

Net Gain

Final Recommendations

Annex 2:

Vulnerability Assessments

Submission to Natural England & JNCC

31 August 2011

**Net Gain
The North Sea Marine Conservation Zones Project
The Deep Business Centre
Tower Street
Hull, HU1 4BG**

Vulnerability Assessments for Geological & Geomorphological Features within the Net Gain Network

This document presents, in hard copy format, the outputs from the vulnerability assessment work undertaken in support of the development of Conservation Objectives for the features at each rMCZ.

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 1b	Subtidal mixed sediments	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Not exposed	Distance from ports/harbours		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Low exposure	1 active and 1 unused, very low due to mitigation too.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - benthic trawling	Exposed	UK and non UK vessels moderate intensity over most of site	~80% less fishing than 50 years ago. VMS data suggests that there is a max stretched value 255hrs/4 yrs for otter trawl gear (unspecified), UK. Beam trawl non-UK/UK has a max stretched value of 255hrs/4 yr period, for the highest pixel record within the site is 90hrs/4 yrs ~1day/yr. Fishing for white fish. Total max of pixel point for non-UK is 933hrs/4 yr period for beam trawl (~10days/yr). Pressure caused by the activity to remain with the understanding that otter trawl is not likely to cause and effect but beam trawling might.	Moderate to high vulnerability - CO set to recover
NG 1b	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - pelagic trawling	Not exposed		Possible pelagic trawling, but not regular, very sporadic.	Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - recreational	Not exposed	Selective method and low intensity		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - set netting	Not exposed	selective method		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 1b	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - pelagic trawling	Not exposed		Possible pelagic trawling, but not regular, very sporadic.	Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - recreational	Not exposed	Selective method and low intensity		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - set netting	Not exposed	Target species are dover sole and cod so not features		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	H	Fishing - benthic trawling	Exposed	UK and non UK vessels moderate intensity over most of site	~80% less fishing than 50 years ago. VMS data suggests that there is a max stretched value 255hrs/4 yrs for otter trawl gear (unspecified), UK. Beam trawl non-UK/UK has a max stretched value of 255hrs/4 yr period, for the highest pixel record within the site is 90hrs/4 yrs ~1day/yr. Fishing for white fish. Total max of pixel point for non-UK is 933hrs/4 yr period for beam trawl (~10days/yr). Pressure caused by the activity to remain with the understanding that otter trawl is not likely to cause and effect but beam trawling might.	Moderate to high vulnerability - CO set to recover
NG 1b	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	H	Shipping	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 1b	Subtidal mixed sediments	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed	Physical conditions are turbid so not sensitive		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Fishing - benthic trawling	Not exposed	Physical conditions are turbid so not sensitive		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Operation)	Low exposure	1 active and 1 unused, very low due to mitigation too		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - benthic trawling	Exposed	UK and non UK vessels moderate intensity over most of site	~80% less fishing than 50 years ago. VMS data suggests that there is a max stretched value 255hrs/4 yrs for otter trawl gear (unspecified), UK. Beam trawl non-UK/UK has a max stretched value of 255hrs/4 yr period, for the highest pixel record within the site is 90hrs/4 yrs ~1day/yr. Fishing for white fish. Total max of pixel point for non-UK is 933hrs/4 yr period for beam trawl (~10days/yr). Pressure caused by the activity to remain with the understanding that otter trawl is not likely to cause and effect but beam trawling might.	Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure	Moderate intensity	Set nets done every couple of weeks, for around 6 months a year.	Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Possible pelagic trawling, but not regular, very sporadic.	Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

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NG 1b	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Possible pelagic trawling, but not regular, very sporadic.	Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Fishing - benthic trawling	Not exposed	Physical conditions are turbid so not sensitive		Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 1b	Subtidal mixed sediments	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year. Habitats and landscapes defined by intertidal zone An increase in relative sea level or decrease	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Quayside development, swinging moorings	No massive expansions due to occur. Quayside development built a couple of years ago. Loads of swinging moorings. If anything would happen in the future, would be subject to environmental assessment.	Low vulnerability - CO set to maintain

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NG 1c	Estuarine rocky habitats	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year.Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreases	M	Infrastructure - coastal defence & land claim	Not exposed		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Introduction of microbial pathogens (disease)	The introduction of microbial pathogens Bonamia and Martelia refringens to an area where they are currently not present	M	Aquaculture - shell fish	Not exposed		Oyster aquaculture at Butley Creek?	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species	H	Aquaculture - shell fish	Not exposed		Oyster aquaculture at Butley Creek?	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Aquaculture - shell fish	Low exposure	Occurs over site but will not create this pressure	Oyster aquaculture at Butley Creek?	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Not exposed		BBC transmission cable at Sudbourne-Aldborough, powercable goes across estuary	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Low exposure	Quayside development, swinging moorings	Very little development planned (some renovations planned). There may be some coastal management alliance, nothing planned but something could happen in the future. Concrete swinging mooring blocks are lifted every few years for maintenance, may cause local disturbance. Likely to be around 200 swinging moorings. Slipways not likely to be any significant increase, some maintainance but very small footprint overall. 3 sailing clubs, 3 boat yards, 2 quays.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal defence & land claim	Low exposure		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Low exposure		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 1c	Estuarine rocky habitats	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - potting/creeling	Low exposure	Thought to occur but unsure of footprint and intensity	Potting/creeling does occur. 20 pots for crab and lobster for commercial trust license (will only be given to fishers who currently have a commercial license), 3 for residents and 1 for non-residents-for the trust restricted area. No restrictions to the number of licenses that can be issued. Not likely to be any potting outside of this area anyways, its further up the estuary. If they want to pot in that area it would fall under the restrictions/licensing of the EA. Very low intensity and small footprint. Small pots that are not weighted are used.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - recreational	Not Exposed	Occurs at the site but the target species is not part of the feature	Yes does occur in the estuary.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - set netting	Not exposed	Target species is not part of the feature	Yes does occur in the estuary.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	L	Infrastructure - coastal defence & land claim	Not exposed		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Low exposure	swinging moorings, slipways, and infrastructure/leisure facility developments but mitigation may be in place	Very popular water skiing spot. Lots of sailing. Water skiing restricted to a small area. No access for jet skis to the river, restriction on launching these. Potential damage to salt marsh, but it is already protected under the SAC, for the top area. Recreational vessels have to insured, and there is an undertaking as an owner to maintain boats to a safe standard. Wake produced may cause exposure. Very seasonal, May-October. Access across or onto the salt marsh is prob where the predominant activity that will be causing damage. Trust is looking at helping to manage this impact. Some anchoring. Very small focused footprint. Majority of very slow sedate vessels, not many fast speed boats.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 1c	Estuarine rocky habitats	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	L	Sewage disposal	Not exposed		Old outfall present. Drainage for water extraction from land.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - cables & pipelines (Operation)	Not exposed		BBC transmission cable at Sudbourne-Aldborough, powercable goes across estuary	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Low exposure	Quayside development, swinging moorings	Low footprint, happening infrequently.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - coastal defence & land claim	Low exposure		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal defence & land claim	Low exposure		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not exposed		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Estuarine rocky habitats	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not exposed		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Damage to seabed surface features	A change in nearshore significant wave height >3% but <5%	M	Aquaculture - shell fish	Low exposure	During installation	Oyster aquaculture at Butley Creek?	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year. Habitats and landscapes defined by intertidal zone An increase in relative sea level or decrease	NS	Infrastructure - coastal defence & land claim	Not exposed		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	M	Aquaculture - shell fish	Not exposed		Oyster aquaculture at Butley Creek?	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Aquaculture - shell fish	Low exposure	shellfish filter feeders so no products going onto seabed	Oyster aquaculture at Butley Creek?	Low vulnerability - CO set to maintain

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NG 1c	Sheltered muddy gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Not exposed		BBC transmission cable at Sudbourne-Aldborough, powercable goes across estuary	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Low exposure	slipways	Nothing planned, there may be minor maintenance. Very small footprint overall.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal defence & land claim	Low exposure		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Low exposure		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - benthic trawling	Low exposure	Thought to occur but unsure of footprint and intensity	Very infrequent, mostly when there is rough weather. 1 very small vessel run by Richard Goldsmith. Method of trawling (otter trawl) would not damage the seabed, is for dover sole. Under Marine Act the EA manages species within the estuary, work with or have the same power as the IFCA. Everything down river from the BBC belongs to the trust, no commercial fishing allowed.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - potting/creeling	Low exposure	Thought to occur but unsure of footprint and intensity	Potting/creeling does occur. 20 pots for crab and lobster for commercial trust license (will only be given to fishers who currently have a commercial license), 3 for residents and 1 for non-residents-for the trust restricted area. No restrictions to the number of licenses that can be issued. Not likely to be any potting outside of this area anyways, its further up the estuary. If they want to pot in that area it would fall under the restrictions/licensing of the EA. Very low intensity and small footprint. Small pots that are not weighted are used.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - recreational	Not exposed	Selective method	Yes does occur in the estuary.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - set netting	Low exposure	Check with the IFCA/RSG	Yes does occur in the estuary.	Low vulnerability - CO set to maintain

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NG 1c	Sheltered muddy gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Tourism & recreation	Not exposed	angling is selective activity with little bycatch	Very popular water skiing spot. Lots of sailing. Water skiing restricted to a small area. No access for jet skis to the river, restriction on launching these. Potential damage to salt marsh, but it is already protected under the SAC, for the top area. Recreational vessels have to insured, and there is an undertaking as an owner to maintain boats to a safe standard. Wake produced may cause exposure. Very seasonal, May-October. Access across or onto the salt marsh is prob where the predominant activity that will be causing damage. Trust is looking at helping to manage this impact. Some anchoring. Very small focused footprint. Majority of very slow sedate vessels, not many fast speed boats.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - benthic trawling	Low exposure	Thought to occur but unsure of footprint and intensity	Very infrequent, mostly when there is rough weather. 1 very small vessel run by Richard Goldsmith. Method of trawling (otter trawl) would not damage the seabed, is for dover sole. Under Marine Act the EA manages species within the estuary, work with or have the same power as the IFCA. Everything down river from the BBC belongs to the trust, no commercial fishing allowed.	Low vulnerability - CO set to maintain
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NG 1c	Sheltered muddy gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed	Target species is not part of the feature	Yes does occur in the estuary.	Low vulnerability - CO set to maintain

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NG 1c	Sheltered muddy gravels	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	NS	Infrastructure - coastal defence & land claim	Not exposed		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M	Crab Tiling/Bait digging	Low exposure	Occurs but unknown intensity	If any occurs, very limited. Not against regulations of the trust. Site is and SPA. Crab tiling/bait digging, easy to control. IFCA, has responsibility to manage bait digging. Good volunteer code working with bait diggers.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M	Fishing - benthic trawling	Low exposure	Thought to occur but unsure of footprint and intensity	Very infrequent, mostly when there is rough weather. 1 very small vessel run by Richard Goldsmith. Method of trawling (otter trawl) would not damage the seabed, is for Dover sole. Under Marine Act the EA manages species within the estuary, work with or have the same power as the IFCA. Everything down river from the BBC belongs to the trust, no commercial fishing allowed.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Low exposure	swinging moorings, slipways, and infrastructure/leisure facility developments but mitigation may be in place	Very popular water skiing spot. Lots of sailing. Water skiing restricted to a small area. No access for jet skis to the river, restriction on launching these. Potential damage to salt marsh, but it is already protected under the SAC, for the top area. Recreational vessels have to insured, and there is an undertaking as an owner to maintain boats to a safe standard. Wake produced may cause exposure. Very seasonal, May-October. Access across or onto the salt marsh is prob where the predominant activity that will be causing damage. Trust is looking at helping to manage this impact. Some anchoring. Very small focused footprint. Majority of very slow sedate vessels, not many fast speed boats.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 1c	Sheltered muddy gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Fishing - benthic trawling	Low exposure	Thought to occur but unsure of footprint and intensity	Very infrequent, mostly when there is rough weather. 1 very small vessel run by Richard Goldsmith. Method of trawling (otter trawl) would not damage the seabed, is for Dover sole. Under Marine Act the EA manages species within the estuary, work with or have the same power as the IFCA. Everything down river from the BBC belongs to the trust, no commercial fishing allowed.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Sewage disposal	Not exposed		Old outfall present. Drainage for water extraction from land.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Low exposure	Thought to occur but unsure of footprint and intensity	Very infrequent, mostly when there is rough weather. 1 very small vessel run by Richard Goldsmith. Method of trawling (otter trawl) would not damage the seabed, is for Dover sole. Under Marine Act the EA manages species within the estuary, work with or have the same power as the IFCA. Everything down river from the BBC belongs to the trust, no commercial fishing allowed.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Sewage disposal	Not exposed		Old outfall present. Drainage for water extraction from land.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Crab Tiling/Bait digging	Low exposure	Occurs but unknown intensity	If any occurs, very limited. Not against regulations of the trust. Site is and SPA. Crab tiling/bait digging, easy to control. IFCA, has responsibility to manage bait digging. Good volunteer code working with bait diggers.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - cables & pipelines (Operation)	Not exposed		BBC transmission cable at Sudbourne-Aldborough, powercable goes across estuary	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Low exposure	Quayside development, swinging moorings	Low footprint, happening infrequently.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - coastal defence & land claim	Low exposure		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Aquaculture - shell fish	Low exposure		Oyster aquaculture at Butley Creek?	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Crab Tiling/Bait digging	Low exposure	Occurs but unknown intensity	If any occurs, very limited. Not against regulations of the trust. Site is and SPA. Crab tiling/bait digging, easy to control. IFCA, has responsibility to manage bait digging. Good volunteer code working with bait diggers.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 1c	Sheltered muddy gravels	Surface abrasion: damage to seabed surface features	Surface abrasion: damage to seabed surface features	M	Fishing - benthic trawling	Low exposure	Thought to occur but unsure of footprint and intensity	Very infrequent, mostly when there is rough weather. 1 very small vessel run by Richard Goldsmith. Method of trawling (otter trawl) would not damage the seabed, is for Dover sole. Under Marine Act the EA manages species within the estuary, work with or have the same power as the IFCA. Everything down river from the BBC belongs to the trust, no commercial fishing allowed.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure	Thought to occur but unsure of footprint and intensity	Potting/creeling does occur. 20 pots for crab and lobster for commercial trust license (will only be given to fishers who currently have a commercial license), 3 for residents and 1 for non-residents-for the trust restricted area. No restrictions to the number of licenses that can be issued. Not likely to be any potting outside of this area anyways, its further up the estuary. If they want to pot in that area it would fall under the restrictions/licensing of the EA. Very low intensity and small footprint. Small pots that are not weighted are used.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure	Check with the IFCA/RSG	Yes does occur in the estuary.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure	swinging moorings, slipways, and infrastructure/leisure facility developments but mitigation may be in place	Very popular water skiing spot. Lots of sailing. Water skiing restricted to a small area. No access for jet skis to the river, restriction on launching these. Potential damage to salt marsh, but it is already protected under the SAC, for the top area. Recreational vessels have to insured, and there is an undertaking as an owner to maintain boats to a safe standard. Wake produced may cause exposure. Very seasonal, May-October. Access across or onto the salt marsh is prob where the predominant activity that will be causing damage. Trust is looking at helping to manage this impact. Some anchoring. Very small focused footprint. Majority of very slow sedate vessels, not many fast speed boats.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 1c	Sheltered muddy gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	M	Fishing - benthic trawling	Low exposure	Thought to occur but unsure of footprint and intensity	Very infrequent, mostly when there is rough weather. 1 very small vessel run by Richard Goldsmith. Method of trawling (otter trawl) would not damage the seabed, is for Dover sole. Under Marine Act the EA manages species within the estuary, work with or have the same power as the IFCA. Everything down river from the BBC belongs to the trust, no commercial fishing allowed.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed			Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	M	Infrastructure - coastal defence & land claim	Low exposure		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not exposed		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	sheltered estuarine environment		Low vulnerability - CO set to maintain
NG 1c	Sheltered muddy gravels	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	M	Infrastructure - coastal defence & land claim	Not exposed		Mainly earth banks, some renovations planned.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	West Runton 1.2m outfall.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Introduction of light	None proposed	NA	Shipping	Not exposed	Natural England to define a benchmark.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Benchmark required from Natural England.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-L	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Litter	None proposed	NA	Shipping	Not exposed	SNCB benchmark required		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Litter	None proposed	NA	Tourism & recreation	Not exposed	Benchmark required from Natural England.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	West Runton 1.2m outfall.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Organic enrichment	A deposit of 100gC/m ² /yr	NS	Sewage disposal	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	West Runton 1.2m outfall.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	High energy infralittoral rock	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	SNCB benchmark required		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - benthic trawling	Not exposed	0-3km no trawl zone.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - potting/creeling	Low exposure			Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - recreational	Low exposure			Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - set netting	Low exposure		Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - benthic trawling	Not exposed	0-3km no trawl zone.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - pelagic trawling	Not exposed		Herring, S & ST drift nets. Only pressures relevant removal of target spp. (lethal), removal of non-target spp. (lethal), but the pressure benchmark is not met.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - potting/creeling	Low exposure			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Low exposure			Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - set netting	Low exposure		Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	SNCB benchmark required		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Fishing - benthic trawling	Not exposed	0-3km no trawl zone.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Fishing - benthic trawling	Not exposed	0-3km no trawl zone.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Sewage disposal	Not exposed		West Runton 1.2m outfall.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Fishing - benthic trawling	Not exposed	0-3km no trawl zone. Doesn't occur over the feature.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Sewage disposal	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Discussions in hub determined that this activity did occur over the feature but were not occurring at the level of the benchmark. West Runton 1.2m outfall.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - benthic trawling	Not exposed	0-3km no trawl zone. Doesn't occur over the feature.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure	High intensity of potting, needs to be discussed with stakeholders.	Concluded that potting is relatively low intensity.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure		Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed	Not applicable		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	0-3km no trawl zone.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Herring, S & ST drift nets. Only pressures relevant removal of target spp. (lethal), removal of non-target spp. (lethal), but the pressure benchmark is not met.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	0-3km no trawl zone.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Herring, S & ST drift nets. Only pressures relevant removal of target spp. (lethal), removal of non-target spp. (lethal), but the pressure benchmark is not met.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	L-M	Fishing - benthic trawling	Not exposed	0-3km no trawl zone.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	High energy infralittoral rock	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not applicable		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Introduction of light	None proposed	NA	Shipping	Not exposed	Natural England to define a benchmark.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Benchmark required from Natural England.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Litter	None proposed	NA	Shipping	Not exposed	Natural England to define a benchmark.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Litter	None proposed	NA	Tourism & recreation	Not exposed	Benchmark required from Natural England.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not applicable		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Infrastructure - cables & pipelines (Installation)	Low exposure	Due to small footprint of pipes and cables.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	Moderate energy circalittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Infrastructure - cables & pipelines (Operation)	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M-H	Infrastructure - cables & pipelines (Installation)	Low exposure	Due to small footprint of cable.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Fishing - benthic trawling	Low exposure	Need to take back to stakeholders to determine how much fishing goes on there. IFCA/MMO suggests there are 12 boats fishing there. No quota.	Not likely to be shrimp benthic trawling over rock habitats. MMO: national legislation requires them to have a vale, traditional grounds, used to kill a lot of sml juvenile flat fish. The vale is a hole in the bottom of the net, the flat fish escape response is to swim down and they are able to move out of net. Making it a very selective fishery. Drifting trammels for sole, fished for 1 hour or 1 mile drift-not considered a problem and will be low exposure.	Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M-H	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M-H	Fishing - recreational	Not exposed	According to fishermap data no recreational fishing occurs.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M-H	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Low exposure	Need to take back to stakeholders to determine how much fishing goes on there. IFCA/MMO suggests there are 12 boats fishing there. No quota.	MMO: No quota because its a localised fishery, rapidly growing species-quota isnt appropriate for the species because of the life cycle of the shrimps. Typically a 22mm net. Idea is to skim the surface to prompt the shrimp to flick up into the net and pass through to the cod end. General a soft sediment fishery.	Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - pelagic trawling	Not exposed		Herring, S & ST drift nets. Only pressures relevant removal of target spp. (lethal), removal of non-target spp. (lethal), but the pressure benchmark is not met.	Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - recreational	Not exposed	According to fishermap data no recreational fishing occurs.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not applicable		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Fishing - benthic trawling	Low exposure	Light gear target is brown shrimp.	MMO: couple of vessels fishing in the area, very rare occasions that there are bottom trawl vessels in the area for white fish. They may use this area as they are moving through to different areas. Shrimp trawl gear is not likely to occur over rock because it would ruin the area	Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M-H	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-H	Fishing - benthic trawling	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - cables & pipelines (Installation)	Low exposure	Because of mitigation measures required, and small footprint.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - cables & pipelines (Operation)	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Fishing - benthic trawling	Low exposure	More information required from stakeholders to determine the intensity and method of benthic trawling.	MMO: couple of vessels fishing in the area, very rare occasions that there are bottom trawl vessels in the area for white fish. They may use this area as they are moving through to different areas. Shrimp trawl gear is not likely to occur over rock because it would ruin the area	Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Fishing - potting/creeling	Low exposure	Ground truth for numbers and intensity.	Concluded that potting is relatively low intensity.	Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed	Not applicable		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not applicable		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Herring, S & ST drift nets. Only pressures relevant removal of target spp. (lethal), removal of non-target spp. (lethal), but the pressure benchmark is not met.	Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	According to fishermap data no recreational fishing occurs.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not applicable		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Herring, S & ST drift nets. Only pressures relevant removal of target spp. (lethal), removal of non-target spp. (lethal), but the pressure benchmark is not met.	Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	According to fishermap data no recreational fishing occurs.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-H	Fishing - benthic trawling	Low exposure	Very low but below the benchmark.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-H	Infrastructure - cables & pipelines (Installation)	Low exposure	Less than benchmark.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	Moderate energy circalittoral rock	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy circalittoral rock	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Introduction of light	None proposed	NA	Shipping	Not exposed	Natural England to define a benchmark.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Benchmark required from Natural England.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Litter	None proposed	NA	Shipping	Not exposed	SNCB benchmark required		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Litter	None proposed	NA	Tourism & recreation	Not exposed	Benchmark required from Natural England.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	SNCB benchmark required		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Installation)	Low exposure	Due to small footprint of pipes and cables.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Infrastructure - cables & pipelines (Installation)	Low exposure	Because of mitigation measures required, and small footprint.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - benthic trawling	Low exposure	0-3km no trawl zone. Low exposure, brown shrimp benthic trawling, IFCA suggests 1 vessel.	Not likely to be shrimp benthic trawling over rock habitats. MMO: national legislation requires them to have a vale, traditional grounds, used to kill a lot of sml juvenile flat fish. The vale is a hole in the bottom of the net, the flat fish escape response is to swim down and they are able to move out of net. Making it a very selective fishery. Vessel size limit of under 15m within the 6NM boundary.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - potting/creeling	Low exposure		"Cottage industry", very seasonal March-Oct (7 months). Work off beach or in small boats, limited by weather. 20-25days per month, 120 pots/day.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - recreational	Not exposed	According to fishermap data no recreational fishing occurs.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - set netting	Low exposure	Low levels occurring.	Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - benthic trawling	Low exposure	0-3km no trawl zone. Low exposure, brown shrimp benthic trawling, INFCA suggests 1 vessel.	MMO: No quota because its a localised fishery, rapidly growing species-quota isnt appropriate for the species because of the life cycle of the shrimps. Typically a 22mm net. Idea is to skim the surface to prompt the shrimp to flick up into the net and pass through to the cod end. General a soft sediment fishery. Vessel size limit of under 15m within the 6NM boundary.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - pelagic trawling	Not exposed		Herring, S & ST drift nets. Only pressures relevant removal of target spp. (lethal), removal of non-target spp. (lethal), but the pressure benchmark is not met.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - potting/creeling	Low exposure		"Cottage industry", very seasonal March-Oct (7 months). Work off beach or in small boats, limited by weather. 20-25days per month, 120 pots/day.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed	According to fishermap data no recreational fishing occurs.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - set netting	Low exposure	Low levels occurring.	Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	SNCB benchmark required		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M	Fishing - benthic trawling	Low exposure	0-3km no trawl zone, brown shrimp trawling, VMS suggests low intensity, IFCA data suggests 1 vessel, below benchmark, low levels.	MMO: couple of vessels fishing in the area, very rare occasions that there are bottom trawl vessels in the area for white fish. They may use this area as they are moving through to different areas. Shrimp trawl gear is not likely to occur over rock because it would ruin their gear. Vessel size limit of under 15m within 6nm boundary.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Fishing - benthic trawling	Not exposed	0-3km no trawl zone.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Sewage disposal	Not exposed		Discussions in hub determined that this activity did occur over the feature but were not occurring at the level of the benchmark. West Runton 1.2m outfall.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Fishing - benthic trawling	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Sewage disposal	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Discussions in hub determined that this activity did occur over the feature but were not occurring at the level of the benchmark. West Runton 1.2m outfall.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - cables & pipelines (Installation)	Low exposure	Because of mitigation measures required, and small footprint.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - cables & pipelines (Operation)	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - benthic trawling	Low exposure	0-3km no trawl zone, we think its low but take this to the stakeholders to offer information.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure	High intensity of potting, needs to be discussed with stakeholders.	Concluded that potting is relatively low intensity.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure	Low levels occurring.	Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed	Not applicable		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Herring, S & ST drift nets. Only pressures relevant removal of target spp. (lethal), removal of non-target spp. (lethal), but the pressure benchmark is not met.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	According to fishermap data no recreational fishing occurs.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Low levels occurring.	Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Herring, S & ST drift nets. Only pressures relevant removal of target spp. (lethal), removal of non-target spp. (lethal), but the pressure benchmark is not met.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Low levels occurring.	Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	L-M	Fishing - benthic trawling	Not exposed	0-3km no trawl zone, high energy site, not likely to have an effect.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	L-M	Infrastructure - cables & pipelines (Installation)	Low exposure			Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Moderate energy infralittoral rock	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Due to small footprint of pipes and cables.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	Subtidal chalk	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Low exposure			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Infrastructure - cables & pipelines (Installation)	Low exposure	Because of mitigation measures required, and small footprint.		Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a <u>commercial scale</u>	L	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a <u>commercial scale</u>	L	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a <u>commercial scale</u>	L	Fishing - recreational	Not exposed	Recreational fishing occurring over feature, 1-18 fishers		Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	L	Fishing - set netting	Not exposed	Gill netting (not specified) known to occur	Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a <u>commercial scale</u>	L	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Siltation rate changes (high)	30cm of fine material added to the seabed in a <u>single event</u> .	M	Fishing - benthic trawling	Not exposed	Occurs over feature, but not likely to be at the level of the benchmark.		Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Siltation rate changes (low)	5cm of fine material added to the seabed in a <u>single event</u> .	L	Fishing - benthic trawling	Low exposure	Siltation likely to occur but not at the level of the benchmark		Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - cables & pipelines (Installation)	Low exposure	Because of mitigation measures required, and small footprint.		Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - cables & pipelines (Operation)	Low exposure			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 2	Subtidal chalk	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Fishing - benthic trawling	Low exposure			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Fishing - set netting	Not exposed	Gill netting (not specified) known to occur	Drifting and trammel netting for sole. Occurs over top of sand/shingle/non sticky sand and NOT rock. Fished for 1 hr or 1 mile drift. Not considered a problem as not sediment features have been put forward for designation at the site.	Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 2	Subtidal chalk	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Introduction of light	None proposed	NA	Shipping	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Introduction of light	None proposed	NA	Tourism & recreation	Low exposure	Low level of boating, recreation diving, no marked anchorages, unlikely recreation vessels would anchor under normal circumstances		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Litter	None proposed	NA	Shipping	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Litter	None proposed	NA	Tourism & recreation	Low exposure	Low level of boating, recreation diving, no marked anchorages, unlikely recreation vessels would anchor under normal circumstances		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal mixed sediments	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - oil & gas	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - sand & gravel	low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Fishing - shellfish harvesting	Not exposed		Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Future activity needs checking	Installation of power cable requires half meter wide trench to be dug, at a depth of >25mm, cable deposited into trench, there will be back filling. Spatial extent pre cable is half meter width, plus track of installation gear. Only Race bank windfarm, only likely to be a few cables there (NG data doesnt show any cables). Overall impact likely to be low. Footprint small and nature of substrate would likely not allow the pressure to occur. Very short duration, small footprint and covered under mitigation.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - offshore (oil & gas platforms)	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - offshore (wind & wave turbines)	low exposure	Footprint over total feature extent is small		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Extraction - sand & gravel	low exposure	low number of hours based on VMS data 2007		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Future activity needs checking	Installation of power cable requires half meter wide trench to be dug, at a depth of >25mm, cable deposited into trench, there will be back filling. Spatial extent pre cable is half meter width, plus track of installation gear. Only Race bank windfarm, only likely to be a few cables there (NG data doesnt show any cables). Overall impact likely to be low. Footprint small and nature of substrate would likely not allow the pressure to occur. Very short duration, small footprint and covered under mitigation.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - benthic trawling	Low exposure	5-9 vessels active see fishermap		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - pelagic trawling	Not exposed	Pelagic fishing will not interact with benthic feature		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - potting/creeling	Low exposure	Selective method		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - recreational	Not exposed	Present but not at a commercial scale		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - set netting	Low exposure	Selective method		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - shellfish harvesting	Not exposed		Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Tourism & recreation	Low exposure	Low level of boating, recreation diving, no marked anchorages, unlikely recreation vessels would anchor under normal circumstances		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - benthic trawling	Low exposure	5-9 vessels active see fishermap		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - pelagic trawling	Not exposed	Pelagic fishing will not interact with benthic feature		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - potting/creeling	Low exposure	Selective method		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - recreational	Not exposed	Present but not at a commercial scale		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - set netting	Low exposure	Selective method		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - shellfish harvesting	Not exposed		Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Fishing - benthic trawling	Low exposure	5-9 vessels active see fishermap		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Tourism & recreation	Low exposure	Low level of boating, recreation diving, no marked anchorages, unlikely recreation vessels would anchor under normal circumstances		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Extraction - sand & gravel	Low exposure		Disucssions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negilable. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Low exposure	5-9 vessels active see fishermap		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal mixed sediments	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Extraction - sand & gravel	Low exposure	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Discussions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negligible. Is at the most extreme point only 500m within the boundary. Very small potential impact of a sediment plume, from the extraction license that borders the boundary with the MCZ.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Fishing - benthic trawling	Low exposure	5-9 vessels active see fishermap		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Energy production - at sea (wind turbines)	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Extraction - sand & gravel	Low exposure		Discussions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negligible. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Future activity needs checking	Installation of power cable requires half meter wide trench to be dug, at a depth of >25mm, cable deposited into trench, there will be back filling. Spatial extent pre cable is half meter width, plus track of installation gear. Only Race bank windfarm, only likely to be a few cables there (NG data doesn't show any cables). Overall impact likely to be low. Footprint small and nature of substrate would likely not allow the pressure to occur. Very short duration, small footprint and covered under mitigation.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - offshore (oil & gas platforms)	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - offshore (wind & wave turbines)	low exposure	Footprint over total feature extent is small		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - benthic trawling	Low exposure	5-9 vessels active see fishermap		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure	Intensity not enough to cause benchmark		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure	Low intensity 3 ish vessels		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - shellfish harvesting	Not exposed		Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure	Low level of boating, recreation diving, no marked anchorages, unlikely recreation vessels would anchor under normal circumstances		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Energy production - at sea (wind turbines)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Not intensely potted area using light weight gear, over a small area. Many other management tools used by MMO and IFCA to be able to manage the fishery if it is so required	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - shellfish harvesting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Infrastructure - offshore (wind & wave turbines)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Possible future min clearance by Fleet Air AM.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Low exposure	Low level of boating, recreation diving, no marked anchorages, unlikely recreation vessels would anchor under normal circumstances		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Energy production - at sea (wind turbines)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Not intensely potted area using light weight gear, over a small area. Many other management tools used by MMO and IFCA to be able to manage the fishery if it is so required	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - shellfish harvesting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - offshore (oil & gas platforms)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - offshore (wind & wave turbines)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Shipping	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Low exposure	Low level of boating, recreation diving, no marked anchorages, unlikely recreation vessels would anchor under normal circumstances.		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Extraction - sand & gravel	Low exposure	Check with stakeholders		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Fishing - benthic trawling	Low exposure	5-9 vessels active see fishermap		Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Infrastructure - cables & pipelines (Installation)	Low exposure	Future activity needs checking	Installation of power cable requires half meter wide trench to be dug, at a depth of >25mm, cable deposited into trench, there will be back filling. Spatial extent pre cable is half meter width, plus track of installation gear. Only Race bank windfarm, only likely to be a few cables there (NG data doesnt show any cables). Overall impact likely to be low. Footprint small and nature of substrate would likely not allow the pressure to occur. Very short duration, small footprint and covered under mitigation.	Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Infrastructure - offshore (oil & gas platforms)	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Infrastructure - offshore (wind & wave turbines)	low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Extraction - sand & gravel	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal mixed sediments	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS-L	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sand	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Litter	None proposed	NA	Tourism & recreation	Not exposed	Low level of boating, recreation diving, no marked anchorages, unlikely recreation vessels would anchor under normal circumstances. Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - sand & gravel	Low exposure		Discussions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negilable. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Fishing - shellfish harvesting	Not exposed		Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Small footprint covered by Centrica Race Bank cable corridor		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Extraction - sand & gravel	Low exposure	Need to assess with stakeholders the intensity over feature in that area	Discussions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negilable. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Infrastructure - cables & pipelines (Installation)	Low exposure	Small footprint covered by Centrica Race Bank cable corridor		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - benthic trawling	Low exposure		Traditionally fished by otter trawling by Beldin trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawls. Otter trawl is likely to have a higher impact on the removal of non-target species, but the overall footprint and intensity is low. Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vane, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - potting/creeling	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Low exposure	Selective method and low intensity 4-5 per year		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - shellfish harvesting	Not exposed		Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Low exposure	Selective method		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not exposed	Occuring but not likely at a commercial scale		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - shellfish harvesting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Fishing - benthic trawling	Low exposure	10-16 vessels	Traditionally fished by otter trawling by Belign trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawl. Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vane, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground. Small footprint and low intensity.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Extraction - sand & gravel	Low exposure		Discussions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negligible. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Extraction - sand & gravel	Low exposure	Need to assess with stakeholders the intensity over feature in that area	Discussions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negligible. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Low exposure		Traditionally fished by otter trawling by Belign trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawls. Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vane, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Energy production - at sea (wind turbines)	Low exposure	Based on assumption that mitigation in place due to overlap with SAC, low footprint of turbines		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Extraction - sand & gravel	Low exposure		Discussions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negligible. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Low exposure	Small footprint covered by Centrica Race Bank cable corridor		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - benthic trawling	Low exposure	10 - 16 vessels	Traditionally fished by otter trawling by Belign trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawl. Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vale, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground. Small footprint and low intensity.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - potting/creeling	Low exposure	Does occur but depends on the intensity so needs groundtruthing	Not intensely potted area using light weight gear, over a small area. Many other management tools used by MMO and IFCA to be able to manage the fishery if it is so required.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - shellfish harvesting	Not exposed		Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Energy production - at sea (wind turbines)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - shellfish harvesting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Possible future min clearance by Fleet Air AM.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Energy production - at sea (wind turbines)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - shellfish harvesting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Extraction - sand & gravel	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sand	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sands and gravels	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Litter	None proposed	NA	Tourism & recreation	Not exposed	Low level of boating, recreation diving, no marked anchorages, unlikely recreation vessels would anchor under normal circumstances. Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Extraction - sand & gravel	Low exposure		Discussions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negilable. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Fishing - shellfish harvesting	Not exposed		Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Installation)	Low exposure	Feature currently has 2 pipelines intersecting it, need to check with stakeholders about future installations, the feature also falls in the Centrica Race Bank corridor.	Installation of power cable requires half meter wide trench to be dug, at a depth of >25mm, cable deposited into trench, there will be back filling. Spatial extent pre cable is half meter width, plus track of installation gear. Only Race bank windfarm, only likely to be a few cables there (NG data doesnt show any cables). Overall impact likely to be low. Footprint small and nature of substrate would likely not allow the pressure to occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Extraction - sand & gravel	Low exposure	Need to assess with stakeholders the intensity over feature in that area	Disucssions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negilable. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sands and gravels	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Infrastructure - cables & pipelines (Installation)	Low exposure	Feature currently has 2 pipelines intersecting it, need to check with stakeholders about future installations, the feature also falls in the Centrica Race Bank corridor.	Installation of power cable requires half meter wide trench to be dug, at a depth of >25mm, cable deposited into trench, there will be back filling. Spatial extent pre cable is half meter width, plus track of installation gear. Only Race bank windfarm, only likely to be a few cables there (NG data doesnt show any cables). Overall impact likely to be low. Footprint small and nature of substrate would likely not allow the pressure to occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - benthic trawling	Low exposure		Traditionally fished by otter trawling by Belign trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawls. Otter trawl is likely to have a higher impact on the removal of non-target species, but the overall footprint and intensity is low (3 vessels). Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vale, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground. Dynamic environment and likely that the sediment would settle out again in a very short period.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - potting/creeling	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Low exposure	Selective method and low intensity 4-5 per year		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - shellfish harvesting	Not exposed		Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Low exposure		Traditionally fished by otter trawling by Belign trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawls. Otter trawl is likely to have a higher impact on the removal of non-target species, but the overall footprint and intensity is low (3 vessels). Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vale, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground. Dynamic environment and likely that the sediment would settle out again in a very short period.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Low exposure	Selective method		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - recreational	Not exposed	Occuring but not likely at a commercial scale		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - shellfish harvesting	Not exposed		Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure	9-18 vessels active see fishermap	Traditionally fished by otter trawling by Belgin trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawls. Otter trawl is likely to have a higher impact on the removal of non-target species, but the overall footprint and intensity is low (3 vessels). Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vale, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground. Dynamic environment and likely that the sediment would settle out again in a very short period.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Extraction - sand & gravel	Low exposure		Discussions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negilable. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sands and gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed		Traditionally fished by otter trawling by Belign trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawls. Otter trawl is likely to have a higher impact on the removal of non-target species, but the overall footprint and intensity is low (3 vessels). Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vale, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground. Dynamic environment and likely that the sediment would settle out again in a week period.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Extraction - sand & gravel	Low exposure		Discussions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negligible. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Low exposure		Traditionally fished by otter trawling by Belign trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawls. Otter trawl is likely to have a higher impact on the removal of non-target species, but the overall footprint and intensity is low (3 vessels). Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vale, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground. Dynamic environment and likely that the sediment would settle out again in a week period.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Energy production - at sea (wind turbines)	Low exposure	Based on assumption that mitigation in place due to overlap with SAC, low footprint of turbines		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Extraction - sand & gravel	Low exposure		Discussions with Mark Russel and the hub, have included a very small portion is very small-therefore footprint is negligible. Is at the most extreme point only 500m within the boundary.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Low exposure	Feature currently has 2 pipelines intersecting it, need to check with stakeholders about future installations, the feature also falls in the Centrica Race Bank corridor		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	9-18 vessels active see fishermap	Traditionally fished by otter trawling by Belign trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawls. Otter trawl is likely to have a higher impact on the removal of non-target species, but the overall footprint and intensity is low (3 vessels). Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vale, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground. Dynamic environment and likely that the sediment would settle out again in a very short period.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure	Does occur but depends on the intensity so needs groundtruthing	Not intensely potted area using light weight gear, over a small area. Many other management tools used by MMO and IFCA to be able to manage the fishery if it is so required. Where there are boats fishing up to 2500 pots.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - shellfish harvesting	Not exposed		Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Energy production - at sea (wind turbines)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Traditionally fished by otter trawling by benign trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawls. Otter trawl is likely to have a higher impact on the removal of non-target species, but the overall footprint and intensity is low (3 vessels). Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vane, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground. Dynamic environment and likely that the sediment would settle out again in a very short period.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - shellfish harvesting	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Possible future min clearance by Fleet Air AM.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Energy production - at sea (wind turbines)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Traditionally fished by otter trawling by Belgin trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawls. Otter trawl is likely to have a higher impact on the removal of non-target species, but the overall footprint and intensity is low (3 vessels). Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vale, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground. Dynamic environment and likely that the sediment would settle out again in a very short period.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - shellfish harvesting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Clam dredging may occur but at low intensity. Seed mussel collection may also occur.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 4	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Traditionally fished by otter trawling by Belign trawlers for rays. VMS data suggests that it is a low intensity fished area by both UK and non-UK otter trawls. Otter trawl is likely to have a higher impact on the removal of non-target species, but the overall footprint and intensity is low (3 vessels). Shrimp trawling, deploys 2 light weight beams with little metal shoes on the end not designed to dig, the ground rope is light weight and designed to go over the surface, to encourage the shrimps to move up into the net. Use a vale, which forces the shrimp up into the cod, and non-target species are able to escape out a hole in the bottom of the net. Trawl designed specifically not to pick up anything on the ground. Dynamic environment and likely that the sediment would settle out again in a very short period.	Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Feature currently has 2 pipelines intersecting it, need to check with stakeholders about future installations, the feature also falls in the Centrica Race Bank corridor		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 4	Subtidal sands and gravels	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	M	Shipping	Not exposed		Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Peat and clay exposures	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	H	Shipping	Not exposed		Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Litter	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Beach replenishment	Not exposed	Following feedback from NE and EA i		Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L	Beach replenishment	Not exposed	Pressure is not likely to be occurring over feature.		Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	L	Fishing - recreational	Not exposed	Occurs but not at a commercial scale	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	L	Fishing - set netting	Not exposed	Occurs below the low water mark	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	L	Tourism & recreation	Not exposed		Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not exposed	Occurs but not at a commercial scale	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Peat and clay exposures	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Occurs below the low water mark	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS	Crab Tiling/Bait digging	Not exposed	The feature is not sensitive though	Confined to sand, digging for mud worms. People do look for edible crabs over the peats, very seasonal, get left behind at low water under rocks and in crevases	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L	Beach replenishment	Not exposed			Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L	Crab Tiling/Bait digging	Not exposed	The feature is not sensitive though	Confined to sand, digging for mud worms. People do look for edible crabs over the peats, very seasonal, get left behind at low water under rocks and in crevases	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Crab Tiling/Bait digging	Not exposed	The feature is not sensitive though	Confined to sand, digging for mud worms. People do look for edible crabs over the peats, very seasonal, get left behind at low water under rocks and in crevases	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - set netting	Not exposed	Occurs below the low water mark	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed		Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Occurs but not at a commercial scale	Paul Learoyd acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Occurs below the low water mark	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Confined to sand, digging for mud worms. People do look for edible crabs over the peats, very seasonal, get left behind at low water under rocks and in crevices	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Occurs but not at a commercial scale	Paul leayrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Occurs below the low water mark	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Peat and clay exposures	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	L	Shipping	Not exposed		Paul Leyrod acknowledged that peat and clay exposures were there and part of the coastal dynamic system.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Introduction of light	None proposed	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal coarse sediment	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Litter	None proposed	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Litter	None proposed	NA	Tourism & recreation	Not exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Beach replenishment	Exposed		Occurs from Skegness to Mablethope. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Beach replenishment	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Installation)	Low exposure	Need to check future interest		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Not exposed		Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Beach replenishment	Exposed		Occurs from Skegness to Mablethope. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal coarse sediment	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Beach replenishment	Low exposure	Potential low exposure but extent and overlap with feature likely to be limited.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal coarse sediment	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Infrastructure - cables & pipelines (Installation)	Not exposed	Need to check future interest	Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Low exposure	More information required particularly due to spawning/nursery importance	Beam trawling, sole and skate, 3 vessels, seasonal, month in the spring before moving further south, local vessels.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Low exposure	Selective method		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - recreational	Low exposure	Bycatch low, 1-8 anglers per km2. Spawning fish do not feed as well so less likely to be caught		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Tourism & recreation	Not exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Low exposure	More information required particularly due to spawning/nursery importance	Otter trawling occurring in the southern portion of this site. Mostly April/May/June 4 sole, krill, roker, winter months for cod, vessel size <60ft, 400+horse power, activity reduce to less than a handful of vessels, inshore white fish trawling vessels has been sig. reduced. Gear used designed for small boats, for otter trawling not to disturbed too much btm ground, its just to persuade fish to move off the btm into net. Crabs are the main features that end up being retained in the cod end, but a number will survive. The area now fished by local vessels, and impact vastly reduced. IFCA, low intensity fishing. Spawning ground for krill and sole, in summer months. Thorn-back ray spawning is further sth than NG5, eggs laid on the sea floor. Cod don't spawn in that area, but they are caught within that area with fully developed row, then move offshore to spawn. By default inshore white fish fleet reduced due to beurocracy of restrictions, in comparison to the past.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Low exposure	Bycatch low, 1-8 anglers per km2. Spawning fish do not feed as well so less likely to be caught		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	L-M	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure	Grandfather rights for Jubilee, others from Kings Lynn, Boston and Grimsby	Shrimp trawling, very weather orientated don't shrimp in rough weather, don't seem to catch a lot in rough weather. Size of gear is between 6-8m, typical tow would be btwn 1-1.5 hrs, all have vales, everything over 40mm goes out. Fishing is seasonal, Autumn. There has been new MSC legislation (should be in place mid 2012) for the whole of Europe that restricts by catch, the length of time that they have to go over side, likely to be a reduction in catch/effort. Beach and breach charge, have to avoid bombing range heavy restrictions to where they can fish. IFCA, inside of 3NM there is a vessel size restriction. NE-fauna within the area are very resistant to damage and have quick recovery. Impacted state is very similar to that of a non-impact state, nature of the section of coast, very mobile sediment, high energy, management not considered useful because the impact of gear to this habitat is considered minimum. Additional ecological interest of site, it is an imp. spawning site, impact of gear on non-target spp. is seasonal, require more info about the impact of fishing gear to the spawning for sole,	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Tourism & recreation	Not exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Beach replenishment	Exposed		Occurs from Skegness to Mablethorpe. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Beach replenishment	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Low exposure		Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Low exposure		Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	Grandfather rights for Jubilee, others from Kings Lynn, Boston and Grimsby	Shrimp trawling, very weather orientated don't shrimp in rough weather, don't seem to catch a lot in rough weather. Size of gear is between 6-8m, typical tow would be btwn 1-1.5 hrs, all have vales, everything over 40mm goes out. Fishing is seasonal, Autumn. There has been new MSC legislation (should be in place mid 2012) for the whole of Europe that restricts by catch, the length of time that they have to go over side, likely to be a reduction in catch/effort. Beach and breach charge, have to avoid bombing range heavy restrictions to where they can fish. IFCA, inside of 3NM there is a vessel size restriction. NE-fauna within the area are very resistant to damage and have quick recovery. Impacted state is very similar to that of a non-impact state, nature of the section of coast, very mobile sediment, high energy, management not considered useful because the impact of gear to this habitat is considered minimum. Additional ecological interest of site, it is an imp. spawning site, impact of gear on non-target spp. is seasonal, require more info about the impact of fishing gear to the spawning for sole,	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure	Low intensity approx 5-10 vessels operating part time, seasonally		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Tourism & recreation	Not exposed		Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Due to the nature of the water movement at the site.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal coarse sediment	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Introduction of light	None proposed	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Litter	None proposed	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Litter	None proposed	NA	Tourism & recreation	Not exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal mixed sediments	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Beach replenishment	Exposed		Occurs from Skegness to Mablethope. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Beach replenishment	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Need to check future interest		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed		Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Beach replenishment	Exposed		Occurs from Skegness to Mablethope. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Beach replenishment	Low exposure	Potential low exposure but extent and overlap with feature likely to be limited.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Infrastructure - cables & pipelines (Installation)	Not exposed	Need to check future interest	Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - benthic trawling	Low exposure	More information required particularly due to spawning/nursery importance	Beam trawling, sole and skate, 3 vessels, seasonal, month in the spring before moving further south, local vessels.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - potting/creeling	Low exposure	Selective method		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - recreational	Low exposure	Bycatch low, 1-8 anglers per km2. Spawning fish do not feed as well so less likely to be caught		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Tourism & recreation	Not exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - benthic trawling	Low exposure	More information required particularly due to spawning/nursery importance	Otter trawling occurring in the southern portion of this site. Mostly April/May/June 4 sole, krill, roker, winter months for cod, vessel size <60ft, 400+horse power, activity reduce to less than a handful of vessels, inshore white fish trawling vessels has been sig. reduced. Gear used designed for small boats, for otter trawling not to disturbed too much btm ground, its just to persuade fish to move off the btm into net. Crabs are the main features that end up being retained in the cod end, but a number will survive. The area now fished by local vessels, and impact vastly reduced. IFCA, low intensity fishing. Spawning ground for krill and sole, in summer months. Thorn-back ray spawning is further sth than NG5, eggs laid on the sea floor. Cod don't spawn in that area, but they are caught within that area with fully developed row, then move offshore to spawn. By default inshore white fish fleet reduced due to beurocracy of restrictions, in comparison to the past.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - recreational	Low exposure	Bycatch low, 1-8 anglers per km2. Spawning fish do not feed as well so less likely to be caught		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	NS-H	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration <25mm	H	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration <25mm	H	Fishing - benthic trawling	Low exposure	Grandfather rights for Jubilee, others from Kings Lynn, Boston and Grimsby	Shrimp trawling, very weather orientated don't shrimp in rough weather, don't seem to catch a lot in rough weather. Size of gear is between 6-8m, typical tow would be btwn 1-1.5 hrs, all have vales, everything over 40mm goes out. Fishing is seasonal, Autumn. There has been new MSC legislation (should be in place mid 2012) for the whole of Europe that restricts by catch, the length of time that they have to go over side, likely to be a reduction in catch/effort. Beach and breach charge, have to avoid bombing range heavy restrictions to where they can fish. IFCA, inside of 3NM there is a vessel size restriction. NE-fauna within the area are very resistant to damage and have quick recovery. Impacted state is very similar to that of a non-impact state, nature of the section of coast, very mobile sediment, high energy, management not considered useful because the impact of gear to this habitat is considered minimum. Additional ecological interest of site, it is an imp. spawning site, impact of gear on non-target spp. is seasonal, require more info about the impact of fishing gear to the spawning for sole,	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration <25mm	H	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Tourism & recreation	Not Exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not Exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Fishing - benthic trawling	Not Exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Beach replenishment	Exposed		Occurs from Skegness to Mablethorpe. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Beach replenishment	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Installation)	Low exposure		Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Operation)	Low exposure		Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldn't effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - benthic trawling	Low exposure	Grandfather rights for Jubilee, others from Kings Lynn, Boston and Grimsby	Shrimp trawling, very weather orientated don't shrimp in rough weather, don't seem to catch a lot in rough weather. Size of gear is between 6-8m, typical tow would be btwn 1-1.5 hrs, all have vales, everything over 40mm goes out. Fishing is seasonal, Autumn. There has been new MSC legislation (should be in place mid 2012) for the whole of Europe that restricts by catch, the length of time that they have to go over side, likely to be a reduction in catch/effort. Beach and breach charge, have to avoid bombing range heavy restrictions to where they can fish. IFCA, inside of 3NM there is a vessel size restriction. NE-fauna within the area are very resistant to damage and have quick recovery. Impacted state is very similar to that of a non-impact state, nature of the section of coast, very mobile sediment, high energy, management not considered useful because the impact of gear to this habitat is considered minimum. Additional ecological interest of site, it is an imp. spawning site, impact of gear on non-target spp. is seasonal, require more info about the impact of fishing gear to the spawning for sole,	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure	Low intensity approx 5-10 vessels operating part time, seasonally		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Not exposed		Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Fishing - benthic trawling	Not exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Infrastructure - cables & pipelines (Installation)	Not exposed		Due to the nature of the water movement at the site.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS-L	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS-L	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal mixed sediments	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sand	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Not exposed due to physical conditions at site	Possibly doesnt occur because its too shallow	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Introduction of light	None proposed	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover.		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Litter	None proposed	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Litter	None proposed	NA	Tourism & recreation	Not exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Not exposed due to physical conditions at site	Possibly doesnt occur because its too shallow	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Organic enrichment	A deposit of 100gC/m2/yr	NS	Sewage disposal	Not exposed	Not exposed due to physical conditions at site	Possibly doesnt occur because its too shallow	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sand	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Beach replenishment	Exposed		Occurs from Skegness to Mablethope. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Beach replenishment	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Need to check future interest		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed		Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Beach replenishment	Exposed		Occurs from Skegness to Mablethope. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Beach replenishment	Low exposure	Potential low exposure but extent and overlap with feature likely to be limited.		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Infrastructure - cables & pipelines (Installation)	Not exposed	Need to check future interest	Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Low exposure	More information required particularly due to spawning/nursery importance	Beam trawling, sole and skate, 3 vessels, seasonal, month in the spring before moving further south, local vessels.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Low exposure	Selective method	About 1/2 beach launch boats working a very small area. Low impact.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - recreational	Low exposure	Bycatch low, 1-8 anglers per km2. Spawning fish do not feed as well so less likely to be caught	Catch and release fishery, very few boats fish in the area.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - set netting	Low exposure		Beach launched boats, subtidal nets, very occasional, not a regular fishery.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Tourism & recreation	Not exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Low exposure	More information required particularly due to spawning/nursery importance	Otter trawling occurring in the southern portion of this site. Mostly April/May/June 4 sole, krill, roker, winter months for cod, vessel size <60ft, 400+horse power, activity reduce to less than a handful of vessels, inshore white fish trawling vessels has been sig. reduced. Gear used designed for small boats, for otter trawling not to disturbed too much btm ground, its just to persuade fish to move off the btm into net. Crabs are the main features that end up being retained in the cod end, but a number will survive. The area now fished by local vessels, and impact vastly reduced. IFCA, low intensity fishing. Spawning ground for krill and sole, in summer months. Thorn-back ray spawning is further sth than NG5, eggs laid on the sea floor. Cod don't spawn in that area, but they are caught within that area with fully developed row, then move offshore to spawn. By default inshore white fish fleet reduced due to beurocracy of restrictions, in comparison to the past.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	About 1/2 beach launch boats working a very small area. Low impact.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Low exposure	Bycatch low, 1-8 anglers per km2. Spawning fish do not feed as well so less likely to be caught	Catch and release fishery, very few boats fish in the area.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Beach launched boats, subtidal nets, very occassional, not a regular fishery.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	L-M	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Fishing - benthic trawling	Low exposure	Grandfather rights for Jubilee, others from Kings Lynn, Boston and Grimsby	Shrimp trawling, very weather orientated don't shrimp in rough weather, don't seem to catch a lot in rough weather. Size of gear is between 6-8m, typical tow would be btwn 1-1.5 hrs, all have vales, everything over 40mm goes out. Fishing is seasonal, Autumn. There has been new MSC legislation (should be in place mid 2012) for the whole of Europe that restricts by catch, the length of time that they have to go over side, likely to be a reduction in catch/effort. Beach and breach charge, have to avoid bombing range heavy restrictions to where they can fish. IFCA, inside of 3NM there is a vessel size restriction. NE-fauna within the area are very resistant to damage and have quick recovery. Impacted state is very similar to that of a non-impact state, nature of the section of coast, very mobile sediment, high energy, management not considered useful because the impact of gear to this habitat is considered minimum. Additional ecological interest of site, it is an imp. spawning site, impact of gear on non-target spp. is seasonal, require more info about the impact of fishing gear to the spawning for sole,	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Tourism & recreation	Not Exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Fishing - benthic trawling	Not Exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Sewage disposal	Not exposed	Not exposed due to physical conditions at site	Possibly doesnt occur because its too shallow	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not Exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Sewage disposal	Not exposed	Not exposed due to physical conditions at site	Possibly doesnt occur because its too shallow	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Beach replenishment	Exposed		Occurs from Skegness to Mablethorpe. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Beach replenishment	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Low exposure		Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Low exposure		Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - benthic trawling	Low exposure	Grandfather rights for Jubilee, others from Kings Lynn, Boston and Grimsby	Shrimp trawling, very weather orientated don't shrimp in rough weather, don't seem to catch a lot in rough weather. Size of gear is between 6-8m, typical tow would be btwn 1-1.5 hrs, all have vales, everything over 40mm goes out. Fishing is seasonal, Autumn. There has been new MSC legislation (should be in place mid 2012) for the whole of Europe that restricts by catch, the length of time that they have to go over side, likely to be a reduction in catch/effort. Beach and breach charge, have to avoid bombing range heavy restrictions to where they can fish. IFCA, inside of 3NM there is a vessel size restriction. NE-fauna within the area are very resistant to damage and have quick recovery. Impacted state is very similar to that of a non-impact state, nature of the section of coast, very mobile sediment, high energy, management not considered useful because the impact of gear to this habitat is considered minimum. Additional ecological interest of site, it is an imp. spawning site, impact of gear on non-target spp. is seasonal, require more info about the impact of fishing gear to the spawning for sole,	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - potting/creeling	Low exposure	Low intensity approx 5-10 vessels operating part time, seasonally	About 1/2 beach launch boats working a very small area. Low impact.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - set netting	Low exposure		Beach launched boats, subtidal nets, very occasional, not a regular fishery.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Tourism & recreation	Not exposed		Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	About 1/2 beach launch boats working a very small area. Low impact.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Catch and release fishery, very few boats fish in the area.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Beach launched boats, subtidal nets, very occassional, not a regular fishery.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	150 light weight bombs/10 heavy bombs per month. Bombs provide a habitat for tube worms etc, may have made an un-natural reef. 200ft diameter around the barge, occassional one 400ft away.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	About 1/2 beach launch boats working a very small area. Low impact.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Catch and release fishery, very few boats fish in the area.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Natural England to set benchmark	Beach launched boats, subtidal nets, very occassional, not a regular fishery.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Due to the nature of the water movement at the site.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldn't affect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldn't affect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldn't affect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sand	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Not exposed due to physical conditions at site	Possibly doesn't occur because it's too shallow	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Introduction of light	None proposed	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Introduction of light	None proposed	NA	Tourism & recreation	Not Exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Litter	None proposed	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Litter	None proposed	NA	Tourism & recreation	Not Exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Not exposed due to physical conditions at site	Possibly doesn't occur because it's too shallow	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Organic enrichment	A deposit of 100gC/m ² /yr	NS	Sewage disposal	Not exposed	Not exposed due to physical conditions at site	Possibly doesn't occur because it's too shallow	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sands and gravels	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Beach replenishment	Exposed	Sites nearby but not within the boundary	Occurs from Skegness to Mablethope. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Beach replenishment	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Installation)	Low exposure	Need to check future interest		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Not exposed		Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Beach replenishment	Exposed	Sites nearby but not within the boundary	Occurs from Skegness to Mablethope. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal sands and gravels	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Beach replenishment	Low exposure	Potential low exposure but extent and overlap with feature likely to be limited.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Infrastructure - cables & pipelines (Installation)	Not exposed	Need to check future interest	Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Low exposure	More information required particularly due to spawning/nursery importance	Beam trawling, sole and skate, 3 vessels, seasonal, month in the spring before moving further south, local vessels.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Low exposure	More information required particularly due to spawning/nursery importance	Beam trawling, sole and skate, 3 vessels, seasonal, month in the spring before moving further south, local vessels.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Low exposure	Selective method		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - recreational	Low exposure	Bycatch low, 1-8 anglers per km2. Spawning fish do not feed as well so less likely to be caught		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Tourism & recreation	Not Exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Low exposure	More information required particularly due to spawning/nursery importance	<p>Otter trawling occurring in the southern portion of this site. Mostly April/May/June 4 sole, krill, roker, winter months for cod, vessel size <60ft, 400+horse power, activity reduce to less than a handful of vessels, inshore white fish trawling vessels has been sig. reduced. Gear used designed for small boats, for otter trawling not to disturbed too much btm ground, its just to persuade fish to move off the btm into net. Crabs are the main features that end up being retained in the cod end, but a number will survive. The area now fished by local vessels, and impact vastly reduced. IFCA, low intensity fishing. Spawning ground for krill and sole, in summer months. Thorn-back ray spawning is further sth than NG5, eggs laid on the sea floor. Cod don't spawn in that area, but they are caught within that area with fully developed row, then move offshore to spawn. By default inshore white fish fleet reduced due to beurocracy of restrictions, in comparison to the past.</p>	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Low exposure	More information required particularly due to spawning/nursery importance	Otter trawling occurring in the southern portion of this site. Mostly April/May/June 4 sole, krill, roker, winter months for cod, vessel size <60ft, 400+horse power, activity reduce to less than a handful of vessels, inshore white fish trawling vessels has been sig. reduced. Gear used designed for small boats, for otter trawling not to disturbed too much btm ground, its just to persuade fish to move off the btm into net. Crabs are the main features that end up being retained in the cod end, but a number will survive. The area now fished by local vessels, and impact vastly reduced. IFCA, low intensity fishing. Spawning ground for krill and sole, in summer months. Thorn-back ray spawning is further sth than NG5, eggs laid on the sea floor. Cod don't spawn in that area, but they are caught within that area with fully developed row, then move offshore to spawn. By default inshore white fish fleet reduced due to beurocracy of restrictions, in comparison to the past.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - recreational	Low exposure	Bycatch low, 1-8 anglers per km2. Spawning fish do not feed as well so less likely to be caught		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	L	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sands and gravels	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure	Grandfather rights for Jubilee, others from Kings Lynn, Boston and Grimsby	Shrimp trawling, very weather orientated don't shrimp in rough weather, don't seem to catch a lot in rough weather. Size of gear is between 6-8m, typical tow would be btwn 1-1.5 hrs, all have vales, everything over 40mm goes out. Fishing is seasonal, Autumn. There has been new MSC legislation (should be in place mid 2012) for the whole of Europe that restricts by catch, the length of time that they have to go over side, likely to be a reduction in catch/effort. Beach and breach charge, have to avoid bombing range heavy restrictions to where they can fish. IFCA, inside of 3NM there is a vessel size restriction. NE-fauna within the area are very resistant to damage and have quick recovery. Impacted state is very similar to that of a non-impact state, nature of the section of coast, very mobile sediment, high energy, management not considered useful because the impact of gear to this habitat is considered minimum. Additional ecological interest of site, it is an imp. spawning site, impact of gear on non-target spp. is seasonal, require more info about the impact of fishing gear to the spawning for sole,	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure	Grandfather rights for Jubilee, others from Kings Lynn, Boston and Grimsby	Shrimp trawling, very weather orientated don't shrimp in rough weather, don't seem to catch a lot in rough weather. Size of gear is between 6-8m, typical tow would be btwn 1-1.5 hrs, all have vales, everything over 40mm goes out. Fishing is seasonal, Autumn. There has been new MSC legislation (should be in place mid 2012) for the whole of Europe that restricts by catch, the length of time that they have to go over side, likely to be a reduction in catch/effort. Beach and breach charge, have to avoid bombing range heavy restrictions to where they can fish. IFCA, inside of 3NM there is a vessel size restriction. NE-fauna within the area are very resistant to damage and have quick recovery. Impacted state is very similar to that of a non-impact state, nature of the section of coast, very mobile sediment, high energy, management not considered useful because the impact of gear to this habitat is considered minimum. Additional ecological interest of site, it is an imp. spawning site, impact of gear on non-target spp. is seasonal, require more info about the impact of fishing gear to the spawning for sole,	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Tourism & recreation	Not Exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not Exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not Exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Sewage disposal	Not exposed	Not exposed due to physical conditions at site	Possibly doesnt occur because its too shallow	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not Exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not Exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Sewage disposal	Not exposed	Not exposed due to physical conditions at site	Possibly doesnt occur because its too shallow	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Beach replenishment	Exposed	Sites nearby but not within the boundary	Occurs from Skegness to Mablethorpe. Offshore dredge. Occurs annually (can take 2-7yrs for the biological communities to recover). EA feedback indicated that this was happening, started in 1994, EA recently done consultation with the fishermen. Longshore drift moves the sand south.	Moderate to high vulnerability - CO set to recover
NG 5	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Beach replenishment	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Low exposure	Need to check future interest	Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Low exposure		Footprint of the cables is very small compared to the rest of the site. Low frequency for the installation pressure/impact	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - coastal defence & land claim	Not exposed		Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	Grandfather rights for Jubilee, others from Kings Lynn, Boston and Grimsby	<p>Shrimp trawling, very weather orientated don't shrimp in rough weather, don't seem to catch a lot in rough weather. Size of gear is between 6-8m, typical tow would be btwn 1-1.5 hrs, all have vales, everything over 40mm goes out. Fishing is seasonal, Autumn.</p> <p>There has been new MSC legislation (should be in place mid 2012) for the whole of Europe that restricts by catch, the length of time that they have to go over side, likely to be a reduction in catch/effort. Beach and breach charge, have to avoid bombing range heavy restrictions to where they can fish. IFCA, inside of 3NM there is a vessel size restriction. NE-fauna within the area are very resistant to damage and have quick recovery. Impacted state is very similar to that of a non-impact state, nature of the section of coast, very mobile sediment, high energy, management not considered useful because the impact of gear to this habitat is considered minimum. Additional ecological interest of site, it is an imp. spawning site, impact of gear on non-target spp. is seasonal, require more info about the impact of fishing gear to the spawning for sole,</p>	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	Grandfather rights for Jubilee, others from Kings Lynn, Boston and Grimsby	Shrimp trawling, very weather orientated don't shrimp in rough weather, don't seem to catch a lot in rough weather. Size of gear is between 6-8m, typical tow would be btwn 1-1.5 hrs, all have vales, everything over 40mm goes out. Fishing is seasonal, Autumn. There has been new MSC legislation (should be in place mid 2012) for the whole of Europe that restricts by catch, the length of time that they have to go over side, likely to be a reduction in catch/effort. Beach and breach charge, have to avoid bombing range heavy restrictions to where they can fish. IFCA, inside of 3NM there is a vessel size restriction. NE-fauna within the area are very resistant to damage and have quick recovery. Impacted state is very similar to that of a non-impact state, nature of the section of coast, very mobile sediment, high energy, management not considered useful because the impact of gear to this habitat is considered minimum. Additional ecological interest of site, it is an imp. spawning site, impact of gear on non-target spp. is seasonal, require more info about the impact of fishing gear to the spawning for sole,	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure	Low intensity approx 5-10 vessels operating part time, seasonally		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Tourism & recreation	Not Exposed	Very low exposure and physical conditions mean feature not sensitive	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Targets are intertidal on the mudflats.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 5	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small harbour, seal colony there, site of interest.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Natural physical environment is mobile sediment, fast currents		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Need to check future interest	Due to the nature of the water movement at the site.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover.		Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Flood defence activities going on, but wouldnt effect feature because it is subtidal.	Low vulnerability - CO set to maintain
NG 5	Subtidal sands and gravels	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Shipping	Not exposed	The fauna of the biotopes are opportunistic so can quickly recolonise disturbed areas. So due to physical conditions are not sensitive, quick to recover.		Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	L	Shipping	Not exposed	Not applicable to the feature.		Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Sabellaria spinulosa reefs	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	H	Fishing - pelagic trawling	Not exposed		Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Sabellaria spinulosa reefs	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Sabellaria spinulosa reefs	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Low exposure	Low exposure because of deeper waters and introduced species are likely to not be able to settle on sediment.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Litter	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - oil & gas	Low exposure	2 platforms over the feature, small footprint.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - sand & gravel	Not exposed	Known that it has been actively extracted, moderate exposure, overlap with feature in SW corner of site.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Low exposure	3 pipelines intersecting the feature, but small footprint so low exposure.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - offshore (oil & gas platforms)	Low exposure	2 active platforms, 1 from 2009, small footprint.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Extraction - sand & gravel	Not exposed	Known that it has been actively extracted, moderate exposure, overlap with feature in SW corner of site.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - benthic trawling	Low exposure	Uncertain of mortality of non target species		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - pelagic trawling	Not exposed		Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - potting/creeling	Not exposed	Selective fishery		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Tourism & recreation	Low exposure	Charter boats occuring out there 2-4 vessels known to use the area.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - benthic trawling	Not exposed	Target fishery for white fish is not integral part of the feature		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - pelagic trawling	Not exposed		Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - potting/creeling	Not exposed	Target fishery for lobster/crab is not integral part of the feature		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	H	Fishing - benthic trawling	Low exposure	5-9 vessels over this feature fishing for white fish with otter trawls. Only small part of gear will penetrate so uncertain to say whether meets benchmark. Effort varies each year and is occasional		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Extraction - sand & gravel	Not exposed	Unsure if the pressure will cause the benchmark, but extraction is known to occur within the SW section of the site, over the feature.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Low exposure	Fishing gear at this intensity will not meet benchmark		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Extraction - sand & gravel	Low exposure	Unsure if the pressure will cause the benchmark, but extraction is known to occur within the SW section of the site, over the feature.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Fishing - benthic trawling	Low exposure	Fishing gear at this intensity will not meet benchmark		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Extraction - sand & gravel	Not exposed	Moderate exposure.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Installation)	Low exposure	3 pipelines intersecting the feature, but small footprint so low exposure.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - offshore (oil & gas platforms)	Low exposure	2 active platforms, 1 from 2009, small footprint.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - benthic trawling	Exposed	5-9 vessels over this feature fishing for white fish with otter trawls	3-5 otter trawl vessels, in the central part of the site-target species are cod, whiting, soles (white fish). Historic dutch beam trawl, pink shrimp trawl (could be beam or otter trawl) along the margins of the silver pit. Pink shrimp fishing is seasonal mainly in the winter time (Jan/Feb)-also limited to weather conditions (damage from shrimp gear is low). If the area is disturbed too much then the fish/shrimps will move away. Otter trawl, max of 373 hrs/4 yr period, otter boards run relatively narrow tracks (of beamers). Otter trawling likely to cause damage to seabed surface, but pink trawling would not and would be low exposure. Damage depends on set up of gear and size and power of vessel. Moderate damage, but low intensity. Mod energy circalittoral rock and mixed sed associated with the bottom of the silver pit, 2.5km wide-rock is very sensitive (Tom-NE). Fishing occurs over both parts of the feature, on the sides and up the channel. Both avoid valley walls which are an important part of the silver pit feature. Caveat, high socio-economic impact and management measures could be zonal to manage the	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure	13-21 static gear vessels operate over feature. Believe intensity of pots will be less than on inshore sites - lots of pots but well spread out		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - offshore (oil & gas platforms)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Extraction - sand & gravel	Not exposed	Extraction is occurring but not likely to meet benchmark.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Fishing - benthic trawling	Low exposure	Fishing gear at this intensity will not meet benchmark		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Infrastructure - cables & pipelines (Installation)	Not exposed	Benchmark not met.		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Infrastructure - offshore (oil & gas platforms)	Not exposed	Not likely to met benchmark		Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Extraction - sand & gravel	Not exposed		Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal mixed sediments	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	Low exposure because of deeper waters and introduced species are likely to not be able to settle on sediment.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Litter	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal sand	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - sand & gravel	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Low exposure	2 pipelines occuring over feature, very small footprint.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Extraction - sand & gravel	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Infrastructure - cables & pipelines (Installation)	Not exposed	Benchmark not met.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Low exposure	Feature is fished by whote fish otter gear so some exposure but unknown mortality of bycatch species.	Pink shrimp fishing gear is selective reduces bycatch.	Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - pelagic trawling	Not exposed		Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Not exposed	Selective fishery so will not meet the benchmark		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Tourism & recreation	Low exposure	2-4 charter boats operating in the area, may remove non target species.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Not exposed	Target white fishery is not an integral feature of the site		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Target species are not integral to the feature		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal sand	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Fishing - benthic trawling	Low exposure	We know this is likely higher intensity than other sand offshore areas due to nature of the feature, but uncertain whether meets benchmark. Inner Silver pit is c. 2.5 km wide at sand feature so intensity is focused over feature. 5-16 vessels over feature fishing for white fish with otter trawls for 6-8 weeks	Damage from shrimp gear on the seabed surface is low. The middle part is highly fished, but the 3-5 otter trawl vessels move around. Because if they disturb the area too much then the fish/shrimps will move away.	Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Shipping	Not exposed	No known anchorages.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Extraction - sand & gravel	Not exposed	Not sure if extraction would meet benchmark.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Fishing - benthic trawling	Not exposed	Fishing gear will not meet this benchmark		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Extraction - sand & gravel	Low exposure	Moderate exposure, because footprint is relatively small.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed	Fishing gear will not meet this benchmark		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Extraction - sand & gravel	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Low exposure	2 pipelines occuring over feature, very small footprint.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - benthic trawling	Exposed	We know this is likely higher intensity than other sand offshore areas due to nature of the feature, but uncertain whether meets benchmark. Inner Silver pit is c. 2.5 km wide at sand feature so intensity is focused over feature. 5-16 vessels over feature fishing for white fish with otter trawls for 6-8 weeks. JNCC advise is that it is highly exposed, based on VMS data and there is over 1000 fishing hours (for both UK and Europe demersal trawling) over the last 4 years, especially over the channel-demersal activity is a concern. EU beam trawling over 400hrs over the past 4 years.	3-5 otter trawl vessels, in the central part of the site-target species are cod, whiting, soles (white fish). Historic dutch beam trawl, pink shrimp trawl (could be beam or otter trawl) along the margins of the silver pit. Pink shrimp fishing is seasonal mainly in the winter time (Jan/Feb)-also limited to weather conditions (damage from shrimp gear is low). If the area is disturbed too much then the fish/shrimps will move away. Otter trawl, max of 373 hrs/4 yr period, otter boards run relatively narrow tracks (of beamers). Otter trawling likely to cause damage to seabed surface, but pink trawling would not and would be low exposure. Damage depends on set up of gear and size and power of vessel. Moderate damage, but low intensity. Mod energy circalittoral rock and mixed sed associated with the bottom of the silver pit, 2.5km wide-rock is very sensitive (Tom-NE). Fishing occurs over both parts of the feature, on the sides and up the channel. Both avoid valley walls which are an important part of the silver pit feature. Caveat, high socio-economic impact and management measures could be zonal to manage the	Moderate to high vulnerability - CO set to recover
NG 6	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - potting/creeling	Low exposure	6-12 static gear fishers for crabs and lobsters		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Shipping	Not exposed	No known anchorages.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - sand & gravel	Not exposed	Not likley to meet benchmark		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Low exposure	Fishing gear will not meet this benchmark		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sand	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS-L	Extraction - sand & gravel	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal sand	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	Low exposure because of deeper waters and introduced species are likely to not be able to settle on sediment.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Litter	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Extraction - oil & gas	Low exposure			Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Extraction - sand & gravel	low exposure	Moderate exposure, because footprint is relatively small.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Installation)	Low exposure	3 pipelines but small footprints		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - offshore (oil & gas platforms)	Low exposure	2 platforms occuring over the modelled data, small footprints.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Extraction - sand & gravel	Low exposure	Moderate exposure, because footprint is relatively small.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Infrastructure - cables & pipelines (Installation)	Not exposed	3 pipelines but small footprints		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - pelagic trawling	Not exposed		Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Tourism & recreation	Low exposure	Only 2-4 charter boats known to use this area for fishing.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - pelagic trawling	Not exposed		Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure			Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed	No known anchorages.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Extraction - sand & gravel	Not exposed	Not sure if this would meet the benchmark, but need to check with stakeholders.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Extraction - sand & gravel	Low exposure	Moderate exposure, because footprint is relatively small.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Low exposure			Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Extraction - sand & gravel	Low exposure	Moderate exposure, because footprint is relatively small.	Boundary has been changed to disclude the sand and gravel extraction. The assessment that now needs to be looked at is the secondary impacts from the proximity of the activity.	Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Low exposure	3 pipelines but small footprints		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - offshore (oil & gas platforms)	Low exposure	2 platforms occurring over the modelled data, small footprints.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Exposed		Tom, suggested the feature would have a moderate sensitivity. Pink shrimping occurring in Jan/Feb-subject to weather conditions, low exposure for shrimp-need further discussions about gear types are used.	Moderate to high vulnerability - CO set to recover
NG 6	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure	According to fishermap there are 1-18 vessels operating over the feature, need to clarify what static fishing methods.	Potting does occur within this site. Thoughts are that it is low intensity.	Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed	No known anchorages.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal sands and gravels	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Pelagic trawling for Herring occurs.	Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - offshore (oil & gas platforms)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 6	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - offshore (oil & gas platforms)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Extraction - sand & gravel	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 6	Subtidal sands and gravels	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	shipping occurs over and around the feature but given the depth of the water column & tidal dispersion - regard likelihood of the feature being exposed above the benchmark as negligible= ne	very low frequency, however ships may be exchanging ballast water.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (operation)	Not exposed	1 pipeline over feature but footprint is very small relative to size of feature & 1 cable over feature (cable is defunct UKPC - so no maintenance/works assoc with it?), pressure not expected to exceed benchmark when feature size is considered - ne	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - offshore (oil & gas platforms)	Not exposed	1 gas platform, Chiswick, It is expected that if present here then the footprint is very low compared to size of feature & not exceed benchmark. For now exposure is assessed as unknown	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 7	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - benthic trawling	Exposed	Benthic trawling is not a very selective fishing method (compared to static and pelagic fishing); species in and on the seafloor can be taken. Benthic trawling can remove many species and it is therefore likely that it removes species which may be importa	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs.	Moderate to high vulnerability - CO set to recover
NG 7	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - pelagic trawling	Not exposed	It is highly unlikely that this method of fishing will result in the removal of non-target species which are closely associated with the feature - exposure = ne		Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - potting/creeling	Low exposure	There is some anecdotal evidence of low levels of potting over feature (ground-truthing to give idea of numbers would be helpful). Potting is a relatively selective fishing method, taking little bycatch but it does take species living on the benthos which	Most selective form of fishing with the lowest impact.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Low exposure	VMS data, set netting interacts relatively little with the benthos, it is expected that very few epibenthic species would be removed by this method; exposure to this pressure would be expected to be very low = ne	Big mesh, cod netting, very little of other spp. caught. Set net vessels only fish once a month.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Not exposed	benthic trawling is high over feature (see above comment) and this activity can potentially remove species associated with the feature which may be important for its long/short term condition. Need further information on biology/ecology of the feature &	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs. Activity not assessed because pressure on feature deemed not sensitive.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	It is unlikely that this method of fishing will result in the removal of species which are closely associated with the feature - exposure = ne	Activity not assessed because pressure on the feature is not sensitive.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Activity not assessed as the feature is not sensitive to the pressure caused.	Activity not assessed because pressure on the feature is not sensitive.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 7	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not exposed	Activity not assessed as the feature is not sensitive to the pressure caused. 1 charter vessel from fishermap.	Activity not assessed because pressure on the feature is not sensitive.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Activity not assessed as the feature is not sensitive to the pressure caused.	Activity not assessed because pressure on the feature is not sensitive.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Exposed	Exposure = high above benchmark. See comment above re: benthic trawling	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs.	Moderate to high vulnerability - CO set to recover
NG 7	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed	exposure to this pressure is regarded as v. low as anchoring is the only activity assoc w/shipping which may result in this pressure, there is some anchoring of large vessels but limited to a small area relative to the size of the feature, therefore not c	Very low frequency and not a known anchorage.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	VMS data - discussion during the workshop concluded benthic trawling is unlikely to result in deposition of material approaching the benchmark=ne		Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	VMS data - discussion during the workshop concluded benthic trawling is unlikely to result in deposition of material approaching the benchmark=ne		Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Fishing - benthic trawling	Exposed	Exposure is regarded as high - see comments on benthic trawling above	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs.	Moderate to high vulnerability - CO set to recover
NG 7	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (operation)	Low exposure	1 pipeline - would expect the footprint to be very low compared to the size of the feature & 1 cable is defunct & so no maintenance/works associated with it? & not exceed benchmark = ne	Currently below the benchmark, but future activities may cause this to change.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - offshore (oil & gas platforms)	Not exposed	1 platform = need presence/absence on this feature to be confirmed before assessing exposure. It is expected that if present here then the footprint is very low compared to size of feature & not exceed benchmark. For now exposure is assessed as unknown.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 7	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Exposed	The feature is subject to a range of fishing methods, including Otter (bottom & twin), beam, midwater trawling, seine & limited netting & nephrops. Both UK & non UK vessels fish over the feature, although non UK vessels (BEL, NLD, DNK, FRA & DEU) contribu	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs.	Moderate to high vulnerability - CO set to recover
NG 7	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure			Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Low exposure	some evidence (MB0106 data layers) that DNK nets over very small area compared to that of feature = score exposure well below benchmark	Set net vessels only fish once a month. Will meet benchmark but is a low exposure.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed	exposure to this pressure is regarded as v. low as anchoring is the only activity assoc w/shipping which may result in this pressure, there is some anchoring of large vessels but limited to a small area relative to the size of the feature	Very low frequency and not a known anchorage.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	benthic trawling even over fine sediment is very unlikely to result in the continued suspension of material for 1 year, sediment will remain in suspension for a limited period of time after a trawl and trawling is not constant, it is not clear how benthic	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs. Activity not assessed because pressure on feature deemed not sensitive.	Low vulnerability - CO set to maintain
NG 7	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - offshore (oil & gas platforms)	Not exposed	1 gas platform, Chiswick. It is expected that if present here then the footprint is very low compared to size of feature & not exceed benchmark. For now exposure is assessed as unknown	Activity not assessed because pressure on the feature is not sensitive.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	water column depth = ~50m and tidally energetic area & shipping is low. Not known if any INS species have been recorded within the feature, expect exposure to be negligible.	very low frequency, however ships may be exchanging ballast water.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - benthic trawling	Exposed	Benthic fishing occurs throughout the site, mostly by non-UK vessels (verified by Ian Rowe). Beam, otter and Nephrops trawling occurs as does some limited midwater fishing, the latter would not be expected to expose the feature to this pressure. UK fishi	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs.	Moderate to high vulnerability - CO set to recover
NG 7	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 7	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Low exposure		Most selective form of fishing with the lowest impact.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - set netting	Low exposure	v little DNK activity & little interaction with benthos - not exposed above benchmark	Big mesh, cod netting, very little of other spp. caught. Set net vessels only fish once a month.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Not exposed	benthic trawling is high over feature (see above comment) and this activity can potentially remove species associated with the feature, exposure = unknown.	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs. Activity not assessed because pressure on feature deemed not sensitive.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Activity not assessed as the feature is not sensitive to the pressure caused.	Activity not assessed because pressure on the feature is not sensitive.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Activity not assessed as the feature is not sensitive to the pressure caused.	Activity not assessed because pressure on the feature is not sensitive.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not exposed	Activity not assessed as the feature is not sensitive to the pressure caused. 1 charter vessel from fishermap.	Activity not assessed because pressure on the feature is not sensitive.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	difficult to say if species being taken are associated with the feature, but set netting is very low effort, covering a low area, unlikely that benchmark is being reached.	Activity not assessed because pressure on the feature is not sensitive.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Fishing - benthic trawling	Exposed	see above comment under surface and structural abrasion	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs.	Moderate to high vulnerability - CO set to recover

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 7	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Shipping	Not exposed	see above comment under surface abrasion	Very low frequency and not a known anchorage.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Fishing - benthic trawling	Not exposed	Benthic fishing occurs throughout the site, mostly by non-UK vessels (verified by Ian Rowe). Beam, otter and Nephrops trawling occurs as does some limited midwater fishing which is not regarded as resulting in exposure to any pressures above benchmarks.		Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed	as discussed in this workshop, cumulative benthic trawling is unlikely to expose feature to pressure above benchmark - very low		Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Fishing - benthic trawling	Exposed	Benthic fishing occurs throughout the site, mostly by non-UK vessels (verified by Ian Rowe). Beam, otter and Nephrops trawling occurs as does some limited midwater fishing which is not regarded as resulting in exposure to any pressures above benchmarks.	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs.	Moderate to high vulnerability - CO set to recover
NG 7	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - offshore (oil & gas platforms)	Not exposed	1 platform- abrasion from scouring around the structure will be significant but only in the immediate vicinity of the pipeline which has a very low footprint compared to area of feature, exposure not exceeding benchmark, very low		Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - benthic trawling	Exposed	Benthic fishing occurs throughout the site, mostly by non-UK vessels (verified by Ian Rowe). Beam, otter and Nephrops trawling occurs as does some limited midwater fishing which is not regarded as resulting in exposure to any pressures above benchmarks.	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs.	Moderate to high vulnerability - CO set to recover
NG 7	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - potting/creeling	Low exposure			Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - set netting	Low exposure	v little DNK activity, negligible footprint, not exposed above benchmark	Set net vessels only fish once a month. Will meet benchmark but is a low exposure.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Shipping	Not exposed	shipping is low and abrasion would only come about from anchoring which would have a low footprint compared to the area of the feature-benchmark not thought to be exceeded	Very low frequency and not a known anchorage.	Low vulnerability - CO set to maintain
NG 7	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	benthic trawling kicks up sediment which settles relatively quickly (compared to the 1 yr benchmark) &/or dispersed by tide and area may be naturally turbid so turbidity from benthic trawling is not likely to exceed ambient turbidity, exposure = NE above	Gear type will have an effect on the extent of the impact. Beam, otter and nephrops trawling occurs. Activity not assessed because pressure on feature deemed not sensitive.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Intertidal mixed sediments	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year.Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreas	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Small scale infrastructure at Hornsea and Withernsea.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year.Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreas	NS	Infrastructure - coastal defence & land claim	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. See SMP.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Litter	None proposed	NA	Tourism & recreation	Low exposure	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Low exposure	Small footprint - existing licence may not mitigate for maintenance		Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Low exposure	Small scale infrastructure at Hornsea and Withernsea	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal defence & land claim	Low exposure	See SMP.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not Exposed	See SMP.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - potting/creeling	Low exposure			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Intertidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - recreational	Low exposure			Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - set netting	Low exposure	MSC Seabass fishery at Hornsea	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Tourism & recreation	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L-M	Fishing - potting/creeling	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L-M	Fishing - recreational	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L-M	Fishing - set netting	Not Exposed	MSC Seabass fishery at Hornsea	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	NS	Infrastructure - coastal defence & land claim	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. See SMP.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M-H	Crab Tiling/Bait digging	Low exposure	Low exposure, below the benchmark	2-3 times per month at lowest spring tide mark, predominantly north of Harnsea. Very dynamic coast, mainly during winter.	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M-H	Tourism & recreation	Not Exposed	Activites not likely to cause this pressure		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Intertidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Crab Tiling/Bait digging	Low exposure	Low exposure, below the benchmark	2-3 times per month at lowest spring tide mark, predominantly north of Harnsea. Very dynamic coast, mainly during winter	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - cables & pipelines (Operation)	Low exposure	Assessed as below benchmark due to small footprint; uncertain exposure to future activity		Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not Exposed	Small scale infrastructure at Hornsea and Withernsea	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - coastal defence & land claim	Low exposure	See SMP.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Crab Tiling/Bait digging	Low exposure	Low exposure, below the benchmark	2-3 times per month at lowest spring tide mark, predominantly north of Harnsea. Very dynamic coast, mainly during winter	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure			Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure	MSC Seabass fishery at Hornsea	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Believed to occur at the site level but not assessed because feature is not sensitive to the activity/pressure.	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Low exposure	Low exposure, below the benchmark	2-3 times per month at lowest spring tide mark, predominantly north of Harnsea. Very dynamic coast, mainly during winter	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Believed to occur at the site level but not assessed because feature is not sensitive to the activity/pressure.	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to. Small scale infrastructure at Hornsea and Withernsea.	Believed to occur at the site level but not assessed because feature is not sensitive to the activity/pressure.	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to. See SMP.	Believed to occur at the site level but not assessed because feature is not sensitive to the activity/pressure.	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not Exposed	Sensitivity to pressure is in lower range & site is naturally very turbid - local natural features are already adapted to turbid conditions and there are few anthropogenic activities that could impact. Small scale infrastructure at Hornsea and Withernsea.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	M	Infrastructure - coastal defence & land claim	Not Exposed	Sensitivity to pressure is in lower range & site is naturally very turbid - local natural features are already adapted to turbid conditions and there are few anthropogenic activities that could impact. See SMP.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to. Small scale infrastructure at Hornsea and Withernsea.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not Exposed	Likely to be below. See SMP.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Intertidal mixed sediments	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not Exposed	Small scale infrastructure at Hornsea and Withernsea	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Intertidal mixed sediments	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	M	Infrastructure - coastal defence & land claim	Not Exposed	See SMP.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	M	Shipping	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	H	Shipping	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Introduction of light	None proposed	NA	Shipping	Not Exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Introduction of light	None proposed	NA	Tourism & recreation	Not Exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Litter	None proposed	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Litter	None proposed	NA	Tourism & recreation	Not Exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	L	Fishing - potting/creeling	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	L	Fishing - recreational	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Peat and clay exposures	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	L	Tourism & recreation	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Shipping	Not Exposed	Assumed to be not exposed as shipping does not anchor within site		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level). Seismic activity has occured within the site previously within the site for installation of pipelines, cables and to locate salt beds. Unlikely to occur close to land.	Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level). Seismic activity has occured within the site previously within the site for installation of pipelines, cables and to locate salt beds. Unlikely to occur close to land.	Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Peat and clay exposures	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not Exposed	Climate change related - outside of scope of project		Low vulnerability - CO set to maintain
NG 8	Peat and clay exposures	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	L	Shipping	Not Exposed	Climate change related - outside of scope of project		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	L	Shipping	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Introduction of light	None proposed	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Introduction of light	None proposed	NA	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS	Shipping	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Litter	None proposed	NA	Shipping	Not Exposed	Benchmark still to be set by Natural England.		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Litter	None proposed	NA	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Extraction - oil & gas	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Sabellaria spinulosa reefs	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - oil & gas	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Low exposure	Small footprint - existing licence may not mitigate for maintenance		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	H	Fishing - potting/creeling	Low exposure	Important shellfish ground but not entirely sure if potting will occur over the feature.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	H	Tourism & recreation	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Shipping	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	H	Tourism & recreation	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Operation)	Low exposure	Assessed as below benchmark due to small footprint; uncertain exposure to future activity		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Fishing - potting/creeling	Low exposure	Important shellfish ground but not entirely sure if potting will occur over the feature.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Sabellaria spinulosa reefs	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Shipping	Not Exposed	Assumed to be not exposed as shipping does not anchor within site		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Tourism & recreation	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - oil & gas	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Visual disturbance (behaviour)	None proposed	NS	Extraction - oil & gas	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Sabellaria spinulosa reefs	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS	Shipping	Not Exposed	Climate change related - outside of scope of project		Low vulnerability - CO set to maintain
NG 8	Sabellaria spinulosa reefs	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not Exposed	Climate change related - outside of scope of project		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	De-oxygenation	Compliance with WFD criteria for good status	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Yorkshire Water Services Ltd, Withernsea Outfall, Sewage disposal works, sewage discharges final/treated effluent water company, storm overflow/storm tank water company.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	De-oxygenation	Compliance with WFD criteria for good status	NS	Waste disposal - fish waste (land-based processing; processing vessels)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Introduction of light	None proposed	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Introduction of light	None proposed	NA	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	M	Shipping	Not Exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal chalk	Litter	None proposed	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Litter	None proposed	NA	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed farming discharges	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Yorkshire Water Services Ltd, Withernsea Outfall, Sewage disposal works, sewage discharges final/treated effluent water company, storm overflow/storm tank water company.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed farming discharges	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Organic enrichment	A deposit of 100gC/m2/yr	L	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed farming discharges	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Organic enrichment	A deposit of 100gC/m2/yr	L	Sewage disposal	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Yorkshire Water Services Ltd, Withernsea Outfall, Sewage disposal works, sewage discharges final/treated effluent water company, storm overflow/storm tank water company.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Organic enrichment	A deposit of 100gC/m2/yr	L	Waste disposal - fish waste (land-based processing; processing vessels)	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not Exposed	Small footprint - existing licence may not mitigate for maintenance		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal chalk	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Waste disposal - fish waste (land-based processing; processing vessels)	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Radionuclide contamination	An increase in 10 µGy/h above background level.	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed farming discharges	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	L	Fishing - potting/creeling	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	L	Fishing - set netting	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	L	Tourism & recreation	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Shipping	Not Exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal chalk	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Tourism & recreation	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Sewage disposal	Not Exposed	Because of the nature of the site (very high natural turbidity and moderate strength coastal currents) there is a high natural variation in deposition rates and therefore anthropogenic impacts are relatively minor. Yorkshire Water Services Ltd, Withernsea Outfall, Sewage disposal works, sewage discharges final/treated effluent water company, storm overflow/storm tank water company.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	L	Sewage disposal	Not Exposed	Because of the nature of the site (very high natural turbidity and moderate strength coastal currents) there is a high natural variation in deposition rates and therefore anthropogenic impacts are relatively minor. Yorkshire Water Services Ltd, Withernsea Outfall, Sewage disposal works, sewage discharges final/treated effluent water company, storm overflow/storm tank water company.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - cables & pipelines (Operation)	Not Exposed	Assessed as below benchmark due to small footprint; uncertain exposure to future activity		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Fishing - potting/creeling	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Fishing - set netting	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Shipping	Not Exposed	Assumed to be not exposed as shipping does not anchor within site		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Tourism & recreation	Not Exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal chalk	Synthetic compound contamination (inc. pesticides, antifoulants, pharmaceuticals)	Compliance with all AA EQS, conformance with PELs, EACs, ER-Ls	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed farming discharges	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Air Force Department, ordnance demolition within on-shore area, Cowden, Military practice area	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level). Seismic activity has occurred within the site previously within the site for installation of pipelines, cables and to locate salt beds. Unlikely to occur close to land.	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal chalk	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level). Seismic activity has occurred within the site previously within the site for installation of pipelines, cables and to locate salt beds. Unlikely to occur close to land.	Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not Exposed	Climate change related - outside of scope of project		Low vulnerability - CO set to maintain
NG 8	Subtidal chalk	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Shipping	Not Exposed	Climate change related - outside of scope of project		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	De-oxygenation	Compliance with WFD criteria for good status	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed farming discharges	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10μT.	NS	Infrastructure - cables & pipelines (Operation)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Introduction of light	None proposed	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal coarse sediment	Introduction of light	None proposed	NA	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Litter	None proposed	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Litter	None proposed	NA	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed farming discharges	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Extraction - oil & gas	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed farming discharges	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal coarse sediment	Organic enrichment	A deposit of 100gC/m2/yr	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed farming discharges	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Organic enrichment	A deposit of 100gC/m2/yr	NS	Sewage disposal	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Extraction - oil & gas	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Installation)	Low exposure	Also uncertain exposure to future activity. Humber Gateway OWF, cable route consented.	Future installation will include 1 cable at Westernmost rough, 1 cable at Humber gate way, 1-2 at Dogger bank, 2 or 4 at Hornsea	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Not Exposed	Small footprint - existing licence may not mitigate for maintenance	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal defence & land claim	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Infrastructure - cables & pipelines (Installation)	Low exposure	Uncertain exposure to future activity	Future installation will include 1 cable at Westernmost rough, 1 cable at Humber gate way, 1-2 at Dogger bank, 2 or 4 at Hornsea	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Radionuclide contamination	An increase in 10 µGy/h above background level.	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed farming discharges	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - potting/creeling	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Low exposure	MSC Seabass fishery at Hornsea	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Tourism & recreation	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	L-M	Infrastructure - coastal defence & land claim	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not Exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L-M	Tourism & recreation	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Sewage disposal	Not Exposed	Because of the nature of the site (very high natural turbidity and moderate strength coastal currents) there is a high natural variation in deposition rates and therefore anthropogenic impacts are relatively minor.		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Sewage disposal	Not Exposed	Because of the nature of the site (very high natural turbidity and moderate strength coastal currents) there is a high natural variation in deposition rates and therefore anthropogenic impacts are relatively minor.		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Not Exposed	Humber Gateway OWF, cable route consented.	Future installation will include 1 cable at Westernmost rough, 1 cable at Humber gate way, 1-2 at Dogger bank, 2 or 4 at Hornsea.	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Low exposure	Assessed as below benchmark due to small footprint; uncertain exposure to future activity	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - coastal defence & land claim	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Low exposure	MSC Seabass fishery at Hornsea	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not Exposed	Assumed to be not exposed as shipping does not anchor within site		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Tourism & recreation	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Synthetic compound contamination (inc. pesticides, antifoulants, pharmaceuticals)	Compliance with all AA EQS, conformance with PELs, EACs, ER-Ls	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to. 2 agriculture consent discharges, Mr J Stevenson, Low farm bradley Grimsby, Mixed farming discharge; Peter W Turner Ltd, Netherwood dairy farm Bradley, Mixed farming discharges	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - oil & gas	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to. Air Force Department, ordnance demolition within on-shore area, Cowden, Military practice area	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level). Seismic activity has occurred within the site previously within the site for installation of pipelines, cables and to locate salt beds. Unlikely to occur close to land.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Extraction - oil & gas	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level). Seismic activity has occurred within the site previously within the site for installation of pipelines, cables and to locate salt beds. Unlikely to occur close to land.	Low vulnerability - CO set to maintain

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NG 8	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not Exposed	Sensitivity to pressure is in lower range & site is naturally very turbid - local natural features are already adapted to turbid conditions and there are few anthropogenic activities that could impact	Future installation will include 1 cable at Westernmost rough, 1 cable at Humber gate way, 1-2 at Dogger bank, 2 or 4 at Hornsea.	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal defence & land claim	Not exposed	Sensitivity to pressure is in lower range & site is naturally very turbid - local natural features are already adapted to turbid conditions and there are few anthropogenic activities that could impact	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not Exposed	Climate change related - outside of scope of project		Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not Exposed	Likely to be below	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal coarse sediment	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not Exposed	Climate change related - outside of scope of project		Low vulnerability - CO set to maintain
NG 8	Subtidal sand	De-oxygenation	Compliance with WFD criteria for good status	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to. SSE Hornsea Ltd, trade discharges unspecified.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	De-oxygenation	Compliance with WFD criteria for good status	NS	Waste disposal - fish waste (land-based processing; processing vessels)	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal sand	Introduction of light	None proposed	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Introduction of light	None proposed	NA	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Litter	None proposed	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Litter	None proposed	NA	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. SSE Hornsea Ltd, trade discharges unspecified.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. SSE Hornsea Ltd, trade discharges unspecified.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Organic enrichment	A deposit of 100gC/m2/yr	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. SSE Hornsea Ltd, trade discharges unspecified.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Organic enrichment	A deposit of 100gC/m2/yr	NS	Waste disposal - fish waste (land-based processing; processing vessels)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal sand	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal defence & land claim	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Waste disposal - fish waste (land-based processing; processing vessels)	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Radionuclide contamination	An increase in 10 µGy/h above background level.	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. SSE Hornsea Ltd, trade discharges unspecified.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - potting/creeling	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Tourism & recreation	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	L-M	Infrastructure - coastal defence & land claim	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Shipping	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Tourism & recreation	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - coastal defence & land claim	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - potting/creeling	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - set netting	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Shipping	Not Exposed	Assumed to be not exposed as shipping does not anchor within site		Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Tourism & recreation	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal sand	Synthetic compound contamination (inc. pesticides, antifoulants, pharmaceuticals)	Compliance with all AA EQS, conformance with PELs, EACs, ER-Ls	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to. SSE Hornsea Ltd, trade discharges unspecified.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not Exposed			Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level). Seismic activity has occurred within the site previously within the site for installation of pipelines, cables and to locate salt beds. Unlikely to occur close to land.	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level). Seismic activity has occured within the site previously within the site for installation of pipelines, cables and to locate salt beds. Unlikely to occur close to land.	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal defence & land claim	Not Exposed	Sensitivity to pressure is in lower range & site is naturally very turbid - local natural features are already adapted to turbid conditions and there are few anthropogenic activities that could impact	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not Exposed	Climate change related - outside of scope of project		Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Infrastructure - coastal defence & land claim	Not Exposed	Likely to be below	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sand	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not Exposed	Climate change related - outside of scope of project		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal sands and gravels	De-oxygenation	Compliance with WFD criteria for good status	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Mixed farming discharge, Mr J Stevenson, Low farm Bradley, Grimsby.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	De-oxygenation	Compliance with WFD criteria for good status	NS	Waste disposal - fish waste (land-based processing; processing vessels)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10µT.	NS	Infrastructure - cables & pipelines (Operation)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Introduction of light	None proposed	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Introduction of light	None proposed	NA	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Litter	None proposed	NA	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Litter	None proposed	NA	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal sands and gravels	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to. Mixed farming discharge, Mr J Stevenson, Low farm Bradley, Grimsby.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Extraction - oil & gas	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to. Mixed farming discharge, Mr J Stevenson, Low farm Bradley, Grimsby.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Organic enrichment	A deposit of 100gC/m2/yr	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to. Mixed farming discharge, Mr J Stevenson, Low farm Bradley, Grimsby.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Organic enrichment	A deposit of 100gC/m2/yr	NS	Waste disposal - fish waste (land-based processing; processing vessels)	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not Exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Extraction - oil & gas	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Not exposed	Small footprint - existing licence may not mitigate for maintenance	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Waste disposal - fish waste (land-based processing; processing vessels)	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Radionuclide contamination	An increase in 10 µGy/h above background level.	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Mixed farming discharge, Mr J Stevenson, Low farm Bradley, Grimsby.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - potting/creeling	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Tourism & recreation	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - set netting	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L-M	Tourism & recreation	Not Exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Not Exposed	Assessed as below benchmark due to small footprint; uncertain exposure to future activity	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not Exposed	Assumed to be not exposed as shipping does not anchor within site	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Tourism & recreation	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Synthetic compound contamination (inc. pesticides, antifoulants, pharmaceuticals)	Compliance with all AA EQS, conformance with PELs, EACs, ER-Ls	NS	Industrial & agricultural liquid discharges	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Mixed farming discharge, Mr J Stevenson, Low farm Bradley, Grimsby.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because the feature is not sensitive to the pressures.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - oil & gas	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level). Seismic activity has occured within the site previously within the site for installation of pipelines, cables and to locate salt beds. Unlikely to occur close to land.	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Extraction - oil & gas	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 8	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level). Seismic activity has occurred within the site previously within the site for installation of pipelines, cables and to locate salt beds. Unlikely to occur close to land.	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not Exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not Exposed	Climate change related - outside of scope of project	Activity not assessed because the feature is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 8	Subtidal sands and gravels	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not Exposed	Climate change related - outside of scope of project	Activity not assessed because the feature is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed	Anchoring in the area, no significant pathway		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 9	Subtidal coarse sediment	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Industrial & agricultural liquid discharges	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Ciba-Geigy Ltd Pyewipe, Chemicals, miscellaneous discharges, surface water	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Garth Villas, sewage discharges, final treated effluent.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Organic enrichment	A deposit of 100gC/m2/yr	NS	Industrial & agricultural liquid discharges	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Ciba-Geigy Ltd Pyewipe, Chemicals, miscellaneous discharges, surface water	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Organic enrichment	A deposit of 100gC/m2/yr	NS	Sewage disposal	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Garth Villas, sewage discharges, final treated effluent.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Extraction - oil & gas	Not Exposed	Unsure how this pressure relates to oil and gas extraction. TCE gas storage lease, Rough production platform, Rough AD offshore platform, Rough AP offshore platform, Rough BD47-8-AD offshore platform, 47-8-AP offshore platform, 47-3B-BD offshore platform, 47-3B-BP offshore platform,	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Installation)	Not Exposed	likely to be a small footprint - advice is that is could be mitigated (refer to guidance)	Future cable installation at this site, new offshore renewables. Installation will be covered by the EIA process and mitigation made. Area of search has a large footprint but the actual cables will only cover a small footprint.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (operation)	Not Exposed	Under FEPA - often the maintenance is not part of the original licence, therefore it is not mitigated, under new ML may be. however, still a small footprint, so low		Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - offshore (oil & gas platforms)	Not Exposed	Scour, accumulation, but a tiny footprint.		Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Waste disposal - munitions (chemical & conventional)	Not Exposed	Possible disposal? Ciba-Geigy Chemicals Ltd, discharge is miscellaneous surface water	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Infrastructure - cables & pipelines (Installation)	Not Exposed	Exisiting cabling small footprint in relation to the feature. Advice is that future cable can be mitigated	Future cable installation at this site, new offshore renewables. Installation will be covered by the EIA process and mitigation made. Area of search has a large footprint but the actual cables will only cover a small footprint.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 9	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - benthic trawling	Exposed	H/M - but will vary depending on gear type - higher= beaming/scalloping; lower = otter trawl etc.	All types of benthic trawling occur over feature, beam, scallop dredging, too many to define. Further discussions to be had about the specific gear types and the intensity.	Moderate to high vulnerability - CO set to recover
NG 9	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - pelagic trawling	Not exposed	ne (targeted)		Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - potting/creeling	Low exposure	low	Likely below benchmark because of the frequency of the activity.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - recreational	Not Exposed	Low/ low level - targetting specific things so depends if they are specific to that feature		Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Not Exposed	Low		Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 9	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to. Diving and water sports.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Exposed	H - Some fishing activity is lower than others . i.e. Otter,etc lighter gears could be OK	All types of benthic trawling occur over feature, beam, scallop dredging, too many to define. Further discussions to be had about the specific gear types and the intensity.	Moderate to high vulnerability - CO set to recover
NG 9	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not Exposed	Low - anchoring, but small footprint.	Very low intensity of shipping and not likely to be anchoring.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not Exposed	Due to the nature of the area, assume sensitivity is low	All types of benthic trawling occur over feature, beam, scallop dredging, too many to define. Further discussions to be had about the specific gear types and the intensity.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Sewage disposal	Not Exposed	East Riding of Yorkshire Council, sewage discharge (Garth Villas), Roos drain, final/treated effluent not water company	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not Exposed		All types of benthic trawling occur over feature, beam, scallop dredging, too many to define. Further discussions to be had about the specific gear types and the intensity.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Sewage disposal	Not Exposed	East Riding of Yorkshire Council, sewage discharge (Garth Villas), Roos drain, final/treated effluent not water company	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Fishing - benthic trawling	Exposed	H - Some fishing activity is much lower than others . i.e. Otter,etc lighter gears could be OK	All types of benthic trawling occur over feature, beam, scallop dredging, too many to define. Further discussions to be had about the specific gear types and the intensity.	Moderate to high vulnerability - CO set to recover

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 9	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Not Exposed	Low, small footprint, mitigation under EIA	Future cable installation at this site, new offshore renewables. Installation will be covered by the EIA process and mitigation made. Area of search has a large footprint but the actual cables will only cover a small footprint.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (operation)	Low exposure	low exposure because of the footprint. Existing may not have been mitigated.	Small footprint, irregular activities.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - offshore (oil & gas platforms)	Low exposure	Low		Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Exposed	H overall but there is a wide range of sensitivities to trawling - see SNCB guidance, impacts range from M-H/ Dredging/beaming H not compatible, trawling trawling - might be able to continue subject to management and further consideration of specific gear.	All types of benthic trawling occur over feature, beam, scallop dredging, too many to define. Further discussions to be had about the specific gear types and the intensity.	Moderate to high vulnerability - CO set to recover
NG 9	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure	Low- Habitat not considered to be sensitive, based on expert judgement- Low	Likely below benchmark because of the frequency of the activity.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Low exposure	Low - As above		Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not Exposed	Anchoring - Super tankers anchor near the Rough gas field - relatively small footprint, but could be exposed over a wide area	Very low intensity of shipping and not likely to be anchoring.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - offshore (oil & gas platforms)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Pipelines over feature.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Introduction of light	None proposed	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Diving, wildlife enthusiasts and water sports occurring over the feature.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 9	Subtidal mixed sediments	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Not exposed	NE feedback: "• Introduction of non-native species: In relation to shipping, the context of this was assessed by the review panel in relation to the exchange of ballast water. In general, the principle was taken that this pressure, when associated with shipping activities, should be 'not exposed'."		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Litter	None proposed	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Litter	None proposed	NA	Tourism & recreation	Not exposed	Diving, wildlife enthusiasts and water sports occurring over the feature.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Extraction - oil & gas	Not exposed	Several wellheads present over feature, and TCE gas storage lease over feature.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - oil & gas	Not exposed	Several wellheads present over feature, and TCE gas storage lease over feature.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Very small footprint and will be mitigated under the EIA process.	Future cable installation at this site, new offshore renewables. Installation will be covered by the EIA process and mitigation made. Area of search has a large footprint but the actual cables will only cover a small footprint.	Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed	Pipelines over feature.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Very small footprint and will be mitigated under the EIA process.	Future cable installation at this site, new offshore renewables. Installation will be covered by the EIA process and mitigation made. Area of search has a large footprint but the actual cables will only cover a small footprint.	Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - benthic trawling	Exposed	H/M - but will vary depending on gear type - higher= beaming/scalloping; lower = otter trawl etc.	All types of benthic trawling occur over feature, beam, scallop dredging, too many to define. Further discussions to be had about the specific gear types and the intensity.	Moderate to high vulnerability - CO set to recover
NG 9	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - pelagic trawling	Not exposed	ne (targeted)		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - potting/creeling	Low exposure			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 9	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - recreational	Not exposed	Activity very targeted.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Tourism & recreation	Not exposed	Diving, wildlife enthusiasts and water sports occurring over the feature. Activity is very low and unlikely to be above the benchmark		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - benthic trawling	Exposed	H/M - but will vary depending on gear type - higher= beaming/scalloping; lower = otter trawl etc.	All types of benthic trawling occur over feature, beam, scallop dredging, too many to define. Further discussions to be had about the specific gear types and the intensity.	Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 9	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Fishing - benthic trawling	Exposed	H - Some fishing activity is lower than others . i.e. Otter,etc lighter gears could be OK	All types of benthic trawling occur over feature, beam, scallop dredging, too many to define. Further discussions to be had about the specific gear types and the intensity.	Moderate to high vulnerability - CO set to recover
NG 9	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Tourism & recreation	Not exposed	Diving, wildlife enthusiasts and water sports occurring over the feature. Activity is very low and unlikely to be above the benchmark.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Very small footprint and will be mitigated under the EIA process.	Future cable installation at this site, new offshore renewables. Installation will be covered by the EIA process and mitigation made. Area of search has a large footprint but the actual cables will only cover a small footprint.	Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Operation)	Low exposure	Pipelines over feature.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - benthic trawling	Exposed	H overall but there is a wide range of sensitivities to trawling - see SNCB guidance, impacts range from M-H/ Dredging/beaming H not compatible, trawling trawling - might be able to continue subject to management and further consideration of specific gear. Low- Habitat not considered to be sensitive, based on expert judgement- Low.	All types of benthic trawling occur over feature, beam, scallop dredging, too many to define. Further discussions to be had about the specific gear types and the intensity.	Moderate to high vulnerability - CO set to recover
NG 9	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure	Diving, wildlife enthusiasts and water sports occurring over the feature. Activity is very low and unlikely to cause significant exposure to the pressure.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - oil & gas	Not exposed	Several wellheads present over feature, and TCE gas storage lease over feature.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 9	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Surface explosions occurring immediately or near the water's surface and some submarie exercises but activities not occurring at anywhere near frequency suggested by benchmark. Feature not sensitive to pressure.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Diving, wildlife enthusiasts and water sports occurring over the feature.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Extraction - oil & gas	Not exposed	Several wellheads present over feature, and TCE gas storage lease over feature.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 9	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Pipelines over feature.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Diving, wildlife enthusiasts and water sports occurring over the feature.		Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Infrastructure - cables & pipelines (Installation)	Not exposed	Very high natural turbidity at site.	Future cable installation at this site, new offshore renewables. Installation will be covered by the EIA process and mitigation made. Area of search has a large footprint but the actual cables will only cover a small footprint.	Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 9	Subtidal mixed sediments	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10μT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year. Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreases	NS-M	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Litter	None proposed	NA	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	High energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Fishing - shellfish harvesting	Not exposed	uncertain as large parts of the site are already heavily modified. Harvest for winkles.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Infrastructure - cables & pipelines (Operation)	Not exposed	uncertain as large parts of the site are already heavily modified. Likely to be below benchmark, has a small footprint.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Infrastructure - coastal defence & land claim	Not exposed	uncertain as large parts of the site are already heavily modified	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - potting/creeling	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	High energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed	Pressure not very unlikely to be occurring at a commercial scale.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - set netting	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - shellfish harvesting	Low exposure	Very low levels occurring within the site, relatively small footprint, very unlikely to be at a commercial scale.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	NS-H	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Crab Tiling/Bait digging	Low exposure	Low - below benchmark. Small footprint.	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Tourism & recreation	Not exposed	low - below benchmark	Foot traffic is considered to be high in certain locations down the coast, however there has to be an acceptance that you cannot stop everything. Most of the site is inaccessible. Educational activities also occurring at the site.	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Crab Tiling/Bait digging	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	High energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - cables & pipelines (Operation)	Low exposure	uncertain as large parts of the site are already heavily modified. Likely to be below benchmark, has a small footprint.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - coastal defence & land claim	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Crab Tiling/Bait digging	Low exposure	low- below benchmark	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure	low- below benchmark		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure	low- below benchmark		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - shellfish harvesting	Low exposure	low- below benchmark	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure	low- below benchmark	Foot traffic is considered to be high in certain locations down the coast, however there has to be an acceptance that you cannot stop everything. Most of the site is inaccessible. Educational activities also occurring at the site.	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	High energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Hub determined that although this is in a military practice area, no activity occurs in the intertidal area.	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Low exposure	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	High energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	High energy intertidal rock	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Outfall pipe, pipsol		Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year.Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreases	NS	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Introduction of light	None proposed	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS	Shipping	Not exposed	NE have advised that: "• Introduction of non-native species: In relation to shipping, the context of this was assessed by the review panel in relation to the exchange of ballast water. In general, the principle was taken that this pressure, when associated with shipping activities, should be 'not exposed'. "		Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Litter	None proposed	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Litter	None proposed	NA	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Not exposed	Outfall pipe, pipsol		Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	NS-M	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS	Fishing - benthic trawling	Not exposed	No specific overlap with feature.	Push nets operational, licensed area.	Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	L	Fishing - benthic trawling	Not exposed	No specific overlap with feature.	Push nets operational, licensed area.	Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	L	Fishing - benthic trawling	Not exposed	No specific overlap with feature.	Push nets operational, licensed area.	Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	NS	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Outfall pipe, pipsol		Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	NS	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - benthic trawling	Not exposed	No specific overlap with feature.	Push nets operational, licensed area.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - set netting	Not exposed	Extent very restricted.		Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	No specific overlap with feature.	Push nets operational, licensed area.	Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Extent very restricted.		Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	RAF, Military practice area, Southern MDA		Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	No specific overlap with feature.	Push nets operational, licensed area.	Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Extent very restricted.		Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Outfall pipe, pipsol		Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	No specific overlap with feature.	Push nets operational, licensed area.	Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal coarse sediment	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal mud	De-oxygenation	Compliance with WFD criteria for good status	NS	Waste disposal - fish waste (land-based processing; processing vessels)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10μT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year. Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreases	M	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Litter	None proposed	NA	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal mud	Organic enrichment	A deposit of 100gC/m2/yr	NS	Waste disposal - fish waste (land-based processing; processing vessels)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Fishing - shellfish harvesting	Not exposed	uncertain as large parts of the site are already heavily modified. Harvest for winkles.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed	uncertain as large parts of the site are already heavily modified. Likely to be below benchmark, has a small footprint.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Waste disposal - fish waste (land-based processing; processing vessels)	Not exposed	uncertain as large parts of the site are already heavily modified	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - benthic trawling	Not exposed	low - below benchmark-doesnt occur in intertidal area	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - potting/creeling	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - recreational	Low exposure	low - below benchmark	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - set netting	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - shellfish harvesting	Not exposed	low - below benchmark	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Tourism & recreation	Not exposed		Foot traffic is considered to be high in certain locations down the coast, however there has to be an acceptance that you cannot stop everything. Most of the site is inaccessible. Educational activities also occurring at the site.	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Not exposed	low - below benchmark-doesnt occur in intertidal area	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - recreational	Not exposed	Pressure not very unlikely to be occurring at a commercial scale.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - set netting	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - shellfish harvesting	Low exposure	Very low levels occurring within the site, relatively small footprint, very unlikely to be at a commercial scale.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal mud	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	L	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L	Crab Tiling/Bait digging	Low exposure	Low - below benchmark. Small footprint.	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Fishing - benthic trawling	Not exposed	low - below benchmark-doesnt occur in intertidal area	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L	Tourism & recreation	Not exposed	low - below benchmark	Foot traffic is considered to be high in certain locations down the coast, however there has to be an acceptance that you cannot stop everything. Most of the site is inaccessible. Educational activities also occurring at the site.	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	L	Fishing - benthic trawling	Not exposed	low - below benchmark-doesnt occur in intertidal area	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Fishing - benthic trawling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L	Crab Tiling/Bait digging	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L	Infrastructure - cables & pipelines (Operation)	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L	Infrastructure - coastal defence & land claim	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Crab Tiling/Bait digging	Low exposure	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - benthic trawling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Hub determined that although this is in a military practice area, no activity occurs in the intertidal area.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Low exposure	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal mud	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal mud	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	M	Infrastructure - coastal defence & land claim	Not exposed	uncertain due to the heavy modification of large parts of the site	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10μT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	There are 2 telecom cables present that go to Denmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year. Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreases	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark. 1 port and 1 club present in close proximity to feature.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year. Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreases	M	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Litter	None proposed	NA	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Extraction - navigational dredging (capital, maintenance)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Navigational dredging occurs in harbour, and is strictly licensed.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal sand and muddy sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - navigational dredging (capital, maintenance)	Low exposure	uncertain as large parts of the site are already heavily modified	Navigational dredging occurs in harbour, and is strictly licensed.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Fishing - shellfish harvesting	Not exposed	uncertain as large parts of the site are already heavily modified. Harvest for winkles.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed	uncertain as large parts of the site are already heavily modified	There are 2 telecom cables present that go to Denmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark. 1 port and 1 club present in close proximity to feature.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Extraction - navigational dredging (capital, maintenance)	Low exposure	low - below benchmark	Navigational dredging occurs in harbour, and is strictly licensed.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Not exposed	low - below benchmark-doesnt occur in intertidal area	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - recreational	Low exposure	low - below benchmark	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal sand and muddy sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - shellfish harvesting	Not exposed	low - below benchmark	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Tourism & recreation	Not exposed		Foot traffic is considered to be high in certain locations down the coast, however there has to be an acceptance that you cannot stop everything. Most of the site is inaccessible. Educational activities also occurring at the site.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Not exposed	low - below benchmark-doesnt occur in intertidal area	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - recreational	Not exposed	Pressure not very unlikely to be occurring at a commercial scale.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - set netting	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - shellfish harvesting	Low exposure	Very low levels occurring within the site, relatively small footprint, very unlikely to be at a commercial scale.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal sand and muddy sand	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	L	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L	Crab Tiling/Bait digging	Low exposure	Low - below benchmark. Small footprint.	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Fishing - benthic trawling	Not exposed	low - below benchmark-doesnt occur in intertidal area	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L	Tourism & recreation	Not exposed	low - below benchmark	Foot traffic is considered to be high in certain locations down the coast, however there has to be an acceptance that you cannot stop everything. Most of the site is inaccessible. Educational activities also occurring at the site.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Extraction - navigational dredging (capital, maintenance)	not exposed	low - exposed below	Navigational dredging occurs in harbour, and is strictly licensed.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed	low - below benchmark-doesnt occur in intertidal area	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Extraction - navigational dredging (capital, maintenance)	not exposed	low- below benchmark	Navigational dredging occurs in harbour, and is strictly licensed.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed	low - below benchmark-doesnt occur in intertidal area	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Crab Tiling/Bait digging	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Extraction - navigational dredging (capital, maintenance)	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	Navigational dredging occurs in harbour, and is strictly licensed.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - cables & pipelines (Operation)	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	There are 2 telecom cables present that go to Denmark.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal sand and muddy sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark. 1 port and 1 club present in close proximity to feature.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - coastal defence & land claim	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Crab Tiling/Bait digging	Low exposure	low- below benchmark	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Fishing - benthic trawling	Not exposed	low - below benchmark-doesnt occur in intertidal area	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Fishing - potting/creeling	Low exposure	low- below benchmark		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Fishing - set netting	Low exposure	low- below benchmark		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Fishing - shellfish harvesting	Low exposure	low- below benchmark	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Tourism & recreation	Low exposure	low- below benchmark	Foot traffic is considered to be high in certain locations down the coast, however there has to be an acceptance that you cannot stop everything. Most of the site is inaccessible. Educational activities also occurring at the site.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - navigational dredging (capital, maintenance)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Navigational dredging occurs in harbour, and is strictly licensed.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Hub determined that although this is in a military practice area, no activity occurs in the intertidal area.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Low exposure	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Extraction - navigational dredging (capital, maintenance)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Navigational dredging occurs in harbour, and is strictly licensed.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	There are 2 telecom cables present that go to Denmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - navigational dredging (capital, maintenance)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Navigational dredging occurs in harbour, and is strictly licensed.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Push nets operational in intertidal areas, licensed activity, likely at a level below the benchmark.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Extraction - navigational dredging (capital, maintenance)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Navigational dredging occurs in harbour, and is strictly licensed.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal sand and muddy sand	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	M	Extraction - navigational dredging (capital, maintenance)	not exposed	uncertain due to the heavy modification of large parts of the site	Navigational dredging occurs in harbour, and is strictly licensed.	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark. 1 port and 1 club present in close proximity to feature.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Intertidal sand and muddy sand	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	M	Infrastructure - coastal defence & land claim	Not exposed	uncertain due to the heavy modification of large parts of the site	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present	Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year. Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreases	L	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Introduction of light	None proposed	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal under boulder communities	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	M	Shipping	Not exposed	NE have advised that: "• Introduction of non-native species: In relation to shipping, the context of this was assessed by the review panel in relation to the exchange of ballast water. In general, the principle was taken that this pressure, when associated with shipping activities, should be 'not exposed'. "		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Litter	None proposed	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Litter	None proposed	NA	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Fishing - shellfish harvesting	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS	Tourism & recreation	Not exposed	No likely to occur at a commercial scale.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed	Pressure not very unlikely to be occurring at a commercial scale.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - shellfish harvesting	Low exposure	Very low levels occurring within the site, relatively small footprint, very unlikely to be at a commercial scale.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	L	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal under boulder communities	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - shellfish harvesting	Low exposure	low- below benchmark		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure	Possible very low exposure to this pressure, but limited relative to extent of feature.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	RAF, Military practice area, Southern MDA		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Intertidal under boulder communities	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Visual disturbance (behaviour)	None proposed	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NA	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	L	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not exposed			Low vulnerability - CO set to maintain
NG 10	Intertidal under boulder communities	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10μT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year. Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreases	M	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Low energy intertidal rock	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Litter	None proposed	NA	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Fishing - shellfish harvesting	Not exposed	uncertain as large parts of the site are already heavily modified. Harvest for winkles.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed	uncertain as large parts of the site are already heavily modified. Likely to be below benchmark, has a small footprint.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Low energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - potting/creeling	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed	Pressure not very unlikely to be occurring at a commercial scale.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - set netting	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - shellfish harvesting	Low exposure	Very low levels occurring within the site, relatively small footprint, very unlikely to be at a commercial scale.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	NS-L	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Crab Tiling/Bait digging	Low exposure	Low - below benchmark. Small footprint.	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Tourism & recreation	Not exposed	low - below benchmark	Foot traffic is considered to be high in certain locations down the coast, however there has to be an acceptance that you cannot stop everything. Most of the site is inaccessible. Educational activities also occurring at the site.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Low energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Crab Tiling/Bait digging	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - cables & pipelines (Operation)	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - coastal defence & land claim	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M-H	Crab Tiling/Bait digging	Low exposure	low- below benchmark	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M-H	Fishing - potting/creeling	Low exposure	low- below benchmark		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M-H	Fishing - set netting	Low exposure	low- below benchmark		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M-H	Fishing - shellfish harvesting	Low exposure	low- below benchmark	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M-H	Tourism & recreation	Low exposure	low- below benchmark	Foot traffic is considered to be high in certain locations down the coast, however there has to be an acceptance that you cannot stop everything. Most of the site is inaccessible. Educational activities also occurring at the site.	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Low energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Hub determined that although this is in a military practice area, no activity occurs in the intertidal area.	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Low exposure	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Low energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Low energy intertidal rock	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-H	Infrastructure - coastal defence & land claim	Not exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10μT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year. Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreases	L-M	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Litter	None proposed	NA	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Moderate energy intertidal rock	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Organic enrichment	A deposit of 100gC/m2/yr	NS	Sewage disposal	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Fishing - shellfish harvesting	Not exposed	uncertain as large parts of the site are already heavily modified. Harvest for winkles.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Infrastructure - cables & pipelines (Operation)	Not exposed	uncertain as large parts of the site are already heavily modified. Likely to be below benchmark, has a small footprint.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Infrastructure - coastal defence & land claim	Not exposed	uncertain as large parts of the site are already heavily modified	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Moderate energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - potting/creeling	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed	Pressure not very unlikely to be occurring at a commercial scale.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - set netting	Low exposure	low - below benchmark		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - shellfish harvesting	Low exposure	Very low levels occurring within the site, relatively small footprint, very unlikely to be at a commercial scale.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	NS-L	Infrastructure - coastal defence & land claim	Not exposed	uncertain: large parts of the sites are heavily modified and will be maintained in current condition.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Crab Tiling/Bait digging	Low exposure	Low - below benchmark. Small footprint.	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Moderate energy intertidal rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Tourism & recreation	Not exposed	low - below benchmark	Foot traffic is considered to be high in certain locations down the coast, however there has to be an acceptance that you cannot stop everything. Most of the site is inaccessible. Educational activities also occurring at the site.	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	L-H	Sewage disposal	Not exposed		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-L	Sewage disposal	Low exposure		Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Crab Tiling/Bait digging	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - cables & pipelines (Operation)	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - coastal defence & land claim	Low exposure	uncertain due to heavy modification of parts of the site; other activities cause low levels of this pressure relative to the benchmark	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Crab Tiling/Bait digging	Low exposure	low- below benchmark	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. I	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure	low- below benchmark		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure	low- below benchmark		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - shellfish harvesting	Low exposure	low- below benchmark	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Moderate energy intertidal rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure	low- below benchmark	Foot traffic is considered to be high in certain locations down the coast, however there has to be an acceptance that you cannot stop everything. Most of the site is inaccessible. Educational activities also occurring at the site.	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Hub determined that although this is in a military practice area, no activity occurs in the intertidal area.	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Low exposure	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Hub determined that although it is mostly bait digging that occurs (big beds during certain tides), and very little crab tiling (only in unknown locations), it is heavily policed and the relative footprint to the feature is small and therefore it is unlikely that the exposure will be above the benchmark. 1	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 10	Moderate energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - shellfish harvesting	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.		Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal defence & land claim	Not exposed	Activity not assessed because pressure caused on the feature is considered to be not sensitive or not applicable.	Activity specific overlap with the feature was considered at a precautionary level at hubs for groundtruthing, in the absence of full consideration of the activity over the feature (consideration was done at a site level).	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-M	Infrastructure - coastal defence & land claim	Not exposed		Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain
NG 10	Moderate energy intertidal rock	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS-M	Infrastructure - coastal defence & land claim	Not exposed	uncertain due to the heavy modification of large parts of the site	Local changes of emergence required, they are required and not likely to be taken away. GIS data does not show any coastal defences present.	Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Death or injury by collision	0.1% of tidal volume on average tide, passing through artificial structure	NS	Military activities	Not exposed	Not exposed - military manoeuvres but no live firing		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Death or injury by collision	0.1% of tidal volume on average tide, passing through artificial structure	NS	Seismic survey (military, exploration, construction)	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Arctica islandica	Death or injury by collision	0.1% of tidal volume on average tide, passing through artificial structure	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Death or injury by collision	0.1% of tidal volume on average tide, passing through artificial structure	NS	Tourism & recreation	Not exposed	No overlap of activity and feature		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Introduction of light	None proposed	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	No overlap of activity and feature		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Litter	None proposed	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Litter	None proposed	NA	Tourism & recreation	Not exposed	No overlap of activity and feature		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	H	Fishing - potting/creeling	Not exposed	Max intensity of potting activity is 132 hours over four years		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	H	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	H	Fishing - set netting	Not exposed	Set netting activity is low at 77 hours over a four year period		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	H	Tourism & recreation	Not exposed	No overlap of activity and feature		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Max intensity of potting activity is 132 hours over four years		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Arctica islandica	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Set netting activity is low at 77 hours over a four year period		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Tourism & recreation	Not exposed	No overlap of activity and feature		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - potting/creeling	Low exposure	Max intensity of potting activity is 132 hours over four years		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - set netting	Low exposure	Set netting activity is low at 77 hours over a four year period		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Tourism & recreation	Not exposed	No overlap of activity and feature		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Temperature changes - regional/national	1.5-4 oC increase by 2100	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Max intensity of potting activity is 132 hours over four years		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Set netting activity is low at 77 hours over a four year period		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not exposed - military manoeuvres but no live firing		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Low exposure	Very low frequency of activity, may not actually recur at site		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	No overlap of activity and feature		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Fishing - potting/creeling	Not exposed	Max intensity of potting activity is 132 hours over four years		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Fishing - set netting	Not exposed	Set netting activity is low at 77 hours over a four year period		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Seismic survey (military, exploration, construction)	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Tourism & recreation	Not exposed	No overlap of activity and feature		Low vulnerability - CO set to maintain
NG 11	Arctica islandica	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed	N/A - no significant pathway	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M-H	Extraction - quarrying	Not exposed	N/A	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - potting/creeling	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	High energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - recreational	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - set netting	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - potting/creeling	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - set netting	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Tourism & recreation	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Shipping	Not exposed	Not exposed - No anchoring known to take place	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Tourism & recreation	Not exposed	Anchoring - High impact but very small footprint - overall low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	High energy circalittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M-H	Fishing - potting/creeling	Low exposure	Further discussion needed - Potentially above benchmark due to the intensity of potting at the site, which covers a large footprint	Natural limit to gear type. Permit fishery, pots wrapped in rubber and protect, may help with abrasion. Below benchmark if activity continues at <u>current level</u> .	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M-H	Fishing - set netting	Low exposure	High impact over a small footprint		Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M-H	Shipping	Not exposed	Not exposed - No anchoring known to take place (emergency anchoring)		Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M-H	Tourism & recreation	Low exposure	Anchoring - High impact but very small footprint - overall low		Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-H	Extraction - quarrying	Not exposed	N/A	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Water flow (tidal & ocean current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Water flow (tidal & ocean current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	High energy circalittoral rock	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	High energy infralittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-L	Shipping	Not exposed	No significant pathway	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Below benchmark	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Organic enrichment	A deposit of 100gC/m2/yr	NS	Sewage disposal	Not exposed	below benchmark	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (operation)	Not exposed	Outfall pipeline , Pipsol data from 2008. Small footprint.	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Some infrastructure in the area, relatively small footprint	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal defence & land claim	Not exposed	Low- small footprint SMP - HTL at Staithes and Runswick Village. Potential change in sediment flow - further consideration necessary	Staithes and Runswick have coastal defences but small footprint. Shoreline management plan needs to be taken into account.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Physical loss (to land or freshwater habitat)	Permanent loss of existing saline habitat	H	Infrastructure - coastal defence & land claim	Not exposed	N/A (more applicable for intertidal?)	Staithes and Runswick have coastal defences but small footprint. Shoreline management plan needs to be taken into account.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Extraction - quarrying	Not exposed	Potash mine in the vicinity of this site - mining occurs below the seabed, therefore N/A	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - potting/creeling	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - recreational	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - set netting	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - potting/creeling	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - set netting	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Tourism & recreation	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Salinity changes - local	Increase from 35 to 38 units for one year or Decrease in salinity by 4-10 units for a year	L-M	Infrastructure - coastal defence & land claim	Not exposed	below the benchmark	Staithes and Runswick have coastal defences but small footprint. Shoreline management plan needs to be taken into account	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M	Shipping	Not exposed	Not exposed - No anchoring known to take place	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Not exposed	Anchoring - High impact but very small footprint - overall low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Sewage disposal	Not exposed	Low level - small footprint	Consents from EA provide mitigation for any effects that could be caused. Unlikely to meet benchmark of pressure.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Sewage disposal	Not exposed	Low level - small footprint	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	High energy infralittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - cables & pipelines (operation)	Not exposed	Outfall pipeline , Pipsol data from 2008. Small footprint.	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Not exposed	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - coastal defence & land claim	Not exposed	Not exposed	Staithe and Runswick have coastal defences but small footprint. Shoreline management plan needs to be taken into account	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure	Further discussion needed - Potentially above the benchmark due to the intensity of potting at the site, which covers a large footprint	Natural limit to gear type. Permit fishery, pots wrapped in rubber and protect, may help with abrasion. Below benchmark if activity continues at current level	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure	low- small footprint		Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed	Not exposed - No anchoring known to take place		Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure	Anchoring - High impact but very small footprint - overall low		Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	L-M	Extraction - quarrying	Not exposed	not exposed	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	L-M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	below the benchmark	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	L-M	Infrastructure - coastal defence & land claim	Not exposed	below the benchmark	Staithe and Runswick have coastal defences but small footprint. Shoreline management plan needs to be taken into account	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Water flow (tidal & ocean current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Water flow (tidal & ocean current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	High energy infralittoral rock	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	High energy infralittoral rock	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Not exposed	N/A no significant pathway	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M-H	Extraction - quarrying	Not exposed	N/A	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Fishing - recreational	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Fishing - set netting	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - recreational	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

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NG 11	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Tourism & recreation	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Shipping	Not exposed	Not exposed - No anchoring known to take place (emergency anchoring)	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Tourism & recreation	Not exposed	Anchoring - High impact but very small footprint - overall low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Fishing - potting/creeling	Low exposure	Further discussion needed - Potentially above benchmark due to the intensity of potting at the site, which covers a large footprint	Natural limit to gear type. Permit fishery, pots wrapped in rubber and protect, may help with abrasion. Below benchmark if activity continues at current level.	Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Fishing - set netting	Low exposure	High impact over a small footprint		Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Shipping	Not exposed	Not exposed - No anchoring known to take place (emergency anchoring)		Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Tourism & recreation	Low exposure	Anchoring - High impact but very small footprint - overall low		Low vulnerability - CO set to maintain
NG 11	Moderate energy circalittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-H	Extraction - quarrying	Not exposed	N/A	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Moderate energy infralittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	M	Shipping	Not exposed	N/A - no exposure pathway	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Extraction - quarrying	Not exposed	N/A - Potash mine below the surface	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - potting/creeling	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - recreational	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - set netting	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - potting/creeling	Not exposed	low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed	low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - set netting	Not exposed	low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Tourism & recreation	Not exposed	low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M	Shipping	Not exposed	Not exposed - No anchoring known to take place	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Not exposed	Anchoring - High impact but very small footprint - overall low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure	Further discussion needed - Potentially above benchmark due to the intensity of potting at the site, which covers a large footprint	Natural limit to gear type. Permit fishery, pots wrapped in rubber and protect, may help with abrasion. Below benchmark if activity continues at current level.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Low exposure	low- small footprint (high impact over very small areas)		Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed	Not exposed - No anchoring known to take place		Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure	Anchoring - High impact but very small footprint - overall low		Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	L-M	Extraction - quarrying	Not exposed	N/A	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Moderate energy infralittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	L-M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Water flow (tidal & ocean current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Water flow (tidal & ocean current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Moderate energy infralittoral rock	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal defence & land claim	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed	The shipping in this area is highly unlikely to create a pathway for the introduction of invasive species	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done. Unsure of exact location, therefore a precautionary assessment has been made assuming the worst possible benchmark	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done. Unsure of exact location, therefore a precautionary assessment has been made assuming the worst possible benchmark	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Extraction - quarrying	Not exposed	N/A	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Not exposed	Low		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - recreational	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed	Not exposed - No anchoring known to take place (emergency anchoring)	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	L-M	Tourism & recreation	Not exposed	Anchoring - High impact but very small footprint - overall low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done. Unsure of exact location, therefore a precautionary assessment has been made assuming the worst possible benchmark	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done. Unsure of exact location, therefore a precautionary assessment has been made assuming the worst possible benchmark	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done. Unsure of exact location, therefore a precautionary assessment has been made assuming the worst possible benchmark	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure	There is potential for damage from dragged anchors but, assuming they are set correctly, demersal static gears are not considered to have a significant impact	Natural limit to gear type. Permit fishery, pots wrapped in rubber and protect, may help with abrasion. Below benchmark if activity continues at current level	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Low exposure	There is potential for damage from dragged anchors but, assuming they are set correctly, demersal static gears are not considered to have a significant impact		Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - navigational dredging (capital, maintenance)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - quarrying	Not exposed	N/A	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Water flow (tidal & ocean current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Extraction - navigational dredging (capital, maintenance)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal coarse sediment	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Extraction - navigational dredging (capital, maintenance)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Not exposed	The shipping in this area is highly unlikely to create a pathway for the introduction of invasive species	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Extraction - quarrying	Not exposed	N/A - Potash mining - takes place beneath the seabed	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - potting/creeling	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - recreational	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - set netting	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - potting/creeling	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - recreational	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - set netting	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Tourism & recreation	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	H	Shipping	Not exposed	Not exposed - No anchoring known to take place	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	H	Tourism & recreation	Not exposed	Anchoring - High impact but very small footprint - overall low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Extraction - navigational dredging (capital, maintenance)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Not exposed	This habitat is not considered to be sensitive to the type of impacts caused by static demersal gears (surface abrasion)	Natural limit to gear type. Permit fishery, pots wrapped in rubber and protect, may help with abrasion. Below benchmark if activity continues at current level.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Not exposed	This habitat is not considered to be sensitive to the type of impacts caused by static demersal gears (surface abrasion)		Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed	Not exposed - No anchoring known to take place (emergency anchoring)		Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Not exposed	Anchoring - High impact but very small footprint - overall low		Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Extraction - quarrying	Not exposed	Subsidence from the potash mine could cause changes in water clarity, but this is not known to have occurred.	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Subtidal mixed sediments	Water flow (tidal & ocean current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done.	Low vulnerability - CO set to maintain
NG 11	Subtidal mixed sediments	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS-L	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed	The shipping in this area is highly unlikely to create a pathway for the introduction of invasive species	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done. Unsure of exact location, therefore a precautionary assessment has been made assuming the worst possible benchmark	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (operation)	Not exposed	Outfall pipeline , Pipsol data from 2008. Small footprint.	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done. Unsure of exact location, therefore a precautionary assessment has been made assuming the worst possible benchmark	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Extraction - quarrying	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - potting/creeling	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - recreational	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Not exposed	Low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Shipping	Not exposed	Not exposed - No anchoring known to take place (emergency anchoring)	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Tourism & recreation	Not exposed	Anchoring - High impact but very small footprint - overall low	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done. Unsure of exact location, therefore a precautionary assessment has been made assuming the worst possible benchmark	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done. Unsure of exact location, therefore a precautionary assessment has been made assuming the worst possible benchmark	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done. Unsure of exact location, therefore a precautionary assessment has been made assuming the worst possible benchmark	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (operation)	Not exposed	Outfall pipeline , Pipsol data from 2008. Small footprint.	Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - potting/creeling	Not exposed	There is potential for damage from dragged anchors but, assuming they are set correctly, demersal static gears are not considered to have a significant impact	Natural limit to gear type. Permit fishery, pots wrapped in rubber and protect, may help with abrasion. Below benchmark if activity continues at current level	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - set netting	Not exposed	There is potential for damage from dragged anchors but, assuming they are set correctly, demersal static gears are not considered to have a significant impact		Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Shipping	Not exposed	Not exposed - No anchoring known to take place (emergency anchoring)		Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Tourism & recreation	Not exposed	Anchoring - High impact but very small footprint - overall low		Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - navigational dredging (capital, maintenance)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - quarrying	Not exposed	N/A	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 11	Subtidal sand	Water flow (tidal & ocean current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Extraction - navigational dredging (capital, maintenance)	Not exposed		Staithes, small footprint infrequently done. Unsure of exact location, therefore a precautionary assessment has been made assuming the worst possible benchmark.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Water flow (tidal & ocean current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed		Feature specific overlap with activity occurring was groundtruthed at a precautionary level, given data was not always available to assess the activity occurring directly over the feature.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Extraction - navigational dredging (capital, maintenance)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG 11	Subtidal sand	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Activity not assessed because it is not sensitive to the pressures.	Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Not exposed	Level of shipping in the area is unknown but anchoring is thought to be the only activity to result in exposure to this pressure, footprint likely to be very low compared to size of feature = ne	No known anchoring points.	Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Infrastructure - cables & pipelines (operation)	Not exposed	3 UKCPC telecom cables cross the feature, running SW to NE, any change in folk class would be restricted to a relatively small area immediately adjacent to the cables. Footprint is very small compared to feature size, exposure below benchmark = ne		Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Fishing - benthic trawling	Exposed	Benthic trawling is not a very selective fishing method (compared to static and pelagic fishing); species in and on the seafloor can be taken. Benthic trawling can remove many species & it is therefore likely that it removes species which may be important		Moderate to high vulnerability - CO set to recover
NG12	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Fishing - potting/creeling	Low exposure	VMS shows some low effort potting over a small area of feature, supported by fishermap info. Ian Rowe - 3 to 4 UK vessels potting on ridge in the centre of the site running NE/SW & likely to increase in the future but for now exposure would not exceed ben	Below benchmark at the current level of activity, 3 vessels, low sensitivity according to guidance. More information required about gear types and management would be required if activity levels increase.	Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Fishing - recreational	Not exposed		Level of recreational fishing would not meet benchmark.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG12	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Low exposure	benthic trawling is moderate to high over feature (see above comment) and this activity's target species can potentially be species closely associated with the feature which may be important for its long/short term condition. Need further information on	Target species are likely to be gadoids, cod and haddock. Need further clarification on the biology of the species and its association with the feature.	Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Low exposure	exposure not regarded as currently exceeding benchmark = ne (see previous comment on potting/creeling	Below benchmark at the current level of activity, 3 vessels, low sensitivity according to guidance. More information required about gear types and management would be required if activity levels increase.	Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - recreational	Not exposed	charter boats pass through the site & possibly recreational fishing is occurring, line fishing is unlikely to expose feature to pressure above benchmark = ne	Level of recreational fishing would not meet benchmark.	Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Fishing - benthic trawling	Exposed	Feature is subject to demersal, including beam & otter trawling and limited potting, seine, nephrops & possibly gillnetting (VMS cannot confirm if gillnetting is occurring over or just near the feature). Non UK vessels fish at a cumulatively moderate eff	Beam and otter trawling occurring (GIS). More discussions required about what gear types are used.	Moderate to high vulnerability - CO set to recover
NG12	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Shipping	Not exposed	Level of shipping in the area is unknown but anchoring is thought to be the only activity to result in exposure to this pressure, footprint likely to be v low compared to size of feature = ne	No known anchoring points.	Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Tourism & recreation	Not exposed	Fishermap shows charter boating may occur over a small portion of the feature anchoring is the only activity likely to result in this pressure - but very low footprint compared to feature size - exposure not above benchmark -ne	Only anchoring but at very low exposure.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG12	Moderate energy circalittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Fishing - benthic trawling	Not exposed	VMS data - discussion during the workshop concluded benthic trawling is unlikely to result in deposition of material approaching the benchmark=ne		Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-H	Fishing - benthic trawling	Not exposed	Discussion during the workshop concluded benthic trawling is unlikely to result in deposition of material approaching the benchmark=ne		Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Fishing - benthic trawling	Exposed	Feature is subject to demersal, including beam & otter trawling and limited potting, seine, nephrops & possibly gillnetting (VMS cannot confirm if gillnetting is occurring over or just near the feature). Non UK vessels fish at a cumulatively moderate eff		Moderate to high vulnerability - CO set to recover
NG12	Moderate energy circalittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - cables & pipelines (operation)	Low exposure	3 UKCPC Telecom cables present, running SW/NE, footprint very small compared to feature size, not exceeding benchmark = ne		Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Fishing - benthic trawling	Exposed	Feature is subject to demersal, including beam & otter trawling and limited potting, seine, nephrops & possibly gillnetting (VMS cannot confirm if gillnetting is occurring over or just near the feature). Non UK vessels fish at a cumulatively moderate eff		Moderate to high vulnerability - CO set to recover
NG12	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Fishing - potting/creeling	Low exposure	exposure not regarded as currently exceeding benchmark = ne (see previous comment on potting/creeling)	Below benchmark at the current level of activity, 3 vessels, low sensitivity according to guidance. More information required about gear types and management would be required if activity levels increase	Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Shipping	Not exposed	exposure = ne (see previous comments on shipping)	No known anchoring points.	Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Tourism & recreation	Low exposure	charter boat activity - exposure = ne (see previous comment on charter boat activity)	Only anchoring but at very low exposure.	Low vulnerability - CO set to maintain
NG12	Moderate energy circalittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-H	Fishing - benthic trawling	Not exposed	benthic trawling even over fine sediment is thought to very unlikely result in the continued suspension of material for 1 year, sediment will remain in suspension for a limited period of time after a trawl/or remain in suspension is energetic, turbid area		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Managed by the WFD criteria.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	High energy infralittoral rock	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-L	Shipping	Not exposed	Legislation is for balast water changed outside 12nm but it may occur within this, further information required.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Litter	None proposed	NA	Shipping	Not exposed	Uncertain of the level, JNCC and NE to set bench mark.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Litter	None proposed	NA	Tourism & recreation	Not exposed	JNCC and NE need to set benchmark, further information required.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Managed by the WFD criteria.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Organic enrichment	A deposit of 100gC/m2/yr	NS	Sewage disposal	Not exposed	Managed by the WFD criteria.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent hasnt been used for the past 3 years. Very small footprint. Exact location in site unknown	Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - pelagic trawling	Not exposed	Due to depth of water, likely to not occur.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - potting/creeling	Not exposed	Very limited, small proportion of the catch-brown, velvet crab and lobster.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - recreational	Not exposed	More recreational fishing occurring in the high than the moderate infralittoral rock, but not significant to the feature.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Tourism & recreation	Not exposed	Likely to occur at a very very low level.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - pelagic trawling	Not exposed		Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - potting/creeling	Not exposed	Believed to be sustainable and would not be damaging to the feature.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Shipping	Not exposed	No anchoring occurring, site was designated with the southern boarder north of the anchoring site to avoid this pressure.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Sewage disposal	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	High energy infralittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Sewage disposal	Low exposure	Managed by the WFD criteria, tidal movement would disperse it.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Waste disposal - navigational dredging (capital, maintenance)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Not exposed	There is potential for damage but this would be extremely low.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed	No anchoring occurring, site was designated with the southern boarder north of the anchoring site to avoid this pressure.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Seismic has occurred within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Seismic has occurred within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	L-M	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	High energy infralittoral rock	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal coarse sediment	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site.	Low vulnerability - CO set to maintain
NG 13	Intertidal coarse sediment	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal coarse sediment	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Extraction - quarrying	Not exposed		Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	L	Sewage disposal	Not exposed			Low vulnerability - CO set to maintain
NG 13	Intertidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	L	Sewage disposal	Low exposure	Seabait limited sewage disposal works		Low vulnerability - CO set to maintain
NG 13	Intertidal coarse sediment	Temperature changes - local	A 5 oC change in temp for a one month period, or 2o C for one year	L-H	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal coarse sediment	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Litter	None proposed	NA	Tourism & recreation	Low exposure	Subject to bench line being set, a lot of beach cleaning occurs in this area. Further studies to determine the amount of littering occurring.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	pH changes	Mean 0.2 pH decrease by 2050	NA	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Extraction - quarrying	Not exposed		Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Radionuclide contamination	An increase in 10 µGy/h above background level.	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - pelagic trawling	Not exposed		Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - recreational	Not exposed	Level of catch is insignificant on the feature.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - set netting	Not exposed	Seasonal T and J set netting for salmon. March-end Aug Trout and June-Aug salmon. Level of catch is insignificant compared to level of stock.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L-M	Fishing - recreational	Not exposed	Level of catch is insignificant on the feature.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L-M	Fishing - set netting	Not exposed	Seasonal T and J set netting for salmon. March-end Aug Trout and June-Aug salmon. Level of catch is insignificant compared to level of stock.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M-H	Crab Tiling/Bait digging	Low exposure	Further north this occurs in these features.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M-H	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Crab Tiling/Bait digging	Low exposure			Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal mixed sediments	Temperature changes - local	A 5 oC change in temp for a one month period, or 2o C for one year	NA	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occuring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occuring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	M	Extraction - quarrying	Not exposed		Very small scale coal extraction occuring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal mixed sediments	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mixed sediments	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year.Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreas	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	H	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Litter	None proposed	NA	Tourism & recreation	Low exposure	Subject to bench line being set, a lot of beach cleaning occurs in this area. Further studies to determine the amount of littering occuring.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	pH changes	Mean 0.2 pH decrease by 2050	NA	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M-H	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M-H	Extraction - quarrying	Not exposed		Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal mud	Radionuclide contamination	An increase in 10 µGy/h above background level.	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - recreational	Not exposed	Level of catch is insignificant on the feature.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - set netting	Not exposed	Seasonal T and J set netting for salmon. March-end Aug Trout and June-Aug salmon.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale.	NS-M	Fishing - recreational	Not exposed	Level of catch is insignificant on the feature.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale.	NS-M	Fishing - set netting	Not exposed	Seasonal T and J set netting for salmon. March-end Aug Trout and June-Aug salmon. Level of catch is insignificant compared to level of stock.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Crab Tiling/Bait digging	Low exposure	Further north this occurs in these features.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L	Crab Tiling/Bait digging	Low exposure			Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Crab Tiling/Bait digging	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Tourism & recreation	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Temperature changes - local	A 5 oC change in temp for a one month period, or 2o C for one year	L	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occuring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occuring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal mud	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Intertidal mud	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	H	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Litter	None proposed	NA	Tourism & recreation	Low exposure	Subject to bench line being set, a lot of beach cleaning occurs in this area. Further studies to determine the amount of littering occurring		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	pH changes	Mean 0.2 pH decrease by 2050	NA	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal sand and muddy sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Know that there will be a cable installed in the future because there is already an existing cable present. Installation will be subject to EIA mitigation. Likely to not cause physical change to seabed type.	Biomass plant at Blyth, considered to be below the benchmark.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Extraction - quarrying	Not exposed		Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Infrastructure - cables & pipelines (Installation)	Low exposure	Know that there will be a cable installed in the future because there is already an existing cable present. Installation will be subject to EIA mitigation, likely to not extract more than the benchmark of sediment.	Biomass plant at Blyth, considered to be below the benchmark.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Radionuclide contamination	An increase in 10 µGy/h above background level.	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - recreational	Not exposed	Level of catch is insignificant on the feature.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Not exposed	Seasonal T and J set netting for salmon. March-end Aug Trout and June-Aug salmon. Level of catch is insignificant compared to level of stock.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale.	NS-M	Fishing - recreational	Not exposed	Level of catch is insignificant on the feature.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal sand and muddy sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - set netting	Not exposed	Seasonal T and J set netting for salmon. March-end Aug Trout and June-Aug salmon. Level of catch is insignificant compared to level of stock.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Crab Tiling/Bait digging	Low exposure	Where most of bait digging occurs, south of Amble. Some sheltered locations this may remain for days, needs discussion about intensity and fequency.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Crab Tiling/Bait digging	Low exposure			Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - cables & pipelines (Installation)	Low exposure	Know that there will be a cable installed in the future because there is already an existing cable present. Installation will be subject to EIA mitigation, likely to not extract more than the benchmark of sediment	Biomass plant at Blyth, considered to be below the benchmark.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Crab Tiling/Bait digging	Not exposed			Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L	Tourism & recreation	Low exposure			Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Temperature changes - local	A 5 oC change in temp for a one month period, or 2o C for one year	L	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal sand and muddy sand	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	There may be some on the works around the time of installation but no lasting effects. There may be a cable installed in this area.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal sand and muddy sand	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal sand and muddy sand	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	pH changes	Mean 0.2 pH decrease by 2050	NA	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Radionuclide contamination	An increase in 10 µGy/h above background level.	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Temperature changes - local	A 5 oC change in temp for a one month period, or 2o C for one year	L	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Intertidal under boulder communities	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Visual disturbance (behaviour)	None proposed	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occuring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NA	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occuring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Intertidal under boulder communities	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Emergence regime changes - local	Intertidal species (and habitats not uniquely defined by intertidal zone) A 1 hour change in the time covered or not covered by the sea for a period of 1 year.Habitats and landscapes defined by intertidal zone An increase in relative sea level or decreas	M	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	pH changes	Mean 0.2 pH decrease by 2050	NA	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Low energy intertidal rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M-H	Extraction - quarrying	Not exposed		Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Radionuclide contamination	An increase in 10 µGy/h above background level.	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Temperature changes - local	A 5 oC change in temp for a one month period, or 2o C for one year	L-H	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-H	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Low energy intertidal rock	Water flow (tidal current) changes - local	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Wave exposure changes - local	A change in nearshore significant wave height >3% but <5%	NS-H	Infrastructure - coastal (ports, marinas, leisure facilities)	Not exposed	Amble marina and club		Low vulnerability - CO set to maintain
NG 13	Low energy intertidal rock	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS-H	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Introduction of light	None proposed	NA	Shipping	not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Not exposed	Balast water is required to be changed outside the 12nm limit but may occur within in this but levels are unknown, further research required.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Litter	None proposed	NA	Shipping	not exposed	Levels of littering occuring unknown.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Litter	None proposed	NA	Tourism & recreation	Not exposed	Needs further research to determine how much littering occurs, bench mark needs to be set.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M-H	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M-H	Fishing - pelagic trawling	Not exposed		Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M-H	Fishing - potting/creeling	Not exposed	Likely not to catch any non target species that will have an effect on the feature.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M-H	Fishing - recreational	Low exposure	Probably occuring at a low intensity but impacts are likely not to be significant.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M-H	Fishing - set netting	Not exposed	Likely to have no impact on the feature.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M-H	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - pelagic trawling	Not exposed		Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Not exposed	Believed to be sustainable fishery, brown, velvet crab and lobster fishery.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - recreational	Low exposure	Probably occurring at a low intensity but impacts are likely not to be significant.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - set netting	Not exposed	Likely to have no impact on the feature.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M-H	Fishing - benthic trawling	Not exposed	Light nets, will avoid trawling over rocks.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M-H	Shipping	Not exposed	No anchoring occurring, site was designated with the southern boarder north of the anchoring site to avoid this pressure.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M-H	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-H	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-H	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Fishing - benthic trawling	Not exposed	Light nets, will avoid trawling over rocks.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Shipping	Not exposed	No anchoring occurring, site was designated with the southern boarder north of the anchoring site to avoid this pressure.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occurred within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occurred within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-H	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Moderate energy circalittoral rock	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy circalittoral rock	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Managed by the WFD criteria. No considered to be sensitive to pressure.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	M	Shipping	Not exposed	Legislation is for ballast water changed outside 12nm but it may occur within this, further information required.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Litter	None proposed	NA	Shipping	Not exposed	Uncertain of the level, JNCC and NE to set benchmark.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Litter	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Managed by the WFD criteria. No considered to be sensitive to pressure.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Organic enrichment	A deposit of 100gC/m ² /yr	NS	Sewage disposal	Not exposed	Managed by the WFD criteria. No considered to be sensitive to pressure.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - pelagic trawling	Not exposed	Due to depth of water, likely to not occur.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - potting/creeling	Not exposed	Very limited, small proportion of the catch-brown, velvet crab and lobster.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Tourism & recreation	Not exposed	Likely to occur at a very very low level.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - pelagic trawling	Not exposed		Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - potting/creeling	Not exposed	Believed to be sustainable and would not be damaging to the feature.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Shipping	Not exposed	No anchoring occuring, site was designated with the southern boarder north of the anchoring site to avoid this pressure.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Sewage disposal	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Moderate energy infralittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Sewage disposal	Low exposure	Managed by the WFD criteria, tidal movement would disperse it.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Waste disposal - navigational dredging (capital, maintenance)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Energy production - at sea (wind turbines)	Not exposed	Processes are in place for them to build the bases for the turbines, but most recent information is that NAREC won't be building within this site due to issues with the radar at the airport. But if they were to go ahead then they would mitigate as per requirements of the		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Not exposed	There is potential for damage but this would be extremely low.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed	No anchoring occurring, site was designated with the southern boarder north of the anchoring site to avoid this pressure		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Energy production - at sea (wind turbines)	Not exposed	Needs to be re-visited if turbines go ahead.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occured within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Energy production - at sea (wind turbines)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occured within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy infralittoral rock	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Moderate energy intertidal rock	pH changes	Mean 0.2 pH decrease by 2050	NA	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M-H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M-H	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M-H	Extraction - quarrying	Not exposed		Very small scale coal extraction occurring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M-H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Radionuclide contamination	An increase in 10 µGy/h above background level.	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Energy production - on land (power stations, inc. nuclear)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Beach replenishment	Not exposed		Discussions from the hub suggest that beach replenishment is occurring at the site near Newbiggin-by-the-sea.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M-H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Moderate energy intertidal rock	Temperature changes - local	A 5 oC change in temp for a one month period, or 2o C for one year	L	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occuring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occuring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Extraction - quarrying	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Very small scale coal extraction occuring at Newbiggin and Lynemouth. Variable frequency but low level, hand collection not an issue, quasi commercial collection using vehicles.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS-M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Moderate energy intertidal rock	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS-M	Energy production - on land (power stations, inc. nuclear)	Not exposed		Future proposal for cooling water biomass plant intake for estuary outfall.	Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal coarse sediment	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	Balast water legislation in place for change outside the 12nm limit but this may occur within this, but not sure.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Litter	None proposed	NA	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - benthic trawling	Low exposure	Light trawling gear, instances are likely to be limited, not in prawn fishing grounds because there is no mud. Trawl effects are negligible, not very intense.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - pelagic trawling	Not exposed		Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Low exposure	Discussions suggest that the intensity is extremely low and there will be little if no impact to the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Low exposure	Light trawling gear, instances are likely to be limited, not in prawn fishing grounds because there is no mud. Trawl effects are negligible, not very intense.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Low exposure	Discussions suggest that the intensity is extremely low and there will be little if no impact to the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure	Light trawling gear, instances are likely to be limited, not in prawn fishing grounds because there is no mud. Trawl effects are negligible, not very intense.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed	No anchoring sites over the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	Light trawling gear, instances are likely to be limited, not in prawn fishing grounds because there is no mud. Trawl effects are negligible, not very intense.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Not exposed	Likely to be very very low intensity, so impacts will not be significant.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed	No anchoring sites over the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occurred within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occured within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal coarse sediment	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Not exposed	Balast water legislation in place for change outside the 12nm limit but this may occur within this, but not sure.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Litter	None proposed	NA	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - pelagic trawling	Not exposed		Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - set netting	Low exposure	Discussions suggest that the intensity is extremely low and there will be little if no impact to the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - pelagic trawling	Not exposed		Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - set netting	Low exposure	Discussions suggest that the intensity is extremely low and there will be little if no impact to the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Shipping	Not exposed	No anchoring sites over the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Waste disposal - navigational dredging (capital, maintenance)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Not exposed	Likely to be very very low intensity, so impacts will not be significant.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed	No anchoring sites over the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occured within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occurred within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mixed sediments	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal mud	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed	Balast water legislation in place for change outside the 12nm limit but this may occur within this, but not sure.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Litter	None proposed	NA	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - pelagic trawling	Not exposed		Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - set netting	Low exposure	Discussions suggest that the intensity is extremely low and there will be little if no impact to the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - pelagic trawling	Not exposed		Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - set netting	Low exposure	Discussions suggest that the intensity is extremely low and there will be little if no impact to the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Shipping	Not exposed	No anchoring sites over the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-L	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-M	Fishing - potting/creeling	Not exposed	Likely to be very very low intensity, so impacts will not be significant.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-M	Shipping	Not exposed	No anchoring sites over the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-M	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occured within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occured within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal mud	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed	Balast water legislation in place for change outside the 12nm limit but this may occur within this, but not sure.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal sand	Litter	None proposed	NA	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - pelagic trawling	Not exposed		Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - set netting	Low exposure	Discussions suggest that the intensity is extremely low and there will be little if no impact to the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Low exposure	Discussions suggest that the intensity is extremely low and there will be little if no impact to the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Shipping	Not exposed	No anchoring sites over the feature.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Waste disposal - navigational dredging (capital, maintenance)	Not exposed		Small scale navigational dredge dumping, very infrequent. Exact location in site unknown.	Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - potting/creeling	Not exposed	Likely to be very very low intensity, so impacts will not be significant.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Shipping	Not exposed	No anchoring sites over the feature.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occurred within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Historical use of the site for pelagic fishing, likely to occur again in the future.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Seismic survey (military, exploration, construction)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Seismic has occured within this site, but regulations should mitigate for impacts.	Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Likely to be extremely low levels.		Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km2 or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 13	Subtidal sand	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Litter	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13	Tide-swept channels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13	Tide-swept channels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed			Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Litter	None proposed	NA	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed			Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Organic enrichment	A deposit of 100gC/m ² /yr	NS	Sewage disposal	Not exposed			Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale.	L	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area. Pressure very unlikely to occur at a commercial scale.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Low exposure	Water sports activities, up to 12 vessels actively using the area. Pressure likely to be very restricted in extent.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Sewage disposal	Not exposed			Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	L	Sewage disposal	Not exposed			Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13a	Coastal saltmarshes and saline reedbeds	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure	Water sports activities, up to 12 vessels actively using the area. Pressure likely to be very restricted in extent.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area.		Low vulnerability - CO set to maintain
NG 13a	Coastal saltmarshes and saline reedbeds	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	1 record of sewage disposal EA consent from Sawmill cottage, but not over the modelled feature.	Outfalls within site	Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Litter	None proposed	NA	Tourism & recreation	Not exposed	Unsure of the amount of litter but likely won't effect the feature.		Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Outfalls within site	Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Organic enrichment	A deposit of 100gC/m2/yr	NS	Sewage disposal	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Outfalls within site	Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Fishing - recreational	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS	Tourism & recreation	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale.	L	Fishing - recreational	Not exposed			Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	L	Sewage disposal	Not exposed		Outfalls within site	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13a	Estuarine rocky habitats	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Sewage disposal	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Outfalls within site	Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13a	Estuarine rocky habitats	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Litter	None proposed	NA	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area. Pressure very unlikely to occur at a commercial scale.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area. Pressure very unlikely to be occurring at a commercial scale.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area. Pressure very unlikely to occur at a commercial scale.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Crab Tiling/Bait digging	Low exposure	Very low levels occuring within site.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Low exposure	Water sports activities, up to 12 vessels actively using the area. Pressure likely to be very restricted in extent.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Crab Tiling/Bait digging	Low exposure	Very low levels occuring within site.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Crab Tiling/Bait digging	Low exposure	Very low levels occuring within site.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13a	High energy infralittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure	Water sports activities, up to 12 vessels actively using the area. Pressure likely to be very restricted in extent.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area.		Low vulnerability - CO set to maintain
NG 13a	High energy infralittoral rock	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Northumberland estates, Sawmill Cottage, sewage disposal works-other, Aln and Tribs, sewage discharges-final/treated effluent, not water company		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Litter	None proposed	NA	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Northumberland estates, Sawmill Cottage, sewage disposal works-other, Aln and Tribs, sewage discharges-final/treated effluent, not water company		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Organic enrichment	A deposit of 100gC/m2/yr	NS	Sewage disposal	Not exposed	Northumberland estates, Sawmill Cottage, sewage disposal works-other, Aln and Tribs, sewage discharges-final/treated effluent, not water company		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area. Pressure very unlikely to occur at a commercial scale.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area. Pressure very unlikely to be occurring at a commercial scale.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area. Pressure very unlikely to occur at a commercial scale.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13a	Intertidal mud	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L	Tourism & recreation	Low exposure	Water sports activities, up to 12 vessels actively using the area. Pressure likely to be very restricted in extent.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	L	Sewage disposal	Not exposed	Northumberland estates, Sawmill Cottage, sewage disposal works-other, Aln and Tribs, sewage discharges-final/treated effluent, not water company		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Sewage disposal	Low exposure	Northumberland estates, Sawmill Cottage, sewage disposal works-other, Aln and Tribs, sewage discharges-final/treated effluent, not water company		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Tourism & recreation	Low exposure	Water sports activities, up to 12 vessels actively using the area. Pressure likely to be very restricted in extent.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area.		Low vulnerability - CO set to maintain
NG 13a	Intertidal mud	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Litter	None proposed	NA	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area. Pressure very unlikely to occur at a commercial scale.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area. Pressure very unlikely to be occurring at a commercial scale.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13a	Sheltered muddy gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	M	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area. Pressure very unlikely to occur at a commercial scale.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Tourism & recreation	Low exposure	Water sports activities, up to 12 vessels actively using the area. Pressure likely to be very restricted in extent.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Crab Tiling/Bait digging	Low exposure	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Low exposure	Water sports activities, up to 12 vessels actively using the area. Pressure likely to be very restricted in extent.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Visual disturbance (behaviour)	None proposed	NS	Crab Tiling/Bait digging	Not exposed	Very low levels occurring within site.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area.		Low vulnerability - CO set to maintain
NG 13a	Sheltered muddy gravels	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	De-oxygenation	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Northumberland estates, Sawmill Cottage, sewage disposal works-other, Aln and Tribes, sewage discharges-final/treated effluent, not water company		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Litter	None proposed	NA	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Nitrogen & phosphorus enrichment	Compliance with WFD criteria for good status	NS	Sewage disposal	Not exposed	Northumberland estates, Sawmill Cottage, sewage disposal works-other, Aln and Tribes, sewage discharges-final/treated effluent, not water company		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 13a	Subtidal sands and gravels	Organic enrichment	A deposit of 100gC/m2/yr	NS	Sewage disposal	Not exposed	Northumberland estates, Sawmill Cottage, sewage disposal works-other, Aln and Tribs, sewage discharges-final/treated effluent, not water company		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area. Pressure very unlikely to occur at a commercial scale.		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area. Pressure very unlikely to be occurring at a commercial scale.		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area. Pressure very unlikely to occur at a commercial scale.		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Tourism & recreation	Low exposure	Water sports activities, up to 12 vessels actively using the area. Pressure likely to be very restricted in extent.		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Sewage disposal	Not exposed	Northumberland estates, Sawmill Cottage, sewage disposal works-other, Aln and Tribs, sewage discharges-final/treated effluent, not water company		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Sewage disposal	Not exposed	Northumberland estates, Sawmill Cottage, sewage disposal works-other, Aln and Tribs, sewage discharges-final/treated effluent, not water company		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Tourism & recreation	Low exposure	Water sports activities, up to 12 vessels actively using the area. Pressure likely to be very restricted in extent.		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area.		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Fishermap suggests 4 anglers use this area.		Low vulnerability - CO set to maintain
NG 13a	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Water sports activities, up to 12 vessels actively using the area.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Introduction of light	None proposed	NA	Shipping	Not exposed	More information required from the SNCBs		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Natural England to provide benchmark		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Moderate energy circalittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Not exposed	We dont think this is exposed but not monitored currently. Legislation is in place to mitigate for this.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Litter	None proposed	NA	Shipping	Low exposure	Not sure of intensity and frequency.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Litter	None proposed	NA	Tourism & recreation	Not exposed	Natural England to provide benchmark		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	More information required from the SNCBs		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Fishing - benthic trawling	Low exposure	nephrops - heavily fished Oct- March and scallop fishery c. 2 weeks per year.	Question over intensity over feature and whether it would be above the benchmark. Trawling thought to be low intensity over rocks. Rock hopper boats limited to area but want to double check with JNCC-also will depend on intensity. BUT want to double check with JNCC, also will depend on intensity. If it is significantly included then would be exposed.	Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Fishing - pelagic trawling	Not exposed	The fishery targets pelagic zone so will not affect benthic features		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Fishing - potting/creeling	Not exposed	Selective fishing method		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Fishing - recreational	Not exposed	Selective fishing method		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M-H	Tourism & recreation	Not exposed	Selective fishing method		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Not exposed	nephrops fishery so not linked to eh feature.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - pelagic trawling	Not exposed	The fishery targets pelagic zone so will not affect benthic features		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Not exposed	Targeting lobster and crab so not integral to the feature of rock. There will be patches of mud targeted within the rock which are also targeted with pots.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - recreational	Not exposed	Not targeting feature and very little overlap with feature (1-8 users per km2).		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	More information required from the SNCBs		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Fishing - benthic trawling	Low exposure	nephrops - heavily fished Oct- March and scallop fishery c. 2 weeks per year.	Question over intensity over feature and whether it would be above the benchmark. Trawling thought to be low intensity over rocks. Rock hopper boats limited to area but want to double check with JNCC-also will depend on intensity. BUT want to double check with JNCC, also will depend on intensity. If it is significantly included then would be exposed.	Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Shipping	Not exposed	No known anchoarge points		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M-H	Tourism & recreation	Not exposed	Very low intensity of activity		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Moderate energy circalittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M-H	Fishing - benthic trawling	Low exposure	Exposed to activity but would not cause this siltation rate	Question over intensity over feature and whether it would be above the benchmark. Trawling thought to be low intensity over rocks. Rock hopper boats limited to area but want to double check with JNCC-also will depend on intensity. BUT want to double check with JNCC, also will depend on intensity. If it is significantly included then would be exposed.	Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-H	Fishing - benthic trawling	Low exposure	Exposed to activity but would not cause this siltation rate	Question over intensity over feature and whether it would be above the benchmark. Trawling thought to be low intensity over rocks. Rock hopper boats limited to area but want to double check with JNCC-also will depend on intensity. BUT want to double check with JNCC, also will depend on intensity. If it is significantly included then would be exposed.	Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Fishing - benthic trawling	Low exposure	nephrops - heavily fished Oct- March and scallop fishery c. 2 weeks per year.	Question over intensity over feature and whether it would be above the benchmark. Trawling thought to be low intensity over rocks. Rock hopper boats limited to area but want to double check with JNCC-also will depend on intensity. BUT want to double check with JNCC, also will depend on intensity. If it is significantly included then would be exposed.	Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Fishing - potting/creeling	Low exposure	Depth of water would reduce movement of pots caused by wave action, also number of vessels (c. 10, max 30 in southern third of NG14N) is not high intensity. At some intensities resilience ios shown by some associated feature species. Judgement is that current level of potting does not meet the benchmark but should check if intensity changes.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Shipping	Not exposed	No known anchoarge points		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-H	Tourism & recreation	Not exposed	Very low intensity of activity		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed	More information required from the SNCBs		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-H	Fishing - benthic trawling	Low exposure	water clarity changes will be no where near this benchmark	Question over intensity over feature and whether it would be above the benchmark. Trawling thought to be low intensity over rocks. Rock hopper boats limited to area but want to double check with JNCC-also will depend on intensity. BUT want to double check with JNCC, also will depend on intensity. If it is significantly included then would be exposed.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Moderate energy circalittoral rock	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Moderate energy circalittoral rock	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS-M	Shipping	Not exposed	More important in inshore sites		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Atmospheric climate change	Increases of 3.5-4.6 oC (winter-summer) by 2050s	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Emergence regime changes (sea level) - regional/national	Increased ASL of 21 cm by 2050 in London	H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Litter	None proposed	NA	Shipping	Not exposed	Natural England to define benchmark		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	L	Fishing - potting/creeling	Not exposed	Selective fishing method		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	L	Fishing - recreational	Not exposed	Very very low levels of recreational fishers, wont cause an impact to the feature.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Not relevant for the feature		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not exposed	Very very low levels of recreational fishers, wont cause an impact to the feature.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Peat and clay exposures	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - potting/creeling	Low exposure	Likely to be below the bench mark, in general the method itself wont cause a problem but the movement of gear and hauling of gear may cause insignificant effect		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Peat and clay exposures	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but ≤5%	L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal coarse sediment	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Natural England to set benchmark.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed	Management measures require that balast water is changed outside the 12nm limit, but this may occur within this boundary but is unknwn.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Litter	None proposed	NA	Shipping	Not exposed	Level of litter is not known.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Litter	None proposed	NA	Tourism & recreation	Not exposed	Level of litter is not known, Natural England to set benchmark.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - benthic trawling	Not exposed	At the moment there is not enough information about the activity that occurs there to be able to make a definative decision, but there may be removal of non-target species occurring.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - pelagic trawling	Low exposure	water clarity changes will be no where near this benchmark		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Not exposed	Crab fishery, very minimal bycatch. Low activity.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - recreational	Not exposed	Very very low levels of recreational fishers, wont cause an impact to the feature.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Not exposed		Wreck and turbo netting, low intensity, 30 events per year, below bench mark for pressures.	Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	The fishery targets pelagic zone so will not affect benthic features		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not exposed	Very very low levels of recreational fishers, wont cause an impact to the feature.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Wreck and turbo netting, low intensity, 30 events per year, below bench mark for pressures.	Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Not exposed	Under bench mark, but some damage may occur, need to confirm the intensity of benthic trawling.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	Below benchmark		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure	Likely to be below the bench mark, in general the method itself wont cause a problem but the movement of gear and hauling of gear may cause insignificant effect		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Not exposed		Wreck and turbo netting, low intensity, 30 events per year, below bench mark for pressures.	Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	The fishery targets pelagic zone so will not affect benthic features		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Wreck and turbo netting, low intensity, 30 events per year, below bench mark for pressures.	Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Feature is not exposed to noise.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Wreck and turbo netting, low intensity, 30 events per year, below bench mark for pressures.	Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal coarse sediment	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Introduction of light	None proposed	NA	Tourism & recreation	Not exposed	Natural England to set benchmark.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	L-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Litter	None proposed	NA	Tourism & recreation	Not exposed	Level of litter is not known, Natural England to set benchmark.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	M	Fishing - benthic trawling	Not exposed	At the moment there is not enough information about the activity that occurs there to be able to make a definitive decision, but there may be removal of non-target species occurring.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - pelagic trawling	Low exposure			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - potting/creeling	Not exposed	Crab fishery, very minimal bycatch. Low activity.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - recreational	Not exposed	Very very low levels of recreational fishers, wont cause an impact to the feature.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - pelagic trawling	Not exposed	The fishery targets pelagic zone so will not affect benthic features		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	L	Fishing - recreational	Not exposed	Very very low levels of recreational fishers, wont cause an impact to the feature.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Fishing - benthic trawling	Not exposed	Under bench mark, but some damage may occur, need to confirm the intensity of benthic trawling.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event	M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - benthic trawling	Low exposure	Below benchmark		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - potting/creeling	Low exposure	Likely to be below the bench mark, in general the method itself wont cause a problem but the movement of gear and hauling of gear may cause insignificant effect		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Tourism & recreation	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	The fishery targets pelagic zone so will not affect benthic features		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Visual disturbance (behaviour)	None proposed	NS	Tourism & recreation	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mixed sediments	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal mud	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - benthic trawling	Exposed	Nephrops fishery, but at an intensity that will not cause a significant impact.	Nephrops and white fish fishery with same gear type. Less than 30 vessels fish the area. Nephrops only fished heavily for 4 months of the year.	Moderate to high vulnerability - CO set to recover
NG 14N	Subtidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - pelagic trawling	Low exposure	But doesnt effect the feature.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	M	Fishing - potting/creeling	Low exposure	There will be no effect on this feature.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Exposed	Nephrops fishery, but at an intensity that will not cause a significant impact.	Nephrops and white fish fishery with same gear type. Less than 30 vessels fish the area. Nephrops only fished heavily for 4 months of the year.	Moderate to high vulnerability - CO set to recover
NG 14N	Subtidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - pelagic trawling	Low exposure	But doesnt effect the feature.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Low exposure	There will be no effect on this feature.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M	Fishing - benthic trawling	Exposed	It is likely to be moderate activity, heavier gear may be used if the prawn fishery moves in. Fishermen conceded this northern part because the feel that it isnt a very productive area.	Nephrops and white fish fishery with same gear type. Less than 30 vessels fish the area. Nephrops only fished heavily for 4 months of the year.	Moderate to high vulnerability - CO set to recover
NG 14N	Subtidal mud	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed		Nephrops and white fish fishery with same gear type. Less than 30 vessels fish the area. Nephrops only fished heavily for 4 months of the year.	Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal mud	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-L	Fishing - benthic trawling	Low exposure	Intensity unkown, the feature is moving already. There may be displacement of sediment but minimal siltation occurring.	Nephrops and white fish fishery with same gear type. Less than 30 vessels fish the area. Nephrops only fished heavily for 4 months of the year.	Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-M	Fishing - benthic trawling	Low exposure	Low intermitent, to be certain we need to determinain the fishing intensity.	Nephrops and white fish fishery with same gear type. Less than 30 vessels fish the area. Nephrops only fished heavily for 4 months of the year.	Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-M	Fishing - potting/creeling	Low exposure	We dont think this will have that much of an effect given the hydrodynamics in the area, and fishing practices-but this needs to be clarified with further knowledge on the intensity.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	L-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Low exposure	Movement of mud from benthic fishing will not cause an effect to the feature.	Nephrops and white fish fishery with same gear type. Less than 30 vessels fish the area. Nephrops only fished heavily for 4 months of the year.	Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed	JNCC and NE to have further discussions.		Low vulnerability - CO set to maintain
NG 14N	Subtidal mud	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS-L	Shipping	Not exposed	JNCC and NE to have further discussions.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal sand	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - benthic trawling	Not exposed	At the moment there is not enough information about the activity that occurs there to be able to make a definitive decision, but there may be removal of non-target species occurring.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - pelagic trawling	Low exposure			Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - potting/creeling	Not exposed	Crab fishery, very minimal bycatch. Low activity.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - recreational	Not exposed	Very very low levels of recreational fishers, wont cause an impact to the feature.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Not exposed		Wreck and turbo netting, low intensity, 30 events per year, below bench mark for pressures.	Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	The fishery targets pelagic zone so will not affect benthic features		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - recreational	Not exposed	Very very low levels of recreational fishers, wont cause an impact to the feature.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Wreck and turbo netting, low intensity, 30 events per year, below bench mark for pressures.	Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Fishing - benthic trawling	Not exposed	Under bench mark, but some damage may occur, need to confirm the intensity of benthic trawling.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - benthic trawling	Low exposure			Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - potting/creeling	Low exposure	Likely to be below the bench mark, in general the method itself wont cause a problem but the movement of gear and hauling of gear may cause insignificant effect		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - set netting	Not exposed		Wreck and turbo netting, low intensity, 30 events per year, below bench mark for pressures.	Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Wreck and turbo netting, low intensity, 30 events per year, below bench mark for pressures.	Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - recreational	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Wreck and turbo netting, low intensity, 30 events per year, below bench mark for pressures.	Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 14N	Subtidal sand	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 14N	Subtidal sand	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	Low exposure because of deeper waters and introduced species are likely to not be able to settle on sediment.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Litter	None proposed	NA	Shipping	not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	L-H	Fishing - benthic trawling	Low exposure	Fishing pressure is low, 1-4 vessels. Uncertainty over mortality of bycatch.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	L-H	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Not exposed	Target fishery is white fish which is not a feature of the habitat type.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	M	Fishing - benthic trawling	Low exposure	The gear would not penetrate to this depth on the rock. Also very low intensity of use 1-4 vessels per sqm. VMS shows negligible fishing effort over feature. Not likely that benthic trawlers will tow over circalittoral rock.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 15	Low energy circalittoral rock	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	M	Shipping	Not exposed	There are no anchorage areas within the site.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed	Fishing occurs but gears will not cause this siltation rate		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Fishing occurs but gears will not cause this siltation rate		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	M	Fishing - benthic trawling	Low exposure	The gear would not penetrate to this depth on the rock. Also very low intensity of use 1-4 vessels per sqm. VMS shows negligible fishing effort over feature. Not likely that benthic trawlers will tow over circalittoral rock.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Fishing - benthic trawling	Low exposure	1-4 vessels. Hard to tell if that intensity is correct, it could be lower as it may be that the vessels are actually avoiding this habitat		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	M	Shipping	Not exposed	There are no anchorage areas within the site.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	M	Fishing - benthic trawling	Not exposed	Fishing occurs but gears will not cause this		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 15	Low energy circalittoral rock	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 15	Low energy circalittoral rock	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS-L	Shipping	Not exposed	There are no anchorage areas within the site.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	Low exposure because of deeper waters and introduced species are likely to not be able to settle on sediment.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Litter	None proposed	NA	Shipping	Not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Low exposure	Uncertain on mortality, but low intensity of use, small footprint.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Not exposed	Data available is from fishermap suggests 1-5 vessels per sqkm, so this is not above the benchmark.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Not exposed	Target fishery is not part of the feature		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 15	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Data available is from fishermap suggests 1-5 vessels per sqkm, so this is not above the benchmark.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure	Intensity across most of feature is 1-4 vessels fishing for white fish		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed	There are no anchorage areas within the site.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Gear will not cause this level of pressure		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Gear will not cause this level of pressure		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Fishing - benthic trawling	Low exposure	Intensity across most of feature is 1-4 vessels fishing for white fish		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	Intensity across most of feature is 1-4 vessels fishing for white fish		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure	Only one vessel with 4 pots occurring over feature.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed	There are no anchorage areas within the site.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 15	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Low exposure	Gear will not cause this level of pressure		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal coarse sediment	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	Low exposure because of deeper waters and introduced species are likely to not be able to settle on sediment.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Litter	None proposed	NA	Shipping	not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Low exposure	Believed to have the potential to reach the benchmark but is of very low intensity. Uncertainty over the mortality of the bycatch though.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 15	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Not exposed	Data available is from fishermap suggests 1-5 vessels per sqkm, so this is not above the benchmark.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Not exposed	Target fishery is white fish which is not a feature of the habitat type.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Fishing - benthic trawling	Low exposure	UK has 1-9 vessels operating over parts of the feature. Very low intensity non UK use (as this is focused more on the subtidal coarse sediment)		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Shipping	Not exposed	There are no anchorage areas within the site.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Fishing - benthic trawling	Not exposed	Fishing gear will not reach benchmark at the intensity present		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed	Fishing gear will not reach benchmark at the intensity present		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - benthic trawling	Low exposure	UK has 1-9 vessels operating over parts of the feature. Very low intensity non UK use (as this is focused more on the subtidal coarse sediment)		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 15	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - potting/creeling	Low exposure	Only one vessel with 4 pots occurring over feature, making the pressure negligible.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Shipping	Not exposed	There are no anchorage areas within the site.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Low exposure	Fishing gear will not reach benchmrak at the intensity present		Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 15	Subtidal sand	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 15	Subtidal sands and gravels	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	Low exposure because of deeper waters and introduced species are likely to not be able to settle on sediment.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Litter	None proposed	NA	Shipping	Not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Low exposure	Believed to have the potential to reach the benchmark but is of very low intensity. Uncertainty over the mortality of hte bycatch though		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - potting/creeling	Not exposed	Data available is from fishermap suggests 1-5 vessels per sqkm, so this is not above the benchmark.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - potting/creeling	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 15	Subtidal sands and gravels	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure	UK has 1-9 vessels operating over parts of the feature. Very low intensity non UK use (as this is focused more on the subtidal coarse sediment)		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed	There are no anchorage areas within the site.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Gear will not cause this level of pressure		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Gear will not cause this level of pressure		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	UK has 1-9 vessels operating over parts of the feature. Very low intensity non UK use (as this is focused more on the subtidal coarse sediment)		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - potting/creeling	Low exposure	Only one vessel with 4 pots occurring over feature, making the pressure negligible.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed	There are no anchorage areas within the site.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 15	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - potting/creeling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Low exposure	Fishing gear will not reach benchmrak at the intensity present		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 15	Subtidal sands and gravels	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%.	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Litter	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - benthic trawling	Low exposure	Intensity is between 1 and 9 vessels but only on a small portion of the entire feature. Also some uncertainty over the mortality of non target species. VMS data supports low fishing intensity there also		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 16	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Low exposure	Some sand eel fishing activity (1-4 vessels) occurs over 25% of site. Overall tow footprint is small compared to feature extent		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure	Intensity is between 1 and 9 vessels but only on a small portion of hte entire feature, so very unlikely to be near the benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Fishing - benthic trawling	Low exposure	Low exposure because there is low intensity and low footprint over the feature.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	Intensity is between 1 and 9 vessels but only on a small portion of the entire feature, so very unlikely to be near the benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 16	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Same as subtidal sand		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal coarse sediment	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 16	Subtidal sand	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	Deeper water environment and less likely to effect benthic communities. Introduced species are not likely to be able to survive.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Litter	None proposed	NA	Shipping	Not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.	Plugged well heads present on sea bed but no active platforms.	Low vulnerability - CO set to maintain
NG 16	Subtidal sand	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - oil & gas	Not exposed	There are 3 wellheads present, but these are likely to be inactive because they were installed in the 1960's/70's.	Plugged well heads present on sea bed but no active platforms.	Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - benthic trawling	Low exposure	Intensity is between 1 and 9 vessels but only on a small portion of the entire feature. Also some uncertainty over the mortality of non target species. VMS data supports low fishing intensity there		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Low exposure	Some sand eel fishing activity (1-4 vessels) occurs over 25% of site. Overall tow footprint is small compared to feature extent		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 16	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Fishing - benthic trawling	Low exposure	Intensity is between 1 and 9 vessels but only on a small portion of the entire feature, so very unlikely to be near the benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event	H	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event	M	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Fishing - benthic trawling	Low exposure	Low exposure because there is low intensity and low footprint over the feature.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - benthic trawling	Low exposure	Intensity is between 1 and 9 vessels but only on a small portion of the entire feature, so very unlikely to be near the benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed	Due to climate change, is a big picture so shipping wont have much of an effect.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Plugged well heads present on sea bed but no active platforms.	Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 16	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.	Plugged well heads present on sea bed but no active platforms.	Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Low exposure	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sand	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS); creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	Deeper water environment and less likely to effect benthic communities. Introduced species are not likely to be able to survive.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Litter	None proposed	NA	Shipping	Not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - benthic trawling	Low exposure	Intensity is between 1 and 9 vessels but only on a small portion of the entire feature. Also some uncertainty over the mortality of non target species. VMS data supports low fishing intensity there also		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 16	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Low exposure	Intensity is between 1 and 9 vessels but only on a small portion of the entire feature. Also some uncertainty over the mortality of non target species. VMS data supports low fishing intensity there also.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure	Intensity is between 1 and 9 vessels but only on a small portion of hte entire feature, so very unlikely to be near the benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Fishing - benthic trawling	Low exposure	Low exposure because there is low intensity and low footprint over the feature.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	Intensity is between 1 and 9 vessels but only on a small portion of the entire feature, so very unlikely to be near the benchmark		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 16	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 16	Subtidal sands and gravels	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Death or injury by collision	0.1% of tidal volume on average tide, passing through artificial structure	NS	Extraction - oil & gas	Not exposed	Need more information on benchmarks from SNCBs		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Death or injury by collision	0.1% of tidal volume on average tide, passing through artificial structure	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10μT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Further research needs to be done to determine the effect to the species from electromagnetic changes, and also the output of electromagnetic changes from cables		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Arctica islandica	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS	Shipping	Not exposed	Level of introduction of species is unknown, further research into competition from potentially introduced species.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Litter	None proposed	NA	Shipping	Not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Extraction - oil & gas	Low exposure	Mitigation in place		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Effects to species unknown, and the extent to which shipping could cause a change above the benchmark unknown		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - oil & gas	Not exposed	Pressure is not relevant to feature.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Not exposed	Pressure is not relevant to feature.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Not exposed	Pressure is not relevant to feature.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - offshore (oil & gas platforms)	Not exposed	Pressure is not relevant to feature.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	H	Infrastructure - cables & pipelines (Installation)	Not exposed	Pressure is not relevant to feature.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	H	Fishing - benthic trawling	Low exposure	Low exposure because it is unlikely to reach benchmark, i.e. Lethal. Spatial occurrences may be very limited, ie 1 in the site. Intensity is up to 9 vessels otter trawling, twin rig, from fishermap data. VMS shows low intensity .		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	H	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	H	Fishing - set netting	Not exposed	Selective fishery		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Arctica islandica	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Not exposed	Target fishery is not for the quahog		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Not a target fishery		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Effects to species unknown, and the extent to which shipping could cause a change above the benchmark unknown		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Shallow abrasion/penetration: damage to seabed surface and penetration ≤25mm	Damage to seabed surface and penetration ≤25mm	H	Fishing - benthic trawling	Low exposure	For individuals there will be exposure but the overall footprint of tows is likely to be small across site. Intensity is up to 9 vessels otter trawling, twin rig, from fishermap data. VMS shows low intensity		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Fishing - benthic trawling	Low exposure	This level of siltation is unlikely for all fishing activity.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS	Fishing - benthic trawling	Low exposure	This level of siltation is unlikely for all fishing activity		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Installation)	Low exposure	Because of small footprint of cables and pipelines.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - cables & pipelines (Operation)	Low exposure	Because of small footprint of cables and pipelines.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	H	Infrastructure - offshore (oil & gas platforms)	Low exposure	Because of small footprint, high sensitivity.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Arctica islandica	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - benthic trawling	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Fishing - set netting	Low exposure	Set nets, gill nets there but very low intensity so will not meet benchmark.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Temperature changes - regional/national	1.5-4 oC increase by 2100	NA	Shipping	Not exposed	Effects to species unknown, and the extent to which shipping could cause a change above the benchmark unknown		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Unknown		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Effects to species unknown, and the extent to which shipping could cause a change above the benchmark unknown		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Extraction - oil & gas	Not exposed	Natural England to provide benchmark		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Fishing - benthic trawling	Not exposed	Natural England to set benchmark		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Fishing - set netting	Not exposed	Unknown		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Infrastructure - offshore (oil & gas platforms)	Not exposed	Natural England to provide benchmark		Low vulnerability - CO set to maintain
NG 17	Arctica islandica	Visual disturbance (behaviour)	None proposed	NA	Shipping	Not exposed	Effects to species unknown, and the extent to which shipping could cause a change above the benchmark unknown		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Arctica islandica	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	Low exposure because of deeper waters and introduced species are likely to not be able to settle on sediment.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Litter	None proposed	NA	Shipping	Not exposed	Natural England to provide benchmark		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesn't cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Installation)	Low exposure	1 pipeline intersects the feature, exposure will be low due to mitigation requirements.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Low exposure	1 pipeline intersects the feature, exposure will be low due to mitigation requirements.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Low exposure	Bycatch of some species. Not enough known about mortality. Low intensity of use. Highest value for VMS over 5x5km sq was 30 hours over 4 years		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - set netting	Not exposed	Selective fishery. VMS data only shows a very small amount of set-netting occurring.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Not exposed	See comment for subtidal sand. Exposed at very low levels unlikely to meet benchmark also targeting white fish and sandeels so not a feature		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure	Low intensity otter trawling, footprint is moderate. Low certainty with regards to benchmark and how intensity relates to that.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	NS-M	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Low exposure	1 pipeline intersects the feature, exposure will be low due to mitigation requirements.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Low exposure	1 pipeline intersects the feature, exposure will be low due to mitigation requirements.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	Low intensity otter trawling, moderate footprint over area. Low certainty with regards to benchmark and how intensity relates to that.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Low exposure	Low intensity use only caused by anchors so very little exposure. Not meeting benchmark due to low numbers of nets in use and only create abrasion from anchors		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Water clarity changes may occur from installation but unlikely to be above the benchmark		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal coarse sediment	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Electromagnetic changes	Local electric field of 1V m-1; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Subtidal sand	Introduction of light	None proposed	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure	Low exposure because of deeper waters and introduced species are likely to not be able to settle on sediment.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Litter	None proposed	NA	Shipping	Not exposed	Natural England to provide benchmark		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Non-synthetic compound contamination (inc. heavy metals, hydrocarbons, produced water)	Compliance with all AA EQS, conformance with PELs, EACs/ER-Ls	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Extraction - oil & gas	Low exposure	4 platforms present, exposure is low because there is a requirement to mitigate through the FA process.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Installation)	Low exposure	There are a number of pipelines, and 1 cable present, 1 cable proposed within the feature but the footprint is small-and they are required to meet mitigation.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - cables & pipelines (Operation)	Low exposure	There are a number of pipelines, and 1 cable present, 1 cable proposed within the feature but the footprint is small-and they are required to meet mitigation.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Physical change (to another seabed type)	Change in 1 folk class for 2 years	H	Infrastructure - offshore (oil & gas platforms)	Low exposure	4 platforms present, exposure is low because there is a requirement to mitigate through the FA process.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	L-H	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Low exposure	Bycatch of some species. Not enough known about mortality. Low intensity of use. Highest value for VMS over 5x5km sq was 30 hours over 4 years		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale.	NS-M	Fishing - set netting	Not exposed	Selective fishery. VMS data only shows a very small amount of set-netting occurring.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - benthic trawling	Low exposure	Fishery is for white fish, and 1-4 vessels targetting sand eels over small part of the site.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS	Fishing - set netting	Not exposed	Not integral to the feature		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Fishing - benthic trawling	Low exposure	Low intensity otter trawling, footprint is moderate. Low certainty with regards to benchmark and how intensity relates to that.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event.	H	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event.	M	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Low exposure	There are a number of pipelines, and 1 cable present, 1 cable proposed within the feature but the footprint is small-and they are required to meet mitigation.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Low exposure	There are a number of pipelines, and 1 cable present, 1 cable proposed within the feature but the footprint is small-and they are required to meet mitigation.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - offshore (oil & gas platforms)	Low exposure	Low exposure due to footprint size, there are 4 platforms present, but will be required to meet mitigation measures following the EA process.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - benthic trawling	Low exposure	Low intensity otter trawling, moderate footprint over area. Low certainty with regards to benchmark and how intensity <u>relates to that</u>		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Fishing - set netting	Low exposure	Not meeting benchmark due to low numbers of nets in use and only create <u>abrasion from anchors</u>		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Temperature changes - regional/national	1.5-4 oC increase by 2100	M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within <u>site</u>	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within <u>site</u>	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within <u>site</u>	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within <u>site</u>	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within <u>site</u>	NS	Military activities	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within <u>site</u>	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Extraction - oil & gas	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is <u>sensitive to.</u>		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is <u>sensitive to.</u>		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is <u>sensitive to.</u>		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is <u>sensitive to.</u>		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is <u>sensitive to.</u>		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - offshore (oil & gas platforms)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is <u>sensitive to.</u>		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Subtidal sand	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Low exposure	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	There may be a change in water clarity from installation, but it is unlikely to be above the benchmark.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - offshore (oil & gas platforms)	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS-L	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sand	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Not assessed because activity doesnt cause a pressure that this feature is sensitive to.		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Electromagnetic changes	Local electric field of 1V m ⁻¹ ; Local magnetic field of 10uT.	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Introduction of light	None proposed	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Introduction or spread of non-indigenous species & translocations (competition)	A significant pathway exists for introduction of one or more Invasive non-indigenous species (INS) ; creation of new colonization space >1ha. One or more INS in Table C3 (Technical Report) has been recorded in the relevant habitat	NS-M	Shipping	Low exposure			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Litter	None proposed	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	pH changes	Mean 0.2 pH decrease by 2050	NA	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Installation)	Low exposure			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Physical change (to another seabed type)	Change in 1 folk class for 2 years	M	Infrastructure - cables & pipelines (Operation)	Low exposure	Very small activity/pressure footprint compared to extent of feature		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Physical removal (extraction of substratum)	Extraction of sediment to 30cm	M	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - benthic trawling	Low exposure	Bycatch of some species. Not enough known about mortality. Low intensity of use. Highest value for VMS over 5x5km sq was 30 hours over 4 years.		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Removal of non-target species (lethal)	Removal of features through pursuit of a target fishery at a commercial scale	NS-M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - benthic trawling	Low exposure	Only very low intensity of exposure. Highest value for VMS over 5x5km sq was 30 hours over 4 years.		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - pelagic trawling	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Removal of target species (lethal)	Removal of target species that are features of conservation importance or sub-features of habitats of conservation importance at a commercial scale .	NS-M	Fishing - set netting	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Salinity changes - regional/national	0.2 psu decrease by 2100	NS	Shipping	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Fishing - benthic trawling	Low exposure	Low intensity otter trawling, footprint is moderate. Low certainty with regards to benchmark and how intensity relates to that.		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Shallow abrasion/penetration: damage to seabed surface and penetration <25mm	Damage to seabed surface and penetration ≤25mm	L-M	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Siltation rate changes (high)	30cm of fine material added to the seabed in a single event	NS-M	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Siltation rate changes (low)	5cm of fine material added to the seabed in a single event	NS-M	Fishing - benthic trawling	Not exposed	Fishing does occur but will not reach this benchmark		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Installation)	Not exposed			Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - cables & pipelines (Operation)	Low exposure	Very small activity/pressure footprint compared to extent of feature		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Structural abrasion/penetration: Structural damage to seabed >25mm	Structural damage to seabed >25mm	L-M	Infrastructure - offshore (oil & gas platforms)	Low exposure			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - benthic trawling	Low exposure	Low intensity otter trawling, moderate footprint over area. Low certainty with regards to benchmark and how intensity relates to that.		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Fishing - set netting	Low exposure			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Surface abrasion: damage to seabed surface features	Damage to seabed surface features	NS-H	Shipping	Not exposed			Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Temperature changes - regional/national	1.5-4 oC increase by 2100	NS	Shipping	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Extraction - oil & gas	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - benthic trawling	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - pelagic trawling	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Fishing - set netting	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Military activities	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Underwater noise	MSFD indicator levels (SEL or peak SPL) exceeded for 20% of days in calendar year within site	NS	Shipping	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Extraction - oil & gas	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - benthic trawling	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - pelagic trawling	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Fishing - set netting	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain

Site	Feature	Pressure	Pressure Benchmark	Sens'ty	Activity	Exposure?	Notes	Hub meeting comments	Vulnerability assessment and conservation objective
NG 17	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - cables & pipelines (Operation)	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Infrastructure - offshore (oil & gas platforms)	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Visual disturbance (behaviour)	None proposed	NS	Shipping	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Fishing - benthic trawling	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - cables & pipelines (Installation)	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Water clarity changes	A change in one rank on the WFD scale, e.g. from clear to turbid for one year	NS	Infrastructure - offshore (oil & gas platforms)	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Water flow (tidal & ocean current) changes - regional/national	Peak mean spring tide flow change between 0.1m/s to 0.2m/s over an area >1km ² or 50% of width of water body for > 1 year	NS	Shipping	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain
NG 17	Subtidal sands and gravels	Wave exposure changes - regional/national	A change in nearshore significant wave height >3% but <5%	NS	Shipping	Not exposed	Feature not sensitive to pressure		Low vulnerability - CO set to maintain

Coastal Geological & Geomorphological Vulnerability

Three features from the GCR were considered, as they fell (wholly or in part) within the boundaries of rMCZs and had been proposed as features.

Feature sensitivity to pressures and activities was assessed by Natural England and information summarising the outputs was disseminated to the Regional Projects in July 2011.

Sensitivity to each of a series of pressures and activities was assessed as:

- No expected impact on feature;
- Possibility of impact on feature; or
- Strong likelihood of impact on feature.

Information on activities and pressures for each of three features (Orfordness, within site NG1c; the North Norfolk Coast, within site NG2; and the Humber [Spurn Point and The Binks], within site NG8) were considered, and the likelihood of exposure of features to potentially damaging pressures was assessed. The results of this vulnerability assessment are presented in the table below.

In addition, Natural England provided guidance on the likely Conservation Objective for the West Runton Submerged Forest feature (which is associated with site NG2). This guidance is reproduced below:

West Runton Submerged Forest

The West Runton Submerged Forest forms part of the Cromer Forest Formation, now known as the Wroxham Crag. This feature consists of a series of Middle Pleistocene sediments that were largely deposited in near-shore to estuarine environments in northern East Anglia.

At West Runton, the Wroxham Crag rests on the Chalk Group. The base of the Wroxham Crag lies at approximately the level of the base of the cliff, and the foreshore consists of a gravel-strewn chalk platform. Offshore, the sea-floor bedrock consists of the Chalk Group and the Wroxham Crag is long since eroded away.

The Wroxham Crag Formation is exposed in the cliffs at West Runton, where it is recognised and designated in two SSSIs – East Runton SSSI and West Runton SSSI. As there are no deposits from the Wroxham Crag Formation offshore, **Natural England advice is that there seems little reason to identify the Wroxham Crag Formation feature for protection within the proposed site.**

Name	Site	Activity	Sensitivity	Does this activity occur at site?	Notes
Alde-Ore Estuary	NG 1c	Aquaculture - shell fish	No expected impact on feature	Yes	n/a
Alde-Ore Estuary	NG 1c	Crab Tiling/Bait digging	No expected impact on feature	Yes	n/a
Alde-Ore Estuary	NG 1c	Fishing - benthic trawling	No expected impact on feature	Yes	n/a
Alde-Ore Estuary	NG 1c	Fishing - potting/creeling	No expected impact on feature	Yes	n/a
Alde-Ore Estuary	NG 1c	Fishing - recreational	No expected impact on feature	Yes	n/a
Alde-Ore Estuary	NG 1c	Fishing - set netting	No expected impact on feature	Yes	n/a
Alde-Ore Estuary	NG 1c	Infrastructure - cables & pipelines (Operation)	Possibility of impact on feature	Yes	Very small footprint. Not likely to result in exposure
Alde-Ore Estuary	NG 1c	Infrastructure - coastal (ports, marinas, leisure facilities)	Strong likelihood of impact on feature	Yes	Activity not coincident with feature - feature not exposed to activity and resultant pressures
Alde-Ore Estuary	NG 1c	Infrastructure - coastal defence & land claim	Strong likelihood of impact on feature	Yes	Activity not coincident with feature - feature not exposed to activity and resultant pressures
Alde-Ore Estuary	NG 1c	Sewerage disposal	No expected impact on feature	Yes	n/a
Alde-Ore Estuary	NG 1c	Tourism & recreation	No expected impact on feature	Yes	n/a
North Norfolk Coast	NG 2	Fishing - benthic trawling	No expected impact on feature	Yes	n/a
North Norfolk Coast	NG 2	Fishing - pelagic trawling	No expected impact on feature	Yes	n/a
North Norfolk Coast	NG 2	Fishing - potting/creeling	No expected impact on feature	Yes	n/a
North Norfolk Coast	NG 2	Fishing - recreational	No expected impact on feature	Yes	n/a
North Norfolk Coast	NG 2	Fishing - set netting	No expected impact on feature	Yes	n/a
North Norfolk Coast	NG 2	Infrastructure - cables & pipelines (Installation)	Possibility of impact on feature	Yes	Very small footprint. Not likely to result in exposure
North Norfolk Coast	NG 2	Infrastructure - cables & pipelines (Operation)	Possibility of impact on feature	Yes	Very small footprint. Not likely to result in exposure
North Norfolk Coast	NG 2	Sewerage disposal	No expected impact on feature	Yes	n/a
North Norfolk Coast	NG 2	Shipping	No expected impact on feature	Yes	n/a
North Norfolk Coast	NG 2	Tourism & recreation	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Crab Tiling/Bait digging	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Extraction - oil & gas	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Fishing - potting/creeling	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Fishing - recreational	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Fishing - set netting	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Industrial & agricultural liquid discharges	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Infrastructure - cables & pipelines (Installation)	Possibility of impact on feature	Yes	Very small footprint. Not likely to result in exposure
Humber (Spurn)	NG 8	Infrastructure - cables & pipelines (Operation)	Possibility of impact on feature	Yes	Very small footprint. Not likely to result in exposure
Humber (Spurn)	NG 8	Infrastructure - coastal (ports, marinas, leisure facilities)	Strong likelihood of impact on feature	Yes	Activity not coincident with feature - feature not exposed to activity and resultant pressures
Humber (Spurn)	NG 8	Infrastructure - coastal defence & land claim	Strong likelihood of impact on feature	Yes	Activity not coincident with feature - feature not exposed to activity and resultant pressures
Humber (Spurn)	NG 8	Military activities	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Seismic survey (military, exploration, construction)	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Sewerage disposal	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Shipping	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Tourism & recreation	No expected impact on feature	Yes	n/a
Humber (Spurn)	NG 8	Waste disposal - fish waste (land-based processing; processing vessels)	No expected impact on feature	Yes	n/a

Non-Coastal Geological & Geomorphological Vulnerability

Further to the information on GCR sites, further information on offshore geological and geomorphological features was provided by Natural England in July 2011. Natural England provided direction on the development of Conservation Objectives for two sites that lie within rMCZs in the Net Gain area, the Inner Silver Pit feature, within site NG6, and the Swallow Hole feature, within site NG16. This guidance was used to develop the following sections of text:

Inner Silver Pit

The Inner Silver Pit is a glacial tunnel valley (oriented north-south) floored by chalk bedrock and with associated tills and possible interglacial deposits forming the walls of the pit. These are in part draped by recent sediments.

The main sensitivity of this site is likely be from aggregate extraction as this activity has the potential to significantly modify the morphology of the feature, as well as disturb or remove the associated sediments that are part of the site's context. The site is also sensitive to the construction of platforms, whether for oil, gas, wind turbines or another purpose, most particularly if they are placed on, or close to walls of the pit. In addition, secondary effects (for example the effects of scour) would have to be considered. Given the size of the site, cables and pipelines are unlikely to have anything but a localised impact but, any such infrastructure in an east-west orientation may impact on the morphology of the walls of the pit, particularly in the southern part of the pit.

Given the levels of activity associated with the area it was suggested by Natural England that, for the most part, the Inner Silver Pit would be in good condition. Whilst there may be concern over the impact of infrastructure development on the walls of the Inner Silver Pit, there is currently no evidence of damage and, in any case, such damage would be likely to be limited within the context of the whole feature. Pragmatically, **Natural England advice would be for the Conservation Objective to aim to maintain the Inner Silver Pit feature in its current state.**

Swallow Hole

Swallow Hole is a glacial tunnel valley but comprises a somewhat smaller feature than Inner Silver Pit. All of the sensitivities identified for the Inner Silver Pit (e.g. aggregate extraction and, to a lesser extent, platform construction) apply to this feature. However, as a consequence of the smaller size of the Swallow Hole feature, sensitivities related to the placement or construction of platforms as well as infrastructure could be considered to be heightened.

Given the levels of activity associated with the area it was suggested by Natural England that, for the most part, the Swallow Hole site would be in good condition. **Natural England advice would be for the Conservation Objective to aim to maintain the Swallow Hole feature in its current state.**