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Humber Estuary Low Tide Count Programme 2003-2004

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We must express our appreciation to all of you for your contribution to the programme and apologise to anyone who may inadvertently have been missed off the list.

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Summary

The Humber Estuary is ranked as one of the top six sites in the UK for waterfowl. Information on, and management of the bird populations on the estuary rely heavily on data derived from the WeBS Core Counts survey scheme also known as the WeBS High Tide Count programme. The WeBS scheme provides sector-based data for the estuary as part of a co-ordinated national counting scheme. As the counts are undertaken around high water, they are able to ensure a relatively high accuracy of counting, as waterfowl are relatively close to the estuary banks. However, the drawback to this method is that the importance of low and mid shore areas of sectors for feeding (and loafing) is not necessarily covered, as flocks may be forced out of key feeding areas onto high water roosts.

Therefore, in order to gain a more accurate assessment of low water activity, the WeBS Low Tide Count scheme was initiated in the winter of 1992/3 with the aim to census the main UK estuaries at low water on a seven-year rotational basis. The first Low Tide Count programme on the Humber was undertaken in 1998/9 and involved low water monthly co-ordinated counts made by volunteer counters across the estuary and was reported by Catley (2000). The scheme was repeated in 2003/4 with the help of volunteer counters but with the organisation and reporting of the programme undertaken by the Institute of Estuarine & Coastal Studies (IECS) at the University of Hull on behalf of English Nature (Humber to Pennines Team).

Covering the whole of the Humber from Goole to Spurn Point on the north bank, and past Grimsby and Cleethorpes down the coast as far as Mablethorpe on the south bank, the Low Tide Count programme has involved 45 local birders who individually or in groups, and on a voluntary basis, covered 40 sections along the estuary.

The species accounts in the main text detail the findings of the programme for key wildfowl and wader species present on the Humber Estuary. Spatial and temporal distributions are described on a seasonal basis through detailed text, maps and graphs. Other species of importance, noted in lower numbers during the Low Tide Count programme are also briefly described. Finally, the additional species recorded during the programme are presented in a table.

The 2003/4 Low Tide Count programme highlighted both the recent recovery of the pink-footed goose on the estuary and the importance of Read's Island for the species. The species was the most numerous wintering goose on the Humber, but its distribution was restricted to Read's Island, the species feeding almost entirely on inland fields largely to the south of the estuary, moving onto the island to roost at night.

The importance of the outer estuary intertidal habitats for the dark-bellied brent goose was emphasised during the programme with the proportion of birds recorded as feeding at low tide being 80%. Generally, the programme found dark-bellied brent geese to be distributed along the southern shore from Cleethorpes to Mablethorpe.

Of all the wildfowl species, shelduck was found to be the most widespread species across the estuary, with the upper Humber and the middle/outer shore of the north bank found to support the largest concentrations. This is perhaps due to the generally muddier nature of these areas.

The bulk of teal and wigeon were concentrated on the upper Humber, although the programme underlined the importance of Read's Island for foraging teal, with discrete populations also present at Saltend.

The 2003/4 survey programme revealed a similar mallard distribution pattern to that of the 1998/9 campaign, with two major centres of distribution - the upper Humber particularly around Faxfleet to Brough and the middle estuary between Saltend and Hawkins Point. Given the absence of current national data for the species, it is not possible at this stage to accurately draw conclusions as to whether the status of the estuary has further declined for the species and whether a shift from inner to outer estuary habitats has continued or stabilised.

Mirroring an increase in avocet numbers at a national level, the programme has indicated an expansion in range and population size across the estuary. Avocet distribution at low water was found to generally match that of the breeding colonies, with the bulk of the population recorded on Read's Island.

On the Humber, the ringed plover was found to be widely distributed with no strong preferences for sections of the estuary, although with concentrations occurring in a number of key sites.

Although numerous across the estuary, golden plover were found to be concentrated in the middle/outer estuary, but with further arrivals during the late autumn to winter period apparently leading to the dispersion of birds into the upper Humber. Over the winter, the importance of the intertidal zone as primarily a roosting area was underlined by data from the current count programme. In contrast, the passage period demonstrated the value of the intertidal areas for foraging birds.

The 2003/4 programme identified the outer shore of the north bank as the favoured area for foraging grey plover and the intertidal areas adjacent to the saltmarsh habitats of Welwick and Cherry Cobb supported consistent numbers over the programme. This suggests that the saltmarsh acts as a main roosting site at high tide, with the birds dispersing onto the adjacent mudflat to feed at low tide.

The proportion of lapwing recorded as feeding at low tide was 30%, a similarly low level to that of golden plover, which again reflects the principal use of estuarine habitat as a safe roost. Flocks tended to concentrate on the inner estuary during the autumn, but the arrival of over-wintering flocks led to the take-up of sites in the middle and outer estuary, interestingly, a largely converse movement to that of golden plover.

The programme identified the importance of the Cleethorpes and Mablethorpe reach, together with Spurn Bight, for knot during the autumn/winter period.

The data on dunlin usage across the estuary indicated a preference for the Paull to Spurn intertidal areas. The proportion of dunlin recorded as feeding at low tide was 98%, a typically high value as the species is a specialist intertidal wader.

As with avocet, the Humber population of black-tailed godwit has risen significantly since the late 1990s in line with broad national trends. Examination of distributional patterns

across the estuary revealed a strong tendency for black-tailed godwit to occupy a few sites on the middle estuary, in particular during the winter. This reliance upon a few sites over the winter months was also highlighted during the previous programme (1998/9) and has implications for the conservation and management of the species. The bar-tailed godwit, also displayed a rather restricted distribution at low tide, but largely across the outer estuary.

For curlew, the 2003/4 programme found the population to be fairly well distributed across the estuary, although large gatherings were observed on the upper Humber and on the reach between Saltend to Skeffling on the north bank. The proportion of curlew recorded feeding at low tide was 88%, somewhat lower than for the majority of estuarine waders, perhaps due to the species sometimes feeding on terrestrial habitats.

Although widespread across the estuarine system, the intertidal areas between Saltend and Spurn were of greatest importance for foraging redshank. Most of these birds were feeding on the periphery of the Welwick and Cherry Cobb saltmarsh, which acted as a high tide roost site.

Turnstone distribution on the Humber at low water was characterised by large concentrations at a small number of sites ie Barton to East Halton Skitter and Cleethorpes to Humberston Fitties sectors. This perhaps reflected the habitat requirements of turnstone, with these sites featuring fucoid covered cobble areas and coarse sandy beaches.

Whilst the 2003/4 count achieved a greater spatial and temporal survey coverage than that of the 1998/9 programme, the sectoral basis of the methodology has allowed, where necessary, comparison between the two datasets (and greater analysis of specific areas can be carried out on a comparable basis if required). However, there are some constraints to the extent to which comparable analyses can be carried out, stemming largely from an absence of national trends data over recent years against which to compare usage trends. This is exacerbated by the current programme being only the second such count on the Humber.

Bearing these issues in mind, it is considered important that the 5-year programme is continued, in order to gain a better understanding of species trends and sectoral usage both in the context of national and regional patterns, and on a sectoral basis. The estuary is a dynamic system, facing a series of changes including relative sea level rise, development pressures and habitat creation. In order to effectively manage the system, it is important to understand how different species and areas within the system are reacting to such changes.

Contents

1 Introduction

The results of the Wetland Bird Survey (WeBS) Core (ie high tide) Counts, run by the WeBS partnership of the British Trust for Ornithology, the Wildfowl and Wetlands Trust, the RSPB and the JNCC (on behalf of English Nature, CCW and SNH), provide a major cornerstone of designated site selection for waders and wildfowl. Core Counts are carried out once a month, principally from September to March, but on some key sites including the Humber, they continue all year round. Undertaken on a high tide at coastal and estuarine sites, this annual survey provides the best available data on the numbers of birds utilising wetland habitats in the UK. This is partly because high tides bring birds closer to the shore and into high tide roosts, concentrating them into relatively small and easily accessible areas for the purposes of the survey.

However, as a result, they provide little information about bird distribution and individual site function as a whole. To address this, the WeBS Low Tide Count scheme was initiated in the winter of 1992/3 with the aim to systematically census each of the 59 main UK estuaries on a five-year rotational basis using standardised methods. This has since been extended to a seven year cycle due to logistical difficulties. This scheme involves co-ordinated counts of feeding and roosting waterfowl during the winter on pre-established subdivisions of the intertidal habitat in the period two hours either side of low tide. These counts therefore give the best data on the distribution and densities of birds feeding and roosting on the intertidal area around low tide – information which is important to understanding species feeding behaviour and preferences as well as sectoral and individual site function.

The first Low Tide Count programme on the Humber Estuary (instigated and funded by English Nature) was undertaken from September 1998 to August 1999 (Catley 2000). On the majority of estuaries in the UK, only four monthly low tide counts are completed from November to February (inclusive), but on the Humber, it was decided to run both the 1998/9 Low Tide Count and the annual Core Counts over a full 12-month period, thus picking up on passage movements as well as breeding usage. Five years on, English Nature led and funded another Low Tide Count between September 2003 and August 2004, the results of this which are reported here.

The aims of the Humber 2003-2004 Low Tide Count programme were to:

- investigate the within-site distribution of estuarine birds at low tide to compliment the information gathered by WeBS Core Counts and thereby ultimately improve understanding of site usage;
- assist in the targeting of conservation efforts to greater effect;
- and help to inform the many decisions that must take account of the nationally and internationally important bird populations on the Humber.

The conservation protection status of the Humber has recently been reviewed, with proposed expansions in the area of the estuary covered by European designations. The boundaries of the Special Protection Area (SPA) and Ramsar site on the Humber have been redrawn to include the entire intertidal and subtidal zones, as well as some adjacent areas, whilst the Humber has also been put forward as a possible Special Area of Conservation (pSAC). The site therefore forms part of the Europe-wide Natura 2000 network of European (ie SPA and SAC) sites. Information from the Low Tide Count programme, together with WeBS and

other monitoring data will be used by English Nature to assist in the future management of the Humber Estuary European Marine Site, and it is hoped that it will provide a valuable tool for all involved in decision-making and management of the estuary.

The Low Tide Count programme on the Humber involved monthly co-ordinated counts by volunteers, made across the intertidal areas of the estuary, and timed for the same day as the WeBS Core Counts. This programme of counts therefore drew heavily on the efforts of volunteer counters on both banks of the estuary, with the organisation and reporting of the programme undertaken by the Institute of Estuarine & Coastal Studies (IECS) at The University of Hull on behalf of English Nature (Humber to Pennines Team). In addition to the organisation and co-ordination of the counts (as well as the provision of two voluntary counters), the Institute's tasks included the production of a monthly newsletter, which included an analysis of the previous months count data and any additional articles relating to the estuary.

Given the very high volunteer involvement in the programme, the organisers and English Nature wish to express thanks to all those who participated, often in poor weather conditions. The success of the project would not have been possible without the efforts of the volunteer counters and it was fortunate that there were a large number of enthusiastic birders with such a pool of knowledge and commitment available on the Humber Estuary.

This report details the findings of the Low Water Count programme conducted on the Humber Estuary between September 2003 and August 2004 inclusive. This report aims to present, through density maps and associated text, the current distribution of key wader and wildfowl species at low water, and discuss any noticeable change in numbers or distribution since the previous Low Tide Count programme, which was undertaken 5 years ago.

2 Methods, coverage and analysis

2.1 Survey methodology

The overall methodology generally followed the WeBS Low Tide Count methodology currently employed on estuaries around the UK, which itself was built on the existing high water WeBS methodology. The full detailed methodology can be found in *Estuarine Waterbirds at Low Tide* (Musgrove and others 2003).

For the Humber, the Low Tide Count participants were each allocated a count sector (in many cases the same as their WeBS Core Count sector), and were asked to conduct a survey of the intertidal areas of the Humber Estuary on a pre-determined date each month. The low water survey effort was restricted to a period two hours either side of low tide on all sectors, except for some of those in the outer estuary which, due to their size (and therefore the distance to low water) could not be completely covered around low water, these sectors being surveyed at a period around mid water.

Prior to the commencement of the programme, all counters were made aware of the potential health and safety risks involved in undertaking such survey work, and were briefed on appropriate survey techniques (count methodology and health and safety). In addition, all counters were provided with a survey schedule for the programme, detailing survey dates, high and low water times standardised to the middle estuary and times for dawn and sunset. Prior to each survey, counters were provided with a standard WeBS low tide count sheet on which to record feeding and roosting survey data, along with the date, sector code and the start and finish times of the count.

2.2 Survey coverage

2.2.1 Site coverage

The high number of volunteers for the 2003/4 programme allowed the area of survey coverage to be extended from that of the 1998/9 programme, this extension being along the south bank of the outer estuary from Grainthorpe Haven down to the Theddlethorpe NNR and along the River Trent on the upper estuary. With the exception of these two areas, the same count sections identified during the first low tide programme (1998/9) were used for the 2003/4 programme, these also being coincidental with the well-established WeBS Core Count sectors where applicable.

Following experience gained from the first low tide count programme, the opportunity was taken to enhance the usability of the collected data, by splitting the larger count sectors into several sub-sections. Counters were asked, where possible, to sub-divide their sections, with the broad stipulation that the new sub-sections must be relatively similar in size and easily identifiable in the field, which will aid future repeated survey programmes. In this way, further information on specific area usage was gained without altering the inter-comparability of the two low tide count programmes, and indeed with the WeBS Core Count programme.

The area to be covered at low water was defined as the habitat between the high water mark, often the flood defence embankment, and the low water mark. This included in numerous

cases intertidal marshes and dune complexes (particularly along the Lincolnshire shore) in addition to the extensive intertidal mud and sand flats.

The low tide count boundaries also incorporated a few non-tidal habitats, where these were known to, or expected to be used by waterfowl which regularly use the Humber ie the North Killingholme Haven Pits.

The count sectors and sub-sectors used during the 2003/4 programme are shown in Figures 1a to 1c. The locations of the count sectors and sub-sectors, together with the individual intertidal area of each sector and sub-sector are also given in text in Table 1.

2.2.2 Species coverage

Standard recording methods were employed with data transcribed to WWT/BTO low water count forms (Musgrove and others 2003). The list of species of interest for the Low Tide Count programme included all waders and wildfowl, along with additional species characteristic of wetland habitats such as divers, grebes, cormorants, herons, rails, gulls, terns and kingfisher. Although data collection for all waterbirds was encouraged, recording of gulls and terns was optional and was left at the discretion of the individual counter. Recording the presence or absence of raptors was also requested, although this was treated as a category of 'activity/disturbance' as opposed to an abundance value. In addition, counters were asked during the breeding season to differentiate between adult and juvenile shelduck and to make any notes of breeding waders on their section.

2.2.3 Temporal coverage

Counts were carried out on a monthly basis, with the low water count timed to coincide with the existing national Core Count WeBS dates in order to minimise counter effort and maximise correlation between datasets. Where it had already been necessary for the Core Count WeBS dates to be rescheduled (ie for count dates on the Humber to deviate from the national Core Count dates, in order to address local issues, eg to ensure survey timing during hours of daylight), then the low water count date was also moved to match with the local Core Count WeBS date. In a few instances (usually due to counter availability), it was necessary for coverage of one or more sectors to be undertaken on a day outside the specified count date. A table showing the sector coverage throughout the course of the programme is presented in Appendix 1. It shows good temporal coverage on the majority of the sectors, although the Tetney Marshes Nature Reserve (Sector MSD & MSE1) was covered on only one occasion during the programme.

For the most part, the low water counts for each sector were carried out approximately two hours either side of low water. However, for the outer estuary sites featuring extensive intertidal sand and mudflats, it was necessary to conduct counts at around mid water, when most flocks were in view of the shore.

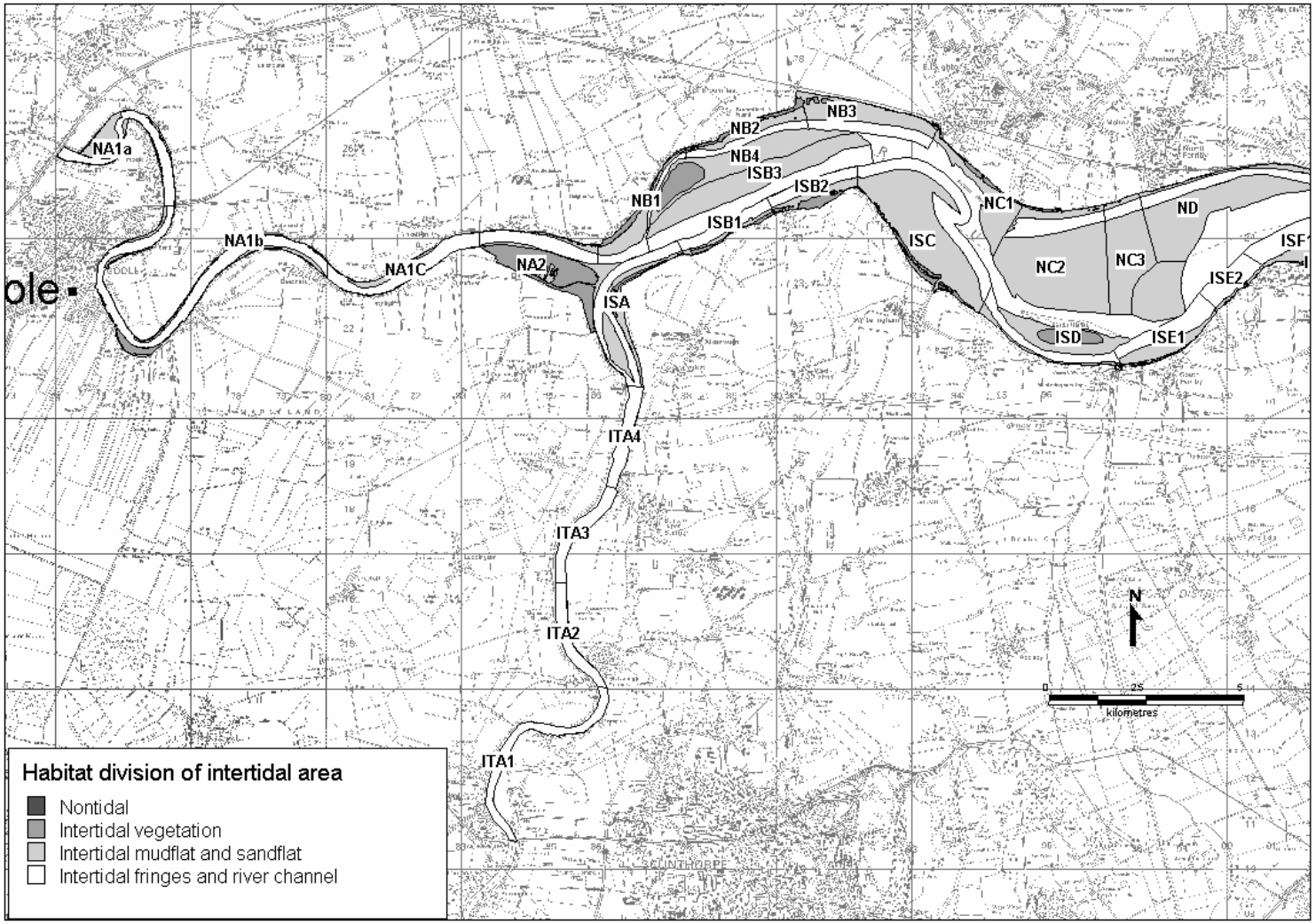


Figure 1a: Inner Estuary sectors and sub sectors used in the Low Tide Count 2003/4. © Crown copyright. All rights reserved English Nature 100017954 2005.

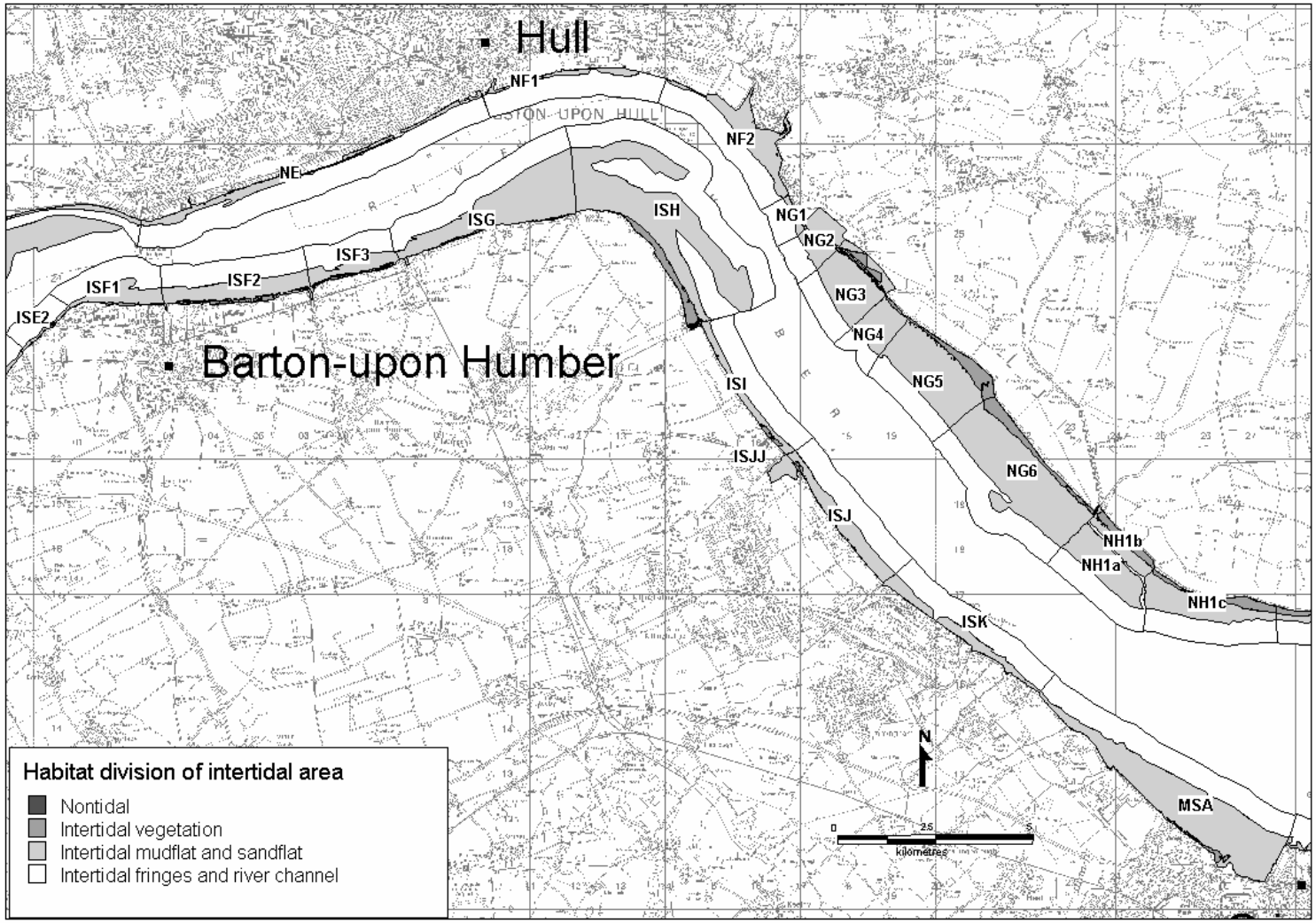


Figure 1b: Middle Estuary sectors and sub sectors as used in the Low Tide Count 2003/4. © Crown copyright. All rights reserved English Nature 100017954 2005.

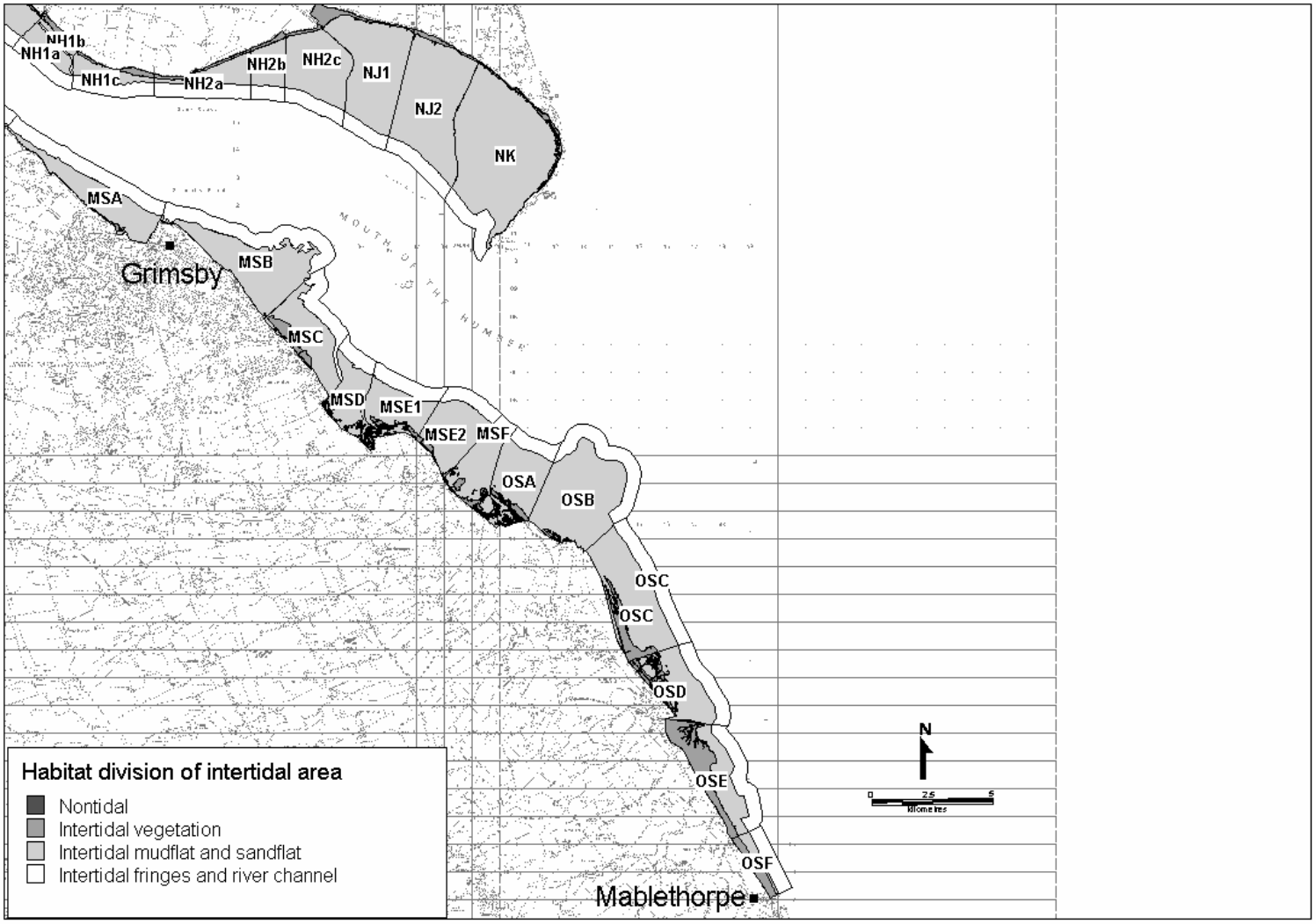


Figure 1c: Outer Estuary sectors and sub sectors as used in the Low Tide Count 2003/4. © Crown copyright. All rights reserved English Nature 100017954 2005.

Table 1: Humber Estuary sectors and sub-sectors as used in the Low Tide Counts 2003-2004

Sectors	Sub-Sectors	Grid Reference (OS National Grid)	Area (sq km)	Descriptions
ITA	ITA1	486 224, 414 035 to 484 220, 410 613	0.958433	Keadby Bridge to Amcotts
	ITA2	485 305, 416 364 to 486 224, 414 035	0.612962	Amcotts to Mere Dyke
	ITA3	486 416, 418 456 to 485 305, 416 364	0.637625	Meredyke - Garthorpe Shore
	ITA4	487 022, 420 716 to 486 416, 418 456	0.66323	Garthorpe Shore - Walcot.
ISA	ISA	487 019, 420 712 to 487 927, 423 650	0.793628	Walcot to Alkborough Beacon
ISB	ISB1	487 927, 423 650 to 489 889, 424 625	0.148853	Alkborough Beacon to Whitton village
	ISB2	489 925, 424,551 to 491 762, 425 129	0.327524	Whitton Village to Whitton Ness
	ISB3	487 090, 423 989 to 492 069, 426 079	2.32896	South side of Whitton Sand counted from south shore
ISC	ISC	491 762, 425 129 to 494 482, 422 361	3.50154	Whitton Ness to 1 km east of Winteringham Haven
ISD	ISD	494 474, 422 341 to 497 514, 421 096	1.05757	Winteringham east to South Ferriby bird hide: includes Read`s Island and all sand and mudflats to north and west.
ISE	ISE1	497 617, 421 069 to 499 704, 422 435	1.85305	South Ferriby bird hide to south Ferriby Cliff and associated mud to the east of Read`s Island
	ISE2	499 757, 422 420 to 500 773, 423 359	0.0820407	South Ferriby Cliff to Chowder Ness

Sectors	Sub-Sectors	Grid Reference (OS National Grid)	Area (sq km)	Descriptions
ISF	ISF1	500 773, 423 359 to 502 866, 423 422	0.66364	Chowder Ness to Barton Haven
	ISF2	502 866, 423 422 to 506 112, 423 676	1.26858	Barton Haven to Barrow Haven
	ISF3	506 112, 423 676 to 508 102, 424 431	0.610426	Barrow Haven to New Holland Pier
ISG	ISG	508 102, 424 431 to 511 999, 425 461	3.11642	New Holland Pier to Goxhill Haven
ISH	ISH	511 999, 425 461 to 514 992, 423 064	4.99501	Goxhill Haven to East Halton Skitter
ISI	ISI	514 518, 422 968 to 516 653, 420 104	0.515476	East Halton Skitter to North Killingholme Haven
ISJ	ISJJ	516 274, 419 707 to 516 342, 419 466	0.22636	North Killingholme Haven Pits
	ISJ	516 653, 420 104 to 518 826, 417 250	0.998391	North Killingholme Haven to south Killingholme Haven
ISK		518 826, 417 250 to 522 287, 414 789	0.752797	South Killingholme Haven to first factory beyond Immingham Dock
MSA		522 287, 414 789 to 527 275, 410 630	4.3868	Factory south of Immingham Dock to Grimsby Dock Tower
MSB		527 767, 411 471 to 531 561, 407 932	6.87674	Grimsby Dock Tower to Cleethorpes Wonderland
MSC		531 518, 407 923 to 533 812, 405 087	3.81158	Cleethorpes to Humberston Fitties
MSD		533 548, 404 867 to 535 316, 403 148	3.02104	Humberston Fitties to Tetney Haven

Sectors	Sub-Sectors	Grid Reference (OS National Grid)	Area (sq km)	Descriptions
MSE	MSE1	535 377, 403 611 to 536 933, 403 575	3.3201	Tetney Haven to North Cotes Point
	MSE2	536 933, 403 575 to 537 849, 402 382	3.89461	North Cotes Point to northern edge of saltmarsh at Horseshoe Point.
MSF		537 996, 402 217 to 539 480, 400 738	3.31323	Northern edge of saltmarsh at Horseshoe Point to Grainthorpe Haven
OSA		540 853, 400 641 to 539 481, 400 703	4.21634	Grainthorpe Haven to Somercotes Head
OSB		540 989, 400 656 to 543 058, 399 556	8.62786	Somercotes Haven to Donna Nook
OSC		544 061, 400 507 to 546 383, 396 168	6.32974	Donna Nook to Salt Box Farm
OSD		544 598, 395 573 to 547 575, 393 305	3.56513	Salt Box Farm to Saltfleet Haven
OSE		547 012, 393 371 to 548 543, 389 291	2.59215	Saltfleet Haven to Theddlethorpe
OSF		548 543, 389 291 to 549 915, 387 161	0.54843	Theddlethorpe St Helen to North End, Mablethorpe
NA1	NA1a	474 507, 425 887 to 475 434, 426 803	0.452691	M62 road bridge to Goole Bridge
	NA1b	475 062, 423 355 to 476 382, 424 712	0.33118	Goole Bridge to Reedness
	NA1c	480 467, 423 110 to 482 477, 423 866	0.19654	Reedness/Yokefleet
NA2		483 375, 424 131 to 486 002, 423 860	0.586698	Yokefleet to Faxfleet (Inc Blacktoft Sands)

Sectors	Sub-Sectors	Grid Reference (OS National Grid)	Area (sq km)	Descriptions
NB	NB1	486 000, 423 824 to 487 956, 425 939	0.555057	Faxfleet to Weighton Lock and Faxfleet ponds
	NB2	487 956, 425 939 to 490 568, 426 924	0.47597	Weighton Lock to Crabley Creek
	NB3	490 409, 427 239 to 493 611, 426 422	1.19345	Crabley Creek to Brough
	NB4	487 163, 424 301 to 491 752, 426,347	1.74511	North side of Whitton Sand
NC	NC1	493 611, 426 422 to 495 441, 424 734	1.0211	North Ferriby to Pier
	NC2	495 441, 424 734 to 497 230, 424 744	4.31187	Pier to Oyster Ness
	NC3	497 230, 424 744 to 498 012, 424 988	1.85463	Oyster Ness to Brough Haven
ND		498 012, 424 988 to 502 370, 425 291	3.10458	North Ferriby to Humber Bridge
NE		502 370, 425 291 to 509 926, 428 072	0.88317	Humber Bridge to Hull
NF	NF1	509 930, 428 077 to 513 420, 428 603	0.312059	Hull to Alexandra Dock
	NF2	513 991,428 453 to 516 719, 425 860	1.26027	Alexandra Dock to Paull

Sectors	Sub-Sectors	Grid Reference (OS National Grid)	Area (sq km)	Descriptions
NG	NG1	516 715, 425 861 to 517 068,425 093	0.116318	Paull to Paull Battery
	NG2	517 377, 425 558 to 517 971, 424 883	0.777148	Paull Battery to Paull Holme
	NG3	517 971, 424 883 to 519 110, 423 771	1.61574	Paull Holme to Little Humber
	NG4	518 854, 423 594 to 519 365,423 103	0.803647	Little Humber
	NG5	519 379, 423 092 to 521 054, 421 292	2.50015	The Outstray to Cherry Cob
	NG6	521 051, 421 297 to 523 573, 418 799	3.89087	Cherry Cobb to Stone Creek
NH1	NH1a	523 350, 418 586 to 524 598, 417 227	1.33935	Stone Creek to West Bank (Lower shore)
	NH1b	523 590, 418 967 to 524 804, 417 530	0.430871	Stone Creek to West Bank (Upper shore)
	NH1c	524 783, 417 511 to 526 244, 416 881	1.35825	West Bank to Old Hall
NH2	NH2a	527 543, 416 576 to 531 022, 417 536	1.84843	Old Hall to Newlands
	NH2b	531 022, 417 536 to 532 266, 418 037	1.8401	Newlands to Outstray Farm
	NH2c	532 266, 418 037 to 533 436, 418 507	5.11989	Outstray Farm to Patrington Channel

Sectors	Sub-Sectors	Grid Reference (OS National Grid)	Area (sq km)	Descriptions
NJ	NJ1	533 584, 418 425 to 536 870, 418 176	7.96906	Patrington Channel to Skeffling Clough
	NJ2	536 872, 418 172 to 539 191, 417 128	9.69532	Skeffling Clough to Kilnsea
NK		539 192, 417 116 to 539 539, 410 415	14.831	Sammy`s Point to Spurn Head includes Spurn Bight

2.3 Survey analysis and interpretation

2.3.1 Data storage, validation and calculation

Counters were requested to return their count forms within the month of the count for the production of the newsletter, and in order to facilitate this, pre-paid envelopes were provided to all participants. On receipt of the count form, the data were input to a purpose-built LTC database provided by the British Trust for Ornithology, and during this stage, if any irregularities were found, they were discussed with the sector counter. Finally, to ensure the virtual elimination of errors during the data input stage, the data were re-checked by a third person before the final analysis.

There are a number of ways in which the Low Tide Count data could be manipulated in order to produce population estimates. On a sectoral basis, mean numbers of birds per season and maximum peak counts per season were considered to be the most reliable to detect changes in relative abundance throughout the year. The mean numbers of birds per season was considered the more suitable approach, since the results for each month were taken into account, reflecting more accurately the frequency of occurrence over the season.

Wader data were then added into three separate spreadsheets containing each of the functional counting seasons defined by the WWT; spring (April to June inclusive to describe spring passage); autumn (July to October inclusive to describe autumn passage) and winter (November to March inclusive, to describe the wintering population). In the case of wildfowl species, the same assessment period as for the wader populations was used, although the timing or extent of these movements is generally less marked than for wildfowl. However, shelduck on the Humber Estuary exhibit a substantial passage during the early autumn and late spring (Allen and others 2003).

The second stage of analysis consisted of processing the data in line with the methodologies utilised by the WWT. This methodology is currently used by the Wetland Bird Survey for the WeBS Core Counts in order to generate the five-year peak means by sector for waders and wildfowl. For the purpose of the current study, the format calculation provided by WWT was used and was slightly modified to allow the average numbers of birds to be calculated. From the calculation, a mean number of birds for the assessment period (spring, autumn and winter) was derived for key waders and wildfowl on a sectoral basis.

2.3.2 Areas and densities

For this report, the presentation and analysis of the survey results has been based on bird density, primarily because the individual count sectors are not of equal size, and therefore a density value provides the best method for inter-sector comparison. To calculate the density, it was necessary to have an area measurement for the estuary as a whole and for sectors, with area values derived from a Geographic Information Sysyem (GIS). This was achieved through the use of digital map interrogation using MapInfo *v7.8.*

In order to map the sectors and sub-sectors of the Humber Estuary, it was necessary to digitise the boundaries of the intertidal areas by mapping the high water and low water marks. As a basis for the analysis, Ordnance Survey maps were initially considered for the base maps. However, this was found to lead to problems in the mapping of site extremities due to

the definition of low water and high water marks. The definitions that appear on published OS maps are for Mean High Water (MHW) and Mean Low Water (MLW), thus omitting the area between mean high water (MHW) and the mean high water of spring tides (MHWS). This latter zone includes habitat surveyed by the counters during the programme which is of substantial importance for many species of waterfowl, and often supports the saltmarsh zone on the Humber.

Another method of determining the upper extent of the intertidal area was clearly required, and for the purpose of the study, the upper limit of the intertidal area was therefore defined by tidal defence structures, such as sea walls or embankments, which coincided with the area surveyed by the counters. The upper limit of intertidal area was mapped using the tidal defences digitised from Ordnance Survey maps (OS 2003), with the low water mark position taken from Admiralty charts (UK Hydrographic Office 2004; Associated British Ports 2004). This latter format provided advantages over the OS maps, as the charts are designed and published for mariners thus are updated regularly and display the position of low water at the height of the Lowest Astronomical Tide (LAT), ie the lowest possible tide under average meteorological conditions.

Once the intertidal areas and the line boundaries of sectors were mapped, each count sector was sub-divided into a maximum of three zones. Although the habitat limits and definitions have been slightly modified for the purpose of the study, this process followed the general approach taken by Musgrove and others (2003) in *Estuarine Birds at Low Tide*. The zones were defined as follows: intertidal vegetation, intertidal mudflat and sandflats, intertidal fringes and river channel. This method of division of surveyed areas allowed a habitat association to be included in the analysis and above all reduces the potential for the derivation of misleading density values. The extent of each habitat in the Humber Estuary is shown in Figures 1a to 1c.

Intertidal vegetation was defined by mapping reed beds, salt marsh and dune complexes which occurred to the seaward side of the tidal defences, thus on the upper limit of the intertidal area. The assessment of the intertidal vegetation around the estuary drew heavily on the NVC surveys undertaken by Bullen Consultants in 2001 (Humber margins) and Dr Tom Dargie (Lincolnshire coast) in 2001 (Dargie 2002a & 2002b), with area assessments made from these data. Once this assignment process was completed, the extent of intertidal mudflat and sandflat was deducted. Finally, the intertidal fringes and river channel were added to the map following a similar approach developed by Musgrove and others (2003). The intertidal fringes and river channel were defined as the area extending half way across a channel, or 500m offshore when the channel was of sufficient width (considered to be the maximum viewable limit in most instances).

2.3.3 Distribution maps

Distribution maps have been produced in the form of dot-density maps, which use dots to represent the mean number of birds in a particular sector. Each dot used on the map representing a single entity (ie one dot = one bird). Although counters differentiated between roosting and foraging birds, for the purpose of the study the mean number of birds included loafing/roosting and foraging birds together. It should be noted that the majority of waterfowl are foraging at low water across the intertidal areas. If not the case, reference to roosting and loafing behaviours are made in the text accompanying the maps.

Dot density maps are considered to be the best way (in black and white) of describing density differences between count sections, however, it should be understood that the dots do not always indicate the exact location of the bird. Indeed, in this instance the GIS analysis employed a protocol to take a number of dots equal to the mean number of individuals of a species present in a count section and to place them randomly within the polygon representing the count sector. Maps have been produced in black and white in order that relevant pages may be reproduced more easily if required.

3 Species accounts

The following text describes the findings of the 2003/4 programme on a species basis:

The main body of text addresses usage on species account basis, using key waders and wildfowl species present on the estuary. Within each species account, the following information is presented and discussed:

> A short introductory paragraph is intended to give a brief outline of the species's status on the Humber Estuary. The findings of the scheme are then presented with the spatial and temporal distribution of key species described on a seasonal basis. Mapped densities are also presented, derived from average numbers of birds recorded, which illustrate the differential pattern of usage throughout the Low Tide Count programme. The species maps are presented at standard dot size with one dot representing 'one averaged bird'. Distribution of dots within each sector are not representative of actual locations, rather they are a randomised distribution based on average numbers within the sector's area. Finally, in addition to describing the spatial and temporal patterns of usage on the Humber by each of the key species, where applicable, comparison is made to data derived from the 1998/9 Low Tide Count programme as well as regional and national trends from the WeBS programme where these data are available.

Other species of importance present in lower numbers are also discussed in the species account text, but in less detail.

Finally, the additional species recorded during the 2003/4 Low Tide Count programme are presented in a summary table.

3.1 Key waders and wildfowl species

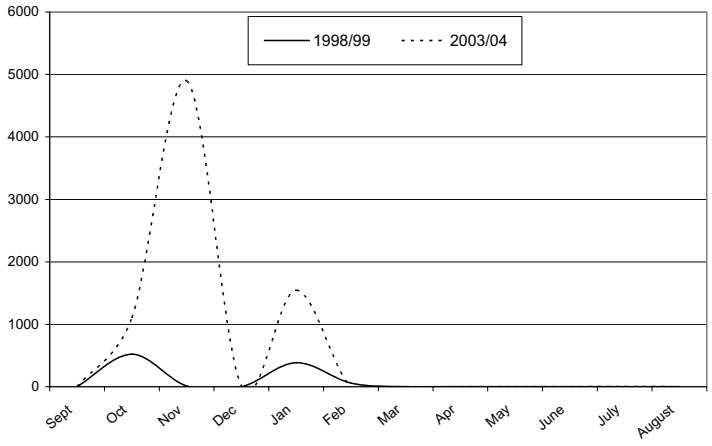
3.1.1 Pink-footed goose (*Anser brachyrhynchus*)

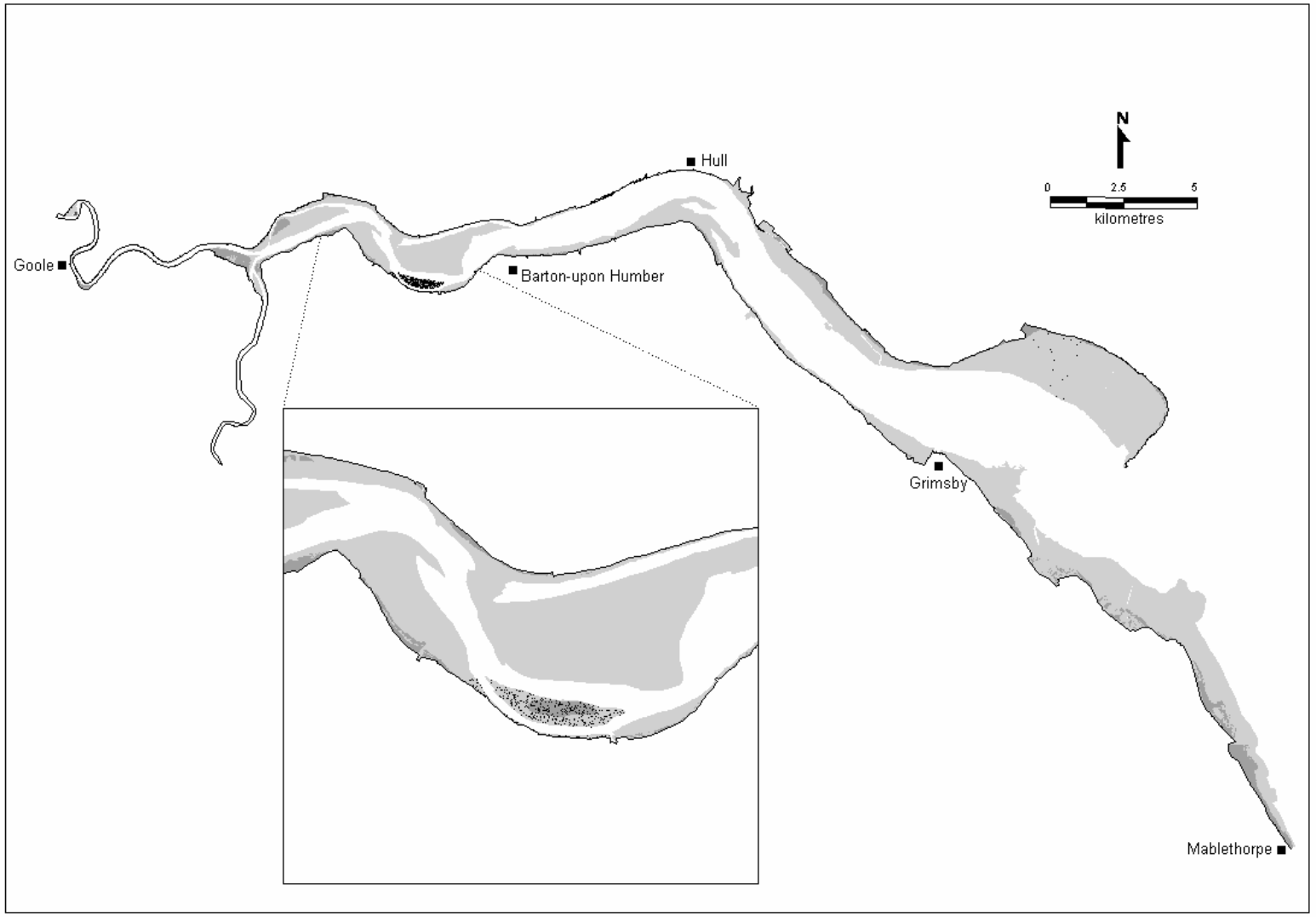
Although pink-footed geese take advantage of habitat within the upper Humber to roost, the wintering population forages almost exclusively on the farmland habitats surrounding the estuary, in particular on the south bank. Pink-footed geese generally gather on the upper Humber to roost at night, and then move off again at dawn often affording a spectacular movement across the estuary. The 1998/9 Low Tide Count programme identified Read's Island as the favoured roosting site on the estuary (Catley 2000).

The importance of the Read's Island sector for pink-footed goose continued to be emphasised during the 2003/4 Low Tide Count programme. The distribution maps shown for the winter and autumn period illustrate the restricted distribution of this species on the Humber. Of the October, November and January counts, which featured the highest maxima, over 80% of the population was concentrated on Read's Island. In November, a flock of 4,000 was observed roosting on Read's Island before sunrise, the majority of the flock were then observed to disperse onto the Lincolnshire Wolds near Barton to feed whilst a smaller group headed towards Winteringham. Elsewhere on the estuary, records were shown to be relatively scarce, however the presence of 800 individuals foraging in November on the Whitton Village to Whitton Sand section was noteworthy. The November count also featured 40 roosting birds on Whitton Sand. Historically this area was habitually used as a key roosting

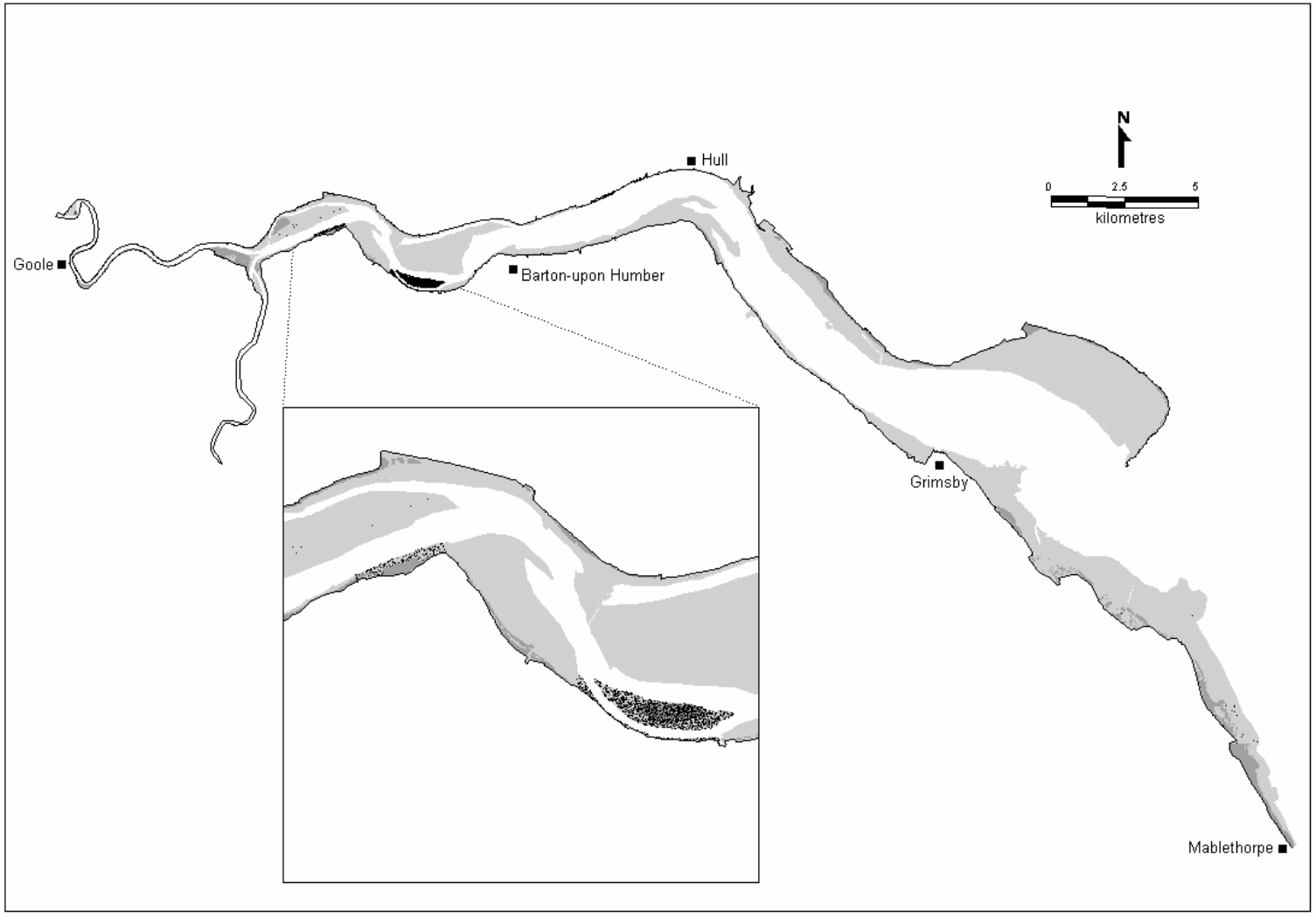
site, however, the increase in vegetative cover at the site (amongst other factors) has meant that the area has not been used by this species on a regular basis for the last 20 years and with only occasional feeding flights undertaken inland onto sites on the north bank (N. Cutts pers. comm. 2004). The November count of 4,000 on Read's Island represented a substantial figure for the Humber as a whole, after the population crash in the mid 1970's. The flock using the Humber has in general been less than 2,000 birds over the last couple of decades with flocks of over 2,000 birds being a rarity on the Humber since the early 1970's. This is in contrast to the rise in importance of the Norfolk wintering population supporting around 20,000 birds, although an increase in numbers on the Humber has been seen in recent years to levels above the international importance threshold of 2,250 birds. The flock of over 4,000 birds from the current reporting programme is therefore of particular note, although there is still someway to go before the flock size of around 15,000 to 20,000 birds is reached, this level of usage having been recorded on the estuary during the 1930's (HWRC, unpublished) and as recently as 1959 (Pashby, 1992).

The WeBS Low Tide Counts highlight both the recent recovery of this species on the estuary and in particular the importance of Read's Island for the Humber population. It must be stressed, however, that given the foraging/roosting behaviour of the species, the Low Tide Count scheme does not always give a true reflection of the status of the species as foraging takes place away from the estuary.





Pink-footed goose low tide distribution, autumn 2003/4.



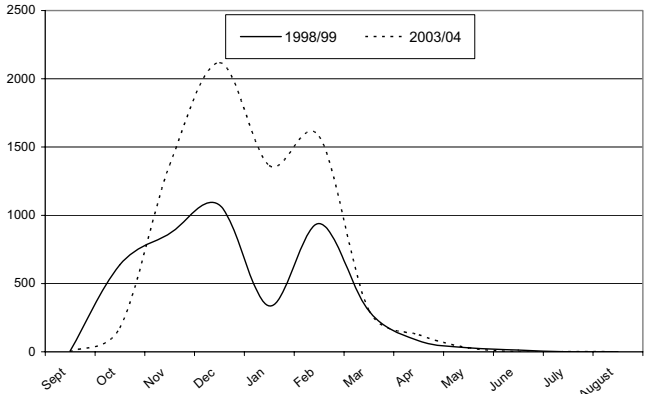
Pink-footed goose low tide distribution, winter 2003/4. *Note: No spring map as the species was not recorded during the spring 2004.*

3.1.2 Dark-bellied brent goose (*Branta bernicla bernicla*)

The dark-bellied brent goose race forms the majority of the brent goose population, this race breeding in arctic Russia (western Siberia) and wintering on the southern North Sea coast. On the Humber, the 1998/9 Low Tide Count programme recorded wintering brent geese to be mainly along the southern shore from Cleethorpes to Saltfleetby, although small numbers were also found on the north shore between Sunk Island and Spurn.

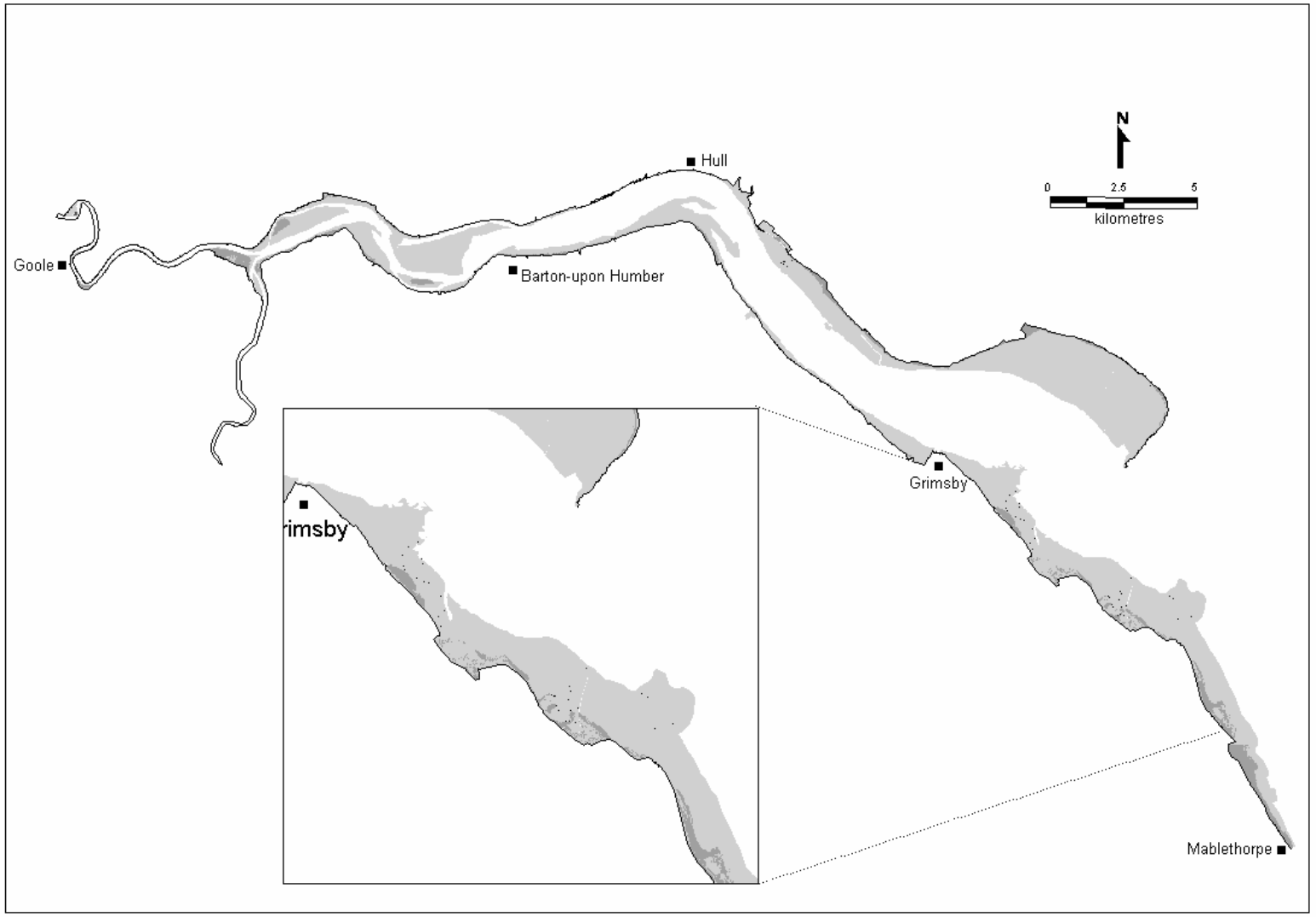
The low tide counts carried out during the 2003/4 winter identified a similar pattern of distribution. The 2003/4 programme showed the early autumn period to feature low numbers of birds, with the main arrival of wintering dark-bellied brent geese taking place during November. The large influx of over 1,000 individuals in November was concentrated on the intertidal zone to the south of Cleethorpes and as the distribution map indicates, the highest densities during the winter were found on the Horseshoe Point to Grainthorpe Haven sector. This sector supported 30% of the Humber wintering population with an average of 446 birds over the winter. The remainder of the population is largely dispersed at a lower density on a large section stretching from Grainthorpe Haven to Mablethorpe. By contrast, the north shore supported only 7% of the Humber wintering population, although the last count of the winter period in March indicated an increase in usage on the Spurn sector. However the overall Humber population declined during this period with most birds leaving for staging areas in the Wadden Sea. The importance of the intertidal habitats for the species is illustrated by the findings of the Low Tide Count programme, with 80% of the observations relating to foraging activity by individuals. Dark-bellied brent geese rely heavily on *Zostera* (Eelgrass) as a food source on their staging areas in the Wadden Sea, and once this has depleted, they move to English estuaries where they again feed on *Zostera* where it is available, and then switch to feeding on green algae and saltmarsh (Ganter 2000).

On the Humber Estuary, the low tide feeding distribution was found to be concentrated around key saltmarsh habitats - not perhaps unexpected given the scarcity of *Zostera* in the Humber (Allen and others 2003). Although not covered by the count programme in any detail, winter sown cereals and grassland also provide a substantial amount of food when intertidal resources are depleted at the end of the winter. Therefore, although perhaps not to the same extent as for the pink-footed goose, the low tide count data potentially do not reflect the true size of the Humber population given the potential field feeding activity undertaken by this species.

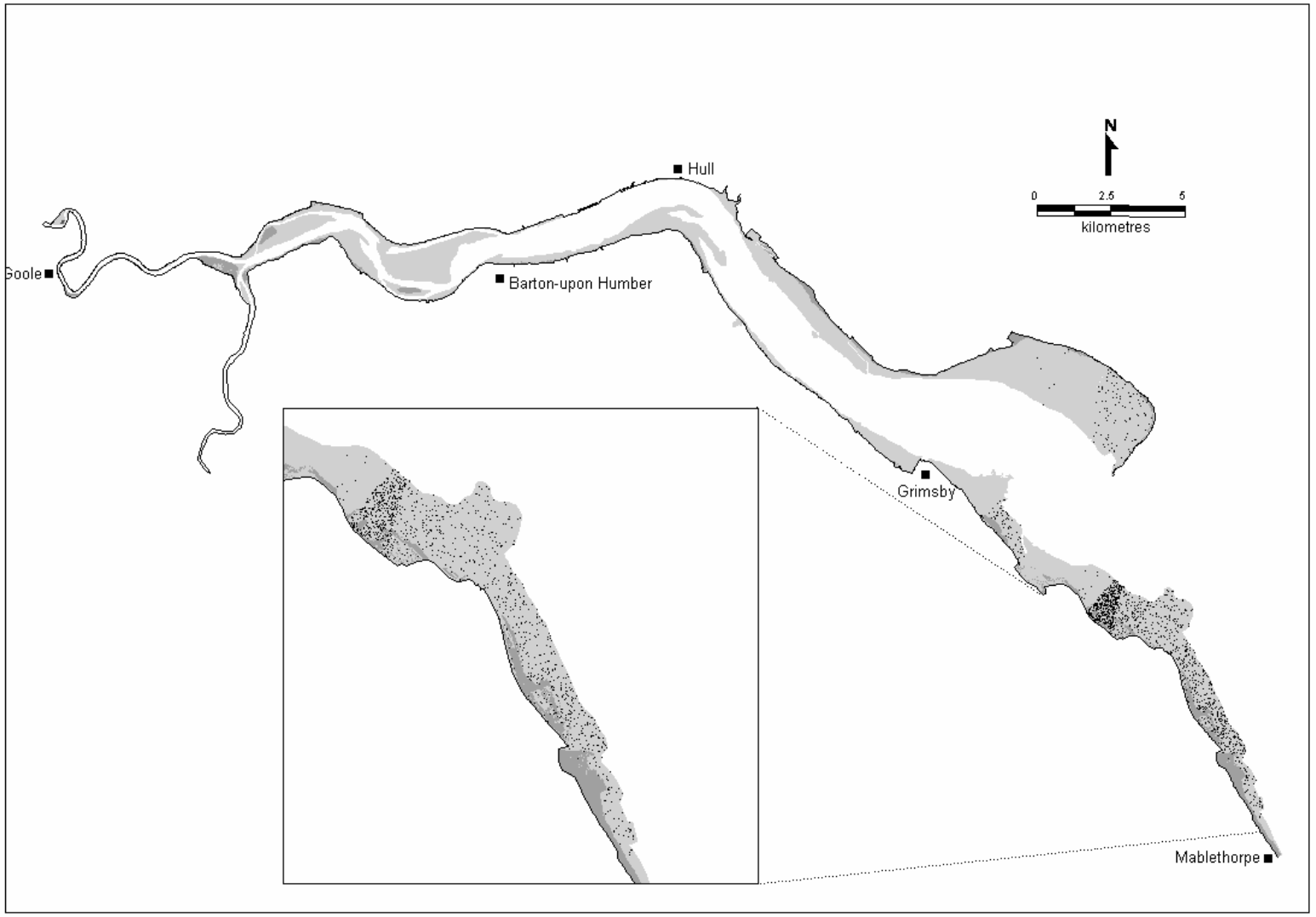


However, the data provide valuable information on the preferred feeding locations for the species on the estuary. Interestingly, the returned presence of *Zostera* on Spurn Bight has recently been confirmed (D. Coverdale pers. comm.), and depending on the status of the species, there may be an increase in feeding utilisation of the Bight by brents in future years. The 2003/4 monthly maxima were well above those of the 1998/9 programme, although the extended coverage of the Grainthorpe Haven to Mablethorpe sector in 2003/4 is a likely reason for this. Both counts interestingly identified a second peak in late winter. At a national level, there is

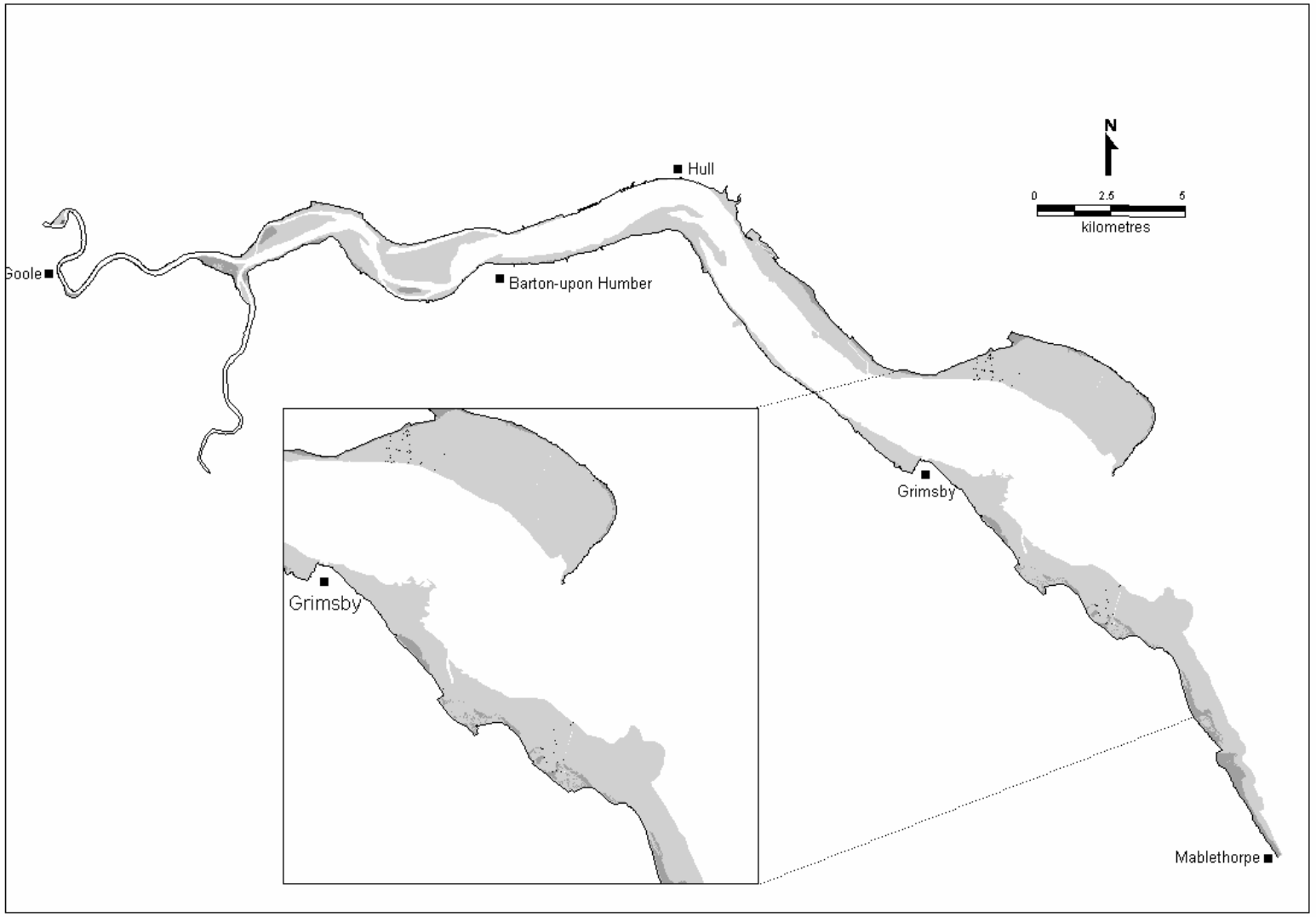
evidence of an early peak occurring in December on a number of estuaries in the UK with a subsequent onward movement to other sites as intertidal food resources in these areas are depleted (Wernham and others 2002), and this secondary peak on the Humber may reflect an arrival of flocks from outside the estuary.



Dark-bellied brent goose low tide distribution, autumn 2003/4.



Dark-bellied brent goose low tide distribution, winter 2003/4.



Dark-bellied brent goose low tide distribution, spring 2003/4.

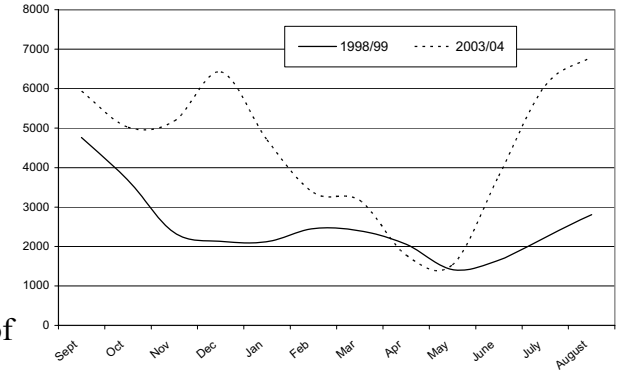
3.1.3 Shelduck (*Tadorna tadorna*)

The Humber Estuary acts both as an important wintering site and a stop-over site during the migration period in the late summer. Several studies have identified a moult population on the estuary at this time, and although there was no evidence of moult activity from the current programme, the presence of flocks of adult birds as well as young at a number of sites on the estuary during the late summer would support this (N. Cutts pers. obs.). Peak maxima for the species are often recorded during the autumn on the Humber, but a large population representing 5% of the UK population spends their winter months on the Humber (Allen and others 2003). The estuary also supports a small breeding population confined largely to the upper estuary, with numbers of these active breeders supplemented by a substantial presence of apparently paired but non-breeding birds. The Low Tide Count initiative of 1998/9 produced a comprehensive assessment of breeding distribution, with a population assessment based on a count of juveniles (Catley 2000).

The results of the Low Tide Count 2003/4 confirmed findings from the 1998/9 programme, that 'despite the widespread distribution there is a clear split between two major concentrations of the species on the Humber' (Catley 2000). Similarly, the 2003/4 programme recorded large gatherings on the Faxfleet to Brough and Whitton Ness to South Ferriby sections with, in the outer estuary, a second area of concentration found between Paull and Stone Creek, this extending to Spurn Bight during the autumn period.

Based on the average count data, the upper Humber accounted for *c.* 25% of the Humber population during the autumn and winter periods, this however increased to 42% during the spring with the establishment of a substantial breeding population (together with paired non-breeders) in this area. In the middle/outer estuary, the second area of concentration, the highest densities of birds were found on the Paull to Skeffling section on the north shore during the autumn and winter periods. However, site utilisation was noted to differ over the autumn/winter period, perhaps in response to prey availability. The Paull to Stone Creek section was found to be of greater importance during the winter with an average of 1,686 birds ie 50% of the outer/middle estuary population, but only 20% during the autumn. Conversely, the Stone Creek to Skeffling section exhibited a greater usage in the autumn suggesting some correlation between sites and activity.

The programme identified population peaks during the winter and late summer periods, a bimodal distribution not seen in most UK estuaries. August produced the largest count of the 2003/4 programme with a total of 6,804 birds, this surpassing the 1998/9 programme maxima, and this accords with the WeBS findings (latest published data for 2000/1) which also recorded the annual peak maxima in August. Whilst taking into account the undoubted contribution of juveniles within this August maxima (see below), the data would suggest that the estuary is an increasingly important roost site for the species, although there remains some doubt surrounding the exact function of the Humber Estuary for the species during this period. The programme failed to produce any direct evidence of moult activity (at least from the data returns) and it was therefore unclear as to the extent to which the Humber is

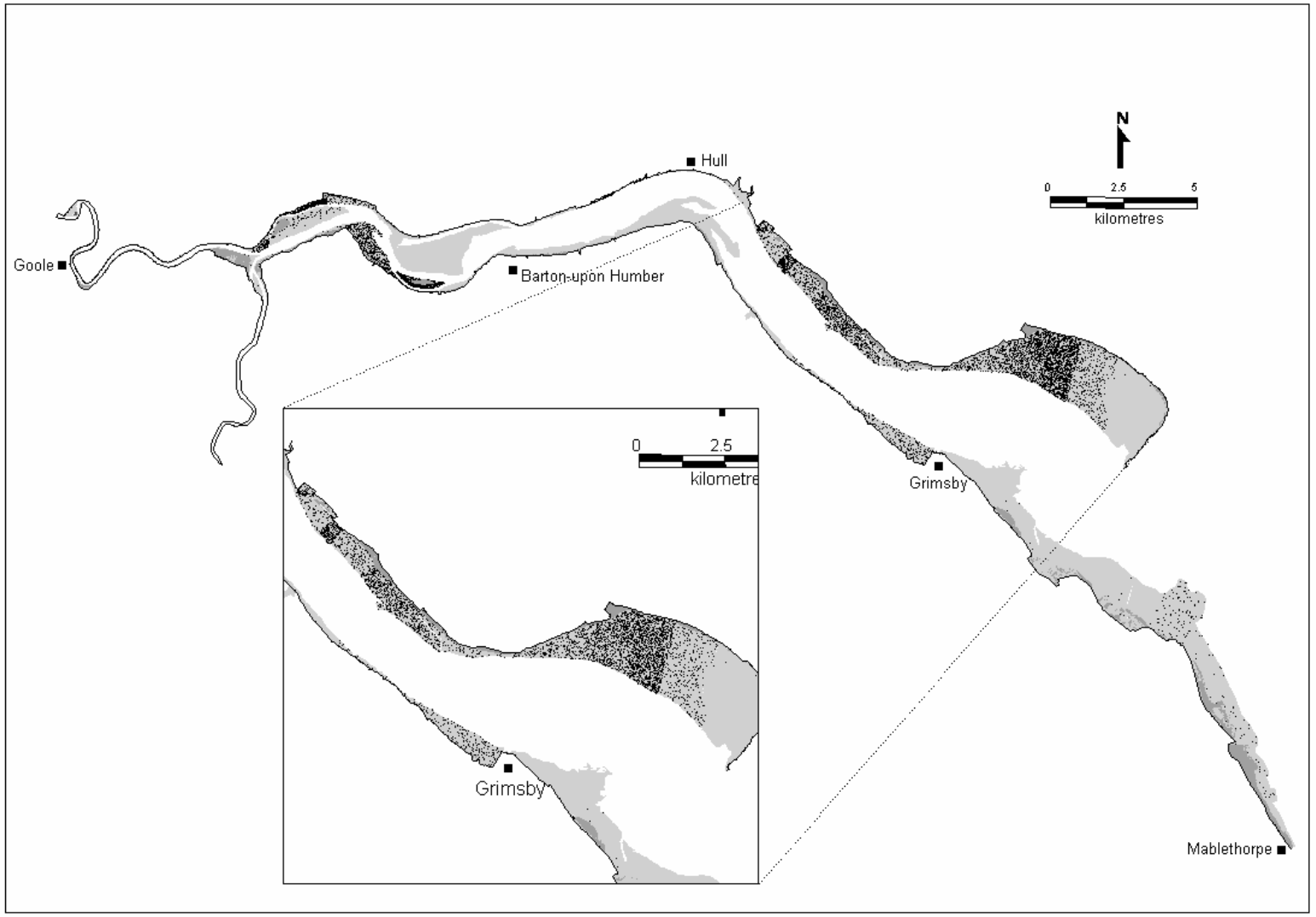


used as a moulting ground for shelduck, in comparison to use as a stop-over site for west coast birds during their moult migration to the Wadden Sea. It may be the case that the majority of the shelduck recorded during the late summer were migratory birds using the Humber as a stop-over site, particularly given the importance of the Mersey for the species and the July timing of its respective maxima (WeBS 2000/1 data), with west coast birds staging for a number of days (perhaps up to a week) on the Humber during their migration to the Wadden Sea and thus leading to an increase in the total number of adults present at this time. However, it may also be possible that these birds remain in the area (together with many Humber birds) over the late summer and undergo an *in situ* moult, but that this was unrecorded during the current count programme. Given the importance of the Humber for the species in both a national and international context, it is suggested that further study on the status of the species at this time is undertaken through targeted observational study, and if possible, mark and recapture/record studies.

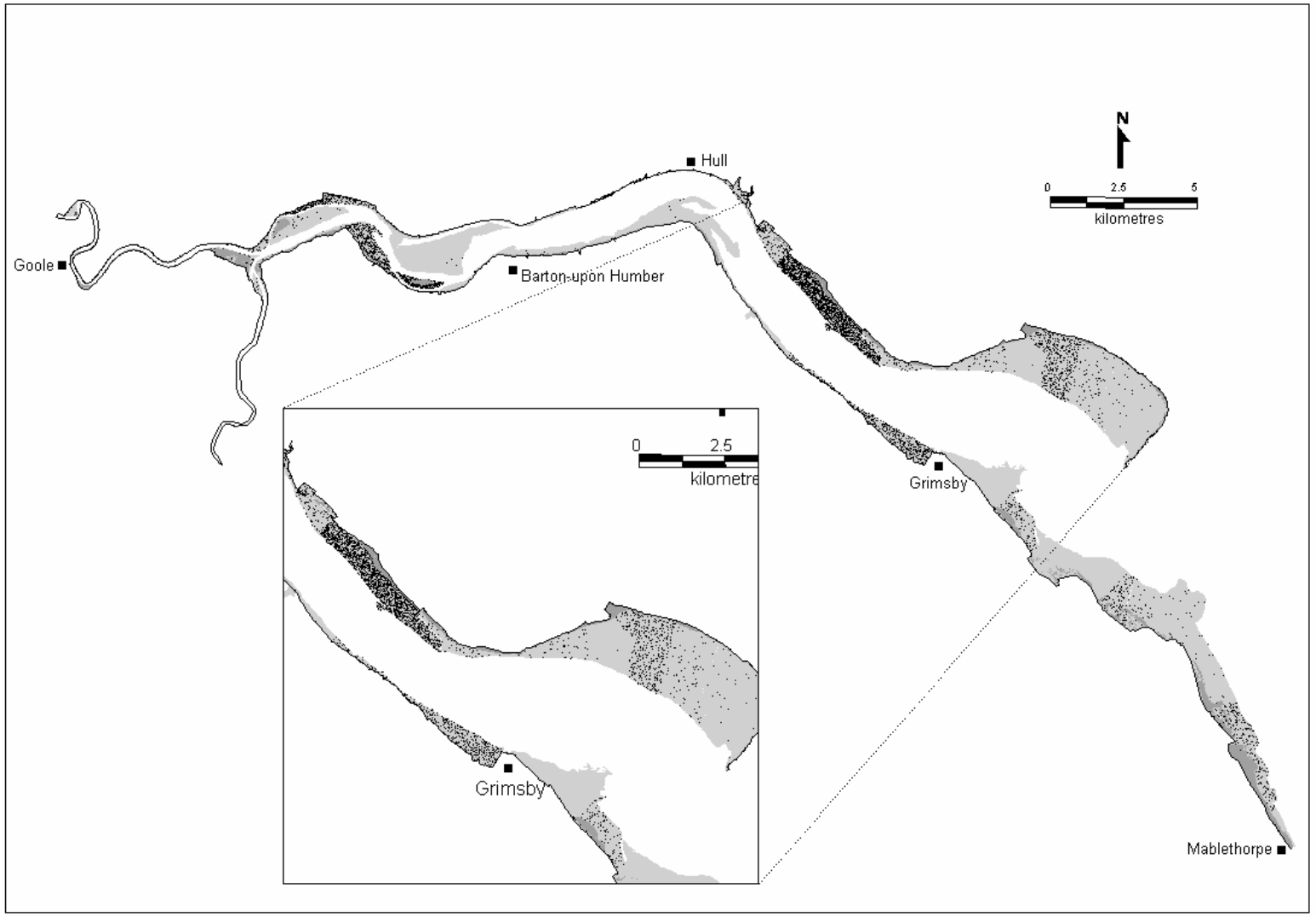
During the summer, the Humber also supports a substantial breeding population of shelduck and counters were asked, where possible, to differentiate between adults and young during the current programme. A total of 152 juveniles were recorded on the estuary in July 2004, in comparison to 365 juveniles recorded from the same period in 1998/9, the 2004 figure representing only 2.5% of the population present on the estuary at that time compared to 16% from the 1998/9 programme. The 2004 figure would appear to be somewhat low in the context of the potential breeding population, assumed to be between 2,500 to 3,500 birds (using the March/April maxima). Many of these birds will not breed, with the reduction to *c.*1,500 birds during May suggesting an active breeding population of between 1,000 and 2,000 birds (the reduction to some extent reflecting a move to inland breeding sites).

Assuming a breeding success (to fledging) figure of 1.5 birds per brood (Cramp and others 1998), then at least 1,000 young would be expected to have fledged in 2004, with perhaps *c.*400 young recorded in each of the main months for young (June and July). In fact, the increase in numbers seen on the estuary during the summer would suggest that at least this number of young were produced, with a July maxima of *c.*5,500 shelduck. Assuming *c.*3,500 of these were adults (breeders and non-breeders), with the remaining 2,000 birds comprising both young birds and staging adults.

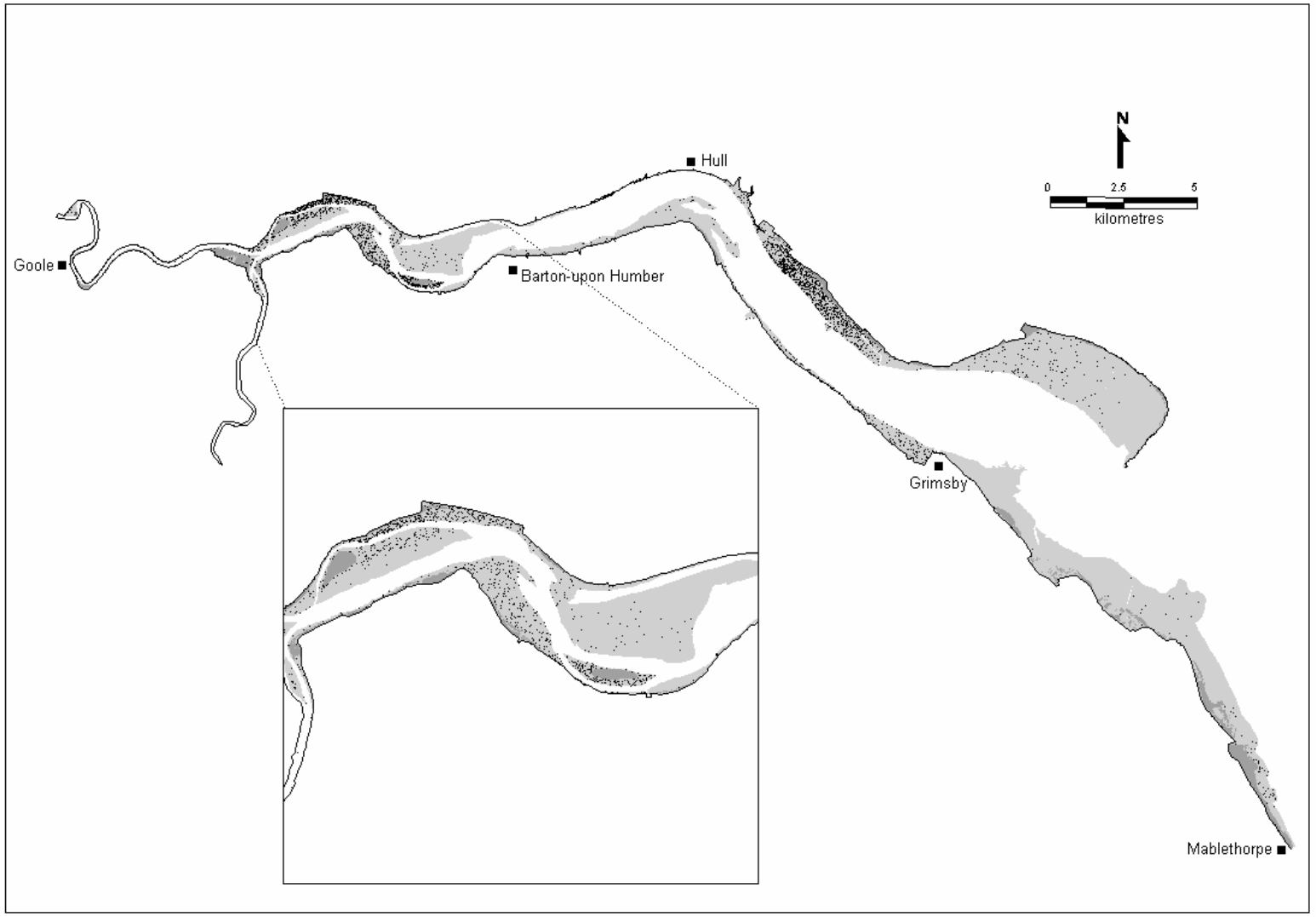
It is therefore likely that the majority of young were counted as adult birds, a well-known difficulty when surveying an area at long range and with heat shimmer during the summer. The late summer and early autumn maxima of almost 7,000 birds is therefore likely to consist of a combination of 2004 juveniles, staging adults on route to the Wadden Sea and *in situ* moulting birds.



Shelduck low tide distribution, autumn 2003/4.



Shelduck low tide distribution, winter 2003/4.



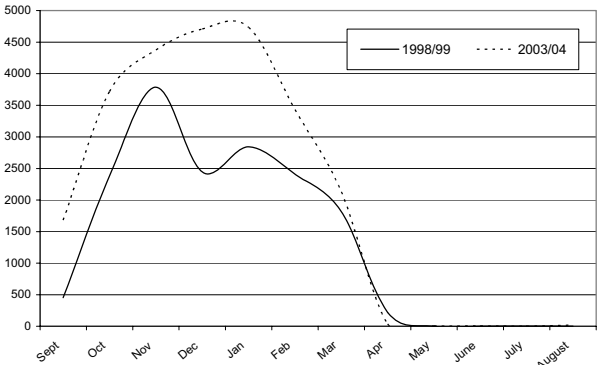
Shelduck low tide distribution, spring 2003/4.

3.1.4 Wigeon (*Anas penelope*)

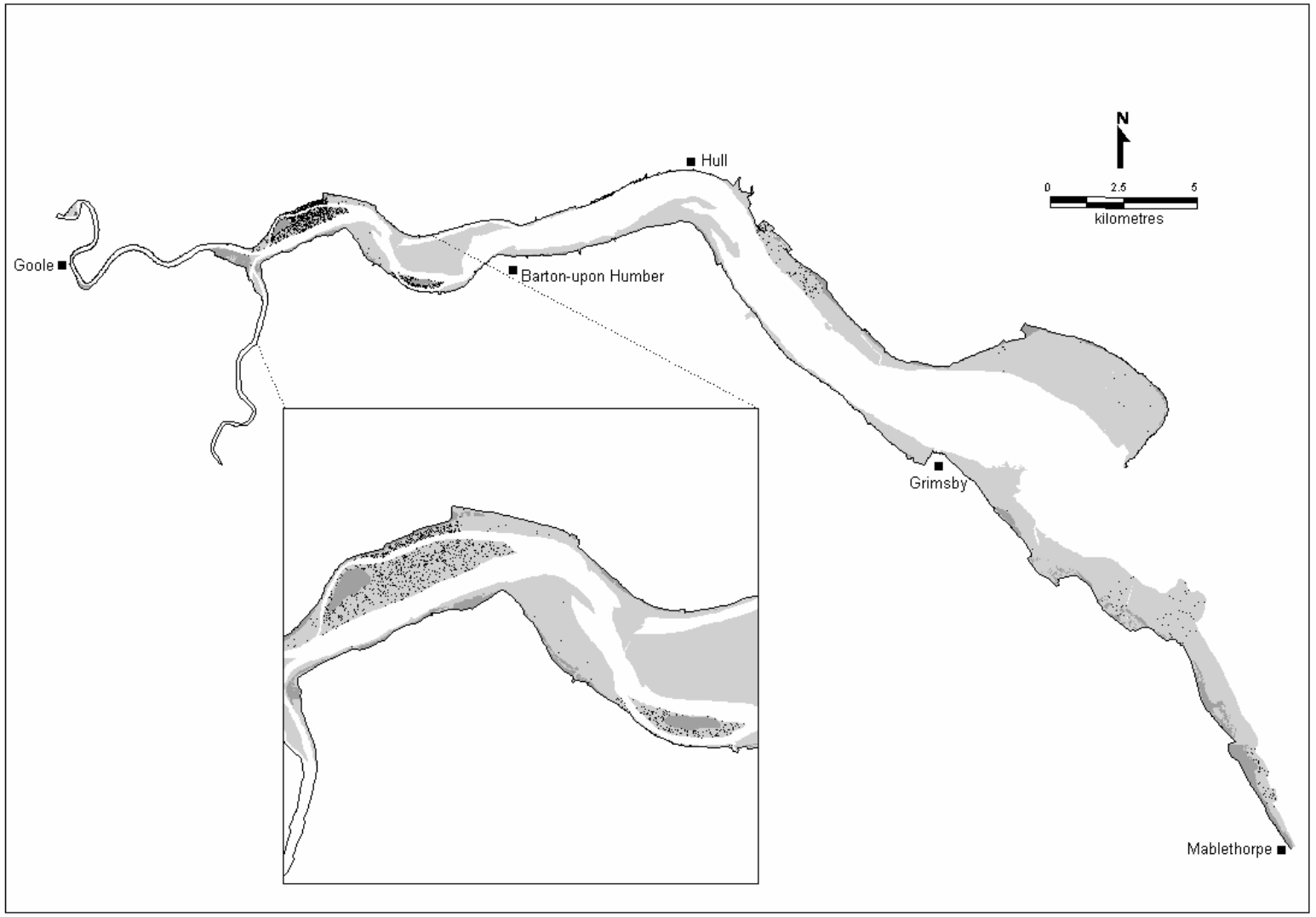
On the Humber, the wigeon population is primarily restricted to the upper estuary where flocks occur during the winter months (primarily loafing during count periods). The wigeon, tends to graze vegetation in a similar manner to that of many geese species, and feeding activity tends to be restricted to areas of 'wigeon lawn', short turf swards of largely red fescue (*Festuca rubra*), although *Ulva intestinalis* algae is also taken. In addition, documentary records suggest that feeding is also carried out on stubble and on sprouting winter wheat, and although the extent to which this occurs on the Humber is uncertain, movement of flocks onto both autumn sown and oilseed crops has been observed in the area.

The 2003/4 programme recorded a large influx of birds into the Humber in September, moving into the Humber Wildfowl Refuge. Based on average count data for the autumn period (July to October), the Brough to Faxfleet section was found to be a key reach for the species, supporting 70% of the Humber population, with the upper Humber as a whole supporting 80% of the estuary's population. Generally, the flocks of wigeon loaf on the steep but terraced banks of Whitton Sand, or raft along the north shore, particularly in the north channel around Whitton Sand. These flocks can form into large rafts, which move upstream as far as Faxfleet and downstream as far as Brough during periods of tidal inundation. During the autumn, further concentrations were recorded on Read's Island with fewer birds on the Paull to Stone Creek section, around Donna Nook and on the Saltfleetby-Theddlethorpe Nature Reserve on the outer estuary.

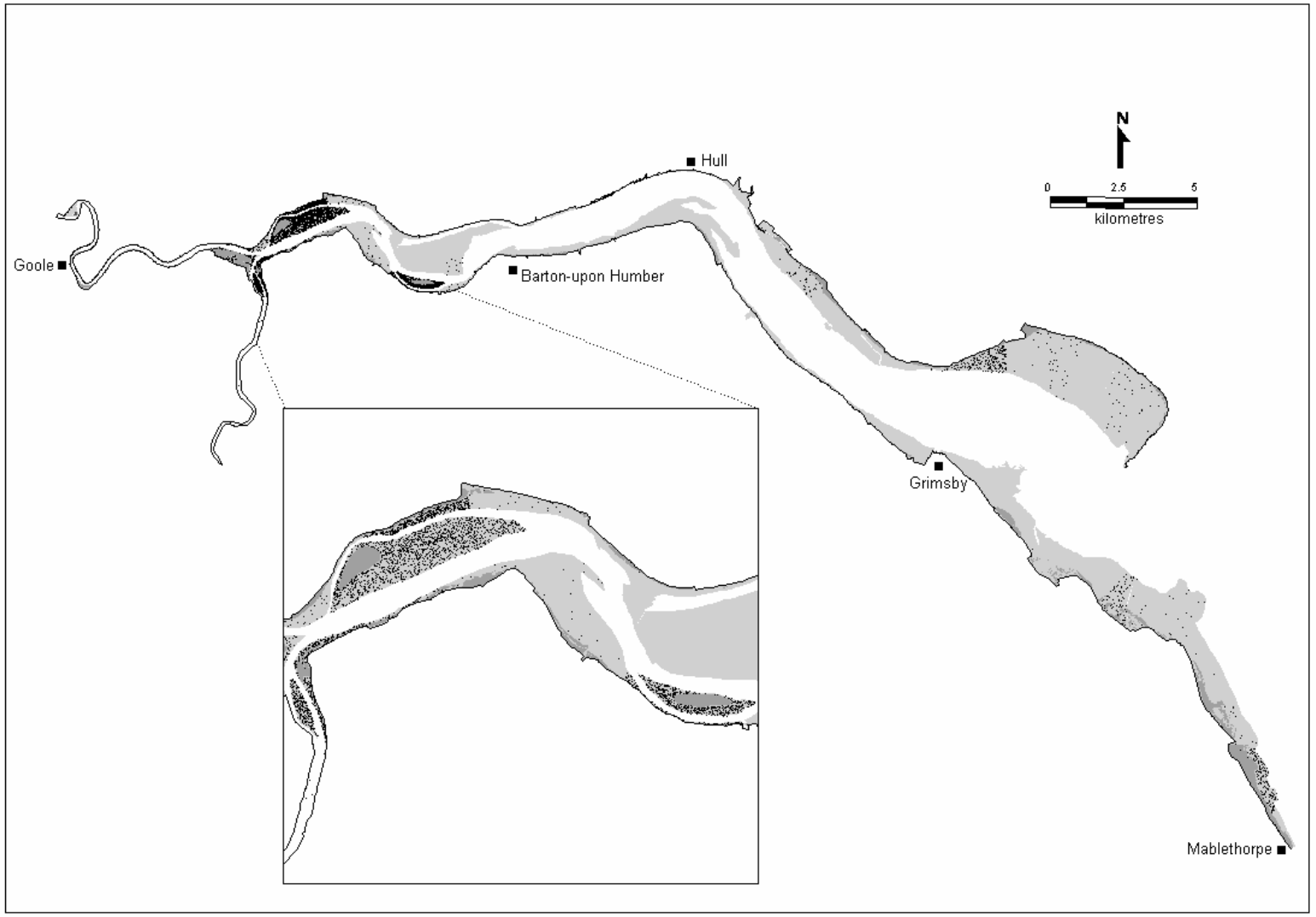
The flock size at these sites increased during the winter following the arrival of further birds in November. This influx also resulted into further dispersion onto adjacent areas ie Trent Falls on the upper Humber and Sunk Island on the outer estuary. Despite this additional influx and a certain degree of dispersion, the upper Humber continued to be a stronghold for wigeon over the winter, with this area supporting around 80% of the estuary population ie an average peak maxima of 3,288 birds.



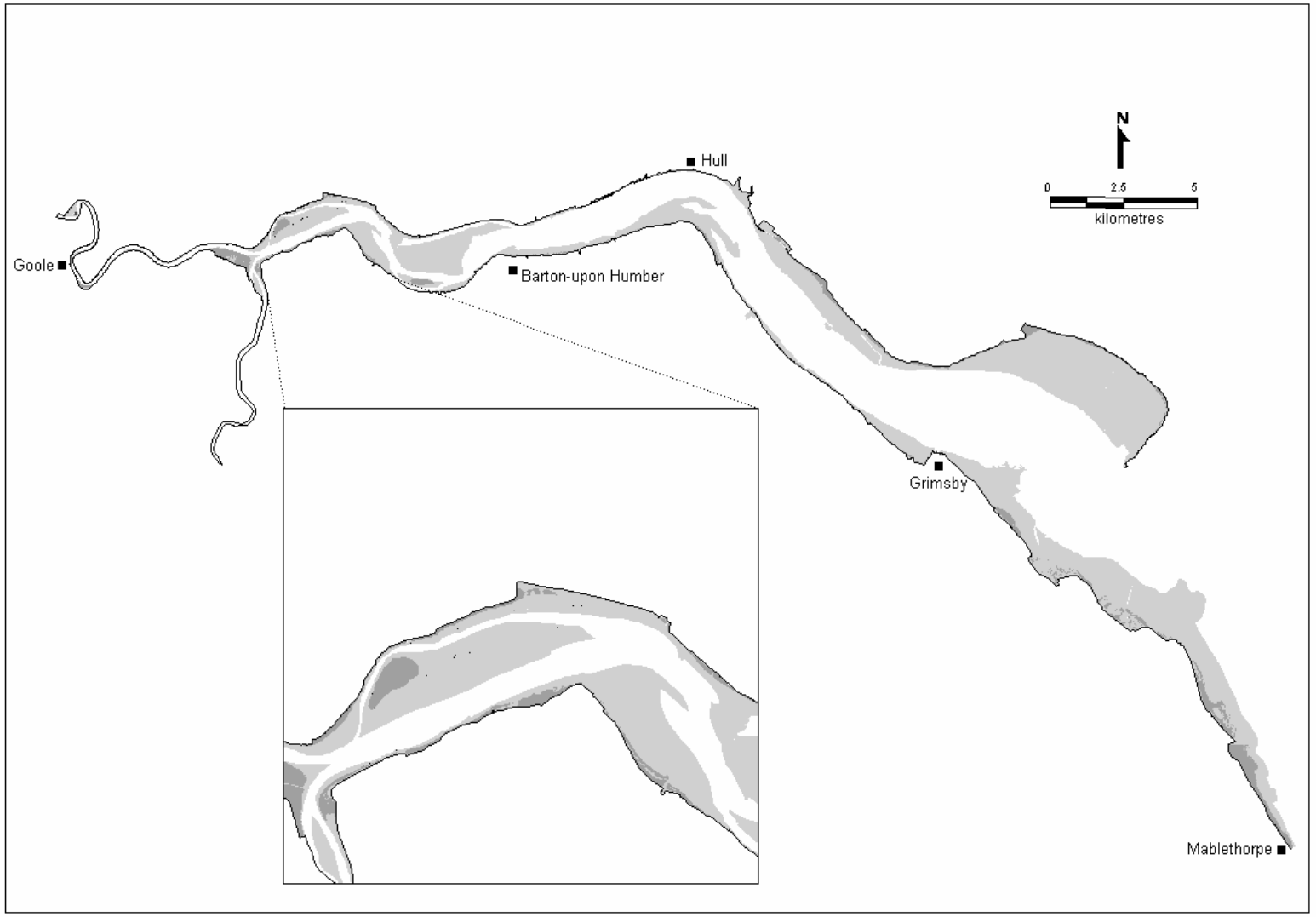
Around 80% of the observations from the 2003/4 Low Tide Count programme related to roosting or loafing birds, with the Faxfleet to Brough section, which includes Whitton Sand, featuring the highest numbers of foraging wigeon, the 'lawn' on the Broomfleet frontage having been habitually utilised for at least 25 years (N. Cutts pers. comm. 2004). A further, smaller foraging area is also now being used on the eastern end of the elevated and vegetated section of Whitton Sand, this site increasing in usage as the site transitions to a more stable habitat. Winter usage remained at a sustained higher level during the 2003/4 season than the previous 1998/9 season. The data from both programmes shows a rapid decline in numbers during the spring as the wintering population departs to breeding grounds in Iceland, Fennoscandia, and western and central Russia, with a small population also breeding in the northern U.K. However, the 2003/4 data suggested that the departure was more abrupt than in 1998/9, in particular around Whitton Sands. A few individuals remained on open and brackish waters adjacent to the Humber throughout the summer although breeding in these areas is unproven, confirmed breeding in the area being apparently restricted to the lower Derwent and Wheldrake Ings (Allen and others 2003).



Wigeon low tide distribution, autumn 2003/4.



Wigeon low tide distribution, winter 2003/4.



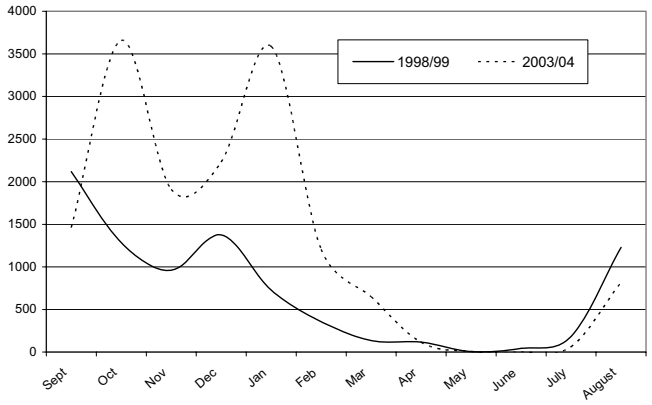
Wigeon low tide distribution, spring 2003/4.

3.1.5 Teal (*Anas crecca*)

In general, this species has a clustered distribution within the Humber, often concentrated around creeks and saltmarsh, as the species tends to feed on seeds and other vegetative material, although small flocks are present along the majority of the WeBS sections (Allen and others 2003).

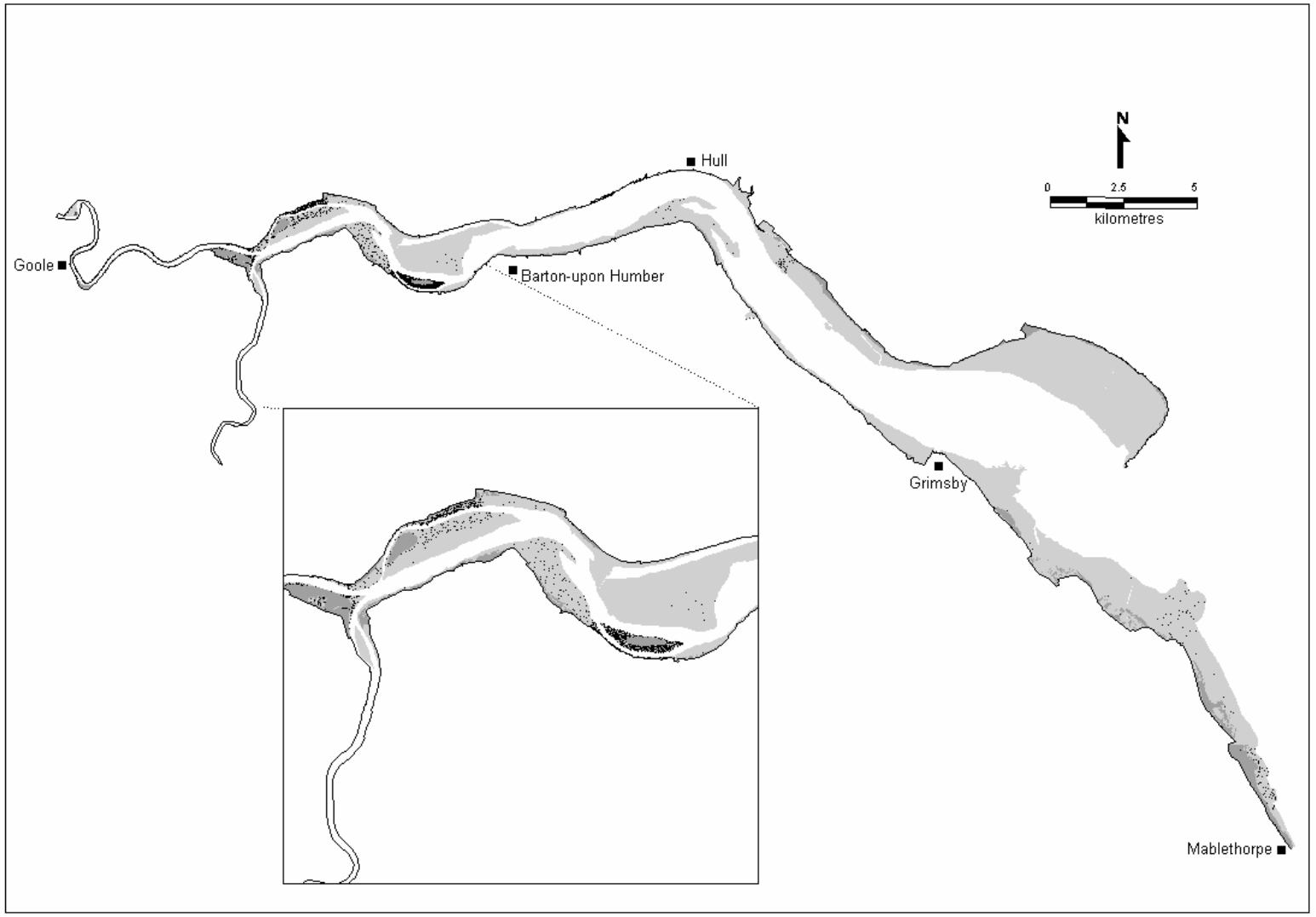
Data from the autumn of the 2003/4 programme recorded the species as being mainly distributed on the upper Humber with 90% of the population, ie an average of 1,523 birds, distributed to the west of the Humber Bridge at this time. Despite a further influx of birds across the estuary during the mid-winter period, the upper Humber population decreased slightly at this time, to an average of 1,257 birds over the winter. These results correlate well to the findings from the 1998/9 programme, which identified an autumn peak to usage in the inner estuary (Catley 2000). The findings of the 2003/4 programme underlined the importance of the Read's Island site in particular during the autumn, illustrating the success of the creation of saline lagoons on the island in 1997. The Island was found to support 50% of the Humber population ie an average of 767 birds, throughout the autumn, of which 90% were foraging birds, and the October count was particularly noteworthy with a total of 2,231 birds. Other concentrations at low water were found on the Faxfleet and Brough section and the Blacktoft Sands Nature Reserve, and in addition to the Winteringham Haven sector, these areas supported the largest numbers of foraging birds on the inner estuary.

The influx of birds during the winter period coincided however with a greater utilisation of the middle/outer estuary and in particular the Paull Holme Strays realignment site, an area around Killingholme Haven, Donna Nook and the Saltfleetby to Theddlethorpe Nature Reserve sectors. This latter area had not been covered during the previous Low Tide Count and was found to support 14% of the Humber population with an average of 293 birds over the winter but with the December and January counts featuring usage by over 500 individuals. The increase in usage of the newly created managed realignment habitat at Paull Holme Strays was of note, this take-up possibly resulting from the movement of part of the Saltend population into the site as conditions have become suitable and the Saltend area having seen lower Teal numbers during this period compared to levels from the 1998/9 programme (Cutts and others 2005).

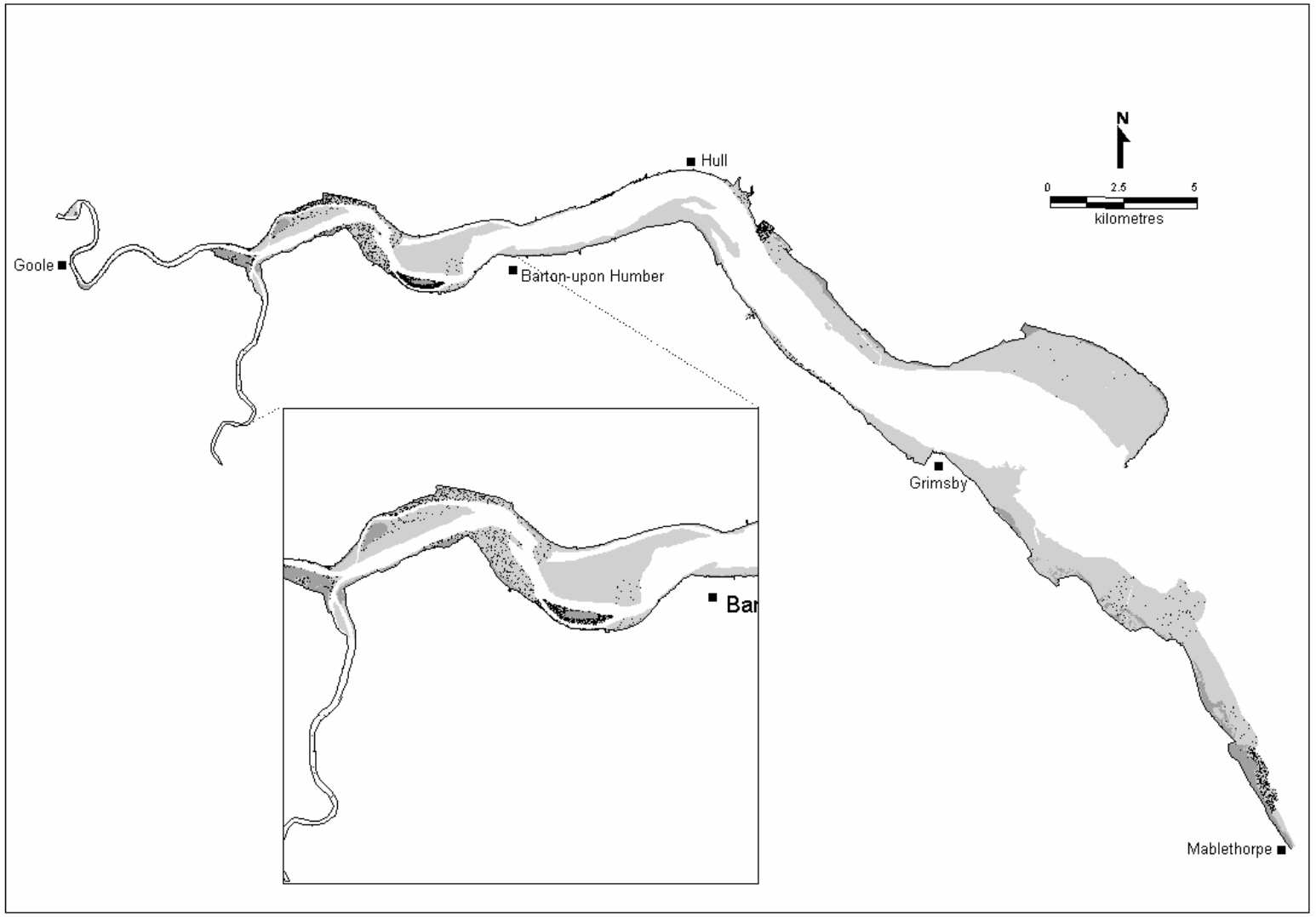


Usage peaked in January with 3,589 individuals recorded, the majority of teal departing the area during March and April, although the species continued to be present in May with the birds possibly breeding in open waters around the Humber. Small numbers have been recorded in previous years breeding on suitable sites around the estuary, such as on the Blacktoft Sands Nature Reserve, at Brough Airfield and on the Far Ings complex (Allen and others 2003). As with other wildfowl species, it would appear that the teal population on the Humber was at a higher level during the winter of 2003/4 than for the winter of 1998/9, with the population around double that recorded from the previous reporting programme. Whilst some of this may be ascribed to increased survey coverage during the current season, it is likely that in

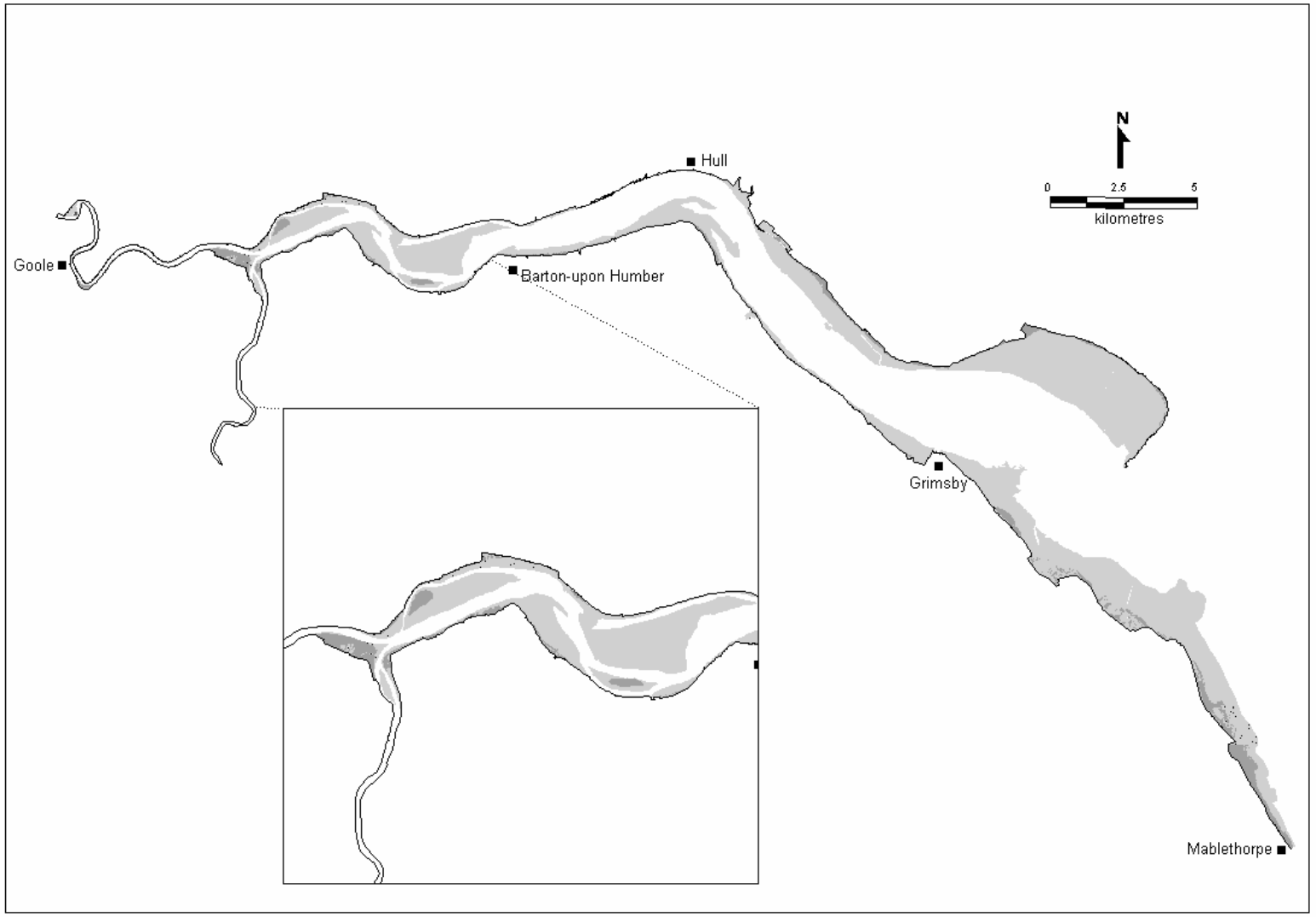
general, numbers were higher during the current reporting programme, as an increase in the teal population on the Humber (high water WeBS data) has been seen over the last few years, matching a trend seen at a national level (Pollitt and others 2003). The importance of the upper Humber and the Donna Nook to Theddlethorpe reach for the species is evident from the distribution maps, which also show the concentration of usage around Saltend to Paull Holme Strays during the mid winter period.



Teal low tide distribution, autumn 2003/4.



Teal low tide distribution, winter 2003/4.



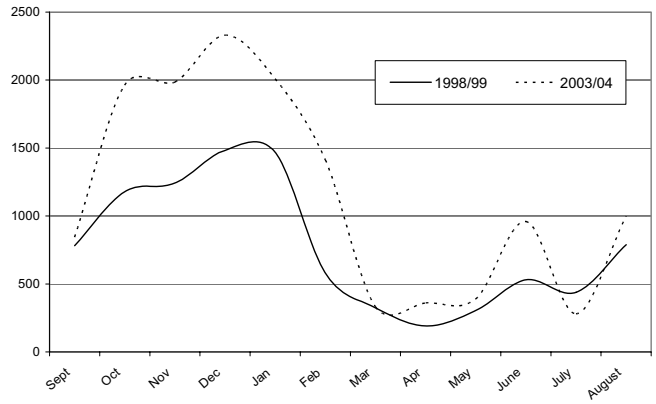
Teal low tide distribution, spring 2003/4.

3.1.6 Mallard (*Anas platyrhynchos*)

The mallard is the most familiar and widespread duck on the Humber, being recorded along the length of the system from the tidal rivers to Spurn Point. Of all species using the estuary, the mallard is one of the most significantly influenced by man, with the breeding population largely dependent on the provision of artificial inland wetland, and wintering flocks on stocking and release and agricultural practices (Allen and others 2003). There have been significant changes to the distribution and status of mallard within the Humber system over the last two decades.

The 2003/4 survey programme revealed a similar mallard distribution pattern to that of the 1998/9 campaign, with two major centres of distribution; the upper Humber particularly around Faxfleet to Brough and the middle Humber between Saltend and Hawkins Point, although most sectors featured some birds. The upper Humber has traditionally been the main wintering area for the species, but over the last couple of decades has seen a significant reduction in numbers, in particular on the Humber Wildfowl Refuge, and by contrast, the middle to outer Humber has increased in importance in recent years.

During the current count programme, the upper Humber was found to support *c.*50% of the Humber population during the autumn/winter period, this area including the lower River Trent. This latter tidal habitat was not covered during the 1998/9 low tide count programme, and was found to be of significant importance over the 2003/4 winter period, supporting 10% of the Humber population. Despite the extended coverage achieved during the current programme (in particular the tidal tributaries in the upper Humber), the inter-survey results indicate a certain degree of recovery for the species, which is worth highlighting in the context of potential future assemblage changes.

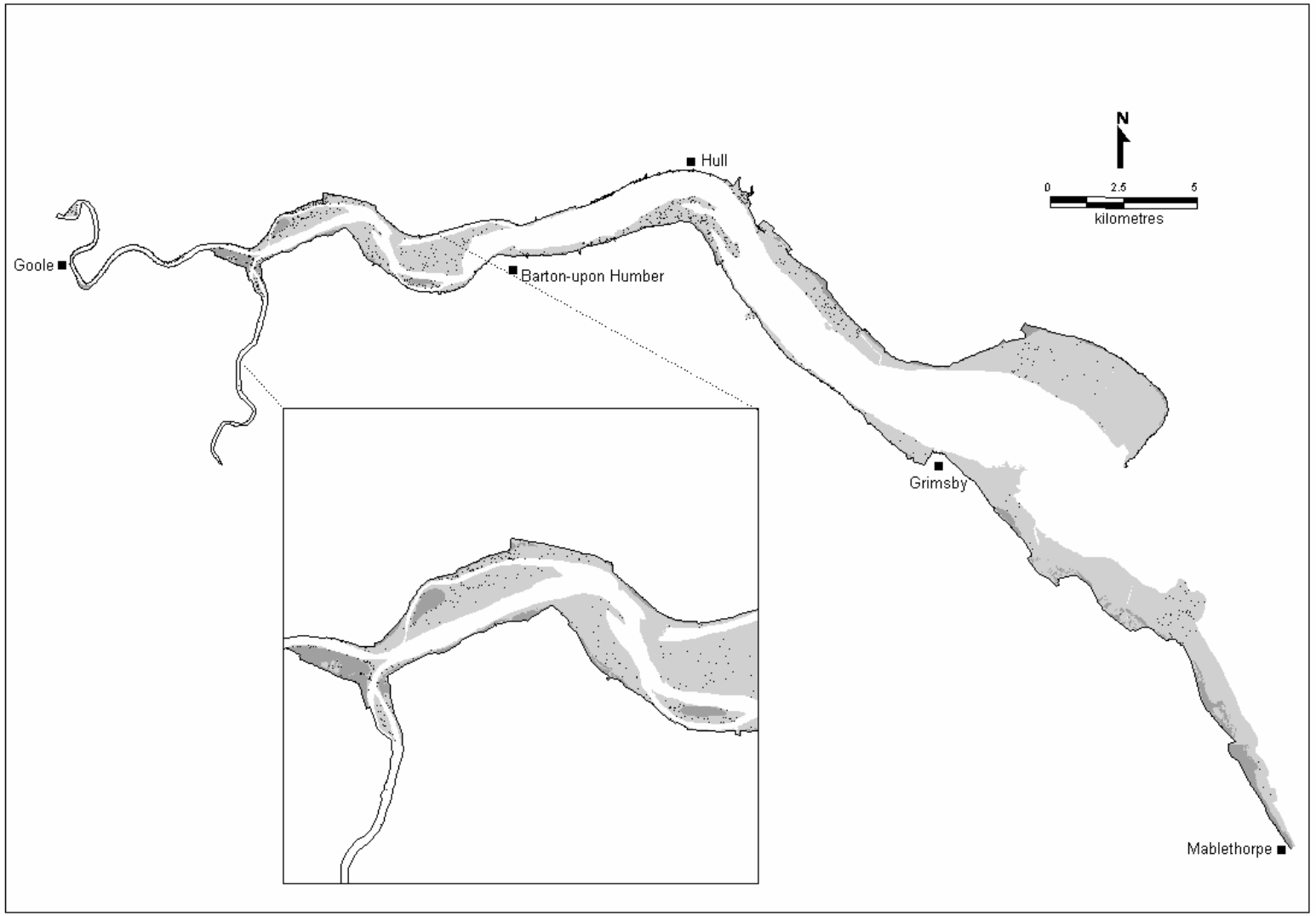


On the middle estuary, the Barrow Haven to East Halton Skitter reach, which includes New Holland Pier, produced notable counts over the autumn, supporting *c.*20% of the Humber population, this area likely to be attractive for feeding mallard due to the spills of grain and animal foodstuffs from the dock operation (Catley 2000). Elsewhere on the middle/outer estuary, small concentrations were observed around Saltend, Cherry Cobb and Spurn Bight, although each of these latter sites supported less than 10% of the Humber population.

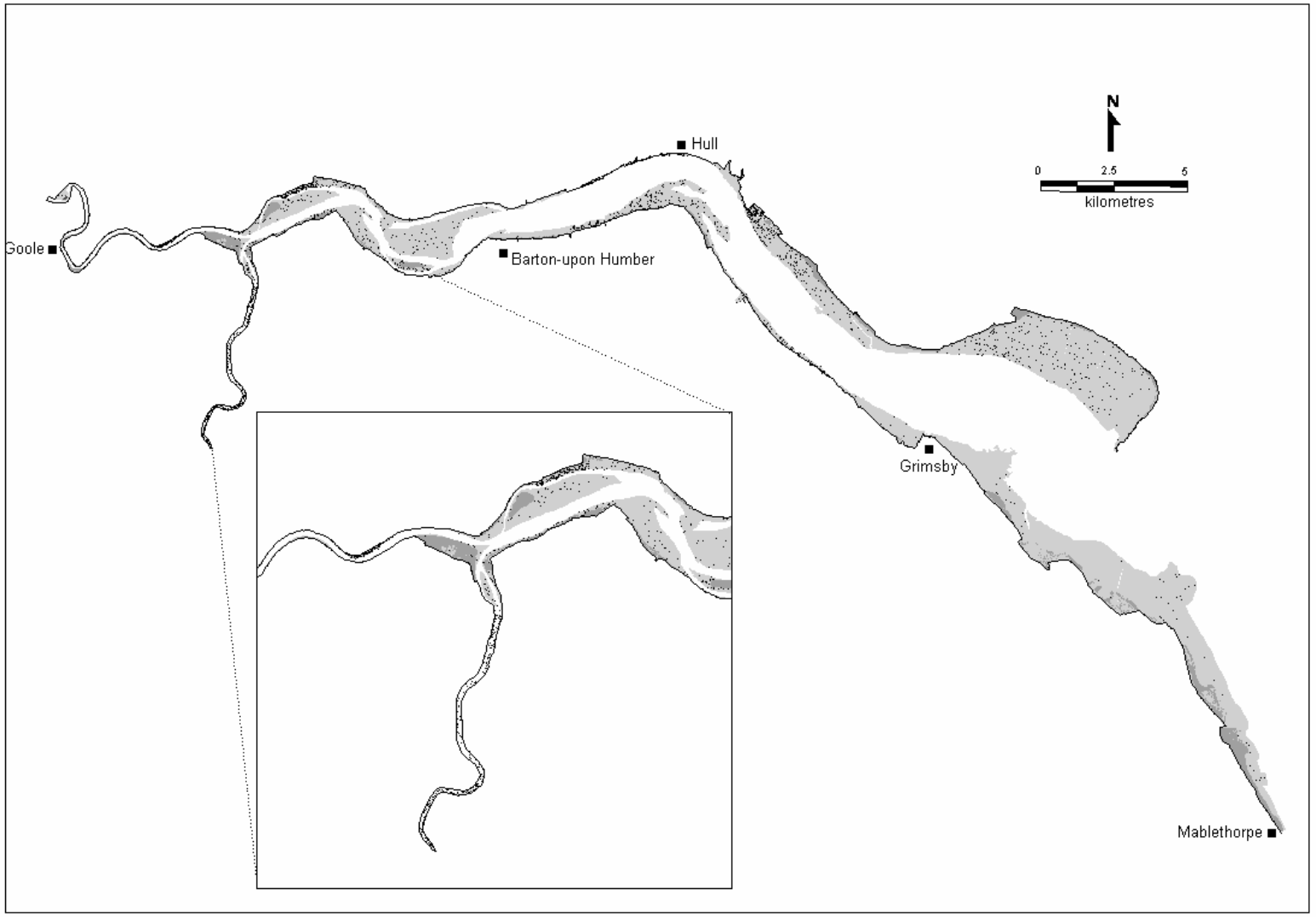
Monthly maxima from both of the Low Tide Count programmes indicate a gradual increase in numbers through the autumn with the peaks recorded during the mid-winter period. This may reflect an influx of birds from the continent, although the scale of this influx would appear to be very much reduced from that seen during the 1970's and 1980's when flocks of over 5,000 were usual on the estuary and over 10,000 mallard were recorded on occasion (Allen and others 2003). The seasonal distribution maps indicate that associated with this increase and potential influx, there is a dispersion away from the autumn areas of concentration by the mid winter period, with a greater utilisation of the Paull to Spurn intertidal areas (30% of the Humber population over the winter). On the middle estuary the new managed realignment site at Paull Holme Strays attracted a large number of mallard,

although as with teal, this has been a result of a movement of part of the Saltend population into the site as conditions became suitable.

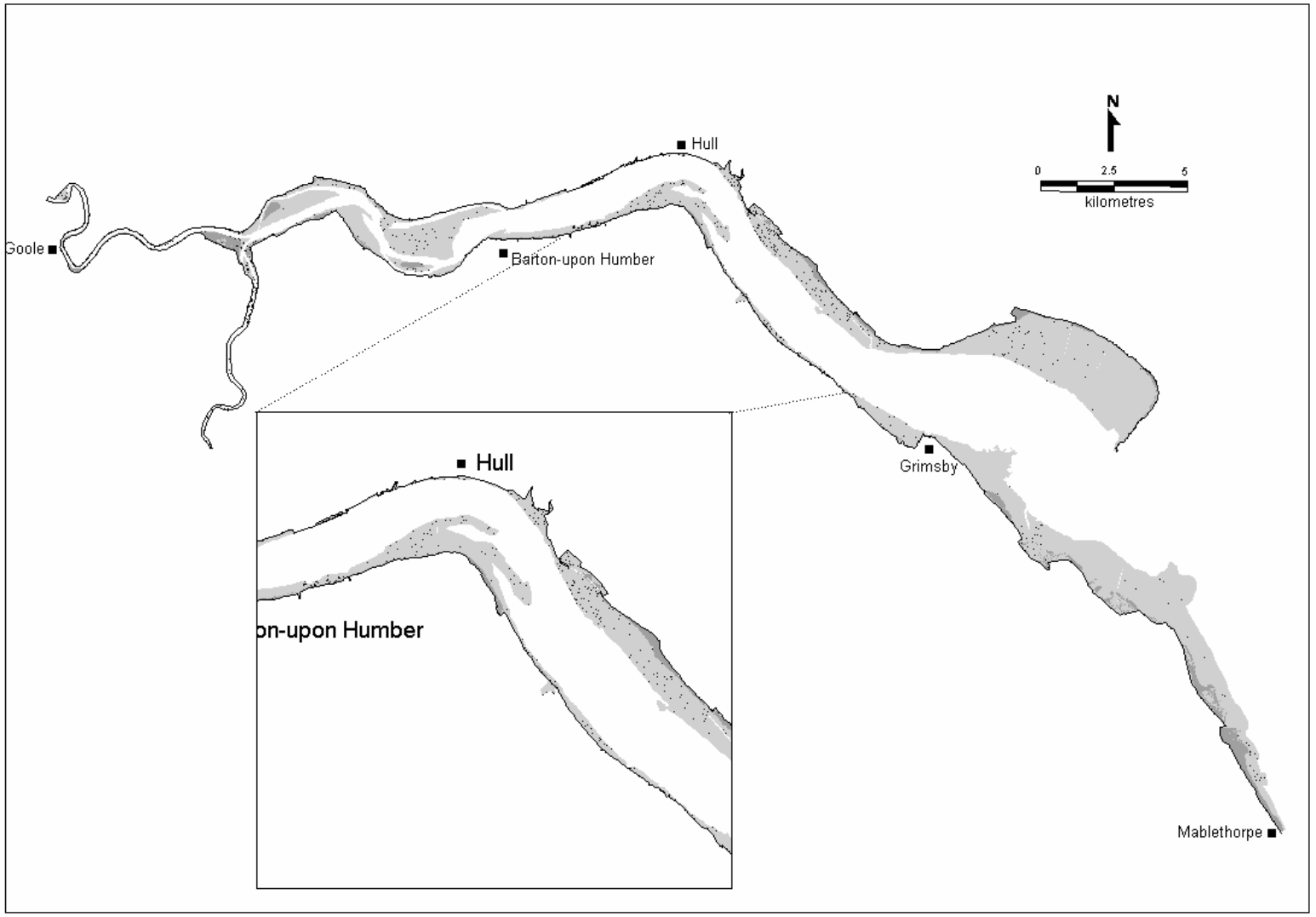
The winter 2003/4 count data also emphasised the relatively low importance of the south bank of the outer estuary (Grimsby to Mablethorpe) for the species, with numbers remaining low over the winter. However, over the spring, the mallard population was more widely distributed throughout the estuary, but with a reduction in the importance of the upper estuary at this time. As expected, the spring period also featured a reduction in numbers, indicating a movement of some over-wintering birds out of the area, possibly due to a small continental return migration, but also with birds dispersing during this time onto inland breeding sites in the region.



Mallard low tide distribution, autumn 2003/4.



Mallard low tide distribution, winter 2003/4.



Mallard low tide distribution, spring 2003/4.

3.1.7 Oystercatcher *(Haematopus ostralegus)*

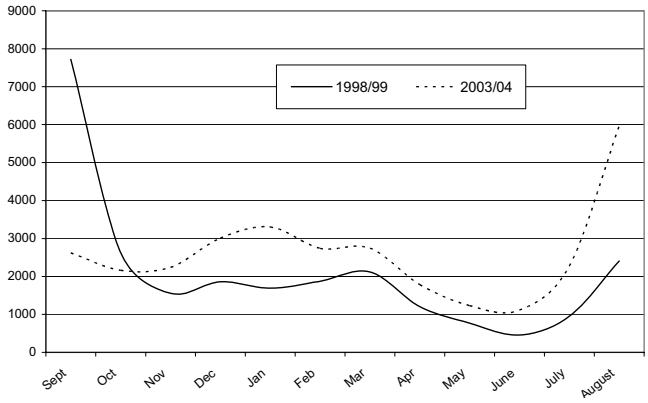
On the Humber Estuary, the oystercatcher is predominantly found on the outer estuary with the majority of the population during all seasons being found downstream of a line drawn form Cherry Cobb to Immingham (Catley 2000; Allen and others 2003). Unsurprisingly, the pattern of distribution of oystercatchers across the estuary matches the distribution of cockle beds, although they will take other bivalves, including the Baltic tellin (*Macoma balthica*). Over the autumn period, the population of oystercatcher was clearly present in higher numbers at the mouth of the Humber, in particular on the south outer estuary. Based on average counts over this period, the intertidal areas south of Cleethorpes supported over 85% of the Humber population. The most striking concentration of oystercatchers occurred on the Horseshoe Point to Grainthorpe Haven sector where the sandflats close to the saltmarsh supported the highest densities of birds on the Humber (3.5 birds per hectares). However, the balance of distribution changed over the winter period with a shift in usage from the south to the north bank of the outer estuary. Over the winter period, the proportion of the Humber population using the intertidal areas south of Cleethorpes fell to 50%, as the birds redistributed to the Spurn intertidal areas; these latter intertidal areas were shown to support 40% of the Humber population at low tide over the winter. However, the feeding densities were lower than those in the south outer estuary. During the winter months the Horseshoe Point to Grainthorpe Haven sector continued to support the highest densities of birds on the Humber Estuary with a total of 2.7 birds per hectare. Over the spring, as the distribution map indicates, the distribution remained consistent with that during the autumn and winter periods.

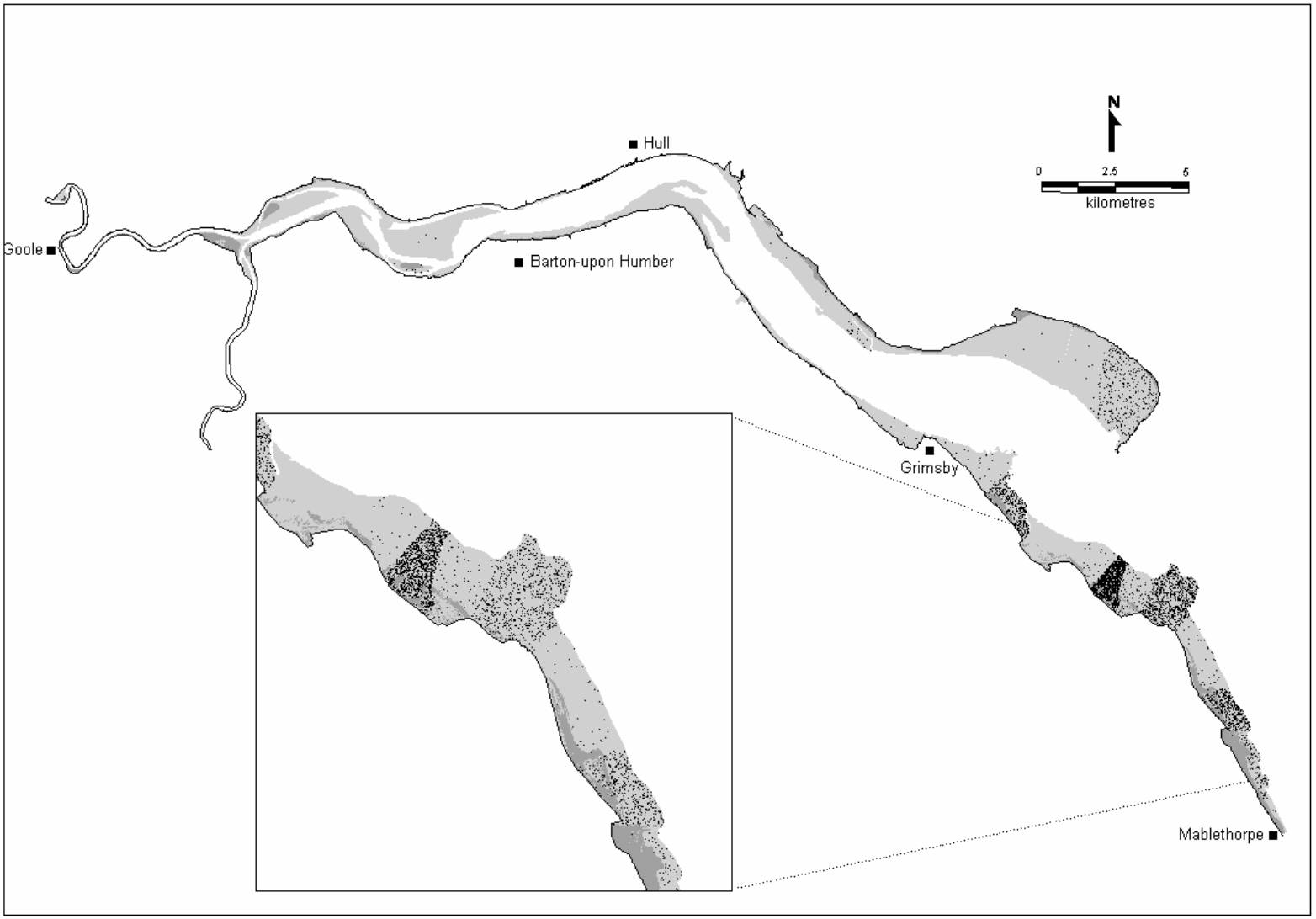
The extended coverage of the south outer estuary (sectors OSA, OSB, OSC, OSD, OSE and OSF) illustrated the importance of these sectors for feeding oystercatcher, in particular the Somercotes Haven to Donna Nook and the Salt Box Farm to Saltfleet Haven sectors.

Whilst the September 1998 low tide count coincided well with the passage of numerous oystercatchers, September 2003 showed in comparison a particularly low level of usage. For the rest of the programme, however, usage was above that of the 1998/9 programme. It is thought that this might be an artefact of the survey programme, given that the survey coverage was extended to the south outer estuary on this occasion.

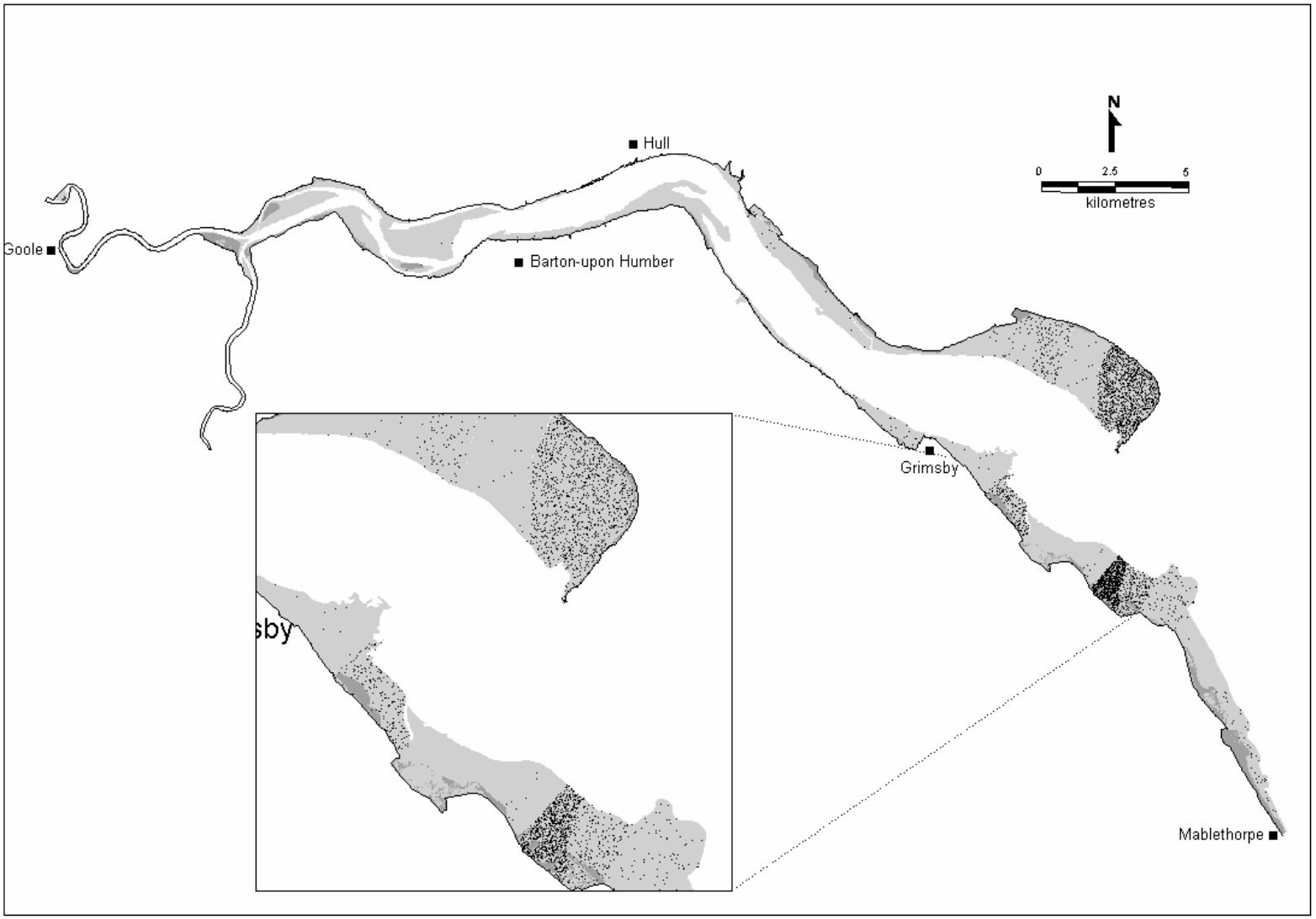
Both low tide count programmes on the Humber showed the stability of the winter population, followed by a reduction during the late spring into May as passage birds move out of the area, leaving a residual summering population of *c.*1,000 birds, comprised of both breeding birds and non-breeding sub-adults. Indeed, many immature birds spend their second and third summers far from their natal areas, often in the same place that they have spent the winter (Goss-Custard and others 1982). On the Humber, non-breeding sub-adults account almost entirely for the summering population with the local breeding population only limited to a few pairs. A total of15 pairs were found breeding during the programme with the majority of pairs found on the outer estuary. A few individuals were also present around Read's Island, where the birds have established breeding territories. Breeding territories on the Humber can be found on a wide range of habitats including the flood defence banks, adjacent saltmarsh, grassland and on adjacent terrestrial sites. For comparison, 26-29 breeding pairs were found during the Low Tide Count programme 1998/9.

As the graph shows, the numbers rise sharply in July and August with the arrival of immigrants, which are likely to begin their primary moult immediately on the Humber. The moult takes about 100 days after which some birds move to wintering grounds further south and west (Wernham and others 2002), although the low tide count suggests a large majority remain through the winter.

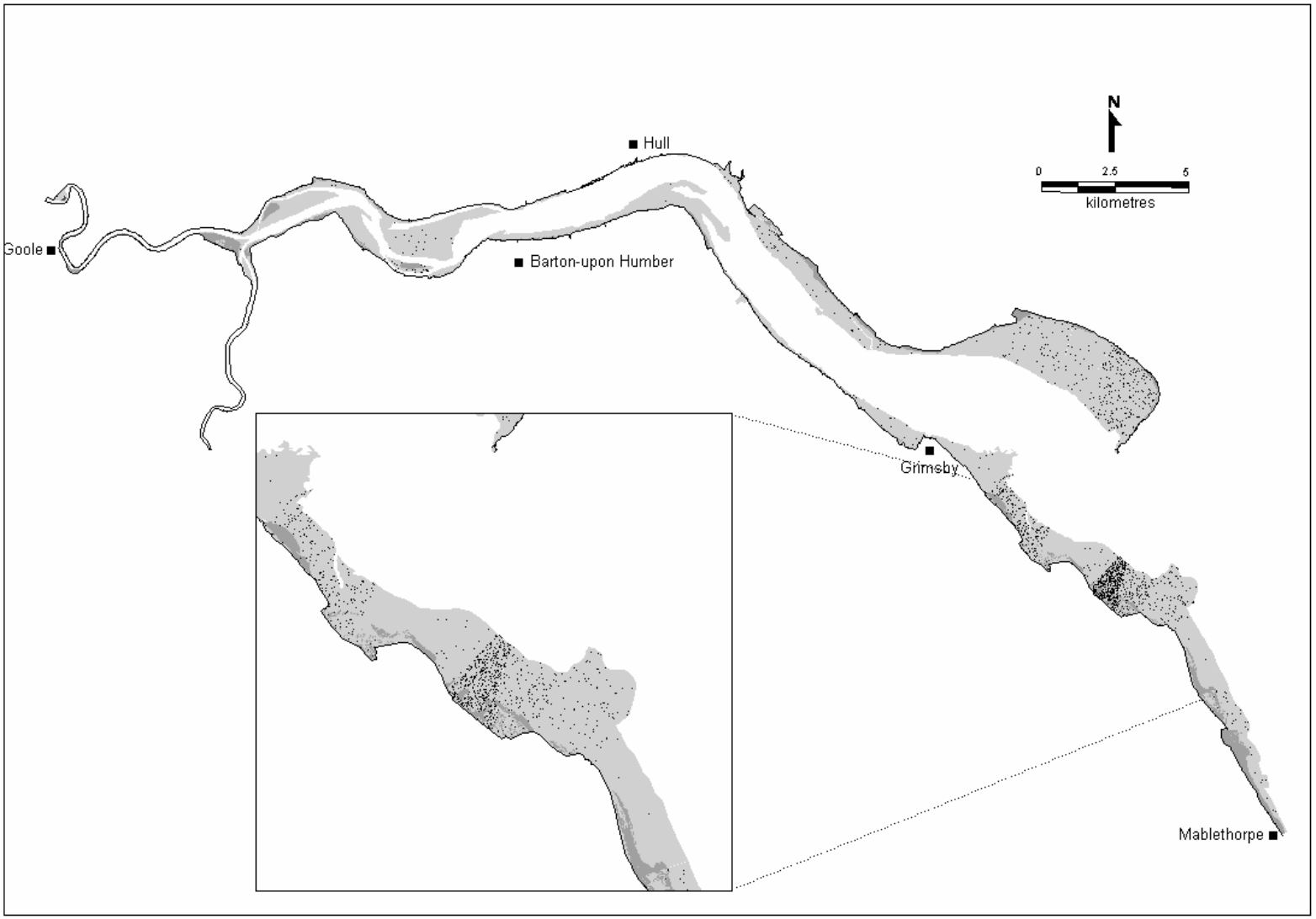




Oystercatcher low tide distribution, autumn 2003/4.



Oystercatcher low tide distribution, winter 2003/4.



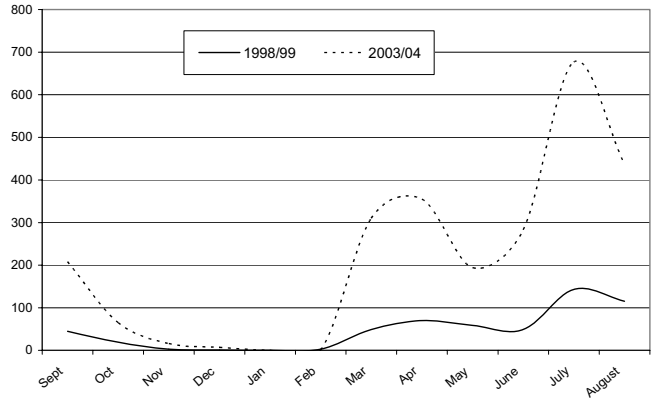
Oystercatcher low tide distribution, spring 2003/4.

3.1.8 Avocet (*Recurvirostra avosetta*)

The avocet has until recent years been something of a rarity on the Humber. However, an expansion in population size and range over the last 20 years has seen the initial colonisation of the upper Humber by breeding birds and the subsequent gradual extension of breeding activity to other sites around the estuary, as well as an increase in numbers of pairs at existing colonies.

Following an excellent breeding season in 2003 where 160 pairs were recorded across five sites (Allen and others 2003), the initial autumn count of the 2003/4 programme produced a total of 208 birds, of which 167 were recorded from Read's Island, this area already having been identified as a post-breeding area from the 1998/9 programme (Catley 2000). Following the September peak, the numbers dropped away in October to 65 birds with the departure of birds to their wintering quarters, although as the Humber is at the edge of the wintering range of the species, some birds were present until December, the wintering population probably only vacating the estuary during the January cold spell.

The species returned to Read's Island in February with one individual noted, but by March a dramatic rise in flock numbers occurred, with the arrival of 298 individuals on the Island. Over the spring, the distribution across the estuary at low water was found to generally match that of the breeding colonies across the estuary, with the bulk of the population again recorded on Read's Island. Of 238 individuals present on the island in June, 25 of them were juveniles from several broods and breeding was also noted to occur at Blacktoft Nature Reserve, one of the strongholds for this species on the Humber. Elsewhere on the estuary, the newly established colony at Paull Holme Strays produced a number of young birds, with at least seven broods observed in the realignment area during the count programme. Breeding birds were also reported at the North Killingholme Haven Pit with three chicks observed feeding in May.

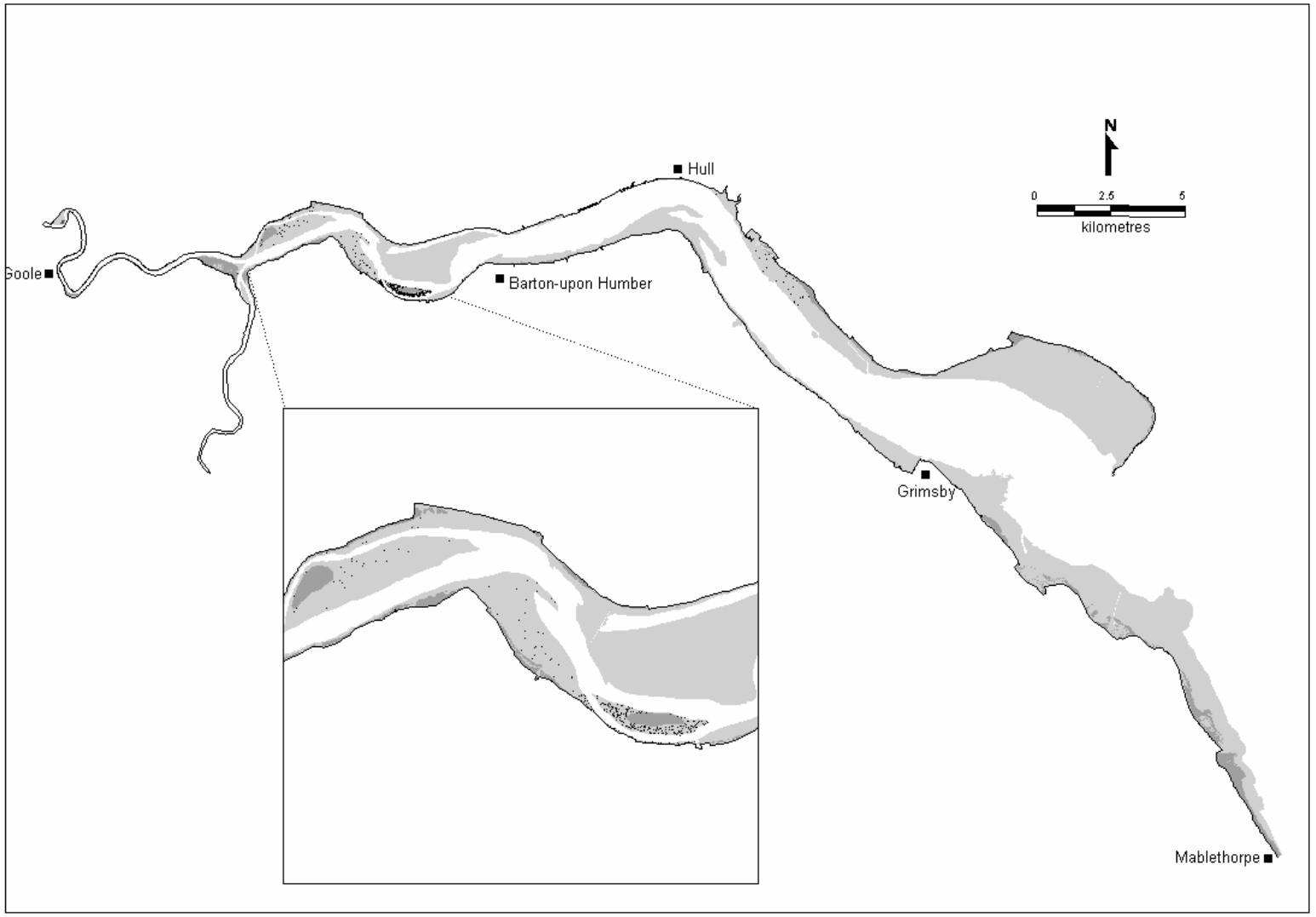


By July, the Avocet population had reached a new record level on the Humber after another successful breeding season. 669 individuals were noted on Read's Island, with local birds supplemented by individuals from other colonies on the estuary and representing a similar post breeding concentration to that noted from the 1998/9 programme when juveniles and adults from the Blacktoft colonies moved to Read's Island. However, in addition to the post-breeding gathering on Read's Island, the 2003/4 programme also recorded concentrations on the intertidal area fronting the Paull Holme Strays site and on Whitton Sand.

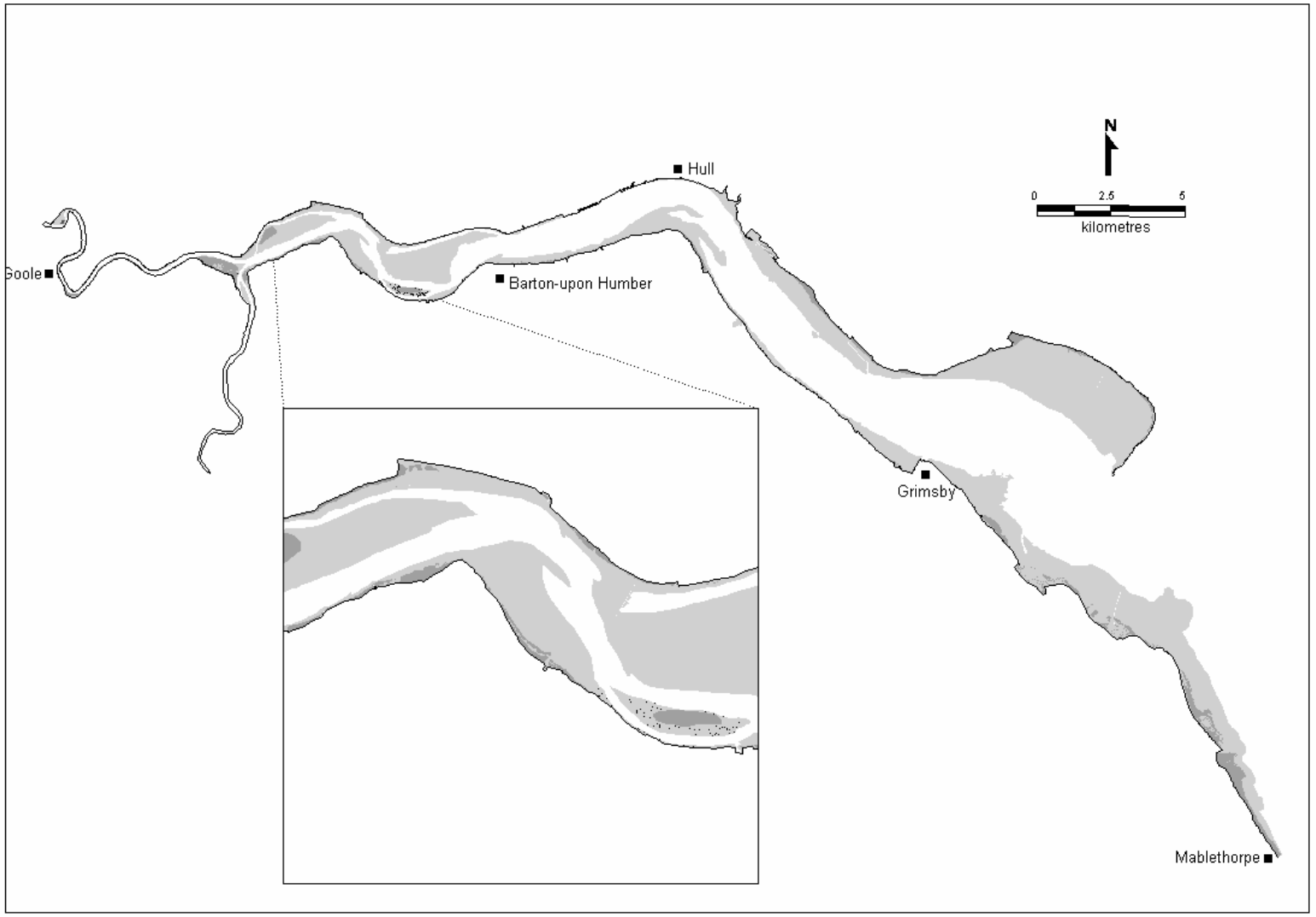
Although, the population fluctuations during the spring and summer of the 2003/4 programme were more marked than for the 1998/9 programme, peaks of usage were noted in April and July in both years. This bi-modal distribution probably reflects an initial arrival of birds during spring, with numbers then declining as birds move onto nests (some potentially hidden by vegetation from the counters), the second peak occurring in July with adult

dispersal and juveniles fledging, moving out from breeding sites to feed and roost on adjacent areas.

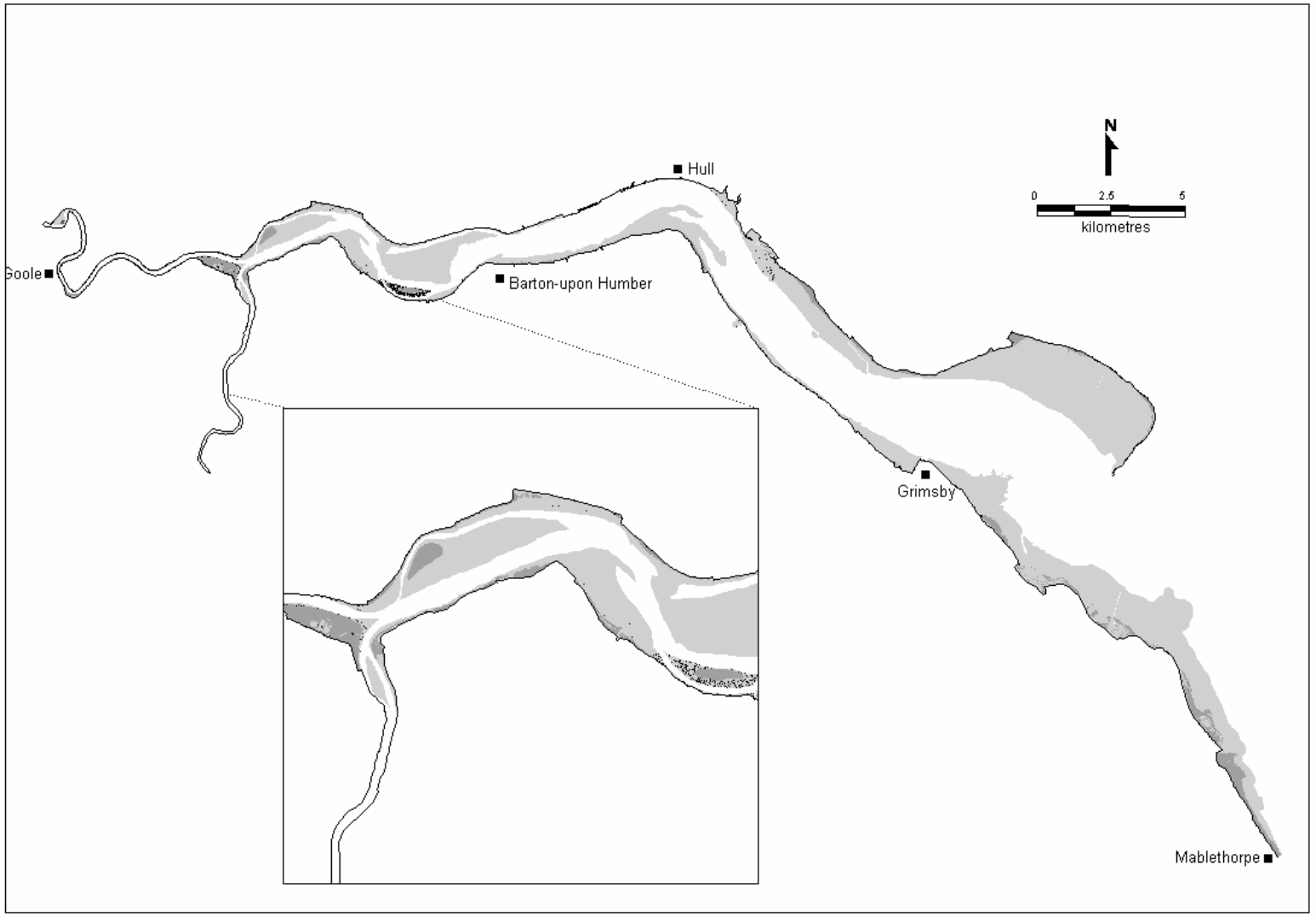
The trend of increase in population size seen on the Humber has been mirrored at a national level (based on the most recent available data), and has been attributed to numerous factors. These have included improved protection from hunting, a reduction in egg-collecting, improved food supplies due to a reduction in eutrophication, and the creation of suitable breeding habitats, both through direct habitat management and as an indirect consequence of coastal engineering projects (Pollit and others 2003). For instance the managed realignment site at Paull Holme Strays on the north bank of the Humber Estuary supported for the second year running a successful breeding colony, despite the breaching of the flood defences after the first year and consequent tidal inundation of much of the retreat area (Mander 2004). Further expansion is expected on the Humber Estuary with several further managed realignment sites planned to become operational over the next few years. This management option, which involves the setting back of existing defences and creation of new shallow wetland habitat, is an integral part of the Environment Agency's flood defence strategy for the Humber. It is required both to offset land loss on the estuary resulting from relative sea level rise (it is estimated that over 700ha of land will be needed to replace losses of habitat from rising sea level during the next 50 years (Environment Agency 2004)) and to improve the quality of flood protection within the estuarine system.



Avocet low tide distribution, autumn 2003/4.



Avocet low tide distribution, winter 2003/4.



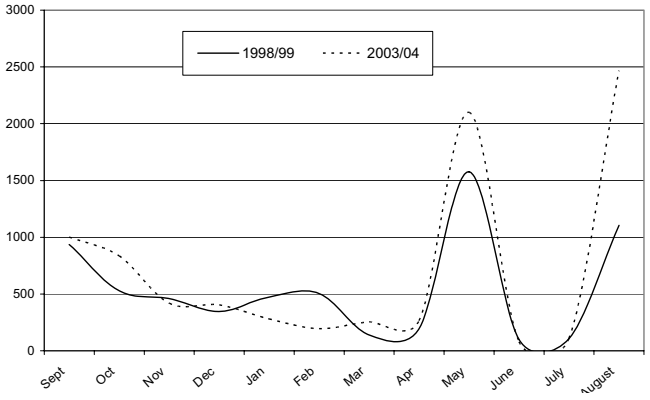
Avocet low tide distribution, spring 2003/4.

3.1.9 Ringed plover (*Charadrius hiaticula*)

The ringed plover is recorded on the Humber in internationally important numbers during migration periods, with a smaller, nationally important wintering population and only a few breeding pairs. Analysis of the WeBS Core Count data from 1996 to 2001 and Low Tide Count data from1998/9 identified a number of sectors supporting a feeding wintering population but with concentrations on a smaller number of areas during passage periods (Allen and others 2003; Catley 2000).

The autumn period from the current 2003/4 programme showed a substantial passage of ringed plover with a substantial increase in numbers from the mid summer total as passage birds moved through the estuary during August. The low tide total at this time was the highest count of the low tide programme with a total of 2,467 birds recorded, this being well in excess of the international importance threshold (500 birds) and well above the maxima from the same period during the 1998/9 programme. Based on average counts over the autumn passage period (July to October), the distribution map shows seven feeding concentrations across the estuary; Whitton Sand, Read's Island and adjacent mudflats (Whitton Ness to 1km east of Winteringham), Paull to Stone Creek intertidal areas, Spurn Bight, Pyewipe, the Cleethorpes to Humberston Fitties reach and the Theddlethorpe St Helen to North End reach. Whilst the mudflat east of Cleethorpes exhibited the highest usage throughout the autumn, the Paull Holme Strays reach featured the highest densities of birds across the estuary.

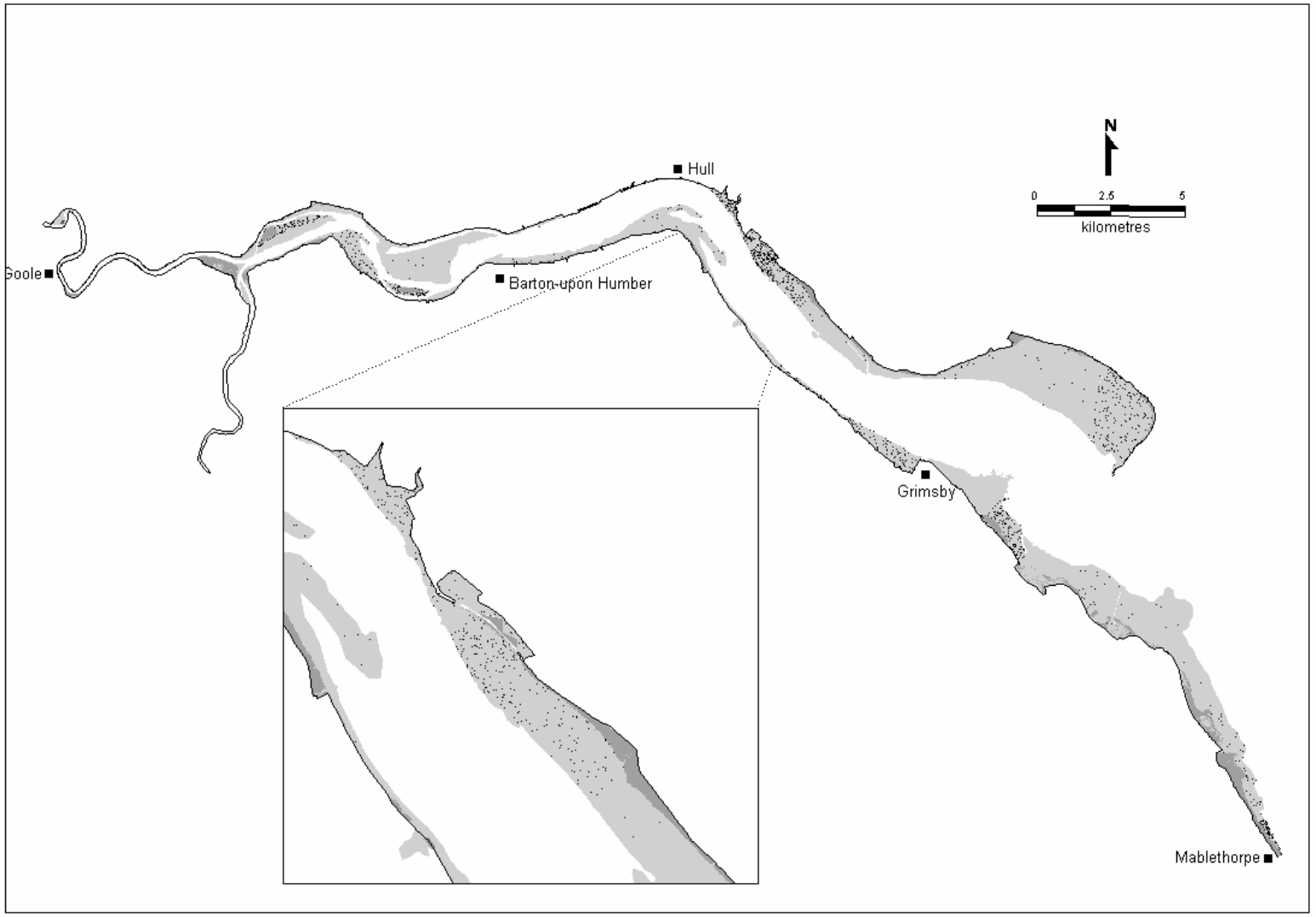
A reduction in usage was recorded over the winter period, the distribution map showing the population to be scattered across the estuary. The Cleethorpes to Humberston Fitties reach continued to be of importance for the species, supporting the largest number of birds (25% of the winter population) and featuring the highest foraging densities. Both the low water programmes have recorded an estuarine wintering population of up to 500 birds, a substantial reduction on passage numbers, but still close to the international importance threshold, although in general, winter usage during the 2003/4 programme was slightly below that of the 1998/9 programme, despite the greater area of coverage.



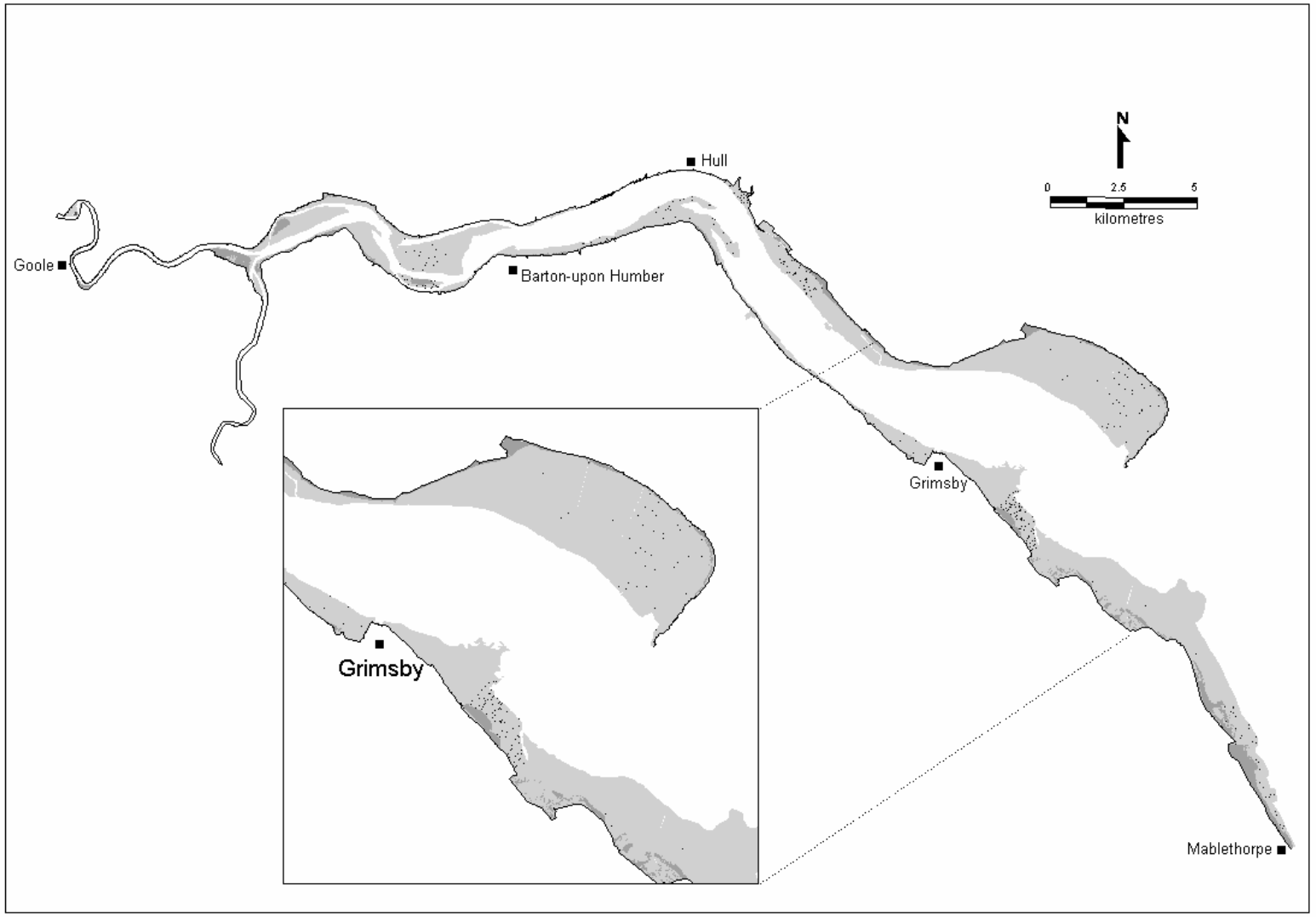
This may have reflected an overall reduction in usage during the current reporting year at a regional or national level, but interestingly, between 200 and 300 ringed plover were present on the western end of the Saltend site during the 2003/4 mid winter (data from outwith the Low Water Count Programme). These birds were recorded using a recently modified mudflat area for feeding and roosting which was probably out of view of the counters during the Low Tide Count Programme. This compares to *c.*100 birds recorded from the same programme for the winter of 1998/9, prior to habitat modification to this area. It may therefore be the case that a shift in usage has occurred in the middle estuary between the two programmes.

In May, the Low Tide Count date appeared to coincide well with the main passage of ringed plover, with a peak maximum of 2,101 birds recorded, this being around twice the maxima of

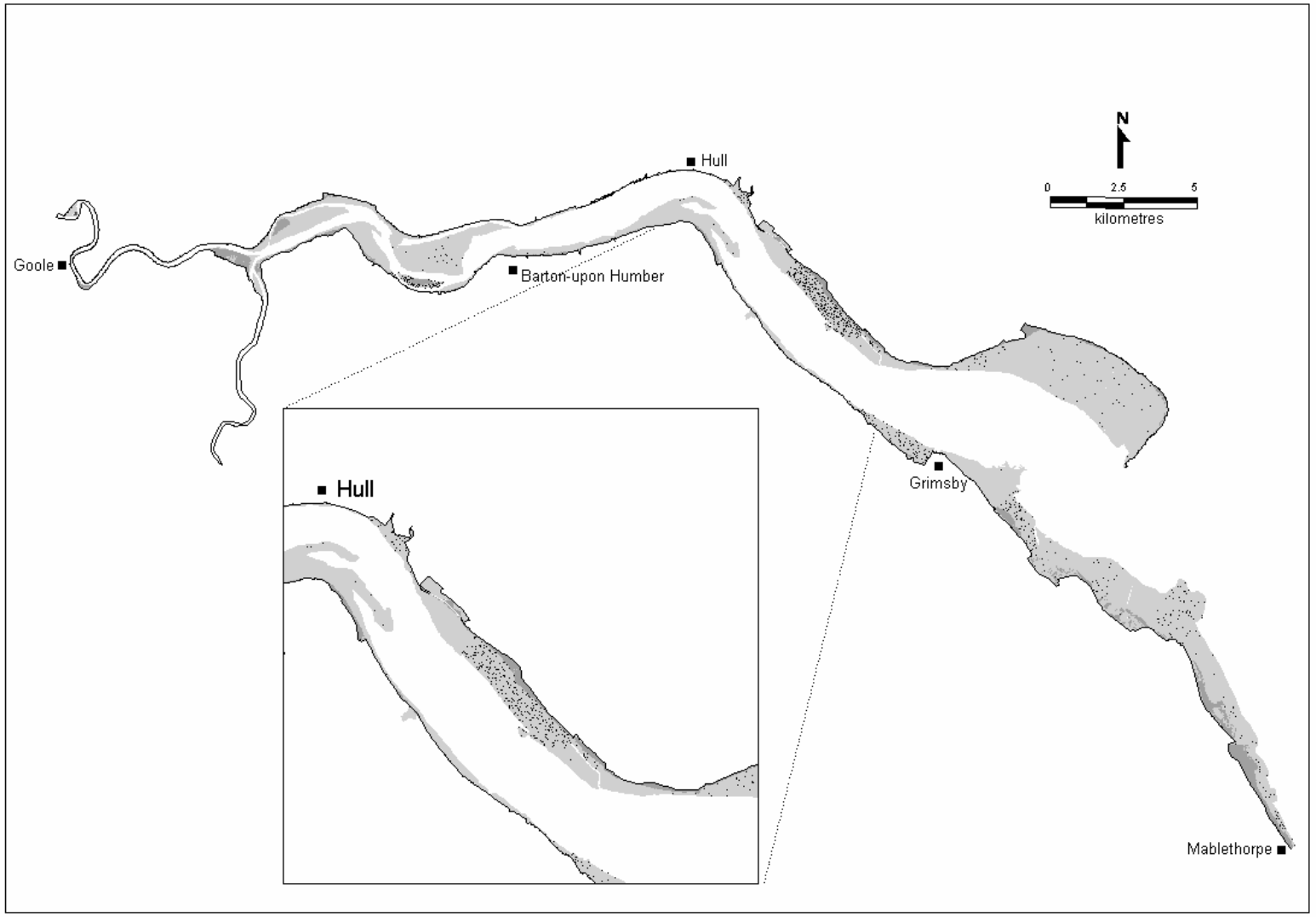
the 1998/9 programme. Ringed plover passage generally occurs during mid to late May with some birds still moving through the Humber in early June, although the peak period of movement is often of short duration. The passage movement involves Fennoscandia breeders as well as birds moving through to breeding sites in Iceland and Greenland, although ringing recoveries suggest that the main passage of ringed plover to and from Greenland/Iceland mostly occurs along the west coast of Britain in the late spring (Wernham and others 2002). There appeared to be a certain degree of consistency in site utilisation between the autumn and spring periods, although a skew in usage to the middle/outer estuary for the spring movement was noted (see figures below). The level of usage during May was particularly noteworthy on the Paull to Stone Creek section, with the count of 858 foraging birds representing almost 50% of the Humber population on that date, and exceeding the international importance threshold. By June it is likely that the large majority of the Humber population consisted of breeding birds, the estuary supporting a small breeding population estimated to be at around 50 pairs from data collected during the Low Tide Count of 1998/9. Specific information on breeding activity was gathered during the current programme, and if anything, suggested the presence of fewer breeding pairs. However, due to the partial nature of such records, it cannot be considered an accurate summary of current breeding status.



Ringed plover low tide distribution, autumn 2003/4.



Ringed plover low tide distribution, winter 2003/4.



Ringed plover low tide distribution, spring 2003/4.

3.1.10 Golden plover (*Pluvialis apricaria*)

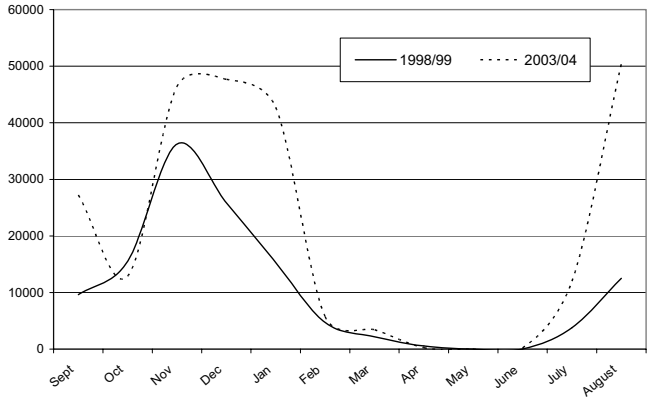
The Humber Estuary is currently of international importance for golden plover, with a high water population of 30,709 (5 year mean 96/7 to 00/01), and is the most important wintering site for the species in the UK, supporting over 20% of the British wintering population. However, the importance of the Humber for the species is a relatively recent development, with only small flocks of the species recorded on the estuary over 20 years ago. During the winter of 1983/4, 8,014 birds were recorded (Salmon & Moser 1985), although the mean from the previous five years from the Birds of Estuaries Enquiry stood at 2,295 birds (Salmon, 1983), the majority of the British wintering population using inland sites at this time with wintering roost flocks concentrated on the intertidal mudflats of the Humber Wildfowl Refuge. During the next 10 years, the wintering population grew substantially (1993/4 5 year mean of 24,841 birds) and distribution of the species expanded across the estuary, with peak usage tending to occur between November and January. The last 10 years have seen a further increase in the size of the wintering population, although with a degree of inter-annual variation, with 1994/5 recording over 60,000 birds compared to less than 9,000 in 1996/7, although to some extent this latter low total may be an artefact of missing sector data from the early winter period.

As already mentioned, golden plover tend to feed on inland fields around the estuary, with old pasture tending to support the greatest densities of invertebrates and as such being of particular importance for golden plover during the winter (Barnard & Thompson, 1985). However, such habitat is not particularly common around the Humber and flocks have also been observed feeding in arable fields. The intertidal habitats of the estuary therefore tend to be used primarily as a roosting resource, although some feeding is undertaken, particularly during passage periods (N Cutts pers. obs.). The importance of the intertidal zone as primarily a roosting area was underlined from the current count programme, with only *c.*30% of the flock actively feeding at this time. In contrast, the passage period demonstrated the value of the intertidal areas for foraging birds; as both August and September recorded over 80% of the Humber population as feeding. The greater utilisation of intertidal areas during late summer is potentially related to the reduced availability of terrestrial habitats, with many fields under crop or featuring rank grass, and others being subject to a relatively high level of agricultural activity. It would appear that there are now at least two, and possibly five, discrete populations operating within the estuary, these flocks moving between habitually used key roosting and feeding areas depending on prey availability and suitable roosting habitat.

During the autumn of the 2003/4 programme, golden plover flocks were found to be concentrated in the middle/outer estuary, but with further arrivals during the late autumn to winter period apparently leading to the dispersion of birds into the upper Humber. On the upper Humber, Read's Island supported the largest concentration of the species with an average of 2,653 birds and a density of 25 birds per ha over the winter, this area being primarily used as a roosting/loafing site. Additionally, large gatherings were noted on the Faxfleet to Brough section and the Blacktoft Sand Nature Reserve. However, it appears that the intertidal areas west of the Humber bridge were of less importance for the species than those of the middle and outer estuary, supporting only 16% of the Humber population during the winter. This demonstrates a shift in distribution from 20 years ago when the upper estuary was the stronghold for the species on the Humber.

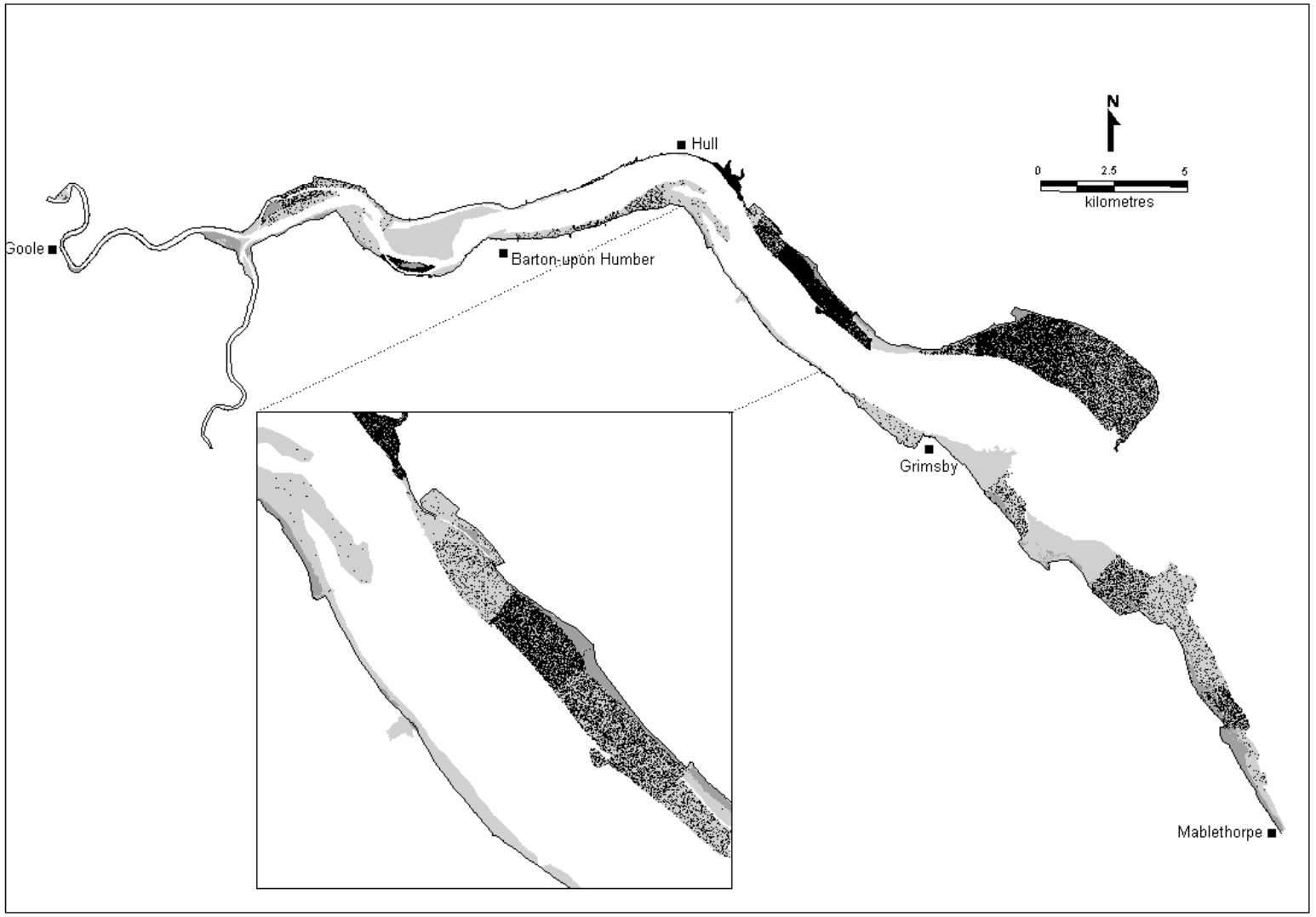
The north shore of the estuary between Hull and Spurn was found to be the preferred feeding and roosting area for the species, although substantial inter-month variation in utilisation within this large section of the estuary was noted. This extensive mudflat area accounted for 80% of the Humber population during the autumn with highest densities recorded at Saltend with 26 birds per ha, whilst in addition, the intertidal areas west of Cherry Cobb featured 17 birds per ha. Interestingly, despite the arrival of additional wintering flocks during November, the utilisation of the Hull to Spurn section reduced to 60% of the Humber total during the winter (with an increase in the numbers using the upper Humber and on the south bank). Distribution during the winter also shifted within the reach, with a decrease in the importance of the Saltend and Spurn sectors and a concentration of birds in the Paull to Stone Creek section.

During the winter, the remainder of the population was concentrated on the intertidal areas east of Immingham, with the flocks showing a clear preference for the mudflat at Pyewipe, the Cleethorpes to Humberston Fitties reach and the area between Horseshoe Point and Donna Nook. The Pyewipe mudflat appeared in particular to be the key area over the winter on the south bank, supporting a density of seven birds per ha whilst other intertidal areas supported less than one bird per hectare.

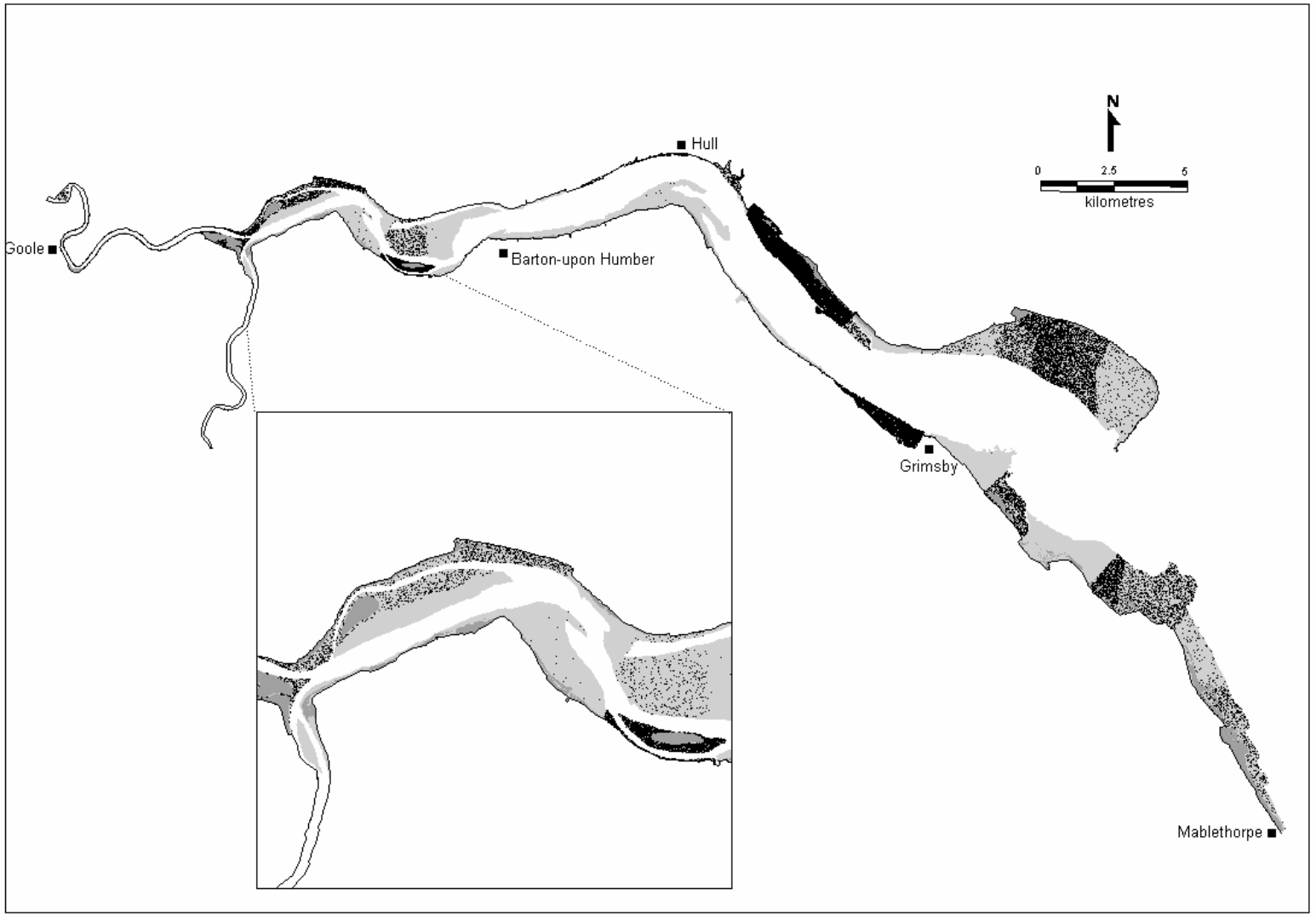


In general, the winter of 2003/4 was found to support a substantially greater population than for the corresponding period of 1998/9, with around a third more birds present in the latter period (based on programme maxima), and with peak winter usage sustained over a longer period. In addition, the 2003/4 autumn passage maxima was perhaps 5 times that of 1998/9. Interestingly, the high water maxima from the winter of 1998/9 was over 10% higher than that for low water, suggesting that during tidal compression periods, some flocks were more readily counted (either out of view at low water, or more accurately counted around high water when closer to the shore). Data from the 2003/4 WeBS Core count programme are not yet available, but it will be interesting to see if this pattern is carried through into the current programme.

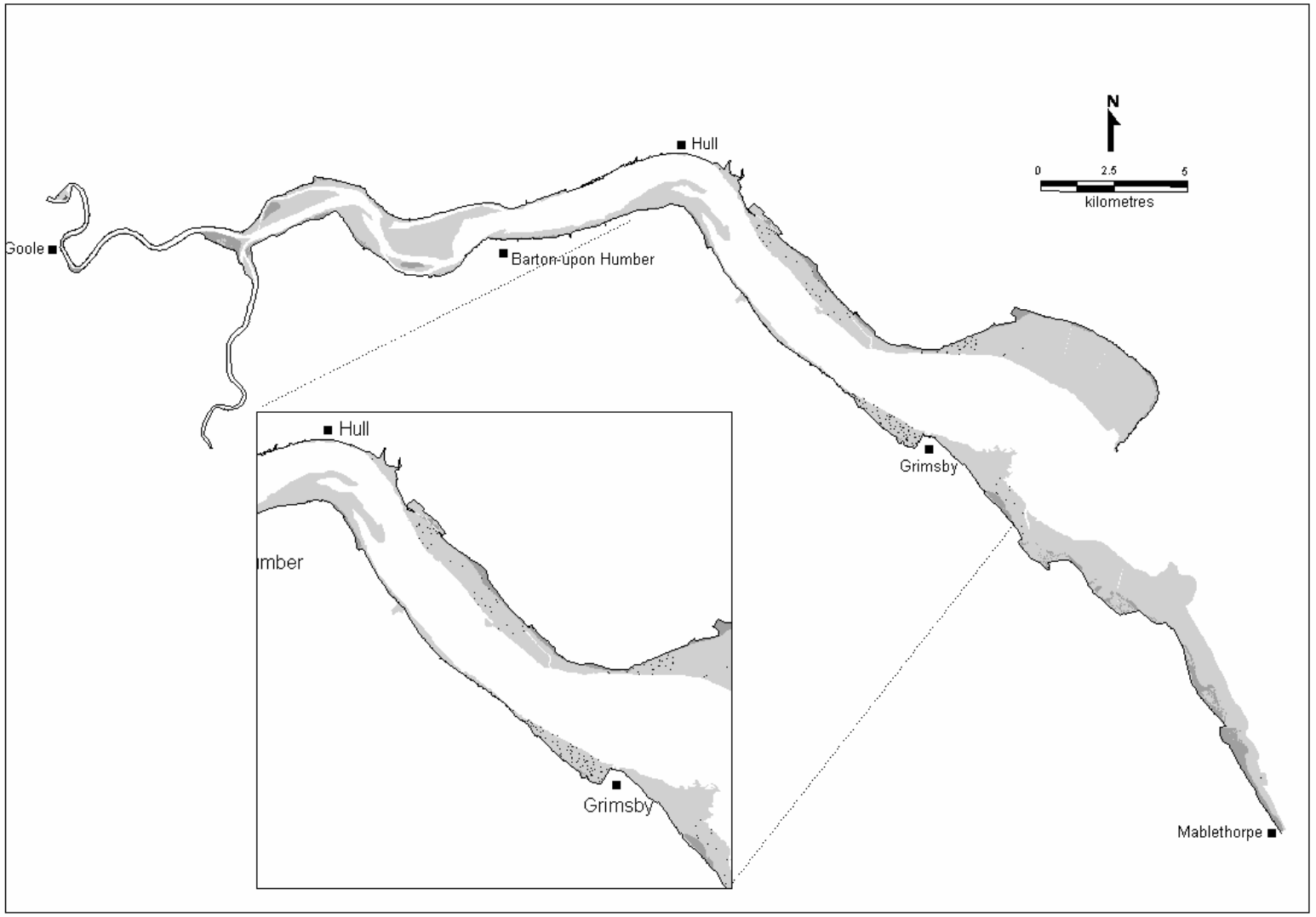
The relative importance of the Humber for the species during autumn and winter compared to spring is evident from the maps below. In most years, wintering golden plover flocks have vacated the estuary in all but very small numbers by the end of February. Interestingly, survey work over the last 10 years at a middle estuary site has seen an earlier departure of wintering golden plover flocks during February by one or two weeks over the last 5 years. This is presumably a phenological artefact resulting from the series of mild winters experienced in the region, allowing an earlier departure of wintering flocks onto inland upland breeding sites.



Golden plover low tide distribution, autumn 2003/4.



Golden plover low tide distribution, winter 2003/4.

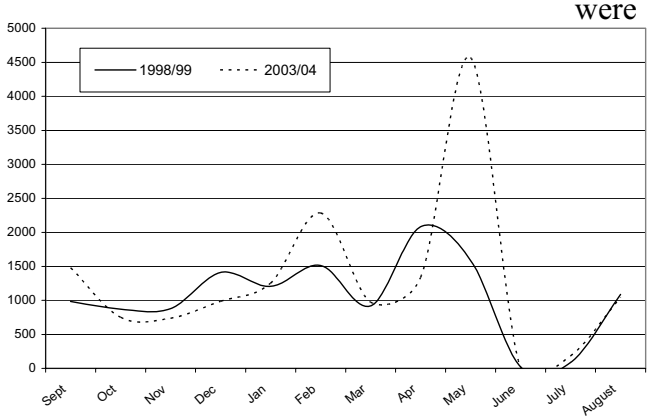


Golden plover low tide distribution, spring 2003/4.

3.1.11 Grey plover (*Pluvialis squatarola*)

In the Humber Estuary, the grey plover is primarily a bird of the outer estuary, often found in well dispersed loose 'flocks' across a mudflat, with feeding activity largely undertaken from the upper to mid shore (Allen and others 2003). Around 1,000 to 2,000 birds winter in the estuary, but the species features a substantial passage movement through the site in the late spring. The Low Tide Counts over the winter of 2003/4 recorded the species as being concentrated to the east of a line stretching from Cherry Cobb to Cleethorpes, this distribution broadly matching the extent of the sandy muddy to fine sand substratum, which supports an *Arenicola, Hediste* and *Macoma* dominated infauna with other species including *Scrobicularia* and *Cerastoderma* present. The more coastal reaches consist of a fine to medium sand with variable mud, and support a more diverse infauna characteristic of a marine environment, including *Nephtys* and amphipods in addition to the *Hediste*, *Macoma* and *Arenicola* dominants.

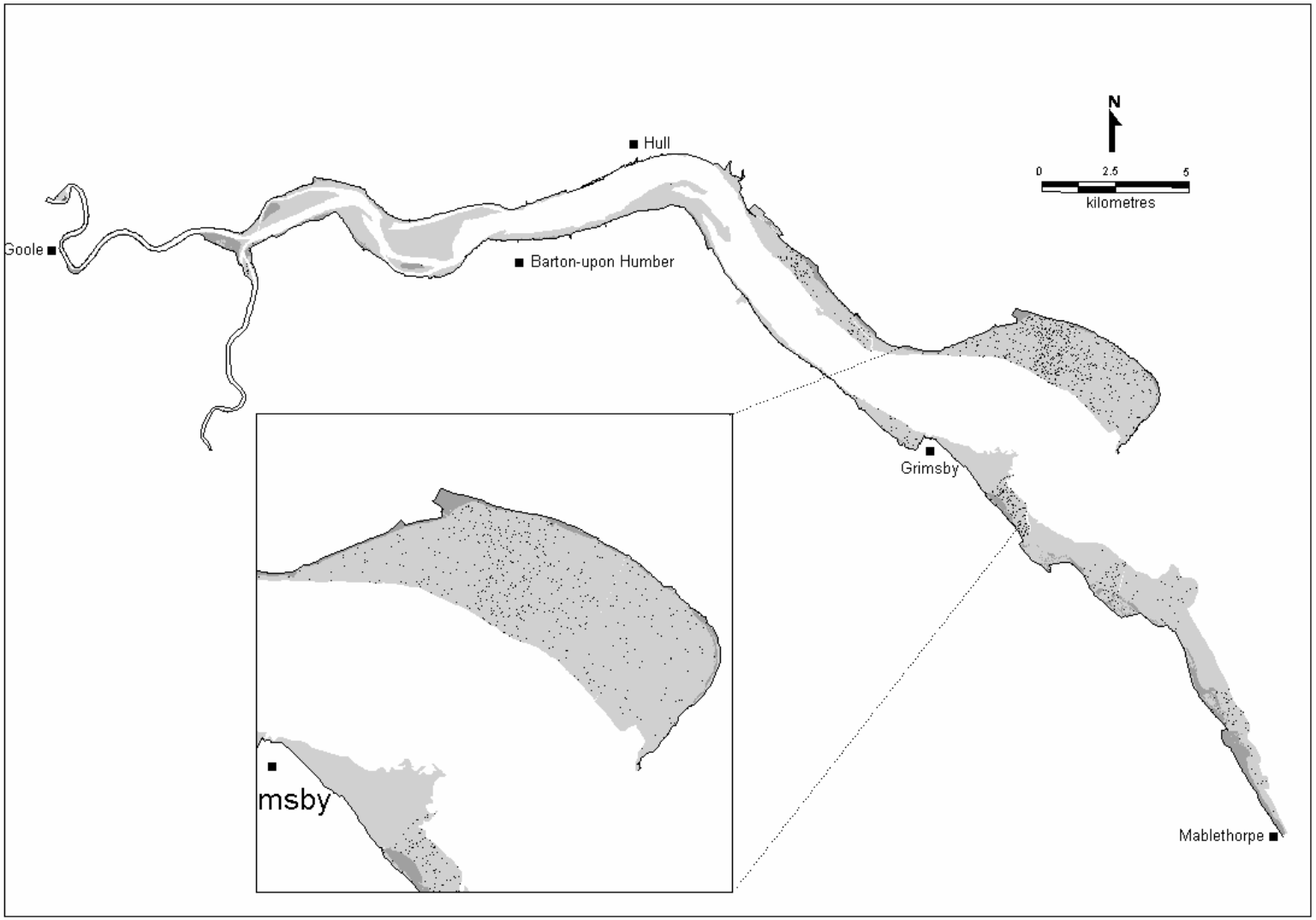
However, the distribution of these benthic species is not well known across the site as a whole and as such, the extent to which the substratum and associated infauna defines the current distribution of grey plover is uncertain, as other factors may also potentially influence usage across the estuary. During the current count programme, the outer shore of the north bank appeared to be the favoured area for foraging by the species, supporting over 75% of the Humber population throughout the year. In fact the intertidal areas adjacent to the saltmarsh habitats of Welwick and Cherry Cobb were seen to support consistent numbers over the 2003/4 programme, possibly suggesting that the saltmarsh acted as a main roosting site at high tide with the birds dispersing onto the adjacent mudflat to feed at low tide. Previous analysis of the WeBS core count data identified the Welwick and Cherry Cobb reaches of being particular importance for roosting waders during the winter (Allen and others 2003). The intertidal habitat around the Cherry Cobb saltmarsh was found to support the highest density of foraging birds on the Humber during the 2003/4 programme, with 231 birds per ha recorded over the spring period, with a count of 2,690 bids in May concentrated just to the west of Cherry Cobb being particularly noteworthy. This count surpasses the level of international importance for the species, indicating that this site provides a particularly important foraging area during passage periods.



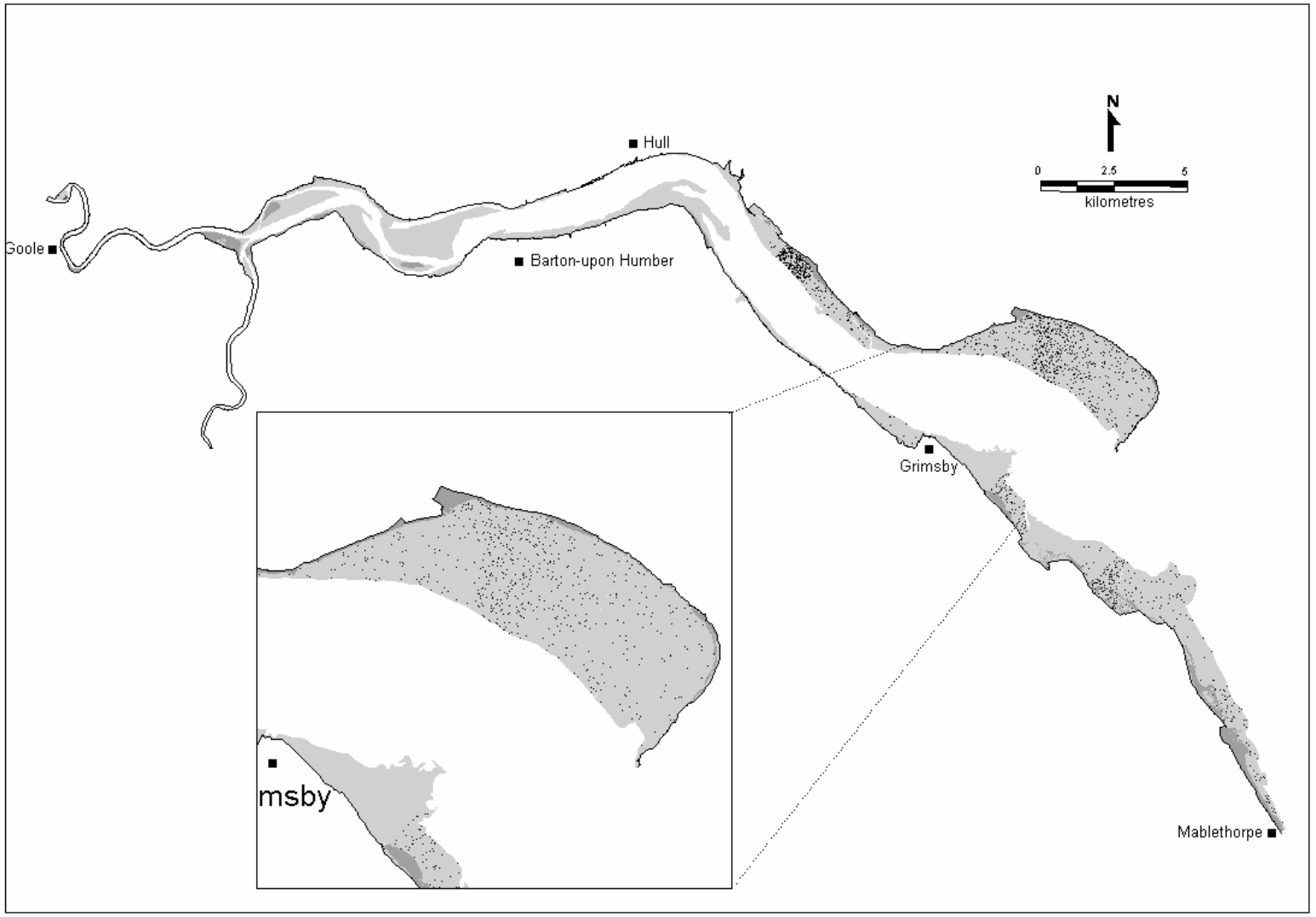
On the south bank, the species was distributed to the south of Immingham with the main feeding concentrations occurring on the Humberston Fitties to Tetney Haven and Horseshoe Point to Grainthorpe Haven reaches, both sections showing consistent utilisation over the autumn and winter periods but with densities of less than 0.30 birds per ha. South of Grainthorpe Haven, the species was recorded across the intertidal area, feeding at low densities. On the outer shore of the south bank (including coastal reaches), there appeared to be steady decline in numbers over the winter and spring, this despite the influx of migrants into the Humber Estuary as a whole during this period, with only 5% of the spring population recorded in this area, compared to 35% during the autumn period. The reason(s) for this shift

in preference are unclear, but potentially relate to changes in prey availability (particularly key items) and substratum between passage and winter periods.

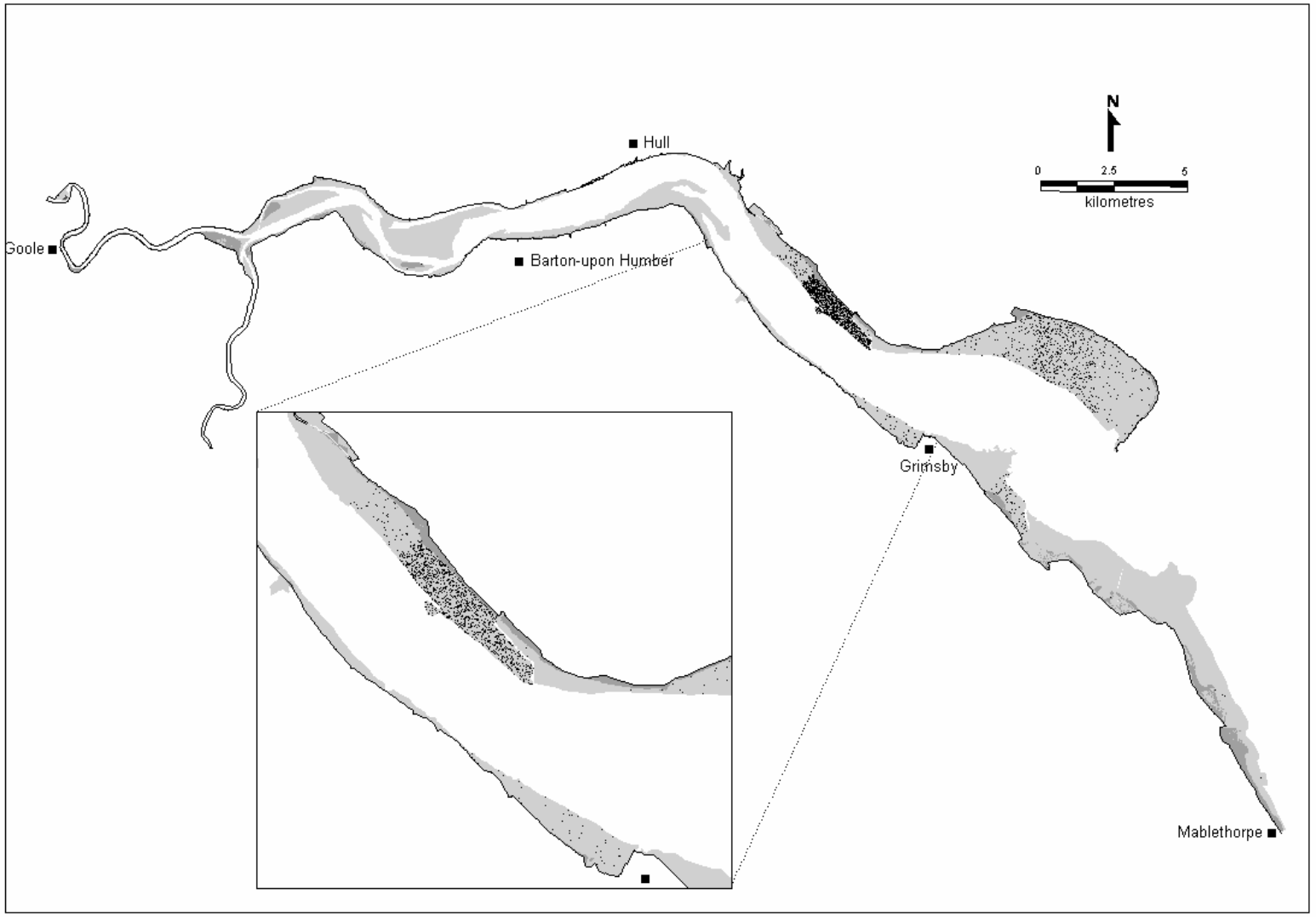
Studies have shown the grey plover to have a strong site fidelity to its wintering areas, both within the season and from year to year (Wernham and others 2002). This pattern has to some extent been observed in the 2003/4 Low Tide Count programme, with a constant distribution noted over the winter period and with 2003/4 distribution data showing strong spatial similarities to that of the 1998/9 programme. Both programmes also recorded a small peak in February, attributed to the movement of the wintering population through the site, followed by a larger peak with the main migratory movement through the site in May. The graph shows the spring peak of 2003/4 to be substantially greater than that recorded from the 1998/9 programme. To some degree, this may however be an artefact of survey timing and increased spatial coverage, the continual arrival and departure of birds during this period meaning that there is a large turnover in the population on the Humber at this time.



Grey plover low tide distribution, autumn 2003/4.



Grey plover low tide distribution, winter 2003/4.

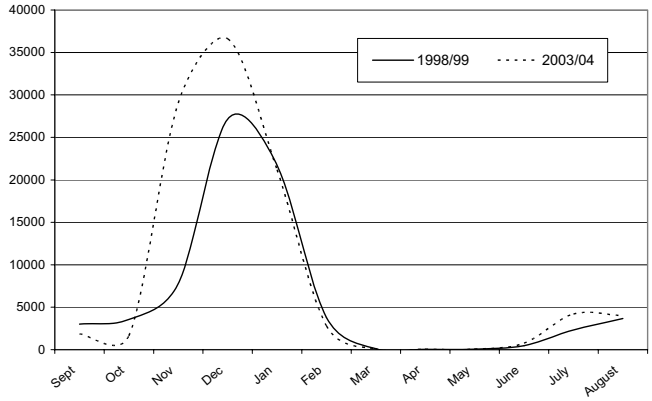


Grey plover low tide distribution, spring 2003/4.

3.1.12 Lapwing (*Vanellus vanellus*)

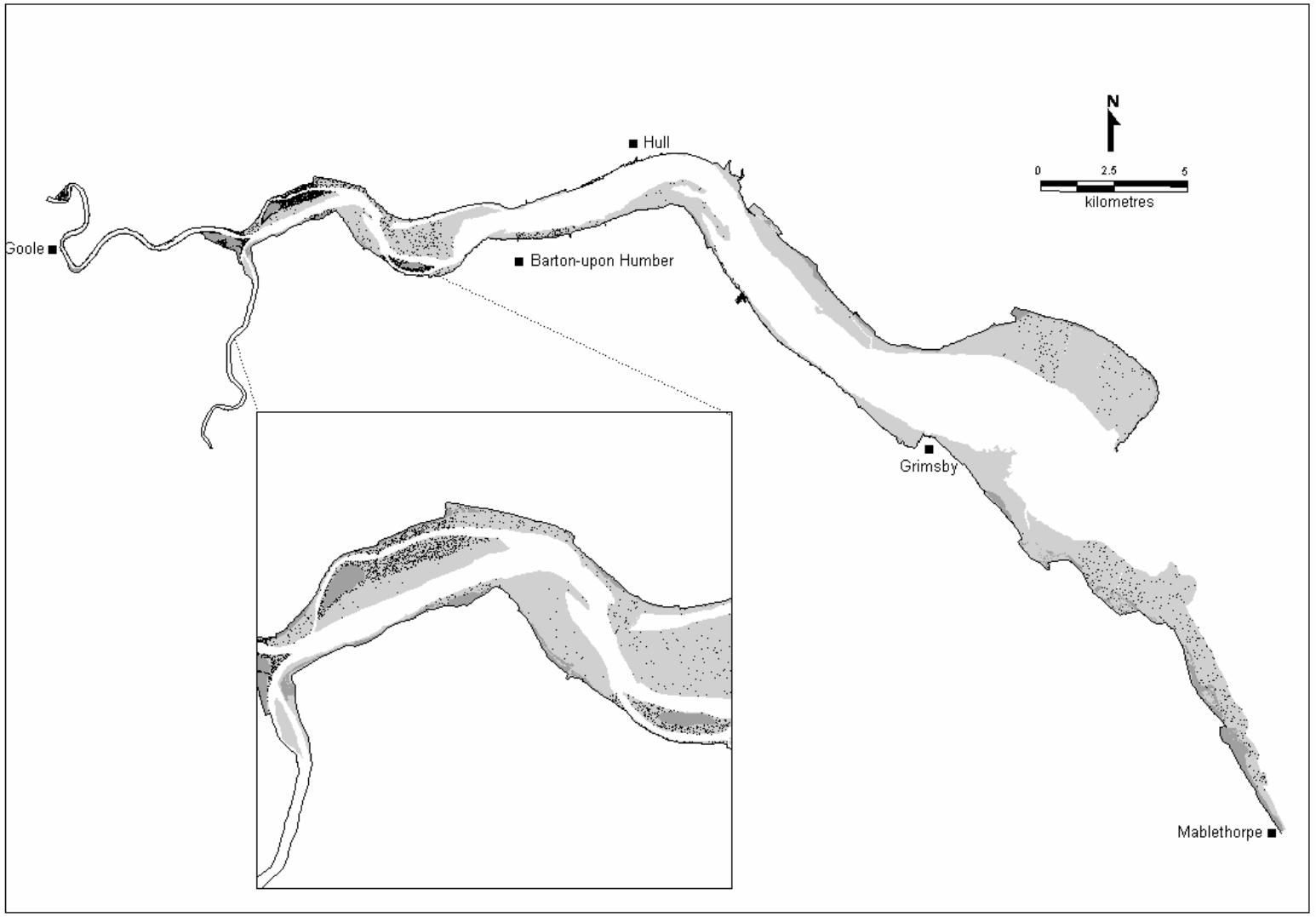
Lapwings utilise the intertidal mudflat habitats less extensively than most other wader species on the Humber, with the majority of feeding activity undertaken inland. As such, they tend to primarily use the intertidal zone as a roost, in a similar manner to golden plover (see above), and in fact are often associated with golden plover flocks, both at intertidal roosts and on inland feeding sites, although feeding flocks can be recorded in large numbers on the intertidal zone during the autumn. The numbers of lapwing present on the intertidal habitats of the estuary can fluctuate considerably during the winter period. Movements generally relate to crop status, disturbance, moon phase and in particular, weather conditions, with a spell of hard weather sometimes initially pushing birds onto the intertidal zone from frozen inland sites, but with a general movement out of the area if the hard spell is prolonged.

Data collated from the 1998/9 programme identified the inner estuary as being particularly important for the species throughout the year but with the intertidal areas of the middle/outer estuary only supporting good numbers during the spring and autumn migration periods. However, this pattern of shifting distribution did not appear to be replicated during the current programme, with the autumn period (July to October) seeing a relatively low level of usage in comparison to the winter period. Flocks tended to be concentrated on the inner estuary (75% of the Humber population) with foraging activity being undertaken by one third of the population and densities in excess of two birds per ha recorded on Whitton Sand, Read's Island, the Weighton Lock to Crabley Creek section, Blacktoft Sands Nature Reserve and Howden Dyke Lee on the River Ouse.

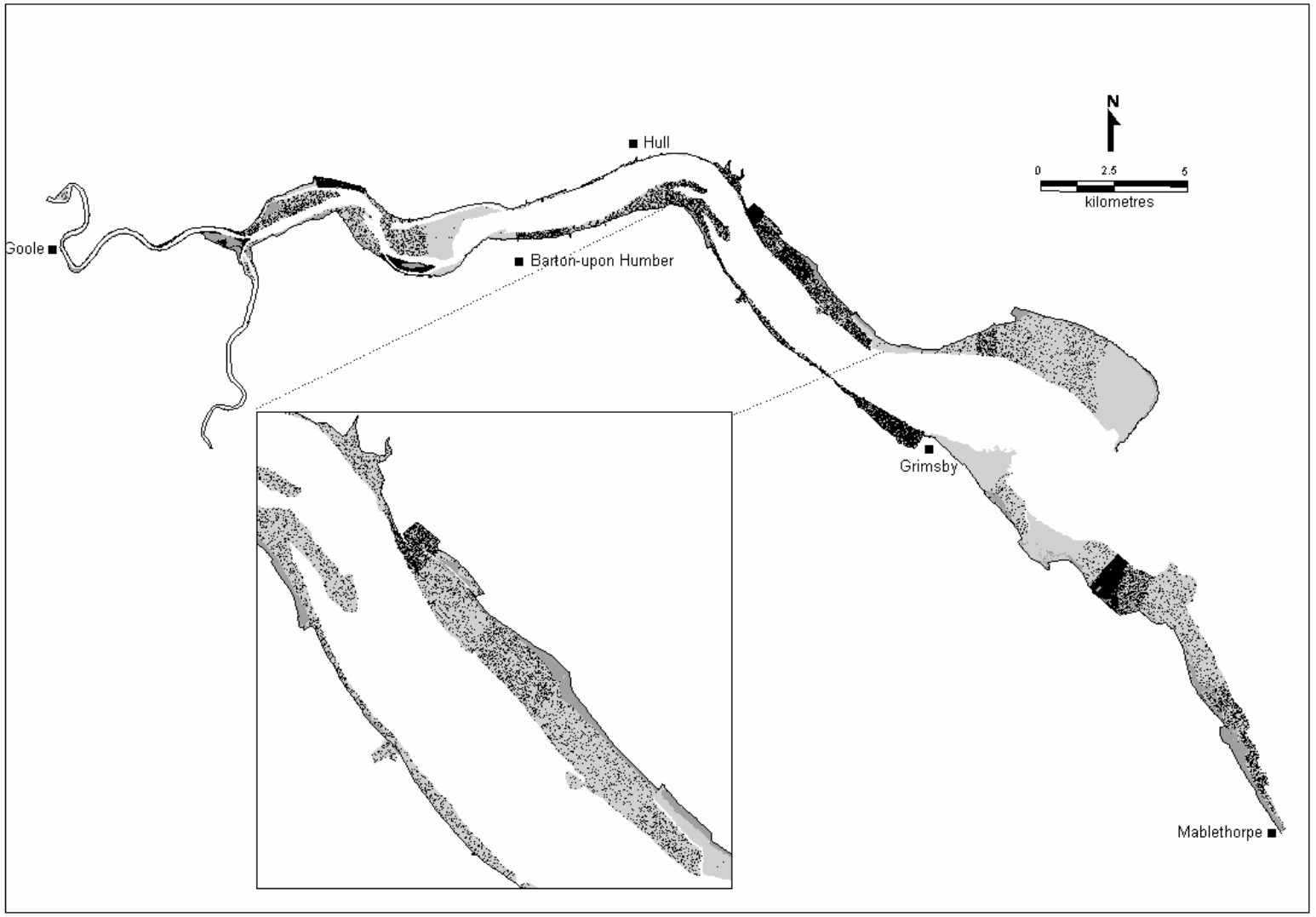


The arrival of over-wintering flocks during November saw an increase in overall usage and an extension in the distribution of flocks, with the increased take-up of sites in the middle and outer estuary. The Horseshoe Point to Grainthorpe reach held the largest flocks in the outer estuary with densities of 9 birds per ha, in addition to similar densities being recorded at sites in the middle estuary to the west of Paull, including the new realignment site at Paull Holme Strays.

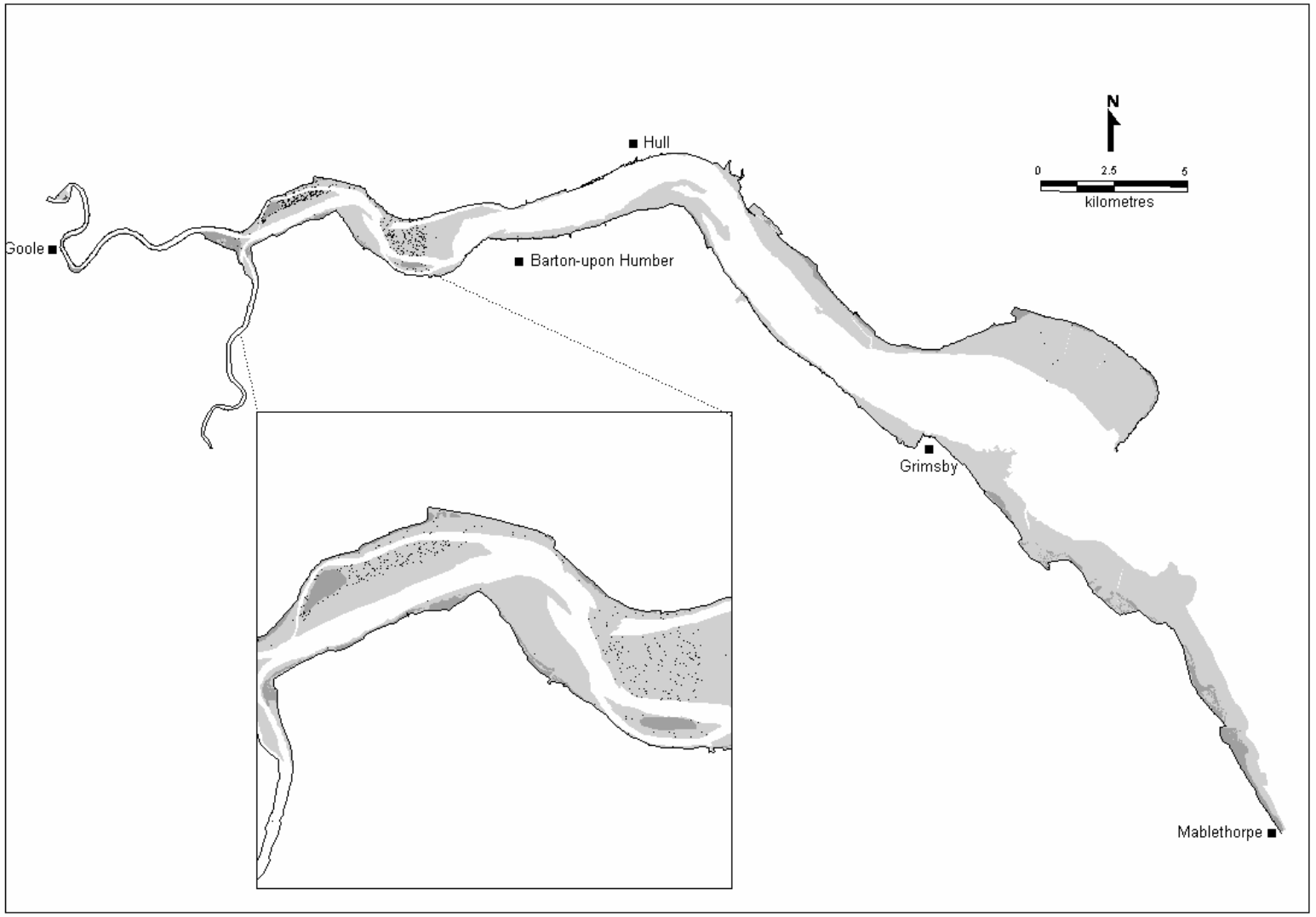
Wintering flock size on the estuary, during the 2003/4 programme, was slightly above that from the 1998/9 programme, with 35,000 birds present. This figure is also substantially above the most recently published 5-year mean WeBS (high water) maxima for the Humber (1996/7 to 2000/1) of 22,765 birds, and representing about 10% of the British wintering population. This figure is also well in excess of the international importance threshold of 20,000 birds.



Lapwing low tide distribution, autumn 2003/4.



Lapwing low tide distribution, winter 2003/4.



Lapwing low tide distribution, spring 2003/4.

3.1.13 Knot (*Calidris canutus*)

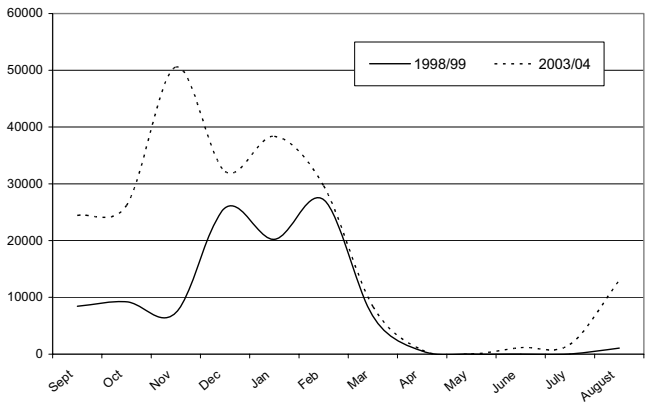
Knot distribution tends to be concentrated in the outer estuary, although small flocks can move further into the estuary as far as the Saltend to New Holland area on occasion, although these latter records are for small flocks or individuals (Allen and others 2003). The outer estuary is therefore a key area for knot and intertidal areas of both the south and north bank support a highly mobile population during autumn and winter months.

Analysis of the Low Tide Count and WeBS Core Counts from 1998/9 identified an increase in the number of birds roosting on the south shore of the estuary towards the late winter and spring, although the feeding population remained concentrated on the north bank. This suggests that there are large-scale flock movements being undertaken between intertidal feeding and roosting areas on the north and south shore of the outer estuary on a regular basis (Catley 2000).

The 2003/4 Low Tide Count programme identified the importance of the intertidal area extending from Patrington Channel (just west of Welwick saltmarsh) to Spurn (sectors NJ1, NJ2 and NK) over the autumn, with this extensive intertidal area regularly supporting between 72% and 92% of the Humber population over the autumn months. These birds, which were generally observed in large flocks, were recorded as foraging across this reach from the upper to middle shore, with the remainder of the autumn passage population recorded from the coastal sector between Cleethorpes and Humberston Fitties.

The winter months saw a more widespread distribution of the species on the Humber, with an extension of the feeding distribution onto the Cherry Cobb on the north bank and the Saltfleetby area on the south bank. The dispersal on the south shore was more marked, with the movement out onto the southern coastal reaches of the estuary mouth, with by contrast, a dispersal upstream into the middle estuary on the north bank. During the winter period the importance of the outer estuary and coastal reaches of the south bank increased, analysis of usage showing the intertidal areas from Cleethorpes to Mablethorpe to support on average 40% of the Humber population (monthly count variations between 33% and 47%) compared to autumn, although the Cleethorpes to Humberston Fitties sector (MSC) continued to support the greatest numbers. However, large gatherings were also noted on the Horseshoe Point to Grainthorpe Haven Sector (MSF), this area featuring the highest density of feeding birds with 10 birds per ha.

By contrast to the increased utilisation on the south bank and middle north bank sites, usage on Spurn Bight remained stable during the period of winter influx and dispersion, supporting a density of approximately 5 birds per ha at this time.



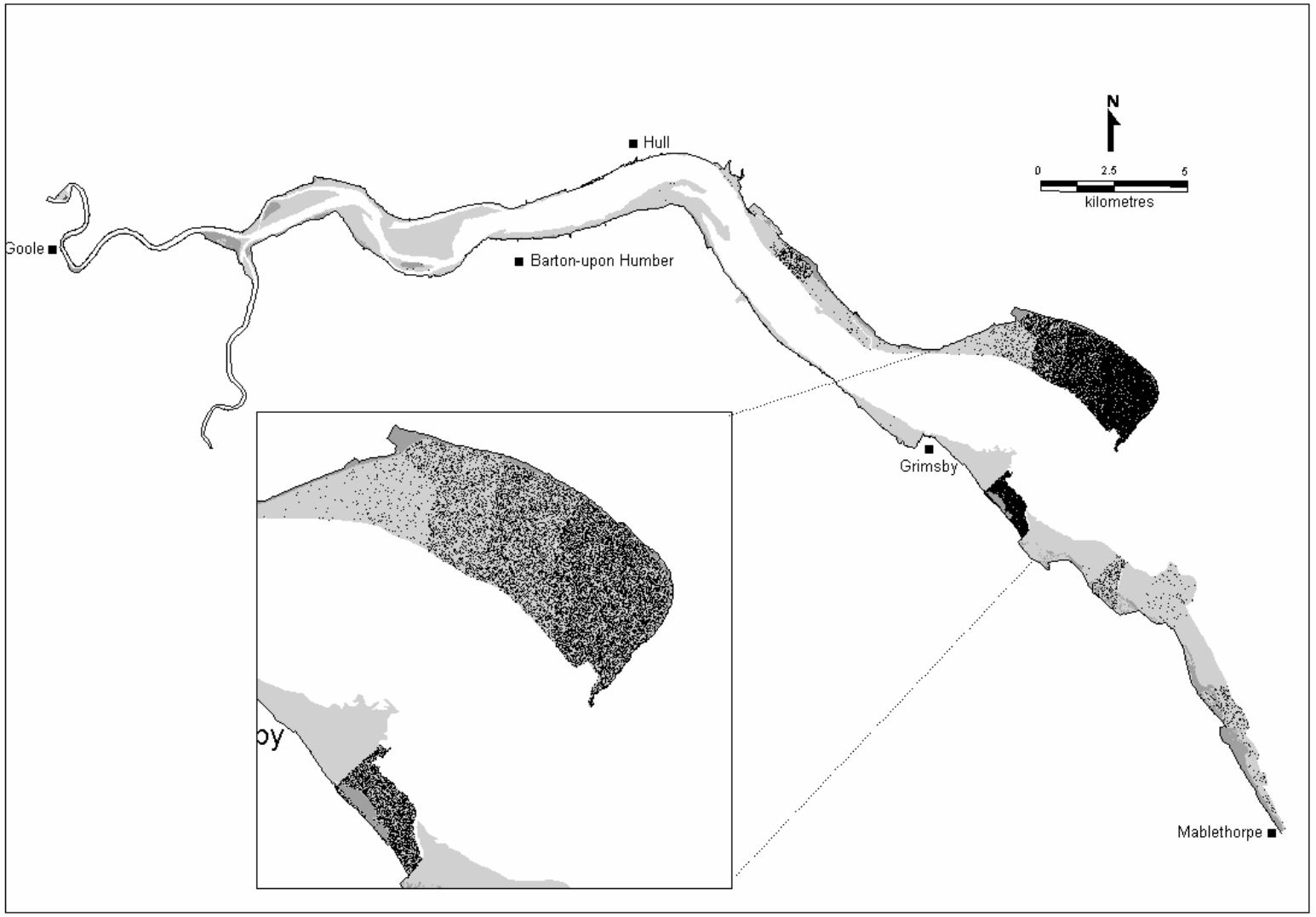
In general, analysis of comparative populations on the north and south shores shows usage to have remained stable over the autumn and winter period, although this masks substantial fluctuations observed at a site specific level. Flocks are often highly mobile within an area, for instance within the intertidal complexes of the Patrington Channel to Spurn reach,

presumably this mobility being to some extent in response to the availability of temporarily abundant food supplies. However there is also the possibility of flock movement between the south and north banks of the estuary, particularly in response to roost provision.

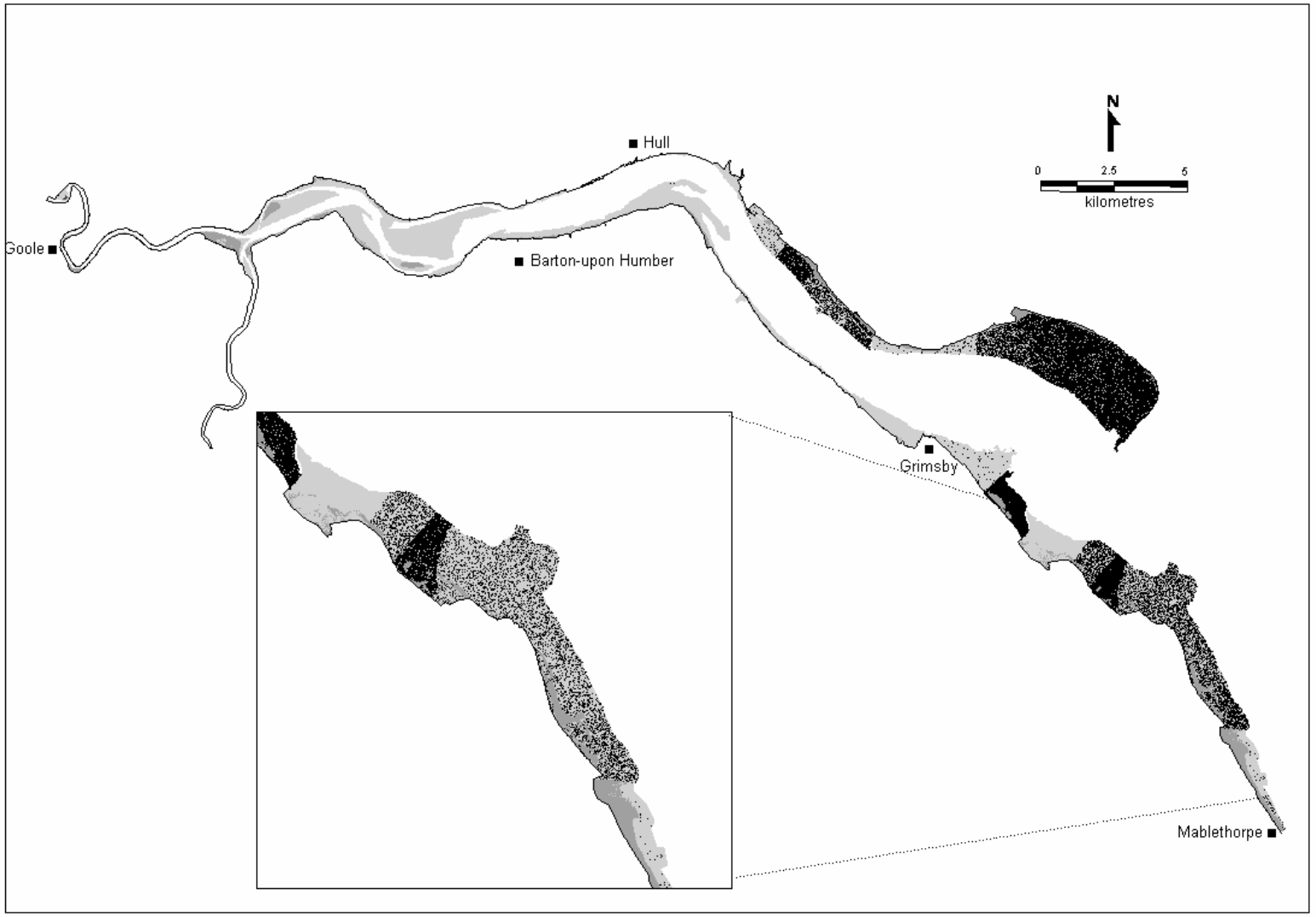
Following a substantial increase in numbers during the late autumn and early winter, as a result of the movement of flocks into the estuaries of eastern England, both the 1998/9 and 2003/4 Low Tide Count programmes recorded a dip in usage during the winter. This bimodal distribution was evident from both years, suggesting short-term movements into and out of the Humber. Such a movement might be expected in response to hard weather, however neither programme experienced particularly prolonged periods of freezing conditions, and similarly, the prevalent conditions were not expected to have produced large scale hard weather mortalities, which might also have led to a reduction in numbers.

It may be that there is simply an onward dispersion of birds during mid winter, possibly in response to prey availability, with a further increase in flock size on the Humber during the late winter as birds again move through the site on their return to breeding grounds. As the graph indicates, there is a rapid decline in numbers during March with a return eastwards to the Wadden Sea where 60-75% of the population begins a body moult into breeding plumage and accumulates nutrient stores. The other 25%-40% remain mostly on British estuaries, congregating, as in autumn, on the larger sites such as the Wash and Morecambe Bay (Wernham and others 2002).

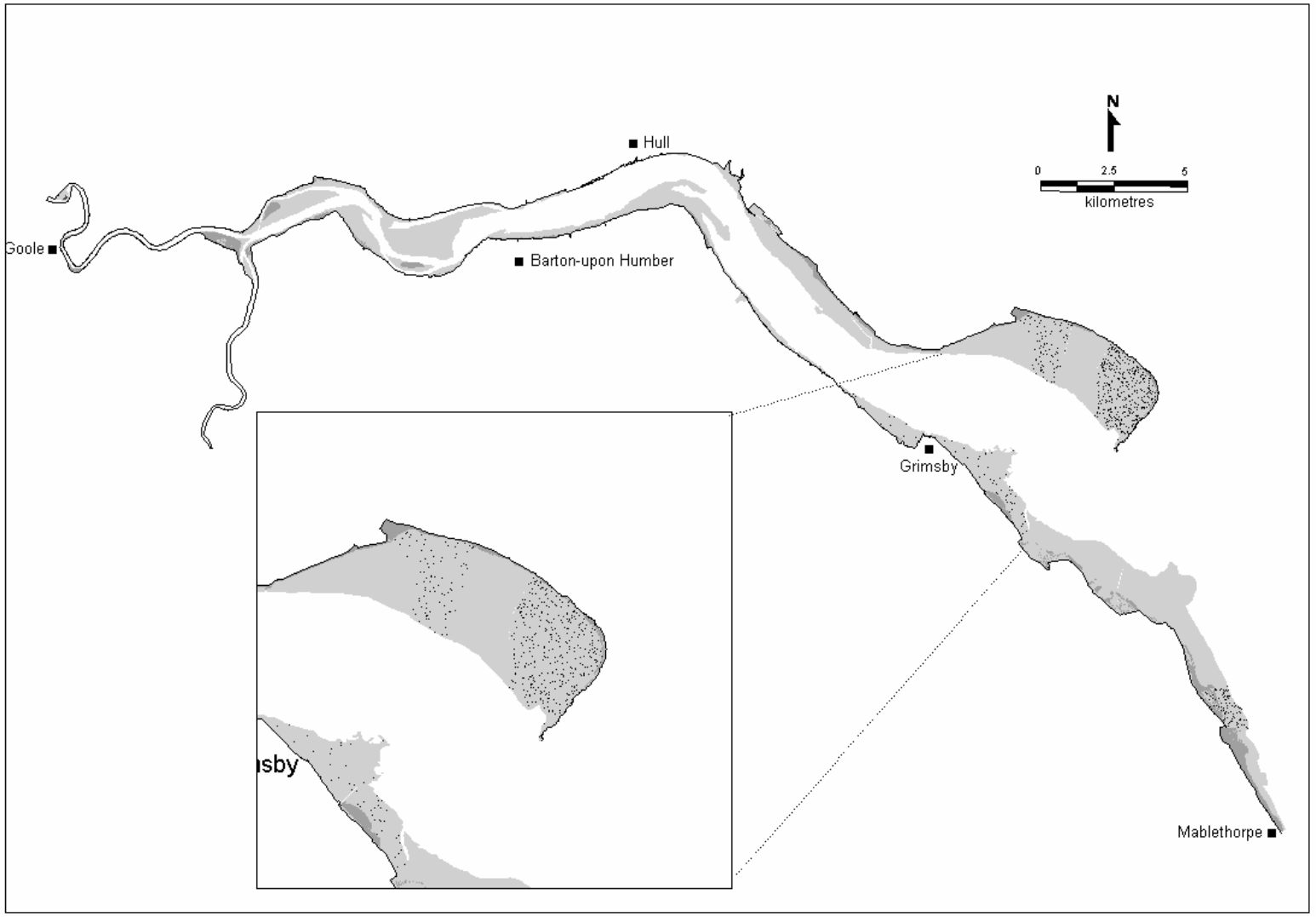
Rather than an absolute increase in flock size on the Humber, the increase in winter abundance between the 1998/9 and 2003/4 programmes may be an artefact of increased counting coverage in the outer coastal reaches of the estuary during the current count programme. The distribution maps illustrate the importance of this area, together with Spurn Bight, for the species during the winter.



Knot low tide distribution, autumn 2003/4.



Knot low tide distribution, winter 2003/4.



Knot low tide distribution, spring 2003/4.

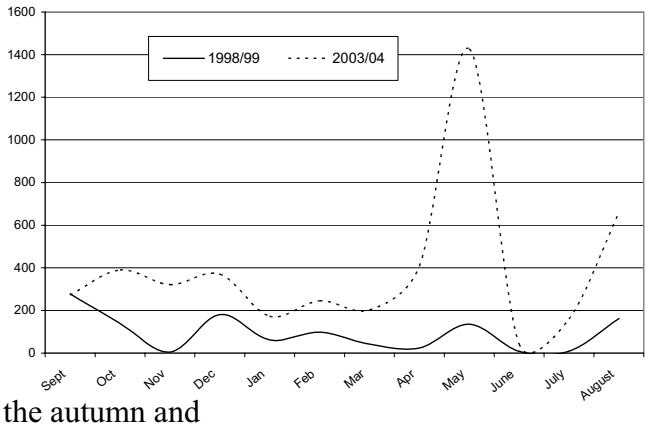
3.1.14 Sanderling (*Calidris alba*)

The sanderling is generally restricted to open, sandy shores, and as such, its distribution within the Humber tends to be concentrated along the open coasts of the system and in the outer estuary, although the 1998/9 programme and other surveys have also recorded the species in the upper and middle estuary during migration periods (Allen and others 2003).

As the distribution maps for the species from the 2003/4 programme clearly shows, the stronghold for the species on the Humber is the outer estuary and open coasts, which is unsurprising given their preference for a well drained sandy substratum. On the north bank the feeding distribution was restricted to the more sandy areas of intertidal habitat within Spurn Bight, whilst on the south bank the sandy 'beaches' between Cleethorpes and Mablethorpe provided an important area for feeding birds.

During the autumn, the main foraging concentrations were recorded from the Spurn sector on the north bank, and from the Cleethorpes to Humberston Fitties sector and the Theddlethorpe St Helens to North End reach on the south bank, these accounting for 85% of the Humber population. The highest densities were recorded from the Theddlethorpe St Helens to North End (Mablethorpe) reach with 1.68 birds per ha. However as sanderling generally feed in a zone of wave-wash on more sandy areas, their actual foraging density will be higher than that given above, with feeding activity concentrated on a relatively narrow band of foreshore. The data from the 2003/4 programme for the November to March period indicated little variation in spatial distribution, with the establishment of stable wintering populations with the Theddlethorpe St Helens to North End (Mablethorpe) reach continuing to support the highest densities of birds.

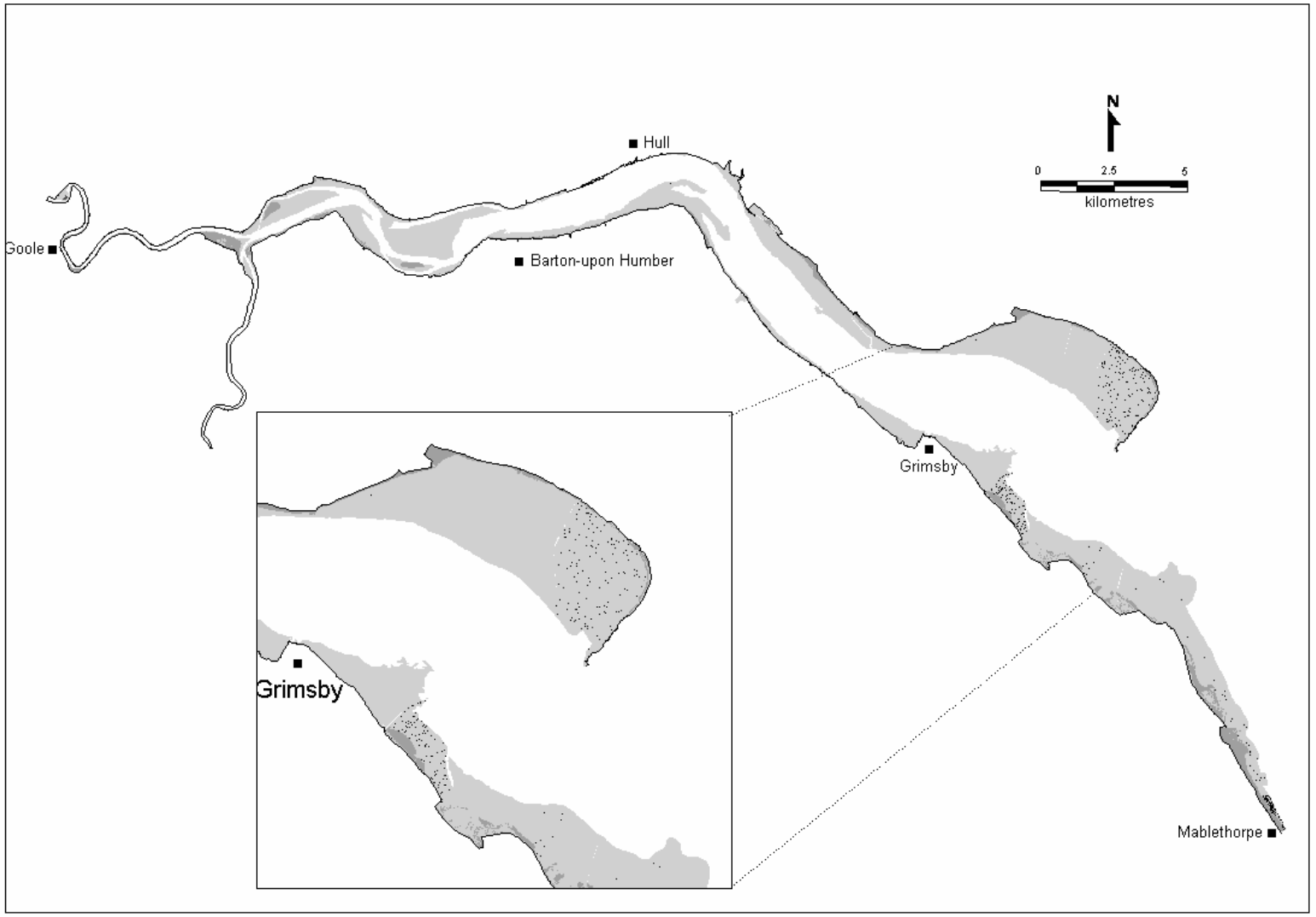
The northward spring migration by sanderling coincided well with the May count. Although spring passage occurs predominantly along the west coast of Britain, in some years, spring passage can occur in large numbers on east coast sites (Wernham and others 2003), whilst the short-term nature of the passage period also means that it can be sometimes missed by the monthly WeBS counts. In 2003/4, the Humber witnessed a large influx of over 1,400 birds during the spring, a substantially greater number of birds than that recorded from the 1998/9 programme (see graph below), this figure being well in excess of the national importance passage threshold of 300 birds and the international importance threshold of 1,000 birds. Relative sectoral usage appeared to be similar to that of the autumn and winter, with the bulk of the population recorded from the Spurn sector on the north bank, and the Cleethorpes to Humberston Fitties and Theddlethorpe St Helens to North End reaches on the south bank.



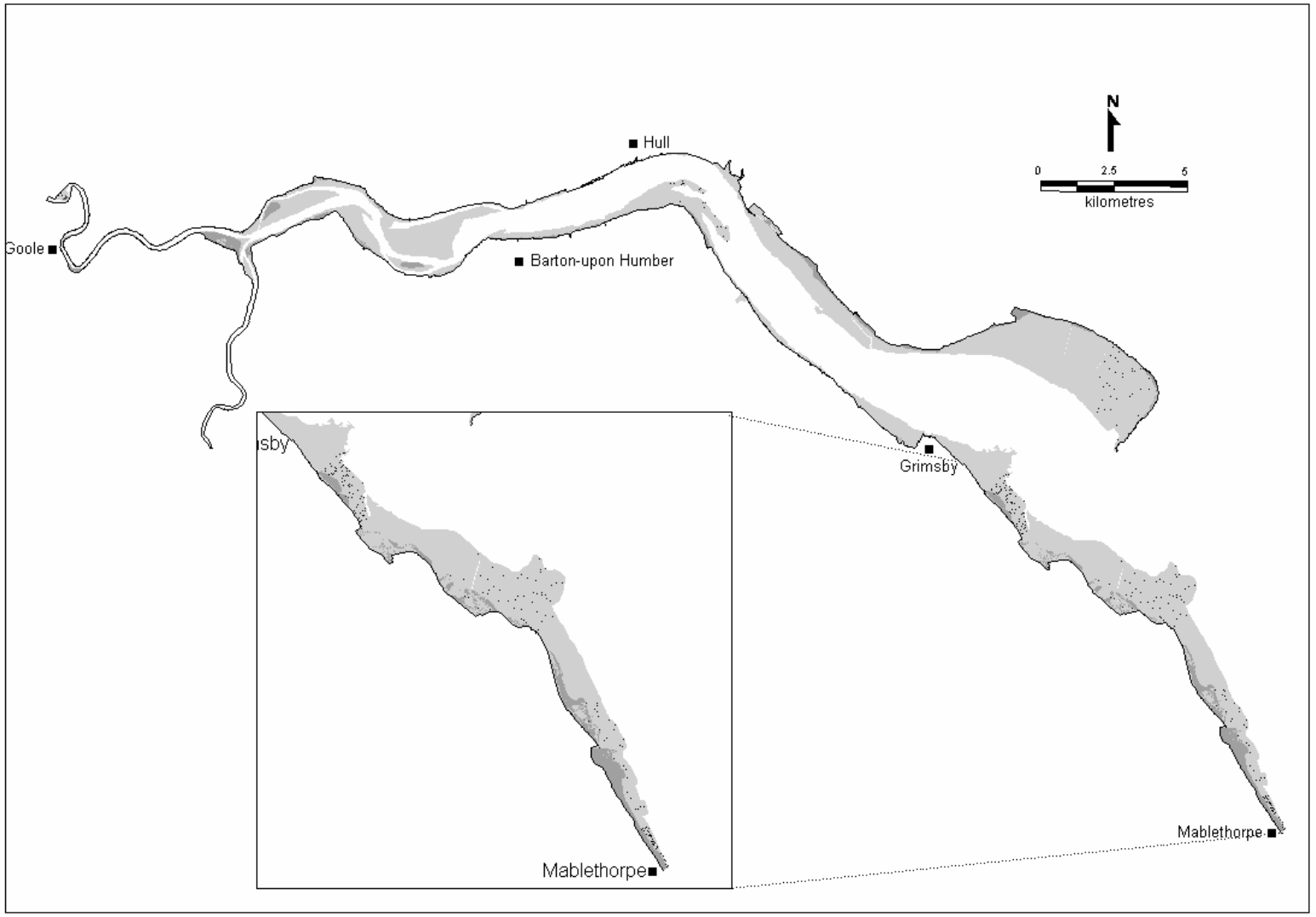
Although the 2003/4 maxima for spring showed a substantial increase from that of the autumn and winter, data from the WeBS Counts (1996/7 to 2000/1) shows a 5 year passage average maxima of 960 birds (spring and autumn passage), with a maxima of 1,626 recorded from May 2000/1 (Pollitt and others 2003). Therefore, in the context of annual usage data, the maxima from the current period is not particularly exceptional for the estuary, but rather, the low usage from the 1998/9 programme is of note. Interestingly the 1998/9 WeBS programme

recorded a relatively low level of usage with a May passage maxima of 697 sanderling, but with the 1999/0 programme featuring an even lower value (annual Humber maxima of 457 birds for September). Unfortunately, more recent WeBS data for the estuary are not available at the time of writing this report, but it will be interesting to see how recent trends have developed, as there appears to be a substantial variation in passage usage on the site between years. Whether this purely reflects switches in the broad movement of flocks along the coast, or is to some extent an artefact of survey timing is questionable.

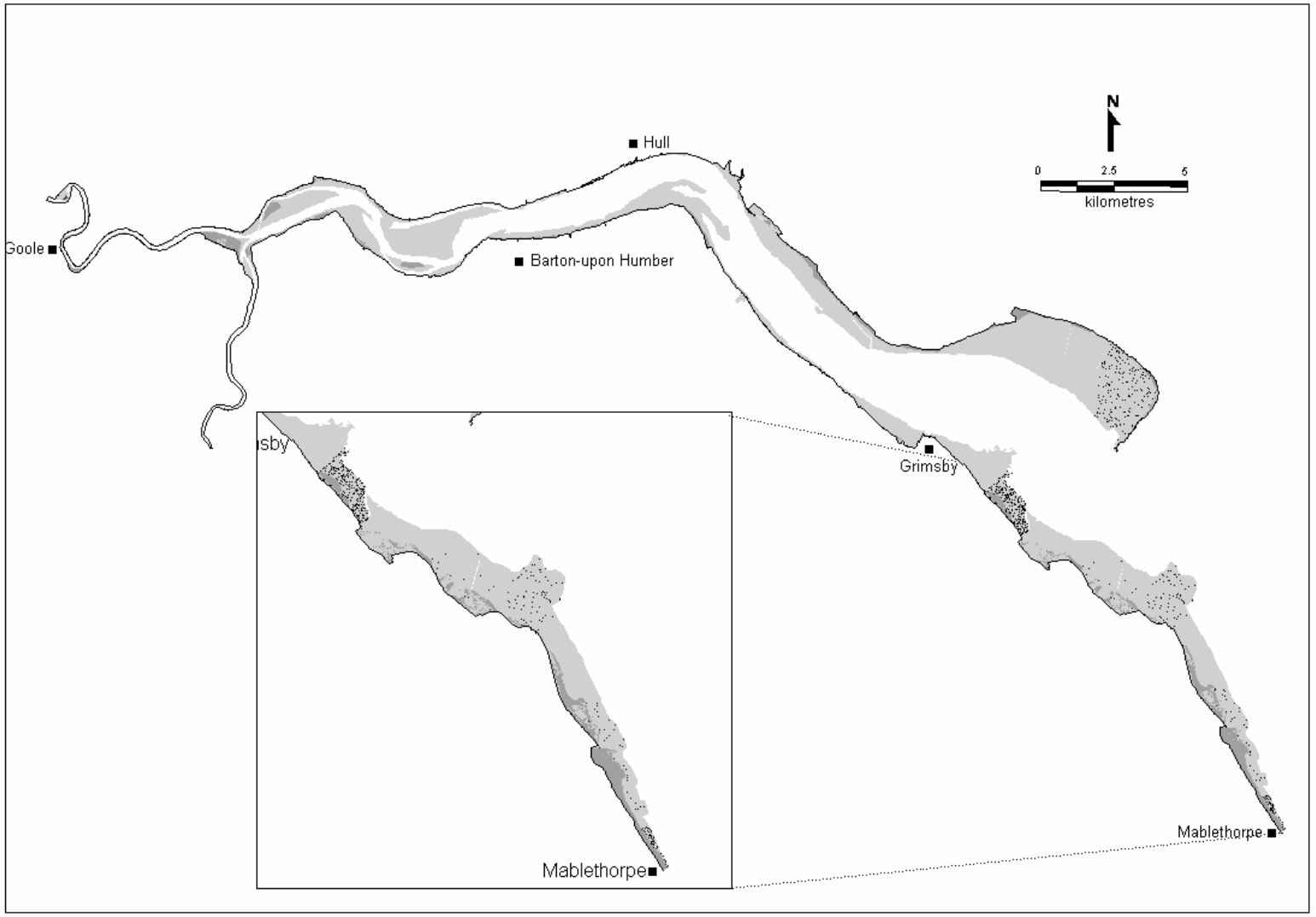
The current Low Tide Count programme recorded a relatively normal level of usage, with maxima broadly comparable to previous data from the WeBS programme. However, numbers were remarkably higher than the 1998/9 Low Tide Count programme, the reasons for this increase partially reflecting the extended coverage along the coast to Mablethorpe, encompassing preferred habitat for the species, although other factors such as survey timing during May, might also have contributed to the disparity between maxima. As such, and in the absence of data from other east coast estuaries for the same period, it is difficult to identify the degree to which natural variations in broad flock movements described by Wernham and others (2002) were a component of the 2003/4 spring passage for sanderling.



Sanderling low tide distribution, autumn 2003/4.



Sanderling low tide distribution, winter 2003/4.



Sanderling low tide distribution, spring 2003/4.

3.1.15 Dunlin (*Calidris alpina*)

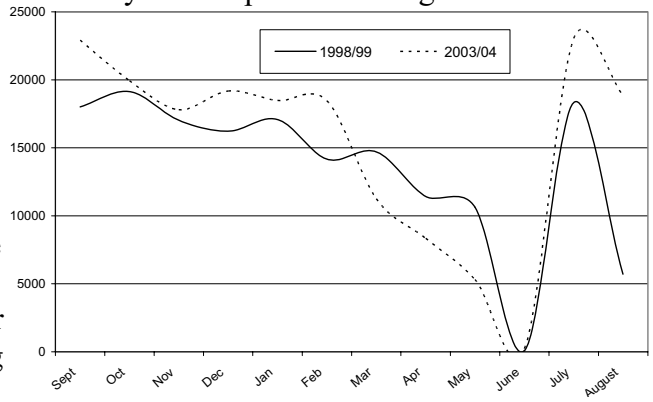
The dunlin is a widespread wader recorded around most intertidal reaches of the Humber at low water, although the largest concentrations are predominantly found between Saltend and Spurn on the north bank and around Read's Island and Pyewipe on the south bank (Allen and others 2003).

The 2003/4 programme identified two main concentrations of dunlin on the estuary during the autumn period; the inner estuary south bank around Read's island, and the middle to outer estuary north bank between Saltend and Spurn Point. The population on the inner estuary although featuring a high density, only represented 10% of the Humber population through the autumn and winter, with the majority of records from the Winteringham to South Ferriby reach which includes Read's Island (ISD). This sector produced the highest densities of the autumn period with 7.53 birds per ha, although similar densities were recorded on the intertidal areas west of Cherry Cobb (NG4) during the autumn. This latter area is part of the extensive Saltend to Spurn reach, which supported 90% of the Humber population over the autumn, with the Saltend mudflat, Paull Holme Sands, Foulholme Sands and Spurn Bight of particular importance during the autumn and indeed into the winter.

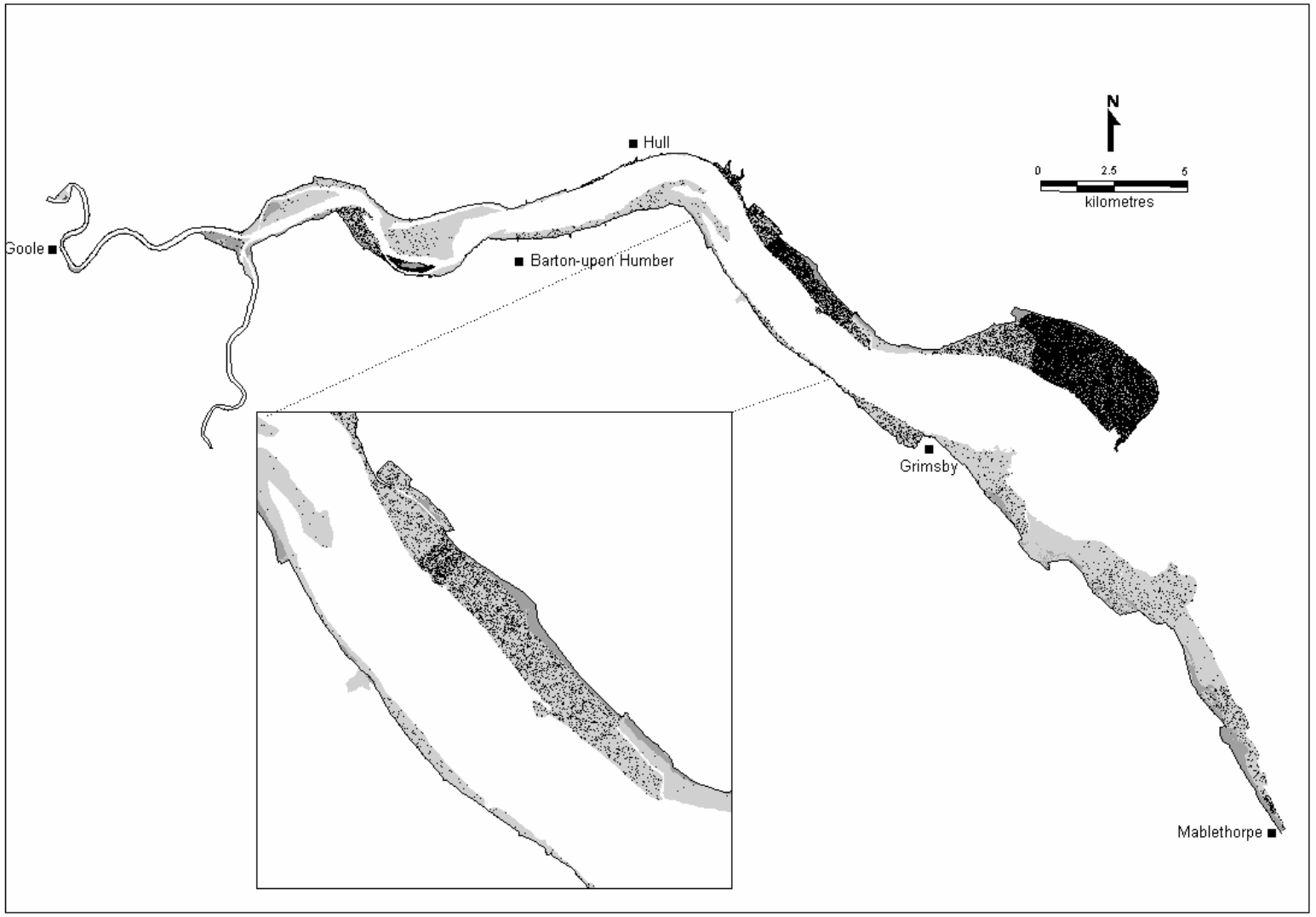
Following the autumn passage period, the Humber population was seen to stabilise into the winter, this pattern continuing through into the early spring, although despite this relative stability, the counts identified a reduction in usage on the Saltend to Spurn intertidal complex over the period, with utilisation declining to 63% of the Humber population. It would appear from the data and the derived maps below, that this reduction was a result of the dispersion of flocks into the middle and outer estuary mudflats of the south bank, possibly reflecting a depletion of prey availability in the original key locations over the winter period.

The late winter and spring can see a series of peaks and troughs in usage (both for the 1998/9 and 2003/4 periods) on the Humber, with the departure of over-wintering flocks and the through movements of flocks of different races. During the spring, substantial flocks were recorded, particularly on the outer estuary, with over three quarters of the birds recorded between Patrington Channel and Spurn, many of those likely to be of the *C. a. shinzii* population heading for Iceland as well as *C. a. alpina* moving through to northern Scandinavia and Russia (Davidson and others 1991).

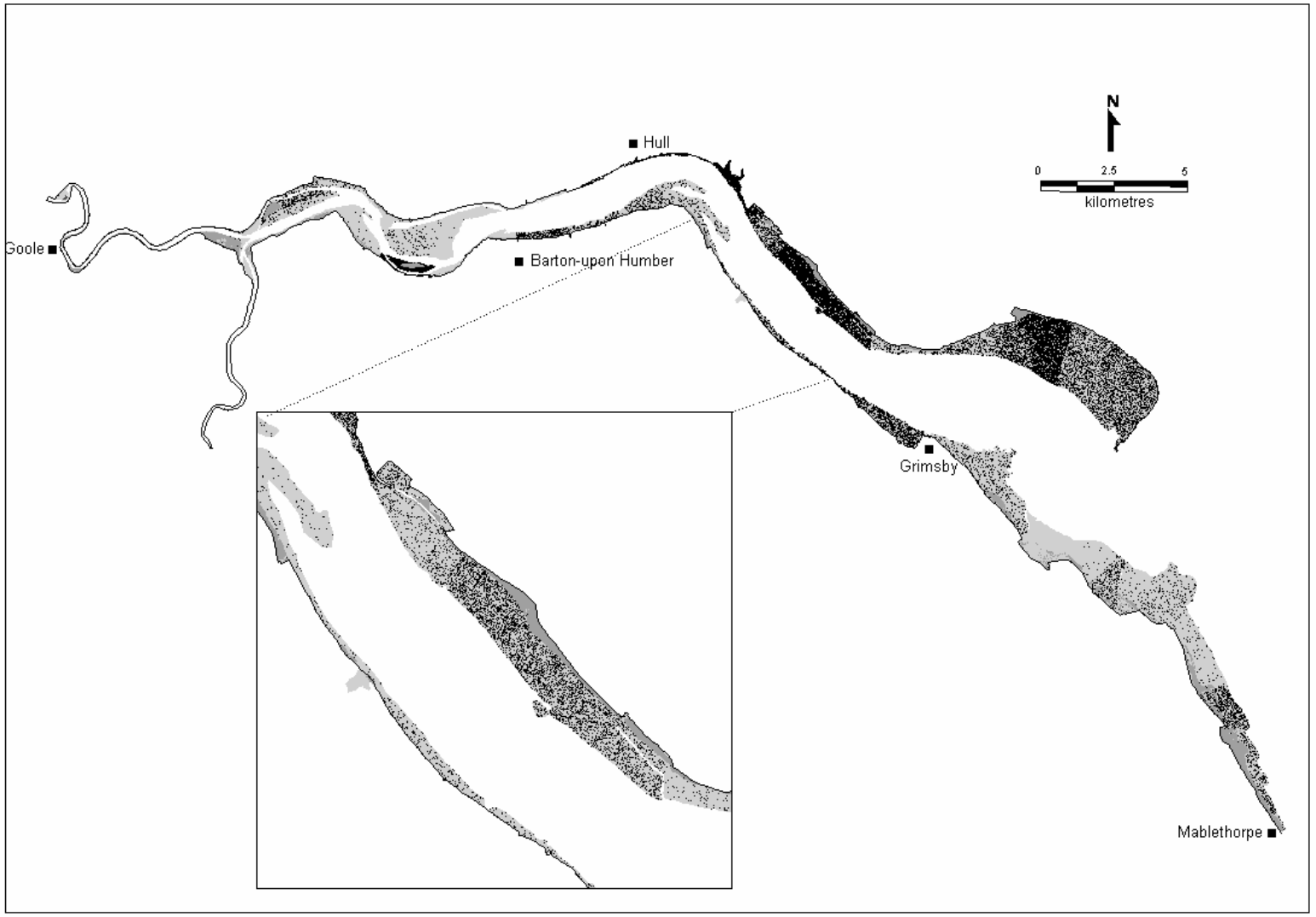
The 2003/4 low tide count programme showed a broadly similar pattern of usage to that of 1998/9, although with less obvious movements through the site during the late winter and spring, but rather, a sharp decline in usage during March. The population on the Humber is normally stable between October and January unless there is a period of severe weather when there may be substantial influxes from the Wadden Sea or the Delta area in the Netherlands, with greater variability thereafter, depending on the timing of wintering departures and spring passage movements.



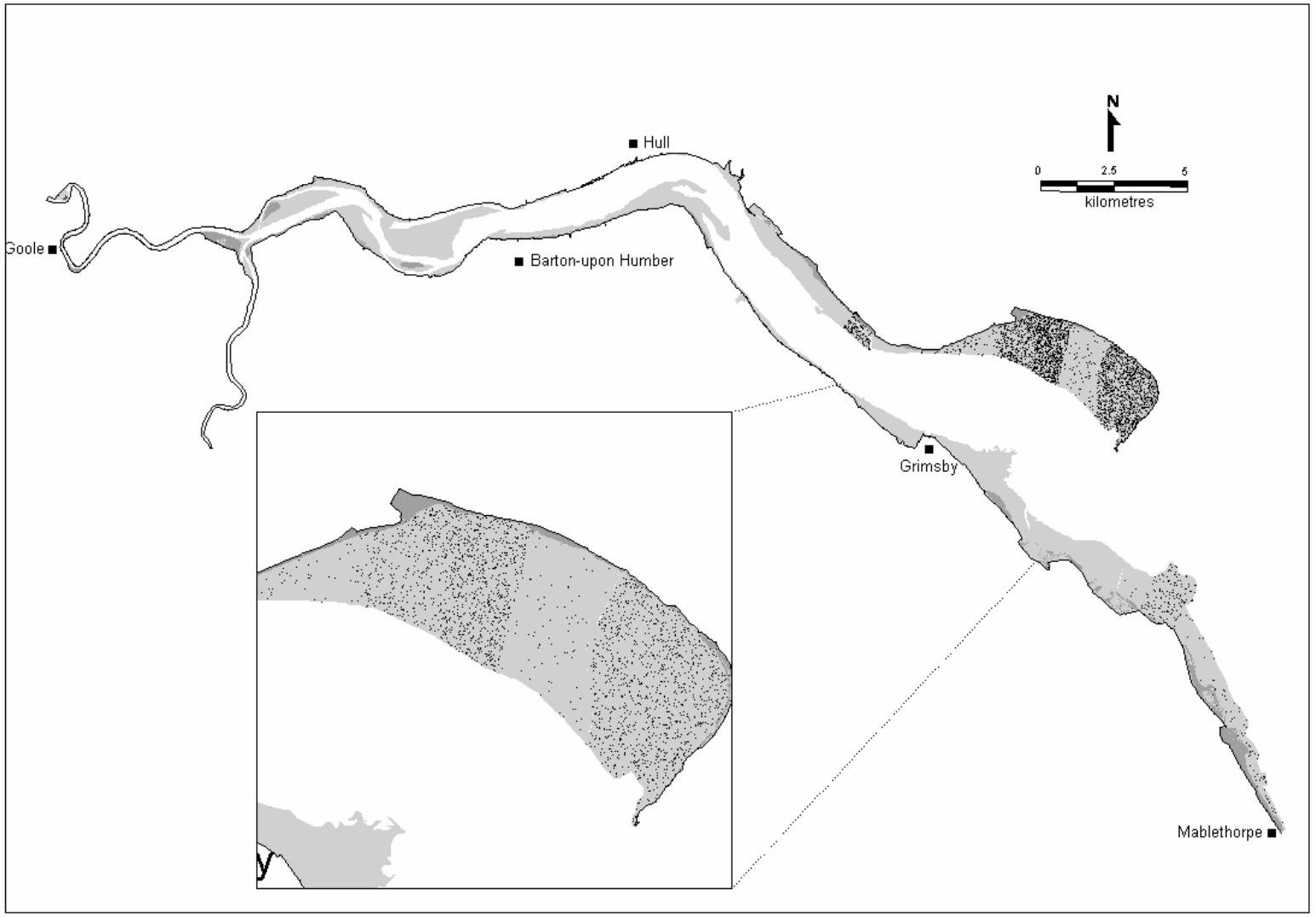
By June, dunlin are back on their breeding grounds, hence the absence of usage on the estuary at this time, but with a further, rapid, increase in numbers during July as birds move back through the site. At this time of year there is a continual arrival and departure of birds, which means that there is a large turnover in the population, with the birds often stopping off for a few days to replenish nutrient reserves for their flight to wintering grounds. As such, the autumn maxima of almost 25,000 birds on the Humber is an underestimation of the number of individuals using the site during this period.



Dunlin low tide distribution, autumn 2003/4.



Dunlin low tide distribution, winter 2003/4.



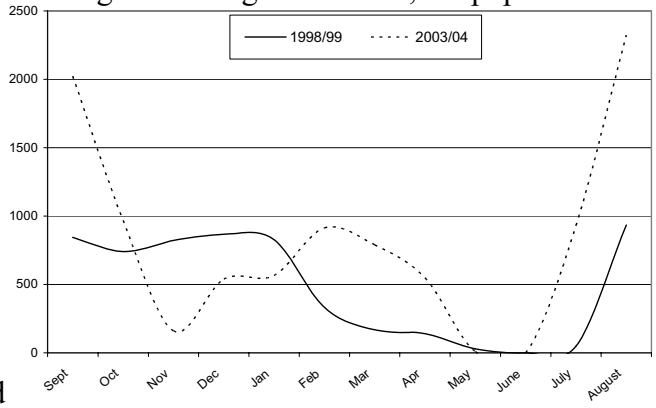
Dunlin low tide distribution, spring 2003/4.

3.1.16 Black-tailed godwit (*Limosa limosa*)

Prior to the mid 1980's, only small flocks of black-tailed godwit of less than 10 individuals were recorded on the Humber (Allen and others 2003). However, mirroring a national increase, the Humber wintering population has risen significantly in the last two decades. This wintering range expansion appears to be attributable to the climatic amelioration in the breeding areas in Iceland (Cranswick and others 1999), the wintering black-tailed godwit in the Humber being of the *L. l. islandica* race, although black-tailed godwit of the nominate race *L. l. limosa* also occur on the Humber during passage periods.

The results of the 2003/4 Low Tide Count programme show the presence of an important passage population on the estuary during the autumn with both August and September counts reaching the 2,000 individuals level (well in excess of the current international importance threshold), with numbers potentially consisting of both races at this time.

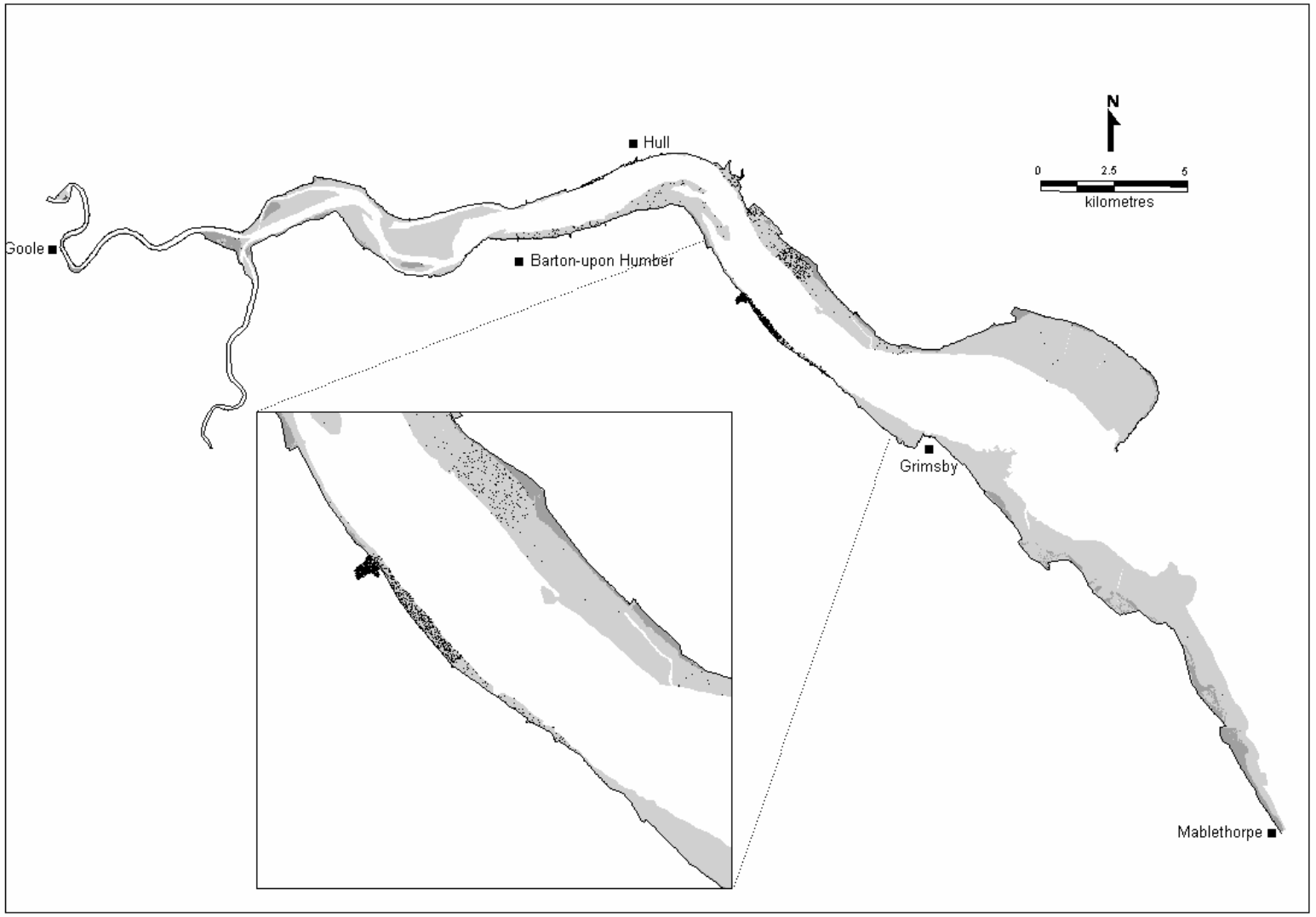
The 2003/4 programme then recorded a substantial dip in usage during the late autumn and early winter, this suggesting that the flocks seen on the estuary during the early autumn are a transient migratory group that subsequently moves through, to winter in other parts of the species' range. However, such a dip in usage was not recorded from the 1998/9 programme, suggesting that migratory patterns may have changed. During the autumn, the population was concentrated around the Killingholme area, North Killingholme Haven Pits being a site of major importance for roosting and loafing black-tailed godwit and apparently used over most stages of the tide. It is worth mentioning that at this time of the year, the birds spend long periods roosting and loafing while they undergo their complete post-breeding moult. In general, feeding appears to take up a relatively short period of available daylight hours with birds often lingering on their roosting sites to around mid water (Cutts & Catley 2002). From the mean autumn 2003/4 peak of 1,610 birds, 40% of birds were recorded on the Killingholme Haven Pits site (sector ISJJ), with an additional 30% on the fronting mudflat (ISJ), although by contrast to the pits, the fronting mudflat was predominantly used as a foraging resource.



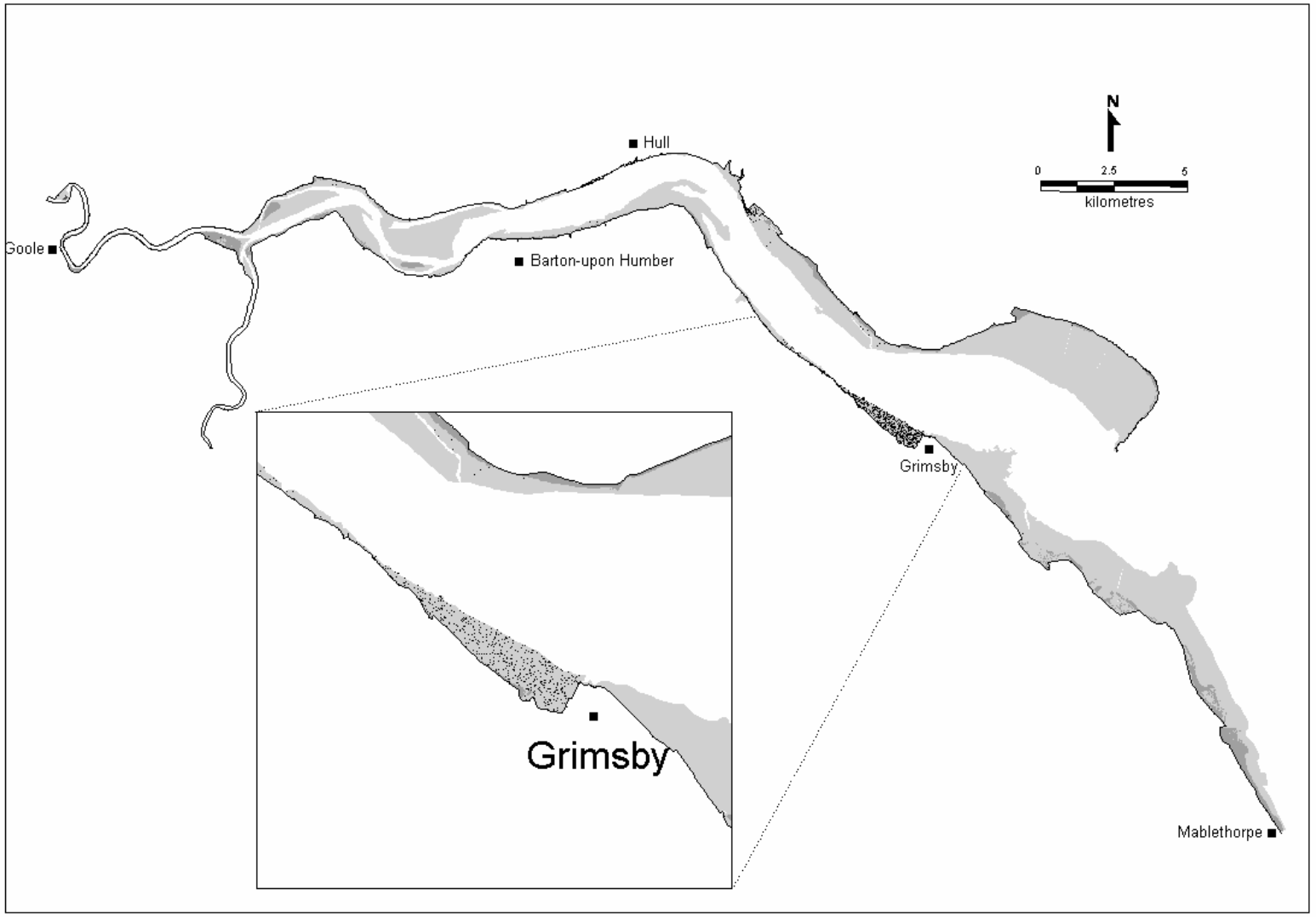
As previously noted, numbers fell substantially during the mid autumn period, resulting in a mean winter population of 617 birds. The establishment of this relatively stable population revealed a shift in usage, with the feeding population concentrated on the mudflats of Pyewipe (MSA), and 90% of the Humber population restricted to this sector throughout the winter. This reliance upon the single site over the winter months was also highlighted during the previous Low Tide Count (Catley 2000). A steady increase in the population throughout the winter and into the early spring is of note and contrasts with the findings of the 1998/9 programme when numbers decreased over the same period. The results of the 2003/4 programme over this period tend to be somewhat atypical, as a degree of movement from the Humber onto inland sites in East Anglia, Lancashire and Ireland has previously been cited (Wernham and others 2002), this movement occurring during the late winter, prior to onward dispersion to breeding sites in Iceland. In this instance over 500 birds remained on the estuary in April, of which 88% were found on the new realignment line at Paull Holme

Strays, with usage only falling away to an absence thereafter, prior to the commencement of the passage return during July and August.

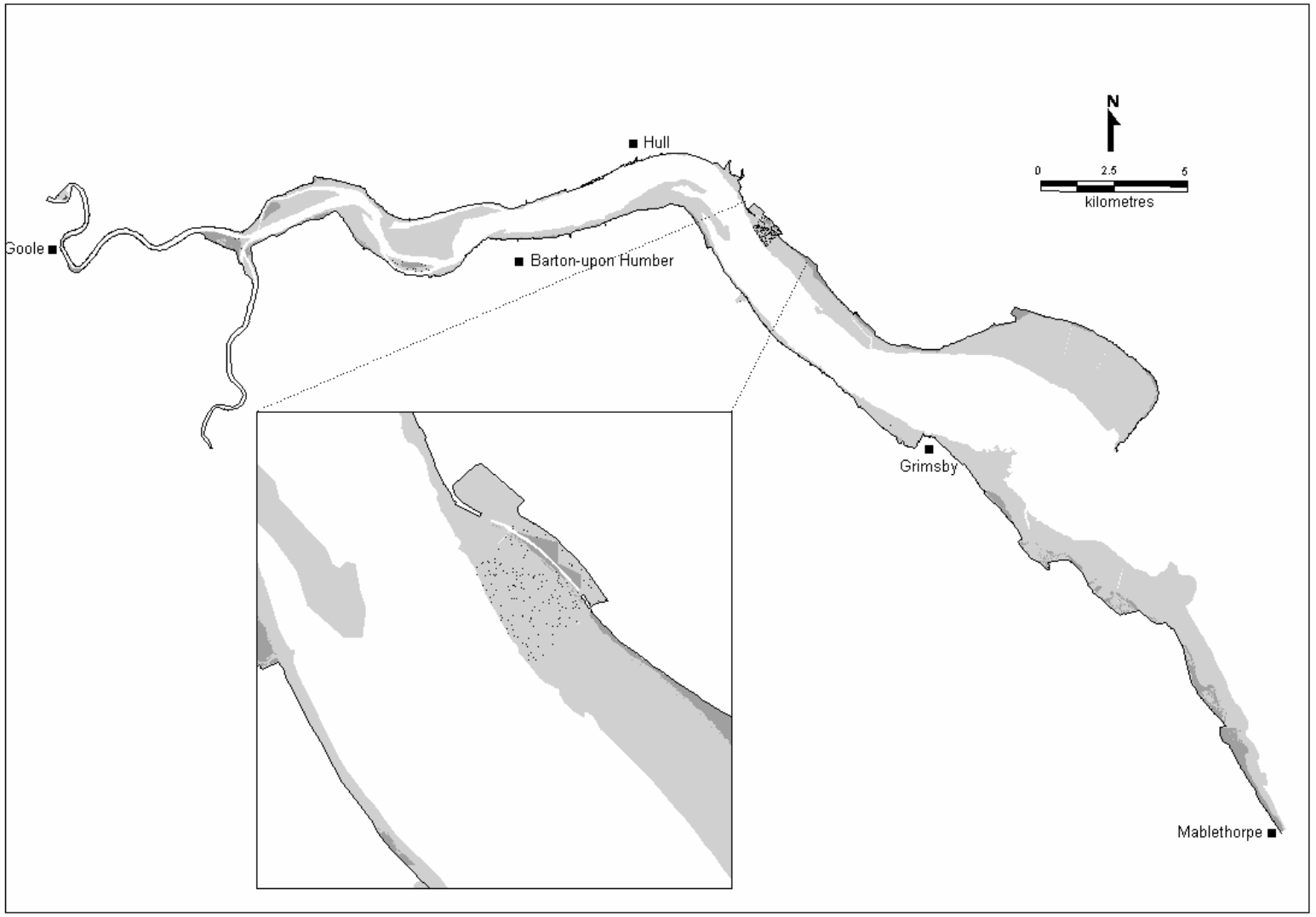
The discrepancy in the patterns of usage between 2003/4 and 1998/9 programmes, in particular during the winter, is evident form the above graph. Ringing studies have shown the species to be highly mobile with frequent movements between the Wash and the Humber during the early winter and with reverse movements in the spring into inland sites in East Anglia. The dynamics of the population at a national and regional level in recent years means that patterns of usage may well be changing on a seasonal or annual basis. Furthermore, the creation of new suitable habitat within the Humber margins, the first of which has recently been established at Paull Holme Strays, means that patterns of usage on both an intra and inter wetland scale will continue to develop over the coming years. Habitat management initiatives on the estuary will need to be able to adapt to these changes, whilst future developments in the estuarine margins should not preclude potential future habitat take-up by this internationally important species on the estuary, particularly given the black-tailed godwit's tendency for reliance on a small number of key feeding and roosting habitats.



Black-tailed godwit low tide distribution, spring 2003/4.



Black-tailed godwit low tide distribution, autumn 2003/4.



Black-tailed godwit low tide distribution, winter 2003/4.

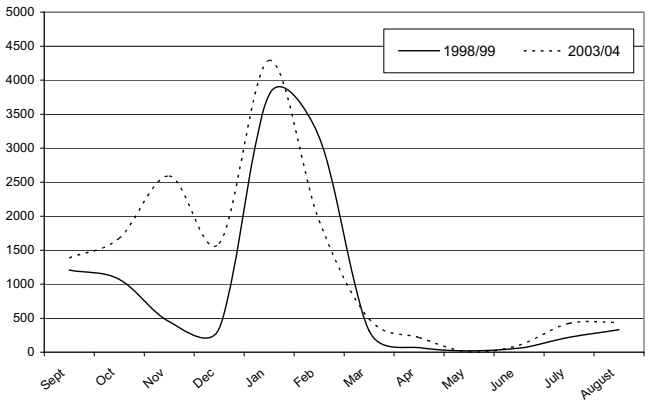
3.1.17 Bar-tailed godwit (*Limosa lapponica*)

The bar-tailed godwit's preference for feeding close to the tideline often makes it difficult to count at low water, as it can be out of sight or at extreme viewing range. Bar-tailed godwits tend to prefer sandier areas of estuaries. On the Humber, the majority of records are centred around the extensive muddy sand flats of the outer estuary, and in general, the Saltend area on the north bank and Immingham docks on the south bank marks the boundary of key usage by the species (Catley 2000; Allen and others 2003).

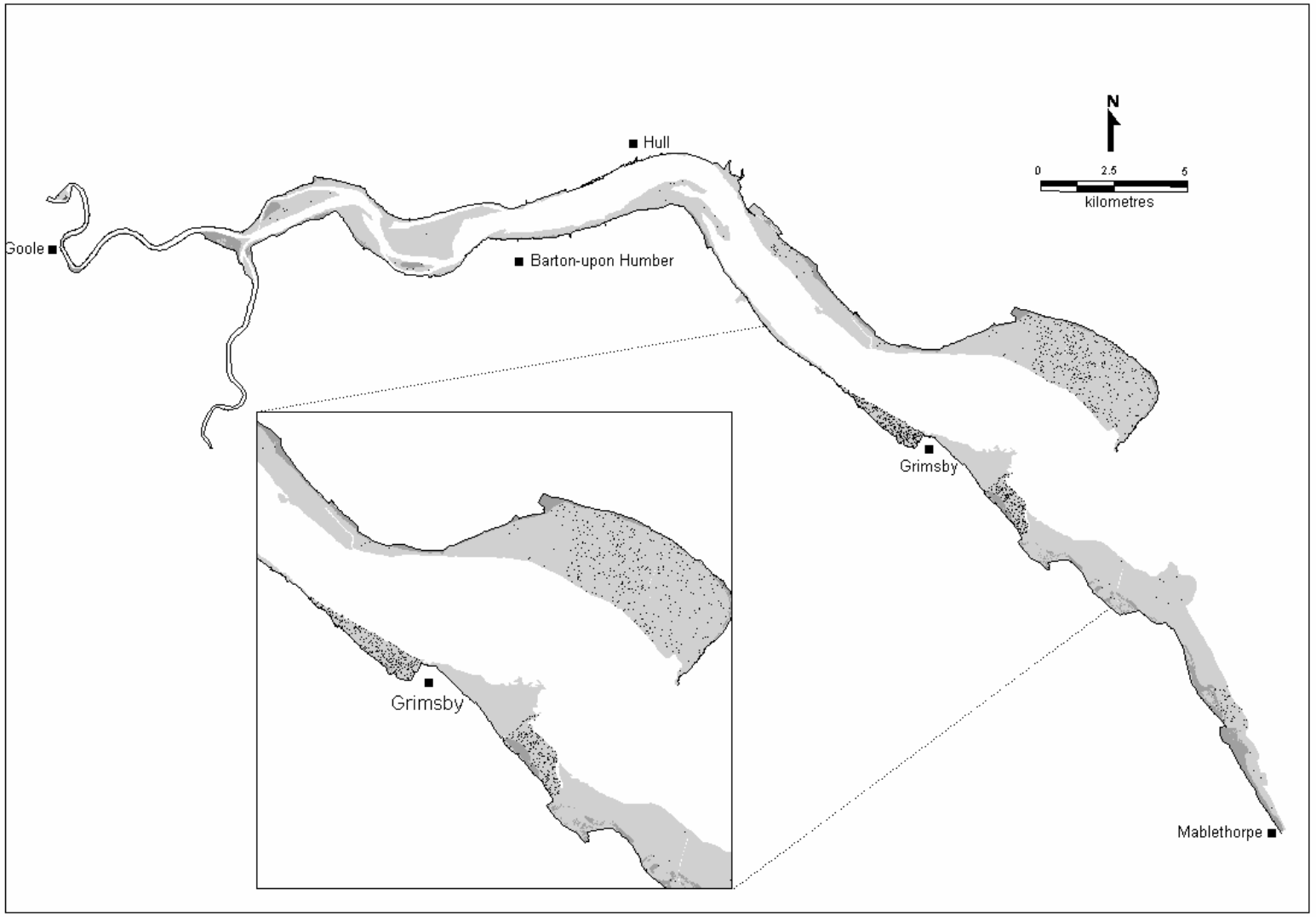
As the autumn distribution map indicates, the species was restricted to three main areas during the 2003/4 Low Tide Count programme, Spurn Bight, Pyewipe and the Cleethorpes to Humberston Fitties section, and together, they accounted for 86% of the Humber population during the autumn period. The species's reliance on a few sites continued during the winter period, although a fourth area of concentration was noted around the Stone Creek area on the north shore. Amongst these four key foraging sites, the Pyewipe mudflat featured the highest density with 1.77 birds per ha during the winter. However, the abundance of the species on the Humber declined rapidly thereafter into the spring, with the majority of the records restricted to Spurn Bight by April.

Compared to the black-tailed godwit, usage over the winter of 2003/4 on the Humber appears to have been similar to that of 1998/9, perhaps reflecting the longer established nature of the population within the Humber system. Both programmes recorded peak usage in the mid winter period, this generally correlating with Prater's (1981) remarks on coastal flocks, with the mid winter peak being reached in January after a gradual build up throughout the early winter. Although, rather than a steady increase, both Humber programmes recorded a sudden influx on the estuary, perhaps reflecting an onward arrival of birds from other areas.

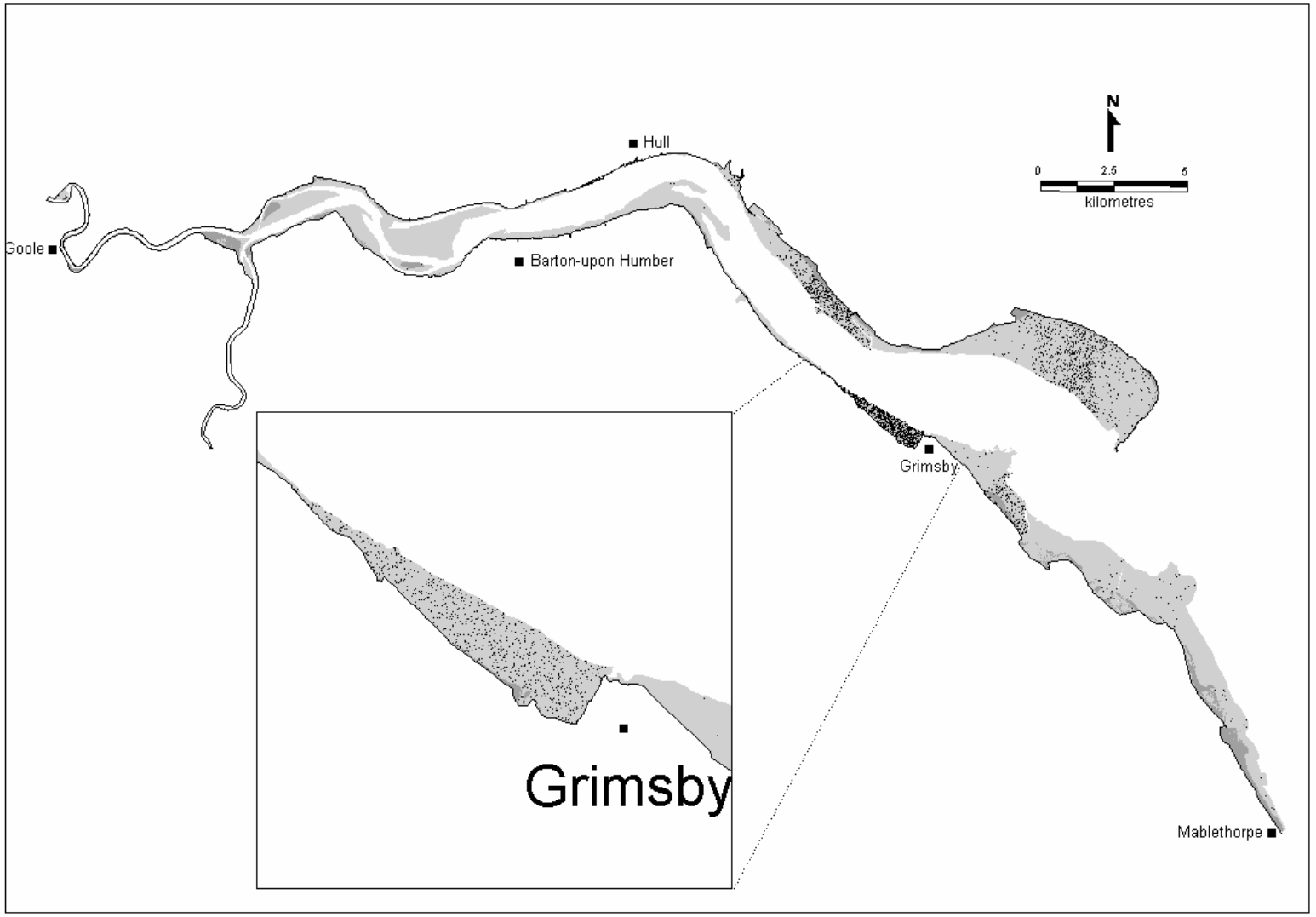
Although, there is no detailed information available on the origin of birds on Humber at this time, it is suggested that the Humber possibly acts as a pre-migratory site. The species is known to move to the Wadden Sea at the end of the winter to undergo pre-migratory fattening before returning to their breeding grounds (Wernham and others 2002). Therefore, it may be the case that, given the strategic position of the Humber along the North Sea flyway, flocks congregate on the Humber prior the departure to staging areas on the Wadden Sea in February.



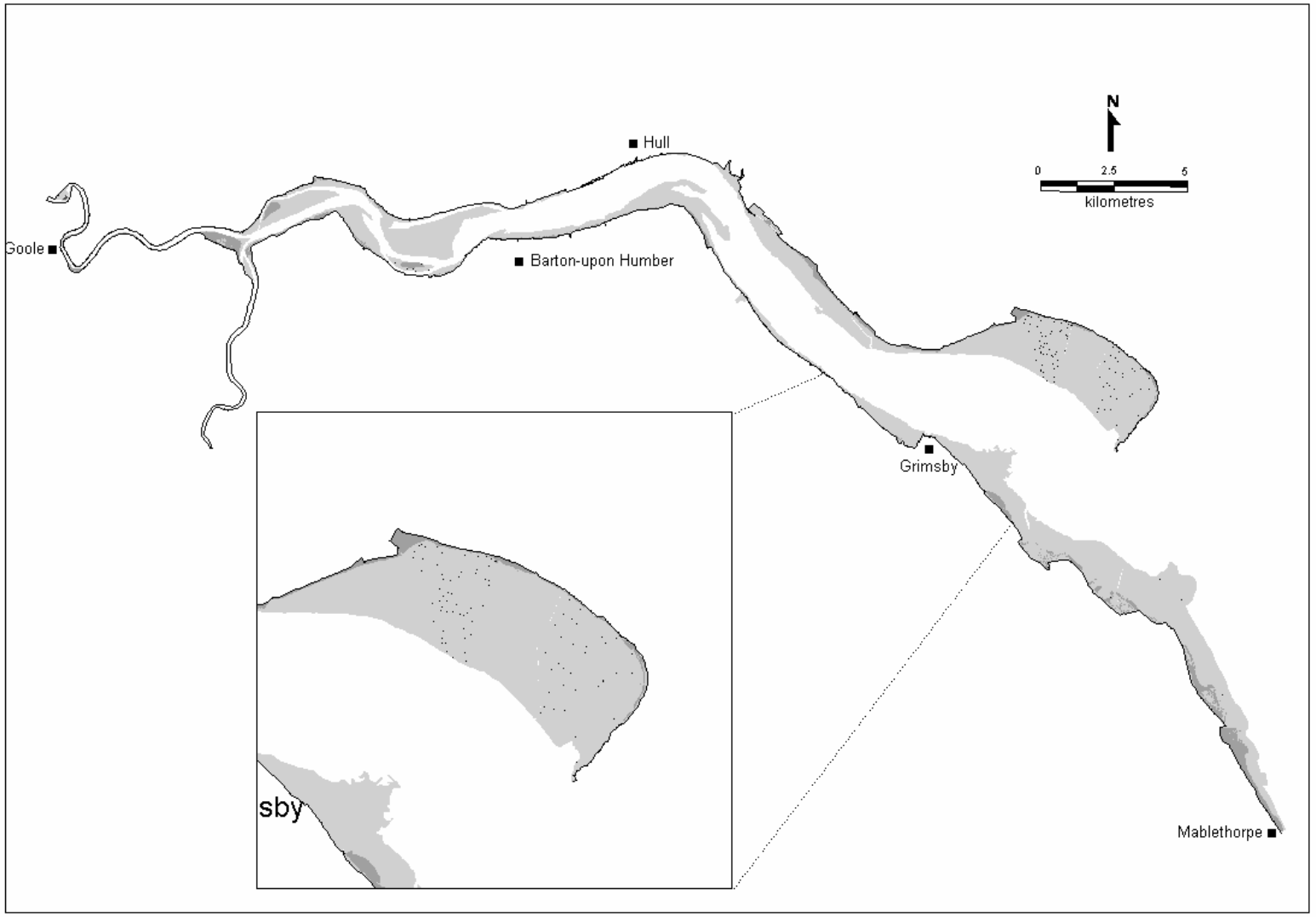
However, it must be stressed that, as with many wader species, there is little empirical data to support such hypotheses, and it is hoped that the colour ringing programme recently commenced by the Humber Wader Ringing Group should help address a number of gaps in our current knowledge of wader movements.



Bar-tailed godwit low tide distribution, autumn 2003/4.



Bar-tailed godwit low tide distribution, winter 2003/4.



Bar-tailed godwit low tide distribution, spring 2003/4.

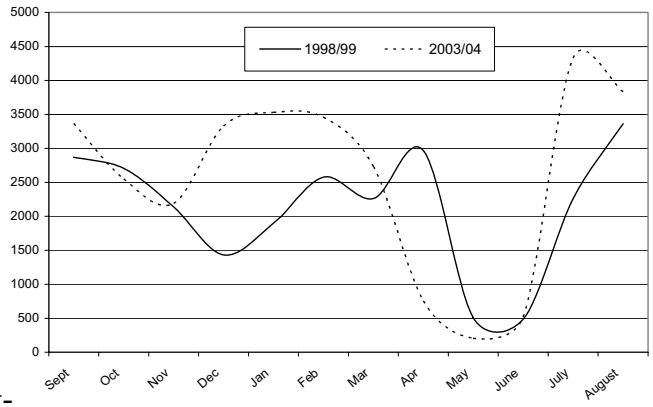
3.1.18 Curlew (*Numenius arquata*)

Curlew feature a widespread distribution over the Humber area during the autumn and winter period, with large flocks feeding on some of the intertidal areas. However, they are also widely found on inland fields, feeding on adjacent arable and pasture land around the estuary, as well as further inland in some areas. Analysis of the 1998/9 programme data combined with the 1998/9 WeBS Core Counts revealed that curlew undertake little movement between foraging and roosting grounds, with the intertidal areas supporting the greatest concentrations of birds at low water also tending to support the largest high tide roosts (Catley 2000). During the 1998/9 programme, large numbers of feeding curlew were found to occur around Read's Island, from Goxhill to East Halton Skitter, Saltend, Cherry Cobb and Sunk Island.

Data from the autumn of the 2003/4 programme found the population to be fairly well distributed across the estuary, although large gatherings were observed on the upper Humber and on the reach between Saltend to Skeffling on the north bank. The upper Humber, which accounted for 20% of the estuary population over the autumn period, produced sizeable counts on Read's Island and on Whitton Sand, however, both areas exhibited a greater usage in the early part of autumn (ie passage during July) with flock size exceeding 400 birds. During the autumn, over 50% of the Humber population was found between Saltend and Skeffling, these feeding birds probably associated with key roosting areas located on the upper shore of these sections ie Cherry Cobb and Welwick saltmarsh. Of particular interest within this large intertidal complex, was the relatively small mudflat at Saltend, which, over the autumn period, featured the highest density of feeding birds (1.49 birds per ha). In addition, autumn feeding flocks were present on Pyewipe just west of Grimsby and further out on the estuary around the Saltfleet saltmarsh area.

Despite a slight decrease in the size of the Humber curlew population into the winter, the status of the feeding population using the Saltend to Skeffling intertidal areas continued to rise, with 65% of the Humber population noted on this section, reflecting the increasing importance of this intertidal complex during the winter. As the distribution map below indicates, the highest densities were again found on the Saltend mudflat, the intertidal areas around the Cherry Cobb saltmarsh and west of Welwick saltmarsh. Elsewhere on the south bank, the Pyewipe mudflat and the intertidal areas around the Saltfleet Haven continued to support a small wintering population.

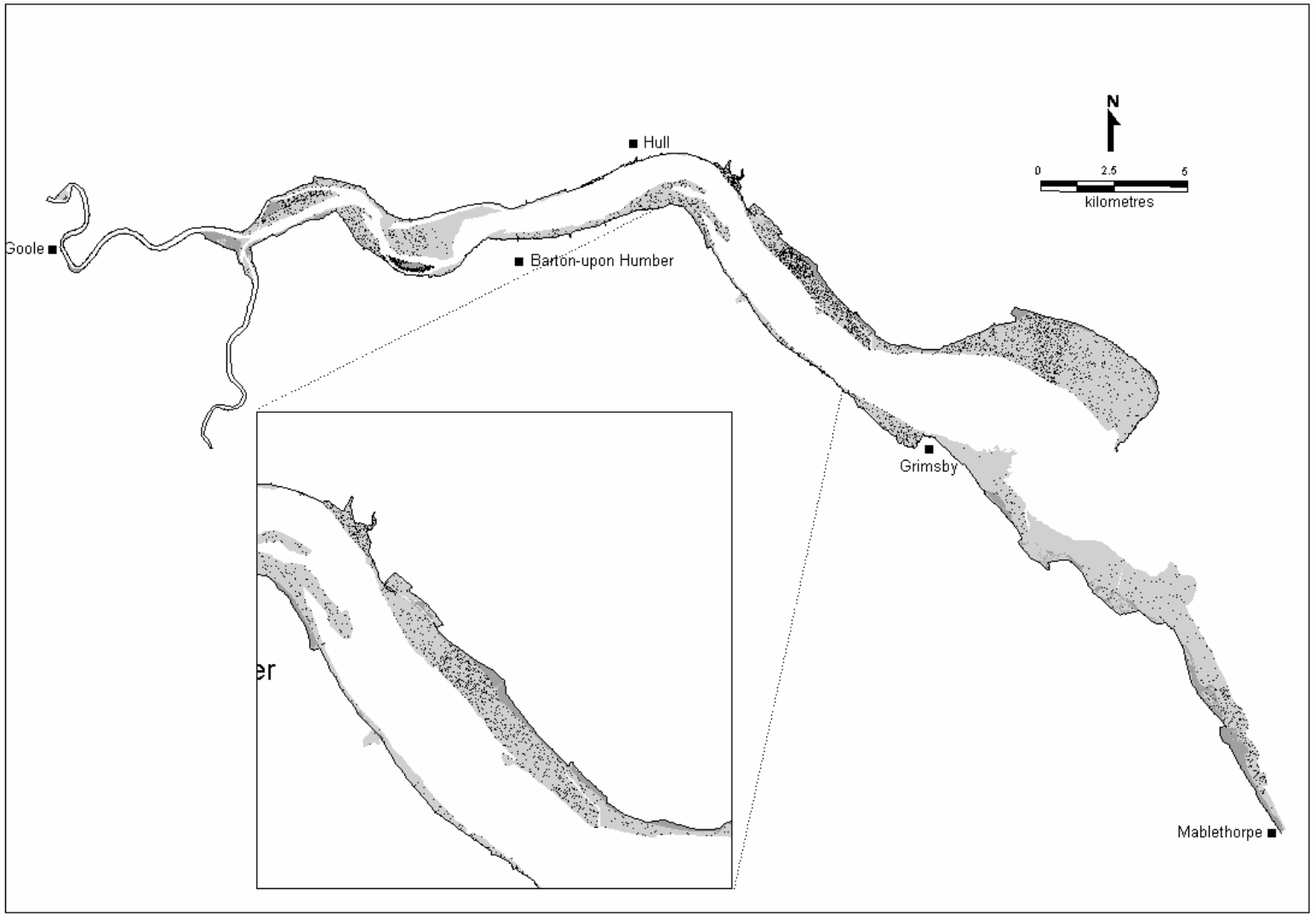
There followed a sharp reduction in usage over the spring, with curlew distribution generally restricted to the intertidal areas around Cherry Cobb and west of the Welwick saltmarsh. The autumn maxima from the 2003/4 programme was comparable to that of the 1998/9 programme, but with a significant divergence in usage patterns noted into the winter (December), with the 2003/4 maxima increasing substantially at that time, compared to a decline in 1998/9. The disparity in level of usage at an inter-monthly level between the programmes may be explained by variations in usage in inland feeding grounds and intertidal areas. Long-term monitoring at Saltend (over the last 12 years) has seen substantial variations in the usage



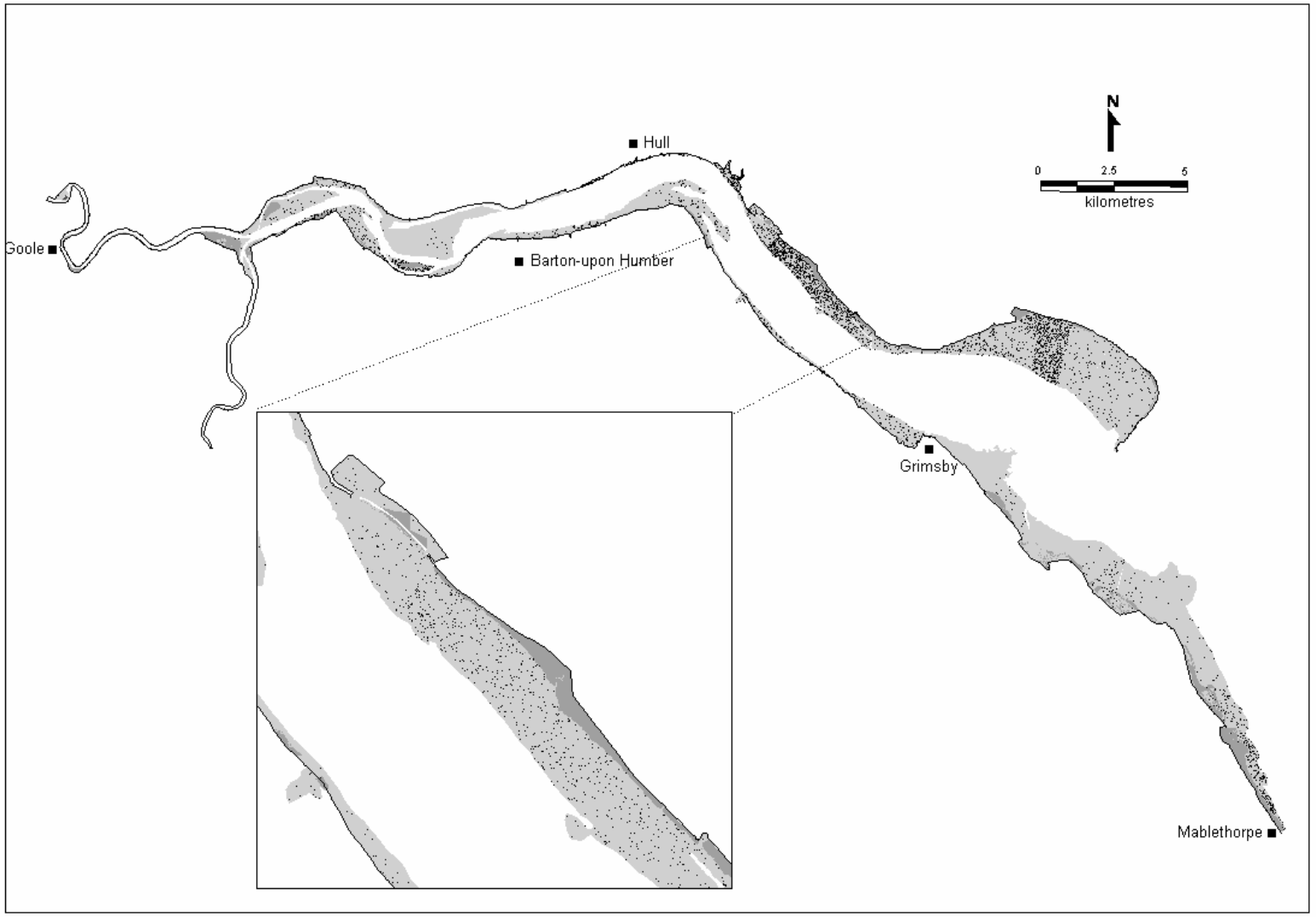
of the intertidal zone by the species on an intra monthly basis. This is possibly linked to weather conditions and the lunar cycle (soil conditions relating to temperature and rainfall, full moon for night-time feeding), the associated availability of productive inland feeding areas (including crop cover), and the level of activities around the estuary (including agricultural work and wildfowling). In addition, at Saltend there is a complex utilisation of the intertidal zone by flocks on a daily basis. At a simplistic level, there are movements of discrete flocks onto and off the site over a tidal cycle with some birds moving onto the intertidal area during the mid ebb phase to roost over the low water period, presumably from inland feeding sites (possibly including night-time feeding), and other flocks moving onto the site to feed at around the same time, from high water roosts on adjacent banks. However, such movement patterns tend to be more complex than that outlined above, as well as varying on a seasonal basis, and as such often the reasons for substantial variations in the type and size of curlew usage on an intra-monthly basis cannot be ascribed to any obvious source(s). Furthermore, it would appear that such patterns of interactions between inland and estuarine sites and feeding and roosting flocks, also vary on a site specific basis.

As such the interpretation of variations between monthly curlew maxima on the estuary can be misleading. There have been no detailed studies of the way in which curlew use the adjacent habitats to the Humber, nor of the drivers of such usage, however it is likely that the utilisation of farmland habitat will vary with weather conditions and the intensity of farming activity.

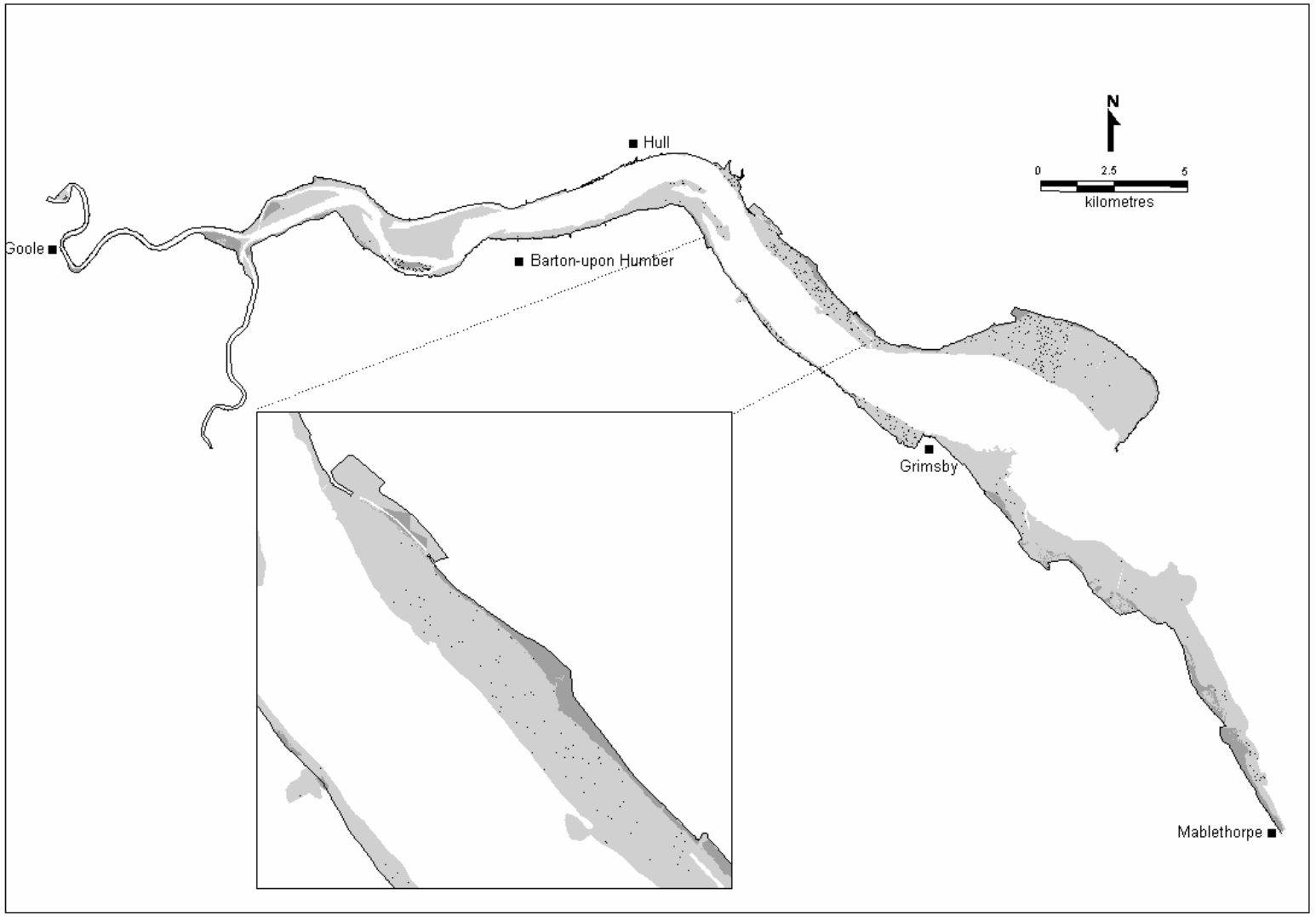
The 2003/4 programme shows a relatively stable population of curlew on the estuary during the winter months, with numbers falling rapidly through the spring with the departure of birds, this departure apparently occurring earlier in 2003/4 than in 1998/9. However, this may, to some extent reflect count timing. The programme has also revealed the presence of a substantial summering population, this increasing into June. Since most birds are aged two years or more before breeding, the birds present at this time are likely to be first year birds initially, with the further influx of birds in June being the result of an early movement back to the estuary of failed breeders and females, who often leave the males to care for the chicks (Cramp, 1998).



Curlew low tide distribution, autumn 2003/4.



Curlew low tide distribution, winter 2003/4.



Curlew low tide distribution, spring 2003/4.

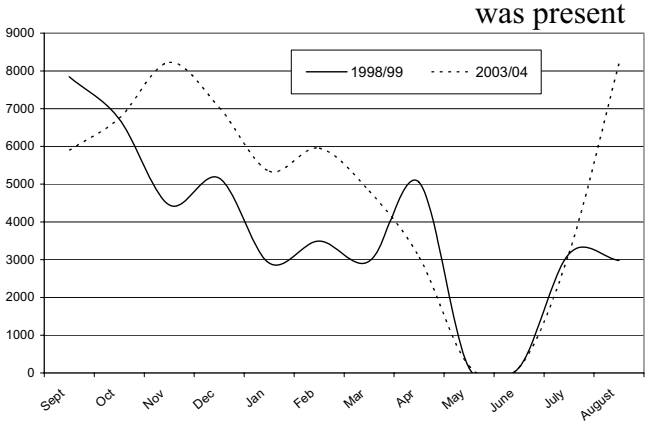
3.1.19 Redshank (*Tringa totanus*)

During the autumn and winter the redshank is one of the most widespread species in the Humber Estuary, encountered on just about any foreshore where a small area of mud is present. In general, the species has a preference for the upper shore of the intertidal habitat and for muddy river channels; many feeding territories are associated with saltmarsh (Prater, 1981). This tends to be the case on the Humber, although during passage periods, flocks can also utilise other areas of the foreshore, with further modifications to feeding area preference during hard weather (Cutts 2004). Indeed, the species is particularly susceptible to increased mortality rates during prolonged cold weather periods, with the upper shore tending to more readily freeze than lower shore areas as it is often not covered by tides during neap phases, causing the prey items to move deeper into the sediment out of reach of the species when temperatures are close to freezing (Cramp, 1998).

Over the autumn and winter periods, the intertidal areas between Saltend and Spurn supported over 70% of the redshank present on the Humber. Most of these birds were feeding on the periphery of the Welwick and Cherry Cobb saltmarsh, where densities exceeded 1 bird per ha. Recent analysis of the 5-years WeBS Core Counts has shown that these habitats tend to be of great importance for redshank, with both areas supporting large numbers of roosting birds. It may be the case that on a daily basis redshank are relatively sedentary within the estuary, feeding close to their roosting habitats, although some movements from high water roost and feeding sites to preferred feeding zones clearly takes place. For instance, movements from Paull Holme Strays onto the Saltend intertidal zone occur during the initial ebb phase over most tides, with a corresponding movement prior to high water inundation on the flood (N Cutts pers. obs.). In fact, the preference for the upper shore as a feeding habitat, particularly as prey items are uncovered on the surface by the falling tide, means that during the initial ebb phase flocks can be highly mobile within a small area, moving rapidly around a site to colonise shallow water and recently uncovered sections of the shore.

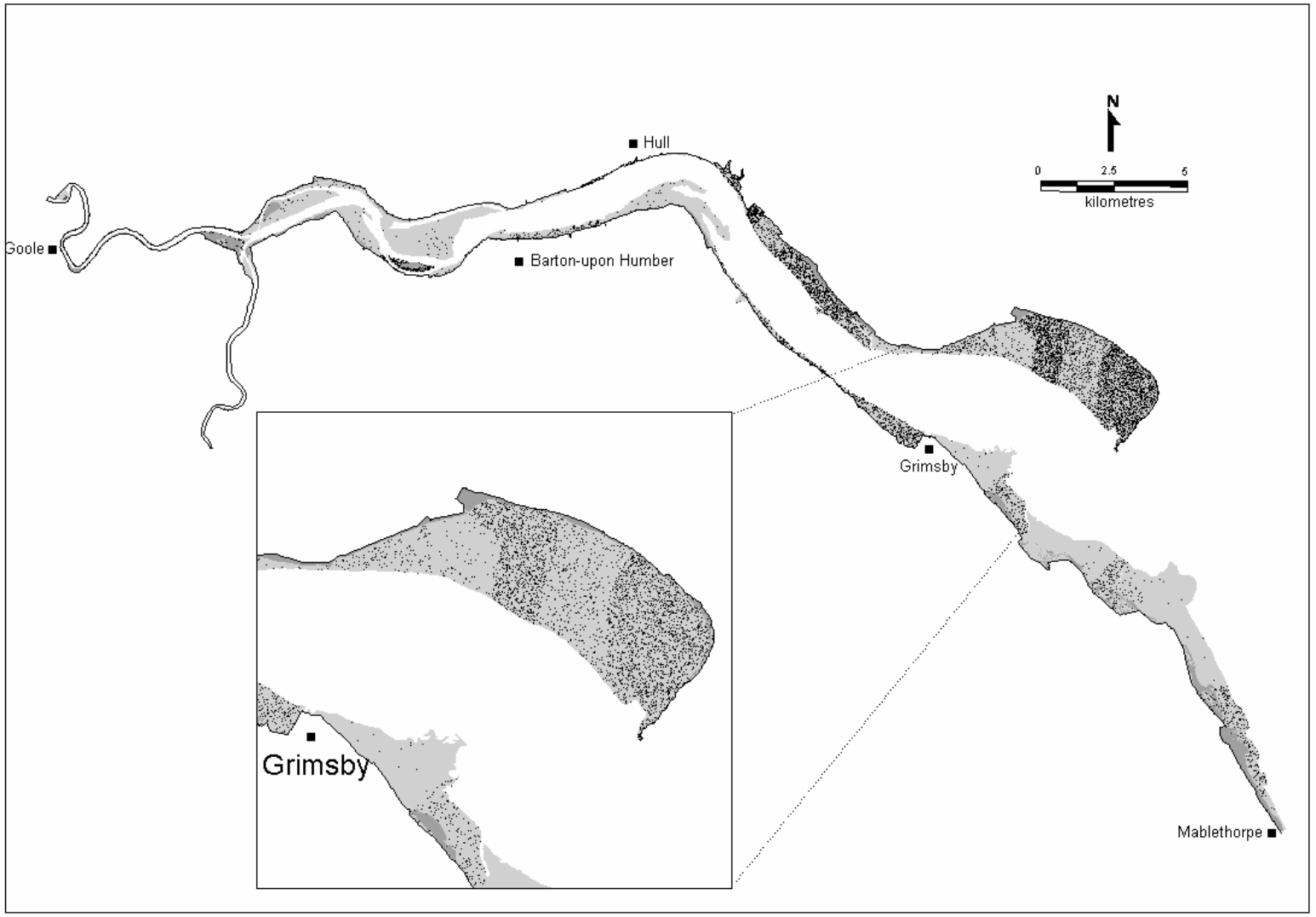
During the 2003/4 programme, large concentrations of foraging birds were also initially found on the Spurn sector (NK), although there was a shift in usage from Spurn Bight to the Paull to Stone Creek area (NG) during the winter. The Spurn sector was of greater importance during the passage period, perhaps reflecting the more coastal proximity, this correlating with the results of the analysis of 5 years of WeBS Core Count data for the Humber Estuary (Allen and others 2003).

Elsewhere on the estuary, the species was present across a large number of sectors with the largest concentrations over the autumn and winter periods occurring on Read's Island and on the Pyewipe mudflat. The intertidal areas south of Cleethorpes, despite featuring extensive saltmarsh accounted for less than 20% of the Humber population but with concentrations found to occur around this habitat.

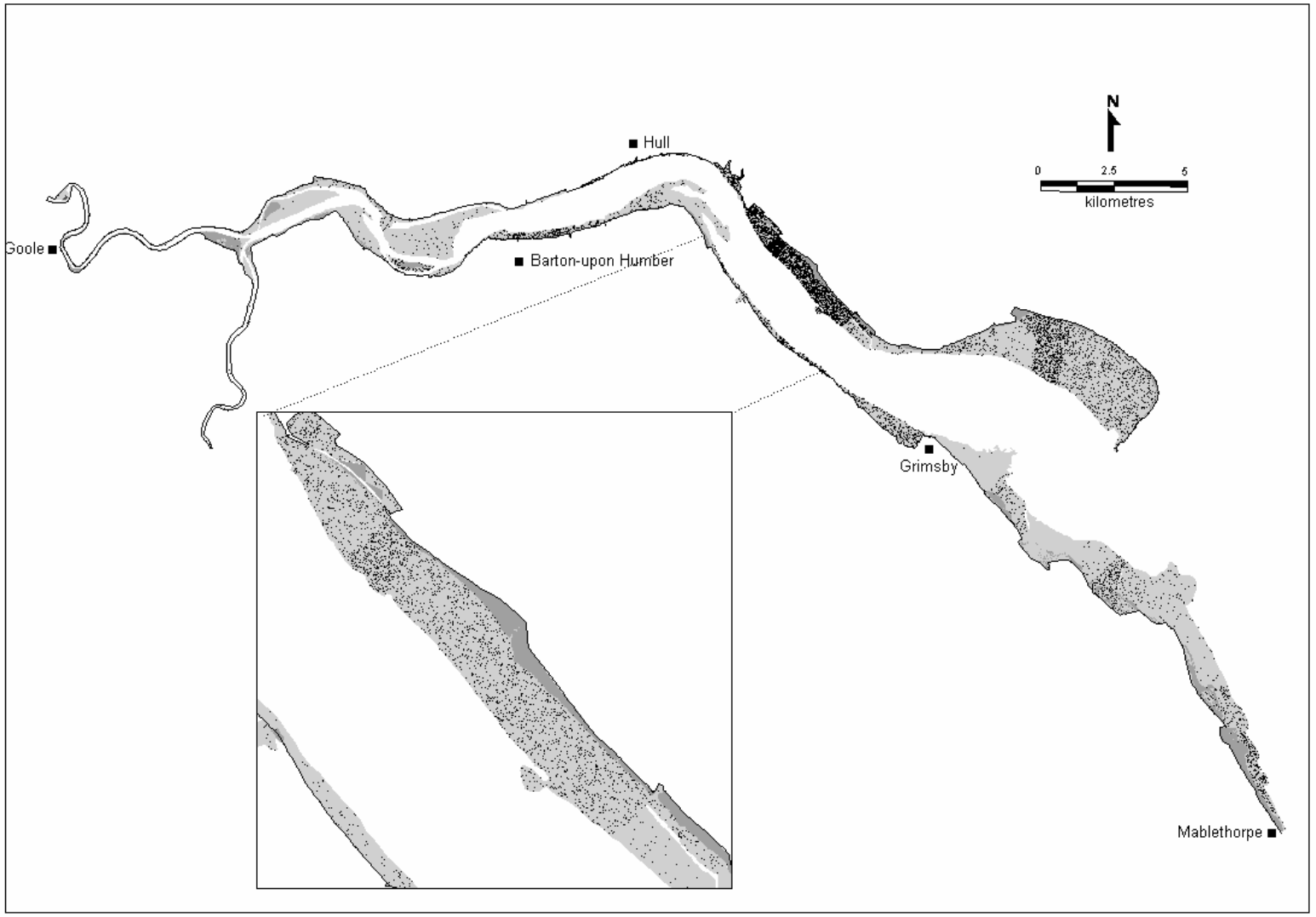


Over the spring, the return passage of redshank to breeding grounds often leads to a peak count during April, although the extent to which this is recorded may depend on the timing of the count. This may well have been the case during the 2003/4 programme, with numbers showing a steady decline from February onwards, compared to a marked passage peak recorded from the 1998/9 programme. However, data from the constant monitoring site at Saltend also recorded the spring passage of Redshank in 2004 as marginally below the mean for the last 10 years (N Cutts pers. obs.).

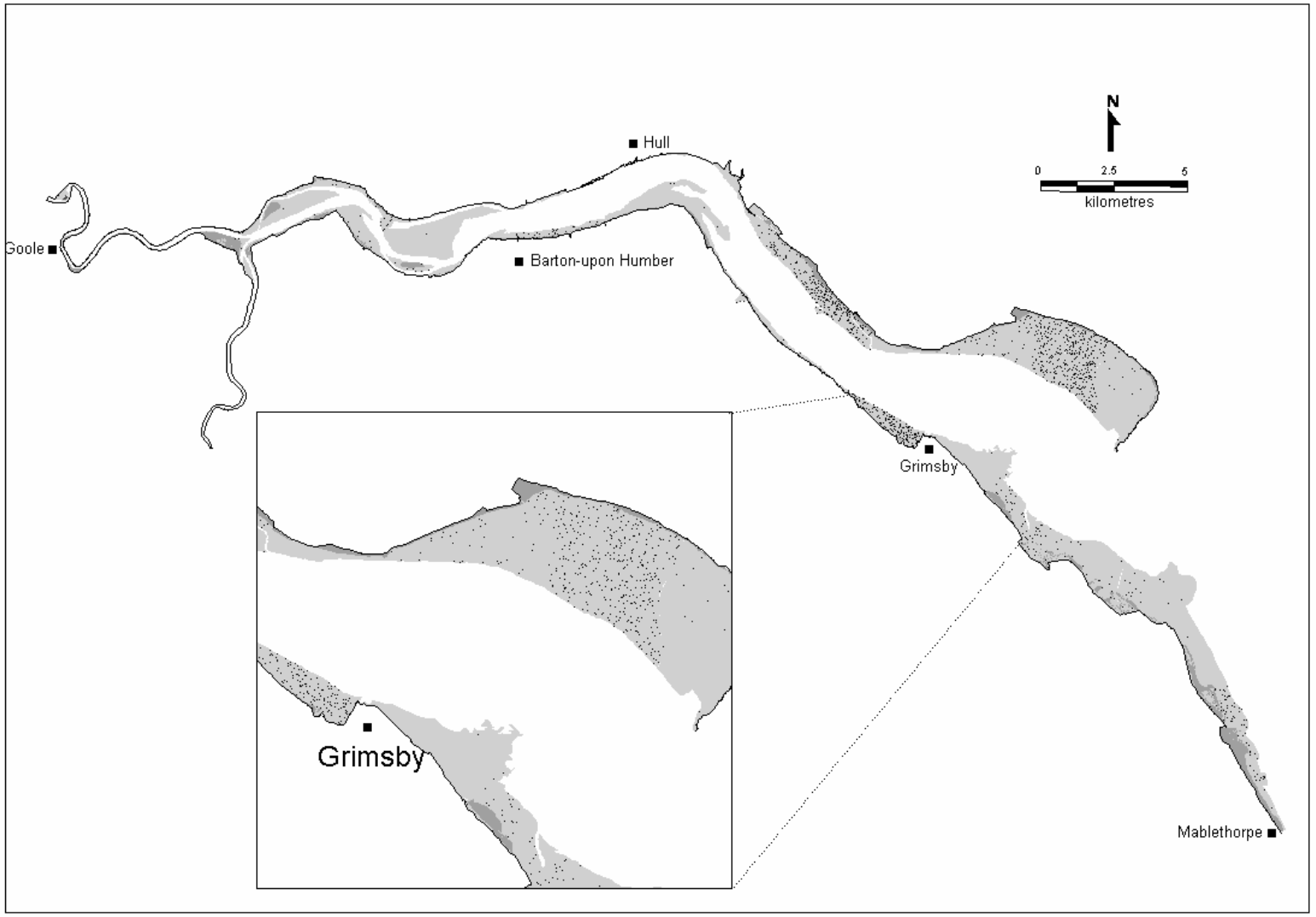
During the summer (May and June), there are a few records for redshank being present within the area, many of these thought to be breeding on the Humber. The maxima for these months for both programmes were very similar, and probably reflect the size of the Humber breeding population. Unsurprisingly, the breeding distribution of redshank across the estuary matches the distribution of saltmarsh areas, with the largest concentrations observed around the saltmarsh of Cherry Cobb and Welwick, with only few individuals on the south bank around Tetney Haven, Grainthorpe Haven, Saltfleet Haven, and on the Brough to Faxfleet reach (including Whitton Sand). Although, breeding redshank can be found on estuarine wet grassland around the estuary, there is a strong preference on the Humber for the saltmarsh; this being an important breeding habitat for redshank at a national level, with about 45% of the population thought to breed in saltmarsh (Davidson and others 1991).



Redshank low tide distribution, autumn 2003/4.



Redshank low tide distribution, winter 2003/4.



Redshank low tide distribution, spring 2003/4.

3.1.20 Turnstone (*Arenaria interpres*)

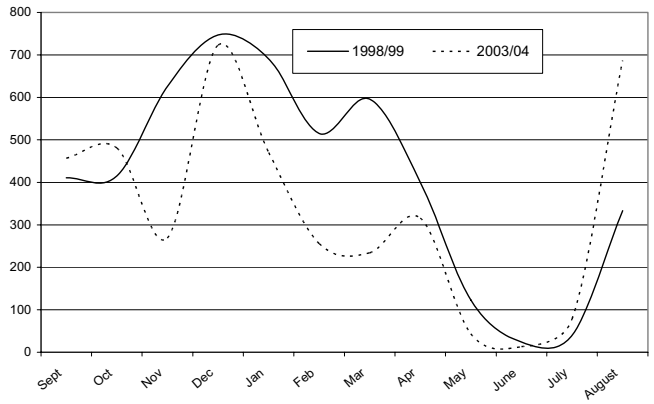
Turnstone distribution on the Humber is characterised by large concentrations at a small number of sites, reflecting the species's habitat requirements, with those sites usually featuring fucoid covered cobble areas and coarse sandy beaches. The autumn and wintering populations are restricted to the middle estuary, many using the Barton to Goxhill Haven section on the south bank and the Hessle to Hull on the north bank to feed, and with smaller numbers occurring between Pyewipe and Northcoates on the outer estuary (Catley 2000; Allen and others 2003).

Over the autumn of the 2003/4 programme, the low water distribution of turnstone was concentrated on the Barton to East Halton Skitter sectors, with this reach supporting on average around 50% of the Humber population (207 birds). Other concentrations were found on the Cleethorpes to Humberston Fitties sector (MSC) with an autumn average of 69 birds and the Spurn sector (47 birds). As the distribution map below shows, the greatest density was found on the Barton Haven to Barrow Haven sub-sector (ISF2), which supported 0.87 birds per ha. This pattern of distribution continued into the winter period, with consistent usage of the Barton to East Halton Skitter reach (sectors ISF2-ISF3-ISG-ISH), which continued to support over half of the Humber population.

This section of the middle estuary features a greater component of fucoid covered cobble habitat, the hard substratum resulting from glacial lag deposits, anthropogenic sources and residue of the chalk strike. Similarly, on the north bank, the fucoid covered cobbles of the chalk strike around Hessle can support a sizeable population of turnstone, although the status of the species along this reach over the winter of 2003/4 is unclear as unfortunately the sector was only occasionally counted.

Analysis of the 2003/4 count data suggests that within the key reach between the Barton to East Halton Skitter, which featured a relatively stable wintering population, the turnstone flock actually moved around quite significantly over the winter months. This was perhaps in response to prey availability and tidal changes, although based on the winter average, the Goxhill Haven to East Halton Skitter (ISH) supported the largest numbers of birds. Typically, wintering turnstones are highly site faithful, both within and between winters, and research suggests that every winter individuals tend to occupy the same patch of shoreline in flocks of stable membership over their lifespan (Wernham and others 2002). As such, flocks are particularly susceptible to habitat loss or damage, given their reliance on a narrow habitat niche within the estuarine system, and having strong site fidelity.

The spring distribution map indicates a much reduced level of usage with the departure of wintering birds to their breeding grounds in Greenland and Canada, some birds stopping off to restock fat reserves in Iceland.

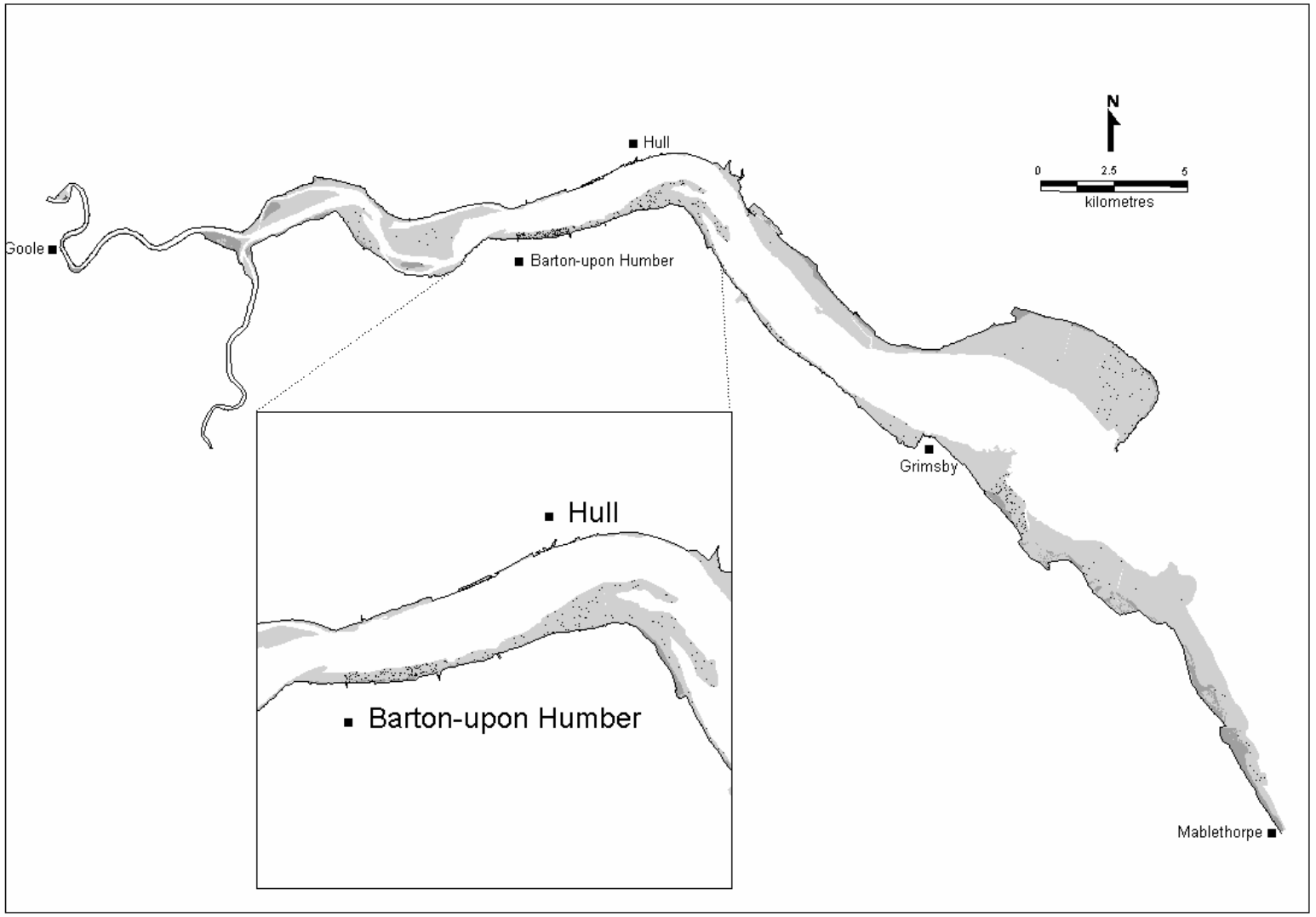


Count data for the winter months of the 2003/4 programme shows usage throughout this period to be low when compared to that from the same period in 1998/9, although the dip in the 2003/4

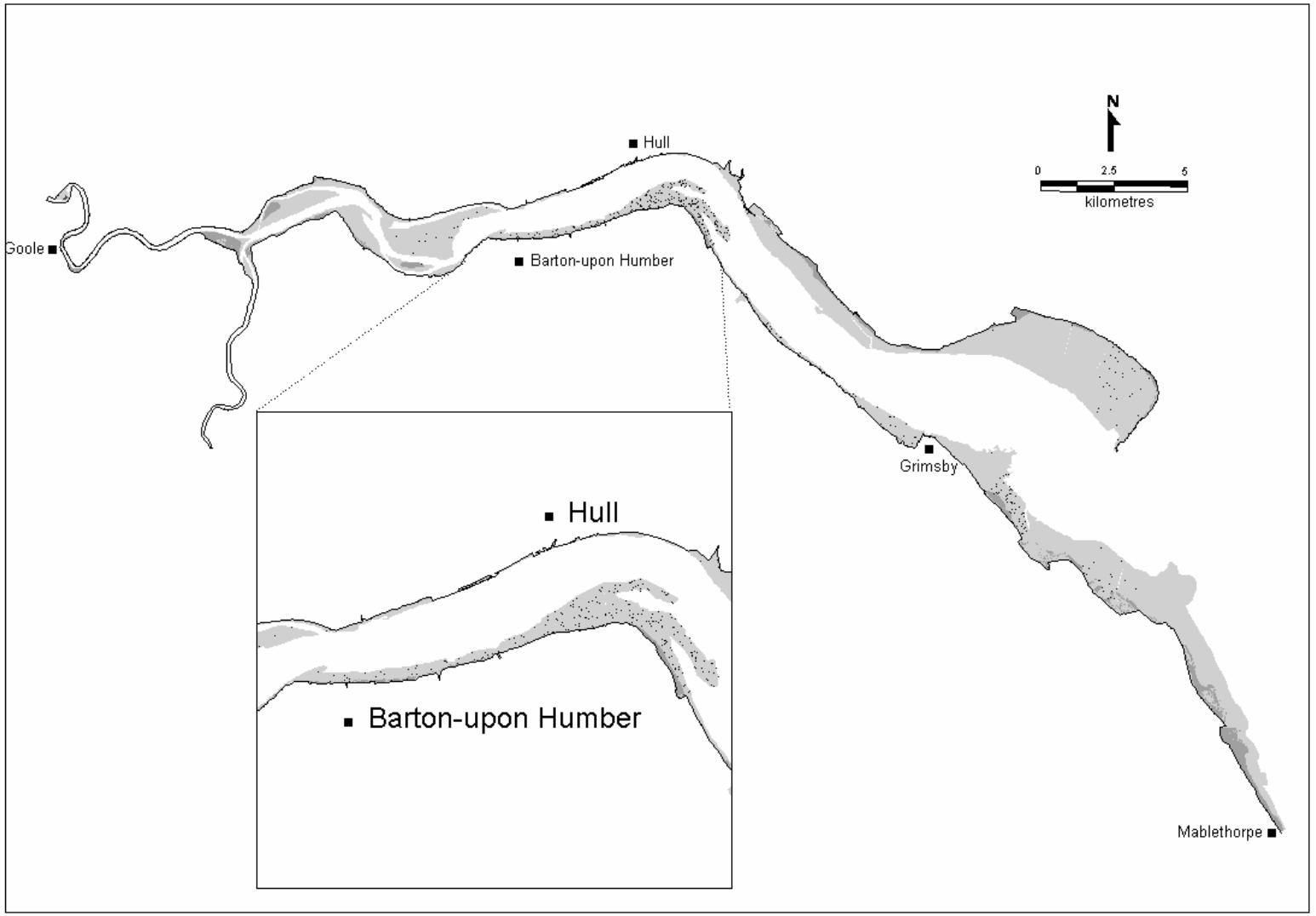
maxima in November was due to an absence of count data for key sectors for that month. However, the figure shows that for both programmes, there was a substantial influx of birds during the December period and a dip in usage in February and March, which possibly reflected the departure of wintering birds.

Turnstone wintering in Britain and Ireland start to leave their wintering grounds as early as late February but the main exodus is in April and May, hence the influx noted on the Humber in April that perhaps related to migratory birds passing through the site. Whether these latter flocks are similarly moving through to Greenland and Canada, or may also include Fenno-Scandia birds is unclear.

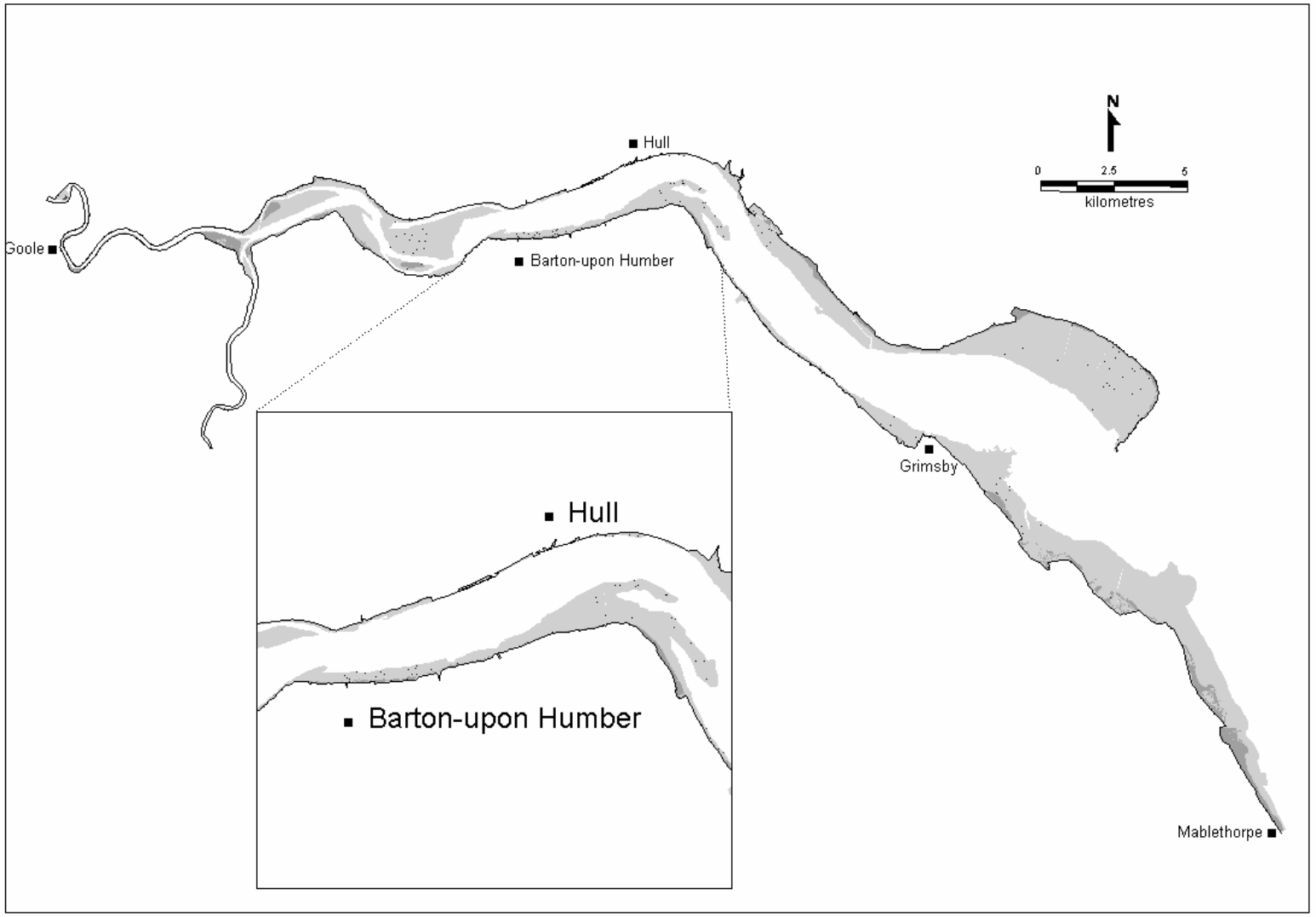
Data from the WeBS Core Count programme, with surveys carried out around high water, shows the wintering population on the estuary to be just below the national importance qualifying criteria (Pollitt and others 2003). However, population estimates from both the 1998/9 and 2003/4 low water count programmes have found the wintering population around low water to be over a third larger than the high water population, suggesting that the Humber is of national and possibly international importance for this species. This discrepancy might be explained by the roosting behaviour of the species, as the turnstone tends, at high tide, to roost on derelict industrial areas, dock areas and remote structures, which often are not covered by the WeBS Core Count sectors.



Turnstone low tide distribution, autumn 2003/4.



Turnstone low tide distribution, winter 2003/4.



Turnstone low tide distribution, spring 2003/4.

3.2 Other key species

3.2.1 Bittern (*Botaurus stellaris*)

One bittern was present on the Donna Nook to Salt Box Farm Sector (OSC) during the January count. The Humber Estuary supports a nationally important wintering population of four individuals, in addition to the nationally important breeding population (Allen and others 2003). Over the winter, the species favours clay pits and extensive reedbeds along the Humber bank (Allen and others 2003).

3.2.2 Gadwall *(Anas strepera)*

The Humber Estuary is not generally an important wintering site for the species, with the majority of concentrations having been recorded on areas of adjacent open water (Allen and others 2003). The survey at low water of saline lagoons across the estuary indicated the species to be present all year around, however, a peak maximum of 44 individuals was noted to occur in December, of which 40 birds were found on the Blacktoft Sands Nature Reserve. Over the spring and summer, this key site also supported a small population, which strongly suggests the presence of breeding individuals, and additionally, a few individuals were noted on Read's Island (ISD) throughout the breeding season.

3.2.3 Pintail *(Anas acuta)*

The intertidal areas adjacent to Welwick saltmarsh (NJ) appeared to be the key areas for pintail, although small flocks were also recorded on Read's Island (ISD) and the Goxhill Haven to East Halton Skitter sector (ISH). The counts reflected a light autumn passage with a peak of 31 birds in October, and the presence of over-wintering populations both in January (85 birds) and February (129 birds). Although this represented the highest peak of the winter, the numbers were well below the level during the 1990s, when the estuary was briefly able to achieve the status of national importance for the species based on high WeBS counts from three consecutive seasons (1990-1993) (Allen and others 2003).

3.2.4 Pochard *(Aythya ferina)*

With the exception of a count of 20 birds between New Holland Pier and Goxhill Haven (ISG) in January 2004, the birds were very scarce on the Humber throughout the programme with only a few individuals recorded at the Blacktoft Sands Nature Reserve (NA2) and on the Faxfleet Ponds (NB5). Sector ISG had been identified, during previous low tide counts, as a prime feeding site on the Humber during the winter, the birds being attracted to the area to feed on a mixture of grain and animal food stuffs from sewage outfalls at the New Holland Bulk service terminal (Catley 2000). Notably considerable inter year fluctuations occur on the Humber Estuary. For instance from the WeBS Core Counts, 2,000 birds were recorded during the winter of 1996/7 but only 323 were recorded in the winter of 1997/8. These fluctuations are mainly attributed to cold weather movements in the UK as Pochard favour shallow eutrophic waters which are highly susceptible to freezing, and therefore the birds tend to concentrate on ice-free waters during cold weather (Wernham and others 2003). It may be the case that the number of wintering birds is affected by the severity of winter temperatures, although the relatively mild winters over the last 10 years would by this reasoning lead to a more stable population.

3.2.5 Goldeneye *(Bucephala clangula)*

As with pochard, the goldeneye population was restricted to the New Holland Pier-Goxhill Haven sector (ISG), although numbers on this section were well below previous levels. Based on the latest WeBS Core Count 5 year mean, the Humber Estuary qualifies as a site of national importance for wintering goldeneye (Pollitt and others 2003), with a flock of approximately 500 birds foraging in Sector ISG (Catley 2000). However, the peak of only 54 birds in January 2004 failed to reflect the nationally important status of this species on the Humber Estuary. As for scaup and pochard, low tide surveys can be problematic for recording goldeneye, as the flock can be some distance away from the vantage point. At present, there is no indication of a decline in the status of the species on the Humber Estuary (Allen and others 2003) although further data and information are needed to ascertain whether the data from the 2003/4 programme represents an unusual occurrence, is an artefact of the methodology or of more concern, indicates a recent trend of decrease for the species.

3.2.6 Hen harrier *(Circus cyaneus)*

The presence or absence of raptors on count sectors was also recorded during the Low Tide Count programme, although this was treated as a category of "activity/disturbance" rather than a part of the main count programme. In the Humber, hen harriers are regularly seen at Spurn Head during the autumn passage but generally roost at a limited number of key sites during the winter season (Allen and others 2003). The presence of the species during the winter of 2003/4 was noted on Welwick saltmarsh and at the Blacktoft Sands Nature Reserve.

3.2.7 Marsh harrier *(Circus aeruginosus)*

The reedbeds along the upper Humber margins, and in particular the Blacktoft Sands Nature Reserve, now support several breeding pairs of marsh harriers. In April, marsh harriers were observed by almost every counter on sectors west of the Humber Bridge, although some of these sightings may have been of the same bird(s). For the rest of the spring and summer, the species was regularly observed from at least five different sites on the upper Humber where the species is known to breed.

The presence of an individual being regularly recorded hunting over Whitton Sand throughout the winter was noteworthy. Marsh harriers were formerly rarely recorded in the region during winter, but small numbers of marsh harriers now over-winter in the UK, particularly in the Norfolk area, and in the last couple of years marsh harriers have been commonly recorded on the estuary in the early part of the winter (Allen and others 2003).

3.2.8 Ruff (*Philomachus pugnax*)

Recent trends have seen increasing numbers of ruff wintering on the Humber Estuary. However, the species remains mainly a bird of passage in both the spring and the autumn. The usual autumn passage, which peaked at 148 birds in September 2003, was followed by a decline into the winter with a peak of only five birds in January. As for the return migration in the spring, only six birds were present in May. Over half of the Low Tide Count observations originated from the Blacktoft Sands Nature Reserve. This fits with the 1998/9 programme, which also found the site to be of key importance for the species on the estuary. Of note during the programme was the presence of 92 individuals at the Blacktoft Sands Nature Reserve in September, whilst adjacent to Blacktoft Sands, Whitgift Sand on the River Ouse produced a count of 46 birds in October. Elsewhere on the estuary, the only noteworthy

gathering was noted at Paull Holme Strays with 44 birds in September. Other areas of occurrence on the estuary produced counts of less than five individuals.

3.2.9 Whimbrel *(Numenius phaeopus)*

On the Humber Estuary, whimbrel tend only to be recorded on passage when the species transits to and from northerly breeding areas in Iceland, the Faroes and northern Scotland. The European population winters south of the Mediterranean, chiefly along the coasts of Africa. Only very small numbers winter in the British Isles (Lack 1986).

As is typical of the species on the Humber, larger flocks were recorded in July as the spring migration along the east coast is often less prominent than the autumn migration (Lack 1986). The Low Tide Counts across the estuary indicated the autumn passage to be twice as great as the spring passage with a total of 63 birds noted in July 2004. During the passage periods, the majority of birds were recorded from the outer estuary, many presumably moving along the coast at that time of the year. There were only a few sightings on the middle estuary and upper estuary during the programme.

The programme found whimbrel to be widespread across the outer estuary, often feeding in small, loose groups on the upper shore. However, the small gathering of 36 birds loafing at the Donna Nook National Nature Reserve was noteworthy. Also of note, during the 2003/4 programme, was the presence of one bird just west of North Ferriby (NC1) in December 2003.

3.2.10 Little tern *(Sterna albifrons)*

On the Humber Estuary, breeding colonies are established on unvegetated sandy areas at the Easington Lagoons, Donna Nook and Tetney Marshes (Allen and others 2003). The peak count of 178 birds noted in July will have included adults and immature birds as well as passage birds. There were few tern sightings from April to August elsewhere on the Humber, and all originated from the outer estuary close to where the species breeds. The largest count was made on the Cleethorpes to Humberston Fitties sector (MSC), just west of the breeding colony at the Tetney Marshes RSPB Nature Reserve, although unfortunately, this latter area (MSD) was only partially covered during the Low Tide Count 2003/4 programme. Other notable counts were made at Spurn (64 birds) and Donna Nook (24 birds) during the summer 2004.

3.2.11 Short-eared owl *(Asio flammeus)*

As with marsh and hen harriers, the presence or absence of short-eared owl was also noted on the count forms during the programme, although this was treated as a category of "activity/disturbance" not as a species record. Over the autumn and winter period, the saltmarsh habitat on the north bank between Stone Creek and Skeffling (NH, NJ) which included the large Welwick saltmarsh, produced regular sightings.

Over the spring, short-eared owls were recorded at Tetney Marshes and Grainthorpe Haven as well as at Blacktoft Sands Nature Reserve in April. Additionally, one bird was present at Welwick saltmarsh in May. Short-eared owls are often recorded around the Humber Estuary during the breeding season where a few pairs nest annually.

3.2.12 Kingfisher *(Alcedo atthis)*

Kingfisher were scarce on the Humber during the 2003/4 Low Tide Count programme, although they were occasionally reported from Sectors ISD, OSE and OSD and more frequently from the Stone Creek area on the north bank (NG6 and NH1a). Throughout the year, kingfishers are present on suitable water bodies adjacent to the Humber Estuary and it is possible that the species was recorded on the intertidal areas. However, in many cases, it is likely that records were for birds on adjacent inland water courses, close to the track of the counter (usually the flood bank) such as soak dykes and larger drainage channels.

3.3 Additional species recorded during the Low Tide Count 2003/04

Species	Humber Maxima	Comments
Red-throated diver *(Gavia stellata)*	15 (January)	The species was only found in January when 4 birds were noted in OSE and 11 birds in OSD.
Little grebe *(Tachybaptus ruficollis)*	31 (December)	Little grebe was present all through the year with the coastal dykes being particularly favoured during the bad winter months, hence the peak of 31 birds in December. Half of the observations throughout the year originated from the following sectors along the Lincolnshire Coast (MSF, MSE, OSA, OSB, OSC, OSD, OSE, OSF).
Great crested grebe *(Podiceps cristatus)*	5 (April)	The East Halton Skitter to North Killingholme Haven sector (ISI) produced 70% of the observations ie 13 birds throughout the year.
Black-necked grebe (*Podiceps nigricollis*)	2 (August)	Two birds were recorded on the Whitton Sand sector (NB4) in August.
Cormorant (*Phalacrocora x aristotelis*)	93 (September)	Cormorant numbers were at their lowest during the breeding season (March-June), in contrast to the autumn and winter period which featured over 80 birds. 30% of the observations related to birds foraging on intertidal fringes and river channels. The largest roost over the survey programme was recorded on Read's Island with 36 birds in December and 23 birds in February.
Little egret (*Egretta garzetta*)	3 (September)	Whilst the 1998/9 counts reported only one bird, a total of nine were seen in the period 2003/4, reflecting the expansion of this species across northern Europe. Widespread around the Mediterranean, the species has spread north in recent decades, widely attributed to mild weather, linked to climate change. Little egret presence was noted in Sectors OSB, OSC, OSD, OSE and NB1 and ISB2 on the upper Humber.
Grey heron *(Ardea cinera)*	36 (September)	Except in the spring when the species returns to their breeding colonies, grey heron were widespread across the estuary.
Mute swan *(Cygnus olor)*	131 (April)	Intertidal fringes and river channels around New Holland pier continued to be the prime foraging area for mute swan on the Humber. The concentration of birds at this locality is a direct result of the inadvertent provision of foodstuffs, in the form of spilt grain and animal feeds, from the New Holland Bulk Services Complex (Catley 2000). However, there appeared to be a sharp reduction in usage since the 1998/9 programme when the four winter counts exceeded 150 birds with a peak of 316 birds in December. By contrast, the winter 2003/4 showed a peak of only 97 individuals in February.
Bewick's swan *(Cygnus*	1 (November)	One bird was present on the Horseshoe Point to Grainthorpe

Species	Humber Maxima	Comments
columbianus)		Haven sector (MSF) on the outer shore in November 2003.
Whooper swan *(Cygnus cygnus)*	14 (January)	The species was present from October to May but with the peak count noted in January. A small flock of eight birds joined the New Holland swan flock in December and January, while five birds were present throughout January and February on the Patrington Channel to Skeffling sector (NJ1). Elsewhere on the estuary, with the exception of six birds at Donna Nook (OSB) in October, whopper swans were very scarce.
Bean goose *(Anser fabalis)*	1 (November)	One individual was present in November on the Whitton Village to Whitton Ness sector (ISB2). This sighting was not ascribed to a race.
European white-fronted goose *(Anser a. albifrons)*	27 (November)	The November count produced a remarkable flock of 25 birds on the Trent Fall area (ISA). Additionally, two were noted on the Whitton Village to Whitton Ness sector (ISB2). In December, four birds were present just east of Stone Creek (NH1a) in December.
Greylag goose *(Anser anser)*	872 (October)	95% of this species were recorded on the upper Humber at low tide with the bulk of the population found on Whitton Sand where the species breeds. Further breeding birds were recorded on Read's Island.
Bar-headed goose *(Anser indicus)*	1 (July)	One bird was present on the south side of Whitton Sand in July (ISB3).
Canada goose *(Branta Canadensis)*	815 (August)	As with greylag geese, Canada geese are concentrated on the upper Humber. However, the breeding distribution within the upper Humber differs markedly; whilst the greylag geese are concentrated on Whitton Sand, the bulk of the Humber breeding Canada goose population is found on Read's Island.
Barnacle goose *(Branta leucopsis)*	125 (July)	The birds recorded on the Humber Estuary are considered as naturalised, but some may be wandering individuals from the migratory populations. Over the summer, the bulk of the population was recorded on Read's Island where the species bred successfully in the summer of 2004.
Shoveler *(Anas clypeata)*	70 (March)	The population appears to be restricted to three locations at low water, the Blacktoft Sands Nature Reserve (NA2), the North Killingholme Haven Pits (ISJJ) and Read's Island (ISD).
Tufted duck *(Aythya fuligula)*	27 (March)	Lower numbers than the Low Tide Count 1998/9 were recorded. The absence of the wintering flocks at the New Holland Pier at low water explained the lower usage on the Humber. However, the reasons for the under utilisation of intertidal fringes and fringes off the New Holland Pier, traditionally favoured foraging areas on the Humber for tufted duck, remain unknown.
Eider *(Somateria mollissima)*	3 (October)	The three birds in October were present on the Saltfleet Haven to Theddlethorpe St Helen sector (OSE).

Species	Humber Maxima	Comments
Common scoter *(Melanitta nigra)*	47 (October)	Along the Humber Estuary, regular east-west movements can be seen during autumn passage periods, as the estuary lies on a regular migration route. Occasionally, the birds stopped off on the Humber, although this is often of short duration. The year 2003/4 brought relatively low numbers of birds in the autumn with both the absence of birds in the winter and spring. The species was restricted in its distribution to the outer estuary.
Smew *(Mergellus albellus)*	1 (February)	One bird was present at the North Killingholme Haven Pit (ISJJ) in February 2004.
Goosander *(Mergus merganser)*	3 (November-December-January)	The species was present from November through to January. Of note was the presence of three individuals on the River Trent in December and January.
Ruddy duck *(Oxyura jamaicensis)*	4 (May-April)	The species was present from March to June.
Moorhen *(Gallinula chloropus)*	60 (November)	Although, often present in the tidal channel, the species was mainly recorded in stretches of open water.
Coot (*Fulica atra)*	87 (February)	The species was mainly recorded in sectors ISE1, NB5, ISJJ and NA2, all sectors featuring areas of fresh or brackish water.
Little ringed plover *(Charadrius dubius)*	10 (August)	Whilst the August count featured passage birds, the April counts of four birds on the Paull Holme Strays and three birds on Read's Island raise hope that breeding may have occurred. The little ringed plover is an uncommon passage migrant and sporadic breeder in the Humber.
Little stint *(Calidris minuta)*	2 (August)	One bird was present at the Blacktoft Sands Nature Reserve in July. The following month saw an autumn record of two birds on sector MSE2 just west of Tetney Marshes.
Curlew sandpiper *(Calidris ferruginea)*	5 (September)	The Low Tide Count 2003/4 failed to produce any notable counts. The curlew sandpiper is a regular passage migrant in the Humber, although numbers vary from year to year. Autumn passage is usually stronger than in the spring.
Jack snipe *(Lymnocryptes minimus)*	5 (December)	Jack snipe were present from October to January. The species was sighted several times at the Blacktoft Sands Nature Reserve and along the Lincolnshire coast saltmarshes.
Snipe *(Gallinago gallinago)*	69 (August)	The snipe's secretive nature means detection of birds is often difficult, unless the birds are flushed. The wet marsh of the Blacktoft Sands Nature Reserve and the saltmarshes of the Lincolnshire coast produced the largest counts over the 2003/4 programme. The counts of 30 at Blacktoft Sands Nature Reserve (NA2) and 39 on the Saltfleet Haven to Theddlethorpe St Helen sector (OSE) in August 2004 were both notable.
Spotted redshank	20 (October)	Of the seven sites that held birds throughout the year, the only double-figure counts were 17 birds on the Blacktoft Sands Nature

Species	Humber Maxima	Comments
(Tringa erythropus)		Reserve in October. As with the Low Tide Count 1998/9, the Blacktoft Sands Nature Reserve appeared to be the prime site for spotted redshank on the Humber. This could reflect the suitability of the saline lagoons at the site but also the greater coverage at the reserve. Out on the wider mudflats, it may be the case that spotted redshank pass unnoticed amongst common redshank. The presence of four spotted redshank in December 2003 at the Blacktoft Sands Nature Reserve was of note; small numbers of this species winter in the upper estuary since about the 1960s.
Greenshank *(Tringa nebularia)*	43 (August)	This species showed an outer estuary distribution with autumn passage more prominent than the spring passage. Over the autumn period, the largest count was made on the Saltfeet Haven to Theddlethorpe St Helen sector (OSE) where 11 birds were reported in September 2003.
Green sandpiper *(Tringa ochropus)*	6 (August)	Green sandpiper tend to shun intertidal mudflats but may be occasionally noted in the tidal channels, as well as ditches and lagoons behind the flood embankments. The lagoons at Blacktoft produced the bulk of green sandpiper records with five birds in August 2004.
Wood sandpiper *(Tringa glareola)*	1 (August)	One was present at the Blacktoft Sands Nature Reserve in August 2004.
Common sandpiper *(Actitis hypoleucos)*	42 (August)	The August count produced a notable passage of Common Sandpiper, of which 11 were noted on the Read's Island.
Mediterranean gull *(Larus melanocephalus)*	2 (July)	The Cleethorpe to Humberston Fitties sector (MSC) produced two birds in July and one single bird in August.
Little gull *(Larus minutus)*	57 (August)	Spectacular movements were recorded throughout September off Spurn Point with daily maxima of up to 4,500 birds recorded (Spurn Bird Observatory 2005). The counts on the mudflat illustrated, however, the relative paucity of passage flocks across the Humber Estuary; the highest count of 56 birds being made along the Stone Creek reach in September 2003. This level of usage was not expected given the relative offshore distribution of this species during migration, although strong wind can drive the birds inshore.
Black-headed gull *(Larus ridibundus)*	6,758 (August)	Black-headed gull remains the most abundant species of gull on the Humber. The species was found to occur in highest numbers during the autumn passage whilst the spring period featured the least numbers of birds. Over the autumn passage, the species was widespread at Saltend, Sunk Island, around Welwick and Cherry Cobb saltmarshes and on the River Trent.
Common gull	2,062	In contrast to other gulls, the common gull was the most abundant

Species	Humber Maxima	Comments
(Larus canus)	(December)	during the winter. The species favoured areas that included the Saltend Mudflat (NF2) and the Goxhill Haven to East Halton Skitter Sector (ISH).
Lesser black-backed gull *(Larus fuscus)*	265 (August)	The counts of 159 birds in July and 265 birds in August reflected the autumn passage of lesser black-backed gull on the Humber. Observations over the winter recorded very few birds. Over half of the observations throughout the year were made on the upper Humber, and in particular on the River Trent where 130 birds were reported in August 2004.
Herring gull *(Larus argentatus)*	535 (October)	The count of 450 birds on the Mablethorpe section contributed largely to the October peak. The general data indicated a dip in usage during the mid winter months with less than 30 birds reported in December, January and February.
Great black-backed gull *(Larus marinus)*	1,601 (October)	The species was present throughout the year, although over the spring and summer great black-backed gull sightings were less numerous. Of the October peak, 1,500 individuals were present on the Mablethorpe sector (OSF).
Sandwich tern *(Sterna sandvicensis)*	271 (August)	The counts demonstrated the coastal distribution of sandwich tern; the outer shore of the south bank found to be the preferred staging post during the autumn migration. The count of 196 birds on the Mablethorpe sector (OSF) was particularly noteworthy.
Common tern *(Sterna hirundo)*	429 (August)	Common tern passage was strong, with movements recorded along the outer shore of the south bank, including 260 common terns on the Cleethorpes to Humberston Fitties Sector (MSC).
Arctic tern *(Sterna paradisaea)*	5 (September)	Few birds were recorded during the surveys. The maximum count of five birds was observed just west of Immingham (ISK) in September 2003.

4 Discussion

A greater coverage of the Humber was achieved during the 2003/4 Low Tide Count programme compared to that during the 1998/9 programme, with the inclusion of the south outer Humber in 2003/4 programme. As a result, there are a number of interpretative issues to bear in mind, largely centring on greater spatial and temporal coverage, despite a consistent methodology being employed by both programmes.

In terms of species composition and spatial distribution, the findings of the study were generally consistent to those of the previous low water programme reported in Catley (2000). However, for several species, the 2003/4 Humber population levels exceeded those of the previous study. Although this reflected a well documented national increase in recent years for a few species (based on WeBS 2000/1 data), in the absence of up-to-date national figures for the majority of species, such increases were considered likely to be an artefact of the greater survey coverage. As such, the comparison of data for some species between the two low tide count programmes should be treated with caution. Where this is the case, these issues have been highlighted in the respective species accounts. For example, the increase in species such as black-tailed godwit and avocet on the Humber reflects a known national increase and as such is not unexpected, particularly with the provision of new suitable habitat e.g the new realignment line at Paull Holme Strays. In line with these increases, it may be that by the next low water tide programme, little egret will also be regularly recorded at some sites. However, it would appear that golden plover numbers have also increased, with national trends for the species being difficult to ascertain due to a series of external influencing factors. However, the status of the species on the estuary does appear to fluctuate between years, although with apparent step changes in total numbers. Further WeBS data will be required in order to identify the current dynamics of the species on the estuary.

As with the 1998/99 Low Tide Count programme, there were considerable between-count variations in abundance, and for the majority of estuarine waders and wildfowl the monthly fluctuations were identical to the previous study. However, the amount of information gained at low tide by the second programme added further value to the existing data set, leading to a greater understanding of utilisation of the estuary throughout the year. Additionally, further information on spatial distribution was gained during the 2003/04 programme by taking the opportunity to split sectors into sub-sectors, where possible following natural breaks in topography such as creeks. This enhanced the value of data and its subsequent application to site specific issues. This change to the recording methods was carried out within the existing methodology and as such did not affect the comparison of data between programmes and between months.

The results of the Low Tide Counts were presented using textual descriptions and maps to demonstrate the consistency of species distribution across the estuary between the two programmes. This may be not suitable in a scientific or legal context, but the raw data are available and if necessary, statistical analysis could be carried out between the two datasets in future studies. The series of low tide counts carried out throughout the twelve months from September 2003 to Augut 2004 illustrated the spatial variations in usage between seasons. For some species, relative distribution was similar throughout the year, but for others, notable differences occurred. Some species are dependent upon a small number of sites at a particular time of the year and therefore protection of these sites is an important component

of maintaining the favourable conservation status of several species of waders and wildfowl on the Humber.

The inclusion of outer estuary/coastal sectors, from the Grainthorpe to Mablethorpe, in the 2003/4 programme highlighted the importance of these areas for some species, although also of note was the Trent Falls area. The coastal sites of the south outer estuary were found to be of great importance for the dark-bellied brent goose as well as several species of wader including grey plover and sanderling.

Species compositions were found to clearly differ across the estuary with the abundance of waders and wildfowl on intertidal areas relating to several factors including the type of sediment, prey densities, morphology of the mudflats, extent of the saltmarshes and grazing marshes. The upper Humber, characterised by narrow generally steeply sloping mudflats with fringing extensive reedbeds and grazing marsh, was of greater importance for the populations of wildfowl ie pink-footed goose, teal and wigeon, with Read's Island being of particular importance for pink-footed geese which use the site for roosting. Shelduck and mallard, although also widespread in the upper Humber, were present in larger numbers across the middle estuary. On the north bank, the intertidal areas of the middle estuary, west of Hull are of lower ornithological importance. By contrast east of Hull, the discrete Saltend mudflat and the extensive intertidal areas stretching from Paull to Stone Creek were found to be of major importance at low tide for golden plover, lapwing, dunlin, redshank, curlew and shelduck. These species were also found on the south middle outer estuary, but in relatively low numbers. The exception however was turnstone, which at low tide was restricted between the Barton to East Halton Skitter intertidal areas. This area features a fucoid covered cobble habitat, which is particularly favoured by feeding turnstone. Also of interest in this area is the presence of large numbers of foraging black-tailed godwit on the intertidal areas adjacent the North Killigholme Haven Pits, in particular during passage period.

The mudflat at Pyewipe was of particular importance for black-tailed godwit during the winter with almost the entire Humber population concentrated in this area, but the reach also supported large flocks of feeding shelduck, dunlin, bar-tailed godwit, curlew and redshank. The rest of the south outer estuary is characterised by extensive intertidal sandy mud and sand flats, areas of grey dune and saltmarsh, with some sections of the Lincolnshire coast having a fully marine environment. The more sandy substratum is reflected on the south outer estuary by the presence of large numbers of oystercatcher, bar-tailed godwit, knot, sanderling and grey plover. Brent geese are also present in substantial numbers between Horseshoe Point and Mablethorpe near the extensive saltmarshes that occur in this area. On the north outer estuary, the massive intertidal area of Spurn Bight was found to support large feeding populations of knot, dunlin, redshank, curlew, oystercatcher and shelduck at low tide.

Whilst the current reporting period has utilised a greater spatial and temporal survey coverage than that of the 1998/9 programme, the sectoral basis of the methodology has allowed, where necessary, comparison between the two datasets (and greater analysis of specific areas can be carried out on a comparable basis is required). In general therefore, current problems outlined above relating to the interpretation of the data stem largely from an absence of national trends data over the same period in which to compare usage trends. This is exacerbated by the current programme being only the second such count on the Humber. Bearing these issues in mind, it is considered important that the 5-year programme is continued, in order to gain a better understanding of species trends and sectoral usage both in the context of national and regional patterns, and on a sectoral basis. The estuary is a

dynamic system, facing a series of changes including relative sea level rise, development pressures and habitat creation. In order to effectively manage the system, it is important to understand how different species and areas within the system are reacting to such changes.

5 References

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6 Glossary

Brackish. Water of a reduced salinity ("slightly salty") due to the mixing of sea water with fresh water eg estuaries.

Colony. Refers to a group of birds nesting together in close association, such as a pelican or gull colony

Density. The number of units (eg, individuals, pairs, groups, nests) per unit area.

Feral. A species which has escaped from domestication. Feral individuals may be descendants of the original escapees.

Habitats Directive (92/43/EEC). Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Flora and Fauna. This requires measures to be taken to maintain or restore to favourable conservation status in their natural range, habitats and species of flora and fauna of Community interest and listed in Annexes to the Directive. It provides for a European-wide ecological network of Special Areas of Conservation (SACs), which together with SPAs are known as Natura 2000.

Immature. An immature bird is a juvenile that has undergone its first moult but does not yet have full adult plumage.

Intertidal. An area of coast or estuary which is only covered by water for part of a tide. On an estuary, the intertidal area often takes the form of an extensive mudflat.

Juvenile. A young bird that is no longer dependent on its parents but has not gained its adult plumage.

Ramsar. The Convention on Wetlands of International Importance, Especially as Waterfowl Habitats (The Ramsar Convention) is an inter-governmental treaty that aims to stem the progressive encroachment on and loss of wetlands now and in the future. The Convention has broadened its scope to cover all aspects of wetland conservation and wise use, recognising wetlands as ecosystems that are extremely important for biodiversity conservation and for the well-being of human communities.

Resident. Inhabiting a given locality throughout the year; sedentary.

Saltmarsh. An area of intertidal habitat with a distinct flora, with plants being able to tolerate elevated salt levels.

Sedentary. A species which is not migratory; see also resident.

Site of Special Scientific Interest (SSSI). Under Section 28 of the Wildlife and Countryside Act 1981 (as amended), English Nature has a duty to notify land that is of special interest for its plants, animals, geological or physiographical features. Areas of such land are called Sites of Special Scientific Interest (SSSIs).

Special Area of Conservation (SAC). See Habitats Directive (92/43/EEC).

Special Protection Area (SPA). See Wild Birds Directive (79/409/EEC).

Staging Area. A staging ground is defined as an area where migratory bird populations stay for a prolonged period of at least several days during the non-breeding part of the year, where the birds can both forage and rest.

Subtidal. The area of an estuary, coast or sea which has a tidal influence but is always covered by water.

Vagrant. An individual found outside of the normal range of a species.

Wader. A generic term for a group of often long-legged and/or long-billed birds which are often at least partially dependent on shallow water and adjacent wetland habitat.

Waterfowl. A collective term for all waterbirds, excluding gulls.

Wild Birds Directive (79/409/EEC). Council Directive 79/409/EEC of 2nd April 1979 on the Conservation of Wild Birds. This Directive aims to protect bird species within the European Union through the conservation of populations of certain birds and the habitats used by these species. States are required to classify Special Protection Areas (SPAs) to conserve the habitats of rare and vulnerable species listed in Annex 1 of the Directive, and of regularly occurring migratory species, to ensure their survival and reproduction in their area of distribution.

Wildfowl. A collective term for ducks, geese and swans.

Appendices

Appendix 1. Sector and sub sector coverage Humber WeBS Low Tide Count September 2003 to August 2004 inclusive

/. Sector Covered. O. Sector Not Covered													
Sectors	**Sub-Sectors**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**
ITA	ITA1	0	0	/	/	/	/	/	/	/	/	/	/
	ITA2	0	0	/	/	/	/	/	/	/	/	/	/
	ITA3	0	0	/	/	/	/	/	/	/	/	/	/
	ITA4	0	0	/	/	/	/	/	/	/	/	/	/
ISA	ISA	/	/	/	/	/	/	/	/	/	/	/	0
ISB	*ISB1*	/	/	/	/	/	0	/	/	/	0	/	0
	ISB2	0	/	/	/	/	0	/	/	/	0	/	0
	ISB3	/	/	/	/	/	0	/	/	/	0	/	0
ISC	*ISC*	/	/	/	/	/	/	/	/	/	/	/	/
ISD	*ISD*	/	/	/	/	/	/	/	/	/	/	/	/
ISE	*ISE1*	/	/	/	/	/	/	/	/	/	/	/	/
	ISE2	/	/	/	/	/	/	/	/	/	/	/	/
ISF	*ISF1*	/	/	/	/	/	/	/	/	/	/	0	0
	ISF2	/	/	/	/	/	/	/	/	/	/	/	/
	ISF3	/	/	/	/	/	/	0	/	/	/	/	/
ISG	ISG	/	/	/	/	/	/	0	/	/	/	/	/
ISH	ISH	/	/	/	/	/	/	0	/	/	/	/	/
ISI	ISI	/	/	/	/	/	/	/	/	/	/	/	/
ISJ	*ISJJ*	/	/	/	/	/	/	/	/	/	/	/	/
	ISJ	/	/	/	/	/	/	/	/	/	/	/	/
ISK		/	/	/	/	/	/	/	/	/	/	/	/
MSA		/	/	/	/	/	/	/	/	/	/	/	/
MSB		/	/	/	/	/	/	/	/	/	/	/	/
MSC		/	/	/	/	/	0	/	/	/	/	/	/
MSD		0	0	0	0	0	0	0	/	0	0	0	0
MSE	*MSE1*	0	0	0	0	0	0	0	/	0	0	0	0
	MSE2	/	/	/	/	/	/	/	/	/	/	/	/
MSF		/	/	/	/	/	/	/	/	/	/	/	/
OSA		/	/	/	/	/	/	/	/	/	/	/	/
OSB		/	/	/	/	/	/	/	/	/	/	/	/
OSC		/	/	/	/	/	/	/	/	/	/	/	/
OSD		/	/	/	/	/	/	/	/	/	/	/	/
OSE		/	/	/	/	/	/	/	/	/	/	/	/
OSF		/	/	/	/	/	/	/	/	/	/	/	/
NA1	*NA1a*	/	/	/	0	/	/	/	/	0	/	/	/
	NA1b	/	/	/	0	/	/	/	/	0	/	/	/
	NA1c	/	/	/	0	/	/	/	/	0	/	/	/
NA2		/	/	/	/	/	/	/	/	/	/	/	/
NB	*NB1*	/	/	/	/	/	/	/	/	/	/	/	/
	NB2	/	/	/	/	/	/	/	/	/	/	/	/
	NB3	/	/	/	/	/	/	/	/	/	/	/	/
	NB4	/	/	/	/	/	/	/	/	/	/	/	/
	NB5	/	/	/	/	/	/	/	/	/	/	/	/
NC	*NC1*	/	/	/	/	/	/	/	/	/	/	/	/
	NC2	/	/	/	/	/	/	/	/	/	/	/	/
	NC3	/	/	/	/	/	/	/	/	/	/	/	/
ND		/	/	/	/	/	/	/	/	/	/	/	/
NE		/	/	/	/	0	0	0	0	0	0	0	0
NF	*NF1*	0	0	0	/	/	/	/	/	/	/	/	/
	NF2	/	/	/	/	/	/	/	/	/	/	/	/
NG	*NG1*	/	/	/	/	/	/	/	/	/	/	/	/
	NG2	/	/	/	/	/	/	/	/	/	/	/	/
	NG3	/	/	/	/	/	/	/	/	/	/	/	/
	NG4	/	/	/	/	/	/	/	/	/	/	/	/
	NG5	/	/	/	/	/	/	/	/	/	/	/	/
	NG6	/	/	/	/	/	/	/	/	/	/	/	/

/. Sector Covered. O. Sector Not Covered													
Sectors	**Sub-Sectors**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**
NH1	*NH1a*	/	/	/	/	/	/	/	/	/	/	/	/
	NH1b	/	/	/	/	/	/	/	/	/	/	/	/
	NH1c	/	/	/	/	/	/	/	/	/	/	/	/
NH2	*NH2a*	/	/	/	/	/	/	0	/	/	/	/	/
	NH2b	/	/	/	/	/	/	0	/	/	/	/	/
	NH2c	/	/	/	/	/	/	0	/	/	/	/	/
NJ	*NJ1*	/	/	/	/	/	/	/	/	/	/	/	/
	NJ2	/	/	/	/	/	/	/	/	/	/	/	/
NK		/	/	/	/	/	/	/	/	/	/	/	/

Appendix 2. Key waders and wildfowl observed during the low tide count 2003/04

The Low Tide Count 2003-04 raw data are held by English Nature and can be obtained on request.

Appendix 2a. South bank sectors and sub-sectors

Sub-Sector ITA1. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ITA1	Shelduck	*Tadorna tadorna*	0	2	0	0.67	0.01
ITA1	Mallard	*Anas platyrhynchos*	7	9	28	14.67	0.15

Sub-Sector ITA1. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ITA1	Mallard	*Anas platyrhynchos*	19	2	0	0	5.25	0.05
ITA1	Redshank	*Tringa totanus*	1	0	0	0	0.25	0.00

Sub-Sector ITA1. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ITA1	Wigeon	*Anas penelope*	0	6	0	0	0	1.20	0.01
ITA1	Mallard	*Anas platyrhynchos*	135	110	241	70	12	113.60	1.19
ITA1	Lapwing	*Vanellus vanellus*	1	0	0	0	0	0.20	0.00
ITA1	Curlew	*Numenius arquata*	0	1	0	0	0	0.20	0.00
ITA1	Redshank	*Tringa totanus*	5	2	9	3	4	4.60	0.05

Sub-Sector ITA2. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ITA2	Mallard	*Anas platyrhynchos*	0	2	18	6.67	0.11

Sub-Sector ITA2. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ITA2	Mallard	*Anas platyrhynchos*	3	7	0	0	2.50	0.04

Sub-Sector ITA2. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ITA2	Wigeon	*Anas penelope*	0	7	0	0	0	1.40	0.02
ITA2	Teal	*Anas crecca*	0	33	0	0	0	6.60	0.11
ITA2	Mallard	*Anas platyrhynchos*	33	40	9	21	2	21.00	0.34
ITA2	Redshank	*Tringa totanus*	5	4	5	1	0	3.00	0.05

Sub-Sector ITA3. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ITA3	Shelduck	*Tadorna tadorna*	0	4	0	1.33	0.02
ITA3	Mallard	*Anas platyrhynchos*	0	5	9	4.67	0.07
ITA3	Lapwing	*Vanellus vanellus*	0	1	0	0.33	0.01
ITA3	Oystercatcher	*Haematopus ostralegus*	0	0	3	1.00	0.02

Sub-Sector ITA3. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ITA3	Mallard	*Anas platyrhynchos*	6	0	0	0	1.50	0.02
ITA3	Oystercatcher	*Haematopus ostralegus*	2	0	0	0	0.50	0.01

Sub-Sector ITA3. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ITA3	Teal	*Anas crecca*	0	0	25	27	0	10.40	0.16
ITA3	Mallard	*Anas platyrhynchos*	37	12	32	33	9	24.60	0.39
ITA3	Lapwing	*Vanellus vanellus*	25	0	0	0	0	5.00	0.08
ITA3	Redshank	*Tringa totanus*	3	1	5	3	0	2.40	0.04

Sub-Sector ITA4. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ITA4	Shelduck	*Tadorna tadorna*	2	4	0	2.00	0.03
ITA4	Teal	*Anas crecca*	0	3	0	1.00	0.02
ITA4	Mallard	*Anas platyrhynchos*	0	18	82	33.33	0.50
ITA4	Lapwing	*Vanellus vanellus*	0	0	4	1.33	0.02

Sub-Sector ITA4. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ITA4	Mallard	*Anas platyrhynchos*	3	3	0	0	1.50	0.01

Sub-Sector ITA4. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ITA4	Wigeon	*Anas penelope*	0	10	0	0	14	4.80	0.04
ITA4	Teal	*Anas crecca*	0	0	2	0	0	0.40	0.07
ITA4	Mallard	*Anas platyrhynchos*	44	183	41	37	10	63.00	0.01
ITA4	Curlew	*Numenius arquata*	0	0	1	2	0	0.60	0.95
ITA4	Redshank	*Tringa totanus*	2	0	4	0	0	1.20	0.01

Sector ISA. Spring monthly counts and densities

			November	December	January	February	March	Average	
ISA	Shelduck	*Tadorna tadorna*	2	0	8	33	28	14.20	0.18
ISA	Wigeon	*Anas penelope*	395	433	845	652	250	581.25	7.32
ISA	Teal	*Anas crecca*	0	0	0	0	19	3.80	0.05
ISA	Mallard	*Anas platyrhynchos*	20	52	48	43	16	35.80	0.45
ISA	Lapwing	*Vanellus vanellus*	109	101	0	1	3	42.80	0.54
ISA	Curlew	*Numenius arquata*	0	0	0	0	30	6.00	0.08
ISA	Redshank	*Tringa totanus*	4	0	6	1	1	2.40	0.03

Sector ISA. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISA	Shelduck	*Tadorna tadorna*	2	0	0	27	7.25	0.09
ISA	Wigeon	*Anas penelope*	0	0	0	6	1.50	0.02
ISA	Teal	*Anas crecca*	0	0	13	0	3.25	0.04
ISA	Mallard	*Anas platyrhynchos*	2	0	23	128	38.25	0.48
ISA	Ringed plover	*Charadrius hiaticula*	0	0	1	0	0.25	0.00
ISA	Grey plover	*Pluvialis squatarola*	62	0	0	0	15.50	0.20
ISA	Lapwing	*Vanellus vanellus*	0	0	1	0	0.25	0.00
ISA	Sanderling	*Calidris alba*	0	0	2	0	0.50	0.01
ISA	Curlew	*Numenius arquata*	0	0	19	26	11.25	0.14
ISA	Redshank	*Tringa totanus*	1	0	7	5	3.25	0.04

Sector ISA. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISA	Shelduck	*Tadorna tadorna*	2	0	8	33	28	14.20	0.18
ISA	Wigeon	*Anas penelope*	395	433	845	652	250	581.25	7.32
ISA	Teal	*Anas crecca*	0	0	0	0	19	3.80	0.05
ISA	Mallard	*Anas platyrhynchos*	20	52	48	43	16	35.80	0.45
ISA	Lapwing	*Vanellus vanellus*	109	101	0	1	3	42.80	0.54
ISA	Curlew	*Numenius arquata*	0	0	0	0	30	6.00	0.08
ISA	Redshank	*Tringa totanus*	4	0	6	1	1	2.40	0.03

Sub-Sector ISB1. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISB1	Shelduck	*Tadorna tadorna*	24	4	0	9.33	0.63
ISB1	Mallard	*Anas platyrhynchos*	12	2	0	4.67	0.31
ISB1	Avocet	*Recurvirostra avosetta*	2	0	0	0.67	0.04
ISB1	Oystercatcher	*Haematopus ostralegus*	2	0	0	0.67	0.04
ISB1	Curlew	*Numenius arquata*	2	0	0	0.67	0.04
ISB1	Redshank	*Tringa totanus*	2	0	0	0.67	0.04

Sub-Sector ISB1. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISB1	Shelduck	*Tadorna tadorna*	3	0	0	0	0.75	0.05
ISB1	Mallard	*Anas platyrhynchos*	2	0	0	0	0.50	0.03
ISB1	Lapwing	*Vanellus vanellus*	3	0	0	0	0.75	0.05
ISB1	Oystercatcher	*Haematopus ostralegus*	1	0	0	0	0.25	0.02
ISB1	Curlew	*Numenius arquata*	3	0	2	0	1.25	0.08
ISB1	Redshank	*Tringa totanus*	0	0	4	0	1.00	0.07

Sub-Sector ISB1. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISB1	Wigeon	*Anas penelope*	0	60	37	0	126	44.60	3.00
ISB1	Teal	*Anas crecca*	0	6	0	0	8	2.80	0.19
ISB1	Mallard	*Anas platyrhynchos*	0	41	30	0	20	18.20	1.22
ISB1	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	4	0.80	0.05
ISB1	Curlew	*Numenius arquata*	0	3	52	0	90	29.00	1.95
ISB1	Redshank	*Tringa totanus*	4	3	4	0	1	2.40	0.16

Sub-Sector ISB2. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISB2	Shelduck	*Tadorna tadorna*	21	0	0	7.00	0.21
ISB2	Mallard	*Anas platyrhynchos*	8	1	0	3.00	0.09
ISB2	Lapwing	*Vanellus vanellus*	0	6	0	2.00	0.06
ISB2	Redshank	*Tringa totanus*	2	6	0	2.67	0.08

Sub-Sector ISB2. Autumn monthly counts and densities

			November	December	January	February	March	Average	
ISB2	Pink-footed goose	*Anser brachyrhynchus*	800	0	0	0	0	160.00	4.89
ISB2	Shelduck	*Tadorna tadorna*	5	0	0	0	14	3.80	0.12
ISB2	Wigeon	*Anas penelope*	0	0	0	0	43	8.60	0.26
ISB2	Teal	*Anas crecca*	93	132	0	0	0	45.00	1.37
ISB2	Mallard	*Anas platyrhynchos*	21	33	28	0	26	21.60	0.66
ISB2	Lapwing	*Vanellus vanellus*	50	0	0	0	2	10.40	0.32
ISB2	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	2	0.40	0.01
ISB2	Curlew	*Numenius arquata*	43	20	46	0	53	32.40	0.99

Sub-Sector ISB2. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISB2	Pink-footed goose	*Anser brachyrhynchus*	800	0	0	0	0	160.00	4.89
ISB2	Shelduck	*Tadorna tadorna*	5	0	0	0	14	3.80	0.12
ISB2	Wigeon	*Anas penelope*	0	0	0	0	43	8.60	0.26
ISB2	Teal	*Anas crecca*	93	132	0	0	0	45.00	1.37
ISB2	Mallard	*Anas platyrhynchos*	21	33	28	0	26	21.60	0.66
ISB2	Lapwing	*Vanellus vanellus*	50	0	0	0	2	10.40	0.32
ISB2	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	2	0.40	0.01
ISB2	Curlew	*Numenius arquata*	43	20	46	0	53	32.40	0.99

Sub-Sector ISB3. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISB3	Shelduck	*Tadorna tadorna*	17	10	0	9.00	0.04
ISB3	Wigeon	*Anas penelope*	1	0	0	0.33	0.00
ISB3	Teal	*Anas crecca*	1	0	0	0.33	0.00
ISB3	Mallard	*Anas platyrhynchos*	0	1	0	0.33	0.00
ISB3	Oystercatcher	*Haematopus ostralegus*	1	0	0	0.33	0.00
ISB3	Curlew	*Numenius arquata*	1	0	0	0.33	0.00
ISB3	Redshank	*Tringa totanus*	4	0	0	1.33	0.01

Sub-Sector ISB3. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISB3	Shelduck	*Tadorna tadorna*	26	0	3	10	9.75	0.04
ISB3	Wigeon	*Anas penelope*	0	0	0	1134	283.50	1.22
ISB3	Teal	*Anas crecca*	0	0	12	0	3.00	0.01
ISB3	Mallard	*Anas platyrhynchos*	5	0	38	0	10.75	0.05
ISB3	Avocet	*Recurvirostra avosetta*	15	0	0	0	3.75	0.02
ISB3	Golden plover	*Pluvialis apricaria*	250	0	0	0	62.50	0.27
ISB3	Lapwing	*Vanellus vanellus*	60	0	0	0	15.00	0.06
ISB3	Dunlin	*Calidris alpina*	15	0	0	0	3.75	0.02
ISB3	Bar-tailed godwit	*Limosa lapponica*	30	0	0	0	7.50	0.03
ISB3	Oystercatcher	*Haematopus ostralegus*	3	0	0	0	0.75	0.00
ISB3	Curlew	*Numenius arquata*	86	0	0	112	49.50	0.21
ISB3	Redshank	*Tringa totanus*	22	0	0	0	5.50	0.02

Sub-Sector ISB3. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISB3	Pink-footed goose	*Anser brachyrhynchus*	40	0	0	0	0	8.00	0.03
ISB3	Shelduck	*Tadorna tadorna*	16	0	8	0	11	7.00	0.03
ISB3	Wigeon	*Anas penelope*	1478	1000	663	0	311	690.40	2.96
ISB3	Teal	*Anas crecca*	0	0	0	0	7	1.40	0.01
ISB3	Mallard	*Anas platyrhynchos*	30	0	3	0	2	7.00	0.03
ISB3	Lapwing	*Vanellus vanellus*	1000	0	500	0	0	300.00	1.29
ISB3	Dunlin	*Calidris alpina*	0	0	300	0	0	60.00	0.26
ISB3	Curlew	*Numenius arquata*	36	0	0	0	88	24.80	0.11

Sector ISC. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISC	Shelduck	*Tadorna tadorna*	145	111	341	199.00	0.57
ISC	Teal	*Anas crecca*	2	0	0	0.67	0.00
ISC	Mallard	*Anas platyrhynchos*	4	0	0	1.33	0.00
ISC	Avocet	*Recurvirostra avosetta*	0	4	8	4.00	0.01
ISC	Lapwing	*Vanellus vanellus*	2	2	0	1.33	0.00
ISC	Curlew	*Numenius arquata*	6	0	0	2.00	0.01
ISC	Redshank	*Tringa totanus*	15	4	0	6.33	0.02

Sector ISC. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISC	Black-tailed godwit	*Limosa limosa*	0	1	0	0	0.25	0.00
ISC	Shelduck	*Tadorna tadorna*	240	295	607	827	492.25	1.41
ISC	Wigeon	*Anas penelope*	0	0	0	25	6.25	0.02
ISC	Teal	*Anas crecca*	0	0	169	160	82.25	0.23
ISC	Mallard	*Anas platyrhynchos*	0	0	0	110	27.50	0.08
ISC	Avocet	*Recurvirostra avosetta*	47	38	38	0	30.75	0.09
ISC	Ringed plover	*Charadrius hiaticula*	0	200	1	0	50.25	0.14
ISC	Golden plover	*Pluvialis apricaria*	23	0	0	28	12.75	0.04
ISC	Grey plover	*Pluvialis squatarola*	0	1	0	0	0.25	0.00
ISC	Lapwing	*Vanellus vanellus*	0	29	48	8	21.25	0.06
ISC	Dunlin	*Calidris alpina*	58	1500	0	130	422.00	1.21
ISC	Turnstone	*Arenaria interpres*	0	46	0	0	11.50	0.03
ISC	Curlew	*Numenius arquata*	18	389	13	18	109.50	0.31
ISC	Redshank	*Tringa totanus*	13	6	19	13	12.75	0.04

Sector ISC. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISC	Shelduck	*Tadorna tadorna*	319	354	561	202	535	394.20	1.13
ISC	Wigeon	*Anas penelope*	4	22	57	0	4	17.40	0.05
ISC	Teal	*Anas crecca*	292	253	236	0	148	185.80	0.53
ISC	Mallard	*Anas platyrhynchos*	0	119	4	5	12	28.00	0.08
ISC	Golden plover	*Pluvialis apricaria*	0	0	0	33	56	17.80	0.05
ISC	Lapwing	*Vanellus vanellus*	430	500	21	38	3	198.40	0.57
ISC	Knot	*Calidris canutus*	2	0	0	0	0	0.40	0.00
ISC	Dunlin	*Calidris alpina*	55	0	34	0	0	17.80	0.05
ISC	Oystercatcher	*Haematopus ostralegus*	0	0	0	1	0	0.20	0.00
ISC	Curlew	*Numenius arquata*	38	67	111	65	39	64.00	0.18
ISC	Redshank	*Tringa totanus*	26	0	21	2	19	13.60	0.04

Sector ISD. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISD	Black-tailed godwit	*Limosa limosa*	51	0	0	17.00	0.16
ISD	Shelduck	*Tadorna tadorna*	143	203	227	191.00	1.81
ISD	Wigeon	*Anas penelope*	0	1	0	0.33	0.00
ISD	Mallard	*Anas platyrhynchos*	15	14	4	11.00	0.10
ISD	Avocet	*Recurvirostra avosetta*	220	117	238	238.00	2.25
ISD	Ringed plover	*Charadrius hiaticula*	79	196	0	91.67	0.87
ISD	Golden plover	*Pluvialis apricaria*	1	0	0	0.33	0.00
ISD	Grey plover	*Pluvialis squatarola*	0	8	0	2.67	0.03
ISD	Lapwing	*Vanellus vanellus*	8	8	33	16.33	0.15
ISD	Bar-tailed godwit	*Limosa lapponica*	10	0	18	9.33	0.09
ISD	Oystercatcher	*Haematopus ostralegus*	25	19	25	23.00	0.22
ISD	Turnstone	*Arenaria interpres*	8	0	0	2.67	0.03
ISD	Curlew	*Numenius arquata*	38	63	116	72.33	0.68
ISD	Redshank	*Tringa totanus*	22	2	7	10.33	0.10

Sector ISD. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISD	Black-tailed godwit	*Limosa limosa*	4	0	0	0	1.00	0.01
ISD	Pink-footed goose	*Anser brachyrhynchus*	3	0	0	1025	257.00	2.43
ISD	Shelduck	*Tadorna tadorna*	514	656	420	433	505.75	4.78
ISD	Wigeon	*Anas penelope*	0	0	36	679	178.75	1.69
ISD	Teal	*Anas crecca*	0	700	240	2131	767.75	7.26
ISD	Mallard	*Anas platyrhynchos*	6	40	30	85	40.25	0.38
ISD	Avocet	*Recurvirostra avosetta*	434	346	167	63	252.50	2.39
ISD	Ringed plover	*Charadrius hiaticula*	40	69	150	12	67.75	0.64
ISD	Golden plover	*Pluvialis apricaria*	950	3	685	1300	734.50	6.95
ISD	Grey plover	*Pluvialis squatarola*	0	0	0	4	1.00	0.01
ISD	Lapwing	*Vanellus vanellus*	650	4	65	427	286.50	2.71
ISD	Knot	*Calidris canutus*	0	19	0	4	5.75	0.05
ISD	Dunlin	*Calidris alpina*	1155	130	800	1100	796.25	7.53
ISD	Bar-tailed godwit	*Limosa lapponica*	5	4	6	12	6.75	0.06
ISD	Oystercatcher	*Haematopus ostralegus*	41	5	0	0	11.50	0.11
ISD	Turnstone	*Arenaria interpres*	3	1	0	8	3.00	0.03
ISD	Curlew	*Numenius arquata*	722	381	251	125	369.75	3.50
ISD	Redshank	*Tringa totanus*	204	132	344	241	230.25	2.18

Sector ISD. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISD	Black-tailed godwit	*Limosa limosa*	0	0	0	0	3	0.60	0.01
ISD	Pink-footed goose	*Anser brachyrhynchus*	4000	0	1544	0	0	1108.80	10.48
ISD	Shelduck	*Tadorna tadorna*	316	221	329	320	443	325.80	3.08
ISD	Wigeon	*Anas penelope*	550	1100	1047	400	68	653.75	6.18
ISD	Teal	*Anas crecca*	600	500	1451	150	25	556.50	5.26
ISD	Mallard	*Anas platyrhynchos*	60	30	64	22	52	49.50	0.47
ISD	Avocet	*Recurvirostra avosetta*	16	6	0	1	298	64.20	0.61
ISD	Ringed plover	*Charadrius hiaticula*	71	13	16	4	22	25.20	0.24
ISD	Golden plover	*Pluvialis apricaria*	4265	9000	0	0	0	2653.00	25.09
ISD	Grey plover	*Pluvialis squatarola*	3	0	0	0	0	0.60	0.01
ISD	Lapwing	*Vanellus vanellus*	2880	4000	260	170	1	1462.20	13.83
ISD	Dunlin	*Calidris alpina*	2035	1432	1271	450	310	1099.60	10.40
ISD	Bar-tailed godwit	*Limosa lapponica*	1	0	7	5	2	3.00	0.03
ISD	Oystercatcher	*Haematopus ostralegus*	0	0	0	1	11	2.40	0.02
ISD	Turnstone	*Arenaria interpres*	2	2	0	1	1	1.20	0.01
ISD	Curlew	*Numenius arquata*	73	41	267	102	142	125.00	1.18
ISD	Redshank	*Tringa totanus*	115	108	133	35	64	91.00	0.86

Sub-Sector ISE1. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISE1	Shelduck	*Tadorna tadorna*	22	3	2	9.00	0.05
ISE1	Mallard	*Anas platyrhynchos*	1	0	0	0.33	0.00
ISE1	Avocet	*Recurvirostra avosetta*	2	0	0	0.67	0.00
ISE1	Ringed plover	*Charadrius hiaticula*	0	16	0	5.33	0.03
ISE1	Oystercatcher	*Haematopus ostralegus*	4	1	0	1.67	0.01

Sub-Sector ISE1. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISE1	Shelduck	*Tadorna tadorna*	0	0	0	1	0.25	0.00
ISE1	Teal	*Anas crecca*	0	0	0	32	8.00	0.04
ISE1	Mallard	*Anas platyrhynchos*	1	3	1	52	14.25	0.08
ISE1	Lapwing	*Vanellus vanellus*	11	0	54	37	25.50	0.14
ISE1	Oystercatcher	*Haematopus ostralegus*	0	1	1	0	0.50	0.00
ISE1	Curlew	*Numenius arquata*	1	7	6	28	10.50	0.06
ISE1	Redshank	*Tringa totanus*	0	4	34	25	15.75	0.08

Sub-Sector ISE1. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISE1	Shelduck	*Tadorna tadorna*	0	0	13	5	4	4.40	0.02
ISE1	Wigeon	*Anas penelope*	11	49	48	2	0	22.00	0.12
ISE1	Teal	*Anas crecca*	2	12	29	60	14	23.40	0.13
ISE1	Mallard	*Anas platyrhynchos*	32	0	27	3	0	12.40	0.07
ISE1	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	12	2.40	0.01
ISE1	Curlew	*Numenius arquata*	1	47	3	6	9	13.20	0.07
ISE1	Redshank	*Tringa totanus*	26	6	48	15	13	21.60	0.12

Sub-Sector ISE2. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISE2	Shelduck	*Tadorna tadorna*	0	0	2	0.67	0.08
ISE2	Mallard	*Anas platyrhynchos*	1	0	0	0.33	0.04
ISE2	Curlew	*Numenius arquata*	0	0	1	0.33	0.04

Sub-Sector ISE2. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISE2	Shelduck	*Tadorna tadorna*	2	0	0	0	0.50	0.06
ISE2	Curlew	*Numenius arquata*	1	0	0	0	0.25	0.03
ISE2	Redshank	*Tringa totanus*	0	0	0	5	1.25	0.15

Sub-Sector ISE2. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISE2	Redshank	*Tringa totanus*	4	6	11	2	2	5.00	0.61

Sub-Sector ISF1. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISF1	Shelduck	*Tadorna tadorna*	0	7	2	3.00	0.05
ISF1	Ringed plover	*Charadrius hiaticula*	0	0	1	0.33	0.01

Sub-Sector ISF1. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISF1	Mallard	*Anas platyrhynchos*	0	19	5	5	7.25	0.11
ISF1	Dunlin	*Calidris alpina*	0	0	0	4	1.00	0.02
ISF1	Curlew	*Numenius arquata*	0	0	0	0	0.00	0.00
ISF1	Redshank	*Tringa totanus*	0	0	0	35	8.75	0.13

Sub-Sector ISF1. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISF1	Shelduck	*Tadorna tadorna*	1	0	0	0	0	0.20	0.00
ISF1	Mallard	*Anas platyrhynchos*	8	0	0	0	2	2.00	0.03
ISF1	Ringed plover	*Charadrius hiaticula*	1	0	0	0	2	0.60	0.01
ISF1	Lapwing	*Vanellus vanellus*	12	0	0	0	0	2.40	0.04
ISF1	Dunlin	*Calidris alpina*	0	0	0	0	6	1.20	0.02
ISF1	Turnstone	*Arenaria interpres*	0	0	16	0	6	4.40	0.07
ISF1	Curlew	*Numenius arquata*	1	0	0	0	7	1.60	0.02
ISF1	Redshank	*Tringa totanus*	39	8	94	18	64	44.60	0.67

Sub-Sector ISF2. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISF2	Shelduck	*Tadorna tadorna*	14	0	12	8.67	0.07
ISF2	Mallard	*Anas platyrhynchos*	2	0	2	1.33	0.01
ISF2	Ringed plover	*Charadrius hiaticula*	0	9	0	3.00	0.02
ISF2	Lapwing	*Vanellus vanellus*	0	0	8	2.67	0.02
ISF2	Oystercatcher	*Haematopus ostralegus*	3	1	1	1.67	0.01
ISF2	Turnstone	*Arenaria interpres*	52	2	0	18.00	0.14
ISF2	Curlew	*Numenius arquata*	0	6	1	2.33	0.02
ISF2	Redshank	*Tringa totanus*	82	0	0	27.33	0.22

Sub-Sector ISF2. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISF2	Black-tailed godwit	*Limosa limosa*	0	0	3	113	29.00	0.23
ISF2	Mallard	*Anas platyrhynchos*	0	8	7	4	4.75	0.04
ISF2	Ringed plover	*Charadrius hiaticula*	0	0	8	30	9.50	0.07
ISF2	Golden plover	*Pluvialis apricaria*	0	0	136	37	43.25	0.34
ISF2	Lapwing	*Vanellus vanellus*	0	0	328	0	82.00	0.65
ISF2	Dunlin	*Calidris alpina*	0	13	68	109	47.50	0.37
ISF2	Bar-tailed godwit	*Limosa lapponica*	0	0	3	0	0.75	0.01
ISF2	Turnstone	*Arenaria interpres*	0	56	153	232	110.25	0.87
ISF2	Curlew	*Numenius arquata*	0	28	74	10	28.00	0.22
ISF2	Redshank	*Tringa totanus*	0	18	15	153	46.50	0.37

Sub-Sector ISF2. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISF2	Shelduck	*Tadorna tadorna*	0	0	3	0	32	7.00	0.06
ISF2	Teal	*Anas crecca*	0	0	2	0	0	0.40	0.00
ISF2	Mallard	*Anas platyrhynchos*	6	0	6	0	0	2.40	0.02
ISF2	Ringed plover	*Charadrius hiaticula*	4	0	0	0	5	1.80	0.01
ISF2	Lapwing	*Vanellus vanellus*	0	1400	180	0	0	316.00	2.49
ISF2	Dunlin	*Calidris alpina*	442	84	620	220	81	289.40	2.28
ISF2	Oystercatcher	*Haematopus ostralegus*	0	0	0	16	8	4.80	0.04
ISF2	Turnstone	*Arenaria interpres*	2	2	56	0	27	17.40	0.14
ISF2	Curlew	*Numenius arquata*	0	0	17	76	6	19.80	0.16
ISF2	Redshank	*Tringa totanus*	202	95	153	154	128	146.40	1.15

Sub-Sector ISF3. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISF3	Shelduck	*Tadorna tadorna*	11	11	6	9.33	0.15
ISF3	Mallard	*Anas platyrhynchos*	24	25	56	35.00	0.57
ISF3	Oystercatcher	*Haematopus ostralegus*	0	0	1	0.33	0.01
ISF3	Turnstone	*Arenaria interpres*	3	0	0	1.00	0.02
ISF3	Curlew	*Numenius arquata*	0	1	0	0.33	0.01
ISF3	Redshank	*Tringa totanus*	23	0	0	7.67	0.13

Sub-Sector ISF3. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISF3	Black-tailed godwit	*Limosa limosa*	2	0	1	74	19.25	0.32
ISF3	Mallard	*Anas platyrhynchos*	0	27	41	55	30.75	0.50
ISF3	Ringed plover	*Charadrius hiaticula*	2	3	1	1	1.75	0.03
ISF3	Golden plover	*Pluvialis apricaria*	169	16	98	0	70.75	1.16
ISF3	Lapwing	*Vanellus vanellus*	0	0	32	1	8.25	0.14
ISF3	Knot	*Calidris canutus*	0	3	0	0	0.75	0.01
ISF3	Dunlin	*Calidris alpina*	0	9	21	6	9.00	0.15
ISF3	Bar-tailed godwit	*Limosa lapponica*	0	0	2	0	0.50	0.01
ISF3	Oystercatcher	*Haematopus ostralegus*	0	1	0	0	0.25	0.00
ISF3	Turnstone	*Arenaria interpres*	0	13	6	36	13.75	0.23
ISF3	Curlew	*Numenius arquata*	6	0	8	4	4.50	0.07
ISF3	Redshank	*Tringa totanus*	12	1	28	155	49.00	0.80

Sub-Sector ISF3. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISF3	Black-tailed godwit	*Limosa limosa*	0	0	0	16	0	3.20	0.05
ISF3	Shelduck	*Tadorna tadorna*	0	0	2	0	0	0.40	0.01
ISF3	Mallard	*Anas platyrhynchos*	3	40	32	162	0	47.40	0.78
ISF3	Ringed plover	*Charadrius hiaticula*	0	0	0	59	0	11.80	0.19
ISF3	Lapwing	*Vanellus vanellus*	0	0	17	229	0	49.20	0.81
ISF3	Knot	*Calidris canutus*	0	0	0	5	0	1.00	0.02
ISF3	Dunlin	*Calidris alpina*	47	2	65	186	0	60.00	0.98
ISF3	Turnstone	*Arenaria interpres*	0	0	52	20	0	14.40	0.24
ISF3	Curlew	*Numenius arquata*	6	10	6	147	0	33.80	0.55
ISF3	Redshank	*Tringa totanus*	91	13	125	18	0	49.40	0.81

Sector ISG. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISG	Shelduck	*Tadorna tadorna*	8	10	0	6.00	0.02
ISG	Mallard	*Anas platyrhynchos*	28	26	23	25.67	0.08
ISG	Grey plover	*Pluvialis squatarola*	1	0	0	0.33	0.00
ISG	Bar-tailed godwit	*Limosa lapponica*	1	0	0	0.33	0.00
ISG	Oystercatcher	*Haematopus ostralegus*	2	0	1	1.00	0.00
ISG	Turnstone	*Arenaria interpres*	13	0	0	4.33	0.01
ISG	Curlew	*Numenius arquata*	3	0	2	1.67	0.01

Sector ISG. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISG	Black-tailed godwit	*Limosa limosa*	0	0	40	41	20.25	0.06
ISG	Shelduck	*Tadorna tadorna*	0	0	2	0	0.50	0.00
ISG	Teal	*Anas crecca*	0	0	22	24	11.50	0.04
ISG	Mallard	*Anas platyrhynchos*	0	59	63	89	52.75	0.17
ISG	Ringed plover	*Charadrius hiaticula*	0	1	1	26	7.00	0.02
ISG	Golden plover	*Pluvialis apricaria*	0	372	90	476	234.50	0.75
ISG	Grey plover	*Pluvialis squatarola*	0	1	0	1	0.50	0.00
ISG	Lapwing	*Vanellus vanellus*	0	0	0	30	7.50	0.02
ISG	Knot	*Calidris canutus*	0	1	0	7	2.00	0.01
ISG	Dunlin	*Calidris alpina*	0	4	6	188	49.50	0.16
ISG	Bar-tailed godwit	*Limosa lapponica*	0	2	4	5	2.75	0.01
ISG	Turnstone	*Arenaria interpres*	0	75	21	79	43.75	0.14
ISG	Curlew	*Numenius arquata*	0	134	89	63	71.50	0.23
ISG	Redshank	*Tringa totanus*	0	3	23	50	19.00	0.06

Sector ISG. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISG	Shelduck	*Tadorna tadorna*	0	0	5	10	0	3.00	0.01
ISG	Mallard	*Anas platyrhynchos*	114	300	24	0	0	87.60	0.28
ISG	Ringed plover	*Charadrius hiaticula*	31	0	26	0	0	11.40	0.04
ISG	Golden plover	*Pluvialis apricaria*	0	12	25	0	0	7.40	0.02
ISG	Lapwing	*Vanellus vanellus*	0	1476	140	0	0	323.20	1.04
ISG	Dunlin	*Calidris alpina*	44	371	482	269	0	233.20	0.75
ISG	Turnstone	*Arenaria interpres*	67	29	115	101	0	62.40	0.20
ISG	Curlew	*Numenius arquata*	1	4	18	23	0	9.20	0.03
ISG	Redshank	*Tringa totanus*	184	54	79	83	0	80.00	0.26

Sector ISH. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISH	Shelduck	*Tadorna tadorna*	27	6	27	20.00	0.04
ISH	Mallard	*Anas platyrhynchos*	25	20	31	25.33	0.05
ISH	Ringed plover	*Charadrius hiaticula*	22	0	0	7.33	0.01
ISH	Lapwing	*Vanellus vanellus*	0	2	0	0.67	0.00
ISH	Bar-tailed godwit	*Limosa lapponica*	2	0	0	0.67	0.00
ISH	Oystercatcher	*Haematopus ostralegus*	0	1	2	1.00	0.00
ISH	Turnstone	*Arenaria interpres*	45	0	0	15.00	0.03
ISH	Curlew	*Numenius arquata*	9	2	35	15.33	0.03
ISH	Redshank	*Tringa totanus*	12	2	0	4.67	0.01

Sector ISH. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISH	Black-tailed godwit	*Limosa limosa*	0	55	3	13	17.75	0.04
ISH	Shelduck	*Tadorna tadorna*	0	0	0	1	0.25	0.00
ISH	Wigeon	*Anas penelope*	0	0	2	0	0.50	0.00
ISH	Teal	*Anas crecca*	0	0	22	0	5.50	0.01
ISH	Mallard	*Anas platyrhynchos*	0	14	138	269	105.25	0.21
ISH	Ringed plover	*Charadrius hiaticula*	0	35	4	36	18.75	0.04
ISH	Golden plover	*Pluvialis apricaria*	0	35	73	61	42.25	0.08
ISH	Grey plover	*Pluvialis squatarola*	0	0	0	6	1.50	0.00
ISH	Lapwing	*Vanellus vanellus*	0	0	0	45	11.25	0.02
ISH	Knot	*Calidris canutus*	0	7	0	3	2.50	0.01
ISH	Sanderling	*Calidris alba*	0	5	0	0	1.25	0.00
ISH	Dunlin	*Calidris alpina*	0	35	44	57	34.00	0.07
ISH	Bar-tailed godwit	*Limosa lapponica*	0	0	14	15	7.25	0.01
ISH	Turnstone	*Arenaria interpres*	0	113	35	11	39.75	0.08
ISH	Curlew	*Numenius arquata*	0	263	247	114	156.00	0.31
ISH	Redshank	*Tringa totanus*	0	8	18	10	9.00	0.02

Sub-Sector ISH. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISH	Black-tailed godwit	*Limosa limosa*	0	1	0	0	0	0.20	0.00
ISH	Shelduck	*Tadorna tadorna*	0	0	6	6	0	2.40	0.00
ISH	Mallard	*Anas platyrhynchos*	117	131	7	53	0	61.60	0.12
ISH	Ringed plover	*Charadrius hiaticula*	0	1	73	0	0	14.80	0.03
ISH	Golden plover	*Pluvialis apricaria*	0	0	19	0	0	3.80	0.01
ISH	Lapwing	*Vanellus vanellus*	615	1064	3600	0	0	1055.80	2.11
ISH	Knot	*Calidris canutus*	6	0	4	0	0	2.00	0.00
ISH	Sanderling	*Calidris alba*	97	0	0	0	0	19.40	0.04
ISH	Dunlin	*Calidris alpina*	7	180	246	416	0	169.80	0.34
ISH	Bar-tailed godwit	*Limosa lapponica*	0	1	15	0	0	3.20	0.01
ISH	Turnstone	*Arenaria interpres*	13	542	47	53	0	131.00	0.26
ISH	Curlew	*Numenius arquata*	2	98	278	64	0	88.40	0.18
ISH	Redshank	*Tringa totanus*	28	25	44	48	0	29.00	0.06

Sector ISI. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISI	Shelduck	*Tadorna tadorna*	9	8	21	12.67	0.25
ISI	Mallard	*Anas platyrhynchos*	5	5	17	9.00	0.17
ISI	Ringed plover	*Charadrius hiaticula*	7	1	0	2.67	0.05
ISI	Oystercatcher	*Haematopus ostralegus*	4	1	1	2.00	0.04
ISI	Turnstone	*Arenaria interpres*	24	0	0	8.00	0.16
ISI	Curlew	*Numenius arquata*	0	3	0	1.00	0.02
ISI	Redshank	*Tringa totanus*	7	0	0	2.33	0.05

Sector ISI. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISI	Black-tailed godwit	*Limosa limosa*	0	24	1	0	6.25	0.12
ISI	Shelduck	*Tadorna tadorna*	4	0	0	0	0.00	0.00
ISI	Mallard	*Anas platyrhynchos*	1	0	1	2	1.00	0.02
ISI	Ringed plover	*Charadrius hiaticula*	0	4	0	0	1.00	0.02
ISI	Grey plover	*Pluvialis squatarola*	0	0	0	1	0.25	0.00
ISI	Lapwing	*Vanellus vanellus*	66	0	0	45	27.75	0.54
ISI	Sanderling	*Calidris alba*	0	3	0	0	0.75	0.01
ISI	Dunlin	*Calidris alpina*	0	0	12	38	12.50	0.24
ISI	Oystercatcher	*Haematopus ostralegus*	1	0	0	0	0.25	0.00
ISI	Turnstone	*Arenaria interpres*	0	17	24	0	10.25	0.20
ISI	Curlew	*Numenius arquata*	8	2	11	8	7.25	0.14
ISI	Redshank	*Tringa totanus*	34	6	30	26	24.00	0.47

Sector ISI. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISI	Shelduck	*Tadorna tadorna*	0	0	3	6	2	2.20	0.04
ISI	Mallard	*Anas platyrhynchos*	4	7	8	2	9	6.00	0.12
ISI	Ringed plover	*Charadrius hiaticula*	0	0	0	0	2	0.40	0.01
ISI	Lapwing	*Vanellus vanellus*	625	178	32	220	0	211.00	4.09
ISI	Dunlin	*Calidris alpina*	35	47	6	81	19	37.60	0.73
ISI	Turnstone	*Arenaria interpres*	5	0	0	0	1	1.20	0.02
ISI	Curlew	*Numenius arquata*	0	0	0	3	2	1.00	0.02
ISI	Redshank	*Tringa totanus*	28	25	45	57	42	39.40	0.76

Sub-Sector ISJJ. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISJJ	Black-tailed godwit	*Limosa limosa*	4	0	0	1.33	0.06
ISJJ	Shelduck	*Tadorna tadorna*	6	6	2	4.67	0.21
ISJJ	Teal	*Anas crecca*	6	0	0	2.00	0.09
ISJJ	Mallard	*Anas platyrhynchos*	6	2	8	5.33	0.24
ISJJ	Avocet	*Recurvirostra avosetta*	3	4	0	2.33	0.10
ISJJ	Oystercatcher	*Haematopus ostralegus*	0	0	2	0.67	0.03
ISJJ	Curlew	*Numenius arquata*	5	0	0	1.67	0.07
ISJJ	Redshank	*Tringa totanus*	5	0	12	5.67	0.25

Sub-Sector ISJJ. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISJJ	Black-tailed godwit	*Limosa limosa*	215	705	927	651	624.50	27.59
ISJJ	Teal	*Anas crecca*	0	0	16	2	4.50	0.20
ISJJ	Mallard	*Anas platyrhynchos*	0	0	0	30	7.50	0.33
ISJJ	Avocet	*Recurvirostra avosetta*	0	0	0	2	0.50	0.02
ISJJ	Grey plover	*Pluvialis squatarola*	0	0	0	1	0.25	0.01
ISJJ	Lapwing	*Vanellus vanellus*	211	178	0	12	100.25	4.43
ISJJ	Curlew	*Numenius arquata*	3	0	2	5	2.50	0.11
ISJJ	Redshank	*Tringa totanus*	0	0	0	15	3.75	0.17

Sub-Sector ISJJ. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISJJ	Teal	*Anas crecca*	13	8	62	26	8	23.40	1.03
ISJJ	Mallard	*Anas platyrhynchos*	0	14	14	18	16	12.40	0.55
ISJJ	Lapwing	*Vanellus vanellus*	224	62	10	0	0	59.20	2.62
ISJJ	Curlew	*Numenius arquata*	3	2	18	15	15	10.60	0.47
ISJJ	Redshank	*Tringa totanus*	14	10	25	11	4	12.80	0.57

Sub-Sector ISJ. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISJ	Shelduck	*Tadorna tadorna*	4	9	30	14.33	0.14
ISJ	Mallard	*Anas platyrhynchos*	6	27	0	11.00	0.11
ISJ	Curlew	*Numenius arquata*	0	1	34	11.67	0.12
ISJ	Redshank	*Tringa totanus*	0	0	1	0.33	0.00

Sub-Sector ISJ. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISJ	Black-tailed godwit	*Limosa limosa*	506	486	961	0	488.25	4.89
ISJ	Mallard	*Anas platyrhynchos*	2	0	0	0	0.50	0.01
ISJ	Ringed plover	*Charadrius hiaticula*	1	0	5	0	1.50	0.02
ISJ	Sanderling	*Calidris alba*	0	2	0	0	0.50	0.01
ISJ	Dunlin	*Calidris alpina*	6	0	110	124	60.00	0.60
ISJ	Oystercatcher	*Haematopus ostralegus*	0	1	0	0	0.25	0.00
ISJ	Turnstone	*Arenaria interpres*	0	11	16	7	8.50	0.09
ISJ	Curlew	*Numenius arquata*	13	6	10	6	8.75	0.09
ISJ	Redshank	*Tringa totanus*	12	30	100	28	42.50	0.43

Sub-Sector ISJ. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISJ	Shelduck	*Tadorna tadorna*	0	0	0	2	1	0.60	0.01
ISJ	Teal	*Anas crecca*	0	14	25	16	4	11.80	0.12
ISJ	Mallard	*Anas platyrhynchos*	0	0	14	22	4	8.00	0.08
ISJ	Lapwing	*Vanellus vanellus*	0	875	93	10	10	197.60	1.98
ISJ	Dunlin	*Calidris alpina*	3	149	223	128	0	125.00	1.25
ISJ	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	2	0.40	0.00
ISJ	Turnstone	*Arenaria interpres*	4	0	22	10	0	8.00	0.08
ISJ	Curlew	*Numenius arquata*	5	1	77	30	24	33.00	0.33
ISJ	Redshank	*Tringa totanus*	13	69	51	59	24	50.80	0.51

Sector ISK. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ISK	Shelduck	*Tadorna tadorna*	15	13	35	21.00	0.28
ISK	Mallard	*Anas platyrhynchos*	13	0	8	7.00	0.09
ISK	Oystercatcher	*Haematopus ostralegus*	3	0	1	1.33	0.02
ISK	Curlew	*Numenius arquata*	0	0	21	7.00	0.09
ISK	Redshank	*Tringa totanus*	7	0	0	2.33	0.03

Sector ISK. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ISK	Black-tailed godwit	*Limosa limosa*	137	69	0	29	58.75	0.78
ISK	Shelduck	*Tadorna tadorna*	21	0	0	65	21.50	0.29
ISK	Wigeon	*Anas penelope*	0	1	0	0	0.25	0.00
ISK	Mallard	*Anas platyrhynchos*	0	0	13	36	12.25	0.16
ISK	Ringed plover	*Charadrius hiaticula*	4	39	10	18	17.75	0.24
ISK	Dunlin	*Calidris alpina*	0	61	0	28	22.25	0.30
ISK	Turnstone	*Arenaria interpres*	0	6	8	5	4.75	0.06
ISK	Curlew	*Numenius arquata*	39	14	51	37	35.25	0.47
ISK	Redshank	*Tringa totanus*	20	82	100	68	67.50	0.90

Sector ISK. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ISK	Black-tailed godwit	*Limosa limosa*	31	20	22	14	9	19.20	0.26
ISK	Shelduck	*Tadorna tadorna*	5	18	53	101	65	48.40	0.64
ISK	Teal	*Anas crecca*	12	47	107	18	0	36.80	0.49
ISK	Mallard	*Anas platyrhynchos*	93	38	18	22	0	34.20	0.45
ISK	Ringed plover	*Charadrius hiaticula*	0	0	0	7	1	1.60	0.02
ISK	Lapwing	*Vanellus vanellus*	56	193	405	59	0	142.60	1.89
ISK	Dunlin	*Calidris alpina*	53	197	160	107	36	110.60	1.47
ISK	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	2	0.40	0.01
ISK	Turnstone	*Arenaria interpres*	5	2	0	0	0	1.40	0.02
ISK	Curlew	*Numenius arquata*	27	24	14	19	0	16.80	0.22
ISK	Redshank	*Tringa totanus*	79	58	168	118	166	117.80	1.56

Sector MSA. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
MSA	Black-tailed godwit	*Limosa limosa*	4	0	0	1.33	0.00
MSA	Shelduck	*Tadorna tadorna*	180	16	85	93.67	0.21
MSA	Mallard	*Anas platyrhynchos*	4	0	33	12.33	0.03
MSA	Ringed plover	*Charadrius hiaticula*	21	207	1	76.33	0.17
MSA	Golden plover	*Pluvialis apricaria*	213	0	0	71.00	0.16
MSA	Grey plover	*Pluvialis squatarola*	5	104	0	36.33	0.08
MSA	Knot	*Calidris canutus*	34	0	0	11.33	0.03
MSA	Oystercatcher	*Haematopus ostralegus*	14	24	5	14.33	0.03
MSA	Turnstone	*Arenaria interpres*	10	2	0	4.00	0.01
MSA	Curlew	*Numenius arquata*	55	7	68	43.33	0.10
MSA	Redshank	*Tringa totanus*	496	0	0	165.33	0.38

Sector MSA. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
MSA	Black-tailed godwit	*Limosa limosa*	3	0	0	0	0.75	0.00
MSA	Shelduck	*Tadorna tadorna*	84	95	0	552	182.75	0.42
MSA	Mallard	*Anas platyrhynchos*	0	25	2	2	7.25	0.02
MSA	Ringed plover	*Charadrius hiaticula*	11	157	24	93	71.25	0.16
MSA	Golden plover	*Pluvialis apricaria*	0	0	0	291	72.75	0.17
MSA	Grey plover	*Pluvialis squatarola*	0	0	0	96	24.00	0.05
MSA	Knot	*Calidris canutus*	0	0	0	15	3.75	0.01
MSA	Dunlin	*Calidris alpina*	554	450	21	34	264.75	0.60
MSA	Bar-tailed godwit	*Limosa lapponica*	0	0	1	1085	271.50	0.62
MSA	Oystercatcher	*Haematopus ostralegus*	7	3	1	16	6.75	0.02
MSA	Turnstone	*Arenaria interpres*	21	7	0	0	7.00	0.02
MSA	Curlew	*Numenius arquata*	130	112	129	180	137.75	0.31
MSA	Redshank	*Tringa totanus*	237	457	139	416	312.25	0.71

Sector MSA. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
MSA	Black-tailed godwit	*Limosa limosa*	0	485	524	840	653	500.40	1.14
MSA	Shelduck	*Tadorna tadorna*	529	299	293	318	337	355.20	0.81
MSA	Mallard	*Anas platyrhynchos*	25	0	0	4	6	7.00	0.02
MSA	Ringed plover	*Charadrius hiaticula*	0	0	0	29	13	8.40	0.02
MSA	Golden plover	*Pluvialis apricaria*	4840	5495	475	4000	2000	3362.00	7.66
MSA	Grey plover	*Pluvialis squatarola*	0	10	0	50	12	14.40	0.03
MSA	Lapwing	*Vanellus vanellus*	3100	2668	670	1430	0	1573.60	3.59
MSA	Dunlin	*Calidris alpina*	491	271	662	1934	476	766.80	1.75
MSA	Bar-tailed godwit	*Limosa lapponica*	1471	863	1216	320	12	776.40	1.77
MSA	Oystercatcher	*Haematopus ostralegus*	0	40	3	47	8	19.60	0.04
MSA	Turnstone	*Arenaria interpres*	0	0	42	0	39	16.20	0.04
MSA	Curlew	*Numenius arquata*	94	65	83	0	161	80.60	0.18
MSA	Redshank	*Tringa totanus*	173	198	203	221	418	242.60	0.55

Sector MSB. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
MSB	Ringed plover	*Charadrius hiaticula*	0	3	0	1.00	0.00
MSB	Knot	*Calidris canutus*	56	0	0	18.67	0.03
MSB	Oystercatcher	*Haematopus ostralegus*	9	9	8	8.67	0.01
MSB	Turnstone	*Arenaria interpres*	1	0	0	0.33	0.00
MSB	Curlew	*Numenius arquata*	1	0	0	0.33	0.00
MSB	Redshank	*Tringa totanus*	4	0	0	1.33	0.00

Sector MSB. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
MSB	Grey plover	*Pluvialis squatarola*	0	0	0	3	0.75	0.00
MSB	Dunlin	*Calidris alpina*	0	0	0	250	62.50	0.09
MSB	Oystercatcher	*Haematopus ostralegus*	0	2	33	63	24.50	0.04
MSB	Turnstone	*Arenaria interpres*	0	2	0	0	0.50	0.00
MSB	Curlew	*Numenius arquata*	0	1	10	6	4.25	0.01
MSB	Redshank	*Tringa totanus*	0	1	9	36	11.50	0.02

Sector MSB. Winter monthly counts and densities

			November	December	January	February	March	Average	
MSB	Golden plover	*Pluvialis apricaria*	6	0	0	0	0	1.20	0.00
MSB	Grey plover	*Pluvialis squatarola*	0	4	0	0	0	0.80	0.00
MSB	Knot	*Calidris canutus*	0	0	240	0	0	48.00	0.07
MSB	Dunlin	*Calidris alpina*	1380	3	30	0	0	282.60	0.41
MSB	Bar-tailed godwit	*Limosa lapponica*	19	36	0	0	0	11.00	0.02
MSB	Oystercatcher	*Haematopus ostralegus*	20	6	10	0	7	8.60	0.01
MSB	Turnstone	*Arenaria interpres*	0	5	0	0	0	1.00	0.00
MSB	Curlew	*Numenius arquata*	0	4	0	0	0	0.80	0.00
MSB	Redshank	*Tringa totanus*	0	15	4	0	0	3.80	0.01

Sector MSC. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
MSC	Black-tailed godwit	*Limosa limosa*	2	0	0	0.67	0.00
MSC	Brent goose (dark-bellied)	*Branta bernicla bernicla*	3	0	0	1.00	0.00
MSC	Shelduck	*Tadorna tadorna*	4	0	0	1.33	0.00
MSC	Mallard	*Anas platyrhynchos*	6	0	8	4.67	0.00
MSC	Ringed plover	*Charadrius hiaticula*	21	185	0	68.67	0.02
MSC	Golden plover	*Pluvialis apricaria*	35	0	0	11.67	0.00
MSC	Grey plover	*Pluvialis squatarola*	129	73	0	67.33	0.02
MSC	Knot	*Calidris canutus*	94	0	0	31.33	0.01
MSC	Sanderling	*Calidris alba*	128	660	0	262.67	0.07
MSC	Oystercatcher	*Haematopus ostralegus*	112	132	124	122.67	0.03
MSC	Turnstone	*Arenaria interpres*	18	11	0	9.67	0.00
MSC	Curlew	*Numenius arquata*	17	12	16	15.00	0.00
MSC	Redshank	*Tringa totanus*	85	4	2	30.33	0.01

Sector MSC. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
MSC	Brent goose (dark-bellied)	*Branta bernicla bernicla*	0	0	0	57	14.25	0.00
MSC	Shelduck	*Tadorna tadorna*	7	0	0	15	5.50	0.00
MSC	Wigeon	*Anas penelope*	0	5	4	0	2.25	0.00
MSC	Teal	*Anas crecca*	0	13	0	0	3.25	0.00
MSC	Mallard	*Anas platyrhynchos*	0	22	4	7	8.25	0.00
MSC	Ringed plover	*Charadrius hiaticula*	0	266	134	86	121.50	0.03
MSC	Golden plover	*Pluvialis apricaria*	0	410	93	420	276.67	0.07
MSC	Grey plover	*Pluvialis squatarola*	0	16	330	138	121.00	0.03
MSC	Lapwing	*Vanellus vanellus*	0	0	0	4	1.00	0.00
MSC	Knot	*Calidris canutus*	72	530	6200	3140	2485.50	0.65
MSC	Sanderling	*Calidris alba*	2	146	146	59	98.00	0.03
MSC	Dunlin	*Calidris alpina*	9	153	240	105	126.75	0.03
MSC	Bar-tailed godwit	*Limosa lapponica*	79	33	670	72	213.50	0.06
MSC	Oystercatcher	*Haematopus ostralegus*	159	431	540	310	360.00	0.09
MSC	Turnstone	*Arenaria interpres*	23	114	88	53	69.50	0.02
MSC	Curlew	*Numenius arquata*	59	26	53	39	44.25	0.01
MSC	Redshank	*Tringa totanus*	8	265	260	131	166.00	0.04

Sector MSC. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
MSC	Black-tailed godwit	*Limosa limosa*	0	8	0	0	0	1.60	0.00
MSC	Brent goose (dark-bellied)	*Branta bernicla bernicla*	203	134	0	0	8	69.00	0.02
MSC	Shelduck	*Tadorna tadorna*	55	228	163	0	86	106.40	0.03
MSC	Wigeon	*Anas penelope*	3	0	0	0	6	1.80	0.00
MSC	Teal	*Anas crecca*	5	0	0	0	0	1.00	0.00
MSC	Mallard	*Anas platyrhynchos*	20	14	34	0	4	14.40	0.00
MSC	Ringed plover	*Charadrius hiaticula*	112	143	74	0	52	76.20	0.02
MSC	Golden plover	*Pluvialis apricaria*	1900	1630	41	0	0	714.20	0.19
MSC	Grey plover	*Pluvialis squatarola*	106	77	138	0	64	77.00	0.02
MSC	Lapwing	*Vanellus vanellus*	260	359	4	0	1	124.80	0.03
MSC	Knot	*Calidris canutus*	11240	9340	1080	0	810	4494.00	1.18
MSC	Sanderling	*Calidris alba*	89	162	104	0	0	71.00	0.02
MSC	Dunlin	*Calidris alpina*	131	234	245	0	177	157.40	0.04
MSC	Bar-tailed godwit	*Limosa lapponica*	97	231	362	0	129	163.80	0.04
MSC	Oystercatcher	*Haematopus ostralegus*	264	271	180	0	231	189.20	0.05
MSC	Turnstone	*Arenaria interpres*	64	87	52	0	71	54.80	0.01
MSC	Curlew	*Numenius arquata*	36	40	16	0	34	25.20	0.01
MSC	Redshank	*Tringa totanus*	135	80	128	0	143	97.20	0.03

Sector MSD. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
MSD	Mallard	*Anas platyrhynchos*	54	0	0	18.00	0.06
MSD	Ringed plover	*Charadrius hiaticula*	26	0	0	8.67	0.03
MSD	Oystercatcher	*Haematopus ostralegus*	220	0	0	73.33	0.24
MSD	Turnstone	*Arenaria interpres*	3	0	0	1.00	0.00
MSD	Redshank	*Tringa totanus*	80	0	0	26.67	0.09

There were no observations recorded at Sector MSD during the autumn or winter periods.

Sub-Sector MSE1. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
MSE1	Ringed plover	*Charadrius hiaticula*	6	0	0	2.00	0.01
MSE1	Redshank	*Tringa totanus*	20	14	0	11.33	0.03

There were no observations recorded at Sub-Sector MSE1 during the autumn or winter periods.

Sub-Sector MSE2. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
MSE2	Ringed plover	*Charadrius hiaticula*	2	38	24	21.33	0.05
MSE2	Sanderling	*Calidris alba*	0	12	0	4.00	0.01
MSE2	Oystercatcher	*Haematopus ostralegus*	5	48	0	17.67	0.05
MSE2	Curlew	*Numenius arquata*	1	0	0	0.33	0.00
MSE2	Redshank	*Tringa totanus*	2	4	0	2.00	0.01

Sub-Sector MSE2. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
MSE2	Ringed plover	*Charadrius hiaticula*	0	53	9	0	15.50	0.04
MSE2	Grey plover	*Pluvialis squatarola*	0	3	0	24	6.75	0.02
MSE2	Lapwing	*Vanellus vanellus*	0	164	0	16	45.00	0.12
MSE2	Knot	*Calidris canutus*	0	14	0	0	3.50	0.01
MSE2	Sanderling	*Calidris alba*	0	26	12	0	9.50	0.02
MSE2	Dunlin	*Calidris alpina*	0	118	3	0	30.25	0.08
MSE2	Oystercatcher	*Haematopus ostralegus*	83	11	0	2	24.00	0.06
MSE2	Turnstone	*Arenaria interpres*	0	27	0	0	6.75	0.02
MSE2	Curlew	*Numenius arquata*	11	0	0	3	3.50	0.01
MSE2	Redshank	*Tringa totanus*	8	19	4	8	9.75	0.03

Sub-Sector MSE2. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
MSE2	Brent goose (dark-bellied)	*Branta bernicla bernicla*	42	0	11	0	0	10.60	0.03
MSE2	Shelduck	*Tadorna tadorna*	0	4	0	0	0	0.80	0.00
MSE2	Ringed plover	*Charadrius hiaticula*	11	0	0	0	0	2.20	0.01
MSE2	Golden plover	*Pluvialis apricaria*	2	0	0	0	0	0.40	0.00
MSE2	Grey plover	*Pluvialis squatarola*	18	0	28	0	14	12.00	0.03
MSE2	Lapwing	*Vanellus vanellus*	456	0	0	0	0	91.20	0.23
MSE2	Knot	*Calidris canutus*	0	0	560	3200	220	796.00	2.04
MSE2	Dunlin	*Calidris alpina*	25	16	32	0	28	20.20	0.05
MSE2	Oystercatcher	*Haematopus ostralegus*	0	0	0	24	18	8.40	0.02
MSE2	Turnstone	*Arenaria interpres*	2	0	27	1	2	6.40	0.02
MSE2	Curlew	*Numenius arquata*	2	6	24	2	12	9.20	0.02
MSE2	Redshank	*Tringa totanus*	29	54	17	21	11	26.40	0.07

Sector MSF. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
MSF	Brent goose (dark-bellied)	*Branta bernicla bernicla*	24	28	0	17.33	0.05
MSF	Shelduck	*Tadorna tadorna*	0	12	0	4.00	0.01
MSF	Teal	*Anas crecca*	0	1	0	0.33	0.00
MSF	Ringed plover	*Charadrius hiaticula*	0	0	6	2.00	0.01
MSF	Grey plover	*Pluvialis squatarola*	0	6	0	2.00	0.01
MSF	Sanderling	*Calidris alba*	0	18	0	6.00	0.02
MSF	Bar-tailed godwit	*Limosa lapponica*	3	0	0	1.00	0.00
MSF	Oystercatcher	*Haematopus ostralegus*	512	426	478	472.00	1.42
MSF	Turnstone	*Arenaria interpres*	4	0	3	2.33	0.01
MSF	Curlew	*Numenius arquata*	11	3	0	4.67	0.01
MSF	Redshank	*Tringa totanus*	27	3	0	10.00	0.03

Sector MSF. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
MSF	Black-tailed godwit	*Limosa limosa*	0	2	0	0	0.50	0.00
MSF	Brent goose (dark-bellied)	*Branta bernicla bernicla*	0	0	0	60	15.00	0.05
MSF	Shelduck	*Tadorna tadorna*	1	7	0	25	8.25	0.02
MSF	Wigeon	*Anas penelope*	0	0	49	44	23.25	0.07
MSF	Teal	*Anas crecca*	0	0	18	0	4.50	0.01
MSF	Mallard	*Anas platyrhynchos*	0	0	0	10	2.50	0.01
MSF	Ringed plover	*Charadrius hiaticula*	0	22	0	0	5.50	0.02
MSF	Golden plover	*Pluvialis apricaria*	740	280	745	96	465.25	1.40
MSF	Grey plover	*Pluvialis squatarola*	2	108	17	77	51.00	0.15
MSF	Lapwing	*Vanellus vanellus*	0	116	0	12	32.00	0.10
MSF	Knot	*Calidris canutus*	87	0	0	798	221.25	0.67
MSF	Dunlin	*Calidris alpina*	142	175	6	108	107.75	0.33
MSF	Bar-tailed godwit	*Limosa lapponica*	2	6	6	14	7.00	0.02
MSF	Oystercatcher	*Haematopus ostralegus*	1109	2400	574	640	1180.75	3.56
MSF	Turnstone	*Arenaria interpres*	0	19	2	6	6.75	0.02
MSF	Curlew	*Numenius arquata*	0	16	74	29	29.75	0.09
MSF	Redshank	*Tringa totanus*	220	68	101	126	128.75	0.39

Sector MSF. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
MSF	Pink-footed goose	*Anser brachyrhynchus*	5	0	0	0	0	1.00	0.00
MSF	Brent goose (dark-bellied)	*Branta bernicla bernicla*	803	4	610	732	82	446.20	1.35
MSF	Shelduck	*Tadorna tadorna*	102	266	59	54	28	101.80	0.31
MSF	Wigeon	*Anas penelope*	300	86	0	0	0	77.20	0.23
MSF	Teal	*Anas crecca*	88	97	0	0	0	37.00	0.11
MSF	Mallard	*Anas platyrhynchos*	5	4	0	4	7	4.00	0.01
MSF	Golden plover	*Pluvialis apricaria*	1700	1250	2300	18	0	1053.60	3.18
MSF	Grey plover	*Pluvialis squatarola*	64	128	73	116	168	109.80	0.33
MSF	Lapwing	*Vanellus vanellus*	5000	5450	5800	81	0	3266.20	9.86
MSF	Knot	*Calidris canutus*	5500	420	7300	3600	1200	3604.00	10.88
MSF	Sanderling	*Calidris alba*	0	26	4	0	0	6.00	0.02
MSF	Dunlin	*Calidris alpina*	301	380	236	155	230	260.40	0.79
MSF	Bar-tailed godwit	*Limosa lapponica*	0	18	29	27	22	19.20	0.06
MSF	Oystercatcher	*Haematopus ostralegus*	1020	980	715	725	1100	908.00	2.74
MSF	Turnstone	*Arenaria interpres*	16	13	11	22	13	15.00	0.05
MSF	Curlew	*Numenius arquata*	66	98	27	31	66	57.60	0.17
MSF	Redshank	*Tringa totanus*	186	248	185	237	160	203.20	0.61

Sector OSA. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
OSA	Shelduck	*Tadorna tadorna*	5	9	2	5.33	0.01
OSA	Mallard	*Anas platyrhynchos*	4	2	0	2.00	0.00
OSA	Ringed plover	*Charadrius hiaticula*	0	2	0	0.67	0.00
OSA	Sanderling	*Calidris alba*	1	12	0	4.33	0.01
OSA	Dunlin	*Calidris alpina*	9	8	0	5.67	0.01
OSA	Oystercatcher	*Haematopus ostralegus*	203	130	14	115.67	0.27
OSA	Curlew	*Numenius arquata*	2	8	2	4.00	0.01
OSA	Redshank	*Tringa totanus*	27	5	8	13.33	0.03

Sector OSA. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
OSA	Shelduck	*Tadorna tadorna*	1	0	0	0	0.25	0.00
OSA	Teal	*Anas crecca*	3	0	0	0	0.75	0.00
OSA	Ringed plover	*Charadrius hiaticula*	4	6	7	0	4.25	0.01
OSA	Golden plover	*Pluvialis apricaria*	294	1480	0	57	457.75	1.09
OSA	Grey plover	*Pluvialis squatarola*	0	15	11	3	7.25	0.02
OSA	Lapwing	*Vanellus vanellus*	0	188	0	6	48.50	0.12
OSA	Sanderling	*Calidris alba*	0	7	0	0	1.75	0.00
OSA	Dunlin	*Calidris alpina*	97	86	48	4	58.75	0.14
OSA	Oystercatcher	*Haematopus ostralegus*	18	216	12	0	61.50	0.15
OSA	Turnstone	*Arenaria interpres*	0	7	0	0	1.75	0.00
OSA	Curlew	*Numenius arquata*	31	12	19	12	18.50	0.04
OSA	Redshank	*Tringa totanus*	14	21	41	66	35.50	0.08

Sector OSA. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
OSA	Brent goose (dark-bellied)	*Branta bernicla bernicla*	32	28	259	315	1	127.00	0.30
OSA	Shelduck	*Tadorna tadorna*	11	66	66	4	2	29.80	0.07
OSA	Wigeon	*Anas penelope*	0	30	0	0	0	6.00	0.01
OSA	Teal	*Anas crecca*	0	0	0	0	12	2.40	0.01
OSA	Mallard	*Anas platyrhynchos*	0	0	0	0	2	0.40	0.00
OSA	Ringed plover	*Charadrius hiaticula*	7	0	0	0	0	1.40	0.00
OSA	Golden plover	*Pluvialis apricaria*	0	510	1100	60	0	334.00	0.79
OSA	Grey plover	*Pluvialis squatarola*	38	6	14	42	12	22.40	0.05
OSA	Lapwing	*Vanellus vanellus*	0	1600	1400	24	0	604.80	1.43
OSA	Knot	*Calidris canutus*	0	14	2100	403	1	503.60	1.19
OSA	Sanderling	*Calidris alba*	62	0	0	0	0	12.40	0.03
OSA	Dunlin	*Calidris alpina*	51	25	87	83	0	49.20	0.12
OSA	Bar-tailed godwit	*Limosa lapponica*	16	0	0	12	0	5.60	0.01
OSA	Oystercatcher	*Haematopus ostralegus*	128	129	278	373	124	206.40	0.49
OSA	Turnstone	*Arenaria interpres*	2	0	5	5	0	2.40	0.01
OSA	Curlew	*Numenius arquata*	27	13	16	31	6	18.60	0.04
OSA	Redshank	*Tringa totanus*	94	109	41	74	35	70.60	0.17

Sector OSB. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
OSB	Shelduck	*Tadorna tadorna*	10	14	8	10.67	0.01
OSB	Teal	*Anas crecca*	0	1	0	0.33	0.00
OSB	Mallard	*Anas platyrhynchos*	8	7	0	5.00	0.01
OSB	Ringed plover	*Charadrius hiaticula*	4	184	0	62.67	0.07
OSB	Grey plover	*Pluvialis squatarola*	0	1	0	0.33	0.00
OSB	Sanderling	*Calidris alba*	58	162	0	73.33	0.08
OSB	Dunlin	*Calidris alpina*	54	400	0	151.33	0.18
OSB	Bar-tailed godwit	*Limosa lapponica*	6	0	0	2.00	0.00
OSB	Oystercatcher	*Haematopus ostralegus*	99	93	78	90.00	0.10
OSB	Curlew	*Numenius arquata*	2	1	1	1.33	0.00
OSB	Redshank	*Tringa totanus*	14	2	1	5.67	0.01

Sector OSB. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
OSB	Brent goose (dark-bellied)	*Branta bernicla bernicla*	0	0	0	22	5.50	0.01
OSB	Shelduck	*Tadorna tadorna*	0	0	7	417	106.00	0.12
OSB	Wigeon	*Anas penelope*	0	0	118	12	32.50	0.04
OSB	Teal	*Anas crecca*	0	0	80	75	38.75	0.04
OSB	Mallard	*Anas platyrhynchos*	3	78	60	41	45.50	0.05
OSB	Ringed plover	*Charadrius hiaticula*	0	18	5	0	5.75	0.01
OSB	Golden plover	*Pluvialis apricaria*	15	630	105	285	258.75	0.30
OSB	Grey plover	*Pluvialis squatarola*	0	92	1	0	23.25	0.03
OSB	Lapwing	*Vanellus vanellus*	0	154	0	0	38.50	0.04
OSB	Knot	*Calidris canutus*	0	0	0	320	80.00	0.09
OSB	Sanderling	*Calidris alba*	0	16	0	0	4.00	0.00
OSB	Dunlin	*Calidris alpina*	40	480	2	147	167.25	0.19
OSB	Bar-tailed godwit	*Limosa lapponica*	0	16	0	12	7.00	0.01
OSB	Oystercatcher	*Haematopus ostralegus*	674	1300	620	250	711.00	0.82
OSB	Turnstone	*Arenaria interpres*	0	5	0	0	1.25	0.00
OSB	Curlew	*Numenius arquata*	5	110	19	7	35.25	0.04
OSB	Redshank	*Tringa totanus*	10	0	1	9	5.00	0.01

Sector OSB. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
OSB	Pink-footed goose	*Anser brachyrhynchus*	0	9	0	0	0	1.80	0.00
OSB	Brent goose (dark-bellied)	*Branta bernicla bernicla*	80	640	7	0	0	145.40	0.17
OSB	Shelduck	*Tadorna tadorna*	12	91	2	3	4	22.40	0.03
OSB	Wigeon	*Anas penelope*	76	0	0	0	0	15.20	0.02
OSB	Teal	*Anas crecca*	130	19	28	0	34	42.20	0.05
OSB	Mallard	*Anas platyrhynchos*	33	28	35	0	6	20.40	0.02
OSB	Ringed plover	*Charadrius hiaticula*	0	0	1	0	0	0.20	0.00
OSB	Golden plover	*Pluvialis apricaria*	2500	400	900	200	136	827.20	0.96
OSB	Grey plover	*Pluvialis squatarola*	0	71	60	59	11	40.20	0.05
OSB	Lapwing	*Vanellus vanellus*	580	0	585	0	0	233.00	0.27
OSB	Knot	*Calidris canutus*	0	1900	4400	0	30	1266.00	1.47
OSB	Sanderling	*Calidris alba*	0	5	0	170	0	35.00	0.04
OSB	Dunlin	*Calidris alpina*	0	280	350	100	450	236.00	0.27
OSB	Bar-tailed godwit	*Limosa lapponica*	0	32	80	0	0	22.40	0.03
OSB	Oystercatcher	*Haematopus ostralegus*	0	9	204	82	140	87.00	0.10
OSB	Turnstone	*Arenaria interpres*	0	0	0	1	0	0.20	0.00
OSB	Curlew	*Numenius arquata*	3	5	34	2	2	9.20	0.01
OSB	Redshank	*Tringa totanus*	58	96	107	37	23	64.20	0.07

Sector OSC. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
OSC	Shelduck	*Tadorna tadorna*	2	0	0	0.67	0.00
OSC	Mallard	*Anas platyrhynchos*	5	2	0	2.33	0.00
OSC	Ringed plover	*Charadrius hiaticula*	0	17	0	5.67	0.01
OSC	Dunlin	*Calidris alpina*	0	33	0	11.00	0.02
OSC	Oystercatcher	*Haematopus ostralegus*	0	4	2	2.00	0.00
OSC	Curlew	*Numenius arquata*	0	3	0	1.00	0.00
OSC	Redshank	*Tringa totanus*	4	0	0	1.33	0.00

Sector OSC. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
OSC	Black-tailed godwit	*Limosa limosa*	0	4	0	0	1.00	0.00
OSC	Shelduck	*Tadorna tadorna*	0	7	0	62	17.25	0.03
OSC	Teal	*Anas crecca*	0	14	1	0	3.75	0.01
OSC	Ringed plover	*Charadrius hiaticula*	2	13	0	0	3.75	0.01
OSC	Golden plover	*Pluvialis apricaria*	0	930	0	0	232.50	0.37
OSC	Lapwing	*Vanellus vanellus*	0	240	0	0	60.00	0.09
OSC	Sanderling	*Calidris alba*	0	12	0	0	3.00	0.00
OSC	Dunlin	*Calidris alpina*	0	80	0	0	20.00	0.03
OSC	Bar-tailed godwit	*Limosa lapponica*	0	0	1	0	0.25	0.00
OSC	Oystercatcher	*Haematopus ostralegus*	2	68	6	69	36.25	0.06
OSC	Turnstone	*Arenaria interpres*	0	2	0	0	0.50	0.00
OSC	Curlew	*Numenius arquata*	48	40	27	3	29.50	0.05
OSC	Redshank	*Tringa totanus*	0	12	0	7	4.75	0.01

Sector OSC. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
OSC	Brent goose (dark-bellied)	*Branta bernicla bernicla*	83	950	2	0	0	207.00	0.33
OSC	Shelduck	*Tadorna tadorna*	54	0	8	8	6	15.20	0.02
OSC	Wigeon	*Anas penelope*	6	5	0	0	0	2.20	0.00
OSC	Teal	*Anas crecca*	0	2	0	0	0	0.40	0.00
OSC	Mallard	*Anas platyrhynchos*	2	8	4	0	4	3.60	0.01
OSC	Ringed plover	*Charadrius hiaticula*	0	7	0	0	0	1.40	0.00
OSC	Golden plover	*Pluvialis apricaria*	500	0	0	0	0	100.00	0.16
OSC	Grey plover	*Pluvialis squatarola*	0	0	47	0	0	9.40	0.01
OSC	Lapwing	*Vanellus vanellus*	94	0	900	0	0	198.80	0.31
OSC	Knot	*Calidris canutus*	0	3400	600	1100	0	1020.00	1.61
OSC	Dunlin	*Calidris alpina*	0	260	0	80	21	72.20	0.11
OSC	Oystercatcher	*Haematopus ostralegus*	0	0	5	0	2	1.40	0.00
OSC	Curlew	*Numenius arquata*	4	0	102	0	0	21.20	0.03
OSC	Redshank	*Tringa totanus*	53	17	27	8	6	22.20	0.04

Sector OSD. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
OSD	Shelduck	*Tadorna tadorna*	9	11	9	9.67	0.03
OSD	Teal	*Anas crecca*	46	0	0	15.33	0.04
OSD	Mallard	*Anas platyrhynchos*	2	0	4	2.00	0.01
OSD	Ringed plover	*Charadrius hiaticula*	5	24	4	11.00	0.03
OSD	Golden plover	*Pluvialis apricaria*	1	0	0	0.33	0.00
OSD	Grey plover	*Pluvialis squatarola*	3	6	0	3.00	0.01
OSD	Knot	*Calidris canutus*	260	18	0	92.67	0.26
OSD	Sanderling	*Calidris alba*	4	56	0	20.00	0.06
OSD	Dunlin	*Calidris alpina*	45	22	0	22.33	0.06
OSD	Bar-tailed godwit	*Limosa lapponica*	3	0	0	1.00	0.00
OSD	Oystercatcher	*Haematopus ostralegus*	30	26	13	23.00	0.06
OSD	Turnstone	*Arenaria interpres*	0	1	0	0.33	0.00
OSD	Curlew	*Numenius arquata*	4	2	9	5.00	0.01
OSD	Redshank	*Tringa totanus*	130	4	2	45.33	0.13

Sector OSD. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
OSD	Black-tailed godwit	*Limosa limosa*	6	0	0	0	1.50	0.00
OSD	Shelduck	*Tadorna tadorna*	5	0	0	71	19.00	0.05
OSD	Wigeon	*Anas penelope*	0	2	0	0	0.50	0.00
OSD	Teal	*Anas crecca*	1	7	0	4	3.00	0.01
OSD	Mallard	*Anas platyrhynchos*	0	0	2	0	0.50	0.00
OSD	Ringed plover	*Charadrius hiaticula*	2	45	4	5	14.00	0.04
OSD	Golden plover	*Pluvialis apricaria*	0	1700	800	37	634.25	1.78
OSD	Grey plover	*Pluvialis squatarola*	0	53	44	54	37.75	0.11
OSD	Lapwing	*Vanellus vanellus*	0	110	87	1	49.50	0.14
OSD	Knot	*Calidris canutus*	0	160	68	374	150.50	0.42
OSD	Sanderling	*Calidris alba*	0	42	0	0	10.50	0.03
OSD	Dunlin	*Calidris alpina*	170	330	105	83	172.00	0.48
OSD	Bar-tailed godwit	*Limosa lapponica*	5	65	65	43	44.50	0.12
OSD	Oystercatcher	*Haematopus ostralegus*	32	760	645	63	375.00	1.05
OSD	Turnstone	*Arenaria interpres*	0	11	2	0	3.25	0.01
OSD	Curlew	*Numenius arquata*	135	170	35	85	106.25	0.30
OSD	Redshank	*Tringa totanus*	70	130	140	210	137.50	0.39

Sector OSD. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
OSD	Pink-footed goose	*Anser brachyrhynchus*	55	0	0	0	0	11.00	0.03
OSD	Brent goose (dark-bellied)	*Branta bernicla bernicla*	72	272	144	364	6	171.60	0.48
OSD	Shelduck	*Tadorna tadorna*	165	232	238	47	17	139.80	0.39
OSD	Wigeon	*Anas penelope*	5	9	8	33	0	11.00	0.03
OSD	Teal	*Anas crecca*	18	70	2	2	0	18.40	0.05
OSD	Mallard	*Anas platyrhynchos*	0	0	9	0	0	1.80	0.01
OSD	Ringed plover	*Charadrius hiaticula*	28	1	15	3	36	16.60	0.05
OSD	Golden plover	*Pluvialis apricaria*	0	1000	500	0	0	300.00	0.84
OSD	Grey plover	*Pluvialis squatarola*	62	35	32	22	44	39.00	0.11
OSD	Lapwing	*Vanellus vanellus*	550	1500	0	0	0	410.00	1.15
OSD	Knot	*Calidris canutus*	285	0	192	3000	1140	923.40	2.59
OSD	Sanderling	*Calidris alba*	9	3	9	3	65	17.80	0.05
OSD	Dunlin	*Calidris alpina*	550	800	214	1000	78	528.40	1.48
OSD	Bar-tailed godwit	*Limosa lapponica*	14	3	12	32	0	12.20	0.03
OSD	Oystercatcher	*Haematopus ostralegus*	38	1	8	4	22	14.60	0.04
OSD	Curlew	*Numenius arquata*	82	76	126	32	47	72.60	0.20
OSD	Redshank	*Tringa totanus*	142	85	145	98	117	117.40	0.33

Sector OSE. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
OSE	Shelduck	*Tadorna tadorna*	47	50	14	37.00	0.14
OSE	Mallard	*Anas platyrhynchos*	0	12	36	16.00	0.06
OSE	Ringed plover	*Charadrius hiaticula*	16	22	6	14.67	0.06
OSE	Golden plover	*Pluvialis apricaria*	0	0	4	1.33	0.01
OSE	Grey plover	*Pluvialis squatarola*	0	3	0	1.00	0.00
OSE	Sanderling	*Calidris alba*	1	39	0	13.33	0.05
OSE	Dunlin	*Calidris alpina*	0	87	6	31.00	0.12
OSE	Oystercatcher	*Haematopus ostralegus*	11	0	8	6.33	0.02
OSE	Turnstone	*Arenaria interpres*	0	1	0	0.33	0.00
OSE	Curlew	*Numenius arquata*	41	6	6	17.67	0.07
OSE	Redshank	*Tringa totanus*	51	6	12	23.00	0.09

Sector OSE. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
OSE	Brent goose (dark-bellied)	*Branta bernicla bernicla*	1	0	0	0	0.25	0.00
OSE	Shelduck	*Tadorna tadorna*	14	9	8	38	17.25	0.07
OSE	Wigeon	*Anas penelope*	0	11	19	132	40.50	0.16
OSE	Teal	*Anas crecca*	0	34	48	150	58.00	0.22
OSE	Mallard	*Anas platyrhynchos*	0	14	0	2	4.00	0.02
OSE	Ringed plover	*Charadrius hiaticula*	7	31	44	14	24.00	0.09
OSE	Golden plover	*Pluvialis apricaria*	28	11	0	140	44.75	0.17
OSE	Grey plover	*Pluvialis squatarola*	0	28	0	14	10.50	0.04
OSE	Lapwing	*Vanellus vanellus*	0	0	0	164	41.00	0.16
OSE	Knot	*Calidris canutus*	0	48	0	115	40.75	0.16
OSE	Sanderling	*Calidris alba*	0	43	12	3	14.50	0.06
OSE	Dunlin	*Calidris alpina*	38	230	14	16	74.50	0.29
OSE	Bar-tailed godwit	*Limosa lapponica*	0	0	11	4	3.75	0.01
OSE	Oystercatcher	*Haematopus ostralegus*	13	82	174	126	98.75	0.38
OSE	Turnstone	*Arenaria interpres*	3	41	0	0	11.00	0.04
OSE	Curlew	*Numenius arquata*	151	93	44	37	81.25	0.31
OSE	Redshank	*Tringa totanus*	22	118	119	114	93.25	0.36

Sector OSE. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
OSE	Black-tailed godwit	*Limosa limosa*	0	0	1	0	0	0.20	0.00
OSE	Brent goose (dark-bellied)	*Branta bernicla bernicla*	14	82	162	36	0	58.80	0.23
OSE	Shelduck	*Tadorna tadorna*	94	0	218	24	78	82.80	0.32
OSE	Wigeon	*Anas penelope*	624	80	18	6	12	148.00	0.57
OSE	Teal	*Anas crecca*	88	530	500	280	70	293.60	1.13
OSE	Mallard	*Anas platyrhynchos*	9	26	10	4	5	10.80	0.04
OSE	Ringed plover	*Charadrius hiaticula*	16	11	8	0	12	9.40	0.04
OSE	Golden plover	*Pluvialis apricaria*	0	780	0	44	0	164.80	0.64
OSE	Grey plover	*Pluvialis squatarola*	11	32	16	11	18	17.60	0.07
OSE	Lapwing	*Vanellus vanellus*	104	1200	570	0	0	374.80	1.45
OSE	Knot	*Calidris canutus*	18	48	0	0	34	20.00	0.08
OSE	Sanderling	*Calidris alba*	5	9	15	7	16	10.40	0.04
OSE	Dunlin	*Calidris alpina*	152	263	230	61	210	183.20	0.71
OSE	Bar-tailed godwit	*Limosa lapponica*	0	6	3	0	0	1.80	0.01
OSE	Oystercatcher	*Haematopus ostralegus*	10	38	18	16	23	21.00	0.08
OSE	Curlew	*Numenius arquata*	63	108	168	184	92	123.00	0.47
OSE	Redshank	*Tringa totanus*	172	168	173	260	162	187.00	0.72

Sector OSF. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
OSF	Ringed plover	*Charadrius hiaticula*	22	28	0	16.67	0.30
OSF	Sanderling	*Calidris alba*	88	67	0	51.67	0.94
OSF	Dunlin	*Calidris alpina*	9	21	0	10.00	0.18
OSF	Oystercatcher	*Haematopus ostralegus*	7	2	0	3.00	0.05
OSF	Redshank	*Tringa totanus*	4	0	0	1.33	0.02

Sector OSF. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
OSF	Ringed plover	*Charadrius hiaticula*	0	98	73	78	62.25	1.14
OSF	Grey plover	*Pluvialis squatarola*	0	2	3	0	1.25	0.02
OSF	Knot	*Calidris canutus*	0	34	34	0	17.00	0.31
OSF	Sanderling	*Calidris alba*	0	183	27	158	92.00	1.68
OSF	Dunlin	*Calidris alpina*	0	216	33	104	88.25	1.61
OSF	Bar-tailed godwit	*Limosa lapponica*	0	4	0	0	1.00	0.02
OSF	Oystercatcher	*Haematopus ostralegus*	0	4	4	4	3.00	0.05
OSF	Curlew	*Numenius arquata*	0	7	0	0	1.75	0.03
OSF	Redshank	*Tringa totanus*	0	0	7	5	3.00	0.05

Sector OSF. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
OSF	Ringed plover	*Charadrius hiaticula*	0	13	0	11	2	5.20	0.09
OSF	Golden plover	*Pluvialis apricaria*	0	0	0	82	0	16.40	0.30
OSF	Grey plover	*Pluvialis squatarola*	19	31	6	6	0	12.40	0.23
OSF	Lapwing	*Vanellus vanellus*	0	84	0	124	0	41.60	0.76
OSF	Knot	*Calidris canutus*	0	166	0	0	0	33.20	0.61
OSF	Sanderling	*Calidris alba*	19	93	12	33	6	32.60	0.59
OSF	Dunlin	*Calidris alpina*	226	124	2	0	8	72.00	1.31
OSF	Bar-tailed godwit	*Limosa lapponica*	0	8	7	3	0	3.60	0.07
OSF	Oystercatcher	*Haematopus ostralegus*	14	0	4	3	3	4.80	0.09
OSF	Curlew	*Numenius arquata*	44	17	52	159	0	54.40	0.99
OSF	Redshank	*Tringa totanus*	36	63	6	19	0	24.80	0.45

Appendix 2b. North bank sectors and sub-sectors

Sub-Sector NA1a. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NA1a	Shelduck	*Tadorna tadorna*	0	0	8	2.67	0.06
NA1a	Mallard	*Anas platyrhynchos*	0	0	17	5.67	0.13

Sub-Sector NA1a. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NA1a	Mallard	*Anas platyrhynchos*	18	0	15	0	8.25	0.18
NA1a	Golden plover	*Pluvialis apricaria*	0	19	0	0	4.75	0.10
NA1a	Lapwing	*Vanellus vanellus*	3	300	300	0	150.75	3.33

Sub-Sector NA1a. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NA1a	Mallard	*Anas platyrhynchos*	0	0	0	0	8	1.60	0.04
NA1a	Golden plover	*Pluvialis apricaria*	200	0	0	0	0	40.00	0.88
NA1a	Lapwing	*Vanellus vanellus*	76	0	0	0	0	15.20	0.34
NA1a	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	2	0.40	0.01

Sub-Sector NA1b. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NA1b	Mallard	*Anas platyrhynchos*	0	0	4	1.33	0.04

Sub-Sector NA1b. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NA1b	Mallard	*Anas platyrhynchos*	4	0	10	0	3.50	0.11

There were no observations recorded at Sub-Sector NA1b during the winter period.

Sub-Sector NA1c. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NA1c	Shelduck	*Tadorna tadorna*	11	0	2	4.33	0.22
NA1c	Mallard	*Anas platyrhynchos*	0	0	19	6.33	0.32

Sub-Sector NA1c. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NA1c	Mallard	*Anas platyrhynchos*	25	0	41	54	30.00	1.53
NA1c	Lapwing	*Vanellus vanellus*	20	6	56	13	23.75	1.21
NA1c	Curlew	*Numenius arquata*	1	0	0	0	0.25	0.01
NA1c	Redshank	*Tringa totanus*	1	0	0	0	0.25	0.01

Sub-Sector NA1c. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NA1c	Shelduck	*Tadorna tadorna*	0	0	0	0	5	1.00	0.05
NA1c	Teal	*Anas crecca*	0	0	0	4	0	0.80	0.04
NA1c	Mallard	*Anas platyrhynchos*	190	200	0	120	4	102.80	5.23
NA1c	Lapwing	*Vanellus vanellus*	420	30	0	0	0	105.00	5.34
NA1c	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	2	0.40	0.02
NA1c	Redshank	*Tringa totanus*	2	1	0	2	0	1.00	0.05

Sector NA2. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NA2	Black-tailed godwit	*Limosa limosa*	0	9	0	3.00	0.05
NA2	Shelduck	*Tadorna tadorna*	48	43	0	30.33	0.52
NA2	Teal	*Anas crecca*	22	4	0	8.67	0.15
NA2	Mallard	*Anas platyrhynchos*	11	56	0	22.33	0.38
NA2	Avocet	*Recurvirostra avosetta*	101	22	0	41.00	0.70
NA2	Lapwing	*Vanellus vanellus*	15	12	0	9.00	0.15
NA2	Oystercatcher	*Haematopus ostralegus*	4	0	0	1.33	0.02
NA2	Curlew	*Numenius arquata*	1	0	0	0.33	0.01
NA2	Redshank	*Tringa totanus*	12	0	0	4.00	0.07

Sector NA2. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NA2	Black-tailed godwit	*Limosa limosa*	0	12	0	9	5.25	0.09
NA2	Shelduck	*Tadorna tadorna*	0	0	0	12	3.00	0.05
NA2	Wigeon	*Anas penelope*	0	0	0	14	3.50	0.06
NA2	Teal	*Anas crecca*	58	50	46	310	139.33	2.37
NA2	Mallard	*Anas platyrhynchos*	90	48	2	35	57.67	0.98
NA2	Avocet	*Recurvirostra avosetta*	4	0	0	0	1.00	0.02
NA2	Lapwing	*Vanellus vanellus*	1000	300	334	41	447.00	7.62
NA2	Dunlin	*Calidris alpina*	64	40	5	11	38.33	0.65
NA2	Curlew	*Numenius arquata*	0	0	0	9	2.25	0.04
NA2	Redshank	*Tringa totanus*	45	24	10	90	53.00	0.90

Sector NA2. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NA2	Black-tailed godwit	*Limosa limosa*	0	1	0	0	0	0.20	0.00
NA2	Shelduck	*Tadorna tadorna*	27	12	0	64	40	28.60	0.49
NA2	Wigeon	*Anas penelope*	126	0	0	476	98	140.00	2.39
NA2	Teal	*Anas crecca*	295	20	0	195	39	109.80	1.87
NA2	Mallard	*Anas platyrhynchos*	9	17	0	40	17	16.60	0.28
NA2	Avocet	*Recurvirostra avosetta*	0	0	0	0	8	1.60	0.03
NA2	Golden plover	*Pluvialis apricaria*	1820	300	0	0	0	424.00	7.23
NA2	Lapwing	*Vanellus vanellus*	1976	827	0	101	29	586.60	10.00
NA2	Dunlin	*Calidris alpina*	48	8	0	0	1	11.40	0.19
NA2	Oystercatcher	*Haematopus ostralegus*	0	0	0	1	0	0.20	0.00
NA2	Curlew	*Numenius arquata*	4	5	0	3	13	5.50	0.09
NA2	Redshank	*Tringa totanus*	20	6	0	5	12	8.60	0.15

Sub-Sector NB1. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NB1	Shelduck	*Tadorna tadorna*	16	42	0	19.33	0.35
NB1	Teal	*Anas crecca*	4	0	0	1.33	0.02
NB1	Mallard	*Anas platyrhynchos*	0	2	0	0.67	0.01
NB1	Lapwing	*Vanellus vanellus*	6	0	0	2.00	0.04
NB1	Redshank	*Tringa totanus*	0	1	0	0.33	0.01

Sub-Sector NB1. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NB1	Shelduck	*Tadorna tadorna*	6	0	395	8	102.25	1.84
NB1	Wigeon	*Anas penelope*	0	0	0	38	9.50	0.17
NB1	Teal	*Anas crecca*	0	0	54	21	18.75	0.34
NB1	Mallard	*Anas platyrhynchos*	0	1	8	2	2.75	0.05
NB1	Avocet	*Recurvirostra avosetta*	1	0	0	0	0.25	0.00
NB1	Lapwing	*Vanellus vanellus*	6	0	140	0	36.50	0.66
NB1	Curlew	*Numenius arquata*	0	0	19	1	5.00	0.09
NB1	Redshank	*Tringa totanus*	0	1	11	2	3.50	0.06

Sub-Sector NB1. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NB1	Shelduck	*Tadorna tadorna*	0	7	43	18	14	16.40	0.30
NB1	Wigeon	*Anas penelope*	60	5	18	0	20	20.60	0.37
NB1	Mallard	*Anas platyrhynchos*	9	5	6	0	0	4.00	0.07
NB1	Golden plover	*Pluvialis apricaria*	0	700	485	0	0	237.00	4.27
NB1	Lapwing	*Vanellus vanellus*	20	550	0	0	8	115.60	2.08
NB1	Curlew	*Numenius arquata*	1	2	0	0	5	1.60	0.03
NB1	Redshank	*Tringa totanus*	2	2	4	3	2	2.60	0.05

Sub-Sector NB2. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NB2	Shelduck	*Tadorna tadorna*	156	108	172	145.33	3.05
NB2	Wigeon	*Anas penelope*	8	0	0	2.67	0.06
NB2	Teal	*Anas crecca*	13	0	0	4.33	0.09
NB2	Mallard	*Anas platyrhynchos*	0	2	3	1.67	0.04
NB2	Lapwing	*Vanellus vanellus*	0	0	36	12.00	0.25
NB2	Curlew	*Numenius arquata*	1	0	0	0.33	0.01
NB2	Redshank	*Tringa totanus*	2	1	0	1.00	0.02

Sub-Sector NB2. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NB2	Shelduck	*Tadorna tadorna*	506	346	303	168	330.75	6.95
NB2	Wigeon	*Anas penelope*	0	0	380	650	257.50	5.41
NB2	Teal	*Anas crecca*	0	0	296	590	221.50	4.65
NB2	Mallard	*Anas platyrhynchos*	0	0	13	198	52.75	1.11
NB2	Avocet	*Recurvirostra avosetta*	26	0	0	0	6.50	0.14
NB2	Golden plover	*Pluvialis apricaria*	0	420	0	0	105.00	2.21
NB2	Lapwing	*Vanellus vanellus*	98	400	0	390	222.00	4.66
NB2	Curlew	*Numenius arquata*	0	4	33	1	9.50	0.20
NB2	Redshank	*Tringa totanus*	1	0	4	9	3.50	0.07

Sub-Sector NB2. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NB2	Shelduck	*Tadorna tadorna*	59	74	192	259	104	137.60	2.89
NB2	Wigeon	*Anas penelope*	200	440	379	880	0	424.75	8.92
NB2	Teal	*Anas crecca*	0	260	264	42	10	115.20	2.42
NB2	Mallard	*Anas platyrhynchos*	145	48	321	33	4	110.20	2.32
NB2	Golden plover	*Pluvialis apricaria*	0	400	0	0	0	80.00	1.68
NB2	Dunlin	*Calidris alpina*	0	0	0	195	0	39.00	0.82
NB2	Curlew	*Numenius arquata*	0	2	3	0	9	2.80	0.06
NB2	Redshank	*Tringa totanus*	0	6	7	0	0	2.60	0.05

Sub-Sector NB3. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NB3	Shelduck	*Tadorna tadorna*	266	67	151	161.33	1.35
NB3	Wigeon	*Anas penelope*	6	0	0	2.00	0.02
NB3	Teal	*Anas crecca*	11	0	0	3.67	0.03
NB3	Mallard	*Anas platyrhynchos*	5	7	11	7.67	0.06
NB3	Avocet	*Recurvirostra avosetta*	8	3	0	3.67	0.03
NB3	Ringed plover	*Charadrius hiaticula*	0	1	0	0.33	0.00
NB3	Lapwing	*Vanellus vanellus*	8	11	19	12.67	0.11
NB3	Oystercatcher	*Haematopus ostralegus*	2	1	3	2.00	0.02
NB3	Curlew	*Numenius arquata*	1	0	0	0.33	0.00
NB3	Redshank	*Tringa totanus*	6	0	3	3.00	0.03

Sub-Sector NB3. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NB3	Shelduck	*Tadorna tadorna*	20	133	22	146	80.25	0.67
NB3	Wigeon	*Anas penelope*	0	0	0	51	12.75	0.11
NB3	Teal	*Anas crecca*	0	0	0	44	11.00	0.09
NB3	Mallard	*Anas platyrhynchos*	9	18	0	53	20.00	0.17
NB3	Avocet	*Recurvirostra avosetta*	2	0	0	0	0.50	0.00
NB3	Ringed plover	*Charadrius hiaticula*	0	0	0	2	0.50	0.00
NB3	Golden plover	*Pluvialis apricaria*	220	95	0	0	78.75	0.66
NB3	Lapwing	*Vanellus vanellus*	0	254	0	51	76.25	0.64
NB3	Dunlin	*Calidris alpina*	54	0	0	54	27.00	0.23
NB3	Curlew	*Numenius arquata*	59	49	0	7	28.75	0.24
NB3	Redshank	*Tringa totanus*	0	19	2	62	20.75	0.17

Sub-Sector NB3. Winter monthly counts and densities

			November	December	January	February	March	Average	
NB3	Black-tailed godwit	*Limosa limosa*	0	11	0	0	0	2.20	0.02
NB3	Shelduck	*Tadorna tadorna*	67	25	132	200	103	105.40	0.88
NB3	Wigeon	*Anas penelope*	8	26	40	0	35	21.80	0.18
NB3	Teal	*Anas crecca*	88	222	140	87	72	121.80	1.02
NB3	Mallard	*Anas platyrhynchos*	0	48	75	0	23	29.20	0.24
NB3	Golden plover	*Pluvialis apricaria*	130	1956	60	0	0	504.00	4.22
NB3	Grey plover	*Pluvialis squatarola*	0	3	0	0	0	0.60	0.01
NB3	Lapwing	*Vanellus vanellus*	189	3490	3	5	0	874.50	7.33
NB3	Dunlin	*Calidris alpina*	35	140	0	22	0	40.50	0.34
NB3	Curlew	*Numenius arquata*	108	21	8	6	14	31.40	0.26
NB3	Redshank	*Tringa totanus*	29	46	8	9	16	21.60	0.18

Sub-Sector NB4. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NB4	Shelduck	*Tadorna tadorna*	55	86	241	127.33	0.73
NB4	Wigeon	*Anas penelope*	14	1	6	7.00	0.04
NB4	Mallard	*Anas platyrhynchos*	0	0	4	1.33	0.01
NB4	Avocet	*Recurvirostra avosetta*	0	2	0	0.67	0.00
NB4	Lapwing	*Vanellus vanellus*	0	18	452	156.67	0.90
NB4	Curlew	*Numenius arquata*	0	4	0	1.33	0.01
NB4	Redshank	*Tringa totanus*	0	2	2	1.33	0.01

Sub-Sector NB4. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NB4	Shelduck	*Tadorna tadorna*	17	0	182	59	64.50	0.37
NB4	Wigeon	*Anas penelope*	0	0	0	765	191.25	1.10
NB4	Teal	*Anas crecca*	0	0	38	110	37.00	0.21
NB4	Mallard	*Anas platyrhynchos*	8	3	0	156	41.75	0.24
NB4	Avocet	*Recurvirostra avosetta*	81	0	0	0	20.25	0.12
NB4	Ringed plover	*Charadrius hiaticula*	0	0	0	330	82.50	0.47
NB4	Golden plover	*Pluvialis apricaria*	760	253	0	33	261.50	1.50
NB4	Lapwing	*Vanellus vanellus*	1770	1214	0	0	746.00	4.27
NB4	Dunlin	*Calidris alpina*	67	0	0	0	16.75	0.10
NB4	Curlew	*Numenius arquata*	442	44	121	0	151.75	0.87
NB4	Redshank	*Tringa totanus*	7	3	43	16	17.25	0.10

Sub-Sector NB4. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NB4	Shelduck	*Tadorna tadorna*	14	14	14	0	33	15.00	0.09
NB4	Wigeon	*Anas penelope*	470	423	1044	850	1090	775.40	4.44
NB4	Teal	*Anas crecca*	2	42	181	0	4	45.80	0.26
NB4	Mallard	*Anas platyrhynchos*	5	18	97	6	4	26.00	0.15
NB4	Golden plover	*Pluvialis apricaria*	0	1100	1030	0	0	426.00	2.44
NB4	Lapwing	*Vanellus vanellus*	453	0	278	0	0	146.20	0.84
NB4	Dunlin	*Calidris alpina*	0	470	410	94	128	252.00	1.44
NB4	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	4	0.80	0.00
NB4	Curlew	*Numenius arquata*	20	2	3	14	2	8.20	0.05
NB4	Redshank	*Tringa totanus*	1	0	8	1	8	3.60	0.02

Sub-Sector NC1. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NC1	Shelduck	*Tadorna tadorna*	24	20	28	28.00	0.27
NC1	Mallard	*Anas platyrhynchos*	5	9	7	9.00	0.09
NC1	Ringed plover	*Charadrius hiaticula*	0	6	0	2.00	0.02
NC1	Lapwing	*Vanellus vanellus*	0	2	35	17.50	0.17
NC1	Redshank	*Tringa totanus*	9	1	15	15.00	0.15

Sub-Sector NC1. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NC1	Shelduck	*Tadorna tadorna*	1	0	0	0	0.25	0.00
NC1	Avocet	*Recurvirostra avosetta*	3	0	0	0	0.75	0.01
NC1	Golden plover	*Pluvialis apricaria*	5	45	0	0	15.00	0.15
NC1	Lapwing	*Vanellus vanellus*	142	22	0	0	41.00	0.40
NC1	Dunlin	*Calidris alpina*	2	0	0	0	0.50	0.00
NC1	Turnstone	*Arenaria interpres*	0	0	0	1	0.25	0.00
NC1	Curlew	*Numenius arquata*	2	0	4	4	2.50	0.02
NC1	Redshank	*Tringa totanus*	0	1	0	8	2.25	0.02

Sub-Sector NC1. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NC1	Shelduck	*Tadorna tadorna*	1	0	0	6	0	1.40	0.01
NC1	Wigeon	*Anas penelope*	0	0	3	0	2	1.00	0.01
NC1	Teal	*Anas crecca*	62	9	14	23	0	28.33	0.28
NC1	Mallard	*Anas platyrhynchos*	11	20	11	0	3	10.50	0.10
NC1	Lapwing	*Vanellus vanellus*	81	254	2	0	0	84.67	0.83
NC1	Dunlin	*Calidris alpina*	0	0	0	0	12	2.40	0.02
NC1	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	2	0.40	0.00
NC1	Turnstone	*Arenaria interpres*	0	0	1	0	0	0.20	0.00
NC1	Curlew	*Numenius arquata*	0	1	6	5	4	3.20	0.03
NC1	Redshank	*Tringa totanus*	28	22	8	18	7	28.00	0.27

Sub-Sector NC2. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NC2	Shelduck	*Tadorna tadorna*	31	16	17	31.00	0.07
NC2	Mallard	*Anas platyrhynchos*	19	11	7	19.00	0.04
NC2	Ringed plover	*Charadrius hiaticula*	3	9	5	6.00	0.01
NC2	Lapwing	*Vanellus vanellus*	3	2	152	152.00	0.35
NC2	Oystercatcher	*Haematopus ostralegus*	2	1	47	16.67	0.04
NC2	Turnstone	*Arenaria interpres*	31	0	6	15.50	0.04
NC2	Curlew	*Numenius arquata*	1	0	0	0.33	0.00
NC2	Redshank	*Tringa totanus*	2	0	1	1.00	0.00

Sub-Sector NC2. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NC2	Mallard	*Anas platyrhynchos*	1	5	19	42	30.50	0.07
NC2	Ringed plover	*Charadrius hiaticula*	1	28	0	3	8.00	0.02
NC2	Lapwing	*Vanellus vanellus*	0	1	98	202	75.25	0.17
NC2	Dunlin	*Calidris alpina*	0	6	0	202	67.33	0.16
NC2	Bar-tailed godwit	*Limosa lapponica*	0	0	4	0	1.00	0.00
NC2	Oystercatcher	*Haematopus ostralegus*	9	0	0	0	2.25	0.01
NC2	Turnstone	*Arenaria interpres*	0	9	6	0	3.75	0.01
NC2	Curlew	*Numenius arquata*	273	1	5	6	94.67	0.22
NC2	Redshank	*Tringa totanus*	0	0	7	7	3.50	0.01

Sub-Sector NC2. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NC2	Shelduck	*Tadorna tadorna*	0	0	0	2	0	0.40	0.00
NC2	Mallard	*Anas platyrhynchos*	31	18	70	2	7	25.60	0.06
NC2	Ringed plover	*Charadrius hiaticula*	4	0	21	47	10	16.40	0.04
NC2	Golden plover	*Pluvialis apricaria*	0	2000	0	0	0	400.00	0.93
NC2	Lapwing	*Vanellus vanellus*	15	1000	57	0	0	333.33	0.77
NC2	Dunlin	*Calidris alpina*	1	0	60	127	205	110.67	0.26
NC2	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	2	0.40	0.00
NC2	Turnstone	*Arenaria interpres*	20	0	1	4	0	5.00	0.01
NC2	Curlew	*Numenius arquata*	0	0	1	2	0	0.60	0.00
NC2	Redshank	*Tringa totanus*	27	7	17	24	17	19.33	0.04

Sub-Sector NC3. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NC3	Shelduck	*Tadorna tadorna*	2	2	2	2.00	0.01
NC3	Mallard	*Anas platyrhynchos*	5	4	3	4.00	0.02
NC3	Ringed plover	*Charadrius hiaticula*	0	24	1	8.33	0.04
NC3	Lapwing	*Vanellus vanellus*	0	2	2	1.33	0.01
NC3	Oystercatcher	*Haematopus ostralegus*	0	0	4	1.33	0.01

Sub-Sector NC3. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NC3	Shelduck	*Tadorna tadorna*	0	0	1	0	0.25	0.00
NC3	Teal	*Anas crecca*	0	0	3	6	2.25	0.01
NC3	Mallard	*Anas platyrhynchos*	0	0	9	0	2.25	0.01
NC3	Golden plover	*Pluvialis apricaria*	0	0	2	0	0.50	0.00
NC3	Lapwing	*Vanellus vanellus*	0	0	66	119	46.25	0.25
NC3	Sanderling	*Calidris alba*	0	1	0	0	0.25	0.00
NC3	Dunlin	*Calidris alpina*	0	0	41	13	13.67	0.07
NC3	Oystercatcher	*Haematopus ostralegus*	6	0	0	0	1.50	0.01
NC3	Turnstone	*Arenaria interpres*	0	4	9	1	4.33	0.02
NC3	Curlew	*Numenius arquata*	1	1	7	8	4.25	0.02
NC3	Redshank	*Tringa totanus*	0	0	18	36	13.50	0.07

Sub-Sector NC3. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NC3	Mallard	*Anas platyrhynchos*	5	5	17	10	0	7.40	0.04
NC3	Ringed plover	*Charadrius hiaticula*	0	0	3	7	0	2.00	0.01
NC3	Golden plover	*Pluvialis apricaria*	0	0	19	0	0	3.80	0.02
NC3	Lapwing	*Vanellus vanellus*	0	0	14	0	0	2.80	0.02
NC3	Dunlin	*Calidris alpina*	0	0	1	84	0	17.00	0.09
NC3	Turnstone	*Arenaria interpres*	0	0	2	3	0	1.00	0.01
NC3	Curlew	*Numenius arquata*	0	0	8	1	25	6.80	0.04
NC3	Redshank	*Tringa totanus*	4	7	13	23	16	12.60	0.07

Sector ND. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
ND	Shelduck	*Tadorna tadorna*	2	3	2	2.33	0.01
ND	Mallard	*Anas platyrhynchos*	8	9	9	8.67	0.03
ND	Ringed plover	*Charadrius hiaticula*	0	0	1	0.33	0.00
ND	Oystercatcher	*Haematopus ostralegus*	0	3	1	1.33	0.00
ND	Redshank	*Tringa totanus*	0	1	0	0.33	0.00

Sector ND. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
ND	Mallard	*Anas platyrhynchos*	1	0	45	28	18.50	0.06
ND	Ringed plover	*Charadrius hiaticula*	0	0	3	4	1.75	0.01
ND	Lapwing	*Vanellus vanellus*	0	0	0	4	1.00	0.00
ND	Dunlin	*Calidris alpina*	0	0	4	10	3.50	0.01
ND	Oystercatcher	*Haematopus ostralegus*	0	0	2	1	0.75	0.00
ND	Turnstone	*Arenaria interpres*	0	0	4	2	1.50	0.00
ND	Curlew	*Numenius arquata*	0	0	1	1	0.50	0.00
ND	Redshank	*Tringa totanus*	1	0	8	6	3.75	0.01

Sector ND. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
ND	Shelduck	*Tadorna tadorna*	1	0	0	0	0	0.20	0.00
ND	Mallard	*Anas platyrhynchos*	27	18	26	0	8	15.80	0.05
ND	Ringed plover	*Charadrius hiaticula*	1	0	0	0	0	0.20	0.00
ND	Lapwing	*Vanellus vanellus*	32	0	0	0	0	6.40	0.02
ND	Dunlin	*Calidris alpina*	2	0	28	0	0	6.00	0.02
ND	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	2	0.40	0.00
ND	Turnstone	*Arenaria interpres*	2	0	1	0	44	9.40	0.03
ND	Curlew	*Numenius arquata*	0	0	0	0	7	1.40	0.00
ND	Redshank	*Tringa totanus*	3	52	35	0	17	21.40	0.07

There were no observations recorded at Sector NE during the spring period.

Sector NE. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NE	Mallard	*Anas platyrhynchos*	0	0	1	5	1.50	0.02
NE	Ringed plover	*Charadrius hiaticula*	0	0	6	10	4.00	0.05
NE	Dunlin	*Calidris alpina*	0	0	0	8	2.00	0.02
NE	Curlew	*Numenius arquata*	0	0	4	0	1.00	0.01
NE	Redshank	*Tringa totanus*	0	0	5	5	2.50	0.03

Sector NE. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NE	Mallard	*Anas platyrhynchos*	7	1	0	0	0	1.60	0.02
NE	Lapwing	*Vanellus vanellus*	215	0	0	0	0	43.00	0.49
NE	Dunlin	*Calidris alpina*	0	1	0	0	0	0.20	0.00
NE	Turnstone	*Arenaria interpres*	2	0	0	0	0	0.40	0.00
NE	Curlew	*Numenius arquata*	2	2	0	0	0	0.80	0.01
NE	Redshank	*Tringa totanus*	5	5	0	0	0	2.00	0.02

Sub-Sector NF1. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NF1	Shelduck	*Tadorna tadorna*	0	2	0	0.67	0.02
NF1	Mallard	*Anas platyrhynchos*	7	15	26	16.00	0.51
NF1	Turnstone	*Arenaria interpres*	28	0	0	9.33	0.30
NF1	Redshank	*Tringa totanus*	1	0	0	0.33	0.01

Sub-Sector NF1. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NF1	Mallard	*Anas platyrhynchos*	40	37	0	0	19.25	0.62
NF1	Oystercatcher	*Haematopus ostralegus*	0	1	0	0	0.25	0.01
NF1	Turnstone	*Arenaria interpres*	0	2	0	0	0.50	0.02
NF1	Redshank	*Tringa totanus*	0	1	0	0	0.25	0.01

Sub-Sector NF1. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NF1	Mallard	*Anas platyrhynchos*	12	40	11	30	14	21.40	0.69
NF1	Golden plover	*Pluvialis apricaria*	1	0	0	0	0	0.20	0.01
NF1	Turnstone	*Arenaria interpres*	6	0	0	0	0	1.20	0.04
NF1	Ringed plover	*Charadrius hiaticula*	1	0	0	0	0	0.20	0.01
NF1	Curlew	*Numenius arquata*	3	1	0	0	1	1.00	0.03
NF1	Redshank	*Tringa totanus*	22	11	41	15	16	21.00	0.67

Sub-Sector NF2. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NF2	Shelduck	*Tadorna tadorna*	30	28	13	23.67	0.19
NF2	Mallard	*Anas platyrhynchos*	1	6	53	20.00	0.16
NF2	Avocet	*Recurvirostra avosetta*	10	6	2	6.00	0.05
NF2	Ringed plover	*Charadrius hiaticula*	9	69	0	26.00	0.21
NF2	Golden plover	*Pluvialis apricaria*	0	0	7	2.33	0.02
NF2	Grey plover	*Pluvialis squatarola*	1	11	0	4.00	0.03
NF2	Oystercatcher	*Haematopus ostralegus*	17	0	4	7.00	0.06
NF2	Curlew	*Numenius arquata*	15	28	26	23.00	0.18
NF2	Redshank	*Tringa totanus*	2	0	0	0.67	0.01

Sub-Sector NF2. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NF2	Black-tailed godwit	*Limosa limosa*	28	7	158	0	48.25	0.38
NF2	Shelduck	*Tadorna tadorna*	16	0	3	6	6.25	0.05
NF2	Mallard	*Anas platyrhynchos*	10	15	41	125	47.75	0.38
NF2	Avocet	*Recurvirostra avosetta*	4	0	0	0	1.00	0.01
NF2	Ringed plover	*Charadrius hiaticula*	0	52	250	3	76.25	0.61
NF2	Golden plover	*Pluvialis apricaria*	1368	20	8132	4000	3380.00	26.82
NF2	Knot	*Calidris canutus*	0	0	0	48	12.00	0.10
NF2	Dunlin	*Calidris alpina*	73	10	780	400	315.75	2.51
NF2	Bar-tailed godwit	*Limosa lapponica*	0	0	2	0	0.50	0.00
NF2	Oystercatcher	*Haematopus ostralegus*	2	0	0	0	0.50	0.00
NF2	Turnstone	*Arenaria interpres*	0	2	3	0	1.25	0.01
NF2	Curlew	*Numenius arquata*	160	349	196	46	187.75	1.49
NF2	Redshank	*Tringa totanus*	43	138	369	21	142.75	1.13

Sub-Sector NF2. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NF2	Shelduck	*Tadorna tadorna*	8	5	25	188	203	85.80	0.68
NF2	Teal	*Anas crecca*	4	0	6	54	57	28.75	0.23
NF2	Mallard	*Anas platyrhynchos*	207	0	6	0	6	53.25	0.42
NF2	Avocet	*Recurvirostra avosetta*	0	0	0	0	2	0.40	0.00
NF2	Ringed plover	*Charadrius hiaticula*	0	11	17	0	76	20.80	0.17
NF2	Golden plover	*Pluvialis apricaria*	1200	800	140	12	0	430.40	3.42
NF2	Lapwing	*Vanellus vanellus*	13	700	800	0	0	302.60	2.41
NF2	Dunlin	*Calidris alpina*	1054	1200	1200	550	2314	1263.60	10.05
NF2	Black-tailed godwit	*Limosa limosa*	2	0	0	0	0	0.40	0.00
NF2	Bar-tailed godwit	*Limosa lapponica*	0	1	16	0	115	26.40	0.21
NF2	Turnstone	*Arenaria interpres*	0	0	0	0	0	0.00	0.00
NF2	Curlew	*Numenius arquata*	205	83	253	100	238	175.80	1.40
NF2	Redshank	*Tringa totanus*	233	60	150	215	428	217.20	1.73

Sector NG1. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NG1	Shelduck	*Tadorna tadorna*	0	37	0	12.33	1.06
NG1	Mallard	*Anas platyrhynchos*	0	3	0	1.00	0.09
NG1	Ringed plover	*Charadrius hiaticula*	0	4	0	1.33	0.11
NG1	Curlew	*Numenius arquata*	0	2	0	0.67	0.06
NG1	Redshank	*Tringa totanus*	0	2	0	0.67	0.06

Sector NG1. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NG1	Black-tailed godwit	*Limosa limosa*	0	0	1	0	0.25	0.02
NG1	Ringed plover	*Charadrius hiaticula*	0	0	14	2	4.00	0.34
NG1	Golden plover	*Pluvialis apricaria*	0	0	27	0	6.75	0.58
NG1	Dunlin	*Calidris alpina*	0	0	74	0	18.50	1.59
NG1	Bar-tailed godwit	*Limosa lapponica*	0	0	3	0	0.75	0.06
NG1	Turnstone	*Arenaria interpres*	0	0	0	2	0.50	0.04
NG1	Curlew	*Numenius arquata*	0	0	10	4	3.50	0.30
NG1	Redshank	*Tringa totanus*	0	0	10	0	2.50	0.21

Sector NG1. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NG1	Black-tailed godwit	*Limosa limosa*	161	0	0	0	0	32.20	2.77
NG1	Shelduck	*Tadorna tadorna*	11	0	0	0	0	2.20	0.19
NG1	Teal	*Anas crecca*	12	0	0	0	0	2.40	0.21
NG1	Mallard	*Anas platyrhynchos*	0	40	0	0	0	8.00	0.69
NG1	Grey plover	*Pluvialis squatarola*	1	0	0	0	0	0.20	0.02
NG1	Lapwing	*Vanellus vanellus*	580	0	0	0	0	116.00	9.97
NG1	Knot	*Calidris canutus*	17	0	0	0	0	3.40	0.29
NG1	Dunlin	*Calidris alpina*	732	0	0	27	0	151.80	13.05
NG1	Bar-tailed godwit	*Limosa lapponica*	2	0	0	0	0	0.40	0.03
NG1	Oystercatcher	*Haematopus ostralegus*	2	0	0	1	0	0.60	0.05
NG1	Turnstone	*Arenaria interpres*	6	0	33	7	1	9.40	0.81
NG1	Curlew	*Numenius arquata*	12	2	0	0	0	2.80	0.24
NG1	Redshank	*Tringa totanus*	82	2	7	3	0	18.80	1.62

Sector NG2. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NG2	Shelduck	*Tadorna tadorna*	0	28	0	9.33	0.12
NG2	Mallard	*Anas platyrhynchos*	0	0	45	15.00	0.19
NG2	Avocet	*Recurvirostra avosetta*	0	2	0	0.67	0.01
NG2	Grey plover	*Pluvialis squatarola*	0	2	0	0.67	0.01
NG2	Oystercatcher	*Haematopus ostralegus*	0	2	0	0.67	0.01
NG2	Turnstone	*Arenaria interpres*	12	0	0	4.00	0.05
NG2	Curlew	*Numenius arquata*	0	0	3	1.00	0.01

Sector NG2. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NG2	Black-tailed godwit	*Limosa limosa*	0	141	0	6	36.75	0.47
NG2	Shelduck	*Tadorna tadorna*	0	208	0	50	64.50	0.83
NG2	Wigeon	*Anas penelope*	0	0	0	110	27.50	0.35
NG2	Mallard	*Anas platyrhynchos*	0	0	0	30	7.50	0.10
NG2	Avocet	*Recurvirostra avosetta*	0	12	0	0	3.00	0.04
NG2	Ringed plover	*Charadrius hiaticula*	2	29	22	0	13.25	0.17
NG2	Golden plover	*Pluvialis apricaria*	0	90	0	0	22.50	0.29
NG2	Knot	*Calidris canutus*	0	4	9	0	3.25	0.04
NG2	Dunlin	*Calidris alpina*	0	0	36	675	177.75	2.29
NG2	Bar-tailed godwit	*Limosa lapponica*	0	0	0	4	1.00	0.01
NG2	Oystercatcher	*Haematopus ostralegus*	1	4	0	0	1.25	0.02
NG2	Turnstone	*Arenaria interpres*	0	1	19	4	6.00	0.08
NG2	Curlew	*Numenius arquata*	6	0	2	89	24.25	0.31
NG2	Redshank	*Tringa totanus*	0	166	0	600	191.50	2.46

Sector NG2. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NG2	Black-tailed godwit	*Limosa limosa*	16	8	14	0	124	32.40	0.42
NG2	Shelduck	*Tadorna tadorna*	20	8	104	52	26	42.00	0.54
NG2	Wigeon	*Anas penelope*	0	0	0	0	15	3.00	0.04
NG2	Teal	*Anas crecca*	82	42	450	210	83	173.40	2.23
NG2	Mallard	*Anas platyrhynchos*	90	120	200	26	2	87.60	1.13
NG2	Avocet	*Recurvirostra avosetta*	0	0	0	0	2	0.40	0.01
NG2	Ringed plover	*Charadrius hiaticula*	0	0	0	2	0	0.40	0.01
NG2	Golden plover	*Pluvialis apricaria*	980	1180	2000	370	112	928.40	11.95
NG2	Lapwing	*Vanellus vanellus*	660	3220	300	160	0	868.00	11.17
NG2	Knot	*Calidris canutus*	60	0	1	5	0	13.20	0.17
NG2	Dunlin	*Calidris alpina*	910	2	200	68	0	236.00	3.04
NG2	Bar-tailed godwit	*Limosa lapponica*	7	0	0	0	0	1.40	0.02
NG2	Oystercatcher	*Haematopus ostralegus*	5	0	3	0	22	6.00	0.08
NG2	Turnstone	*Arenaria interpres*	0	0	0	0	9	1.80	0.02
NG2	Curlew	*Numenius arquata*	18	4	85	0	0	21.40	0.28
NG2	Redshank	*Tringa totanus*	862	17	192	15	2	217.60	2.80

Sector NG3. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NG3	Black-tailed godwit	*Limosa limosa*	493	0	0	164.33	1.02
NG3	Shelduck	*Tadorna tadorna*	65	50	223	112.67	0.70
NG3	Teal	*Anas crecca*	2	0	0	0.67	0.00
NG3	Mallard	*Anas platyrhynchos*	19	0	97	38.67	0.24
NG3	Avocet	*Recurvirostra avosetta*	0	0	33	11.00	0.07
NG3	Golden plover	*Pluvialis apricaria*	0	0	45	15.00	0.09
NG3	Grey plover	*Pluvialis squatarola*	0	2	0	0.67	0.00
NG3	Oystercatcher	*Haematopus ostralegus*	34	1	4	13.00	0.08
NG3	Turnstone	*Arenaria interpres*	18	0	0	6.00	0.04
NG3	Curlew	*Numenius arquata*	12	0	0	4.00	0.02
NG3	Redshank	*Tringa totanus*	32	0	0	10.67	0.07

Sector NG3. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NG3	Black-tailed godwit	*Limosa limosa*	40	0	0	0	10.00	0.06
NG3	Shelduck	*Tadorna tadorna*	28	80	65	11	57.67	0.36
NG3	Wigeon	*Anas penelope*	0	0	49	0	12.25	0.08
NG3	Teal	*Anas crecca*	0	0	12	0	3.00	0.02
NG3	Mallard	*Anas platyrhynchos*	14	0	2	0	4.00	0.02
NG3	Avocet	*Recurvirostra avosetta*	28	0	3	0	7.75	0.05
NG3	Ringed plover	*Charadrius hiaticula*	13	440	74	0	131.75	0.82
NG3	Golden plover	*Pluvialis apricaria*	0	1750	5	0	438.75	2.72
NG3	Grey plover	*Pluvialis squatarola*	1	0	0	0	0.25	0.00
NG3	Dunlin	*Calidris alpina*	363	400	50	300	278.25	1.72
NG3	Oystercatcher	*Haematopus ostralegus*	4	0	2	0	1.50	0.01
NG3	Turnstone	*Arenaria interpres*	4	0	0	0	1.00	0.01
NG3	Curlew	*Numenius arquata*	45	102	78	11	59.00	0.37
NG3	Redshank	*Tringa totanus*	60	120	21	26	67.00	0.41

Sector NG3. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NG3	Black-tailed godwit	*Limosa limosa*	0	0	0	19	0	3.80	0.02
NG3	Shelduck	*Tadorna tadorna*	0	80	49	122	0	50.20	0.31
NG3	Wigeon	*Anas penelope*	0	0	9	0	0	1.80	0.01
NG3	Teal	*Anas crecca*	0	0	28	0	30	11.60	0.07
NG3	Mallard	*Anas platyrhynchos*	0	140	44	150	0	66.80	0.41
NG3	Ringed plover	*Charadrius hiaticula*	0	12	0	0	0	2.40	0.01
NG3	Golden plover	*Pluvialis apricaria*	6000	2200	160	0	0	1672.00	10.35
NG3	Grey plover	*Pluvialis squatarola*	6	0	0	0	0	1.20	0.01
NG3	Lapwing	*Vanellus vanellus*	0	1000	900	47	0	389.40	2.41
NG3	Knot	*Calidris canutus*	200	0	0	0	0	40.00	0.25
NG3	Dunlin	*Calidris alpina*	0	486	150	200	70	181.20	1.12
NG3	Bar-tailed godwit	*Limosa lapponica*	0	0	0	0	10	2.00	0.01
NG3	Oystercatcher	*Haematopus ostralegus*	0	2	13	7	6	5.60	0.03
NG3	Curlew	*Numenius arquata*	20	7	222	0	101	70.00	0.43
NG3	Redshank	*Tringa totanus*	460	119	290	73	600	308.40	1.91

Sector NG4. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NG4	Shelduck	*Tadorna tadorna*	69	205	130	134.67	1.68
NG4	Wigeon	*Anas penelope*	0	2	0	0.67	0.01
NG4	Teal	*Anas crecca*	2	0	0	0.67	0.01
NG4	Mallard	*Anas platyrhynchos*	0	37	0	12.33	0.15
NG4	Avocet	*Recurvirostra avosetta*	8	34	0	14.00	0.17
NG4	Oystercatcher	*Haematopus ostralegus*	18	0	4	7.33	0.09
NG4	Curlew	*Numenius arquata*	30	2	3	11.67	0.15
NG4	Redshank	*Tringa totanus*	50	2	0	17.33	0.22

Sector NG4. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NG4	Black-tailed godwit	*Limosa limosa*	0	31	0	0	7.75	0.10
NG4	Brent goose (dark-bellied)	*Branta bernicla bernicla*	0	0	0	30	7.50	0.09
NG4	Shelduck	*Tadorna tadorna*	6	540	60	215	205.25	2.55
NG4	Wigeon	*Anas penelope*	0	1	0	0	0.25	0.00
NG4	Teal	*Anas crecca*	0	0	120	0	30.00	0.37
NG4	Mallard	*Anas platyrhynchos*	0	0	6	12	4.50	0.06
NG4	Avocet	*Recurvirostra avosetta*	0	2	0	0	0.50	0.01
NG4	Ringed plover	*Charadrius hiaticula*	0	120	0	0	30.00	0.37
NG4	Golden plover	*Pluvialis apricaria*	16	0	600	0	154.00	1.92
NG4	Knot	*Calidris canutus*	0	11	0	50	15.25	0.19
NG4	Dunlin	*Calidris alpina*	52	501	0	2000	638.25	7.94
NG4	Bar-tailed godwit	*Limosa lapponica*	0	0	1	50	12.75	0.16
NG4	Oystercatcher	*Haematopus ostralegus*	1	0	0	0	0.25	0.00
NG4	Curlew	*Numenius arquata*	27	1	59	50	34.25	0.43
NG4	Redshank	*Tringa totanus*	12	12	52	100	44.00	0.55

Sector NG4. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NG4	Shelduck	*Tadorna tadorna*	0	0	702	17	95	162.80	2.03
NG4	Ringed plover	*Charadrius hiaticula*	0	44	0	0	0	8.80	0.11
NG4	Golden plover	*Pluvialis apricaria*	900	0	14000	0	300	3040.00	37.83
NG4	Grey plover	*Pluvialis squatarola*	20	0	0	0	0	4.00	0.05
NG4	Lapwing	*Vanellus vanellus*	0	0	590	0	0	118.00	1.47
NG4	Knot	*Calidris canutus*	35	0	0	80	0	23.00	0.29
NG4	Dunlin	*Calidris alpina*	0	60	560	100	160	176.00	2.19
NG4	Bar-tailed godwit	*Limosa lapponica*	0	0	0	2	0	0.40	0.00
NG4	Oystercatcher	*Haematopus ostralegus*	0	0	0	0	14	2.80	0.03
NG4	Curlew	*Numenius arquata*	2	165	181	67	183	119.60	1.49
NG4	Redshank	*Tringa totanus*	530	1202	91	14	390	445.40	5.54

Sector NG5. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NG5	Shelduck	*Tadorna tadorna*	36	57	766	286.33	1.15
NG5	Mallard	*Anas platyrhynchos*	1	0	32	11.00	0.04
NG5	Ringed plover	*Charadrius hiaticula*	0	335	2	112.33	0.45
NG5	Golden plover	*Pluvialis apricaria*	0	0	9	3.00	0.01
NG5	Grey plover	*Pluvialis squatarola*	6	157	0	54.33	0.22
NG5	Oystercatcher	*Haematopus ostralegus*	2	5	1	2.67	0.01
NG5	Curlew	*Numenius arquata*	45	16	17	26.00	0.10
NG5	Redshank	*Tringa totanus*	55	14	15	28.00	0.11

Sector NG5. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NG5	Black-tailed godwit	*Limosa limosa*	0	800	0	0	200.00	0.80
NG5	Shelduck	*Tadorna tadorna*	0	276	166	171	153.25	0.61
NG5	Wigeon	*Anas penelope*	0	0	185	30	53.75	0.21
NG5	Mallard	*Anas platyrhynchos*	0	0	50	0	12.50	0.05
NG5	Avocet	*Recurvirostra avosetta*	30	38	0	0	17.00	0.07
NG5	Ringed plover	*Charadrius hiaticula*	0	156	39	3	65.00	0.26
NG5	Golden plover	*Pluvialis apricaria*	2950	11080	1016	2422	4367.00	17.47
NG5	Grey plover	*Pluvialis squatarola*	1	167	6	41	53.75	0.21
NG5	Lapwing	*Vanellus vanellus*	0	1	0	0	0.25	0.00
NG5	Knot	*Calidris canutus*	0	19	0	1135	288.50	1.15
NG5	Dunlin	*Calidris alpina*	700	1660	280	840	870.00	3.48
NG5	Bar-tailed godwit	*Limosa lapponica*	0	0	0	41	10.25	0.04
NG5	Oystercatcher	*Haematopus ostralegus*	6	0	0	1	1.75	0.01
NG5	Turnstone	*Arenaria interpres*	0	1	1	0	0.50	0.00
NG5	Curlew	*Numenius arquata*	127	411	525	180	310.75	1.24
NG5	Redshank	*Tringa totanus*	52	697	110	229	272.00	1.09

Sector NG5. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NG5	Black-tailed godwit	*Limosa limosa*	0	1	0	0	0	0.20	0.00
NG5	Shelduck	*Tadorna tadorna*	760	923	532	440	44	539.80	2.16
NG5	Wigeon	*Anas penelope*	60	126	0	0	0	37.20	0.15
NG5	Mallard	*Anas platyrhynchos*	0	162	0	140	0	60.40	0.24
NG5	Ringed plover	*Charadrius hiaticula*	0	148	0	0	0	29.60	0.12
NG5	Golden plover	*Pluvialis apricaria*	6300	8100	2000	390	360	3430.00	13.72
NG5	Grey plover	*Pluvialis squatarola*	72	103	0	1070	57	260.40	1.04
NG5	Lapwing	*Vanellus vanellus*	172	1801	2600	85	0	931.60	3.73
NG5	Knot	*Calidris canutus*	1100	4290	0	150	5	1109.00	4.44
NG5	Dunlin	*Calidris alpina*	2290	2240	0	1500	655	1337.00	5.35
NG5	Bar-tailed godwit	*Limosa lapponica*	0	39	0	193	0	46.40	0.19
NG5	Oystercatcher	*Haematopus ostralegus*	0	1	0	0	0	0.20	0.00
NG5	Curlew	*Numenius arquata*	219	480	116	284	96	239.00	0.96
NG5	Redshank	*Tringa totanus*	124	440	94	1800	231	562.25	2.25

Sector NG6. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NG6	Shelduck	*Tadorna tadorna*	26	72	810	302.67	0.78
NG6	Mallard	*Anas platyrhynchos*	2	15	73	30.00	0.08
NG6	Ringed plover	*Charadrius hiaticula*	0	519	1	173.33	0.45
NG6	Golden plover	*Pluvialis apricaria*	0	0	48	16.00	0.04
NG6	Grey plover	*Pluvialis squatarola*	1	2690	0	897.00	2.31
NG6	Oystercatcher	*Haematopus ostralegus*	10	8	4	7.33	0.02
NG6	Curlew	*Numenius arquata*	45	7	76	42.67	0.11
NG6	Redshank	*Tringa totanus*	365	47	14	142.00	0.36

Sector NG6. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NG6	Black-tailed godwit	*Limosa limosa*	7	6	9	8	7.50	0.02
NG6	Shelduck	*Tadorna tadorna*	644	823	383	108	489.50	1.26
NG6	Mallard	*Anas platyrhynchos*	0	0	99	67	41.50	0.11
NG6	Ringed plover	*Charadrius hiaticula*	0	0	14	3	4.67	0.01
NG6	Golden plover	*Pluvialis apricaria*	3160	6803	520	1504	2996.75	7.70
NG6	Grey plover	*Pluvialis squatarola*	0	5	30	0	8.75	0.02
NG6	Lapwing	*Vanellus vanellus*	0	0	0	10	2.50	0.01
NG6	Knot	*Calidris canutus*	0	0	2	43	11.25	0.03
NG6	Dunlin	*Calidris alpina*	3190	61	310	242	950.75	2.44
NG6	Bar-tailed godwit	*Limosa lapponica*	0	0	1	0	0.25	0.00
NG6	Oystercatcher	*Haematopus ostralegus*	4	1	0	0	1.25	0.00
NG6	Curlew	*Numenius arquata*	667	81	45	94	221.75	0.57
NG6	Redshank	*Tringa totanus*	119	432	750	512	453.25	1.16

Sector NG6. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NG6	Black-tailed godwit	*Limosa limosa*	0	0	1	0	0	0.20	0.00
NG6	Shelduck	*Tadorna tadorna*	1370	1947	370	550	211	889.60	2.29
NG6	Teal	*Anas crecca*	0	0	13	0	0	2.60	0.01
NG6	Mallard	*Anas platyrhynchos*	3	10	35	41	6	23.00	0.06
NG6	Ringed plover	*Charadrius hiaticula*	1	0	0	0	0	0.20	0.00
NG6	Golden plover	*Pluvialis apricaria*	3200	590	10500	150	0	2888.00	7.42
NG6	Grey plover	*Pluvialis squatarola*	37	0	151	20	0	41.60	0.11
NG6	Lapwing	*Vanellus vanellus*	2460	390	0	2	0	570.40	1.47
NG6	Knot	*Calidris canutus*	900	400	1316	0	0	523.20	1.34
NG6	Dunlin	*Calidris alpina*	2940	290	3600	1175	761	1753.20	4.51
NG6	Bar-tailed godwit	*Limosa lapponica*	272	20	1146	6	0	288.80	0.74
NG6	Oystercatcher	*Haematopus ostralegus*	0	0	0	5	6	2.20	0.01
NG6	Curlew	*Numenius arquata*	255	279	299	259	326	283.60	0.73
NG6	Redshank	*Tringa totanus*	1902	903	870	310	458	888.60	2.28

Sub-Sector NH1a. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NH1a	Shelduck	*Tadorna tadorna*	13	28	89	43.33	0.32
NH1a	Mallard	*Anas platyrhynchos*	0	2	2	1.33	0.01
NH1a	Ringed plover	*Charadrius hiaticula*	0	4	0	1.33	0.01
NH1a	Grey plover	*Pluvialis squatarola*	38	734	0	257.33	1.92
NH1a	Dunlin	*Calidris alpina*	0	315	0	105.00	0.78
NH1a	Oystercatcher	*Haematopus ostralegus*	3	8	9	6.67	0.05
NH1a	Curlew	*Numenius arquata*	12	2	11	8.33	0.06
NH1a	Redshank	*Tringa totanus*	79	0	0	26.33	0.20

Sub-Sector NH1a. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NH1a	Shelduck	*Tadorna tadorna*	245	127	126	46	136.00	1.02
NH1a	Golden plover	*Pluvialis apricaria*	66	168	348	1403	496.25	3.71
NH1a	Grey plover	*Pluvialis squatarola*	0	63	1	16	20.00	0.15
NH1a	Knot	*Calidris canutus*	0	0	0	68	17.00	0.13
NH1a	Dunlin	*Calidris alpina*	134	271	49	44	149.67	1.12
NH1a	Oystercatcher	*Haematopus ostralegus*	0	64	0	10	18.50	0.14
NH1a	Turnstone	*Arenaria interpres*	0	0	0	1	0.25	0.00
NH1a	Curlew	*Numenius arquata*	48	146	141	131	116.50	0.87
NH1a	Redshank	*Tringa totanus*	58	193	38	24	91.67	0.68

Sub-Sector NH1a. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NH1a	Shelduck	*Tadorna tadorna*	403	510	49	81	26	213.80	1.60
NH1a	Teal	*Anas crecca*	0	0	24	0	0	4.80	0.04
NH1a	Mallard	*Anas platyrhynchos*	32	12	0	0	0	8.80	0.07
NH1a	Golden plover	*Pluvialis apricaria*	690	0	120	0	0	162.00	1.21
NH1a	Grey plover	*Pluvialis squatarola*	5	5	27	3	13	10.60	0.08
NH1a	Lapwing	*Vanellus vanellus*	1220	440	44	0	0	340.80	2.54
NH1a	Knot	*Calidris canutus*	63	94	182	964	490	358.60	2.68
NH1a	Sanderling	*Calidris alba*	0	1	0	9	0	2.00	0.01
NH1a	Dunlin	*Calidris alpina*	225	369	560	766	150	414.00	3.09
NH1a	Bar-tailed godwit	*Limosa lapponica*	4	6	257	26	0	58.60	0.44
NH1a	Oystercatcher	*Haematopus ostralegus*	1	0	0	2	8	2.20	0.02
NH1a	Curlew	*Numenius arquata*	86	98	50	45	11	58.00	0.43
NH1a	Redshank	*Tringa totanus*	70	40	33	0	23	33.20	0.25

Sub-Sector NH1b. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NH1b	Shelduck	*Tadorna tadorna*	51	4	6	20.33	0.47
NH1b	Mallard	*Anas platyrhynchos*	1	0	11	4.00	0.09
NH1b	Ringed plover	*Charadrius hiaticula*	0	34	0	11.33	0.26
NH1b	Grey plover	*Pluvialis squatarola*	2	4	1	2.33	0.05
NH1b	Dunlin	*Calidris alpina*	29	38	0	22.33	0.52
NH1b	Oystercatcher	*Haematopus ostralegus*	1	0	0	0.33	0.01
NH1b	Curlew	*Numenius arquata*	0	0	4	1.33	0.03
NH1b	Redshank	*Tringa totanus*	49	1	0	16.67	0.39

Sub-Sector NH1b. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NH1b	Shelduck	*Tadorna tadorna*	4	69	42	16	32.75	0.76
NH1b	Ringed plover	*Charadrius hiaticula*	0	0	8	0	2.00	0.05
NH1b	Golden plover	*Pluvialis apricaria*	0	0	4	0	1.00	0.02
NH1b	Grey plover	*Pluvialis squatarola*	1	5	0	11	4.25	0.10
NH1b	Dunlin	*Calidris alpina*	0	8	5	0	3.25	0.08
NH1b	Curlew	*Numenius arquata*	30	25	1	18	18.50	0.43
NH1b	Redshank	*Tringa totanus*	2	11	24	62	24.75	0.57

Sub-Sector NH1b. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NH1b	Black-tailed godwit	*Limosa limosa*	0	0	0	23	0	4.60	0.11
NH1b	Shelduck	*Tadorna tadorna*	0	0	8	6	27	8.20	0.19
NH1b	Teal	*Anas crecca*	0	0	0	0	5	1.00	0.02
NH1b	Mallard	*Anas platyrhynchos*	0	3	0	3	0	1.20	0.03
NH1b	Grey plover	*Pluvialis squatarola*	0	0	22	12	5	7.80	0.18
NH1b	Lapwing	*Vanellus vanellus*	0	0	1	0	0	0.20	0.00
NH1b	Knot	*Calidris canutus*	151	0	0	383	14	109.60	2.54
NH1b	Dunlin	*Calidris alpina*	5	29	40	347	11	106.75	2.48
NH1b	Bar-tailed godwit	*Limosa lapponica*	0	5	3	15	0	4.60	0.11
NH1b	Curlew	*Numenius arquata*	3	35	10	58	19	25.00	0.58
NH1b	Redshank	*Tringa totanus*	80	36	51	36	122	65.00	1.51

Sub-Sector NH1c. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NH1c	Shelduck	*Tadorna tadorna*	2	4	19	8.33	0.06
NH1c	Mallard	*Anas platyrhynchos*	0	0	15	5.00	0.04
NH1c	Oystercatcher	*Haematopus ostralegus*	19	0	3	7.33	0.05
NH1c	Curlew	*Numenius arquata*	6	4	7	5.67	0.04

Sub-Sector NH1c. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NH1c	Black-tailed godwit	*Limosa limosa*	0	2	52	33	21.75	0.16
NH1c	Shelduck	*Tadorna tadorna*	38	176	7	1	55.50	0.41
NH1c	Grey plover	*Pluvialis squatarola*	0	0	0	3	0.75	0.01
NH1c	Knot	*Calidris canutus*	0	0	24	17	10.25	0.08
NH1c	Dunlin	*Calidris alpina*	7	0	5	9	5.25	0.04
NH1c	Bar-tailed godwit	*Limosa lapponica*	0	0	18	0	4.50	0.03
NH1c	Oystercatcher	*Haematopus ostralegus*	1	0	0	0	0.25	0.00
NH1c	Curlew	*Numenius arquata*	22	28	49	42	35.25	0.26
NH1c	Redshank	*Tringa totanus*	18	7	21	13	14.75	0.11

Sub-Sector NH1c. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NH1c	Black-tailed godwit	*Limosa limosa*	21	0	0	0	0	4.20	0.03
NH1c	Shelduck	*Tadorna tadorna*	6	159	0	3	6	34.80	0.26
NH1c	Grey plover	*Pluvialis squatarola*	0	2	1	0	0	0.60	0.00
NH1c	Lapwing	*Vanellus vanellus*	0	0	24	0	0	4.80	0.04
NH1c	Knot	*Calidris canutus*	10	28	0	37	7	16.40	0.12
NH1c	Dunlin	*Calidris alpina*	101	220	1	92	3	83.40	0.61
NH1c	Turnstone	*Arenaria interpres*	1	0	0	0	1	0.40	0.00
NH1c	Curlew	*Numenius arquata*	40	32	47	15	46	36.00	0.27
NH1c	Redshank	*Tringa totanus*	30	23	16	22	45	27.20	0.20

Sub-Sector NH2a. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NH2a	Shelduck	*Tadorna tadorna*	33	0	2	11.67	0.06
NH2a	Ringed plover	*Charadrius hiaticula*	0	60	0	20.00	0.11
NH2a	Golden plover	*Pluvialis apricaria*	0	0	74	24.67	0.13
NH2a	Grey plover	*Pluvialis squatarola*	50	8	0	19.33	0.10
NH2a	Dunlin	*Calidris alpina*	70	36	0	35.33	0.19
NH2a	Bar-tailed godwit	*Limosa lapponica*	1	0	0	0.33	0.00
NH2a	Oystercatcher	*Haematopus ostralegus*	1	2	1	1.33	0.01
NH2a	Turnstone	*Arenaria interpres*	0	0	2	0.67	0.00
NH2a	Curlew	*Numenius arquata*	4	2	10	5.33	0.03
NH2a	Redshank	*Tringa totanus*	25	2	1	9.33	0.05

Sub-Sector NH2a. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NH2a	Shelduck	*Tadorna tadorna*	113	148	50	202	128.25	0.69
NH2a	Ringed plover	*Charadrius hiaticula*	0	37	0	0	9.25	0.05
NH2a	Golden plover	*Pluvialis apricaria*	129	457	550	1	284.25	1.54
NH2a	Grey plover	*Pluvialis squatarola*	2	58	5	0	16.25	0.09
NH2a	Knot	*Calidris canutus*	0	44	0	0	11.00	0.06
NH2a	Sanderling	*Calidris alba*	0	4	0	0	1.00	0.01
NH2a	Dunlin	*Calidris alpina*	214	98	94	128	133.50	0.72
NH2a	Bar-tailed godwit	*Limosa lapponica*	2	1	0	0	0.75	0.00
NH2a	Turnstone	*Arenaria interpres*	0	0	0	3	0.75	0.00
NH2a	Curlew	*Numenius arquata*	49	57	62	95	65.75	0.36
NH2a	Redshank	*Tringa totanus*	13	86	96	101	74.00	0.40

Sub-Sector NH2a. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NH2a	Shelduck	*Tadorna tadorna*	65	3	39	6	0	22.60	0.12
NH2a	Wigeon	*Anas penelope*	0	0	420	0	0	84.00	0.45
NH2a	Mallard	*Anas platyrhynchos*	4	0	65	2	0	14.20	0.08
NH2a	Golden plover	*Pluvialis apricaria*	300	0	6	15	0	64.20	0.35
NH2a	Grey plover	*Pluvialis squatarola*	30	4	48	30	0	22.40	0.12
NH2a	Lapwing	*Vanellus vanellus*	250	0	0	0	0	50.00	0.27
NH2a	Knot	*Calidris canutus*	30	7	60	120	0	43.40	0.23
NH2a	Dunlin	*Calidris alpina*	60	70	130	498	0	174.50	0.94
NH2a	Bar-tailed godwit	*Limosa lapponica*	8	1	2	0	0	2.20	0.01
NH2a	Curlew	*Numenius arquata*	80	40	76	60	0	51.20	0.28
NH2a	Redshank	*Tringa totanus*	60	110	65	76	0	62.75	0.34

Sub-Sector NH2b. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NH2b	Brent goose (dark-bellied)	*Branta bernicla bernicla*	84	0	0	28.00	0.15
NH2b	Shelduck	*Tadorna tadorna*	6	0	45	17.00	0.09
NH2b	Mallard	*Anas platyrhynchos*	0	2	13	5.00	0.03
NH2b	Ringed plover	*Charadrius hiaticula*	0	12	0	4.00	0.02
NH2b	Golden plover	*Pluvialis apricaria*	0	0	2	0.67	0.00
NH2b	Grey plover	*Pluvialis squatarola*	12	14	0	8.67	0.05
NH2b	Dunlin	*Calidris alpina*	42	6	0	16.00	0.09
NH2b	Oystercatcher	*Haematopus ostralegus*	0	2	2	1.33	0.01
NH2b	Curlew	*Numenius arquata*	12	4	3	6.33	0.03
NH2b	Redshank	*Tringa totanus*	42	0	0	14.00	0.08

Sub-Sector NH2b. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NH2b	Shelduck	*Tadorna tadorna*	220	105	250	15	147.50	0.80
NH2b	Wigeon	*Anas penelope*	0	0	9	12	5.25	0.03
NH2b	Mallard	*Anas platyrhynchos*	0	4	0	0	1.00	0.01
NH2b	Ringed plover	*Charadrius hiaticula*	0	8	1	0	2.25	0.01
NH2b	Golden plover	*Pluvialis apricaria*	26	4300	50	3	1094.75	5.95
NH2b	Grey plover	*Pluvialis squatarola*	18	12	23	10	15.75	0.09
NH2b	Knot	*Calidris canutus*	0	30	90	0	30.00	0.16
NH2b	Dunlin	*Calidris alpina*	220	210	120	30	183.33	1.00
NH2b	Bar-tailed godwit	*Limosa lapponica*	0	4	10	0	3.50	0.02
NH2b	Oystercatcher	*Haematopus ostralegus*	2	0	0	0	0.50	0.00
NH2b	Curlew	*Numenius arquata*	32	36	146	45	64.75	0.35
NH2b	Redshank	*Tringa totanus*	73	55	80	30	59.50	0.32

Sub-Sector NH2b. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NH2b	Shelduck	*Tadorna tadorna*	79	0	28	10	0	23.40	0.13
NH2b	Wigeon	*Anas penelope*	0	620	30	0	0	130.00	0.71
NH2b	Teal	*Anas crecca*	0	3	0	0	0	0.60	0.00
NH2b	Mallard	*Anas platyrhynchos*	92	60	24	0	0	35.20	0.19
NH2b	Golden plover	*Pluvialis apricaria*	40	115	0	0	0	31.00	0.17
NH2b	Grey plover	*Pluvialis squatarola*	30	6	16	80	0	26.40	0.14
NH2b	Lapwing	*Vanellus vanellus*	1400	0	0	0	0	280.00	1.52
NH2b	Knot	*Calidris canutus*	0	420	1350	120	0	378.00	2.05
NH2b	Dunlin	*Calidris alpina*	120	135	296	216	0	153.40	0.83
NH2b	Bar-tailed godwit	*Limosa lapponica*	30	0	0	0	0	6.00	0.03
NH2b	Oystercatcher	*Haematopus ostralegus*	0	0	22	15	0	7.40	0.04
NH2b	Turnstone	*Arenaria interpres*	0	4	3	0	0	1.40	0.01
NH2b	Curlew	*Numenius arquata*	106	110	18	80	0	62.80	0.34
NH2b	Redshank	*Tringa totanus*	73	70	54	40	0	47.40	0.26

Sub-Sector NH2c. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NH2c	Brent goose (dark-bellied)	*Branta bernicla bernicla*	12	0	0	4.00	0.01
NH2c	Shelduck	*Tadorna tadorna*	8	14	80	34.00	0.07
NH2c	Mallard	*Anas platyrhynchos*	13	6	39	19.33	0.04
NH2c	Ringed plover	*Charadrius hiaticula*	1	0	0	0.33	0.00
NH2c	Golden plover	*Pluvialis apricaria*	0	0	10	3.33	0.01
NH2c	Grey plover	*Pluvialis squatarola*	142	6	0	49.33	0.10
NH2c	Dunlin	*Calidris alpina*	870	8	0	292.67	0.57
NH2c	Bar-tailed godwit	*Limosa lapponica*	2	0	0	0.67	0.00
NH2c	Oystercatcher	*Haematopus ostralegus*	32	12	0	14.67	0.03
NH2c	Turnstone	*Arenaria interpres*	6	0	0	2.00	0.00
NH2c	Curlew	*Numenius arquata*	34	12	17	21.00	0.04
NH2c	Redshank	*Tringa totanus*	32	2	2	12.00	0.02

Sub-Sector NH2c. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NH2c	Shelduck	*Tadorna tadorna*	1624	656	82	96	614.50	1.20
NH2c	Mallard	*Anas platyrhynchos*	0	0	40	45	21.25	0.04
NH2c	Golden plover	*Pluvialis apricaria*	73	5450	950	75	1637.00	3.20
NH2c	Grey plover	*Pluvialis squatarola*	33	33	105	20	47.75	0.09
NH2c	Lapwing	*Vanellus vanellus*	0	30	0	0	7.50	0.01
NH2c	Knot	*Calidris canutus*	190	12	330	120	177.33	0.35
NH2c	Dunlin	*Calidris alpina*	810	800	180	175	596.67	1.17
NH2c	Bar-tailed godwit	*Limosa lapponica*	0	5	0	14	4.75	0.01
NH2c	Oystercatcher	*Haematopus ostralegus*	8	2	0	0	2.50	0.00
NH2c	Turnstone	*Arenaria interpres*	0	0	10	1	2.75	0.01
NH2c	Curlew	*Numenius arquata*	55	122	100	146	105.75	0.21
NH2c	Redshank	*Tringa totanus*	20	35	95	103	63.25	0.12

Sub-Sector NH2c. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NH2c	Shelduck	*Tadorna tadorna*	4	6	0	4	0	2.80	0.01
NH2c	Wigeon	*Anas penelope*	0	0	0	10	0	2.00	0.00
NH2c	Teal	*Anas crecca*	7	0	0	0	0	1.40	0.00
NH2c	Mallard	*Anas platyrhynchos*	102	80	46	0	0	45.60	0.09
NH2c	Golden plover	*Pluvialis apricaria*	2400	210	50	25	0	537.00	1.05
NH2c	Grey plover	*Pluvialis squatarola*	10	5	30	150	0	39.00	0.08
NH2c	Lapwing	*Vanellus vanellus*	1046	0	0	0	0	209.20	0.41
NH2c	Knot	*Calidris canutus*	200	60	3350	2950	0	1312.00	2.56
NH2c	Dunlin	*Calidris alpina*	215	3950	124	221	0	902.00	1.76
NH2c	Bar-tailed godwit	*Limosa lapponica*	40	3	18	0	0	12.20	0.02
NH2c	Oystercatcher	*Haematopus ostralegus*	23	10	26	30	0	17.80	0.03
NH2c	Curlew	*Numenius arquata*	63	130	32	150	0	75.00	0.15
NH2c	Redshank	*Tringa totanus*	40	60	22	70	0	38.40	0.08

Sub-Sector NJ1. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NJ1	Shelduck	*Tadorna tadorna*	41	37	64	47.33	0.06
NJ1	Mallard	*Anas platyrhynchos*	8	14	18	13.33	0.02
NJ1	Avocet	*Recurvirostra avosetta*	0	0	2	0.67	0.00
NJ1	Ringed plover	*Charadrius hiaticula*	9	22	9	13.33	0.02
NJ1	Grey plover	*Pluvialis squatarola*	575	274	0	283.00	0.36
NJ1	Lapwing	*Vanellus vanellus*	0	0	18	6.00	0.01
NJ1	Knot	*Calidris canutus*	270	4	0	91.33	0.11
NJ1	Dunlin	*Calidris alpina*	1850	650	115	871.67	1.09
NJ1	Bar-tailed godwit	*Limosa lapponica*	167	2	2	57.00	0.07
NJ1	Oystercatcher	*Haematopus ostralegus*	37	21	85	47.67	0.06
NJ1	Turnstone	*Arenaria interpres*	3	4	0	2.33	0.00
NJ1	Curlew	*Numenius arquata*	310	3	19	110.67	0.14
NJ1	Redshank	*Tringa totanus*	415	46	9	156.67	0.20

Sub-Sector NJ1. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NJ1	Black-tailed godwit	*Limosa limosa*	0	0	25	0	6.25	0.01
NJ1	Pink-footed goose	*Anser brachyrhynchus*	0	0	0	75	18.75	0.02
NJ1	Shelduck	*Tadorna tadorna*	1350	1366	2187	920	1455.75	1.83
NJ1	Wigeon	*Anas penelope*	0	0	0	7	1.75	0.00
NJ1	Mallard	*Anas platyrhynchos*	0	0	12	26	9.50	0.01
NJ1	Avocet	*Recurvirostra avosetta*	2	0	0	0	0.50	0.00
NJ1	Ringed plover	*Charadrius hiaticula*	0	25	14	0	9.75	0.01
NJ1	Golden plover	*Pluvialis apricaria*	30	8575	1700	32	2584.25	3.24
NJ1	Grey plover	*Pluvialis squatarola*	66	290	346	138	234.00	0.29
NJ1	Lapwing	*Vanellus vanellus*	0	290	0	0	72.50	0.09
NJ1	Knot	*Calidris canutus*	17	4750	253	1575	1673.33	2.10
NJ1	Dunlin	*Calidris alpina*	3650	2150	7920	3800	4573.33	5.74
NJ1	Bar-tailed godwit	*Limosa lapponica*	215	195	6	12	107.00	0.13
NJ1	Oystercatcher	*Haematopus ostralegus*	14	0	0	0	3.50	0.00
NJ1	Turnstone	*Arenaria interpres*	0	4	0	4	2.00	0.00
NJ1	Curlew	*Numenius arquata*	465	470	286	395	407.00	0.51
NJ1	Redshank	*Tringa totanus*	380	350	2175	460	968.33	1.22

Sub-Sector NJ1. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NJ1	Black-tailed godwit	*Limosa limosa*	0	4	3	0	0	1.40	0.00
NJ1	Brent goose (dark-bellied)	*Branta bernicla bernicla*	0	0	16	19	0	7.00	0.01
NJ1	Shelduck	*Tadorna tadorna*	405	855	185	137	485	413.40	0.52
NJ1	Wigeon	*Anas penelope*	0	140	12	18	34	40.80	0.05
NJ1	Teal	*Anas crecca*	0	9	0	31	0	8.00	0.01
NJ1	Mallard	*Anas platyrhynchos*	44	0	17	165	0	45.20	0.06
NJ1	Avocet	*Recurvirostra avosetta*	0	0	0	1	0	0.20	0.00
NJ1	Ringed plover	*Charadrius hiaticula*	2	0	11	2	9	4.80	0.01
NJ1	Golden plover	*Pluvialis apricaria*	0	4500	6750	158	63	2294.20	2.88
NJ1	Grey plover	*Pluvialis squatarola*	26	120	210	385	460	290.33	0.36
NJ1	Lapwing	*Vanellus vanellus*	50	195	387	14	34	136.00	0.17
NJ1	Knot	*Calidris canutus*	1640	3750	3750	5750	1115	3201.00	4.02
NJ1	Sanderling	*Calidris alba*	0	0	0	0	3	0.60	0.00
NJ1	Dunlin	*Calidris alpina*	624	3950	1950	4800	2750	3031.00	3.80
NJ1	Bar-tailed godwit	*Limosa lapponica*	0	39	94	615	174	184.40	0.23
NJ1	Oystercatcher	*Haematopus ostralegus*	12	17	3	54	635	144.20	0.18
NJ1	Turnstone	*Arenaria interpres*	0	4	0	0	1	1.00	0.00
NJ1	Curlew	*Numenius arquata*	124	875	185	1210	646	608.00	0.76
NJ1	Redshank	*Tringa totanus*	540	1145	730	815	425	731.25	0.92

Sub-Sector NJ2. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NJ2	Shelduck	*Tadorna tadorna*	12	16	22	19.00	0.02
NJ2	Mallard	*Anas platyrhynchos*	3	0	12	6.00	0.01
NJ2	Ringed plover	*Charadrius hiaticula*	0	43	0	14.33	0.01
NJ2	Grey plover	*Pluvialis squatarola*	343	306	0	216.33	0.22
NJ2	Dunlin	*Calidris alpina*	175	49	6	76.67	0.08
NJ2	Oystercatcher	*Haematopus ostralegus*	6	69	2	35.50	0.04
NJ2	Turnstone	*Arenaria interpres*	2	4	0	2.00	0.00
NJ2	Curlew	*Numenius arquata*	23	0	4	9.00	0.01
NJ2	Redshank	*Tringa totanus*	764	0	2	255.33	0.26

Sub-Sector NJ2. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NJ2	Shelduck	*Tadorna tadorna*	288	680	146	203	329.25	0.34
NJ2	Mallard	*Anas platyrhynchos*	0	0	0	28	7.00	0.01
NJ2	Ringed plover	*Charadrius hiaticula*	0	0	26	0	6.50	0.01
NJ2	Golden plover	*Pluvialis apricaria*	308	4954	2227	3	1873.00	1.93
NJ2	Grey plover	*Pluvialis squatarola*	0	14	387	19	105.00	0.11
NJ2	Knot	*Calidris canutus*	12	1328	2450	7320	3260.67	3.36
NJ2	Dunlin	*Calidris alpina*	5453	2524	2701	3862	4005.33	4.13
NJ2	Bar-tailed godwit	*Limosa lapponica*	47	39	360	141	146.75	0.15
NJ2	Oystercatcher	*Haematopus ostralegus*	3	26	3	6	9.50	0.01
NJ2	Turnstone	*Arenaria interpres*	0	2	0	0	0.50	0.00
NJ2	Curlew	*Numenius arquata*	261	20	59	112	113.00	0.12
NJ2	Redshank	*Tringa totanus*	397	257	402	473	382.25	0.39

Sub-Sector NJ2. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NJ2	Black-tailed godwit	*Limosa limosa*	0	0	0	2	0	0.40	0.00
NJ2	Brent goose (dark-bellied)	*Branta bernicla bernicla*	0	0	2	0	2	0.80	0.00
NJ2	Shelduck	*Tadorna tadorna*	185	14	104	30	46	75.80	0.08
NJ2	Mallard	*Anas platyrhynchos*	26	2	125	88	0	48.20	0.05
NJ2	Ringed plover	*Charadrius hiaticula*	14	0	0	0	0	2.80	0.00
NJ2	Golden plover	*Pluvialis apricaria*	6035	3478	8	0	0	1904.20	1.96
NJ2	Grey plover	*Pluvialis squatarola*	141	241	184	90	24	136.00	0.14
NJ2	Lapwing	*Vanellus vanellus*	1548	0	0	0	0	309.60	0.32
NJ2	Knot	*Calidris canutus*	7100	4560	8163	771	1843	4487.40	4.63
NJ2	Dunlin	*Calidris alpina*	960	1244	1126	848	760	987.60	1.02
NJ2	Bar-tailed godwit	*Limosa lapponica*	422	198	891	553	6	414.00	0.43
NJ2	Oystercatcher	*Haematopus ostralegus*	6	2	53	13	3	15.40	0.02
NJ2	Turnstone	*Arenaria interpres*	0	0	0	0	2	0.40	0.00
NJ2	Curlew	*Numenius arquata*	103	86	114	47	21	74.20	0.08
NJ2	Redshank	*Tringa totanus*	555	77	226	246	259	272.60	0.28

Sector NK. Spring monthly counts and densities

Sector	Common name	Latin name	Monthly Count			Seasonal Average	Density (Ha)
			April	May	June		
NK	Black-tailed godwit	*Limosa limosa*	1	0	0	0.33	0.00
NK	Brent goose (dark-bellied)	*Branta bernicla bernicla*	2	2	0	1.33	0.00
NK	Shelduck	*Tadorna tadorna*	10	0	3	4.33	0.00
NK	Mallard	*Anas platyrhynchos*	1	0	4	1.67	0.00
NK	Ringed plover	*Charadrius hiaticula*	10	27	18	18.33	0.01
NK	Golden plover	*Pluvialis apricaria*	0	0	2	0.67	0.00
NK	Grey plover	*Pluvialis squatarola*	28	159	0	62.33	0.04
NK	Lapwing	*Vanellus vanellus*	0	0	7	2.33	0.00
NK	Knot	*Calidris canutus*	0	1	1130	377.00	0.25
NK	Sanderling	*Calidris alba*	127	401	42	190.00	0.13
NK	Dunlin	*Calidris alpina*	1704	1599	61	1121.33	0.76
NK	Bar-tailed godwit	*Limosa lapponica*	21	3	78	34.00	0.02
NK	Oystercatcher	*Haematopus ostralegus*	327	166	170	221.00	0.15
NK	Turnstone	*Arenaria interpres*	35	18	2	18.33	0.01
NK	Curlew	*Numenius arquata*	5	1	6	4.00	0.00
NK	Redshank	*Tringa totanus*	0	13	29	14.00	0.01

Sector NK. Autumn monthly counts and densities

Sector	Common name	Latin name	Monthly Count				Seasonal Average	Density (Ha)
			July	August	September	October		
NK	Black-tailed godwit	*Limosa limosa*	11	0	0	0	2.75	0.00
NK	Brent goose (dark-bellied)	*Branta bernicla bernicla*	0	0	0	6	1.50	0.00
NK	Shelduck	*Tadorna tadorna*	3	0	11	0	3.50	0.00
NK	Wigeon	*Anas penelope*	0	0	25	3	7.00	0.00
NK	Teal	*Anas crecca*	0	0	2	0	0.50	0.00
NK	Mallard	*Anas platyrhynchos*	0	0	4	0	1.00	0.00
NK	Ringed plover	*Charadrius hiaticula*	19	513	49	75	164.00	0.11
NK	Golden plover	*Pluvialis apricaria*	402	1	8276	153	2208.00	1.49
NK	Grey plover	*Pluvialis squatarola*	0	79	199	70	87.00	0.06
NK	Lapwing	*Vanellus vanellus*	0	0	170	0	42.50	0.03
NK	Knot	*Calidris canutus*	1304	5900	14981	11000	8296.25	5.59
NK	Sanderling	*Calidris alba*	158	167	75	170	142.50	0.10
NK	Dunlin	*Calidris alpina*	5670	6016	8730	4500	6229.00	4.20
NK	Bar-tailed godwit	*Limosa lapponica*	36	66	200	150	113.00	0.08
NK	Oystercatcher	*Haematopus ostralegus*	63	586	0	600	312.25	0.21
NK	Turnstone	*Arenaria interpres*	24	89	50	25	47.00	0.03
NK	Curlew	*Numenius arquata*	73	72	218	97	115.00	0.08
NK	Redshank	*Tringa totanus*	953	4206	3295	1789	2560.00	1.71

Sector NK. Winter monthly counts and densities

Sector	Common name	Latin name	Monthly Count					Seasonal Average	Density (Ha)
			November	December	January	February	March		
NK	Brent goose (dark-bellied)	*Branta bernicla bernicla*	40	8	146	113	204	102.20	0.07
NK	Shelduck	*Tadorna tadorna*	7	5	87	25	6	26.00	0.02
NK	Wigeon	*Anas penelope*	0	33	56	106	0	39.00	0.03
NK	Teal	*Anas crecca*	15	1	0	0	0	3.20	0.00
NK	Mallard	*Anas platyrhynchos*	83	25	66	30	0	40.80	0.03
NK	Ringed plover	*Charadrius hiaticula*	114	0	15	24	12	33.00	0.02
NK	Golden plover	*Pluvialis apricaria*	500	0	52	188	408	229.60	0.15
NK	Grey plover	*Pluvialis squatarola*	38	105	150	139	70	100.40	0.07
NK	Lapwing	*Vanellus vanellus*	0	2	0	0	0	0.40	0.00
NK	Knot	*Calidris canutus*	22000	3260	3745	7000	1456	7492.20	5.05
NK	Sanderling	*Calidris alba*	40	71	29	23	15	35.60	0.02
NK	Dunlin	*Calidris alpina*	1450	3150	2548	1252	1137	1907.40	1.29
NK	Bar-tailed godwit	*Limosa lapponica*	189	81	133	124	18	109.00	0.07
NK	Oystercatcher	*Haematopus ostralegus*	696	1500	1760	1319	318	1118.60	0.75
NK	Turnstone	*Arenaria interpres*	50	33	30	28	15	31.20	0.02
NK	Curlew	*Numenius arquata*	60	117	257	59	43	107.20	0.07
NK	Redshank	*Tringa totanus*	495	941	245	516	122	463.80	0.31

Appendix 3. Other birds observed during the low tide count 2003/04

Sub-Sector ITA1. Keadby Bridge to Amcotts

Sector	Date	Common name	Scientific name	Total
ITA1	November	Moorhen	*Gallinula chloropus*	2
ITA1	November	Great black-backed gull	*Larus marinus*	3
ITA1	November	Common gull	*Larus canus*	39
ITA1	November	Cormorant	*Phalacrocorax carbo*	3
ITA1	November	Black-headed gull	*Larus ridibundus*	81
ITA1	December	Black-headed gull	*Larus ridibundus*	2
ITA1	December	Cormorant	*Phalacrocorax carbo*	1
ITA1	December	Common gull	*Larus canus*	3
ITA1	December	Greylag goose	*Anser anser*	11
ITA1	January	Goosander	*Mergus merganser*	3
ITA1	January	Common gull	*Larus canus*	50
ITA1	January	Black-headed gull	*Larus ridibundus*	285
ITA1	January	Gadwall	*Anas strepera*	1
ITA1	January	Cormorant	*Phalacrocorax carbo*	5
ITA1	January	Moorhen	*Gallinula chloropus*	3
ITA1	February	Moorhen	*Gallinula chloropus*	2
ITA1	February	Goldeneye	*Bucephala clangula*	1
ITA1	February	Gadwall	*Anas strepera*	1
ITA1	February	Common gull	*Larus canus*	19
ITA1	February	Cormorant	*Phalacrocorax carbo*	1
ITA1	February	Black-headed gull	*Larus ridibundus*	50
ITA1	March	Common gull	*Larus canus*	4
ITA1	March	Black-headed gull	*Larus ridibundus*	3
ITA1	April	Coot	*Fulica atra*	1
ITA1	May	Cormorant	*Phalacrocorax carbo*	2
ITA1	May	Goldeneye	*Bucephala clangula*	1
ITA1	July	Common gull	*Larus canus*	5
ITA1	July	Common sandpiper	*Actitis hypoleucos*	1
ITA1	July	Black-headed gull	*Larus ridibundus*	160
ITA1	July	Lesser black-backed gull	*Larus fuscus*	4
ITA1	August	Common gull	*Larus canus*	11
ITA1	August	Great black-backed gull	*Larus marinus*	4
ITA1	August	Lesser black-backed gull	*Larus fuscus*	24
ITA1	August	Moorhen	*Gallinula chloropus*	1
ITA1	August	Cormorant	*Phalacrocorax carbo*	2
ITA1	August	Common sandpiper	*Actitis hypoleucos*	1
ITA1	August	Black-headed gull	*Larus ridibundus*	99

Sub-Sector ITA2. Amcotts to Mere Dyke

Sector	Date	Common name	Scientific name	Total
ITA2	November	Grey heron	*Ardea cinerea*	1
ITA2	December	Black-headed gull	*Larus ridibundus*	1
ITA2	December	Common gull	*Larus canus*	21
ITA2	January	Black-headed gull	*Larus ridibundus*	10
ITA2	January	Common gull	*Larus canus*	18
ITA2	January	Great black-backed gull	*Larus marinus*	1
ITA2	February	Moorhen	*Gallinula chloropus*	1
ITA2	February	Common gull	*Larus canus*	9
ITA2	February	Black-headed gull	*Larus ridibundus*	2
ITA2	March	Common gull	*Larus canus*	1
ITA2	March	Cormorant	*Phalacrocorax carbo*	6
ITA2	April	Cormorant	*Phalacrocorax carbo*	1
ITA2	July	Cormorant	*Phalacrocorax carbo*	1
ITA2	July	Black-headed gull	*Larus ridibundus*	2
ITA2	August	Black-headed gull	*Larus ridibundus*	1

Sub-Sector ITA3. Mere Dyke – Garthorpe Shore

Sector	Date	Common name	Scientific name	Total
ITA3	November	Cormorant	*Phalacrocorax carbo*	1
ITA3	November	Black-headed gull	*Larus ridibundus*	17
ITA3	November	Common gull	*Larus canus*	77
ITA3	November	Great black-backed gull	*Larus marinus*	1
ITA3	December	Cormorant	*Phalacrocorax carbo*	2
ITA3	January	Common gull	*Larus canus*	8
ITA3	January	Black-headed gull	*Larus ridibundus*	1
ITA3	February	Cormorant	*Phalacrocorax carbo*	1
ITA3	February	Great black-backed gull	*Larus marinus*	1
ITA3	April	Greylag goose	*Anser anser*	1
ITA3	May	Black-headed gull	*Larus ridibundus*	3
ITA3	June	Black-headed gull	*Larus ridibundus*	42
ITA3	July	Black-headed gull	*Larus ridibundus*	72
ITA3	July	Lesser black-backed gull	*Larus fuscus*	2
ITA3	August	Black-headed gull	*Larus ridibundus*	1200
ITA3	August	Cormorant	*Phalacrocorax carbo*	1
ITA3	August	Common gull	*Larus canus*	50
ITA3	August	Great black-backed gull	*Larus marinus*	3
ITA3	August	Lesser black-backed gull	*Larus fuscus*	130

Sub-Sector ITA4. Garthorpe Shore - Walcott

Sector	Date	Common name	Scientific name	Total
ITA4	November	Black-headed gull	*Larus ridibundus*	43
ITA4	November	Common gull	*Larus canus*	83
ITA4	December	Common gull	*Larus canus*	102
ITA4	December	Goosander	*Mergus merganser*	3
ITA4	December	Cormorant	*Phalacrocorax carbo*	1
ITA4	December	Black-headed gull	*Larus ridibundus*	45
ITA4	February	Cormorant	*Phalacrocorax carbo*	1
ITA4	March	Cormorant	*Phalacrocorax carbo*	1
ITA4	March	Common gull	*Larus canus*	7
ITA4	March	Black-headed gull	*Larus ridibundus*	1
ITA4	July	Lesser black-backed gull	*Larus fuscus*	2
ITA4	July	Common gull	*Larus canus*	8
ITA4	July	Black-headed gull	*Larus ridibundus*	79
ITA4	August	Grey heron	*Ardea cinerea*	1
ITA4	August	Common gull	*Larus canus*	1
ITA4	August	Black-headed gull	*Larus ridibundus*	86

Sector ISA. Walcot to Alkborough Beacon

Sector	Date	Common name	Scientific name	Total
ISA	October	Grey heron	*Ardea cinerea*	1
ISA	October	Greylag goose	*Anser anser*	221
ISA	October	Canada goose	*Branta canadensis*	71
ISA	October	Grey heron	*Ardea cinerea*	1
ISA	November	Canada goose	*Branta canadensis*	3
ISA	November	European white-fronted goose	*Anser a. flavirostris*	25
ISA	December	Canada goose	*Branta canadensis*	2
ISA	December	Greylag goose	*Anser anser*	241
ISA	December	Cormorant	*Phalacrocorax carbo*	4
ISA	January	Greylag goose	*Anser anser*	258
ISA	January	Grey heron	*Ardea cinerea*	1
ISA	January	Canada goose	*Branta canadensis*	88
ISA	February	Canada goose	*Branta canadensis*	30
ISA	February	Greylag goose	*Anser anser*	12
ISA	February	Grey heron	*Ardea cinerea*	1
ISA	March	Cormorant	*Phalacrocorax carbo*	2
ISA	March	Canada goose	*Branta canadensis*	10
ISA	March	Greylag goose	*Anser anser*	78
ISA	April	Barnacle goose	*Branta leucopsis*	2
ISA	April	Canada goose	*Branta canadensis*	16
ISA	April	Greylag goose	*Anser anser*	64
ISA	May	Greylag goose	*Anser anser*	114
ISA	May	Canada goose	*Branta canadensis*	21
ISA	July	Canada goose	*Branta canadensis*	25
ISA	July	Grey heron	*Ardea cinerea*	1

Sub-Sector ISB1. Alkborough Beacon to Whitton Village

Sector	Date	Common name	*Scientific name*	Total
ISB1	October	Common sandpiper	*Actitis hypoleucos*	1
ISB1	October	Grey heron	*Ardea cinerea*	1
ISB1	November	Kingfisher	*Alcedo atthis*	1
ISB1	December	Common sandpiper	*Actitis hypoleucos*	1
ISB1	December	Moorhen	*Gallinula chloropus*	4
ISB1	January	Cormorant	*Phalacrocorax carbo*	2
ISB1	March	Herring gull	*Larus argentatus*	5
ISB1	April	Grey heron	*Ardea cinerea*	1
ISB1	July	Grey heron	*Ardea cinerea*	1
ISB1	July	Common sandpiper	*Actitis hypoleucos*	6
ISB1	July	Common gull	*Larus canus*	1
ISB1	July	Black-headed gull	*Larus ridibundus*	17

Sub-Sector ISB2. Whitton Village to Whitton Ness

Sector	Date	Common name	*Scientific name*	Total
ISB2	November	Bean goose	*Anser fabalis*	1
ISB2	November	European white-fronted goose	*Anser a. albifrons*	2
ISB2	November	Grey heron	*Ardea cinerea*	2
ISB2	December	Greylag goose	*Anser anser*	35
ISB2	January	Canada goose	*Branta canadensis*	7
ISB2	March	Snipe	*Gallinago gallinago*	2
ISB2	March	Common gull	*Larus canus*	3
ISB2	March	Grey heron	*Ardea cinerea*	1
ISB2	March	Herring gull	*Larus argentatus*	1
ISB2	March	Lesser black-backed gull	*Larus fuscus*	6
ISB2	March	Moorhen	*Gallinula chloropus*	1
ISB2	July	Grey heron	*Ardea cinerea*	1
ISB2	July	Greylag goose	*Anser anser*	176
ISB2	July	Little egret	*Egretta garzetta*	1
ISB2	July	Common gull	*Larus canus*	5
ISB2	July	Black-headed gull	*Larus ridibundus*	38
ISB2	July	Lesser black-backed gull	*Larus fuscus*	10
ISB2	July	Little grebe	*Tachybaptus ruficollis*	1

Sub-Sector ISB3. South side of Whitton Sand counted from south shore

Sector	Date	Common name	Scientific name	Total
ISB3	October	Lesser black-backed gull	*Larus fuscus*	15
ISB3	October	Herring gull	*Larus argentatus*	48
ISB3	October	Greylag goose	*Anser anser*	375
ISB3	October	Great black-backed gull	*Larus marinus*	10
ISB3	November	Common gull	*Larus canus*	8
ISB3	November	Great black-backed gull	*Larus marinus*	1
ISB3	December	Greylag goose	*Anser anser*	50
ISB3	December	Lesser black-backed gull	*Larus fuscus*	50

Sub-Sector ISB3 … contd.

Sector	Date	Common name	Scientific name	Total
ISB3	January	Greylag goose	*Anser anser*	120
ISB3	March	Greylag goose	*Anser anser*	19
ISB3	March	Herring gull	*Larus argentatus*	1
ISB3	March	Lesser black-backed gull	*Larus fuscus*	7
ISB3	March	Black-headed gull	*Larus ridibundus*	2
ISB3	March	Canada goose	*Branta canadensis*	13
ISB3	April	Canada goose	*Branta canadensis*	3
ISB3	April	Greylag goose	*Anser anser*	76
ISB3	May	Greylag goose	*Anser anser*	37
ISB3	May	Canada goose	*Branta canadensis*	41
ISB3	May	Barnacle goose	*Branta leucopsis*	2
ISB3	July	Common gull	*Larus canus*	2
ISB3	July	Lesser black-backed gull	*Larus fuscus*	28
ISB3	July	Herring gull	*Larus argentatus*	2
ISB3	July	Bar-headed goose	*Anser indicus*	1
ISB3	July	Greenshank	*Tringa nebularia*	2
ISB3	July	Greylag goose	*Anser anser*	80
ISB3	July	Great black-backed gull	*Larus marinus*	2
ISB3	July	Canada goose	*Branta canadensis*	85
ISB3	July	Cormorant	*Phalacrocorax carbo*	2
ISB3	July	Barnacle goose	*Branta leucopsis*	125
ISB3	July	Black-headed gull	*Larus ridibundus*	67

Sector ISC. Whitton Ness to 1km east of Winteringham Haven

Sector	Date	Common name	Scientific name	Total
ISC	September	Grey heron	*Ardea cinerea*	1
ISC	November	Grey heron	*Ardea cinerea*	1
ISC	March	Greylag goose	*Anser anser*	2
ISC	April	Green sandpiper	*Tringa ochropus*	1
ISC	May	Canada goose	*Branta canadensis*	42
ISC	August	Greenshank	*Tringa nebularia*	1
ISC	August	Grey heron	*Ardea cinerea*	1

Sector ISD. Winteringham east to South Ferriby bird hide including Read's Island and all sand and mudflats north and west

Sector	Date	Common name	Scientific name	Total
ISD	September	Kingfisher	*Alcedo atthis*	1
ISD	September	Grey heron	*Ardea cinerea*	2
ISD	September	Greenshank	*Tringa nebularia*	1
ISD	September	Greylag goose	*Anser anser*	8
ISD	September	Curlew sandpiper	*Calidris ferruginea*	1
ISD	September	Cormorant	*Phalacrocorax carbo*	19
ISD	September	Canada goose	*Branta canadensis*	28
ISD	October	Cormorant	*Phalacrocorax carbo*	14

Sector ISD … contd.

Sector	Date	Common name	Scientific name	Total
ISD	October	Canada goose	*Branta canadensis*	20
ISD	October	Grey heron	*Ardea cinerea*	2
ISD	October	Pintail	*Anas acuta*	31
ISD	November	Grey heron	*Ardea cinerea*	2
ISD	November	Greylag goose	*Anser anser*	16
ISD	November	Canada goose	*Branta canadensis*	3
ISD	November	Cormorant	*Phalacrocorax carbo*	13
ISD	November	Pintail	*Anas acuta*	4
ISD	December	Cormorant	*Phalacrocorax carbo*	36
ISD	December	Grey heron	*Ardea cinerea*	1
ISD	December	Pintail	*Anas acuta*	4
ISD	January	Shoveler	*Anas clypeata*	4
ISD	January	Pintail	*Anas acuta*	29
ISD	January	Moorhen	*Gallinula chloropus*	3
ISD	January	Greylag goose	*Anser anser*	33
ISD	January	Canada goose	*Branta canadensis*	10
ISD	January	Cormorant	*Phalacrocorax carbo*	21
ISD	February	Canada goose	*Branta canadensis*	122
ISD	February	Cormorant	*Phalacrocorax carbo*	23
ISD	February	Greylag goose	*Anser anser*	7
ISD	February	Moorhen	*Gallinula chloropus*	2
ISD	March	Cormorant	*Phalacrocorax carbo*	11
ISD	March	Canada goose	*Branta canadensis*	92
ISD	March	Greylag goose	*Anser anser*	15
ISD	March	Shoveler	*Anas clypeata*	31
ISD	March	Moorhen	*Gallinula chloropus*	1
ISD	April	Greylag goose	*Anser anser*	18
ISD	April	Gadwall	*Anas strepera*	2
ISD	April	Spotted redshank	*Tringa erythropus*	1
ISD	April	Grey heron	*Ardea cinerea*	1
ISD	April	Little ringed plover	*Charadrius dubius*	3
ISD	April	Moorhen	*Gallinula chloropus*	1
ISD	April	Common sandpiper	*Actitis hypoleucos*	2
ISD	April	Canada goose	*Branta canadensis*	104
ISD	April	Cormorant	*Phalacrocorax carbo*	2
ISD	April	Shoveler	*Anas clypeata*	7
ISD	May	Shoveler	*Anas clypeata*	6
ISD	May	Cormorant	*Phalacrocorax carbo*	1
ISD	May	Tufted duck	*Aythya fuligula*	4
ISD	May	Mute swan	*Cygnus olor*	13
ISD	May	Moorhen	*Gallinula chloropus*	4
ISD	May	Greylag goose	*Anser anser*	14
ISD	May	Gadwall	*Anas strepera*	12
ISD	May	Canada goose	*Branta canadensis*	224
ISD	June	Canada goose	*Branta canadensis*	233
ISD	July	Tufted duck	*Aythya fuligula*	1

Sector ISD … contd.

Sector	Date	Common name	*Scientific name*	Total
ISD	July	Grey heron	*Ardea cinerea*	1
ISD	July	Greylag goose	*Anser anser*	11
ISD	July	Common sandpiper	*Actitis hypoleucos*	3
ISD	July	Little ringed plover	*Charadrius dubius*	2
ISD	July	Moorhen	*Gallinula chloropus*	2
ISD	July	Shoveler	*Anas clypeata*	3
ISD	July	Whimbrel	*Numenius phaeopus*	3
ISD	July	Common tern	*Sterna hirundo*	5
ISD	July	Canada goose	*Branta canadensis*	57
ISD	July	Cormorant	*Phalacrocorax carbo*	6
ISD	August	Little gull	*Larus minutus*	1
ISD	August	Barnacle goose	*Branta leucopsis*	36
ISD	August	Cormorant	*Phalacrocorax carbo*	8
ISD	August	Canada goose	*Branta canadensis*	302
ISD	August	Common sandpiper	*Actitis hypoleucos*	11
ISD	August	Gadwall	*Anas strepera*	6
ISD	August	Greylag goose	*Anser anser*	105
ISD	August	Grey heron	*Ardea cinerea*	2
ISD	August	Kingfisher	*Alcedo atthis*	1
ISD	August	Ruff	*Philomachus pugnax*	1
ISD	August	Shoveler	*Anas clypeata*	3
ISD	August	Whimbrel	*Numenius phaeopus*	2

Sub-Sector ISE1. South Ferriby bird hide to South Ferriby Cliff and associated mud flat east of Read's Island

Sector	**Date**	**Common name**	**Scientific name**	**Total**
ISE1	September	Coot	*Fulica atra*	21
ISE1	September	Grey heron	*Ardea cinerea*	1
ISE1	September	Moorhen	*Gallinula chloropus*	10
ISE1	September	Shoveler	*Anas clypeata*	1
ISE1	September	Mute swan	*Cygnus olor*	2
ISE1	October	Moorhen	*Gallinula chloropus*	11
ISE1	October	Coot	*Fulica atra*	30
ISE1	November	Coot	*Fulica atra*	28
ISE1	November	Moorhen	*Gallinula chloropus*	6
ISE1	December	Coot	*Fulica atra*	23
ISE1	December	Moorhen	*Gallinula chloropus*	1
ISE1	January	Canada goose	*Branta canadensis*	9
ISE1	January	Coot	*Fulica atra*	13
ISE1	January	Moorhen	*Gallinula chloropus*	1
ISE1	January	Mute swan	*Cygnus olor*	2
ISE1	February	Coot	*Fulica atra*	7
ISE1	March	Mute swan	*Cygnus olor*	2
ISE1	March	Moorhen	*Gallinula chloropus*	2
ISE1	March	Gadwall	*Anas strepera*	2

Sub-Sector ISE1 … contd.

Sector	Date	Common name	Scientific name	Total
ISE1	March	Coot	*Fulica atra*	8
ISE1	March	Greylag goose	*Anser anser*	2
ISE1	April	Canada goose	*Branta canadensis*	3
ISE1	April	Coot	*Fulica atra*	2
ISE1	April	Little grebe	*Tachybaptus ruficollis*	1
ISE1	April	Moorhen	*Gallinula chloropus*	2
ISE1	April	Mute swan	*Cygnus olor*	2
ISE1	May	Canada goose	*Branta canadensis*	2
ISE1	May	Moorhen	*Gallinula chloropus*	1
ISE1	May	Coot	*Fulica atra*	2
ISE1	May	Ruddy duck	*Oxyura jamaicensis*	1
ISE1	June	Moorhen	*Gallinula chloropus*	2
ISE1	June	Mute swan	*Cygnus olor*	6
ISE1	June	Coot	*Fulica atra*	14
ISE1	July	Coot	*Fulica atra*	10
ISE1	July	Moorhen	*Gallinula chloropus*	5
ISE1	July	Mute swan	*Cygnus olor*	2
ISE1	July	Tufted duck	*Aythya fuligula*	1
ISE1	August	Canada goose	*Branta canadensis*	25
ISE1	August	Coot	*Fulica atra*	12
ISE1	August	Greenshank	*Tringa nebularia*	1
ISE1	August	Grey heron	*Ardea cinerea*	1
ISE1	August	Mute swan	*Cygnus olor*	3
ISE1	August	Moorhen	*Gallinula chloropus*	1

Sub-Sector ISE2. South Ferriby Cliff to Chowder Ness

Sector	Date	Common name	Scientific name	Total
ISE2	October	Greenshank	*Tringa nebularia*	1
ISE2	April	Greylag goose	*Anser anser*	2
ISE2	April	Mute swan	*Cygnus olor*	5
ISE2	August	Mute swan	*Cygnus olor*	3

Sub-Sector ISF2. Barton Haven to Barrow Haven

Sector	Date	Common name	Scientific name	Total
ISF2	September	Cormorant	*Phalacrocorax carbo*	10
ISF2	September	Common tern	*Sterna hirundo*	15
ISF2	September	Grey heron	*Ardea cinerea*	3
ISF2	October	Cormorant	*Phalacrocorax carbo*	14
ISF2	October	Great black-backed gull	*Larus marinus*	4
ISF2	October	Herring gull	*Larus argentatus*	4
ISF2	October	Lesser black-backed gull	*Larus fuscus*	2
ISF2	November	Cormorant	*Phalacrocorax carbo*	22
ISF2	March	Mute swan	*Cygnus olor*	1
ISF2	May	Canada goose	*Branta canadensis*	34

Sub-Sector ISF3. Barrow Haven to New Holland Pier

Sector	Date	Common name	Scientific name	Total
ISF3	September	Mute swan	*Cygnus olor*	17
ISF3	October	Mute swan	*Cygnus olor*	66
ISF3	October	Grey heron	*Ardea cinerea*	1
ISF3	November	Black-headed gull	*Larus ridibundus*	65
ISF3	November	Common gull	*Larus canus*	3
ISF3	November	Mute swan	*Cygnus olor*	6
ISF3	December	Mute swan	*Cygnus olor*	8
ISF3	December	Whooper swan	*Cygnus cygnus*	7
ISF3	January	Whooper swan	*Cygnus cygnus*	8
ISF3	January	Mute swan	*Cygnus olor*	18
ISF3	January	Grey heron	*Ardea cinerea*	1
ISF3	January	Black-headed gull	*Larus ridibundus*	25
ISF3	January	Common gull	*Larus canus*	25
ISF3	February	Grey heron	*Ardea cinerea*	5
ISF3	February	Mute swan	*Cygnus olor*	4
ISF3	April	Whooper swan	*Cygnus cygnus*	1
ISF3	April	Ruddy duck	*Oxyura jamaicensis*	1
ISF3	April	Mute swan	*Cygnus olor*	32
ISF3	May	Mute swan	*Cygnus olor*	50
ISF3	May	Black-headed gull	*Larus ridibundus*	3
ISF3	June	Mute swan	*Cygnus olor*	43
ISF3	August	Cormorant	*Phalacrocorax carbo*	1
ISF3	August	Mute swan	*Cygnus olor*	62

Sector ISG. New Holland Pier to Goxhill Haven

Sector	Date	Common name	Scientific name	Total
ISG	September	Mute swan	*Cygnus olor*	85
ISG	October	Mute swan	*Cygnus olor*	2
ISG	October	Greylag goose	*Anser anser*	49
ISG	November	Great black-backed gull	*Larus marinus*	2
ISG	November	Goldeneye	*Bucephala clangula*	20
ISG	November	Grey heron	*Ardea cinerea*	1
ISG	November	Mute swan	*Cygnus olor*	73
ISG	November	Black-headed gull	*Larus ridibundus*	41
ISG	November	Common gull	*Larus canus*	2
ISG	December	Mute swan	*Cygnus olor*	6
ISG	December	Cormorant	*Phalacrocorax carbo*	1
ISG	January	Mute swan	*Cygnus olor*	8
ISG	January	Common gull	*Larus canus*	80
ISG	January	Cormorant	*Phalacrocorax carbo*	1
ISG	January	Black-headed gull	*Larus ridibundus*	120
ISG	January	Pochard	*Aythya ferina*	20
ISG	January	Goldeneye	*Bucephala clangula*	47
ISG	January	Tufted duck	*Aythya fuligula*	3
ISG	February	Mute swan	*Cygnus olor*	75

Sector ISG … contd.

Sector	Date	Common name	Scientific name	Total
ISG	April	Grey heron	*Ardea cinerea*	1
ISG	April	Mute swan	*Cygnus olor*	15
ISG	May	Black-headed gull	*Larus ridibundus*	19
ISG	May	Mute swan	*Cygnus olor*	8
ISG	May	Herring gull	*Larus argentatus*	1
ISG	May	Snipe	*Gallinago gallinago*	1
ISG	June	Grey heron	*Ardea cinerea*	1
ISG	June	Mute swan	*Cygnus olor*	3
ISG	August	Cormorant	*Phalacrocorax carbo*	2
ISG	August	Mute swan	*Cygnus olor*	2
ISG	August	Pintail	*Anas acuta*	1
ISG	August	Gadwall	*Anas strepera*	1
ISG	August	Whimbrel	*Numenius phaeopus*	2

Sector ISH. Goxhill Haven to East Halton Skitter

Sector	Date	Common name	Scientific name	Total
ISH	September	Mute swan	*Cygnus olor*	9
ISH	September	Grey heron	*Ardea cinerea*	2
ISH	September	Pintail	*Anas acuta*	2
ISH	October	Grey heron	*Ardea cinerea*	1
ISH	November	Black-headed gull	*Larus ridibundus*	53
ISH	November	Grey heron	*Ardea cinerea*	1
ISH	November	Great black-backed gull	*Larus marinus*	10
ISH	November	Common gull	*Larus canus*	23
ISH	November	Cormorant	*Phalacrocorax carbo*	2
ISH	December	Grey heron	*Ardea cinerea*	1
ISH	January	Grey heron	*Ardea cinerea*	6
ISH	January	Pintail	*Anas acuta*	85
ISH	January	Jack snipe	*Lymnocryptes minimus*	1
ISH	January	Great black-backed gull	*Larus marinus*	7
ISH	January	Common gull	*Larus canus*	1200
ISH	January	Black-headed gull	*Larus ridibundus*	1800
ISH	February	Mute swan	*Cygnus olor*	2
ISH	February	Cormorant	*Phalacrocorax carbo*	3
ISH	April	Coot	*Fulica atra*	2
ISH	April	Shoveler	*Anas clypeata*	2
ISH	April	Grey heron	*Ardea cinerea*	2
ISH	April	Mute swan	*Cygnus olor*	15
ISH	May	Lesser black-backed gull	*Larus fuscus*	4
ISH	May	Herring gull	*Larus argentatus*	8
ISH	May	Black-headed gull	*Larus ridibundus*	1
ISH	May	Mute swan	*Cygnus olor*	6
ISH	June	Mute swan	*Cygnus olor*	2
ISH	August	Common sandpiper	*Actitis hypoleucos*	1
ISH	August	Pintail	*Anas acuta*	1

Sector ISI. East Halton Skitter to North Killingholme Haven

Sector	Date	Common name	Scientific name	Total
ISI	September	Cormorant	*Phalacrocorax carbo*	2
ISI	September	Grey heron	*Ardea cinerea*	1
ISI	October	Cormorant	*Phalacrocorax carbo*	2
ISI	October	Mute swan	*Cygnus olor*	1
ISI	October	Moorhen	*Gallinula chloropus*	1
ISI	November	Cormorant	*Phalacrocorax carbo*	2
ISI	November	Coot	*Fulica atra*	2
ISI	November	Grey heron	*Ardea cinerea*	1
ISI	November	Moorhen	*Gallinula chloropus*	13
ISI	December	Shoveler	*Anas clypeata*	2
ISI	December	Cormorant	*Phalacrocorax carbo*	2
ISI	December	Grey heron	*Ardea cinerea*	1
ISI	January	Pochard	*Aythya ferina*	1
ISI	January	Grey heron	*Ardea cinerea*	3
ISI	January	Great crested grebe	*Podiceps cristatus*	2
ISI	January	Cormorant	*Phalacrocorax carbo*	8
ISI	February	Cormorant	*Phalacrocorax carbo*	4
ISI	February	Moorhen	*Gallinula chloropus*	1
ISI	February	Great crested grebe	*Podiceps cristatus*	1
ISI	February	Coot	*Fulica atra*	33
ISI	March	Tufted duck	*Aythya fuligula*	6
ISI	March	Ruddy duck	*Oxyura jamaicensis*	1
ISI	March	Little grebe	*Tachybaptus ruficollis*	1
ISI	March	Great crested grebe	*Podiceps cristatus*	3
ISI	March	Cormorant	*Phalacrocorax carbo*	3
ISI	March	Canada goose	*Branta canadensis*	4
ISI	March	Coot	*Fulica atra*	8
ISI	April	Coot	*Fulica atra*	3
ISI	April	Grey heron	*Ardea cinerea*	3
ISI	April	Great crested grebe	*Podiceps cristatus*	3
ISI	April	Mute swan	*Cygnus olor*	1
ISI	May	Ruddy duck	*Oxyura jamaicensis*	2
ISI	May	Mute swan	*Cygnus olor*	4
ISI	May	Moorhen	*Gallinula chloropus*	1
ISI	May	Coot	*Fulica atra*	4
ISI	June	Coot	*Fulica atra*	1
ISI	June	Mute swan	*Cygnus olor*	2
ISI	July	Moorhen	*Gallinula chloropus*	1
ISI	July	Great crested grebe	*Podiceps cristatus*	2
ISI	July	Common sandpiper	*Actitis hypoleucos*	5
ISI	July	Coot	*Fulica atra*	3
ISI	August	Moorhen	*Gallinula chloropus*	1
ISI	August	Great crested grebe	*Podiceps cristatus*	2
ISI	August	Common sandpiper	*Actitis hypoleucos*	1
ISI	August	Coot	*Fulica atra*	2

Sub-Sector ISJJ. North Killingholme Haven pits

Sector	Date	Common name	Scientific name	Total
ISJJ	September	Pintail	*Anas acuta*	22
ISJJ	September	Coot	*Fulica atra*	1
ISJJ	September	Moorhen	*Gallinula chloropus*	2
ISJJ	September	Little grebe	*Tachybaptus ruficollis*	4
ISJJ	September	Grey heron	*Ardea cinerea*	2
ISJJ	October	Little grebe	*Tachybaptus ruficollis*	8
ISJJ	October	Grey heron	*Ardea cinerea*	1
ISJJ	October	Coot	*Fulica atra*	5
ISJJ	October	Shoveler	*Anas clypeata*	17
ISJJ	November	Moorhen	*Gallinula chloropus*	2
ISJJ	November	Grey heron	*Ardea cinerea*	1
ISJJ	November	Coot	*Fulica atra*	3
ISJJ	November	Cormorant	*Phalacrocorax carbo*	2
ISJJ	November	Shoveler	*Anas clypeata*	17
ISJJ	December	Moorhen	*Gallinula chloropus*	2
ISJJ	December	Little grebe	*Tachybaptus ruficollis*	4
ISJJ	December	Shoveler	*Anas clypeata*	38
ISJJ	December	Cormorant	*Phalacrocorax carbo*	1
ISJJ	December	Coot	*Fulica atra*	2
ISJJ	December	Grey heron	*Ardea cinerea*	1
ISJJ	December	Mute swan	*Cygnus olor*	1
ISJJ	January	Little grebe	*Tachybaptus ruficollis*	2
ISJJ	January	Shoveler	*Anas clypeata*	24
ISJJ	January	Gadwall	*Anas strepera*	2
ISJJ	February	Mute swan	*Cygnus olor*	2
ISJJ	February	Cormorant	*Phalacrocorax carbo*	1
ISJJ	February	Smew	*Mergellus albellus*	1
ISJJ	February	Moorhen	*Gallinula chloropus*	11
ISJJ	February	Shoveler	*Anas clypeata*	4
ISJJ	February	Grey heron	*Ardea cinerea*	1
ISJJ	February	Coot	*Fulica atra*	9
ISJJ	March	Grey heron	*Ardea cinerea*	1
ISJJ	March	Shoveler	*Anas clypeata*	26
ISJJ	April	Coot	*Fulica atra*	4
ISJJ	April	Cormorant	*Phalacrocorax carbo*	1
ISJJ	May	Moorhen	*Gallinula chloropus*	1
ISJJ	May	Grey heron	*Ardea cinerea*	1
ISJJ	May	Coot	*Fulica atra*	1
ISJJ	June	Grey heron	*Ardea cinerea*	2
ISJJ	June	Moorhen	*Gallinula chloropus*	3
ISJJ	June	Cormorant	*Phalacrocorax carbo*	1
ISJJ	July	Coot	*Fulica atra*	1
ISJJ	July	Moorhen	*Gallinula chloropus*	1
ISJJ	August	Coot	*Fulica atra*	5
ISJJ	August	Moorhen	*Gallinula chloropus*	1
ISJJ	August	Grey heron	*Ardea cinerea*	1

Sub-Sector ISJ. North Killingholme Haven to South Killingholme Haven

Sector	Date	Common name	Scientific name	Total
ISJ	October	Mute swan	*Cygnus olor*	2
ISJ	October	Curlew sandpiper	*Calidris ferruginea*	3
ISJ	December	Gadwall	*Anas strepera*	4
ISJ	December	Grey heron	*Ardea cinerea*	1
ISJ	January	Coot	*Fulica atra*	3
ISJ	January	Gadwall	*Anas strepera*	2
ISJ	January	Grey heron	*Ardea cinerea*	1
ISJ	January	Moorhen	*Gallinula chloropus*	4
ISJ	February	Shoveler	*Anas clypeata*	18
ISJ	February	Moorhen	*Gallinula chloropus*	2
ISJ	February	Gadwall	*Anas strepera*	6
ISJ	February	Coot	*Fulica atra*	11
ISJ	March	Shoveler	*Anas clypeata*	6
ISJ	March	Coot	*Fulica atra*	6
ISJ	March	Mute swan	*Cygnus olor*	1
ISJ	April	Mute swan	*Cygnus olor*	2
ISJ	April	Moorhen	*Gallinula chloropus*	1
ISJ	April	Coot	*Fulica atra*	8
ISJ	April	Tufted duck	*Aythya fuligula*	2
ISJ	June	Coot	*Fulica atra*	2
ISJ	July	Moorhen	*Gallinula chloropus*	2
ISJ	July	Coot	*Fulica atra*	2
ISJ	August	Coot	*Fulica atra*	6

Sector ISK. South Killingholme Haven to first factory beyond Immingham Dock

Sector	Date	Common name	Scientific name	Total
ISK	September	Arctic tern	*Sterna paradisaea*	5
ISK	October	Cormorant	*Phalacrocorax carbo*	1
ISK	December	Grey heron	*Ardea cinerea*	2
ISK	January	Grey heron	*Ardea cinerea*	1
ISK	May	Cormorant	*Phalacrocorax carbo*	1

Sector MSA. Factory south of Immingham Dock to Grimsby Dock Tower

Sector	Date	Common name	Scientific name	Total
MSA	September	Grey heron	*Ardea cinerea*	2
MSA	September	Great black-backed gull	*Larus marinus*	50
MSA	September	Black-headed gull	*Larus ridibundus*	250
MSA	September	Herring gull	*Larus argentatus*	100
MSA	January	Curlew sandpiper	*Calidris ferruginea*	5
MSA	February	Grey heron	*Ardea cinerea*	1

Sector MSB. Grimsby Dock Tower to Cleethorpes Wonderland

Sector	Date	Common name	Scientific name	Total
MSB	September	Great black-backed gull	*Larus marinus*	54
MSB	September	Herring gull	*Larus argentatus*	100
MSB	September	Common gull	*Larus canus*	50
MSB	September	Black-headed gull	*Larus ridibundus*	250
MSB	November	Great black-backed gull	*Larus marinus*	6
MSB	November	Common gull	*Larus canus*	200

Sector MSC. Cleethorpes to Humberston Fitties

Sector	Date	Common name	Scientific name	Total
MSC	September	Mute swan	*Cygnus olor*	21
MSC	September	Snipe	*Gallinago gallinago*	1
MSC	September	Ruff	*Philomachus pugnax*	1
MSC	September	Grey heron	*Ardea cinerea*	2
MSC	September	Cormorant	*Phalacrocorax carbo*	8
MSC	October	Little grebe	*Tachybaptus ruficollis*	2
MSC	October	Cormorant	*Phalacrocorax carbo*	4
MSC	October	Grey heron	*Ardea cinerea*	1
MSC	October	Jack snipe	*Lymnocryptes minimus*	1
MSC	October	Snipe	*Gallinago gallinago*	5
MSC	November	Little grebe	*Tachybaptus ruficollis*	2
MSC	November	Grey heron	*Ardea cinerea*	1
MSC	November	Ruff	*Philomachus pugnax*	1
MSC	November	Cormorant	*Phalacrocorax carbo*	4
MSC	December	Little grebe	*Tachybaptus ruficollis*	2
MSC	December	Grey heron	*Ardea cinerea*	3
MSC	January	Cormorant	*Phalacrocorax carbo*	4
MSC	January	Little grebe	*Tachybaptus ruficollis*	2
MSC	January	Grey heron	*Ardea cinerea*	1
MSC	January	Ruff	*Philomachus pugnax*	5
MSC	March	Ruff	*Philomachus pugnax*	2
MSC	March	Snipe	*Gallinago gallinago*	16
MSC	March	Grey heron	*Ardea cinerea*	1
MSC	March	Cormorant	*Phalacrocorax carbo*	5
MSC	April	Common sandpiper	*Actitis hypoleucos*	1
MSC	June	Grey heron	*Ardea cinerea*	1
MSC	July	Snipe	*Gallinago gallinago*	1
MSC	July	Little tern	*Sterna albifrons*	114
MSC	July	Cormorant	*Phalacrocorax carbo*	2
MSC	July	Common tern	*Sterna hirundo*	12
MSC	July	Grey heron	*Ardea cinerea*	3
MSC	July	Mediterranean gull	*Larus melanocephalus*	2
MSC	July	Sandwich tern	*Sterna sandvicensis*	2
MSC	July	Whimbrel	*Numenius phaeopus*	2
MSC	August	Little tern	*Sterna albifrons*	4
MSC	August	Common tern	*Sterna hirundo*	260

Sector MSC … contd.

Sector	Date	Common name	Scientific name	Total
MSC	August	Curlew sandpiper	*Calidris ferruginea*	1
MSC	August	Common scoter	*Melanitta nigra*	4
MSC	August	Greenshank	*Tringa nebularia*	1
MSC	August	Grey heron	*Ardea cinerea*	2
MSC	August	Little grebe	*Tachybaptus ruficollis*	2
MSC	August	Sandwich tern	*Sterna sandvicensis*	31
MSC	August	Mediterranean gull	*Larus melanocephalus*	1
MSC	August	Whimbrel	*Numenius phaeopus*	6

Sector MSD. Humberston Fitties to Tetney Haven

Sector	Date	Common name	Scientific name	Total
MSD	April	Mute swan	*Cygnus olor*	33

Sub-Sector MSE2. North Cotes Point to northern edge of saltmarsh at Horseshoe Point

Sector	Date	Common name	Scientific name	Total
MSE2	September	Pintail	*Anas acuta*	8
MSE2	November	Snipe	*Gallinago gallinago*	1
MSE2	March	Cormorant	*Phalacrocorax carbo*	2
MSE2	May	Ruff	*Philomachus pugnax*	2
MSE2	July	Cormorant	*Phalacrocorax carbo*	2
MSE2	August	Ruff	*Philomachus pugnax*	2
MSE2	August	Sandwich tern	*Sterna sandvicensis*	18
MSE2	August	Common sandpiper	*Actitis hypoleucos*	3
MSE2	August	Little ringed plover	*Charadrius dubius*	3
MSE2	August	Little stint	*Calidris minuta*	2

Sector MSF. Northern edge of saltmarsh at Horseshoe Point to Grainthorpe Haven

Sector	Date	Common name	Scientific name	Total
MSF	September	Cormorant	*Phalacrocorax carbo*	7
MSF	September	Greenshank	*Tringa nebularia*	3
MSF	October	Cormorant	*Phalacrocorax carbo*	3
MSF	October	Pintail	*Anas acuta*	2
MSF	November	Grey heron	*Ardea cinerea*	1
MSF	November	Bewick's swan	*Cygnus columbianus*	1
MSF	November	Mute swan	*Cygnus olor*	7
MSF	November	Cormorant	*Phalacrocorax carbo*	5
MSF	November	Little grebe	*Tachybaptus ruficollis*	2
MSF	November	Pintail	*Anas acuta*	5
MSF	December	Cormorant	*Phalacrocorax carbo*	3
MSF	January	Whooper swan	*Cygnus cygnus*	1
MSF	January	Cormorant	*Phalacrocorax carbo*	1
MSF	February	Cormorant	*Phalacrocorax carbo*	1
MSF	February	Little grebe	*Tachybaptus ruficollis*	2

Sector MSF … contd.

Sector	Date	Common name	Scientific name	Total
MSF	February	Pintail	*Anas acuta*	2
MSF	February	Brent goose (light-bellied)	*Branta bernicla hrota*	2
MSF	April	Cormorant	*Phalacrocorax carbo*	2
MSF	May	Little tern	*Sterna albifrons*	5
MSF	May	Cormorant	*Phalacrocorax carbo*	1
MSF	May	Canada goose	*Branta canadensis*	5
MSF	May	Common tern	*Sterna hirundo*	2
MSF	May	Greenshank	*Tringa nebularia*	2
MSF	July	Greenshank	*Tringa nebularia*	1
MSF	July	Whimbrel	*Numenius phaeopus*	1
MSF	July	Cormorant	*Phalacrocorax carbo*	2
MSF	August	Common tern	*Sterna hirundo*	10
MSF	August	Cormorant	*Phalacrocorax carbo*	16
MSF	August	Sandwich tern	*Sterna sandvicensis*	8
MSF	August	Whimbrel	*Numenius phaeopus*	3
MSF	August	Greenshank	*Tringa nebularia*	2

Sub-Sector NA1a. M62 Road Bridge to Goole Bridge

Sector	Date	Common name	Scientific name	Total
NA1a	October	Grey heron	*Ardea cinerea*	1
NA1a	October	Cormorant	*Phalacrocorax carbo*	11
NA1a	November	Greylag goose	*Anser anser*	24
NA1a	December	Grey heron	*Ardea cinerea*	1
NA1a	March	Grey heron	*Ardea cinerea*	3
NA1a	March	Greylag goose	*Anser anser*	17
NA1a	June	Grey heron	*Ardea cinerea*	1
NA1a	July	Greylag goose	*Anser anser*	1
NA1a	July	Cormorant	*Phalacrocorax carbo*	1
NA1a	August	Grey heron	*Ardea cinerea*	6

Sub-Sector NA1c. Reedness/Yokefleet

Sector	Date	Common name	Scientific name	Total
NA1c	September	Cormorant	*Phalacrocorax carbo*	4
NA1c	September	Grey heron	*Ardea cinerea*	2
NA1c	October	Grey heron	*Ardea cinerea*	1
NA1c	October	Ruff	*Philomachus pugnax*	46
NA1c	November	Cormorant	*Phalacrocorax carbo*	2
NA1c	December	Grey heron	*Ardea cinerea*	2
NA1c	March	Cormorant	*Phalacrocorax carbo*	1
NA1c	June	Moorhen	*Gallinula chloropus*	2
NA1c	June	Grey heron	*Ardea cinerea*	2
NA1c	June	Greylag goose	*Anser anser*	33
NA1c	July	Cormorant	*Phalacrocorax carbo*	1

Sub-Sector NA1c … contd.

Sector	Date	Common name	Scientific name	Total
NA1c	July	Greylag goose	*Anser anser*	5
NA1c	August	Grey heron	*Ardea cinerea*	2

Sector NA2. Yokefleet to Faxfleet (including Blacktoft Sands)

Sector	Date	Common name	Scientific name	Total
NA2	September	Curlew sandpiper	*Calidris ferruginea*	3
NA2	September	Shoveler	*Anas clypeata*	52
NA2	September	Snipe	*Gallinago gallinago*	33
NA2	September	Ruff	*Philomachus pugnax*	92
NA2	September	Moorhen	*Gallinula chloropus*	5
NA2	September	Lesser black-backed gull	*Larus fuscus*	10
NA2	September	Grey heron	*Ardea cinerea*	5
NA2	September	Greenshank	*Tringa nebularia*	8
NA2	September	Common gull	*Larus canus*	25
NA2	September	Cormorant	*Phalacrocorax carbo*	3
NA2	September	Black-headed gull	*Larus ridibundus*	570
NA2	September	Green sandpiper	*Tringa ochropus*	3
NA2	October	Snipe	*Gallinago gallinago*	11
NA2	October	Ruff	*Philomachus pugnax*	28
NA2	October	Spotted redshank	*Tringa erythropus*	17
NA2	October	Grey heron	*Ardea cinerea*	3
NA2	October	Cormorant	*Phalacrocorax carbo*	9
NA2	October	Greylag goose	*Anser anser*	26
NA2	October	Shoveler	*Anas clypeata*	36
NA2	October	Greenshank	*Tringa nebularia*	3
NA2	October	Little grebe	*Tachybaptus ruficollis*	4
NA2	November	Cormorant	*Phalacrocorax carbo*	2
NA2	November	Shoveler	*Anas clypeata*	6
NA2	November	Snipe	*Gallinago gallinago*	20
NA2	November	Ruff	*Philomachus pugnax*	1
NA2	November	Great black-backed gull	*Larus marinus*	2
NA2	November	Grey heron	*Ardea cinerea*	1
NA2	November	Jack snipe	*Lymnocryptes minimus*	2
NA2	November	Moorhen	*Gallinula chloropus*	19
NA2	December	Spotted redshank	*Tringa erythropus*	4
NA2	December	Moorhen	*Gallinula chloropus*	8
NA2	December	Jack snipe	*Lymnocryptes minimus*	1
NA2	December	Grey heron	*Ardea cinerea*	1
NA2	December	Snipe	*Gallinago gallinago*	30
NA2	December	Gadwall	*Anas strepera*	40
NA2	December	Shoveler	*Anas clypeata*	15
NA2	February	Coot	*Fulica atra*	19
NA2	February	Snipe	*Gallinago gallinago*	6
NA2	February	Pochard	*Aythya ferina*	6
NA2	February	Gadwall	*Anas strepera*	14

Sector NA2 … contd.

Sector	Date	Common name	Scientific name	Total
NA2	February	Little grebe	*Tachybaptus ruficollis*	1
NA2	February	Grey heron	*Ardea cinerea*	1
NA2	February	Greylag goose	*Anser anser*	59
NA2	February	Shoveler	*Anas clypeata*	15
NA2	March	Cormorant	*Phalacrocorax carbo*	10
NA2	March	Snipe	*Gallinago gallinago*	3
NA2	March	Shoveler	*Anas clypeata*	5
NA2	March	Common gull	*Larus canus*	1
NA2	March	Pintail	*Anas acuta*	1
NA2	March	Pochard	*Aythya ferina*	2
NA2	March	Gadwall	*Anas strepera*	28
NA2	March	Coot	*Fulica atra*	24
NA2	March	Mute swan	*Cygnus olor*	2
NA2	March	Great black-backed gull	*Larus marinus*	3
NA2	March	Great crested grebe	*Podiceps cristatus*	1
NA2	March	Greylag goose	*Anser anser*	10
NA2	March	Little grebe	*Tachybaptus ruficollis*	3
NA2	March	Moorhen	*Gallinula chloropus*	3
NA2	March	Goldeneye	*Bucephala clangula*	1
NA2	April	Little grebe	*Tachybaptus ruficollis*	11
NA2	April	Greylag goose	*Anser anser*	2
NA2	April	Great crested grebe	*Podiceps cristatus*	2
NA2	April	Gadwall	*Anas strepera*	3
NA2	April	Coot	*Fulica atra*	20
NA2	April	Ruddy duck	*Oxyura jamaicensis*	3
NA2	April	Canada goose	*Branta canadensis*	2
NA2	April	Mute swan	*Cygnus olor*	6
NA2	April	Moorhen	*Gallinula chloropus*	3
NA2	April	Pochard	*Aythya ferina*	6
NA2	May	Ruff	*Philomachus pugnax*	1
NA2	May	Ruddy duck	*Oxyura jamaicensis*	1
NA2	May	Shoveler	*Anas clypeata*	6
NA2	May	Tufted duck	*Aythya fuligula*	5
NA2	May	Whooper swan	*Cygnus cygnus*	3
NA2	May	Greylag goose	*Anser anser*	6
NA2	May	Pochard	*Aythya ferina*	5
NA2	May	Mute swan	*Cygnus olor*	1
NA2	May	Little stint	*Calidris minuta*	1
NA2	May	Gadwall	*Anas strepera*	12
NA2	May	Coot	*Fulica atra*	18
NA2	May	Canada goose	*Branta canadensis*	1
NA2	May	Little grebe	*Tachybaptus ruficollis*	8
NA2	July	Shoveler	*Anas clypeata*	2
NA2	July	Snipe	*Gallinago gallinago*	4
NA2	July	Ruff	*Philomachus pugnax*	14
NA2	July	Moorhen	*Gallinula chloropus*	8

Sector NA2 … contd.

Sector	Date	Common name	Scientific name	Total
NA2	July	Little grebe	*Tachybaptus ruficollis*	2
NA2	July	Grey heron	*Ardea cinerea*	3
NA2	July	Little ringed plover	*Charadrius dubius*	2
NA2	July	Cormorant	*Phalacrocorax carbo*	6
NA2	July	Greenshank	*Tringa nebularia*	1
NA2	July	Spotted redshank	*Tringa erythropus*	4
NA2	July	Gadwall	*Anas strepera*	9
NA2	July	Green sandpiper	*Tringa ochropus*	5
NA2	July	Greylag goose	*Anser anser*	7
NA2	August	Snipe	*Gallinago gallinago*	30
NA2	August	Little grebe	*Tachybaptus ruficollis*	4
NA2	August	Moorhen	*Gallinula chloropus*	20
NA2	August	Wood sandpiper	*Tringa glareola*	1
NA2	August	Ruff	*Philomachus pugnax*	28
NA2	August	Shoveler	*Anas clypeata*	16
NA2	August	Grey heron	*Ardea cinerea*	2
NA2	August	Spotted redshank	*Tringa erythropus*	2
NA2	August	Cormorant	*Phalacrocorax carbo*	2
NA2	August	Gadwall	*Anas strepera*	4

Sub-Sector NB1. Faxfleet to Weighton Lock

Sector	Date	Common name	*Scientific name*	Total
NB1	September	Little egret	*Egretta garzetta*	1
NB1	September	Greenshank	*Tringa nebularia*	2
NB1	September	Grey heron	*Ardea cinerea*	1
NB1	October	Grey heron	*Ardea cinerea*	1
NB1	October	Greenshank	*Tringa nebularia*	1
NB1	October	Greylag goose	*Anser anser*	2
NB1	November	Black-headed gull	*Larus ridibundus*	1
NB1	November	Greylag goose	*Anser anser*	3
NB1	November	Grey heron	*Ardea cinerea*	1
NB1	December	Grey heron	*Ardea cinerea*	1
NB1	February	Canada goose	*Branta canadensis*	3
NB1	March	Canada goose	*Branta canadensis*	4
NB1	March	Greylag goose	*Anser anser*	3
NB1	June	Canada goose	*Branta canadensis*	10
NB1	June	Greylag goose	*Anser anser*	38

Sub-Sector NB2. Weighton Lock to Crabley Creek

Sector	Date	Common name	Scientific name	Total
NB2	September	Greylag goose	*Anser anser*	5
NB2	December	Grey heron	*Ardea cinerea*	1
NB2	December	Greylag goose	*Anser anser*	108
NB2	January	Barnacle goose	*Branta leucopsis*	81
NB2	February	Greylag goose	*Anser anser*	19
NB2	March	Canada goose	*Branta canadensis*	2
NB2	June	Greylag goose	*Anser anser*	44
NB2	July	Canada goose	*Branta canadensis*	4
NB2	July	Greylag goose	*Anser anser*	38

Sub-Sector NB3. Crabley Creek to Brough

Sector	Date	Common name	Scientific name	Total
NB3	October	Moorhen	*Gallinula chloropus*	3
NB3	October	Grey heron	*Ardea cinerea*	1
NB3	November	Cormorant	*Phalacrocorax carbo*	2
NB3	November	Barnacle goose	*Branta leucopsis*	1
NB3	November	Greylag goose	*Anser anser*	28
NB3	November	Moorhen	*Gallinula chloropus*	5
NB3	December	Moorhen	*Gallinula chloropus*	4
NB3	June	Moorhen	*Gallinula chloropus*	2
NB3	June	Greylag goose	*Anser anser*	42
NB3	July	Greylag goose	*Anser anser*	7

Sub-Sector NB4. North side of Whitton Sands

Sector	Date	Common name	Scientific name	Total
NB4	September	Grey heron	*Ardea cinerea*	3
NB4	September	Greylag goose	*Anser anser*	45
NB4	September	Canada goose	*Branta canadensis*	82
NB4	September	Grasshopper warbler	*Locustella naevia*	3
NB4	September	Cormorant	*Phalacrocorax carbo*	12
NB4	October	Canada goose	*Branta canadensis*	4
NB4	October	Greylag goose	*Anser anser*	172
NB4	October	Grey heron	*Ardea cinerea*	2
NB4	November	Lesser black-backed gull	*Larus fuscus*	2
NB4	November	Herring gull	*Larus argentatus*	1
NB4	November	Greylag goose	*Anser anser*	112
NB4	November	Common gull	*Larus canus*	9
NB4	November	Canada goose	*Branta canadensis*	15
NB4	November	Black-headed gull	*Larus ridibundus*	28
NB4	December	Greylag goose	*Anser anser*	4
NB4	December	Canada goose	*Branta canadensis*	4
NB4	December	Grey heron	*Ardea cinerea*	1
NB4	January	Grey heron	*Ardea cinerea*	2
NB4	January	Greylag goose	*Anser anser*	24

Sub-Sector NB4 … contd.

Sector	Date	Common name	Scientific name	Total
NB4	January	Canada goose	*Branta canadensis*	54
NB4	February	Cormorant	*Phalacrocorax carbo*	1
NB4	February	Canada goose	*Branta canadensis*	101
NB4	February	Greylag goose	*Anser anser*	235
NB4	March	Greylag goose	*Anser anser*	72
NB4	March	Cormorant	*Phalacrocorax carbo*	1
NB4	March	Canada goose	*Branta canadensis*	23
NB4	April	Greenshank	*Tringa nebularia*	1
NB4	April	Greylag goose	*Anser anser*	258
NB4	April	Canada goose	*Branta canadensis*	12
NB4	May	Canada goose	*Branta canadensis*	113
NB4	May	Barnacle goose	*Branta leucopsis*	1
NB4	May	Greylag goose	*Anser anser*	599
NB4	June	Canada goose	*Branta canadensis*	99
NB4	June	Greylag goose	*Anser anser*	700
NB4	June	Grey heron	*Ardea cinerea*	2
NB4	July	Canada goose	*Branta canadensis*	66
NB4	July	Greylag goose	*Anser anser*	62
NB4	July	Greenshank	*Tringa nebularia*	2
NB4	July	Grey heron	*Ardea cinerea*	2
NB4	July	Cormorant	*Phalacrocorax carbo*	5
NB4	August	Canada goose	*Branta canadensis*	360
NB4	August	Barnacle goose	*Branta leucopsis*	33
NB4	August	Coot	*Fulica atra*	10
NB4	August	Great crested grebe	*Podiceps cristatus*	1
NB4	August	Greylag goose	*Anser anser*	240
NB4	August	Pochard	*Aythya ferina*	3
NB4	August	Black-necked grebe	*Podiceps nigricollis*	2
NB4	August	Little grebe	*Tachybaptus ruficollis*	1

Sub-Sector NB5. Faxfleet Pond

Sector	Date	Common name	***Scientific name***	Total
NB5	September	Moorhen	*Gallinula chloropus*	1
NB5	September	Coot	*Fulica atra*	14
NB5	October	Tufted duck	*Aythya fuligula*	1
NB5	October	Moorhen	*Gallinula chloropus*	1
NB5	October	Coot	*Fulica atra*	23
NB5	November	Shoveler	*Anas clypeata*	5
NB5	November	Moorhen	*Gallinula chloropus*	4
NB5	November	Coot	*Fulica atra*	14
NB5	December	Coot	*Fulica atra*	14
NB5	December	Moorhen	*Gallinula chloropus*	2
NB5	January	Tufted duck	*Aythya fuligula*	2
NB5	January	Moorhen	*Gallinula chloropus*	5
NB5	January	Coot	*Fulica atra*	9

Sub-Sector NB5 … contd.

Sector	Date	Common name	Scientific name	Total
NB5	February	Coot	*Fulica atra*	8
NB5	March	Coot	*Fulica atra*	6
NB5	March	Moorhen	*Gallinula chloropus*	2
NB5	March	Mute swan	*Cygnus olor*	8
NB5	March	Pochard	*Aythya ferina*	5
NB5	March	Tufted duck	*Aythya fuligula*	15
NB5	April	Tufted duck	*Aythya fuligula*	2
NB5	April	Coot	*Fulica atra*	6
NB5	April	Gadwall	*Anas strepera*	2
NB5	April	Greylag goose	*Anser anser*	2
NB5	April	Little grebe	*Tachybaptus ruficollis*	2
NB5	April	Mute swan	*Cygnus olor*	1
NB5	April	Shoveler	*Anas clypeata*	4
NB5	May	Pochard	*Aythya ferina*	1
NB5	May	Mute swan	*Cygnus olor*	2
NB5	May	Gadwall	*Anas strepera*	1
NB5	May	Coot	*Fulica atra*	8
NB5	June	Ruddy duck	*Oxyura jamaicensis*	1
NB5	June	Mute swan	*Cygnus olor*	2
NB5	June	Little grebe	*Tachybaptus ruficollis*	1
NB5	June	Great crested grebe	*Podiceps cristatus*	2
NB5	June	Coot	*Fulica atra*	3
NB5	June	Pochard	*Aythya ferina*	2
NB5	July	Moorhen	*Gallinula chloropus*	1
NB5	July	Coot	*Fulica atra*	8
NB5	July	Mute swan	*Cygnus olor*	7

Sub-Sector NC1. North Ferriby to Pier

Sector	Date	Common name	Scientific name	Total
NC1	September	Black-headed gull	*Larus ridibundus*	3
NC1	September	Great black-backed gull	*Larus marinus*	1
NC1	September	Herring gull	*Larus argentatus*	5
NC1	September	Lesser black-backed gull	*Larus fuscus*	6
NC1	November	Cormorant	*Phalacrocorax carbo*	1
NC1	December	Whimbrel	*Numenius phaeopus*	1
NC1	January	Cormorant	*Phalacrocorax carbo*	2
NC1	January	Goldeneye	*Bucephala clangula*	7
NC1	June	Grey heron	*Ardea cinerea*	1
NC1	June	Mute swan	*Cygnus olor*	2
NC1	August	Common sandpiper	*Actitis hypoleucos*	1

Sub-Sector NC2. Pier to Oyster Ness

Sector	Date	Common name	Scientific name	Total
NC2	September	Lesser black-backed gull	*Larus fuscus*	6
NC2	September	Herring gull	*Larus argentatus*	7
NC2	September	Black-headed gull	*Larus ridibundus*	29
NC2	October	Cormorant	*Phalacrocorax carbo*	2
NC2	November	Grey heron	*Ardea cinerea*	2
NC2	December	Cormorant	*Phalacrocorax carbo*	6
NC2	January	Grey heron	*Ardea cinerea*	9
NC2	January	Cormorant	*Phalacrocorax carbo*	1
NC2	February	Grey heron	*Ardea cinerea*	1
NC2	March	Spotted redshank	*Tringa erythropus*	2
NC2	April	Grey heron	*Ardea cinerea*	3
NC2	July	Cormorant	*Phalacrocorax carbo*	3
NC2	August	Grey heron	*Ardea cinerea*	2

Sub-Sector NC3. Oyster Ness to Brough haven

Sector	Date	Common name	*Scientific name*	Total
NC3	September	Black-headed gull	*Larus ridibundus*	38
NC3	September	Common gull	*Larus canus*	3
NC3	September	Herring gull	*Larus argentatus*	1
NC3	September	Ruff	*Philomachus pugnax*	4
NC3	October	Cormorant	*Phalacrocorax carbo*	3

Sector ND. North Ferriby to Humber Bridge

Sector	Date	Common name	*Scientific name*	Total
ND	September	Little grebe	*Tachybaptus ruficollis*	2
ND	September	Lesser black-backed gull	*Larus fuscus*	2
ND	September	Herring gull	*Larus argentatus*	40
ND	September	Grey heron	*Ardea cinerea*	1
ND	September	Great black-backed gull	*Larus marinus*	20
ND	September	Common gull	*Larus canus*	30
ND	September	Black-headed gull	*Larus ridibundus*	150
ND	October	Common gull	*Larus canus*	10
ND	October	Black-headed gull	*Larus ridibundus*	150
ND	October	Coot	*Fulica atra*	4
ND	October	Moorhen	*Gallinula chloropus*	2
ND	October	Great black-backed gull	*Larus marinus*	20
ND	October	Herring gull	*Larus argentatus*	20
ND	October	Lesser black-backed gull	*Larus fuscus*	1
ND	October	Little grebe	*Tachybaptus ruficollis*	2
ND	November	Black-headed gull	*Larus ridibundus*	500
ND	November	Great black-backed gull	*Larus marinus*	20
ND	November	Moorhen	*Gallinula chloropus*	2
ND	November	Tufted duck	*Aythya fuligula*	1
ND	November	Little grebe	*Tachybaptus ruficollis*	1

Sector ND … contd.

Sector	Date	Common name	Scientific name	Total
ND	November	Grey heron	*Ardea cinerea*	1
ND	November	Coot	*Fulica atra*	2
ND	November	Common gull	*Larus canus*	30
ND	November	Herring gull	*Larus argentatus*	50
ND	January	Black-headed gull	*Larus ridibundus*	1100
ND	January	Common gull	*Larus canus*	21
ND	January	Great black-backed gull	*Larus marinus*	5
ND	January	Herring gull	*Larus argentatus*	8
ND	March	Tufted duck	*Aythya fuligula*	4
ND	March	Black-headed gull	*Larus ridibundus*	65
ND	March	Pochard	*Aythya ferina*	2
ND	March	Moorhen	*Gallinula chloropus*	2
ND	March	Little grebe	*Tachybaptus ruficollis*	1
ND	March	Herring gull	*Larus argentatus*	10
ND	March	Great black-backed gull	*Larus marinus*	25
ND	March	Coot	*Fulica atra*	4
ND	March	Common gull	*Larus canus*	45
ND	April	Herring gull	*Larus argentatus*	100
ND	April	Great black-backed gull	*Larus marinus*	30
ND	May	Common gull	*Larus canus*	1
ND	May	Black-headed gull	*Larus ridibundus*	20
ND	May	Little grebe	*Tachybaptus ruficollis*	1
ND	May	Herring gull	*Larus argentatus*	500
ND	May	Great black-backed gull	*Larus marinus*	50
ND	May	Common sandpiper	*Actitis hypoleucos*	1
ND	June	Moorhen	*Gallinula chloropus*	2
ND	June	Common gull	*Larus canus*	10
ND	June	Coot	*Fulica atra*	4
ND	June	Great black-backed gull	*Larus marinus*	30
ND	June	Herring gull	*Larus argentatus*	160
ND	June	Mute swan	*Cygnus olor*	2
ND	June	Little grebe	*Tachybaptus ruficollis*	1
ND	June	Black-headed gull	*Larus ridibundus*	10
ND	July	Herring gull	*Larus argentatus*	420
ND	July	Common gull	*Larus canus*	4
ND	July	Great black-backed gull	*Larus marinus*	120
ND	July	Black-headed gull	*Larus ridibundus*	151
ND	July	Common sandpiper	*Actitis hypoleucos*	1

Sector NE. Humber Bridge to Hull

Sector	Date	Common name	Scientific name	Total
NE	September	Lesser black-backed gull	*Larus fuscus*	1
NE	September	Common gull	*Larus canus*	31
NE	September	Black-headed gull	*Larus ridibundus*	108
NE	October	Lesser black-backed gull	*Larus fuscus*	3
NE	October	Black-headed gull	*Larus ridibundus*	100
NE	October	Common gull	*Larus canus*	70
NE	October	Great black-backed gull	*Larus marinus*	1
NE	October	Herring gull	*Larus argentatus*	10
NE	October	Mute swan	*Cygnus olor*	2
NE	November	Great black-backed gull	*Larus marinus*	1
NE	November	Herring gull	*Larus argentatus*	3
NE	November	Black-headed gull	*Larus ridibundus*	40
NE	November	Common gull	*Larus canus*	60
NE	December	Black-headed gull	*Larus ridibundus*	5
NE	December	Common gull	*Larus canus*	5
NE	December	Great black-backed gull	*Larus marinus*	1

Sub-Sector NF1. Hull to Alexandra Dock

Sector	Date	Common name	Scientific name	Total
NF1	November	Black-headed gull	*Larus ridibundus*	213
NF1	December	Cormorant	*Phalacrocorax carbo*	2
NF1	November	Common gull	*Larus canus*	21
NF1	November	Great black-backed gull	*Larus marinus*	10
NF1	November	Mute swan	*Cygnus olor*	4
NF1	December	Herring gull	*Larus argentatus*	10
NF1	December	Cormorant	*Phalacrocorax carbo*	1
NF1	December	Black-headed gull	*Larus ridibundus*	130
NF1	December	Moorhen	*Gallinula chloropus*	1
NF1	December	Common gull	*Larus canus*	8
NF1	December	Great black-backed gull	*Larus marinus*	1
NF1	January	Great black-backed gull	*Larus marinus*	2
NF1	January	Common gull	*Larus canus*	2
NF1	January	Black-headed gull	*Larus ridibundus*	305
NF1	February	Cormorant	*Phalacrocorax carbo*	7
NF1	February	Common gull	*Larus canus*	5
NF1	February	Great black-backed gull	*Larus marinus*	1
NF1	February	Black-headed gull	*Larus ridibundus*	80
NF1	March	Black-headed gull	*Larus ridibundus*	8
NF1	March	Cormorant	*Phalacrocorax carbo*	4
NF1	March	Common gull	*Larus canus*	1
NF1	March	Herring gull	*Larus argentatus*	1
NF1	April	Mute swan	*Cygnus olor*	2
NF1	April	Herring gull	*Larus argentatus*	1
NF1	June	Great black-backed gull	*Larus marinus*	1
NF1	June	Lesser black-backed gull	*Larus fuscus*	2
NF1	June	Black-headed gull	*Larus ridibundus*	18
NF1	July	Herring gull	*Larus argentatus*	4

Sub-Sector NF1 … contd.

Sector	Date	Common name	Scientific name	Total
NF1	July	Cormorant	*Phalacrocorax carbo*	1
NF1	July	Black-headed gull	*Larus ridibundus*	44
NF1	August	Herring gull	*Larus argentatus*	22
NF1	August	Great black-backed gull	*Larus marinus*	3
NF1	August	Lesser black-backed gull	*Larus fuscus*	4
NF1	August	Black-headed gull	*Larus ridibundus*	183
NF1	August	Cormorant	*Phalacrocorax carbo*	3
NF1	August	Common gull	*Larus canus*	13

Sub-Sector NF2. Alexandra Dock to Paull

Sector	Date	Common name	Scientific name	Total
NF2	September	Herring gull	*Larus argentatus*	1
NF2	September	Great black-backed gull	*Larus marinus*	3
NF2	September	Common tern	*Sterna hirundo*	148
NF2	September	Cormorant	*Phalacrocorax carbo*	21
NF2	September	Black-headed gull	*Larus ridibundus*	378
NF2	September	Common gull	*Larus canus*	11
NF2	October	Cormorant	*Phalacrocorax carbo*	11
NF2	November	Great black-backed gull	*Larus marinus*	1
NF2	November	Common gull	*Larus canus*	18
NF2	November	Black-headed gull	*Larus ridibundus*	24
NF2	December	Cormorant	*Phalacrocorax carbo*	11
NF2	December	Common gull	*Larus canus*	1000
NF2	January	Cormorant	*Phalacrocorax carbo*	10
NF2	February	Cormorant	*Phalacrocorax carbo*	1
NF2	March	Cormorant	*Phalacrocorax carbo*	4
NF2	April	Common gull	*Larus canus*	17
NF2	April	Herring gull	*Larus argentatus*	1
NF2	April	Cormorant	*Phalacrocorax carbo*	7
NF2	April	Great black-backed gull	*Larus marinus*	6
NF2	April	Black-headed gull	*Larus ridibundus*	22
NF2	May	Cormorant	*Phalacrocorax carbo*	1
NF2	May	Common gull	*Larus canus*	29
NF2	May	Great black-backed gull	*Larus marinus*	1
NF2	May	Herring gull	*Larus argentatus*	4
NF2	May	Lesser black-backed gull	*Larus fuscus*	2
NF2	June	Common gull	*Larus canus*	45
NF2	June	Lesser black-backed gull	*Larus fuscus*	3
NF2	June	Cormorant	*Phalacrocorax carbo*	2
NF2	June	Black-headed gull	*Larus ridibundus*	46
NF2	July	Cormorant	*Phalacrocorax carbo*	4
NF2	July	Great black-backed gull	*Larus marinus*	2
NF2	July	Black-headed gull	*Larus ridibundus*	265

Sub-Sector NF2 … contd.

Sector	Date	Common name	Scientific name	Total
NF2	August	Great black-backed gull	*Larus marinus*	3
NF2	August	Common gull	*Larus canus*	29
NF2	August	Black-headed gull	*Larus ridibundus*	667

Sub-Sector NG1. Paull to Paull Battery

Sector	Date	Common name	Scientific name	Total
NG1	September	Common gull	*Larus canus*	1
NG1	September	Herring gull	*Larus argentatus*	2
NG1	September	Black-headed gull	*Larus ridibundus*	55
NG1	November	Coot	*Fulica atra*	1
NG1	November	Black-headed gull	*Larus ridibundus*	206
NG1	November	Common gull	*Larus canus*	333
NG1	November	Snipe	*Gallinago gallinago*	1
NG1	November	Mute swan	*Cygnus olor*	1
NG1	November	Moorhen	*Gallinula chloropus*	4
NG1	November	Grey heron	*Ardea cinerea*	1
NG1	November	Great black-backed gull	*Larus marinus*	1
NG1	December	Great black-backed gull	*Larus marinus*	1
NG1	January	Black-headed gull	*Larus ridibundus*	3
NG1	May	Whimbrel	*Numenius phaeopus*	2

Sub-Sector NG2. Paull Battery to Paull Holme

Sector	Date	Common name	Scientific name	Total
NG2	September	Common scoter	*Melanitta nigra*	1
NG2	September	Black-headed gull	*Larus ridibundus*	200
NG2	September	Ruff	*Philomachus pugnax*	44
NG2	September	Mute swan	*Cygnus olor*	2
NG2	September	Great black-backed gull	*Larus marinus*	2
NG2	September	Coot	*Fulica atra*	1
NG2	September	Common tern	*Sterna hirundo*	62
NG2	October	Great black-backed gull	*Larus marinus*	27
NG2	October	Greylag goose	*Anser anser*	27
NG2	October	Black-headed gull	*Larus ridibundus*	66
NG2	October	Common gull	*Larus canus*	7
NG2	November	Snipe	*Gallinago gallinago*	2
NG2	November	Pintail	*Anas acuta*	1
NG2	November	Grey heron	*Ardea cinerea*	1
NG2	November	Goldeneye	*Bucephala clangula*	1
NG2	November	Goosander	*Mergus merganser*	1
NG2	December	Lesser black-backed gull	*Larus fuscus*	2
NG2	December	Common gull	*Larus canus*	118
NG2	December	Black-headed gull	*Larus ridibundus*	80
NG2	December	Cormorant	*Phalacrocorax carbo*	1
NG2	December	Great black-backed gull	*Larus marinus*	8

Sub-Sector NG2 … contd.

Sector	Date	Common name	Scientific name	Total
NG2	December	Grey heron	*Ardea cinerea*	2
NG2	December	Herring gull	*Larus argentatus*	2
NG2	January	Little grebe	*Tachybaptus ruficollis*	2
NG2	January	Grey heron	*Ardea cinerea*	2
NG2	January	Moorhen	*Gallinula chloropus*	1
NG2	March	Snipe	*Gallinago gallinago*	1
NG2	March	Grey heron	*Ardea cinerea*	1
NG2	March	Common gull	*Larus canus*	34
NG2	March	Coot	*Fulica atra*	2
NG2	April	Herring gull	*Larus argentatus*	2
NG2	April	Great black-backed gull	*Larus marinus*	1
NG2	April	Common gull	*Larus canus*	2
NG2	May	Whimbrel	*Numenius phaeopus*	3
NG2	May	Mute swan	*Cygnus olor*	1
NG2	May	Coot	*Fulica atra*	3
NG2	May	Cormorant	*Phalacrocorax carbo*	2
NG2	July	Black-headed gull	*Larus ridibundus*	60
NG2	August	Black-headed gull	*Larus ridibundus*	120
NG2	August	Great black-backed gull	*Larus marinus*	2
NG2	August	Greylag goose	*Anser anser*	220
NG2	August	Greenshank	*Tringa nebularia*	4
NG2	August	Mute swan	*Cygnus olor*	4

Sub-Sector NG3. Paull Holme to Little Humber

Sector	Date	Common name	Scientific name	Total
NG3	September	Common tern	*Sterna hirundo*	132
NG3	September	Common gull	*Larus canus*	500
NG3	September	Cormorant	*Phalacrocorax carbo*	2
NG3	September	Black-headed gull	*Larus ridibundus*	400
NG3	September	Great black-backed gull	*Larus marinus*	2
NG3	September	Greylag goose	*Anser anser*	54
NG3	September	Snipe	*Gallinago gallinago*	1
NG3	September	Ruff	*Philomachus pugnax*	3
NG3	September	Moorhen	*Gallinula chloropus*	7
NG3	October	Snipe	*Gallinago gallinago*	1
NG3	October	Black-headed gull	*Larus ridibundus*	106
NG3	October	Coot	*Fulica atra*	4
NG3	January	Great black-backed gull	*Larus marinus*	1
NG3	March	Moorhen	*Gallinula chloropus*	1
NG3	April	Little grebe	*Tachybaptus ruficollis*	2
NG3	April	Herring gull	*Larus argentatus*	1
NG3	April	Mute swan	*Cygnus olor*	6
NG3	April	Whimbrel	*Numenius phaeopus*	1
NG3	April	Great black-backed gull	*Larus marinus*	12
NG3	April	Common gull	*Larus canus*	14

Sub-Sector NG3 … contd.

Sector	Date	Common name	Scientific name	Total
NG3	May	Moorhen	*Gallinula chloropus*	2
NG3	May	Common sandpiper	*Actitis hypoleucos*	1
NG3	June	Moorhen	*Gallinula chloropus*	1
NG3	June	Black-headed gull	*Larus ridibundus*	4
NG3	June	Cormorant	*Phalacrocorax carbo*	1
NG3	June	Common gull	*Larus canus*	26
NG3	June	Mute swan	*Cygnus olor*	1
NG3	July	Mute swan	*Cygnus olor*	2
NG3	July	Greenshank	*Tringa nebularia*	4
NG3	July	Cormorant	*Phalacrocorax carbo*	1
NG3	July	Black-headed gull	*Larus ridibundus*	592
NG3	July	Little ringed plover	*Charadrius dubius*	5
NG3	August	Common tern	*Sterna hirundo*	2
NG3	August	Grey heron	*Ardea cinerea*	1

Sub-Sector NG4. Little Humber to ?

Sector	Date	Common name	Scientific name	Total
NG4	September	Greylag goose	*Anser anser*	13
NG4	September	Black-headed gull	*Larus ridibundus*	260
NG4	October	Black-headed gull	*Larus ridibundus*	160
NG4	October	Common gull	*Larus canus*	40
NG4	October	Great black-backed gull	*Larus marinus*	1
NG4	December	Great black-backed gull	*Larus marinus*	84
NG4	December	Common gull	*Larus canus*	80
NG4	December	Black-headed gull	*Larus ridibundus*	60
NG4	January	Great black-backed gull	*Larus marinus*	1
NG4	February	Grey heron	*Ardea cinerea*	2
NG4	April	Coot	*Fulica atra*	6
NG4	April	Herring gull	*Larus argentatus*	6
NG4	April	Grey heron	*Ardea cinerea*	3
NG4	April	Little ringed plover	*Charadrius dubius*	5
NG4	April	Great black-backed gull	*Larus marinus*	3
NG4	June	Black-headed gull	*Larus ridibundus*	2
NG4	June	Cormorant	*Phalacrocorax carbo*	2
NG4	June	Coot	*Fulica atra*	2
NG4	June	Grey heron	*Ardea cinerea*	3
NG4	July	Black-headed gull	*Larus ridibundus*	52
NG4	August	Common gull	*Larus canus*	48
NG4	August	Common sandpiper	*Actitis hypoleucos*	5
NG4	August	Great black-backed gull	*Larus marinus*	5
NG4	August	Grey heron	*Ardea cinerea*	2
NG4	August	Black-headed gull	*Larus ridibundus*	650
NG4	August	Greenshank	*Tringa nebularia*	1
NG4	August	Cormorant	*Phalacrocorax carbo*	7

Sub-Sector NG5. ? to Cherry Cob

Sector	Date	Common name	Scientific name	Total
NG5	September	Snipe	*Gallinago gallinago*	3
NG5	September	Grey heron	*Ardea cinerea*	1
NG5	October	Black-headed gull	*Larus ridibundus*	230
NG5	October	Great black-backed gull	*Larus marinus*	1
NG5	December	Greylag goose	*Anser anser*	63
NG5	December	Black-headed gull	*Larus ridibundus*	16
NG5	December	Common gull	*Larus canus*	30
NG5	December	Great black-backed gull	*Larus marinus*	5
NG5	December	Grey heron	*Ardea cinerea*	1
NG5	December	Herring gull	*Larus argentatus*	3
NG5	January	Common gull	*Larus canus*	3
NG5	January	Great black-backed gull	*Larus marinus*	4
NG5	March	Shoveler	*Anas clypeata*	2
NG5	April	Whimbrel	*Numenius phaeopus*	2
NG5	April	Greenshank	*Tringa nebularia*	1
NG5	July	Black-headed gull	*Larus ridibundus*	1120
NG5	August	Grey heron	*Ardea cinerea*	4
NG5	August	Greenshank	*Tringa nebularia*	3
NG5	August	Green sandpiper	*Tringa ochropus*	1
NG5	August	Great black-backed gull	*Larus marinus*	2
NG5	August	Black-headed gull	*Larus ridibundus*	1100

Sub-Sector NG6. Cherry Cob to Stone Creek

Sector	Date	Common name	Scientific name	Total
NG6	September	Kingfisher	*Alcedo atthis*	4
NG6	September	Curlew sandpiper	*Calidris ferruginea*	1
NG6	September	Black-headed gull	*Larus ridibundus*	126
NG6	October	Black-headed gull	*Larus ridibundus*	7
NG6	October	Common gull	*Larus canus*	1
NG6	October	Snipe	*Gallinago gallinago*	1
NG6	October	Great black-backed gull	*Larus marinus*	1
NG6	October	Kingfisher	*Alcedo atthis*	2
NG6	November	Kingfisher	*Alcedo atthis*	1
NG6	December	Greylag goose	*Anser anser*	30
NG6	January	Common gull	*Larus canus*	12
NG6	January	Great black-backed gull	*Larus marinus*	2
NG6	January	Herring gull	*Larus argentatus*	1
NG6	January	Black-headed gull	*Larus ridibundus*	1
NG6	May	Kingfisher	*Alcedo atthis*	2
NG6	May	Greenshank	*Tringa nebularia*	1
NG6	May	Great black-backed gull	*Larus marinus*	2
NG6	May	Arctic tern	*Sterna paradisaea*	1
NG6	May	Whimbrel	*Numenius phaeopus*	5
NG6	June	Black-headed gull	*Larus ridibundus*	8
NG6	July	Common gull	*Larus canus*	4

Sub-Sector NG6 … contd.

Sector	Date	Common name	Scientific name	Total
NG6	July	Black-headed gull	*Larus ridibundus*	439
NG6	July	Great black-backed gull	*Larus marinus*	12
NG6	July	Grey heron	*Ardea cinerea*	3
NG6	August	Black-headed gull	*Larus ridibundus*	987
NG6	August	Great black-backed gull	*Larus marinus*	2
NG6	August	Grey heron	*Ardea cinerea*	1
NG6	August	Greenshank	*Tringa nebularia*	6

Sub-Sector NH1a. Stone Creek to ?

Sector	Date	Common name	Scientific name	Total
NH1a	November	Grey heron	*Ardea cinerea*	1
NH1a	December	European white-fronted goose	*Anser a. albifrons*	4
NH1a	August	Whimbrel	*Numenius phaeopus*	1

Sub-Sector NH1b. ? to ?

Sector	Date	Common name	Scientific name	Total
NH1b	September	Greenshank	*Tringa nebularia*	1
NH1b	June	Kingfisher	*Alcedo atthis*	1
NH1b	August	Common tern	*Sterna hirundo*	2
NH1b	August	Moorhen	*Gallinula chloropus*	1
NH1b	August	Grey heron	*Ardea cinerea*	1
NH1b	August	Common sandpiper	*Actitis hypoleucos*	1

Sub-Sector NH1c. ? to Old Hall

Sector	Date	Common name	Scientific name	Total
NH1c	September	Little gull	*Larus minutus*	56
NH1c	September	Sandwich tern	*Sterna sandvicensis*	3
NH1c	September	Unidentified tern	*Sterna sp.*	29
NH1c	September	Greenshank	*Tringa nebularia*	1
NH1c	October	Cormorant	*Phalacrocorax carbo*	1
NH1c	October	Great black-backed gull	*Larus marinus*	28
NH1c	August	Cormorant	*Phalacrocorax carbo*	2

Sub-Sector NH2a. Old Hall to ?

Sector	Date	Common name	Scientific name	Total
NH2a	September	Lesser black-backed gull	*Larus fuscus*	6
NH2a	December	Great black-backed gull	*Larus marinus*	4
NH2a	December	Common gull	*Larus canus*	15
NH2a	January	Pintail	*Anas acuta*	1
NH2a	January	Black-headed gull	*Larus ridibundus*	80
NH2a	January	Common gull	*Larus canus*	130
NH2a	January	Great black-backed gull	*Larus marinus*	6

Sub-Sector NH2a … contd.

Sector	Date	Common name	Scientific name	Total
NH2a	January	Herring gull	*Larus argentatus*	1
NH2a	February	Great black-backed gull	*Larus marinus*	2
NH2a	May	Great black-backed gull	*Larus marinus*	2
NH2a	June	Great black-backed gull	*Larus marinus*	5
NH2a	June	Black-headed gull	*Larus ridibundus*	15
NH2a	July	Whimbrel	*Numenius phaeopus*	1
NH2a	July	Lesser black-backed gull	*Larus fuscus*	2
NH2a	July	Great black-backed gull	*Larus marinus*	6
NH2a	July	Common gull	*Larus canus*	2
NH2a	July	Black-headed gull	*Larus ridibundus*	46
NH2a	July	Greenshank	*Tringa nebularia*	1
NH2a	August	Lesser black-backed gull	*Larus fuscus*	80
NH2a	August	Common gull	*Larus canus*	80
NH2a	August	Great black-backed gull	*Larus marinus*	40
NH2a	August	Greenshank	*Tringa nebularia*	1
NH2a	August	Black-headed gull	*Larus ridibundus*	110
NH2a	August	Herring gull	*Larus argentatus*	30

Sub-Sector NH2b. ? to ?

Sector	Date	Common name	Scientific name	Total
NH2b	September	Black-headed gull	*Larus ridibundus*	300
NH2b	September	Lesser black-backed gull	*Larus fuscus*	20
NH2b	December	Cormorant	*Phalacrocorax carbo*	2
NH2b	December	Herring gull	*Larus argentatus*	8
NH2b	December	Greylag goose	*Anser anser*	7
NH2b	December	Common gull	*Larus canus*	6
NH2b	January	Great black-backed gull	*Larus marinus*	4
NH2b	January	Common gull	*Larus canus*	45
NH2b	January	Black-headed gull	*Larus ridibundus*	10
NH2b	February	Lesser black-backed gull	*Larus fuscus*	1
NH2b	February	Great black-backed gull	*Larus marinus*	60
NH2b	February	Herring gull	*Larus argentatus*	4
NH2b	May	Great black-backed gull	*Larus marinus*	6
NH2b	June	Great black-backed gull	*Larus marinus*	17
NH2b	June	Eider	*Somateria mollissima*	1
NH2b	June	Black-headed gull	*Larus ridibundus*	7
NH2b	July	Black-headed gull	*Larus ridibundus*	12
NH2b	July	Great black-backed gull	*Larus marinus*	4
NH2b	July	Lesser black-backed gull	*Larus fuscus*	8
NH2b	August	Lesser black-backed gull	*Larus fuscus*	8
NH2b	August	Common gull	*Larus canus*	12
NH2b	August	Great black-backed gull	*Larus marinus*	20
NH2b	August	Herring gull	*Larus argentatus*	2
NH2b	August	Black-headed gull	*Larus ridibundus*	75

Sub-Sector NH2c. ? to Patrington Channel

Sector	Date	Common name	Scientific name	Total
NH2c	September	Black-headed gull	*Larus ridibundus*	600
NH2c	September	Greylag goose	*Anser anser*	22
NH2c	September	Herring gull	*Larus argentatus*	4
NH2c	September	Lesser black-backed gull	*Larus fuscus*	20
NH2c	December	Herring gull	*Larus argentatus*	6
NH2c	December	Great black-backed gull	*Larus marinus*	20
NH2c	December	Common gull	*Larus canus*	20
NH2c	December	Black-headed gull	*Larus ridibundus*	4
NH2c	January	Common gull	*Larus canus*	12
NH2c	January	Black-headed gull	*Larus ridibundus*	30
NH2c	January	Great black-backed gull	*Larus marinus*	4
NH2c	January	Mute swan	*Cygnus olor*	4
NH2c	January	Herring gull	*Larus argentatus*	2
NH2c	January	Grey heron	*Ardea cinerea*	1
NH2c	February	Black-headed gull	*Larus ridibundus*	4
NH2c	February	Cormorant	*Phalacrocorax carbo*	1
NH2c	February	Common gull	*Larus canus*	120
NH2c	February	Great black-backed gull	*Larus marinus*	4
NH2c	May	Common sandpiper	*Actitis hypoleucos*	1
NH2c	May	Lesser black-backed gull	*Larus fuscus*	12
NH2c	May	Grey heron	*Ardea cinerea*	1
NH2c	May	Great black-backed gull	*Larus marinus*	90
NH2c	June	Great black-backed gull	*Larus marinus*	3
NH2c	July	Whimbrel	*Numenius phaeopus*	1
NH2c	July	Spotted redshank	*Tringa erythropus*	1
NH2c	July	Lesser black-backed gull	*Larus fuscus*	32
NH2c	July	Herring gull	*Larus argentatus*	2
NH2c	July	Grey heron	*Ardea cinerea*	2
NH2c	July	Great black-backed gull	*Larus marinus*	8
NH2c	July	Common gull	*Larus canus*	4
NH2c	July	Cormorant	*Phalacrocorax carbo*	3
NH2c	July	Black-headed gull	*Larus ridibundus*	15
NH2c	July	Greenshank	*Tringa nebularia*	1
NH2c	August	Whimbrel	*Numenius phaeopus*	1
NH2c	August	Black-headed gull	*Larus ridibundus*	1030
NH2c	August	Common gull	*Larus canus*	50
NH2c	August	Lesser black-backed gull	*Larus fuscus*	10
NH2c	August	Great black-backed gull	*Larus marinus*	36
NH2c	August	Herring gull	*Larus argentatus*	5
NH2c	August	Common sandpiper	*Actitis hypoleucos*	3

Sub-Sector NJ1. Patrington Channel to Skeffling Clough

Sector	Date	Common name	Scientific name	Total
NJ1	September	Snipe	*Gallinago gallinago*	2
NJ1	October	Black-headed gull	*Larus ridibundus*	160
NJ1	October	Common gull	*Larus canus*	70
NJ1	October	Spotted redshank	*Tringa erythropus*	3
NJ1	October	Great black-backed gull	*Larus marinus*	8
NJ1	October	Greenshank	*Tringa nebularia*	4
NJ1	October	Snipe	*Gallinago gallinago*	2
NJ1	October	Herring gull	*Larus argentatus*	3
NJ1	November	Grey heron	*Ardea cinerea*	1
NJ1	December	Cormorant	*Phalacrocorax carbo*	1
NJ1	December	Black-headed gull	*Larus ridibundus*	2500
NJ1	December	Snipe	*Gallinago gallinago*	3
NJ1	December	Great black-backed gull	*Larus marinus*	18
NJ1	December	Common gull	*Larus canus*	650
NJ1	December	Grey heron	*Ardea cinerea*	2
NJ1	January	Mute swan	*Cygnus olor*	8
NJ1	January	Greylag goose	*Anser anser*	4
NJ1	January	Common gull	*Larus canus*	60
NJ1	January	Black-headed gull	*Larus ridibundus*	1500
NJ1	January	Whooper swan	*Cygnus cygnus*	5
NJ1	February	Mute swan	*Cygnus olor*	11
NJ1	February	Black-headed gull	*Larus ridibundus*	150
NJ1	February	Cormorant	*Phalacrocorax carbo*	3
NJ1	February	Common gull	*Larus canus*	6
NJ1	February	Great black-backed gull	*Larus marinus*	9
NJ1	February	Pintail	*Anas acuta*	129
NJ1	February	Whooper swan	*Cygnus cygnus*	5
NJ1	March	Whooper swan	*Cygnus cygnus*	2
NJ1	March	Pintail	*Anas acuta*	17
NJ1	March	Moorhen	*Gallinula chloropus*	8
NJ1	March	Little grebe	*Tachybaptus ruficollis*	4
NJ1	March	Lesser black-backed gull	*Larus fuscus*	4
NJ1	March	Herring gull	*Larus argentatus*	28
NJ1	March	Grey heron	*Ardea cinerea*	1
NJ1	March	Mute swan	*Cygnus olor*	9
NJ1	March	Coot	*Fulica atra*	10
NJ1	March	Common gull	*Larus canus*	165
NJ1	March	Cormorant	*Phalacrocorax carbo*	3
NJ1	March	Black-headed gull	*Larus ridibundus*	385
NJ1	March	Green sandpiper	*Tringa ochropus*	1
NJ1	April	Black-headed gull	*Larus ridibundus*	68
NJ1	April	Common tern	*Sterna hirundo*	1
NJ1	April	Cormorant	*Phalacrocorax carbo*	1
NJ1	April	Whimbrel	*Numenius phaeopus*	2
NJ1	April	Herring gull	*Larus argentatus*	9
NJ1	April	Great black-backed gull	*Larus marinus*	1

Sub-Sector NJ1 … contd.

Sector	Date	Common name	Scientific name	Total
NJ1	May	Greenshank	*Tringa nebularia*	2
NJ1	May	Moorhen	*Gallinula chloropus*	3
NJ1	May	Little grebe	*Tachybaptus ruficollis*	2
NJ1	May	Herring gull	*Larus argentatus*	9
NJ1	May	Common gull	*Larus canus*	40
NJ1	May	Cormorant	*Phalacrocorax carbo*	1
NJ1	May	Black-headed gull	*Larus ridibundus*	39
NJ1	May	Grey heron	*Ardea cinerea*	1
NJ1	May	Whimbrel	*Numenius phaeopus*	1
NJ1	June	Black-headed gull	*Larus ridibundus*	86
NJ1	June	Cormorant	*Phalacrocorax carbo*	2
NJ1	June	Common gull	*Larus canus*	74
NJ1	June	Herring gull	*Larus argentatus*	18
NJ1	June	Moorhen	*Gallinula chloropus*	6
NJ1	June	Lesser black-backed gull	*Larus fuscus*	3
NJ1	June	Little grebe	*Tachybaptus ruficollis*	3
NJ1	June	Coot	*Fulica atra*	3
NJ1	June	Mute swan	*Cygnus olor*	1
NJ1	June	Grey heron	*Ardea cinerea*	1
NJ1	July	Herring gull	*Larus argentatus*	39
NJ1	July	Grey heron	*Ardea cinerea*	1
NJ1	July	Greenshank	*Tringa nebularia*	6
NJ1	July	Great black-backed gull	*Larus marinus*	36
NJ1	July	Common gull	*Larus canus*	82
NJ1	July	Cormorant	*Phalacrocorax carbo*	4
NJ1	July	Black-headed gull	*Larus ridibundus*	870
NJ1	July	Lesser black-backed gull	*Larus fuscus*	68
NJ1	July	Mute swan	*Cygnus olor*	3
NJ1	July	Whimbrel	*Numenius phaeopus*	5
NJ1	August	Grey heron	*Ardea cinerea*	2
NJ1	August	Greenshank	*Tringa nebularia*	7
NJ1	August	Moorhen	*Gallinula chloropus*	6
NJ1	August	Lesser black-backed gull	*Larus fuscus*	9
NJ1	August	Little grebe	*Tachybaptus ruficollis*	4
NJ1	August	Green sandpiper	*Tringa ochropus*	1
NJ1	August	Whimbrel	*Numenius phaeopus*	2
NJ1	August	Spotted redshank	*Tringa erythropus*	3
NJ1	August	Coot	*Fulica atra*	2
NJ1	August	Common tern	*Sterna hirundo*	4
NJ1	August	Common gull	*Larus canus*	65
NJ1	August	Cormorant	*Phalacrocorax carbo*	4
NJ1	August	Great black-backed gull	*Larus marinus*	3
NJ1	August	Black-headed gull	*Larus ridibundus*	450

Sub-Sector NJ2. Skeffling Clough to Kilnsea

Sector	Date	Common name	Scientific name	Total
NJ2	September	Greenshank	*Tringa nebularia*	3
NJ2	October	Grey heron	*Ardea cinerea*	1
NJ2	November	Grey heron	*Ardea cinerea*	2
NJ2	December	Common gull	*Larus canus*	4
NJ2	December	Mute swan	*Cygnus olor*	2
NJ2	December	Great black-backed gull	*Larus marinus*	1
NJ2	January	Pintail	*Anas acuta*	53
NJ2	February	Black-headed gull	*Larus ridibundus*	5
NJ2	February	Herring gull	*Larus argentatus*	5
NJ2	March	Common gull	*Larus canus*	72
NJ2	March	Great black-backed gull	*Larus marinus*	3
NJ2	April	Greenshank	*Tringa nebularia*	2
NJ2	May	Common sandpiper	*Actitis hypoleucos*	1
NJ2	May	Whimbrel	*Numenius phaeopus*	6
NJ2	July	Common gull	*Larus canus*	36
NJ2	July	Whimbrel	*Numenius phaeopus*	2
NJ2	July	Greenshank	*Tringa nebularia*	1
NJ2	July	Great black-backed gull	*Larus marinus*	14
NJ2	July	Cormorant	*Phalacrocorax carbo*	2
NJ2	July	Black-headed gull	*Larus ridibundus*	247
NJ2	August	Greenshank	*Tringa nebularia*	2

Sector NK. Sammy's Point to Spurn Head (including Spurn Bight)

Sector	Date	Common name	Scientific name	Total
NK	September	Little gull	*Larus minutus*	1
NK	September	Whimbrel	*Numenius phaeopus*	1
NK	September	Little grebe	*Tachybaptus ruficollis*	4
NK	October	Cormorant	*Phalacrocorax carbo*	3
NK	October	Moorhen	*Gallinula chloropus*	14
NK	October	Little grebe	*Tachybaptus ruficollis*	7
NK	October	Common scoter	*Melanitta nigra*	39
NK	October	Coot	*Fulica atra*	1
NK	December	Mute swan	*Cygnus olor*	5
NK	December	Cormorant	*Phalacrocorax carbo*	1
NK	December	Shoveler	*Anas clypeata*	1
NK	January	Cormorant	*Phalacrocorax carbo*	1
NK	February	Goldeneye	*Bucephala clangula*	4
NK	February	Little grebe	*Tachybaptus ruficollis*	5
NK	April	Cormorant	*Phalacrocorax carbo*	5
NK	April	Common scoter	*Melanitta nigra*	1
NK	April	Little grebe	*Tachybaptus ruficollis*	8
NK	April	Mute swan	*Cygnus olor*	4
NK	April	Whimbrel	*Numenius phaeopus*	9
NK	May	Curlew sandpiper	*Calidris ferruginea*	2

Sector NK … contd.

Sector	Date	Common name	Scientific name	Total
NK	May	Whimbrel	*Numenius phaeopus*	12
NK	June	Common gull	*Larus canus*	63
NK	June	Cormorant	*Phalacrocorax carbo*	2
NK	June	Black-headed gull	*Larus ridibundus*	10
NK	June	Little tern	*Sterna albifrons*	12
NK	June	Snipe	*Gallinago gallinago*	1
NK	June	Moorhen	*Gallinula chloropus*	4
NK	June	Sandwich tern	*Sterna sandvicensis*	15
NK	June	Coot	*Fulica atra*	2
NK	June	Mute swan	*Cygnus olor*	2
NK	June	Lesser black-backed gull	*Larus fuscus*	3
NK	June	Herring gull	*Larus argentatus*	32
NK	June	Great black-backed gull	*Larus marinus*	15
NK	June	Little grebe	*Tachybaptus ruficollis*	1
NK	July	Whimbrel	*Numenius phaeopus*	6
NK	July	Sandwich tern	*Sterna sandvicensis*	20
NK	July	Shoveler	*Anas clypeata*	1
NK	July	Snipe	*Gallinago gallinago*	2
NK	July	Greenshank	*Tringa nebularia*	2
NK	July	Eider	*Somateria mollissima*	1
NK	July	Common scoter	*Melanitta nigra*	25
NK	July	Common tern	*Sterna hirundo*	20
NK	July	Cormorant	*Phalacrocorax carbo*	15
NK	July	Little tern	*Sterna albifrons*	64
NK	August	Whimbrel	*Numenius phaeopus*	2
NK	August	Common sandpiper	*Actitis hypoleucos*	5

Sector OSA. Grainthorpe Haven to Somercotes Head

Sector	Date	Common name	Scientific name	Total
OSA	September	Greenshank	*Tringa nebularia*	2
OSA	October	Snipe	*Gallinago gallinago*	1
OSA	October	Grey heron	*Ardea cinerea*	1
OSA	November	Snipe	*Gallinago gallinago*	2
OSA	November	Little grebe	*Tachybaptus ruficollis*	1
OSA	November	Grey heron	*Ardea cinerea*	1
OSA	April	Greylag goose	*Anser anser*	2
OSA	April	Greenshank	*Tringa nebularia*	2
OSA	April	Grey heron	*Ardea cinerea*	2
OSA	May	Cormorant	*Phalacrocorax carbo*	1
OSA	June	Grey heron	*Ardea cinerea*	1
OSA	July	Sandwich tern	*Sterna sandvicensis*	6
OSA	July	Whimbrel	*Numenius phaeopus*	3
OSA	August	Greenshank	*Tringa nebularia*	3
OSA	August	Common sandpiper	*Actitis hypoleucos*	1
OSA	August	Moorhen	*Gallinula chloropus*	3

Sector OSB. Somercotes Head to Donna Nook

Sector	Date	Common name	Scientific name	Total
OSB	September	Tufted duck	*Aythya fuligula*	1
OSB	September	Grey heron	*Ardea cinerea*	3
OSB	October	Whooper swan	*Cygnus cygnus*	6
OSB	October	Mute swan	*Cygnus olor*	3
OSB	October	Cormorant	*Phalacrocorax carbo*	5
OSB	October	Common scoter	*Melanitta nigra*	8
OSB	October	Snipe	*Gallinago gallinago*	5
OSB	November	Mute swan	*Cygnus olor*	6
OSB	November	Little grebe	*Tachybaptus ruficollis*	2
OSB	November	Jack snipe	*Lymnocryptes minimus*	1
OSB	November	Grey heron	*Ardea cinerea*	3
OSB	November	Goosander	*Mergus merganser*	2
OSB	December	Cormorant	*Phalacrocorax carbo*	1
OSB	December	Grey heron	*Ardea cinerea*	1
OSB	December	Jack snipe	*Lymnocryptes minimus*	3
OSB	December	Little grebe	*Tachybaptus ruficollis*	6
OSB	December	Moorhen	*Gallinula chloropus*	8
OSB	December	Pintail	*Anas acuta*	1
OSB	December	Snipe	*Gallinago gallinago*	2
OSB	January	Mute swan	*Cygnus olor*	4
OSB	January	Moorhen	*Gallinula chloropus*	7
OSB	January	Little grebe	*Tachybaptus ruficollis*	4
OSB	January	Cormorant	*Phalacrocorax carbo*	12
OSB	March	Little grebe	*Tachybaptus ruficollis*	1
OSB	March	Moorhen	*Gallinula chloropus*	3
OSB	April	Tufted duck	*Aythya fuligula*	7
OSB	April	Moorhen	*Gallinula chloropus*	5
OSB	April	Coot	*Fulica atra*	1
OSB	May	Tufted duck	*Aythya fuligula*	7
OSB	May	Sandwich tern	*Sterna sandvicensis*	2
OSB	May	Cormorant	*Phalacrocorax carbo*	5
OSB	May	Mute swan	*Cygnus olor*	1
OSB	May	Moorhen	*Gallinula chloropus*	6
OSB	May	Little grebe	*Tachybaptus ruficollis*	4
OSB	May	Grey heron	*Ardea cinerea*	1
OSB	May	Little egret	*Egretta garzetta*	1
OSB	June	Tufted duck	*Aythya fuligula*	4
OSB	June	Little grebe	*Tachybaptus ruficollis*	3
OSB	June	Grey heron	*Ardea cinerea*	4
OSB	July	Cormorant	*Phalacrocorax carbo*	4
OSB	July	Little grebe	*Tachybaptus ruficollis*	2
OSB	July	Tufted duck	*Aythya fuligula*	2
OSB	July	Sandwich tern	*Sterna sandvicensis*	45
OSB	July	Grey heron	*Ardea cinerea*	1
OSB	July	Greenshank	*Tringa nebularia*	1
OSB	July	Common sandpiper	*Actitis hypoleucos*	1

Sector OSB … contd.

Sector	Date	Common name	Scientific name	Total
OSB	July	Whimbrel	*Numenius phaeopus*	36
OSB	July	Moorhen	*Gallinula chloropus*	3
OSB	August	Whimbrel	*Numenius phaeopus*	2
OSB	August	Sandwich tern	*Sterna sandvicensis*	4
OSB	August	Ruff	*Philomachus pugnax*	2
OSB	August	Moorhen	*Gallinula chloropus*	4
OSB	August	Common tern	*Sterna hirundo*	6
OSB	August	Cormorant	*Phalacrocorax carbo*	18
OSB	August	Common sandpiper	*Actitis hypoleucos*	5
OSB	August	Greenshank	*Tringa nebularia*	1
OSB	August	Grey heron	*Ardea cinerea*	2
OSB	August	Little grebe	*Tachybaptus ruficollis*	4

Sector OSC. Donna Nook to Salt Box Farm

Sector	Date	Common name	Scientific name	Total
OSC	September	Mute swan	*Cygnus olor*	2
OSC	September	Sandwich tern	*Sterna sandvicensis*	3
OSC	September	Moorhen	*Gallinula chloropus*	4
OSC	September	Little grebe	*Tachybaptus ruficollis*	2
OSC	October	Mute swan	*Cygnus olor*	4
OSC	October	Little grebe	*Tachybaptus ruficollis*	2
OSC	October	Jack snipe	*Lymnocryptes minimus*	1
OSC	November	Mute swan	*Cygnus olor*	5
OSC	November	Moorhen	*Gallinula chloropus*	3
OSC	November	Little grebe	*Tachybaptus ruficollis*	4
OSC	December	Coot	*Fulica atra*	1
OSC	December	Mute swan	*Cygnus olor*	5
OSC	December	Whooper swan	*Cygnus cygnus*	1
OSC	December	Grey heron	*Ardea cinerea*	1
OSC	December	Kingfisher	*Alcedo atthis*	3
OSC	December	Little grebe	*Tachybaptus ruficollis*	4
OSC	December	Moorhen	*Gallinula chloropus*	6
OSC	January	Little grebe	*Tachybaptus ruficollis*	4
OSC	January	Mute swan	*Cygnus olor*	3
OSC	January	Snipe	*Gallinago gallinago*	2
OSC	January	Bittern	*Botaurus stellaris*	1
OSC	February	Little grebe	*Tachybaptus ruficollis*	2
OSC	February	Mute swan	*Cygnus olor*	3
OSC	February	Tufted duck	*Aythya fuligula*	3
OSC	March	Coot	*Fulica atra*	3
OSC	March	Little grebe	*Tachybaptus ruficollis*	4
OSC	March	Snipe	*Gallinago gallinago*	2
OSC	March	Tufted duck	*Aythya fuligula*	2
OSC	April	Little grebe	*Tachybaptus ruficollis*	3
OSC	April	Moorhen	*Gallinula chloropus*	4

Sector OSC … contd.

Sector	Date	Common name	Scientific name	Total
OSC	April	Mute swan	*Cygnus olor*	2
OSC	April	Snipe	*Gallinago gallinago*	2
OSC	April	Tufted duck	*Aythya fuligula*	2
OSC	April	Coot	*Fulica atra*	4
OSC	May	Tufted duck	*Aythya fuligula*	2
OSC	May	Mute swan	*Cygnus olor*	2
OSC	May	Moorhen	*Gallinula chloropus*	2
OSC	May	Little tern	*Sterna albifrons*	3
OSC	May	Coot	*Fulica atra*	5
OSC	May	Greenshank	*Tringa nebularia*	3
OSC	May	Little grebe	*Tachybaptus ruficollis*	2
OSC	June	Mute swan	*Cygnus olor*	2
OSC	June	Moorhen	*Gallinula chloropus*	3
OSC	June	Little egret	*Egretta garzetta*	1
OSC	July	Little grebe	*Tachybaptus ruficollis*	1
OSC	July	Moorhen	*Gallinula chloropus*	6
OSC	July	Coot	*Fulica atra*	4
OSC	August	Cormorant	*Phalacrocorax carbo*	3
OSC	August	Common tern	*Sterna hirundo*	55
OSC	August	Green sandpiper	*Tringa ochropus*	2
OSC	August	Greenshank	*Tringa nebularia*	4
OSC	August	Grey heron	*Ardea cinerea*	1
OSC	August	Common sandpiper	*Actitis hypoleucos*	1
OSC	August	Little grebe	*Tachybaptus ruficollis*	2
OSC	August	Sandwich tern	*Sterna sandvicensis*	34
OSC	August	Moorhen	*Gallinula chloropus*	6
OSC	August	Tufted duck	*Aythya fuligula*	3

Sector OSD. Salt Box Farm to Saltfleet Haven

Sector	Date	Common name	Scientific name	Total
OSD	September	Greenshank	*Tringa nebularia*	1
OSD	September	Grey heron	*Ardea cinerea*	1
OSD	September	Pintail	*Anas acuta*	4
OSD	September	Sandwich tern	*Sterna sandvicensis*	22
OSD	October	Cormorant	*Phalacrocorax carbo*	1
OSD	December	Grey heron	*Ardea cinerea*	1
OSD	December	Little grebe	*Tachybaptus ruficollis*	7
OSD	January	Greylag goose	*Anser anser*	8
OSD	January	Red-throated diver	*Gavia stellata*	11
OSD	March	Snipe	*Gallinago gallinago*	1
OSD	April	Whimbrel	*Numenius phaeopus*	3
OSD	April	Cormorant	*Phalacrocorax carbo*	1
OSD	April	Little tern	*Sterna albifrons*	1
OSD	April	Greenshank	*Tringa nebularia*	1
OSD	May	Little tern	*Sterna albifrons*	24

Sector OSD … contd.

Sector	Date	Common name	Scientific name	Total
OSD	June	Whimbrel	*Numenius phaeopus*	1
OSD	June	Grey heron	*Ardea cinerea*	1
OSD	July	Spotted redshank	*Tringa erythropus*	2
OSD	July	Little egret	*Egretta garzetta*	1
OSD	July	Greenshank	*Tringa nebularia*	1
OSD	July	Common sandpiper	*Actitis hypoleucos*	1
OSD	July	Grey heron	*Ardea cinerea*	1
OSD	July	Whimbrel	*Numenius phaeopus*	3
OSD	August	Sandwich tern	*Sterna sandvicensis*	63
OSD	August	Whimbrel	*Numenius phaeopus*	4
OSD	August	Little grebe	*Tachybaptus ruficollis*	1
OSD	August	Greenshank	*Tringa nebularia*	1
OSD	August	Common sandpiper	*Actitis hypoleucos*	3
OSD	August	Common tern	*Sterna hirundo*	8
OSD	August	Cormorant	*Phalacrocorax carbo*	6

Sector OSE. Saltfleet Haven to Theddlethorpe

Sector	Date	Common name	Scientific name	Total
OSE	September	Whimbrel	*Numenius phaeopus*	2
OSE	September	Grey heron	*Ardea cinerea*	3
OSE	September	Ruff	*Philomachus pugnax*	4
OSE	September	Snipe	*Gallinago gallinago*	3
OSE	September	Sandwich tern	*Sterna sandvicensis*	18
OSE	September	Greenshank	*Tringa nebularia*	11
OSE	September	Little egret	*Egretta garzetta*	2
OSE	September	Cormorant	*Phalacrocorax carbo*	5
OSE	October	Snipe	*Gallinago gallinago*	12
OSE	October	Little grebe	*Tachybaptus ruficollis*	3
OSE	October	Grey heron	*Ardea cinerea*	1
OSE	October	Eider	*Somateria mollissima*	3
OSE	October	Cormorant	*Phalacrocorax carbo*	4
OSE	November	Grey heron	*Ardea cinerea*	1
OSE	November	Snipe	*Gallinago gallinago*	35
OSE	November	Little grebe	*Tachybaptus ruficollis*	3
OSE	November	Cormorant	*Phalacrocorax carbo*	12
OSE	November	Jack snipe	*Lymnocryptes minimus*	1
OSE	November	Goldeneye	*Bucephala clangula*	4
OSE	December	Kingfisher	*Alcedo atthis*	2
OSE	December	Little grebe	*Tachybaptus ruficollis*	8
OSE	December	Pintail	*Anas acuta*	2
OSE	December	Jack snipe	*Lymnocryptes minimus*	1
OSE	December	Snipe	*Gallinago gallinago*	5
OSE	January	Snipe	*Gallinago gallinago*	15
OSE	January	Shoveler	*Anas clypeata*	2
OSE	January	Red-throated diver	*Gavia stellata*	4

Sector OSE … contd.

Sector	Date	Common name	Scientific name	Total
OSE	January	Cormorant	*Phalacrocorax carbo*	2
OSE	January	Green sandpiper	*Tringa ochropus*	1
OSE	January	Jack snipe	*Lymnocryptes minimus*	2
OSE	January	Little grebe	*Tachybaptus ruficollis*	7
OSE	February	Cormorant	*Phalacrocorax carbo*	4
OSE	February	Green sandpiper	*Tringa ochropus*	1
OSE	February	Little egret	*Egretta garzetta*	2
OSE	February	Snipe	*Gallinago gallinago*	14
OSE	February	Little grebe	*Tachybaptus ruficollis*	4
OSE	March	Snipe	*Gallinago gallinago*	4
OSE	March	Little grebe	*Tachybaptus ruficollis*	3
OSE	March	Cormorant	*Phalacrocorax carbo*	27
OSE	April	Greenshank	*Tringa nebularia*	1
OSE	April	Grey heron	*Ardea cinerea*	1
OSE	April	Mute swan	*Cygnus olor*	5
OSE	April	Snipe	*Gallinago gallinago*	5
OSE	April	Greylag goose	*Anser anser*	7
OSE	April	Cormorant	*Phalacrocorax carbo*	2
OSE	May	Greenshank	*Tringa nebularia*	1
OSE	May	Shoveler	*Anas clypeata*	2
OSE	May	Grey heron	*Ardea cinerea*	2
OSE	May	Canada goose	*Branta canadensis*	12
OSE	May	Greylag goose	*Anser anser*	6
OSE	May	Ruff	*Philomachus pugnax*	3
OSE	May	Green sandpiper	*Tringa ochropus*	1
OSE	May	Common sandpiper	*Actitis hypoleucos*	1
OSE	May	Cormorant	*Phalacrocorax carbo*	2
OSE	May	Whimbrel	*Numenius phaeopus*	2
OSE	May	Tufted duck	*Aythya fuligula*	4
OSE	May	Little tern	*Sterna albifrons*	2
OSE	June	Common tern	*Sterna hirundo*	8
OSE	June	Sandwich tern	*Sterna sandvicensis*	6
OSE	July	Common tern	*Sterna hirundo*	5
OSE	July	Common sandpiper	*Actitis hypoleucos*	1
OSE	July	Spotted redshank	*Tringa erythropus*	3
OSE	July	Little grebe	*Tachybaptus ruficollis*	2
OSE	July	Sandwich tern	*Sterna sandvicensis*	29
OSE	July	Greenshank	*Tringa nebularia*	4
OSE	August	Sandwich tern	*Sterna sandvicensis*	66
OSE	August	Shoveler	*Anas clypeata*	5
OSE	August	Whimbrel	*Numenius phaeopus*	7
OSE	August	Snipe	*Gallinago gallinago*	39
OSE	August	Greenshank	*Tringa nebularia*	5
OSE	August	Arctic tern	*Sterna paradisaea*	4
OSE	August	Cormorant	*Phalacrocorax carbo*	3
OSE	August	Canada goose	*Branta canadensis*	128

Sector OSE … contd.

Sector	Date	Common name	Scientific name	Total
OSE	August	Common tern	*Sterna hirundo*	59
OSE	August	Green sandpiper	*Tringa ochropus*	2
OSE	August	Greylag goose	*Anser anser*	18

Sector OSF. Theddlethorpe St Helen to North End, Mablethorpe

Sector	Date	Common name	Scientific name	Total
OSF	September	Common tern	*Sterna hirundo*	2
OSF	September	Sandwich tern	*Sterna sandvicensis*	196
OSF	October	Herring gull	*Larus argentatus*	450
OSF	October	Lesser black-backed gull	*Larus fuscus*	6
OSF	October	Great black-backed gull	*Larus marinus*	1500
OSF	October	Black-headed gull	*Larus ridibundus*	150
OSF	April	Whimbrel	*Numenius phaeopus*	3
OSF	June	Great black-backed gull	*Larus marinus*	9
OSF	June	Lesser black-backed gull	*Larus fuscus*	2
OSF	July	Black-headed gull	*Larus ridibundus*	314
OSF	July	Common gull	*Larus canus*	168
OSF	July	Great black-backed gull	*Larus marinus*	2
OSF	July	Herring gull	*Larus argentatus*	21
OSF	July	Lesser black-backed gull	*Larus fuscus*	3
OSF	July	Sandwich tern	*Sterna sandvicensis*	15
OSF	August	Little ringed plover	*Charadrius dubius*	7
OSF	August	Common tern	*Sterna hirundo*	23
OSF	August	Sandwich tern	*Sterna sandvicensis*	47

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Middle left: Co_2 experiment at Roudsea Wood and Mosses NNR, Lancashire.
Peter Wakely/English Nature 21,792
Bottom left: Radio tracking a hare on Pawlett Hams, Somerset.
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