2014/15 Capital Grants: Natura 2000 (N2K) Targeting Plan

River Basin District Plans outlining the targeting approach to Catchment Sensitive Farming (CSF) Capital Grants in 2014/15.

River Basin District	North Anglia	Plan prepared	10/03/2014
Natura 2000 Catchments covered by this plan	**Catchments:** • Bure, Ant and Muckfleet (1) • River Yare (4a) • River Wensum (2)	**Natura 2000 sites covered by this plan**	Natura 2000 sites and which catchment they lie within: **Bure, Ant and Muckfleet in the Broads Special Area of Conservation (SAC)** Upper Thurne Broads And Marshes Upton Broad & Marshes Ant Broads And Marshes Trinity Broads Shallam Dyke Marshes, Thurne Bure Broads And Marshes **River Yare** Yare Broads And Marshes **River Wensum** River Wensum Potter & Scarning Fens, East Dereham
Natura 2000 Catchment(s) *not* being considered for grants	**Catchment 17 - River Nar** N2K site Norfolk Valley Fens SAC which has a failing SSSI Unit (3) – SSSI East Walton and Adcock's Common.	**Rationale**	The unit is unfavourable recovering condition with a Higher Level Stewardship (HLS) agreement in place. The sward structure within the unit is the inhibiting factor to achieving favourable condition which the HLS is working to address. The unit is not within the Catchment's Diffuse Water Pollution plan.

Catchment 1

Catchment where grants will be offered	**Bure, Ant and Muckfleet**
Rationale for offering grant	The Broads SAC sites features include wet peat and species rich fens, reedbeds and wetland habitats including transition mires and quaking bogs, standing waters (sensitive to acidification), vascular plants, lower plants and rare invertebrates of wet habitats (such as desmoulins whorl snail, fen orchid, ramshorn snail) and important numbers of wintering and breeding wetland birds. These habitats are a priority as they are vulnerable to eutrophication caused by release of nutrients, particularly phosphorus, from the sediment and diffuse water pollution from a variety of sources, including agriculture. All main sewage works in the northern rivers are now phosphorus stripping and there is a programme of mud-pumping to remove the historic sediment burden from lakes. Catchment's land use is dominated by arable farming with grazing marshes, there are also a number of boatyards within the catchment. The Diffuse Water Pollution (DWP) Plans identify diffuse water pollution from agriculture with sediment listed as a significant contributor to unfavourable condition. Sources include agricultural land and this surface wash also carries Phosphate and crop protection productions within. The items on the priority list aim to address possible sediment sources to reduce this input.
Description of theme	Sediment loss from surface wash run off from farm yards and fields from arable operations and poor clean and dirty water separation within holding infrastructure. This sediment may also contain organic matter and nutrients negatively impacting upon the N2K site. This links to remedies to address water pollution from agricultural run off and the sites diffuse water pollution plan actions.
Area / holdings to be targeted	Predominately arable farms will be targeted within the Water Framework Directive management sub catchments. These will be prioritised as follows: • Holdings that have direct connectivity to the N2K site. Therefore items will positively impact water quality into the N2k site reducing sediment ingress. • Holdings identified by the CSF Effectiveness data where CSF is most effective to address sediment loss • Where previously received CSF technical advice and recommendations support CGS items to address the N2K failure • Where there is an existing HLS agreement and consultation with HLS advisers and Responsible Officers shows CGS could

	address a DWPA issue that to the benefit of the N2K site Where the above priority holdings have been targeted and addressed, holdings outside of this geographic boundary below: • Where CGS item location shows connectivity to N2k site and significant benefit to N2K from addressing DWPA on holding.
CSF Capital Grant Scheme (CGS) items to be deployed	To address sediment loss from agricultural fields and farm yard areas: CSF001 Relocation of gateways and associated gapping up CSF003 Watercourse fencing CSF007 Hard bases for livestock drinkers and feeders CSF008 Pasture pumps and associated pipework CSF009 Ram pumps and associated pipework CSF010 Livestock troughs with associated pipework CSF011 Cross drains on or in farm tracks or within farm yards for clean and dirty water separation CSF012 Sediment ponds and traps CSF014 Yard works for clean and dirty water separation CSF015 Installation of piped culverts in ditches CSF016 Resurfacing of gateways CSF017 Rainwater storage tanks, first flush rainwater diverters and downpipe filters CSF021 Livestock and Machinery tracks Most suitable items to address sediment loss from farm infrastructure and break field surface run off pathways to water courses as cited in the Diffuse Water Pollution User Manual (ADAS 2009). When combined with CSFO advice promoting good soil management will reduce surface wash from fields.

Catchment 2

Catchment where grants will be offered	**Yare**

Rationale for offering grant	The Yare Broads and Marshes site is a component of The Broads SAC, Broadland Special Protection Area and Broadland Ramsar site with great botanical and ornithological interest. The Marshes contain extensive areas of shallow fenland peats species-rich fens, carr woodland, open water and grazing marsh with dykes and unimproved meadows holding an outstanding assemblage of plants including many rare species. The site holds an important community of breeding birds and swallowtail butterfly is also present in good numbers on the site. The Marshes are open to the river running through with most areas and habitats unprotected from inundation by flood banks. A number of units have been assessed in the last two years as unfavourable declining or unfavourable no change due to diffuse water pollution identified within the DWP plan. These units either have direct connectivity with the River Yare or receive regular inundation of river water making this N2K catchment a priority to reduce sediment inputs into the N2K aiding nutrient enrichment affecting vegetation species structure. The land use is dominated by agriculture (total 82%, of which 36% is cereals, 25% other crops and 21% grassland) with the remaining 18% of land split evenly between urban and woodland. Potatoes and sugar beet are extensively grown with the majority of the land used for arable cultivation under-drained, mainly with systems installed in the last 30-40 years. This has important implications for nitrate, phosphate and sediment seen in turbid drainage water from agricultural fields.
Description of theme	Sediment loss from surface wash run off from farm yards and fields from both arable operations and poor clean and dirty water separation within holding infrastructure. Bankside erosion from cattle accessing watercourses and poached areas of grassland, such as feeding/drinking areas and gateways, are also a sizeable contribution to sediment losses into surface waters. This sediment may also contain organic matter and nutrients negatively impacting upon the N2K site. This links to remedies to address water pollution from agricultural run off with the DWP plan.

Area / holdings to be targeted	Predominately arable farms will be targeted within the Water Framework Directive management sub catchments. These will be prioritised as follows: • Holdings that have direct connectivity to the N2K site. Therefore items will positively impact water quality into the N2K site reducing sediment ingress. • Holdings identified by the CSF Effectiveness data where CSF is most effective to address sediment loss • Where previously received CSF technical advice and recommendations support CGS items to address the N2K failure • Where there is an existing HLS agreement and consultation with HLS advisers and Responsible Officers shows CGS could address a DWPA issue that to the benefit of the N2K site Where the above priority holdings have been targeted and addressed, holdings outside of this geographic boundary where CGS item location shows connectivity to N2K site and significant benefit to N2K from addressing DWPA on holding.
CSF Capital Grant Scheme (CGS) items to be deployed	To address sediment loss from agricultural and grazing fields and farm yard areas: CSF001 Relocation of gateways and associated gapping up CSF003 Watercourse fencing CSF007 Hard bases for livestock drinkers and feeders CSF008 Pasture pumps and associated pipework CSF009 Ram pumps and associated pipework CSF010 Livestock troughs with associated pipework CSF011 Cross drains on or in farm tracks or within farm yards for clean and dirty water separation CSF012 Sediment ponds and traps CSF014 Yard works for clean and dirty water separation CSF015 Installation of piped culverts in ditches CSF016 Resurfacing of gateways CSF017 Rainwater storage tanks, first flush rainwater diverters and downpipe filters CSF021 Livestock and Machinery tracks Most suitable items to address sediment loss from farm infrastructure and break field sediment pathways to water courses as

	cited in the Diffuse Water Pollution User Manual (ADAS 2009). When combined with CSFO advice promoting good soil management items will help reduce surface wash from fields

Catchment 3

Catchment where grants will be offered	**River Wensum and Potter and Scarning Fens**
Rationale for offering grant	All of the River Wensum units (units 46-55) are identified within the DWP plan as in unfavourable condition, and have an adverse condition reason of water pollution – agriculture/run-off. The Wensum is an enriched, calcareous lowland river with a total of over 100 species of plants, a rich invertebrate fauna and a relatively natural corridor. Chalk rivers are characterised by a high base flow from underlying aquifers with very low nutrient levels and very low turbidity. Diffuse pollution impacts the site through changes to the nutrient balance within the water, increases turbidity, deposition of sediment and changes to the physical nature of substrates making this a priority to address. Potter and Scarning Fens support small calcareous valley fens on shallow peat. The flora and fauna is exceptionally diverse and a number of uncommon mosses and liverworts are present. The site has great entomological interest and supports a rare species of damsel-fly, the only site in England for Norfolk flapwort. The site is in unfavourable condition due to water pollution – agriculture/run-off, and with a remedy of Diffuse Water Pollution Plan. Valley fens supporting M13[1] mire are characterised by a high base flow from underlying aquifers with very low nutrient levels, and as a consequence are extremely vulnerable to nutrient inputs attributed to agricultural run off making this a priority within the scheme. Agriculture is the main land use within the catchment, including cereal production and large areas of oilseed rape and sugar beet. The floodplains have been drained for farming and comprise mainly managed grassland with areas of fen, wet grassland, wet woodland and reedbed. They lie within the boundary of the former Broads ESA scheme and much of the land is covered by agri-environment schemes.

[1] Schoenus nigrans constant cover <80% in at least 40% of samples – very high cover of Schoenus may indicate lack of grazing
Carex hostiana, C. doica, C viridula (all ssp) C flacca, C panacea: at least 2 species of subspecies constant

Description of theme	Sediment loss from surface wash run off from farm yards and fields from both arable operations and poor clean and dirty water separation within holding infrastructure. Bank side erosion from cattle accessing watercourses and poached areas of grassland, such as feeding/drinking areas and gateways, are also a sizeable contribution to sediment losses into surface waters. This sediment may also contain organic matter and nutrients negatively impacting upon the N2K site. This links to remedies to address water pollution from agricultural run off.
Area / holdings to be targeted	Predominately arable farms will be targeted within the Water Framework Directive management sub catchments. These will be prioritised as follows: • Holdings that have direct connectivity to the N2K site. Therefore items will positively impact water quality into the N2K site reducing sediment ingress. • Holdings identified by the CSF Effectiveness data where CSF is most effective to address sediment loss • Where previously received CSF technical advice and recommendations support CGS items to address the N2K failure • Where there is an existing HLS agreement and consultation with HLS advisers and Responsible Officers shows CGS could address a DWPA issue that to the benefit of the N2K site Where the above priority holdings have been targeted and addressed, holdings outside of this geographic boundary below: • Where CGS item location shows connectivity to N2k site and significant benefit to N2K from addressing DWPA on holding.
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