

## 4. Avifauna

### Bird Assemblage - Humber Estuary

**Key Sites: All areas have ornithological value.** Particular sites or reaches of note include the Humber Wildfowl Refuge (including Whitton Sand), Brough Airfield, Read's Island and adjacent fringing mudflat, the Barton Clay Pits complex, Skitterness & the Grues, Saltend, Cherry Cobb & Foulholme Sands, North Killingholme to Pyewipe, Welwick & Spurn Bight, Tetney to Donna Nook and Saltfleetby-Theddlethorpe Dunes NNR.

#### Summary Status:

- International importance under the Ramsar Convention and the Wild Birds Directive for its assemblage.
- Internationally and nationally important for a series of waterfowl species (see below).
- Site includes SPA, Ramsar, NNR, SSSIs and SNCIs.

#### Description

The Humber Estuary plays an international role in bird migration and is one of the six most important wetland sites in the UK. As a resource, it provides safe feeding and roosting for species moving from breeding sites in the arctic and sub arctic to wintering grounds in southern Europe and Africa, as well as for species which use the Humber as an over-wintering site. Its strategic role stems from its position along the East Atlantic Flyway, a broad zone stretching between the breeding grounds of waders in the arctic and sub arctic and their over-wintering sites in southern Europe and Africa with wader and waterfowl flocks utilising the extensive and highly productive intertidal mudflats of the estuary as a source of food and as a roost site.

The Humber should therefore be regarded as one of a series of wetland sites (e.g. the Wash, the Wadden Sea and the Tees) along the migration route, with estuarine function in relation to waterfowl migration having been described as analogous to that of a service station on an international motorway network.

In ecological terms, the value of the Humber is therefore not particularly in the occurrence of rare species, but for the massive numbers of wildfowl and waders which regularly use the intertidal mudflats and saltmarsh during their passage to and from their wintering grounds and during their winter residence. In the period 1995/6-2000/01, the Humber supported a mean annual peak maxima of 153,934 waterfowl, (Pollit *et al.*, 2003).

During passage periods, numbers of wildfowl and waders can be even higher than those given above, with flocks usually staying on a single site for any length of time between a few days and a couple of weeks before moving on to the next staging wetland. This turnover means that the numbers of birds using a site may be a number of times greater than the peak count, with research suggesting a turnover factor of up to three times during spring migration (Davidson *et al* 1991). In addition to passage movement between wetlands during the spring and autumn, there are winter movements between sites in response to a variety of stimuli such as weather and prey availability.

The Humber is therefore of great importance for passage movement of waterfowl along the east coast during spring and autumn, but is also subject to the international and national movement of waterfowl flocks during the winter with an influx of waders from the Wadden Sea and the Wash.

As of August 2000 when the most recent citation was drafted, the site qualified for protection as a SPA under Article 4.1 of the Wild Birds Directive (Annex 1 species) for breeding marsh harrier, avocet and little tern, and wintering bittern (now also breeding), hen harrier, golden plover and bar-tailed godwit. It also qualified under Article 4.2 of the Wild Birds Directive (migratory species other than Annex 1) for migratory ringed plover, sanderling, redshank, shelduck, grey plover, lapwing, knot, dunlin and redshank, together with wintering dark-bellied brent goose, wigeon, mallard, pochard, scaup, goldeneye, oystercatcher, ringed plover, sanderling, black-tailed godwit and curlew. Details of individual species, their distribution and status on the Humber are given in the individual species accounts elsewhere in this document.

The site also qualifies as an SPA and Ramsar site for its general waterfowl assemblage under Article 4.2 of the Wild Birds Directive and Criterion 5 of the Ramsar Convention as it regularly supports over 20,000 waterfowl (current 5 year mean annual peak maxima 153,934). Details of the waterfowl assemblage on a sectional basis are given below.

### **Assemblage Distribution (on a sectional basis)**

#### **Inner estuary**

This section of the estuary is characterised by extensive *Phragmites* reedbeds, gravel pits and saline lagoons, areas of saltmarsh and wet grazing with fringing mudflats. The mudflats tend to be narrow and steeply shelving within the tidal tributaries, opening out into more extensive areas downstream of Trent Falls. Characteristic species of the area include reedbed specialists such as the marsh harrier and bearded tit, as well as those associated with shallow lagoons such as avocet and saltmarsh and mudflats such as mallard, teal and shelduck.

Upstream of the confluence of the rivers Ouse and Trent, waterfowl importance is limited as although the rivers are still tidal, the area of intertidal mudflat is relatively small. However, ducks and waders are present in low numbers and the fringing reedbeds are of value for *Acrocephalus* warblers and are hunted by marsh harrier. Several sections of the Ouse are of note, in particular, the mudflat and adjacent fields at Howdendyke Lee supports flocks of regionally important golden plover and lapwing. Small areas of intertidal mud have also developed on the inside of bends within the river system, and these are often used by waterfowl, e.g. c. 40-50 mallard regularly use the reach opposite Saltmarshe Hall (N.D. Cutts pers. obs. 2002).

The RSPB Reserve at Blacktoft Sands at the confluence of the Trent and Ouse is of major ornithological importance, comprising areas of open water, intertidal mudflat, extensive *Phragmites* reedbed, and rough grazing. The site is particularly important for marsh harrier and for breeding avocet, with a substantial population now established.. Other species of note also breeding on the reserve include water rail, pochard and bearded tit (RSPB 2001). As well as its breeding species, Blacktoft is additionally of importance as an over-wintering and passage site supporting a hen harrier roost, and is also important as an over-wintering and passage site for a variety of other species including gadwall, teal, mallard, pintail, golden

plover, lapwing and ruff (RSPB 2001). Faxfleet Ponds on the north bank of the River Ouse, opposite the Blacktoft Reserve, features areas of open water with fringing reedbed habitat and supports breeding duck and bearded tit (N.D. Cutts pers. obs. 1990-2001).

The Humber Wildfowl Refuge consists of the mid channel Whitton Sand which is a mudflat and saltmarsh habitat, together with intertidal mudflats on each bank between Faxfleet and Brough on the north bank and Alkborough Flats and Whitton Ness on the south bank, with fringing grazed saltmarsh and extensive reedbeds. Whitton Sand is of particular ecological note being one of the few accreting areas in the Humber Estuary, with unmanaged saltmarsh development of interest. It supports nationally and internationally important numbers of waterfowl during passage and winter months and is a valuable resource for breeding species. Breeding birds within the saltmarsh habitat include greylag goose, Canada goose, and redshank, whilst wintering waterfowl using the mudflats include pink-footed goose, shelduck, wigeon, teal, mallard, dunlin, lapwing and golden plover. The golden plover roost at this site regularly reaches numbers in excess of 5,000 (well in excess of the national importance threshold) and interaction occurs between Whitton Sand, the mudflats of Brough Flats, and Brough airfield (N.D. Cutts pers. obs. 2002). A flock of up to 5,000 (national importance) wigeon regularly feed on the 'lawn' fronting Broomfleet island, as well as the fronting mudflat and the adjacent intertidal reach between Crabley and Brough supports in excess of 2,000 shelduck, over 1,000 mallard and up to 1,000 teal (N.D. Cutts pers. obs. 1990-2001). Shelduck numbers have increased markedly on this site over the last decade with the establishment of a moult site (Cutts 1998). However, mallard numbers have undergone a decline during the same period. Lapwing roost flocks of 7,000 also use the area, with high water roosts on Brough airfield. Large ringed plover flocks are also recorded on this reach with peak numbers sometimes in excess of 1,000 occurring during passage, whilst dunlin feeding flocks usually total in excess of 2,000. The grazed saltmarsh is used by breeding redshank and oystercatcher, as well as marsh harrier.

On the south bank of the Humber Wildfowl Refuge, intertidal mudflats are generally narrower, backed in places by grazed marsh, with key areas around Alkborough Flats and Whitton Ness. They are of particular importance for wildfowl and waders, with Alkborough Flats supporting flocks of golden plover, lapwing and pink-footed goose during the winter, as well as breeding waders such as lapwing, redshank, and snipe, whilst the mudflat at Whitton Ness supports feeding shelduck, wigeon, teal and mallard, as well as pink-footed geese on occasion (HWRC/English Nature unpubl.). High tide roosts are established on several areas of fringing saltmarsh as well as on inland fields, depending on cropping. High tide roosts of note can occur on the frontage at Crabley, on Alkborough Flats and on Whitton upper marsh (Cutts 1998).

East of the Humber Wildfowl Refuge, the intertidal fringe is generally more narrow, although the mid channel bank, Redcliffe Middle Sand, is unvegetated and can support 2,000 mallard, 6,000 lapwing and several thousand golden plover, whilst a localised population of turnstone utilises an area of intertidal cobble near Welton Waters (N.D. Cutts pers. obs. 1990-2001). The Read's Island and Pudding Pie complex is one of the most important areas for the pink-footed goose on the Humber with roosting flocks of over 1,000 observed, with flight lines to the south onto inland fields where the preferred crop tends to be sugar beet tops. The Pudding Pie complex also supports over 2,000 shelduck, 2,000 wigeon, 2,000 mallard and 1,000 teal. Wader flocks can also be large with over 12,000 golden plover, 10,000 lapwing and 2,000 dunlin. The interior of Read's Island has been recently flooded under managed conditions to create a new extensive wetland lagoon habitat, and has become an important

site for teal and breeding avocet. The wetland at Brough Airfield and Welton Waters is an important high water roost and feeding site for flocks of up to 150 wigeon, 250 teal, 400 pochard, 4,000 golden plover, 4,000 lapwing, 1,000 dunlin, 500 ringed plover, 100 black-tailed godwit, 200 snipe, 300 redshank and 200 curlew, and as a wetland in its own right supports a breeding waterfowl population (BAOG 2002; N.D. Cutts pers. obs. 1990-2001).

### **Middle estuary**

This section of the estuary features a complex mosaic of habitats, as it marks the transition from the outer, maritime, habitats to the inner, estuarine and riverine habitats. It has also been highly modified in morphology and features a series of man-made habitats.

The upstream part of this section of the estuary generally features more narrow intertidal areas, due both to natural and anthropogenic constraints, as well as several mid channel sandbanks uncovered at low water. The patches of hard stratum found in this region are however of interest. In natural form they are generally comprised of cobble and pebbles, with fucoid cover and interstitial mud, as well as in a more uniform unnatural state along the frontage of Hull (again colonised by fucoid algae). These areas support a distinct wader assemblage including ringed plover and turnstone, redshank and curlew, although these species are recorded elsewhere in the estuary in a different composition. In the downstream area of the section, wider mudflats and saltmarsh become more dominant, with an assemblage characteristic of extensive mudflats, including dunlin, redshank and golden plover, the latter also using the adjacent arable fields to feed and roost.

The majority of this section on the north bank is characterised by narrow intertidal mudflat and, within the Hull boundary, hard sea defences. Ornithological value is therefore limited, although the more diverse intertidal habitat towards Hessle can support regionally important numbers of turnstone. A small embayment between Hessle and Hull is also of importance as a high tide roost site, remaining uncovered by the tide on most occasions and supporting flocks of dunlin (in excess of 400 birds on occasion). However recently part of this embayment has been dredged in order to open up a drainage creek, and this may influence usage of this area in the short to medium term until it starts to accrete again (N.D. Cutts pers. obs. 1990-2001). The mudflat which has developed between the River Hull and the West Wharf/Alexandra Dock can support regionally important numbers of ringed plover and redshank, as well as turnstone and curlew. High water roosts (ringed plover, turnstone and dunlin) occur on derelict sites along the frontage, including around Albert dock, West wharf and Queen Elizabeth dock. A discrete area of more extensive mudflat at Saltend supports internationally important populations of golden plover (regularly over 5,000), and nationally important numbers of black-tailed godwit, ringed plover and redshank.

On the south bank, dunlin feed in concentrations on the middle reaches of the mudflats surrounding New Holland Pier, with other concentrations around Goxhill Haven. The channel immediately east of New Holland Pier can have extensive feeding flocks of diving duck, including pochard and goldeneye (Catley 2000). The area is also used by a flock of mute swan with over 150 observed during the autumn. Regionally important numbers of feeding curlew use Goxhill (approximately 10% of the Humber average), although these birds may move around the middle Humber, either on a daily basis in response to the availability of food and roost sites or in response to disturbance events including agricultural activity and wildfowling (Prater 1981). Roosting lapwing and golden plover utilise the marshy habitat in this area, whilst passage flocks of ringed plover and dunlin use Goxhill

Haven (Eco Surveys 1990). As with the majority of undisturbed saltmarsh along the Humber, breeding territories of both redshank and snipe have been recorded in the marshes along this stretch of foreshore (Cutts 1998).

Downstream from Hull, on the north bank the fringing saltmarsh and mudflat widens to between 1km and 2km in the vicinity of Cherry Cobb Outstay which often supports important populations of waders and wildfowl. The area can support in excess of 2,000 mallard and 5,000 golden plover, together with nationally important redshank, grey plover, dunlin and ringed plover flocks (Cutts 1998). The major concentrations of wintering wildfowl and waders on the south bank occur between North Killingholme and Immingham Docks, with other regular sites being East Halton Skitter and North Beck Drain (Eco Surveys 1990). Ringed plover concentrations off Killingholme Oil Storage Depot and either side of North Beck Drain have been found to be of regional importance, whilst dunlin appear to concentrate around the Immingham jetties. Peak curlew registrations centre around the North Killingholme to Immingham stretch of mudflat whilst small numbers of redshank are present all along the shore, with regular sites for larger flocks being around the Immingham jetties and north-west of South Killingholme Haven. Both bar-tailed godwit and black-tailed godwit feed in the Killingholme area, with the latter present in internationally important numbers, in excess of 1,000 (Catley 2000). Black-tailed godwit are primarily recorded from the south bank, between North Killingholme Haven and Pyewipe, with roosting flocks observed on the adjacent North Killingholme Haven pits and high water roosts of golden plover and lapwing in fields between Skitterness and East Halton Skitter. The saltmarsh on both banks in the middle estuary are used by several species of breeding wader, in particular redshank and snipe, whilst oystercatcher also breed on the reach, but are more restricted to the upper transitional saltmarsh grassland.

### **Outer estuary**

The 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 and marine nature of the section is reflected in the bird assemblage which includes brent geese, oystercatcher, knot, sanderling and grey plover, species associated with more coastal habitats. In addition, the shingle and dune areas support breeding little tern and ringed plover.

The north bank of this section is fronted by the massive intertidal area of Spurn Bight, with its large feeding populations of waders and wildfowl during winter and the spring and autumn passage periods, whilst Welwick Marsh and adjacent upper shore habitats are also important both for breeding and roosting species. Welwick supports breeding territories of waterfowl including shelduck, mallard, redshank and snipe as well as wintering hen harrier. Flocks of over 200 brent geese are regularly recorded on this section, along with in excess of 1,000 shelduck. Oystercatcher flocks are regularly observed in excess of 1000 during the winter, together with peaks of over 10,000 knot and dunlin (Cutts 1998). Smaller flocks of golden plover and grey plover occur with flocks in excess of 1,000, with redshank and curlew also present in high numbers. Little terns have established breeding colonies at Easington and ringed plover breed on the shingle/sand along the upper shore of Spurn Bight (Gillon 1995; Bell & Degnan 2001).

On the south bank of the estuary, the main area of ornithological interest is the intertidal mudflats of Pyewipe, supporting regionally important numbers of shelduck, dunlin, bar-tailed

godwit, curlew and redshank. High water roosts have been established on the fields east of Stallingborough power station for golden plover and lapwing (N.D. Cutts pers. obs. 1990-2001), with curlew using the flat roofs of industrial units in the area (Shepherd *et al* 1982).

The Cleethorpes shore is characterised by dry sand ridges, muddy basins and backed in part by low dunes and as such are distinct from the more muddy intertidal mudflats within the main body of the estuary. Despite the very high level of human disturbance, it can support large numbers of waterfowl, with knot in particular occurring in internationally important flocks with numbers in excess of 10,000 regularly observed in the latter part of the winter, with movement of flocks between this area and Spurn Bight. Other wader species using the area in important numbers include oystercatcher, sanderling, bar-tailed godwit and turnstone, the latter present in numbers representing up to 50% of the Humber population (Eco Surveys 1990).

The Tetney section of the coast centres around the outfall of the Louth Canal and includes soft mudflats, sand flats and sandy ridges, backed by saltmarsh and dune. The variable substratum of the area is reflected in the avifaunal community with a number of wildfowl and wader species present in regionally, and occasionally nationally, important numbers, including brent goose, shelduck, oystercatcher, knot, golden plover, redshank, sanderling and turnstone. Feeding is carried out across the majority of habitats, depending on prey preference, with high tide roosts established on the sand ridges, and saltmarsh. A breeding colony of little tern is present within the area, whilst oystercatcher, ringed plover and redshank also breed on the saltmarsh and adjacent high sand and shingle habitats (Eco Surveys 1990).

The Grainthorpe, Donna Nook and Saltfleet reach comprises an extensive intertidal area dominated by fine sand and areas of mud and shingle, backed by saltmarsh, dune and buckthorn. This section of coast supports nationally important numbers of brent geese, shelduck and redshank, together with locally important numbers of other waterfowl and roosting hen harrier in the winter. At the Saltfleetby-Theddlethorpe NNR, the shingle ridges on the seaward side of the saltmarsh are used by breeding little tern, ringed plover and oystercatcher (Eco Surveys 1990). This also holds true for the ridges at Saltfleet and Skidbrooke (G. Weaver pers. comm. 2002).

## **Seasonality**

Although the Humber bird assemblage has a distinct seasonal component to it, with movements of species and populations into and out of the estuary during the year, it is considered to be of international importance for waterfowl all year round.

At a general level, waterfowl numbers are usually at their lowest during June, when only breeding birds, as well as non or failed breeders are present. During this month the assemblage is dominated by wildfowl, with shelduck the dominant species, and a total waterfowl maxima of *c.* 5,000 birds. However the assemblage size increases rapidly during July, with the return of wader flocks, with perhaps 30,000 waders present including the return of 10,000 dunlin. By late summer, many of the dunlin have passed through the site, with golden plover becoming more abundant and over 40,000 waterfowl present, and wildfowl numbers increasing to 6,000. Numbers continue to increase into the early autumn with the arrival of over-wintering geese and ducks such as pink-footed geese and wigeon and waders such as knot, with a maxima of *c.* 70,000-100,000 waterfowl expected. Waterfowl numbers

continue to increase through the early to mid winter period as further flocks arrive, with the Humber maxima achieved during November to January, when a peak of around 150,000 birds is usually recorded, maxima figures often being affected by weather conditions both in the region and in continental Europe. Depending on the severity of the weather, numbers start declining during the late winter, with a substantial reduction occurring during February with the departure of golden plover and knot, with around 40,000 individuals present by March. The spring sees a further increase in some wader species as passage flocks move through the area, although these increases are offset by the departure of wildfowl, with between 20,000-25,000 birds present, numbers then falling back to the summer low during June (Musgrove *et al* 2001; N.D. Cutts pers. obs. 2001).

### Historical changes and trends

The Humber waterfowl population has altered noticeably over the last 20 years, both in overall numbers and in the relative composition of wildfowl and waders.

**Table 2** Humber annual waterfowl peak maxima (WeBS Selected Years 1979/80-1999/00)

Year	Wildfowl	Waders	Total Waterfowl
1979/80	18,880	54,261	73,141
1985/86	17,300	92,610	109,910
1989/90	14,724	127,274	141,998
1995/96	17,641	126,615	144,256
1999/00	c. 18,000	c. 152,000	170,927

From Table 2, it is clear that the waterfowl population of the Humber increased substantially during the 1980's and 1990's. This has been due in general to increases in the wader assemblage, and in particular the expansion of the golden plover population using the estuary, whilst wildfowl numbers have remained broadly stable over the same period. For the last decade, numbers have stabilised to some extent, with wildfowl maxima of around 14,000 to 16,000 but with further high counts in 1998/99 (192,472) and 1999/00 (170,927). Individual wildfowl and waterfowl data are not published in the 1999/00 WeBS, but have been estimated for Table 2. From the data above, it would appear that the wildfowl assemblage has continued to be stable, whilst the wader population has again increased.

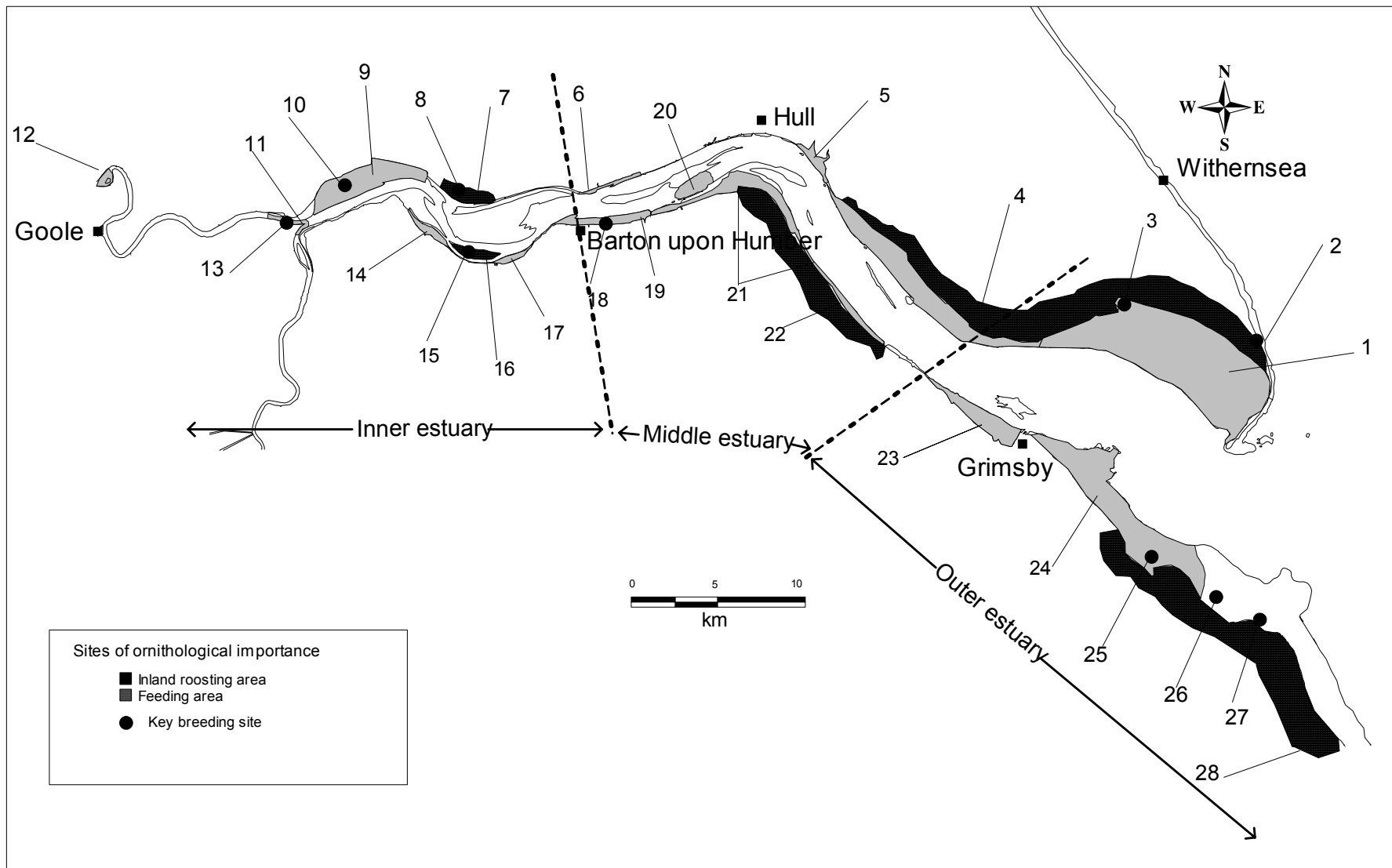
### Conservation status

The Humber Estuary supports an internationally important waterfowl population on an annual basis, with a 1996/97 – 2000/01 5 year mean annual peak maxima of 153,934 waterfowl recorded (Pollit *et al.*, 2003), and with shelduck, golden plover, lapwing, knot, dunlin, bar-tailed godwit, black-tailed godwit and redshank recorded in internationally important numbers and with other species present in international numbers during passage or on an irregular basis.

- Wetland of International Importance under the Ramsar Convention (regularly supporting over 20,000 waterbirds).
- Special Protection Area (SPA) under the Wild Birds Directive (regularly supporting over 20,000 waterfowl).
- 5 year peak mean of 153,934 waterfowl (Pollit *et al.*, 2003).

- 2000/01 maxima of 163,066 waterfowl (Pollit *et al.*, 2003).
- As of August 2000 when the last citation was drafted, the site qualified under Article 4.1 of the Wild Birds Directive (Annex 1 species) for breeding marsh harrier, avocet and little tern, and wintering bittern (now also breeding), hen harrier, golden plover and bar-tailed godwit. It also qualified under Article 4.2 of the Wild Birds Directive (species other than Annex 1) for migratory ringed plover, sanderling, redshank, shelduck, grey plover, lapwing, knot, dunlin and redshank, as well as wintering dark-bellied brent goose, wigeon, mallard, pochard, scaup, goldeneye, oystercatcher, ringed plover, sanderling, black-tailed godwit and curlew.





**Table 3** Information related to the above map of the Humber highlighting the areas of ornithological importance

Site ID	Area name	Key function			Main species	Comments
		Breeding site	Feeding site	Roosting site		
1	Spurn Bight		✓		BA, KN, OC, DN, RK, CU & GV	Major concentrations
2	Beacon Lagoons	✓			LT & RP	Major breeding tern colony
3	Welwick saltmarshes	✓		✓	RK	Breeding waders
4	Inland field	✓			GP, CU, RK & L	High tide roost in field
5	Saltend		✓		DN, RK, CU, SU, GP, RP, MA & T	Highest density of waders on the Humber
6	Humber Bridge		✓		TT	Major concentrations of waders
7	Brough airfield			✓	T, MA, WN, PO, L & GP	High tide roost
8	Welton water	✓			PO & garganey	Breeding wildfowl
9	Whitton Sands/Faxfleet		✓		WN, SU, L, CU, T, DN, MA, RP	Major concentration
10	Whitton Sands	✓			RK	Breeding waders
11	Blacktoft Sand		✓		L, GP, MA & T	Major concentrations
12	Howdendyke Lee		✓	✓	GP & L	Major concentration
13	Blacktoft Sand	✓			marsh harrier, AV & bearded tit	Major breeding site
14	Winteringham		✓		TT & DN	Minor concentrations
15	Read's Island	✓			AV	
16	Read's Island			✓	L & GP	Major concentrations
17	South Ferriby		✓			Minor concentration
19	Barton		✓		MA, RK & DN	Major concentrations
20	New Holland to Goxhill		✓		PO & GN	
21	New Holland to Goxhill and Killingholme		✓	✓	SU, MA, GV, GP & DN	Major concentrations
22	Goxhill to Killingholme			✓	GP, L & CU	
23	Pyewipe		✓	✓	KN, SS, OC & TT	Major concentrations
24	Cleethorpes		✓		KN	Breeding waders
25	Tetney marshes	✓			RK & RP	Breeding waders
26	Grainthorpe haven	✓			RK & RP	Breeding waders wintering wildfowl
27	Donna Nook	✓			LT	Breeding site for little tern
28	Inland field		✓		BG & CU	Inland roosting site

RK; Redshank, BA; Bar-tailed godwit, KN; Knot, DN; Dunlin, GP; Golden Plover, CU; Curlew, OC; Oystercatcher, GV; Grey plover, RP; Ringed plover, SS; Sanderling, L; Lapwing, AV; Avocet, SU; Shelduck, WN; Wigeon, MA; Mallard, T; Teal, BG; Brent Goose, GN; Goldeneye, PO; Pochard, LT; Little tern.

## References

- BELL, N.A. & DEGNAN, L.J., eds., 2001. *Spurn wildlife No.10*. Spurn Bird Observatory.
- BAOG, 2002. *Brough birders data-counts for breeding birds*. Brough Airfield Ornithological Group, unpublished.
- \*CATLEY, G., 2000. Humber Estuary Wetland Bird Survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.
- \*CUTTS, N.D., 1998. *Humber Estuary environmental baseline: Ornithological summary*. Hull: Institute of Estuarine & Coastal Studies, University of Hull. Report to Binnie, Black & Veatch.
- CUTTS, N.D., 2002. *Impact of the stoning strategy on the Humber SPA/SAC: Ornithological appraisal*. Hull: Institute of Estuarine & Coastal Studies, University of Hull. Report to Halcrow.
- CUTTS, N.D., personal observation, 1990-2001. *Personal observations from various years between dates*. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX.
- CUTTS, N.D., personal observation, 2002. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX.
- DAVIDSON, N.C., D' A LAFFOLEY, D., DOODY, J.P., WAY, L.S., GORDON, J., KEY, R., DRAKE, C.M., PIENKOWSKI, M.W., MITCHELL, R. & DUFF, K.L., 1991. *Nature conservation and estuaries in Great Britain*. Peterborough: Nature Conservancy Council.
- \*ECO SURVEYS LTD, 1990. *Winter wildfowl and wader feeding area study along the Lincolnshire and South Humberside coast 1989-1990*. Report to the NRA.
- GILLON, K., 1995. *Little terns at Easington Lagoons. A report on the 1995 breeding season*. Spurn Heritage Coast Project.
- HUMBER WILDFOWL REFUGE COMMITTEE (HWRC/English Nature), unpublished. *The Humber Wildfowl Refuge: A review of the ornithological data presented in the annual reports*. Report funded by English Nature.
- MUSGROVE, A.J., POLLITT, M.S., HALL, C., HEARN, R.D., HOLLOWAY, S.J., MARSHALL, P.E., ROBINSON, J.A. & CRANSWICK, P.A., 2001. *The wetland bird survey 1999-2000: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- POLLITT, M.S., HALL, C., HOLLOWAY, S.J HEARN, R.D., MARSHALL, P.E. ROBINSON, J.A., MUSGROVE, A., ROBINSON, J., & CRANSWICK, P.A., 2003. *The Wetland Bird Survey 2000-2001: Wildfowl and wader counts*. Slimbridge: BTO/ WWT/ RSPB/ JNCC.
- PRATER, A.J., 1981. *Estuary Birds of Britain and Ireland*. Calton: T. & A.D. Poyser.
- RSPB, 2001. *RSPB Blacktoft Sands Nature Reserve*. Ornithological Report for 2000.

SHEPHERD, I.G., HAYHOW, S.J. & RODEN, A., 1982. *Birds of Pyewipe mudflats*. Hull: Department of Zoology, University of Hull.

WEAVER, G., personal communication, 2002. English Nature, The Maltings, Wharf Road, Grantham, Lincolnshire, NG31 6BH.

## Bittern *Botaurus stellaris*

**Key Sites:** Barton to New Holland Clay Pits complex, Blacktoft Sands.

**EC Wild Birds Directive:** Listed in Annex I.

### Humber Population Status:

	<b>No. of individuals/booming males</b>	<b>% of National Population</b>	<b>% of Biogeographic Population</b>
<b>Breeding</b>	2 booming males	10% **	Insufficient data – biogeographic breeding population not defined
<b>Wintering</b>	4 individuals	4%**	0.1%
<b>Passage</b>	Insufficient data	Insufficient data	Insufficient data

Based on 3 year mean

\*\*National population thresholds taken from Stone *et al* 1997

### Breeding Status:

<b>Years</b>	1998	1999	2000	2001	2002	3 year mean
<b>Number of booming males</b>	0	0	2	2	3	2.3

(Numbers from L.Grooby, pers comm. 2002)

### Wintering Status:

<b>Years</b>	1998/99	1999/00	2000/01	2001/02	2002/03	5 year mean
<b>Number of pairs</b>	2	5	4	3	5	4

(Numbers are for Blacktoft Sands RSPB reserve, Ian Higginson 2003, pers comm., and the Barton to Barrow Haven clay pits, Graham Catley 2003, pers comm. only).

### Description

In the UK the Bittern is a declining, localised and rare species, being restricted to reedbed/marshland. During the breeding season, the species is confined almost entirely to lowland marshes in Norfolk, Suffolk and Lancashire, dominated by the common reed *Phragmites australis* (Gibbons *et al* 1993). British birds stay for the winter and are joined by wintering birds from mainland Europe (Lack 1986). Although bittern are fairly catholic and flexible in their choice of food (predominantly fish, amphibians and insects), their diet may also include small birds and mammals (Cramp & Simmons 1977).

## **Distribution within the Humber**

### **Breeding birds**

In the Humber Estuary, breeding bitterns are generally confined to the chain of flooded clay pits and extensive reedbeds along the Humber south bank from west of Barton-upon-Humber to New Holland.

The year 2000 saw the return of the bittern to the Barton to New Holland Clay Pits complex after 21 years of absence. In 2001, two bitterns nested in the estuary, one fledged two chicks but the outcome of the other was unknown (L. Grooby pers. com. 2002).

Previously, breeding bittern have been recorded at Dawson City Clay Pits. The reserve, situated north east of Goxhill, adjacent the River Humber is managed by the Lincolnshire Wildlife Trust, and given the successful initiative by the LWT to encourage the return of breeding bittern to the area, future breeding success at the site may occur.

Outside the key area for the species on the south bank between Barton and New Holland, the Blacktoft Sands site has also supported the species, with the last booming male heard in 1950's (Mather 1986). In 1998, an intermittent booming male was heard in May/June for the first time (RSPB unpubl.), suggesting a possible return. However, it is unknown whether these birds bred successfully in the area.

There has also been a possibly successful breeding pair elsewhere in the inner estuary in recent years (N.D. Cutts pers. obs. 2002), although current status cannot be provided in this text.

### **Non-breeding birds**

Again in winter, bittern favour flooded clay pits and extensive reedbeds along the Humber Bank. Bittern regularly winter at Blacktoft Sands (RSPB unpubl.) and occasionally in the clay pits and reed bed complex either side of Barton on the south bank. The numbers of bittern wintering in Britain is closely linked with the severity of the weather (Bibby 1981) but a regular wintering population in the Humber is estimated to be in the region of two individuals (Stroud *et al* 2001). This represents less than 0.1% of the biogeographical population and 2% of the national population (Stroud *et al* 2001).

### **Seasonality**

In the Humber Estuary, the bittern is recorded throughout the year and the British populations are thought to be fairly sedentary. The breeding season commences in early spring and males advertise their territories by booming in March. Usually four to five eggs are laid in April/May and fledging takes place between June and early August in northern Europe (Cramp & Simmons 1977). Influx from north and east European populations into Britain occurs in autumn or winter.

## Historical changes and trends

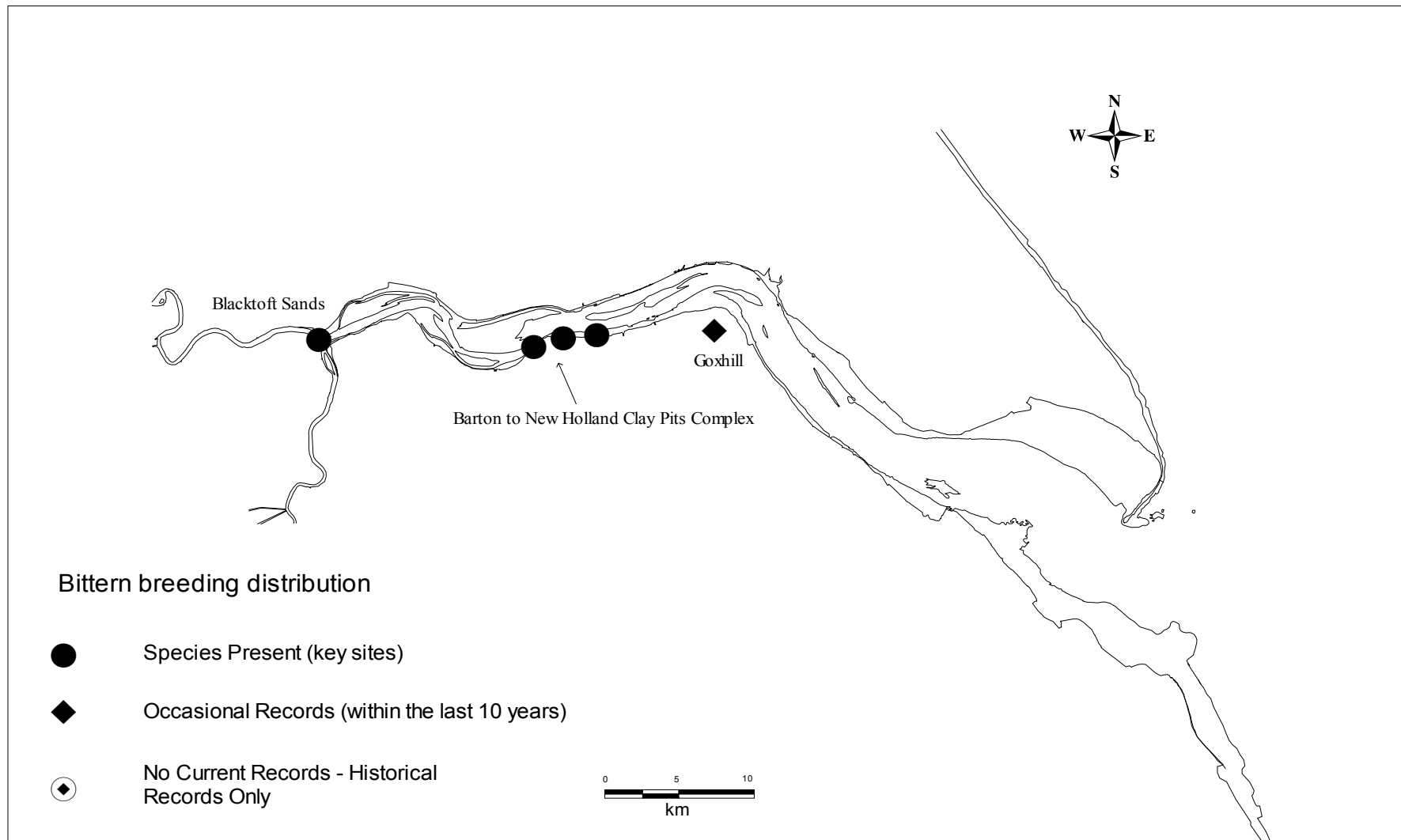
Bittern have been found preserved in peat in many areas of England and Wales, with records dating to the Neolithic period indicating a wide historical distribution for the species. In the early 19<sup>th</sup> Century they were still common in the fens and broads of eastern England. The bittern became extinct in the UK around 1885, due in part to sport and trophy hunting, but returned to breed in eastern England in 1911. Their population and range subsequently increased so that by 1954 there were an estimated 78-83 booming males within seven counties. However, numbers began to fall again and by 1976 there were an estimated 45-47 booming males, falling to 26-29 by 1986. The population continued to fluctuate in the 1990's, reaching its lowest level in 1997 with only 12 males recorded (this low level following the severe winter in 1996-97). In recent years, the UK's bittern population is making a slow recovery with 22 booming males recorded in 2000 (Gregory *et al* 2001), and 30 booming males at 18 sites in 2001 (RSPB 2002).

Historically, the bittern was well distributed as a breeding species across Yorkshire and during medieval times it featured on banqueting menus. The species started to decline in the 19<sup>th</sup> Century, mirroring the national decline, and in 1907 Nelson wrote that it was no longer a resident in the Yorkshire county. Mather (1986) reported only one possible breeding bird for the majority of the 20<sup>th</sup> Century, with a bird calling near Goole in 1954. The majority of records in the 20<sup>th</sup> Century were during the winter months, but the Barton to New Holland Clay Pits complex was a breeding stronghold for this species from the 1940's to 1979, with perhaps as many as 10 booming males in the best years (Lincolnshire Wildlife Trust 2002). The return of bittern to the Barton to New Holland Clay Pits complex is probably linked to the improvement in the reedbed habitat after more than a decade of targeted management work.

## Conservation status

Protected under Schedule 1 Part 1 of the WCA 1981; listed in Annex I of the EC Wild Birds Directive; Appendix II of the Berne Convention; Species of European Conservation Concern (SPEC 3); UK Species of High Conservation Concern (Red List). It is also listed as one of the waterfowl species used to identify wetlands of international importance under the Ramsar Convention.

- 3 year mean of 2 booming males (summer 2000-02).
- 2002 maxima of 3 booming males.
- 10% of GB breeding population.
- 4% of GB wintering population.





## References

- BIBBY, C.J., 1981. Wintering bitterns in Britain. *British birds*, **74**, pp.1-10.
- CATLEY, G., Personal communication, 2002.
- CRAMP, S. & SIMMONS, K.E.L., 1979. *Handbook of the birds of Europe, the Middle East and North Africa. The birds of Western Palearctic*. Oxford: Oxford University Press.
- CUTTS, N.D., personal observation, 2002. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.
- GIBBONS, D.W., REID, J.B. & CHAPMAN, R.A. 1993. *The new atlas of breeding birds in Britain and Ireland: 1998-1991*. London: T. & A.D. Poyser.
- GREGORY, R.D., WILKINSON, N.I., NOBLE, D.G., ROBINSON, J.A., BROWN, A.F., HUGHES, J., PROCTOR, D.A., GIBBONS, D.W. & GALBRAITH, C.A., 2001. The population status of birds in the United Kingdom, Channel Islands and Isle of Man: an analysis of conservation concern 2002-2007. *British Birds*, **95**, pp.410-450.
- GROOBY, L., personal communication, 2002. Lincolnshire Wildlife Trust, Banovallum House, Manor House Street, Horncastle, Lincolnshire, LN9 5HF.
- HIGGINSON, I., Personal communication, 2003
- LACK, P., 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.
- LINCOLNSHIRE WILDLIFE TRUST, 2002. *Nature reserves in Lincolnshire*. [Online]. <http://www.lincstrust.co.uk/reserves/nr/fi/reserve.html> [Accessed 28 August 2002].
- MATHER, J.R., 1986. *The birds of Yorkshire: An account of their historical and present status and distribution*. London: Croom Helm Ltd.
- RSPB, 2002. *The bittern*. [Online]. <http://www.rspb.org.uk/features/default.asp> [Accessed 28 August 2002].
- RSPB, unpublished report. *Blacktoft Sands RSPB Nature Reserve. Review of management achievements*. Royal Society for the Protection of Birds.
- STONE, B.H., SEARS, J., CRANSWICK, P.A., GREGORY, R.D., GIBBONS, D.W., REHFISCH, M.H., AEBISCHER, N.J. & REID, J.B., 1997. *Population Estimates of Birds in Britain and in the United Kingdom*. *British Birds* **90** pp 1 – 22.
- STROUD, D.A., CHAMBERS, D., COOK, S., BUXTON, N., FRASER, B., CLEMENT, P., LEWIS, P., MCLEAN, I., BAKER, H. & WHITHEHEAD, S., eds., 2001. *The UK SPA network: its scope and contents. Volume 2 Species Accounts*. Peterborough: JNCC.

## Pink-footed goose *Anser brachyrhynchus*

**Key Sites:** Whitton Ness to Read's Island.

**EC Wild Birds Directive:** Listed in Annex II/2.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	N/A	N/A	N/A
<b>Wintering</b>	1,083	0.45%	0.45%
<b>Passage</b>	N/A	N/A	N/A

### Description

The pink-footed goose *Anser brachyrhynchus* is closely related to the bean goose but is slightly smaller in size. Internationally important numbers winter in the UK and there are three predominant breeding areas for this species: Greenland, Iceland and Svalbard to the north of Norway. During winter, the populations of Greenland and Iceland migrate to Scotland and northern England, whilst the population of Svalbard migrate to the Netherlands, Germany and Denmark.

The majority of the pink-footed geese populations wintering in the UK are located in estuaries from eastern Scotland to north Norfolk and the Wash (Lack 1986) where they feed on agricultural fields close to their roosting sites. These fields provide a winter food supply which includes barley stubble, potato crops, winter sown cereals and pasture (Lack 1986). Historically, flocks have generally roosted on estuaries, but larger lakes and reservoirs are now being used.

### Distribution within the Humber

#### Non-breeding

During daylight hours, pink-footed geese tend to reside in the upper estuary on the Humber Wildfowl Refuge and subsequently fly out at dusk to feed on adjacent farmland in Lincolnshire and/or Yorkshire. The flocks are relatively faithful to a number of fields, particularly on the south bank (Catley 2000).

**Roosting sites:** Read's Island now provides an important roosting site on the Humber Estuary. Catley (2000) noted that during the winter of 1998/99, the favoured roost for this species was the mudflats and sand bars to the north of Read's Island, however, more recent observations have shown the usage of the new saline lagoons on the remnants of the island itself. Historically, Whitton Sand was additionally used as a key roosting site; however, the increase in vegetative cover at the site now means that it is not used by the species on a regular basis.

**Feeding sites:** From their roosting site on Read's Island, the geese travel to favoured feeding sites in adjacent areas of north Lincolnshire (Catley 2000), together with adjacent farmland habitat along the upper estuary, with flocks being noted feeding on the Yorkshire Wolds over

10km from the estuary on occasions (N.D. Cutts pers. obs. 2002). Historically, the feeding pattern of pink-foot in winter was to forage on the stubbles of the Yorkshire and Lincolnshire Wolds (Mather 1986; Pashby 1992). However, with changes in farming practice (see below), the majority of movements are now onto favoured feeding sites located on the south bank around Winteringham, where tops have been left in fields. The potential to encourage farmers, through financial support, to provide this preferred food source for flocks has been investigated by the Upper Humber Wildfowl Refuge Committee. However, although the idea was met with general approval, no active scheme has since been put in place.

### **Seasonality**

Birds start arriving on the Humber Estuary from their breeding grounds in Iceland during September (Mather 1986) where they congregate on the Humber Wildfowl Refuge, although in recent years, concentrations have been associated with the Read's Island area, outside the Refuge boundary. The return journey to breeding grounds takes place in March.

### **Historical changes and trends**

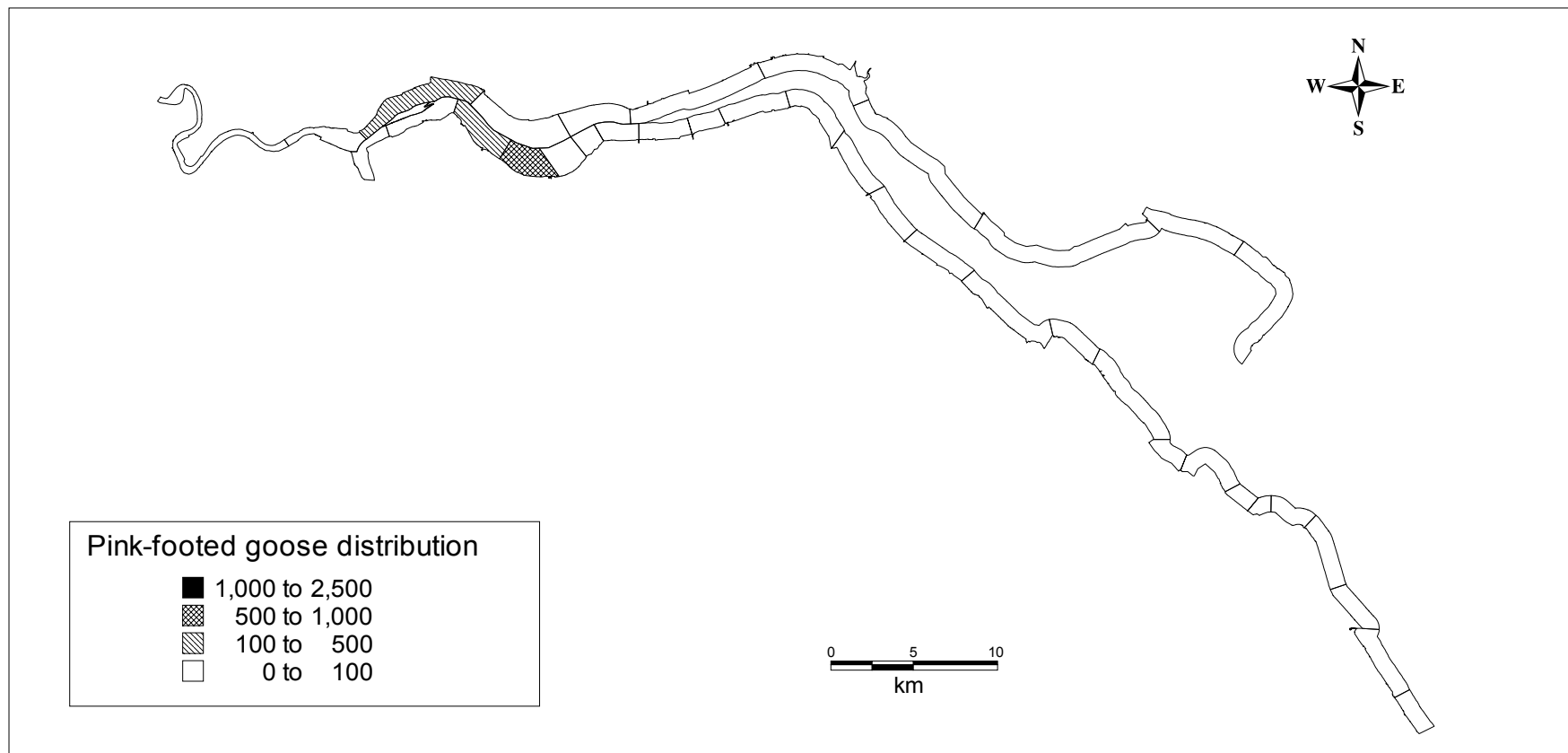
Annual indices published in WeBS show a fairly stable population in the UK through the 1960's and 1970's before a slight increase in the mid 1980's. Although there has been a small decrease in population size over the last few years in the UK, Musgrove *et al* (2001) consider that this will not affect the long-term trend of this population i.e. showing overall stability for the past 10 years.

At a local level, however, the population has been far more volatile. In 1959, around 20,000 birds were estimated to be on the Humber Estuary and it is thought that most of the British population was concentrated in the Humber that year (Mather 1986). Populations then fell dramatically until the mid 1970's. During the autumn of 1974, a number of geese were found dead around the Humber Estuary with post mortem examinations showing that they had died through eating grain dressed with Trithion. Unfortunately in that year, autumn sowing was delayed to winter and a plentiful supply of dressed wheat was available in January for the geese, resulting in a number of individuals being poisoned (Pashby 1976). It was considered likely that 500 geese may have died during the incident. However although aggravating the 'natural' decline, this incident was not largely responsible for the overall decline in the species on the estuary.

Through the 1970's and 1980's, populations remained very low, with less than 2,000 individuals present (Pashby 1992) but since the mid 1990's the population has been increasing. In 2000/01, the Humber Estuary surpassed the qualifying level for international and national importance, with 2,700 individuals present in November (Pollitt *et al* 2003). In November 2001 a count of 3,790 pink-feet was also recorded from the estuary.

### **Conservation status**

Protected under Schedule 2 Part 1 of WCA 1981; Listed in Annex II/2 of EC Birds Directive (79/409/EEC); Listed in Appendix II of the Bonn Convention; Species of European Conservation Concern (SPEC 4); UK Species of Medium Conservation Concern (Amber List).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	47.00	0.67	239.20	0.00	0.00	0.00	0.00	36.00	31.20	0.00	6.60			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.00	65.80	14.80	119.00	593.20	0.00	12.00	0.00	1.00	0.20	0.20	0.00	0.00	0.00
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.00	34.00	0.00	0.00	45.20	0.00	

**5 year mean annual peak maxima for pink-footed goose by sector, Source; Core WeBS counts 1996-2001.**

## References

- \*CATLEY, G., 2000. Humber Estuary wetland bird survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.
- CUTTS, N.D., personal observation, 2002. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.
- LACK, P., 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.
- MATHER, J.R., 1986. *The birds of Yorkshire*. London: Butler & Tanner Ltd.
- MUSGROVE, A.J., POLLITT, M.S., HALL, C., HEARN, R.D., HOLLOWAY, S.J., MARSHALL, P.E., ROBINSON, J.A. & CRANSWICK, P.A., 2001. *The wetland bird survey 1999-2000: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- PASHBY, B.S., 1976. Pink-footed Goose fatalities at the Humber Wildfowl Refuge. In: M.R.D. SEAWARD, ed. *The Naturalist: A quarterly journal of natural history for the North of England*, **101**, pp. 15-18. The Yorkshire Naturalists Union.
- PASHBY, B.S., 1992. The Humber Wildfowl Refuge: An Experiment in Wildfowl Conservation. In: M.R.D. SEAWARD, ed. *The Naturalist: A quarterly journal of natural history for the North of England*, **117**, pp. 81-100. The Yorkshire Naturalists Union.
- POLLITT, M.S., HALL, C., HOLLOWAY, S.J HEARN, R.D., MARSHALL, P.E. ROBINSON, J.A., MUSGROVE, A., ROBINSON, J., & CRANSWICK, P.A., 2003. *The wetland bird survey 2000-2001: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.

## Dark-bellied brent goose *Branta bernicla bernicla*

**Key Sites:** Spurn Bight, Grainthorpe and Saltfleetby.

**EC Wild Birds Directive:** Listed in Annex II/2.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	N/A	N/A	N/A
<b>Wintering</b>	2,098	2.14 %	0.95 %
<b>Passage</b>	N/A	N/A	N/A

### Description

The nominate dark-bellied brent goose breeds in arctic Russia and winters in western Europe, with approximately half of the population using the south east of England. It traditionally occurs on natural and semi-natural habitats (saltmarsh, mudflats, eelgrass beds), but nowadays they also make use of agricultural land. On intertidal areas, food consists mainly of eelgrass (*Zostera*) and various marine algae such as *Enteromorpha* and *Ulva* (Batten *et al* 1990). Winter cereals and grass are mainly taken on farmland habitat.

### Distribution within the Humber

#### Non-breeding

Around low water, brent geese mainly occur on the coast along the southern shore from Cleethorpes to Saltfleetby, but small numbers are also present on the north shore between Sunk Island and Spurn (Catley 2000).

**Feeding sites:** In the Humber Estuary, brent geese feed mainly on the algal beds and saltmarsh of the south shore from Cleethorpes to Saltfleetby and large concentrations occur in the Grainthorpe and Saltfleetby areas during the winter. Observations from Eco Surveys (1991) based on flock movements and colour-ringed birds suggest that there is no interchange between Grainthorpe and the Saltfleetby populations. In addition, on the south shore large numbers of birds are recorded feeding on fields of arable crops (Catley 2000). On the north shore, a similar feeding usage occurs at Kilnsea where flocks of *c.* 300 birds are often observed feeding on inland sites of autumn sown cereal crops and set-aside fields (L. Mander pers. obs. 2001; M. Coverdale pers. comm. 2002.). The extent, distribution and seasonality of farmland usage in the Humber is however currently unknown, although it is suggested that a greater usage of farmland during December through to February following depletion of the intertidal food resource may occur (M. Coverdale pers. comm. 2002) as in the Wash birds feed on the algal beds and saltmarsh on arrival but by November move inland to grass pasture and arable crops (Taylor *et al* 2000). In addition, Eco Surveys (1991) reported interchanges between intertidal and inland fields due to human disturbance in both habitats.

**Roosting sites:** On the north shore at high tide, birds appear to move to the northern end of Spurn to roost (L. Mander pers. obs. 2001) whilst along the Lincolnshire coast flocks move off the intertidal flats to roost in the havens (Eco Surveys 1991).

### **Seasonality**

The main passage arrivals of the dark-bellied race take place in October and November with peak numbers usually present in December-February. Numbers fall rapidly by March (Mather 1986).

### **Historical changes and trends**

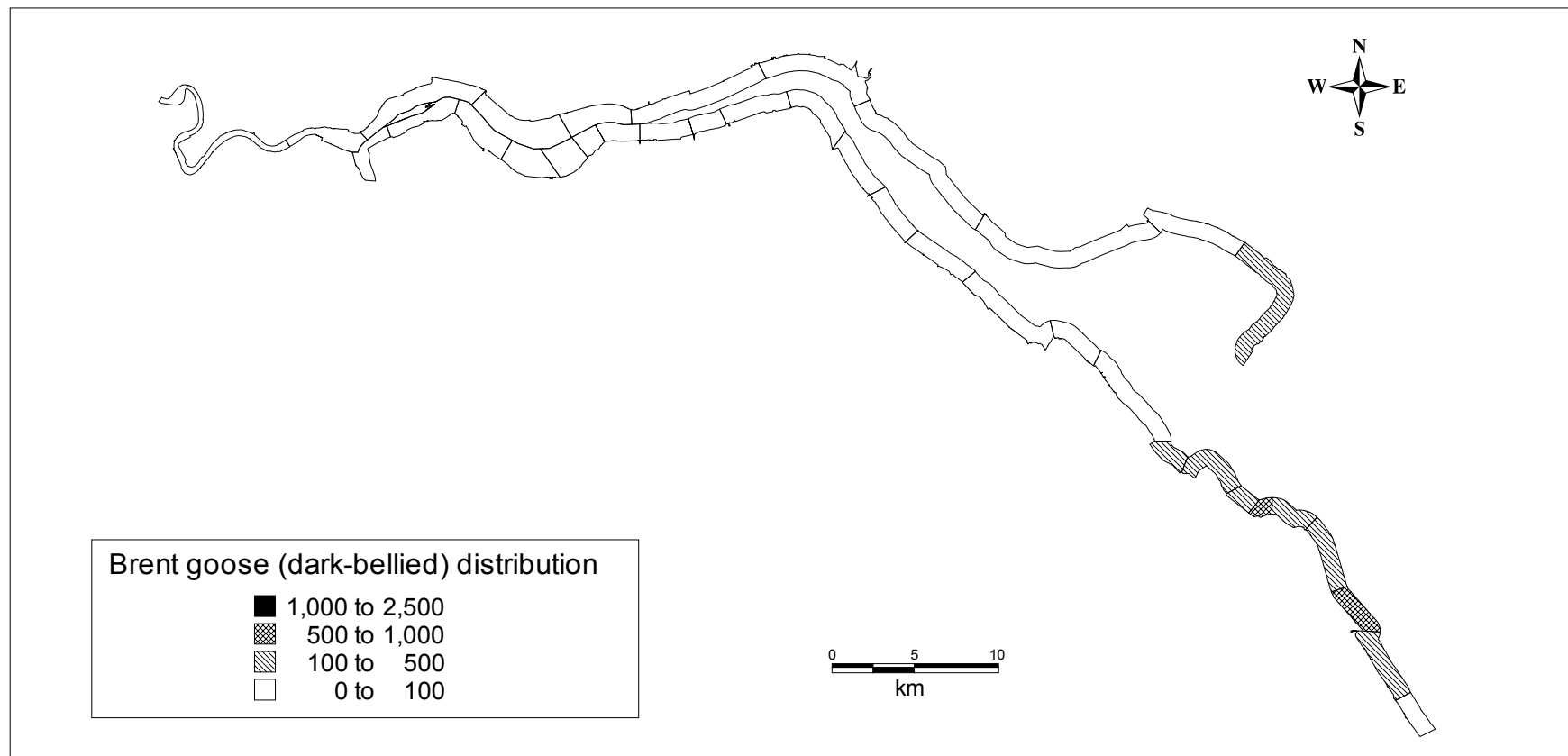
In the 1930's the worldwide population of the brent goose underwent a dramatic decline, due to a die off of *Zostera* combined with poor breeding success and hunting pressures. This decline continued until the late 1950's. However subsequent protection and good breeding seasons have resulted in a steady increase in the size of the world population of the dark-bellied race. The world population of this sub-species has increased from c.22,000 birds in winter 1960/61 to around 300,000 birds in the late 1990's (Batten *et al* 1990). Numbers wintering in England have increased in proportion to the world population. This growth has been accompanied by a marked change in feeding habits. In the Humber Estuary, Tasker & Milsom (1979) recorded a dramatic increase in numbers of the species in the late 1970's and at the end of 1970's, feeding distribution on Spurn Bight coincided with eelgrass area and saltmarsh extent, with the increase in inland feeding on the north shore being a recent occurrence. On the south shore of the Humber, during the 1970's birds began to feed on adjacent grassland and in the 1980's, cereal feeding was first recorded in north Lincolnshire (Eco Surveys 1991). This resource now plays a particularly important role in the survival of the wintering population.

### **Conservation status**

Protected under WCA 1981 (protected in close season: from 1<sup>st</sup> February to 31<sup>st</sup> August); listed in Annex II/2 of EC Birds Directive (79/409/EEC); Appendix II of the Bonn Convention; Appendix III of the Berne Convention; Species of European Conservation Concern (SPEC 3); UK Species of Medium Conservation Concern (Amber List).

In the 1990's the Humber qualified as an estuary of international importance for the species but a recent re-evaluation of the international threshold means that the Humber now only exceeds the national importance criterion.

- 5 year annual peak mean of 2,098 (96/97-00/01).
- 5 year winter peak mean of 2,098 (96/97-00/01).
- 2000/01 maxima of 1,649 (winter).
- 2.14% of GB population (winter).
- 0.95% of biogeographic population (winter)



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.00	98.00	29.40	345.20			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	1.00	0.00	89.80	404.40	168.60	226.20	596.00	204.20	288.40	690.40	307.40	0.00	

**5 year mean annual peak maxima for brent goose (dark-bellied) by sector, Source; Core WeBS counts 1996-2001.**



## References

BATTEN, L.A., BIBBY, C.J., CLEMENT, P., ELLIOT, G.D. & PORTER, R.F., 1990. *Red data birds in Britain*. London: T. & A.D. Poyser.

\*CATLEY, G., 2000. Humber Estuary wetland bird survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.

COVERDALE, M., personal communication, 2002. Spurn Bird Observatory, Kew Villa, Kilnsea, Hull, East Yorkshire, HU12 0UG.

\*ECO SURVEYS, 1991. *Winter wildfowl and wader feeding area study along the Lincolnshire and south Humberside coast*. Report to the National Rivers Authority.

MANDER, L., personal observation, 2001. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.

MATHER, J.R., 1986. *The birds of Yorkshire. An account of their historical and present status and distribution*. London: Croom Helm Ltd.

ROSE, P.M. & SCOTT, D.A., 1997. Waterfowl population estimates B Second Edition. *Wetlands International Publication 44*, Wageningen, The Netherlands: Wetlands International.

\*TASKER, M. & MILSOM, T.P., 1979. *Birds of the Humber Estuary*. Hull: Department of Zoology, University of Hull.

TAYLOR, M., ALLARD, P., SEAGO, M. & DORLING, D., 2000. *The birds of Norfolk*. Mountfield: Pica Press.

## Shelduck *Tadorna tadorna*

**Key Sites:** Whitton to Barrow Haven (including Read's Island), Brough to Faxfleet, Foulholme to Cherry Cobb, Grainthorpe Haven and Pyewipe.

**EC Wild Birds Directive:** Not listed.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	Insufficient data	Insufficient data	Insufficient data
<b>Wintering</b>	4,464	5.71% of GB population	1.49% of bio-geographic population
<b>Passage</b>	N/A	N/A	N/A

### Description

The shelduck is a maritime species largely confined to sheltered coasts and estuaries. Shelduck wintering in the UK occur on most coasts, with large concentrations on the muddier estuaries of southern and eastern England, southern Ireland, around the shores of the Irish Sea, and in the south west of Scotland (Lack 1986).

After the breeding season, almost all of the north-west European populations gather in the Wadden Sea to moult (Rose & Scott 1997). Most adult shelduck from Britain and Ireland move to the German section, but several thousand remain to moult on the east coast; this habit appearing to be relatively recent in origin (Lack 1986).

Although the laver spire shell *Hydrobia ulvae* is often reported to be a key prey item for the shelduck, on the Humber this species of gastropod, although present, is patchily recorded, and both spatially and temporally variable. It is therefore likely that although *H. ulvae* will comprise a component of the shelduck diet on the Humber, other species will also be taken, and in some cases, these will form the principle component of the diet, with prey species including small polychaetes and oligochaetes (Prater 1981).

### Distribution within the Humber

#### Breeding

Although shelduck breed along the estuary, the low tide count initiative of 1998/1999 produced the most comprehensive assessment of breeding distribution to date, and this assessment was based on a count of juvenile birds, and not breeding pairs. The results of the survey identified the estuary upstream of the Humber Bridge to be the main breeding area for the species, containing 82% of the juveniles recorded on the estuary, and a total number of 365 juveniles recorded on the Humber, or 16% of the total shelduck population present. No specific data on breeding pairs are available for the Humber, although from the number of juveniles recorded, the number of breeding pairs is expected to be somewhere around 150 pairs, assuming a survival rate to fledging of 27% and an average clutch size of nine eggs (Cramp 1998).

## **Non-breeding**

The British Isles is an important wintering area for this species with 24% (some 70,000-75,000 birds) of the biogeographic populations spending the winter months on our estuaries. The Humber Estuary, at times, holds a significant proportion of this total with a five year mean annual peak maxima of 5,400 birds (Pollitt *et al.*, 2001). The Humber Estuary is additionally developing as an important moulting site for this species (Catley 2000).

The shelduck has the most widespread distribution of any species of duck on the Humber (Catley 2000), although concentrations occur in the upper Humber (around Read's Island) in the middle estuary (Foulholme Sands and Pyewipe) and the outer estuary (Grainthorpe Basin, Skidbrooke-Saltfleet and Tetney basin) (Eco Surveys 1991; Tasker & Milsom 1979).

Analysis of the 98/99 low tide data by Catley (2000) reveals two major centres of distribution on the estuary with minimum interchange between the two populations. One population is located on the upper estuary, to the west of the Humber Bridge and the other population occurs on the outer estuary, east and south of a line drawn from Saltend to North Killingholme Haven.

## **Wintering distribution**

In 1979, Tasker & Milsom concluded that wintering shelduck occurred in relatively small numbers on the north bank of the Humber. During this period, they found that the Foulholme-Cherry Cobb reach was the preferred area, and so a key feeding area on the north bank. However, this survey concentrated on the outer estuary population.

The main concentrations of shelduck on the south bank of the Humber occur on the upper Humber from Whitton to Barrow Haven (WeBS count sectors ISC, ISD and ISE), at Grainthorpe Basin and at Skidbrooke-Saltfleet. Tetney Basin and Pyewipe flats (WeBS sector MSA) also support locally important numbers (Eco Surveys 1991). These sites are important for feeding and loafing birds.

## **Moulting & pre-migratory distribution**

Shelduck are present in large numbers on the north bank of the outer Humber during the summer and early autumn. Although the breeding populations of north-west Europe undertake a migration to moult on the German Wadden Sea in autumn, some birds now remain to moult on a number of British estuaries. Flocks of 161 moulting birds were observed off Stone Creek in the summer of 1978 (Tasker & Milsom 1979), and Pashby (1992) noted suspicions that shelduck were forming a moulting flock in the Humber Wildfowl Refuge at the end of the 1980s. This site has continued to increase in importance for moulting birds, and the upper estuary now supports a substantial moulting flock through July and August which is concentrated in the Whitton Sand to Brough and Winteringham to South Ferriby and Read's Island areas, (Catley, 2000; N.D. Cutts pers. obs. 2002).

Large numbers of shelduck have additionally been observed in the early summer on Foulholme Sands (Tasker & Milsom 1979; IECS in prep; L. Mander pers. obs. 2002), suggesting the importance of the site for pre-migratory gatherings. This area is important for birds returning from the Wadden Sea Sands (Tasker & Milsom 1979), and is probably used

as a staging post for feeding up on migration by birds moving between the west coast and the continent.

### **Seasonality**

Shelduck are present on the Humber Estuary throughout the year, peak counts often occurring during autumn passage as birds cross the North Sea from July to September. For example, during the 1998/99 low tide count survey, peak counts in both the inner and outer estuary occurred in September (Catley 2000).

### **Historical changes and trends**

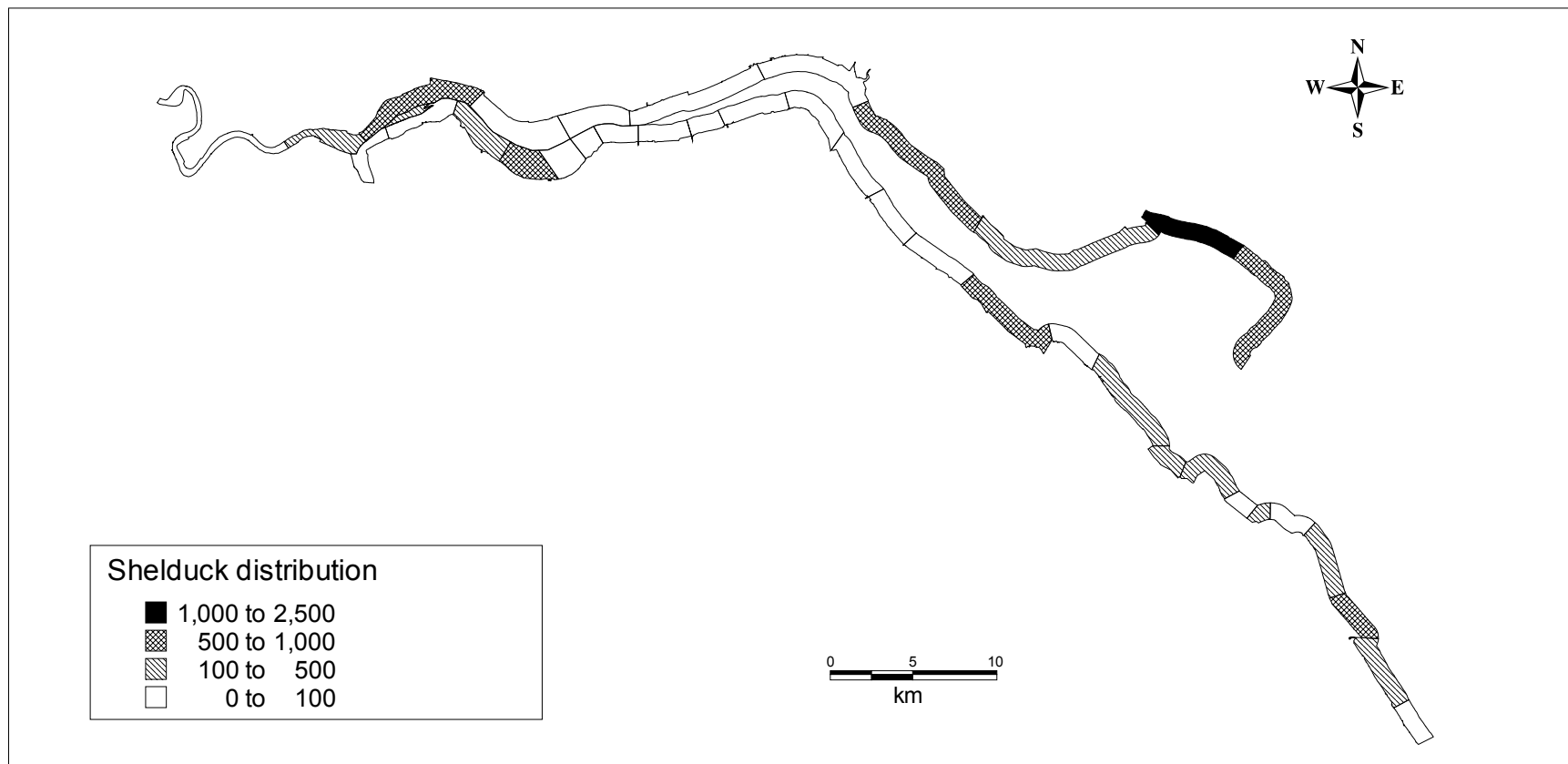
The UK winter shelduck population has shown a general increase since 1965 however, for the third consecutive winter, peak counts in Great Britain in 1999-2000 were the lowest since the 1970's (Musgrove *et al* 2001).

Analyses of WeBS peak count data for the last 15 years shows that the population is fairly stable in the Humber Estuary. However, the new trend for shelduck to undergo their moult in the British Isles could markedly alter the present status of the species in the Humber Estuary.

### **Conservation status**

Protected under WCA 1981; EC Birds Directive; Appendix II of the Berne Convention; Appendix II of the Bonn Convention; UK Species of Medium Conservation Concern (Amber List).

- 5 year annual peak mean of 5,400 (96/97-00/01).
- 5 year winter peak mean of 4,463 (96/97-00/01).
- 2000/01 maxima of 6918 (August).
  
- 5.71% of GB population (winter).
- 1.49% of biogeographic population (winter).
- Possibly *c.* 1.4% of UK breeding population (based on juvenile survival extrapolation).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	41.80	119.33	937.40	21.40	2.40	11.20	57.40	845.60	370.80	1,850.00	847.80			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	34.00	110.20	9.60	293.20	629.00	53.60	0.00	10.40	13.20	10.00	18.80	15.00	3.60	10.80
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	37.20	563.80	0.00	206.60	212.20	173.60	28.00	210.33	12.20	141.00	512.20	239.60	13.20	

**5 year mean annual peak maxima for shelduck by sector, Source; Core WeBS counts 1996-2001.**

## References

- \*CATLEY, G., 2000. Humber Estuary wetland bird survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.
- CRAMP, S., 1998. *The complete birds of the Western Palearctic*. CD-ROM. Oxford: Oxford University Press.
- CUTTS, N.D., personal observation, 2002. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.
- \*ECO SURVEYS, 1991. *Winter wildfowl and wader feeding area study along the Lincolnshire and South Humberside Coast*. Report to the National Rivers Authority.
- IECS, in prep. *Ornithological monitoring, Thorngumbald: Quarterly report #2 July 2002 to September 2002*. Hull: Institute of Estuarine and Coastal Studies, University of Hull.
- LACK, P., 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.
- MANDER, L., personal observation, 2002. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.
- PASHBY, B.S., 1992. The Humber Wildfowl Refuge: An experiment in wildfowl conservation. In: M.R.D. SEAWARD, ed. *The Naturalist: A quarterly Journal of Natural History for the North of England*. The Yorkshire Naturalists Union.
- POLLITT, M.S., HALL, C., HOLLOWAY, S.J HEARN, R.D., MARSHALL, P.E. ROBINSON, J.A., MUSGROVE, A., ROBINSON, J., & CRANSWICK, P.A., 2003. *The wetland bird survey 2000-2001: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- PRATER, A.J., 1981. *Estuary birds of Britain and Ireland*. Calton: T. & A.D. Poyser.
- ROSE, P.M. & SCOTT, D.A., 1997. Waterfowl population estimates. Second Edition. *Wetlands International Publication*, 44. Wageningen, The Netherlands: Wetlands International.
- \*TASKER, M. & MILSOM, T.P., 1979. *Birds of the Humber Estuary*. Hull: Department of Zoology, University of Hull.

## Wigeon *Anas penelope*

**Key Sites:** Saltend to Spurn, Pyewipe and Read's Island.

### Humber Population Status:

**EC Wild Birds Directive:** Listed in Annex II/1 and III/2.

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	N/A	N/A	N/A
<b>Wintering</b>	5,044	1.2%	0.3%
<b>Passage</b>	N/A	N/A	N/A

### Description

The wigeon differs somewhat from other dabbling ducks having a more diving-duck-like shape. The male has striking yellowish forehead and crown in full plumage, the female is rather drab brown grey with rusty flanks.

Unlike other ducks, the wigeon is almost entirely vegetarian, its diet and feeding behaviour resembling that of geese. On estuaries, feeding is often carried out on 'wigeon lawns' of red fescue *Festuca rubra*, great water grass *Glyceria maxima* or sea meadow-grass *Puccinellia maritima*, whilst on the mudflats food consists mainly of eelgrass *Zostera* and green algae, including *Enteromorpha* and sea lettuce *Ulva*. Feeding is also carried out on stubble and on sprouting winter wheat, and the use of inland habitats for grazing may have originated during the 1930's when *Zostera* was reduced by disease (Batten *et al* 1990).

### Winter Distribution within the Humber

Although the species is occasionally recorded in small numbers on most count sectors along the estuary, it is generally concentrated on a small number of sites. The main concentration of wigeon occurs within the Humber Wildfowl Refuge, with annual maxima of over 4,000 individuals recorded. Key sites for the species within the Refuge are the Faxfleet to Brough reach, Whitton Sands and Alkborough Flats, whilst in addition, Read's Island in the inner estuary supports a further flock with over 500 wigeon present (Catley 2000; N.D. Cutts pers. obs. 2002).

Around low water, when not feeding, large flocks of loafing birds congregate on the banks of Whitton Sand, as well as the mudflats fronting Broomfleet Island, with these flocks forming large rafts which move upstream as far as Faxfleet and downstream as far as Brough during periods of tidal inundation (N.D. Cutts pers. obs. 2002).

Although feeding is carried out on the intertidal mudflats within the Humber Wildfowl Refuge, these areas are often also used as loafing sites. A key feeding site is the Broomfleet Island frontage which can feature grazing flocks of over 6,000 birds during the November to January period. The movement of flocks onto autumn wheat and oilseed rape fields has also been noted in recent years, although the extent of this feeding activity is unknown (N.D. Cutts pers. obs. 2002; HWRC unpubl.).

A further concentration of around 500 wigeon occurs in the middle/outer estuary on the Cherry Cobb and Welwick reaches, where there are areas of saltmarsh as well as extensive mudflats (Catley 2000).

### **Seasonality**

Migrants from the north begin to appear in Britain from early September onwards, with a return passage from March to May (Jonsson 1992).

The movements of wigeon are complex and not well understood. Birds wintering in Britain and Ireland come from Scandinavia and Siberia, and some from Iceland. There is some southward and westward movement within Britain and Ireland as the winter progresses and probably a movement into Ireland and Scotland (Lack 1986). Further movements may occur during hard weather.

On the Humber, peak maxima are usually encountered during the November to January period, although the timing of the peak period can depend on external factors such as weather conditions in the region, with prolonged freezing periods forcing birds out of inland wintering sites onto the estuary, and as a result October and February can also support high numbers.

### **Historical changes and trends**

At a national level, the wintering wigeon population has been held at a relatively high level for the last decade, and although the 1999/2000 maxima was the lowest for 6 years (Musgrove *et al* 2001), the numbers in Great Britain in 2000-2001 were the second highest recorded by WeBS, surpassed only by a count of 400,000 in 1996-97 (Pollitt *et al.*, 2003).

The most extensive records for the species come from records for the Humber Wildfowl Refuge, the most important site for the species on the Humber, and cover the last 30 years. These data show a steady increase in peak maxima from less than 1,000 birds in the early 1970's to a peak in 1979/80 with 9,600 birds recorded. Thereafter there was a decline in numbers to less than 2,000 in 1987/88, followed by a further increase and stabilisation to around 5,000 birds by the late 1990's. It is interesting however that the high peak maxima during the late 1970's and early 1980's were not sustained throughout the winter period, with a winter mean of *c.* 4,000 birds, whilst the mid to late 1990's have seen a more stable population with a peak maxima of *c.* 5000, but a winter mean in excess of 4,000. However, a further fall to below 4,000 appears to have occurred in the last couple of years. The reasons for this are not clear, but may reflect the recent trend of less severe winters, or an alteration in food availability or preference (N.D. Cutts pers. obs. 2002; HWRC unpubl.).

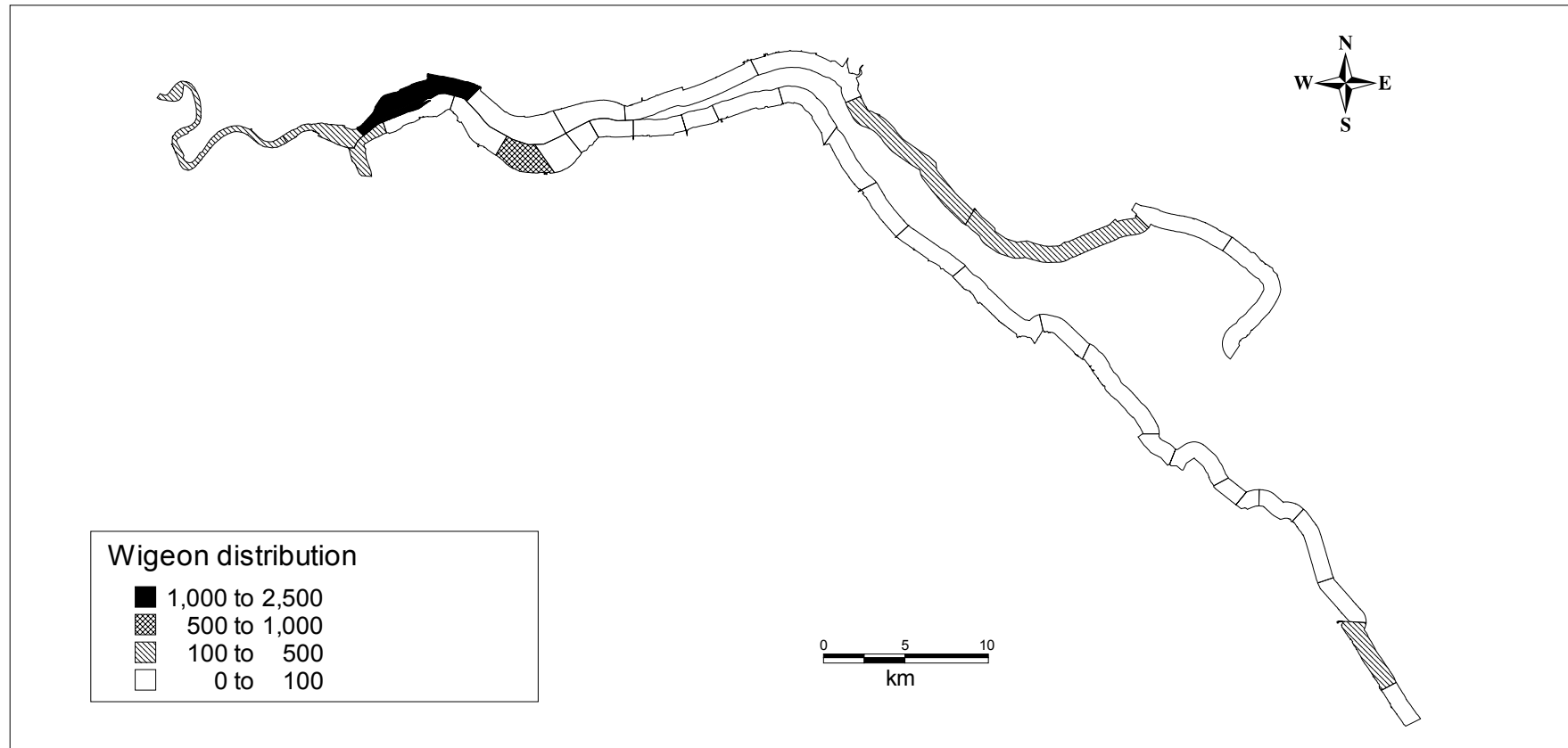
### **Conservation status**

Protected under Schedule 2 Part 1 Schedule 3 Part 3 of WCA 1981; Listed in Annex II/1 & III/2 of EC Wild Bird Directive; Appendix II of the Bonn Convention; Appendix III of the Berne Convention; UK Species of Medium Conservation Concern (Amber List).

- 5 year annual peak mean of 5,039 (96/97-00/01).
- 5 year winter peak mean of 5,039 (96/97 – 00/01).



- 1.2% of GB population (winter).
- 0.3% of biogeographic population (winter).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	347.00	477.00	2,065.80	20.60	0.00	0.40	0.20	325.00	237.20	3.80	41.00			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	217.20	1,745.80	25.40	60.60	615.80	29.00	0.20	14.60	44.00	1.40	4.00	1.60	0.20	0.00
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	1.60	0.40	2.00	43.20	20.80	7.20	33.67	6.00	9.60	44.00	285.00	0.00	

**5 year mean annual peak maxima for wigeon by sector, Source; Core WeBS counts 1996-2001.**

## References

- BATTEN, L.A., BIBBY, C.J., CLEMENT, P., ELLIOTT, G.D. & PORTER, R.F., 1990. *Red data birds in Britain*. Calton: T. & A.D. Poyser.
- CATLEY, G., 2000. Humber Estuary Wetland Bird Survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.
- \*HWRC, unpublished. *The Humber Wildfowl Refuge A review of the ornithological data presented in the annual reports*. HWRC.
- JONSSON, L., 1992. *Birds of Europe*. London: A. & C. Black.
- LACK, P. 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.
- MUSGROVE, A.J., POLLITT, M.S., HALL C., HEARN, R.D., HOLLOWAY, S.J. MARSHALL, P.E. ROBINSON, J.A. & CRANSWICK, P.A., 2001. *The wetland bird survey 1999-2000: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- POLLITT, M.S., HALL, C., HOLLOWAY, S.J HEARN, R.D., MARSHALL, P.E. ROBINSON, J.A., MUSGROVE, A., ROBINSON, J., & CRANSWICK, P.A., 2003. *The wetland bird survey 2000-2001: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- PRATER, A.J., 1981. *Estuary birds of Britain and Ireland*. Calton: T. & A.D. Poyser.

## **Mallard *Anas platyrhynchos***

**Key Sites:** Saltend to Spurn, New Holland to Pyewipe, Upper Humber Wildfowl Refuge.

**EC Wild Birds Directive:** Listed in Annex II/1 and III/1.

### **Humber Population Status:**

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	Insufficient data	Insufficient data	Insufficient data
<b>Wintering</b>	2,456	0.7%	0.1%
<b>Passage</b>	N/A	N/A	N/A

### **Description**

The mallard is a large dabbling duck, commonly seen on inland ponds as well as in estuaries. The species breeds on sites on or adjacent to lakes, pools and ditches, usually on the ground, but occasionally in tree holes. On completion of breeding the males will go into eclipse, often forming groups on estuaries during the summer. During the autumn many birds move onto estuaries and feed both on the intertidal zone (various marine organisms and vegetation) and on stubbles (seeds), although others will remain on inland waters if kept clear of ice, over the winter.

### **Distribution within the Humber**

#### **Breeding**

The species breeds on or adjacent to wetland areas, including lakes, pools and drainage dykes along the estuary, as well as from similar habitat further inland. No quantitative assessment of the breeding status of mallard on the wetlands fringing the estuary has been carried out, although it has to be assumed that the larger pond and lake areas will support breeding populations. For instance Faxfleet Ponds and Welton Waters have several breeding pairs (N.D. Cutts pers. obs. 2002), the Water's Edge site at Barton supports between 10 and 20 pairs (Catley 2001) and the borrow pits around Thorngumbald have supported several broods (IECS 2002).

#### **Non-breeding**

Historically, the key area for mallard on the Humber was the Humber Wildfowl Refuge, which supported a nationally important population. However a substantial decline in the status of the species on the Refuge means that the upper Humber, although still supporting flocks of the species, is not the key site that it once was. WeBS data for the estuary show that the species is present along most reaches, but is most commonly recorded in the mid to outer estuary, particularly on the north bank, although there are suggestions that this population is artificially high, with numbers being boosted by the release of captive bred birds for wildfowling (A. Grieve pers. comm. 2000).

The reach from Saltend to Spurn supports an average of around 1600 birds, with concentrations occurring from around Paull to Welwick. On the south bank the New Holland

to Pyewipe reach supports around 450 birds. The outer estuary and coastal margin, as expected, is not particularly important for the species, supporting around 200 birds along the coast as far south as Saltfleetby. Interestingly Read's Island supports an average of around 140 birds, with a similar number recorded along the River Ouse as far as Goole, whilst a flock of 165 mallard were recorded at the confluence of the River Aire and River Ouse (WeBS unpubl.; Cutts 2002).

As already noted, the current distribution of mallard may be influenced by captive bred release programmes on the north bank of the middle to outer estuary. In addition, the mallard flock in the vicinity of New Holland, like other wildfowl in this area, will be feeding on an artificially productive area (spills of grain and animal foodstuffs from dock handling etc) (Catley 2000). The distribution of mallard is therefore to some extent artificially skewed towards the middle to outer estuary, and without such anthropogenic modification, would be likely to be more evenly distributed, but with a reduced population.

### **Seasonality**

The species is present on the Humber all year round, but with peak maxima achieved during the mid winter period. In general, birds depart during the late winter and early spring onto inland breeding sites. This departure has become earlier over the last few years with the series of mild winters, resulting in a significant decline in the estuary population between January and February (Catley 2000). A return of non-breeders and some eclipse males usually occurs during the summer, with the main influx occurring during August and into September. Thereafter numbers decline and stabilise over the early to mid winter period. In the past, the Humber has been subject to a large influx of continental mallard during the winter. However it does not appear that this has been the case in recent years, with no large peaks occurring during the winter period (WeBS unpubl.). This is probably due to the run of mild winters experienced on the continent in recent years (Cutts unpubl.). This pattern is well illustrated from the Humber Wildfowl Refuge data (HWRC unpubl.), which, using 10 year monthly means, shows a steady increase in mallard numbers of around 75% from September to January for the period 1977/78 to 1986/87, whilst the population on the refuge shows a relatively stable population from September to January from the period 1987/88 to 1996/97.

### **Historical changes and trends**

Historically, the Humber was the most important site for mallard in Britain, and the only nationally important site for the species with a 5 year mean annual peak maxima (1976/77 to 1980/81) of 6,364 birds and a peak maxima of 8,420 in 1979/80. The Humber is now ranked eighth in Britain, and is below the current national importance level of 3,520 (Kershaw and Cranswick, 2003) with a 5 year mean annual peak maxima (1996/97 to 2000/01) of 2,456 individuals and a peak maxima for 2000/01 of 3,460 birds (Pollitt *et al* 2003).

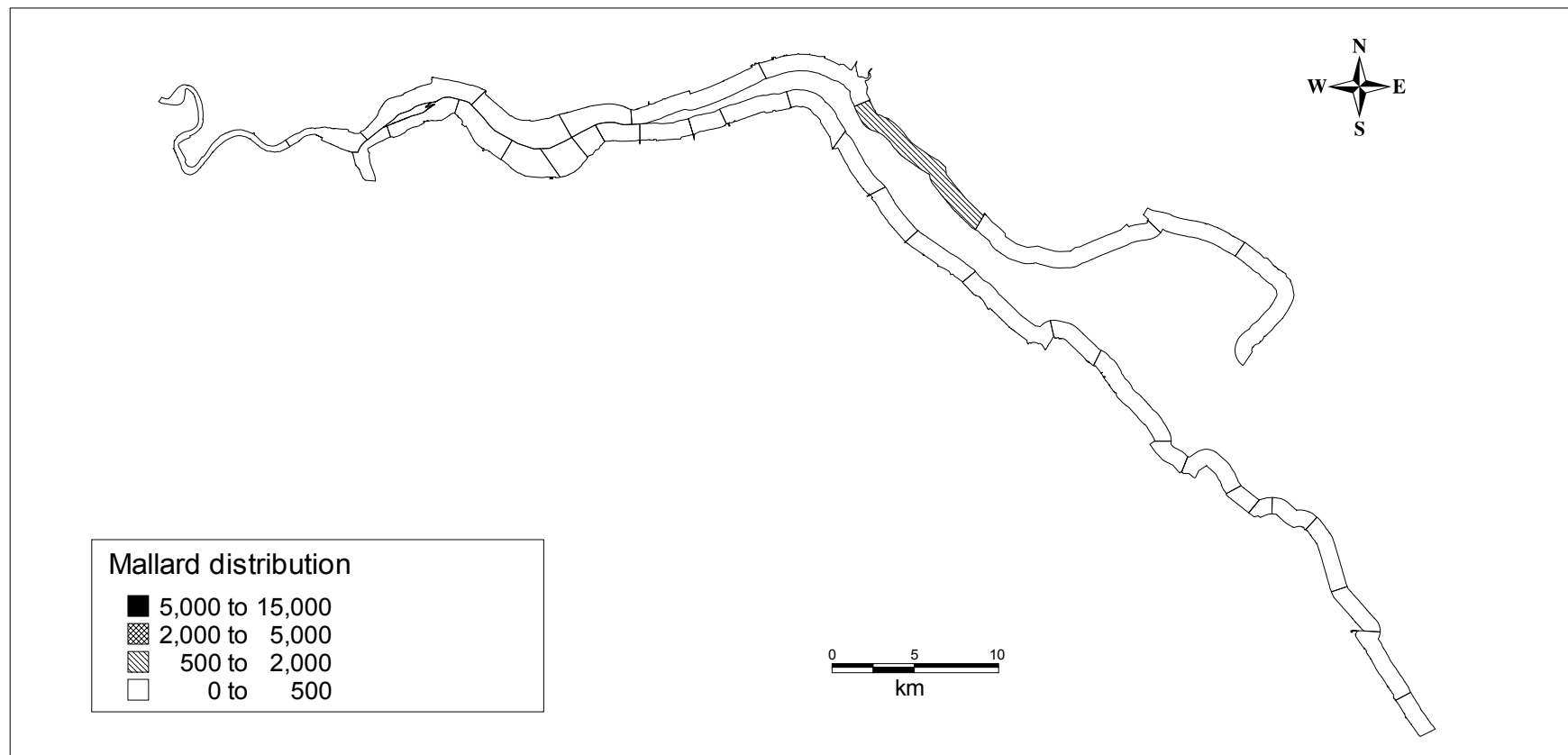
It is interesting however that whilst the mallard population on the Humber has undergone a significant decline in numbers over the last 20 years, with the importance of the Humber for the species also having declined, there have been some alterations to the importance of sites within the estuary itself. As discussed above, the north bank between Paull and Welwick has become the most important section for the species, although flocks may be supplemented by captive bred birds, released for wildfowling purposes, and monitoring of the population at Saltend over the last 10 years has produced some interesting patterns. The mallard 5 year

mean annual peak maxima from the site for the period 1992/93-1996/97 was 61 individuals, whilst for the period 1997/8-2001/02 it had increased to 238 individuals, with peak maxima in the autumn of almost 400 birds, around 20% of the Humber population (Cutts unpubl.).

### **Conservation status**

Protected under Schedule 2 Part 1 and Schedule 3 Part 3 of WCA 1981; Listed in Annex II/1 & III/1 of EC Wild Bird Directive (79/409/EEC); Appendix II of the Bonn Convention; Appendix III of the Berne Convention.

- 5 year annual peak mean of 2,456 (96/97-00/01).
- 5 year winter peak mean of 2,456 (96/97-00/01)
- 2000/01 maxima of 3,460 (winter).
  
- 0.7% of GB population (winter).
- 0.1% of biogeographic population (winter).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	202.00	205.33	239.20	75.60	39.40	30.40	189.80	672.40	374.60	325.20	91.80			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	50.20	65.80	14.80	104.60	163.00	17.40	11.20	38.60	140.60	130.80	270.80	46.20	7.00	15.40
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	27.80	107.20	5.40	64.80	12.20	8.00	20.60	46.33	61.60	6.40	18.20	67.60	3.20	

**5 year mean annual peak maxima for mallard by sector, Source; Core WeBS counts 1996-2001.**

## References

\*CATLEY, G., 2000. Humber Estuary Wetland Bird Survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.

CATLEY, G., 2001. *Waters Edge ornithological report 2001 [online]*. North Lincolnshire Council. Available: <http://www.northlincs.gov.uk/watersedge/birds/report2001.htm> [Accessed 23 October 2002].

CUTTS, N.D., 2002. *Impact of the Stoning Strategy on the Humber SPA/SAC: Ornithological Appraisal*. Report to Halcrow Ltd.

CUTTS, N.D., unpublished. *Correspondence to YWSL, Autumn 2002*. Hull: Institute of Estuarine & Coastal Studies, University of Hull.

GRIEVE, A., personal communication, 2000.

\*HWRC, unpublished. *The Humber Wildfowl Refuge. A review of the ornithological data presented in the annual reports*. Humber Wildfowl Refuge Committee (HWRC).

IECS, 2002. *Thorngumbald Avifaunal Usage Assessment*. Hull : Institute of Estuarine and Coastal Studies (IECS), University of Hull. Report to the Environment Agency.

KERSHAW, M & CRANSWICK, P.A. 2003. *Numbers of wintering waterbirds in Great Britain, 1994/1995 – 1998/1999: I. Wildfowl and selected waterbirds*. Biological Conservation 111 pp91-104.

POLLITT, M.S., HALL, C., HOLLOWAY, S.J HEARN, R.D., MARSHALL, P.E. ROBINSON, J.A., MUSGROVE, A., ROBINSON, J., & CRANSWICK, P.A., 2003. *The wetland bird survey 2000-2001: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.

\*WeBS, unpublished. Five year summary data for the Humber Estuary. *The wetland bird survey 1999-2000 wildfowl and wader counts*. BTO/WWT/RSPB/JNCC.



## Gadwall *Anas strepera*

**Key Sites:** Goole to Faxfleet Ponds, Blacktoft, Barton Clay Pits complex, Read's Island, Broomfleet Brick Pits and Welton Waters.

**EC Wild Birds Directive:** Listed in Annex II/1 and III/2.

### Humber Population Status:

There are difficulties in providing an accurate assessment of Humber usage in the context of the national population, due in part to the rapid expansion in the population, and the dispersed nature of occurrence, which includes a number of sites which are not surveyed in the WeBS programme. No accurate census of breeding usage has been conducted, and the breeding figures given below are based on recent survey accounts of key sites around the estuary.

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	Insufficient data (perhaps 10-15 pairs-year 2002)	N/A	N/A
<b>Wintering</b>	46 individuals	0.27%	0.08%
<b>Passage</b>	N/A	N/A	N/A

### Description

The gadwall is a medium sized dabbling duck, commonly seen on inland reservoirs and gravel pits. It is however rarely recorded in large numbers on estuaries. The male is a greyish colour with black rear and white speculum, the female being speckled, but generally greyer than other *Anas* females, again with a notable white speculum. The species breeds on or by lakes and pools with reedbeds, and winters on more open waters including reservoirs.

### Distribution within the Humber

#### Breeding

During the summer, small numbers of gadwall are generally present on the pits and lakes around the upper Humber, with occasional breeding. Blacktoft, Faxfleet Ponds, Broomfleet Brick Ponds, Brough Airfield/Welton Waters, Read's Island and the Barton Clay Pits complex all have small summer populations, (N.D. Cutts pers. obs. 2002; Catley 2001; RSPB 2002) with potential breeding pairs present, a small number of which are usually successful breeders.

#### Non-breeding

The Humber Estuary itself is not generally an important wintering site for the species, with the majority of concentrations having been recorded on areas of adjacent open water. The key sites for the species are generally the reed-fringed lakes and pits located in the upper to middle estuary, with concentrations of birds recorded at Blacktoft, Faxfleet Ponds, Broomfleet Brick Ponds (*c.* 2km from the estuary), Brough airfield/Welton Waters, Read's

Island and the Barton Clay Pits complex (N.D. Cutts pers. obs. 2002; BAOG 2002; Catley 2000 & 2001; RSPB 2002).

### **Seasonality**

The species is present on the Humber all year round, but with peak maxima achieved during the early autumn and the early to mid winter period. In general, birds disperse during the late winter and early spring onto inland breeding sites although some remain on key sites immediately adjacent to the estuary (see above). An autumn movement through the site is sometimes apparent in August and September, with numbers also high during the early to mid winter period (RSPB 2001). However, the concentration of flocks on sites adjacent to the estuary means that many are missed during the WeBS core counts, and as such, there are no co-ordinated count data for the species.

### **Historical changes and trends**

At a national level the species has doubled its population in the last decade, with a similar rapid increase in numbers seen in the region (Musgrove *et al* 2001). However the relative absence of the species from the estuary itself, means that comprehensive co-ordinated WeBS count data are unavailable. Certainly there has been a substantial and rapid increase in the wintering population on the key sites immediately adjacent to the estuary in the last few years, with Broomfleet Brick Ponds becoming nationally important for the species in 1999/00 (Musgrove *et al* 2001).

### **Conservation status**

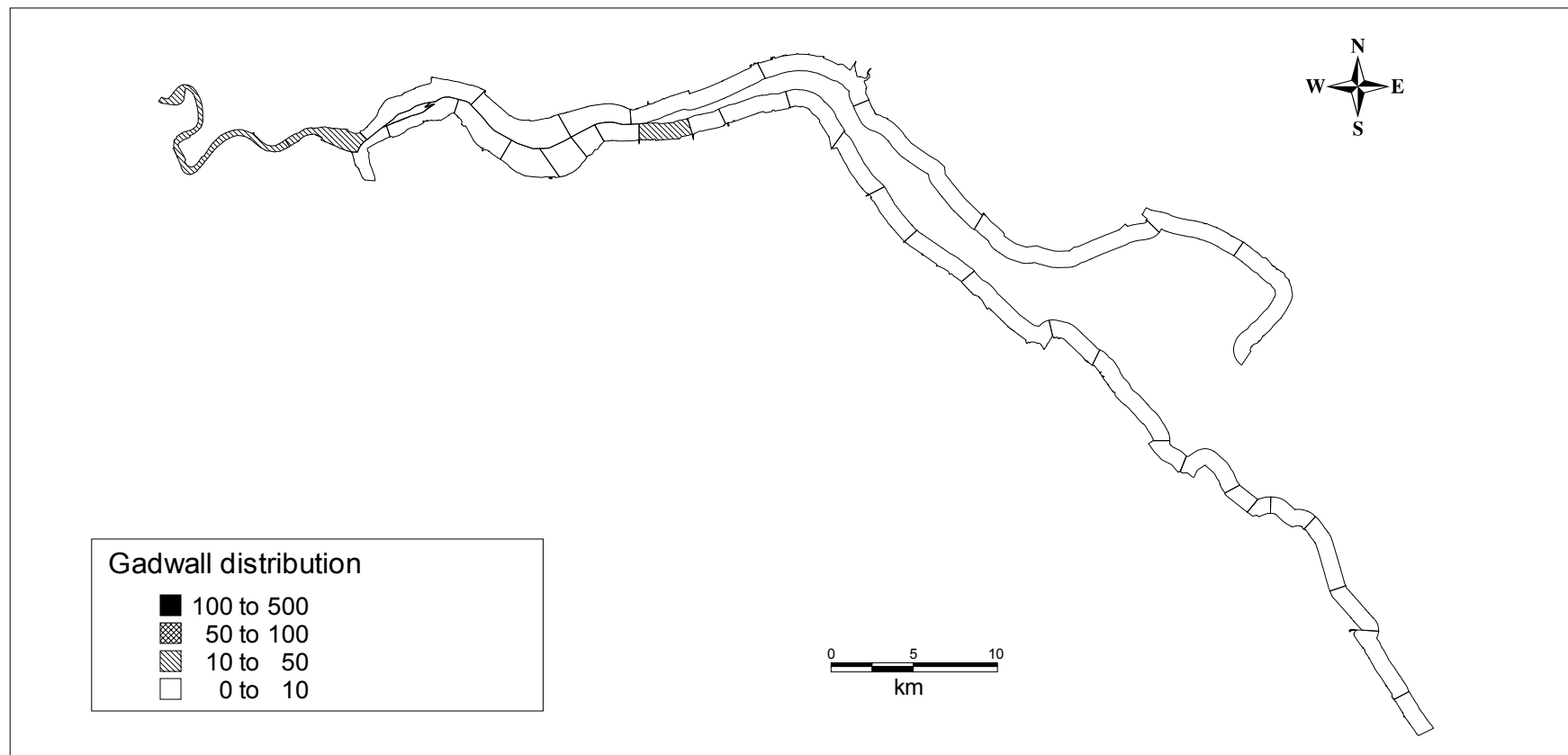
Protected under Schedule 2 and Schedule 3 of the WCA; listed in Annex II/1 & III/2 (migratory) of the EC Birds Directive (79/409/EEC); Appendix III of Berne Convention; Species of European Conservation Concern (SPEC 3); UK Species of Medium Conservation Concern (Amber List).

### **Wintering:**

- 5 year winter peak mean of 46 (96/97-00/01).
- .027% of GB population (winter).
- 0.08% of biogeographic population (winter).

### **Breeding:**

- 2002 maxima of 10-15 pairs (N.D. Cutts pers. obs. 2002).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	16.20	11.66	3.60	0.40	0.00	0.00	0.00	0.00	0.20	0.00	0.40			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.00	0.00	0.00	0.00	1.00	0.00	0.00	3.60	27.20	0.00	0.40	6.60	0.00	
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	

**5 year mean annual peak maxima for gadwall by sector, Source; Core WeBS counts 1996-2001.**

## References

- BAOG, 2002. *Brough birders data-counts for breeding birds*. Brough Airfield Ornithological Group, unpublished.
- CATLEY, G., 2000. Humber Estuary wetland bird survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.
- CATLEY, G., 2001. *Waters Edge ornithological report 2001 [online]*. North Lincolnshire Council. Available: <http://www.northlincs.gov.uk/watersedge/birds/report2001.htm> [Accessed 23 October 2002].
- CUTTS, N.D., personal observation, 2002. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.
- MUSGROVE, A.J., POLLITT, M.S., HALL, C., HEARN, R.D., HOLLOWAY, S.J., MARSHALL, P.E., ROBINSON, J.A. & CRANSWICK, P.A., 2001. *The wetland bird survey 1999-2000: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- RSPB, 2001. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report 2000*. Royal Society for the Protection of Birds, UK.
- RSPB, 2002. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report 2001*. Royal Society for the Protection of Birds, UK.

## Pintail *Anas acuta*

**Key Sites:** Humber Wildfowl Refuge and Read's Island.

**EC Wild Birds Directive:** Listed in Annex II/1.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	N/A	N/A	N/A
<b>Wintering</b>	38	0.14%	0.06 %
<b>Passage</b>	N/A	N/A	N/A

### Description

The pintail is a highly migratory species breeding throughout northern parts of Eurasia and North America. The species is a rare but annual breeder in Britain and a fairly common winter visitor. In winter, pintail occur mainly on estuaries (Lack 1986) where they feed extensively on the mollusc *Hydrobia ulvae* and occasionally on *Macoma balthica*. Some also feed on flooded grazing land adjacent to the estuary. Breeding territories are generally close to the water such as damp marshes and rough pastures.

### Distribution within the Humber

#### Non-breeding

According to Catley (2000) "large numbers of birds move along the estuary but their appearance on WeBS counts is in general a reflection of fortuitous timing". However a number do remain for a longer period during autumn within the Humber Wildfowl Refuge and around Read's Island, although numbers have declined since the 1990's. Elsewhere on the Humber Estuary the species occurs in similar numbers between Paull and Spurn point (Tasker & Milsom 1979; WeBS unpubl.). The primary site for feeding and roosting on the north bank is Welwick Saltmarshes and associated areas of Spurn Bight (L. Mander pers. obs. 2002).

#### Seasonality

Peak numbers of pintail are generally recorded on the Humber during the autumn migration period from September to November, although small numbers of over-wintering birds remain into February (Catley 2000).

#### Historical changes and trends

Tasker and Milsom (1979) found that Cherry Cobb Sands Outstray and nearby Foulholme Sands provided the most important site on the north shore of the outer estuary with flocks of national importance recorded during the winter and autumn of 1978/1979. Since then populations have declined dramatically on the outer north shore. The upper estuary has traditionally been the favoured site for pintail, but numbers seem to have declined in recent years after increases in the late 1980's and early 1990's (HWRC unpubl.). In the early 1990's the estuary was briefly able to achieve the status of national importance for the

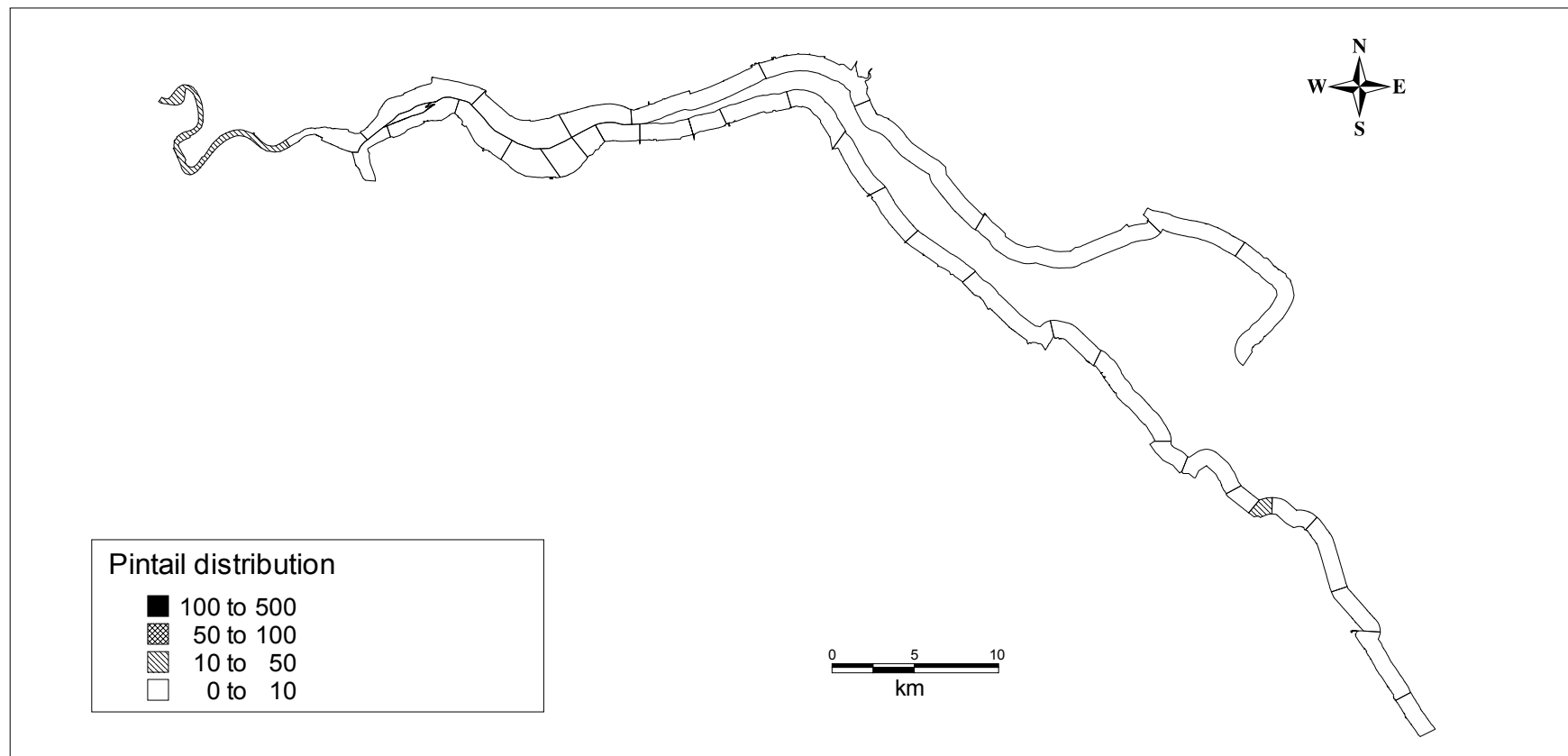
species based on high WeBS counts from three consecutive seasons (1990-1993), with some of the larger flocks at this time concentrated in the Humber Wildfowl Refuge. However, since that time numbers have declined to the early 1980's levels on both the Refuge and the estuary as a whole.

At a national level, the population has been highly variable over the last 20 years, but has been comparatively low during the 1990's. In 1999/2000 the Great Britain maximum was recorded as the lowest since the late 1970's (Musgrove *et al* 2001).

### **Conservation status**

Protected under Schedule 1 Part II of WCA 1981 (specially protected in the close season); Annex II/1 of EC Birds Directive (79/409/EEC); Appendix III of the Berne Convention; Species of European Conservation Concern (SPEC 3); UK Species of Medium Conservation Concern (Amber List).

- 5 year winter peak mean of 38 (96/97-00/01).
- 0.14% of GB population (winter).
- 0.06% of biogeographic population (winter).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	15.40	0.00	0.00	4.00	0.00	0.00	0.00	6.60	6.20	6.80	2.80			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.00	0.00	0.00	1.20	9.00	0.00	0.00	0.40	0.20	0.20	0.60	0.00	0.00	0.00
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	0.00	0.00	1.60	0.00	0.00	0.00	40.33	0.40	0.20	0.60	6.00	0.00	

**5 year mean annual peak maxima for pintail by sector, Source; Core WeBS counts 1996-2001.**

## References

- \*CATLEY, 2000. Humber Estuary Wetland Bird Survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.
- \*HWRC, unpublished. *The Humber wildfowl Refuge. A review of the ornithological data presented in the annual reports.* Humber Wildfowl Refuge Committee (HWRC).
- LACK, P., 1986. *The atlas of wintering birds in Britain and Ireland.* Calton: T. & A.D. Poyser.
- MUSGROVE, A., POLLIT, M., HALL, C., HEARN, R., HOLLOWAY, S., MARSHALL, P., ROBINSON, J. & CRANSWICK, P., 2001. *The wetland bird survey 1999-2000 wildfowl and wader counts.* Slimbridge: BTO/WWT/RSPB/JNCC.
- \*TASKER, M. & MILSOM, T.P., 1979. *Birds of the Humber Estuary.* Hull: Department of Zoology, University of Hull.
- WeBS, unpublished. Five year summary data for the Humber Estuary. *The wetland bird survey 1999-2000 wildfowl and wader counts.* BTO/WWT/RSPB/JNCC.



## Teal *Anas crecca*

**Key Sites:** Blacktoft Sands Nature Reserve, Crabley to Brough, Saltend, Winteringham Haven and Read's Island.

EC Wild Birds Directive: Listed in Annex II/1 and III/2.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	Status unknown	Status unknown	Status unknown
<b>Wintering</b>	2,322	1.2%	0.6%
<b>Passage</b>	N/A	N/A	N/A

### Description

Teal is a small duck found on estuaries and inland waters. The female is a drab brown colour with the male characterised by a chestnut and green head. In Europe, teal breed discontinuously from Iceland, Britain, Ireland, and France eastwards to Russia. In winter, the species occurs across much of Europe, wherever there are suitable wetland habitats, including inland and coastal wetlands. Most non-breeding teal in the UK, as elsewhere in Europe, originate from the east and north, including Iceland, Fennoscandia and Russia (Batten *et al* 1990). Winter flocks also contain locally breeding birds that, within Europe, are of a more sedentary or dispersive nature. The Humber wintering population is therefore likely to be made up of both locally breeding birds and those which migrate significantly greater distances northwards to breed.

Their food consists mainly of seeds of aquatic plants, chiefly knotgrass (*Polygonum* spp.), spike-rush (*Eleocharis*) and spearwort (*Ranunculus*) in freshwater, glasswort (*Salicornia*) and orache (*Atriplex*) in seawater and various small invertebrates, principally *Chironomid* larvae and snails (Batten *et al* 1990). Some teal also feed on winter stubble (Batten *et al* 1990) and this behaviour is often associated with mallard movements onto the areas.

### Distribution

#### Breeding

Unfortunately no data are available on the Humber breeding population, however, small numbers have been recorded as possibly breeding on suitable sites around the estuary, such as Blacktoft Sands Nature Reserve, Brough Airfield and Far Ings (RSPB 2001 & 2002; N.D. Cutts pers. obs. 2002). It is likely that the Humber breeding population is a very small component of the regional and national population, with regional concentrations along river valleys (e.g. Derwent valley) and at a national level with the species favouring upland oligotrophic wetlands.

#### Non-breeding

The species displays a clustered distribution within the Humber, although small flocks are present along the majority of the WeBS sections. Key sites are often associated with creeks

and may reflect the availability of food, possibly a combination of vegetative material such as seeds carried down the system, an increase in small invertebrates including freshwater species, and the presence of saltmarsh vegetation.

The main flocks on the Humber occur at Winteringham Haven (*c.* 160), Saltend (Hedon Haven and Lords Clough) (*c.* 300), Crabley Creek and Brough Haven (*c.* 250), Blacktoft (*c.* 350) Theddlethorpe-Saltfleetby (*c.* 400) and Read's Island (*c.* 750).

The numbers given above are averages for the sites, with peak annual maxima often substantially greater, for instance over 800 teal have been recently recorded at Saltend and over 500 on the Brough to Crabley reach. These peak maxima often reflect flock movements within the estuary and periods of peak usage are often different between key sites, possibly reflecting the productivity of preferred feeding areas or disturbance pressures (N.D. Cutts pers. obs. 2002).

### **Seasonality**

As with other dabbling ducks, the males desert the females soon after their clutch is complete and undergo a moult migration. This begins in June and males moult in areas some way south of the breeding grounds, usually on larger lakes with abundant emergent vegetation such as *Phragmites* reedbeds. Birds appear in north-western Europe from late June onwards and on moulting grounds in Denmark a peak of flightless birds occurs towards the end of July (Prater 1981). A few birds move into Britain during August after moult and numbers then build up on estuaries. The main period of movement south and south-westwards across Europe occurs in October and November (Prater 1981) and numbers rise to their maximum in December on British and Irish estuaries. Numbers fall off somewhat in January, although the reason for this is not entirely clear and by the end of February some teal begin the return migration northwards. The majority however depart during March and April with numbers dropping further in May and June (Prater 1981). In the Humber the timescales given above are broadly accurate, although there are some intra-site movements as well and usage can be affected by periods of hard weather (Owen *et al* 1986).

### **Historical changes and trends**

There are five biogeographic populations of teal recognised, two of which occur in Europe (Wetlands International, 2002). Birds wintering in the UK belong to the north-west European population, the size of which is currently estimated at 400,000 (Wetlands International, 2002). The general trend in the north-west European population over the last 23 years has been one of increase, with annual growth of 2.5% over the period 1967 to 1993 (Rose 1995). Recent international monitoring shows that the population increase has levelled off and numbers were generally stable between the years 1987 and 1996 (Delany *et al* 1999). Population changes in the UK have been largely similar to those noted elsewhere in north-west Europe. There has been an increase in British and Irish non-breeding numbers over the last three decades (Gilburn & Kirby 1992 in Stroud *et al* 2001) but in recent years the increase has slowed, with peak counts fluctuating around 130,000 (Cranswick *et al* 1999 in Stroud *et al* 2001). The long-term increase in numbers of teal in Britain has been attributed to an increase in the number of birds occurring on migration, as well as an increase in habitat availability, particularly through the creation of new inland wetlands as a consequence of mineral extraction (Gilburn & Kirby 1992 in Stroud *et al* 2001). On the Humber, the creation of the Read's Island wetland has apparently led to a substantial increase in the

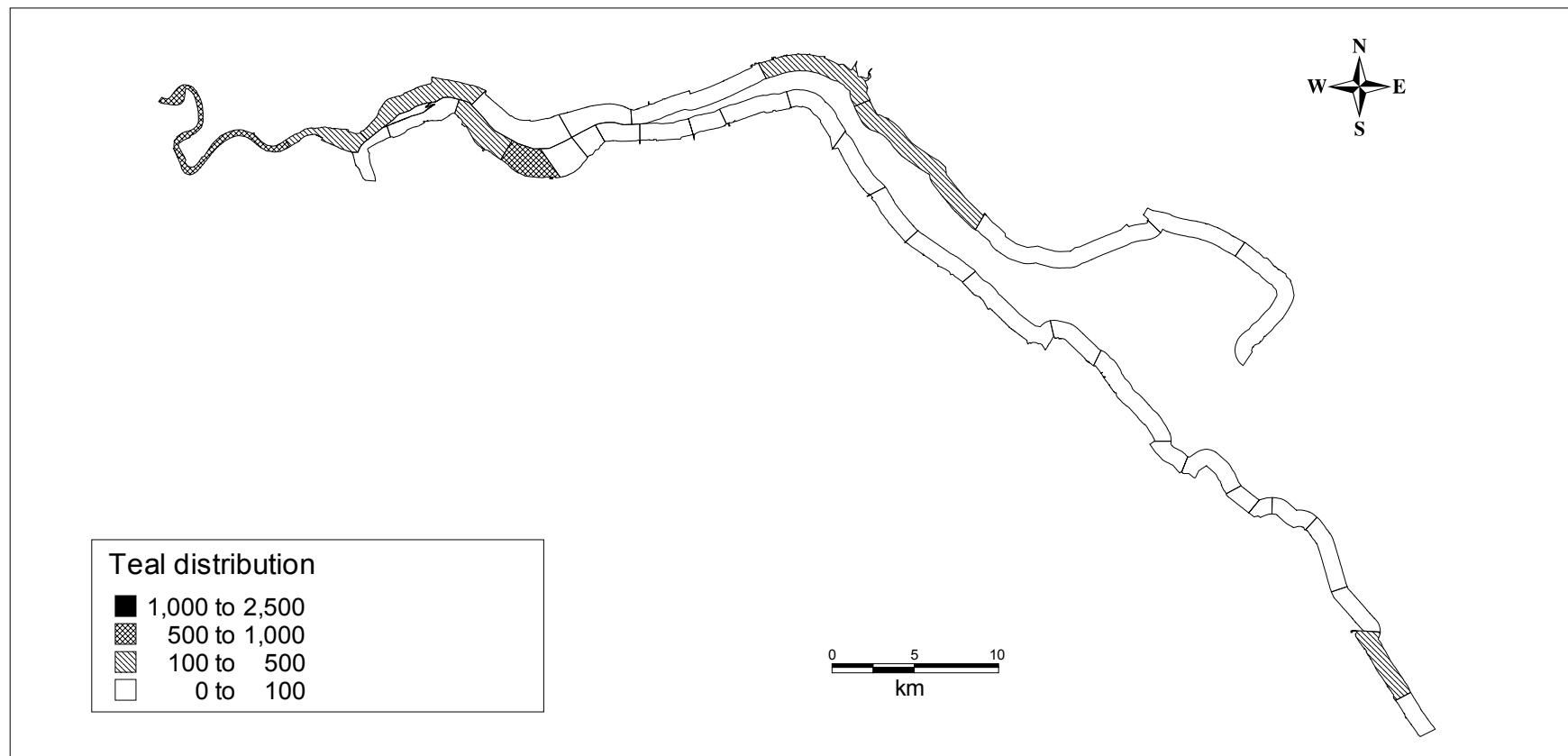
Humber population, with over 2,500 birds recorded in 1999/00 compared to *c.* 1,400 in previous years (Musgrove *et al* 2001).

Locally, large fluctuations in numbers occur in response to changes in environmental conditions, such as the freezing of shallow waters. Indeed, teal are highly susceptible to the consequences of severe periods of winter weather and often show significant dispersal to warmer areas (Ridgill & Fox 1990).

### **Conservation status**

Protected under Schedule 2 Part 1 and Schedule 3 Part 3 of WCA 1981; Listed in Annex II/1 & III/2 of EC Birds Directive (79/409/EEC); Appendix II of the Bonn Convention; Appendix III of the Berne Convention; UK Species of Medium Conservation Concern (Amber List).

- 5 year annual peak mean of 2,275 (96/97-00/01).
- 5 year winter peak mean of 2,322 (96/97-00/01).
- 2000/01 maxima of 3,370 (winter).
  
- 1.2% of GB population (winter).
- 0.6% of biogeographic population (winter).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	790.00	238.00	263.00	96.60	0.00	0.00	364.80	160.80	31.60	8.20	14.20			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	62.00	62.80	2.40	250.80	944.80	11.40	1.00	3.40	20.40	12.20	8.20	4.80	3.40	15.00
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	3.80	0.00	9.80	20.80	9.80	9.00	55.00	10.20	3.20	12.80	279.80	1.20	

**5 year mean annual peak maxima for teal by sector, Source; Core WeBS counts 1996-2001.**

## References

- BATTEN, L.A., BIBBY, C.J., CLEMENT, P., ELLIOT, G.D. & PORTER, R.F., 1990. *Red data birds in Britain*. London: T. & A.D. Poyser.
- DELANY, S., REYES, C., HUBERT, E., PIHL, S., REES, E., HAANSTRA, L. & VAN STRIEN, A., 1999. Results from the international waterbird census in the western Palearctic and southwest Asia 1995 and 1996. *Wetlands International Publication* 54. Wageningen, Netherlands: Wetlands International.
- MUSGROVE, A.J., POLLITT, M.S., HALL, C., HEARN, R.D., HOLLOWAY, S.J. MARSHALL, P.E., ROBINSON, J.A. & CRANSWICK, P.A., 2001. *The wetland bird survey 1999-2000: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- OWEN, M., ATKINSON-WILLES, G.L. & SALMON, D.G. *Wildfowl in Great Britain; second edition*. Cambridge: Cambridge University Press.
- PRATER, A.J., 1981. *Estuary birds of Britain and Ireland*. Calton: T. & A.D. Poyser.
- RIDGILL, S.C. & FOX, A.D., 1990. Cold weather movements of waterfowl in Western Europe. *IWRB Special Publication* 14. Slimbridge: International Waterfowl and Wetlands Research Bureau.
- ROSE, P.M., 1995. Western Palearctic and south west Asia waterfowl census 1994. *IWRB Publication* 35. Slimbridge: International Waterfowl and Wetlands Research Bureau.
- RSPB, 2001. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report 2000*. Royal Society for the Protection of Birds, UK.
- RSPB, 2002. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report 2001*. Royal Society for the Protection of Birds, UK.
- SCOTT, D.A. & ROSE, P.M. 1996. Atlas of Anatidae populations in Africa and western Eurasia. *Wetlands International Publication* 41. Wageningen, Netherlands: Wetlands International.
- STROUD, D.A., CHAMBERS, D., COOK, S., BUXTON, N., FRASER, B., CLEMENT, P., MCLEAN, I., BAKER, H. & WHITEHEAD, S., eds., 2001. UK SPA network: *Its scope and content, volume 2. Species accounts*. JNCC.
- WETLANDS INTERNATIONAL., 2002. Waterbird Population Estimates-Third Edition. *Wetlands International Global Series* No.12. Wageningen, Netherlands: Wetlands International.

## **Garganey *Anas querquedula***

**Key Sites:** Blacktoft Sands Nature Reserve, Brough Airfield and Goxhill area.

### **Humber Population Status:**

EC Wild Birds Directive: Listed in Annex II/2.

### **Humber Population Status:**

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	Insufficient data	Insufficient data	Insufficient data
<b>Wintering</b>	N/A	N/A	N/A
<b>Passage</b>	N/A	N/A	N/A

### **Description**

This small, slightly built, and slender-necked dabbling duck has the distinction of being the only wildfowl species which is a summer visitor to Britain and Ireland, with most European birds wintering in sub-Saharan Africa. It breeds in water meadows, grasslands with intersecting ditches, and rushy marshes, or in other shallow freshwaters often edged with reeds. The species is highly secretive and breeding pairs usually remain concealed amidst vegetation. Food consists mainly of insects and larvae, small molluscs, crustaceans, leeches, worms, frog spawn, tadpoles, leaves and the seeds of many water plants (Batten *et al* 1990).

### **Distribution within the Humber**

#### **Breeding**

Away from Fairburn Ings and the valleys of the Don and the Dearne, breeding has been infrequent in Yorkshire (Mather 1986). Proof of breeding is rare in the Humber Estuary, Mather (1986) reported the presence of breeding birds at Easington where a nest containing nine eggs was found in 1952. In the past, breeding has occurred occasionally in Dawson City Clay Pits reserve, the reserve which is situated north-east of Goxhill adjoining the Humber, and garganey bred at Rosper Road Pool, south of Immingham in 1987 (G. Catley pers. comm. 2002). There have also been records of breeding at Brough Airfield, which has developed as a wetland in recent years (BAOG 2002). At Blacktoft Sands Nature Reserve, at least one pair is present each year and it is likely that this results in successful breeding (RSPB 2002).

#### **Non-breeding**

The garganey also occurs in small numbers during passage on the Humber Estuary, with regular sightings in spring and autumn at Blacktoft Sands Nature Reserve, several of the clay pits around the Humber, and on the lagoons at Easington (RSPB 2001 & 2002; Catley 2001; Bell & Degnan 2001).

## **Seasonality**

Birds arrive from mid March to late May and most garganey have left Yorkshire and Lincolnshire by September. Eggs are laid from the end of April to late June and the young fledge by mid August.

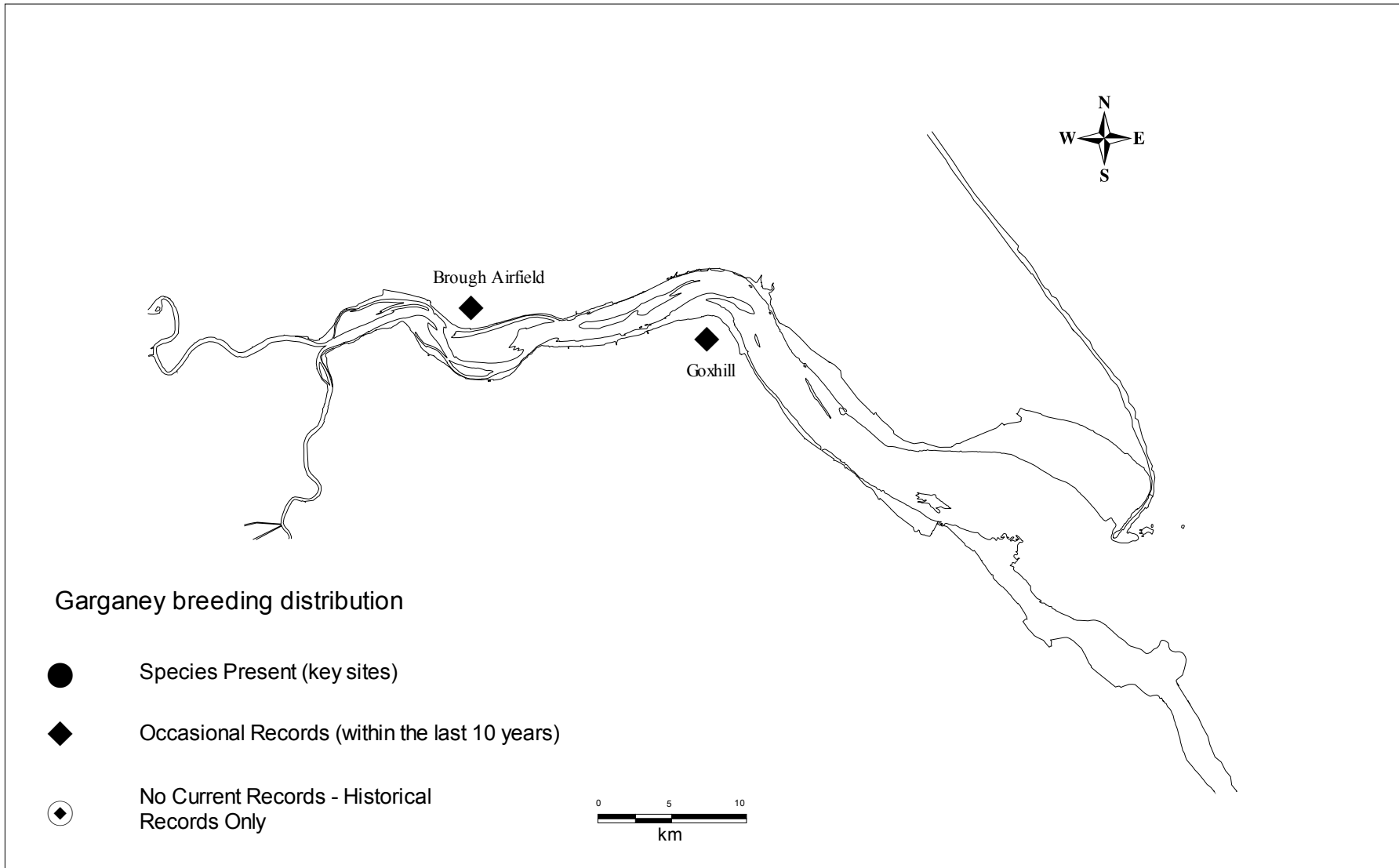
## **Historical changes and trends**

In the first half of the 20<sup>th</sup> Century, populations increased in Europe, but have retracted since then. The breeding population was estimated at 50-70 pairs for the 1968-1972 Atlas, and records submitted since 1980 indicate that numbers fluctuate, generally in the range of 40-60 pairs, but rising to 100 pairs in occasional years (Gibbons *et al* 1993). The fluctuating breeding population in Britain reflects a typical edge of range distribution with a fragile dependency on climate and the availability of prime habitat (Batten *et al* 1990).

In the Humber, there has been little change in status since Mather (1986), where this species was summarised as a passage migrant and a very scarce and local breeder.

## **Conservation status**

Protected under Schedule 1 Part 2 of WCA 1981; Listed in Annex II/2 of EC Birds Directive (79/409/EEC); Appendix II of the Bonn Convention; Appendix III of the Berne Convention; UK Species of Medium Conservation Concern (Amber List).





## References

- BAOG, 2002. *Brough birders data-counts for breeding birds*. Brough Airfield Ornithological Group, unpublished.
- BATTEN, L.A., BIBBY, C.J., CLEMENT, P., ELLIOT, G.D. & PORTER, R.F., 1990. *Red data birds in Britain*. London: T. & A.D. Poyser.
- BELL, N.A. & DEGNAN, L.J., eds., 2001. *Spurn wildlife No.10*. Spurn Bird Observatory Trust.
- CATLEY, G., 2001. *Waters Edge ornithological report 2001 [online]*. North Lincolnshire Council. Available: <http://www.northlincs.gov.uk/watersedge/birds/report2001.htm> [Accessed 23 October 2002].
- CATLEY, G., personal communication, 2002. 13 West Acridge, Barton-on-Humber, North Lincolnshire, DN18 5AJ.
- GIBBONS, D.W., REID, J.B. & CHAPMAN, R.A., 1993. *The new atlas of breeding birds in Britain and Ireland: 1988-1991*. London: T. & A.D. Poyser.
- MATHER, J.R., 1986. *The birds of Yorkshire. An account of their historical and present status and distribution*. London: Croom Helm Ltd.
- RSPB, 2001. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report 2000*. Royal Society for the Protection of Birds, UK.
- RSPB, 2002. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report 2001*. Royal Society for the Protection of Birds, UK.

## Pochard *Aythya ferina*

**Key Sites:** On the Humber from Chowder Ness to Goxhill Haven.

EC Wild Birds Directive: Listed in Annex II/1 and III/2.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	Insufficient data	Insufficient data	Insufficient data
<b>Wintering</b>	719	1.2%	0.2%
<b>Passage</b>	N/A	N/A	N/A

### Description

Pochard are uncommon breeding birds, largely restricted to eastern England and Scotland (Gibbons *et al* 1993). In winter, however, they are extremely common and can be found on larger stretches of inland water (Lack 1986). They prefer water bodies less than 3m deep, diving to the bottom to forage (Owen *et al* 1986). During the dives, the bird is feeding mainly on vegetation and faunal components amount to only about 15 % of the diet. Pochard occur in small numbers on estuaries which provide vital feeding grounds during periods of stress i.e. severe weather (Prater 1981).

### Distribution within the Humber

#### Non-breeding birds

On the Humber Estuary, the majority of birds can be found between Chowder Ness and Goxhill Haven (Catley 2000). Small numbers are present in the upper Humber between Blacktoft Sands and Brough and on occasion large populations can be present on Welton Waters and Broomfleet Brick Pits (N.D. Cutts pers. obs. 2002).

**Feeding area:** The major feeding site on the Humber is at WeBS sector ISG (New Holland Pier to Goxhill Skitter). According to Catley (2000) the birds are attracted to the area to feed on a mixture of grain and animal food stuffs from sewage outfalls at the New Holland Bulk Services terminal. Analysis of low tide counts by Catley (2000) shows that at least 75% (c.500) of the Humber population can be feeding in sector ISG during the winter period, however nationally important sized flocks have also been recorded on Welton Waters during the winter (N.D. Cutts pers. obs. 2002).

**Roosting area:** Roosting and loafing takes place on the ebbing tide, the majority of pochard from the New Holland area drifting as far down the estuary as Immingham. During harsh weather conditions, there is a movement of large flocks onto Barrow Haven/Barton clay pits to roost or bathe (Catley 2000) and similarly Welton Waters can be used during such periods, depending on ice cover (N.D. Cutts pers. obs. 2002).

## **Seasonality**

The first autumn arrivals may appear in late September, gathering through October into December and invariably peaking in January or February. The main departure is generally in March, with relatively few pochard remaining into April.

## **Historical changes and trends**

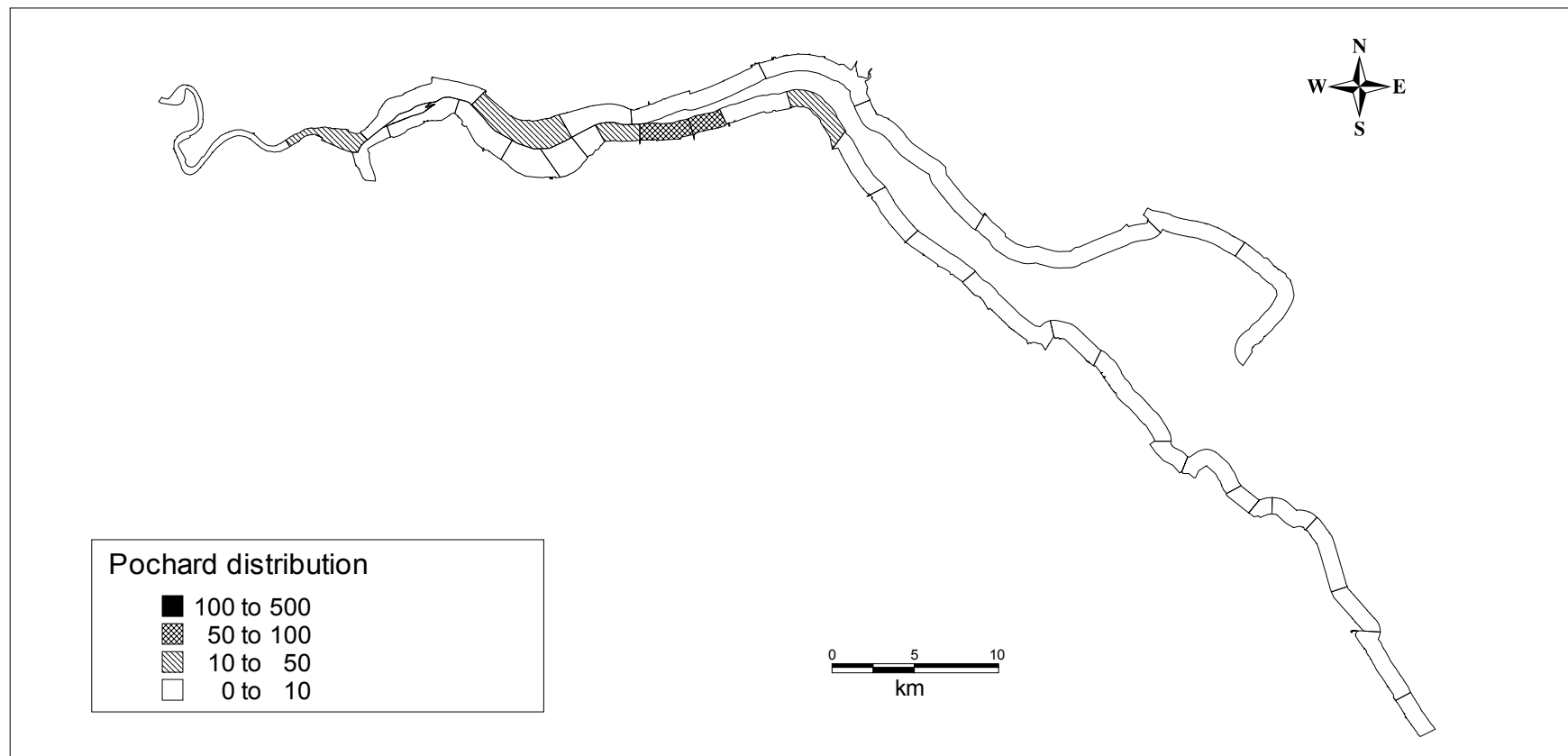
The UK wintering population increased dramatically until the mid 1970's peaking at about 35,000 which approximated to 10% of the north-west European wintering population (Batten *et al* 1990). Since then, although annual indices for Britain continue to fluctuate between years, the overall trend remains one of stability (Musgrove *et al* 2001).

Although the Humber maximum is subject to substantial inter-annual variation, the current population remains at a similar level to that of the early 1990's, suggesting a general stability.

## **Conservation status**

Protected under Schedule 2 Part 1 and Schedule 3 Part 3 of the WCA 1981; Listed in Annex II/1 and III/2 of the EC Birds Directive (79/409/EEC); Appendix II of the Bonn Convention; Appendix III of the Berne Convention; Species of European Conservation Concern (SPEC 4); UK Species of Medium Conservation Concern (Amber List).

- 5 year annual peak mean of 719 (96/97-00/01).
- 5 year winter peak mean of 719 (96/97-00/01).
- 2000/01 maxima of 216 (winter).
  
- 1.2% of GB population (winter).
- 0.2% bio-geographic population (winter).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	8.00	16.67	6.20	28.40	0.00	0.00	1.20	0.00	0.20	0.00	3.80			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.00	0.00	0.00	0.00	0.40	0.20	0.00	35.80	76.80	57.20	608.20	23.00	0.00	1.20
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	0.00	0.20	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.00	0.20	0.00	

**5 year mean annual peak maxima for pochard by sector, Source; Core WeBS counts 1996-2001.**

## References

BATTEN, L.A., BIBBY, C.J., CLEMENT, P., ELLIOT, G.D. & PORTER, R.F., 1990. *Red data birds in Britain*. London: T. & A.D. Poyser.

\*CATLEY, G., 2000. Humber Estuary wetland bird survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.

CUTTS, N.D., personal observation, 2002. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.

GIBBONS, D.W., REID, J.B. & CHAPMAN, R.A., 1993. *The new atlas of breeding birds in Britain and Ireland: 1998-1991*. London: T. & A.D. Poyser.

LACK, P., 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.

MUSGROVE, A.J., POLLITT, M.S., HALL, C., HEARN, R.D., HOLLOWAY, S.J. MARSHALL, P.E., ROBINSON, J.A. & CRANSWICK, P.A., 2001. *The wetland bird survey 1999-2000: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.

OWEN, M., ATKINSON-WILLES, G.L. & SALMON, D.G., 1986. *Wildfowl in Great Britain*: Second edition. Cambridge: Cambridge University Press.

PRATER, A.J., 1981. *Estuary birds of Britain and Ireland*. Calton: T. & A.D. Poyser.

## Scaup *Aythya marila*

**Key Sites:** Spurn Bight and New Holland.

EC Wild Birds Directive: Listed in Annex II/2 and III/2.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	N/A	N/A	N/A
<b>Wintering</b>	127	1.7%	0.04%
<b>Passage</b>	N/A	N/A	N/A

### Description

The scaup is a circumpolar low-arctic or sub-arctic breeding species, with the most northerly distribution of the *Aythya* species. It winters predominantly along the coast, on brackish lagoons, in estuaries, and in sheltered bays and shallow marine waters (Scott & Rose 1996). Small numbers also occur inland on lakes and reservoirs in the UK (Lack 1986). In winter, the birds principally feed on mussels *Mytilus edulis* and other bivalves such as *Macoma baltica* (Atkinson-Wiles 1963). The birds are also attracted to industrial and sewage outfalls as the discharge often provides a significant dietary component (Prater 1981). Feeding occurs mainly at night, and birds tend to remain near their night-time feeding areas during the day, where they gather in dense flocks.

### Distribution within the Humber

Their principal wintering grounds are around the mouth of the estuary off Spurn Bight and also at New Holland (Catley 2000).

### Seasonality

Flocks in the Humber Estuary start arriving in October, generally reaching a peak in the late winter. However, this is subject to weather conditions and the highest numbers usually coincide with periods of harsh wintry weather (Musgrove *et al* 2001). Most birds have left the estuary by April.

### Historical changes and trends

Large fluctuations occur on the Humber from one year to another but the status of scaup within the estuary appears to have remained fairly constant this century. Nelson (1907) noted that numbers of scaup varied greatly in different years, depending on the mildness or severity of the season. Similarly, Mather (1986) reports large fluctuations in flock size from weather conditions.

For the past 10 years, numbers have been generally similar to those in preceding years with numbers below 50 individuals. However, large influxes occurred in 1995/96 and 1996/97 with two exceptional counts of 353 and 594 birds (Musgrove *et al* 2001) representing numbers of national importance. However, according to Musgrove *et al* (2001) it seems

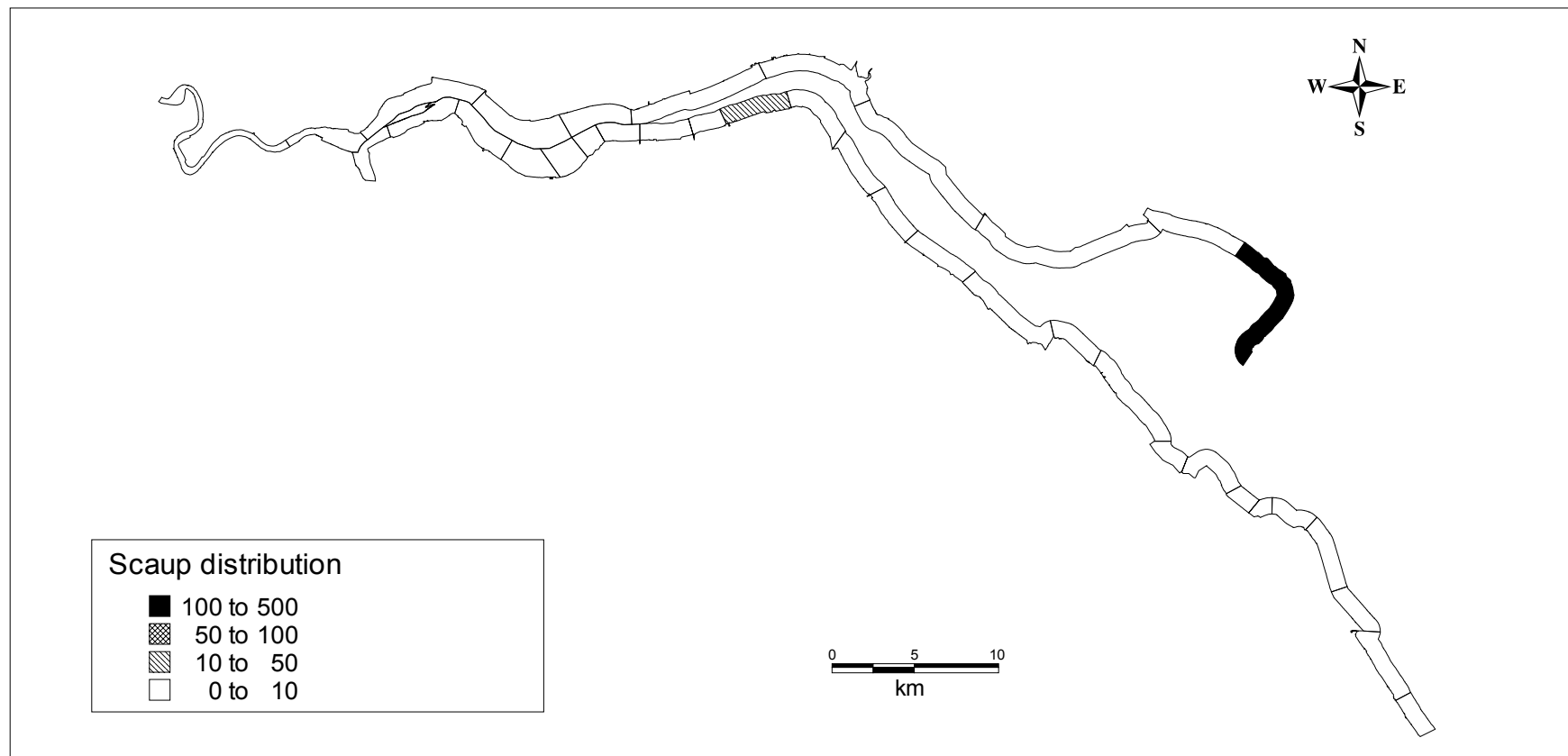
likely that the apparent influx resulted from cold weather movements, with subsequent numbers returning to early 1990's levels.

The estuary currently qualifies as being nationally important for the species on the basis of two large influxes in the winter of 1995/1996 and 1996/1997. However subsequent yearly maxima have been lower and it is likely that the site may cease to be of national importance once the 2001/02 data have been included in the statistics.

### **Conservation status**

The scaup is protected under Schedule 1 Part 1 and Schedule 3 Part 3 of the WCA 1981; Listed in Annex II/2 and Annex III/2 of EC Birds Directive; Appendix II of the Bonn Convention; Appendix III of the Bonn Convention; Species of European Conservation Concern (SPEC 3); UK Species of Medium Conservation Concern (Amber List).

- 5 year annual peak mean of 127 (96/97-00/01).
- 5 year winter peak mean of 127 (96/97-00/01).
- 2000/01 maxima of 6 (winter).
  
- 1.7% of GB population (winter).
- 0.04% of biogeographic population (winter).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.20	114.60			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.60	31.00	0.60	0.00	0.00
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	0.00	0.40	0.00	0.00	0.20	0.00	0.00	0.00	0.40	0.00	2.00	0.00	

**5 year mean annual peak maxima for scaup by sector, Source; Core WeBS counts 1996-2001.**



## References

- ATKINSON-WILES, G.L., 1963. *Wildfowl in Great Britain*. Nature Conservancy Monograph No.3. London: HMSO.
- \*CATLEY, G., 2000. Humber Estuary wetland bird survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.
- LACK, P., 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.
- MATHER, J.R., 1986. *The birds of Yorkshire: An account of their historical and present status and distribution*. London: Croom Helm Ltd.
- MUSGROVE, A.J., POLLITT, M.S., HALL, C., HEARN, R.D., HOLLOWAY, S.J. MARSHALL, P.E. ROBINSON, J.A. & CRANSWICK, P.A., 2001. *The wetland bird survey 1999-2000: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- NELSON, T.H., 1907. *The birds of Yorkshire*. London: A. Brown and Sons.
- PRATER, A.J., 1981. *Estuary Birds of Britain and Ireland*. Calton: T. & A.D. Poyser.
- SCOTT, D.A. & ROSE, P.M. 1996. Atlas of Anatidae populations in Africa and western Eurasia. *Wetlands International Publication* 41. Wageningen, Netherlands: Wetlands International.

## Goldeneye *Bucephala clangula*

**Key Sites:** Chowder Ness to Goxhill Haven.

EC Wild Birds Directive: Listed in Annex II/2.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	N/A	N/A	N/A
<b>Wintering</b>	467	1.9%	0.1%
<b>Passage</b>	N/A	N/A	N/A

### Description

The goldeneye is a rare breeding bird in Britain, but in winter large flocks from Scandinavia visit the British Isles. The goldeneye winters in both freshwater and coastal habitats (Lack 1986) and wintering groups are often closely associated with pochard and scaup. Food is obtained by diving and consists mainly of invertebrates and crustaceans and, like scaup, goldeneye may benefit from limited organic pollution (Prater 1981).

### Distribution within the Humber

#### Non-breeding

In the Humber Estuary, the most favoured section of shoreline is from Chowder Ness to Goxhill Haven, but large concentrations occur from New Holland pier to Goxhill Haven. Analysis of WeBS low tide count data show that more than 95% of the population of goldeneye during the winter of 1998/99 was located from New Holland pier to Goxhill Haven (Catley 2000) and in some years a good number of goldeneye move onto the Barton-Barrow Haven clay pits in winter. Occasional records occur elsewhere on the estuary and adjacent pits, with individuals or pairs regularly observed at Saltend (N.D. Cutts pers. obs. 2002) presumably associated with the main New Holland to Goxhill flock and at Broomfleet Brick Pits where wintering flocks of up to 12 individuals are usually present (N.D. Cutts pers. obs. 2002).

**Feeding sites:** The majority of feeding takes place from east of New Holland pier to Goxhill Haven but on some occasions on the falling tide groups of birds drift down the estuary as far as East Halton Skitter (Catley 2000). The low tide count initiative also found that during the late winter, a large proportion of the flock spent long periods feeding on a pit at Barton, with mass feeding usually occurring for an hour or two after high tide (Catley 2000).

**Roosting sites:** Key roosting sites appear to be similar to feeding areas, and birds tend to drift down the estuary and fly back onto the feeding ground (Catley 2001).

#### Seasonality

The flock tends not to build up until late November or even early December and winter peak counts are usually recorded in either December or January with a rapid decline in numbers

taking place through February and only a few individuals present in most years by early March (Mather 1986; Catley 2000).

### **Historical changes and trends**

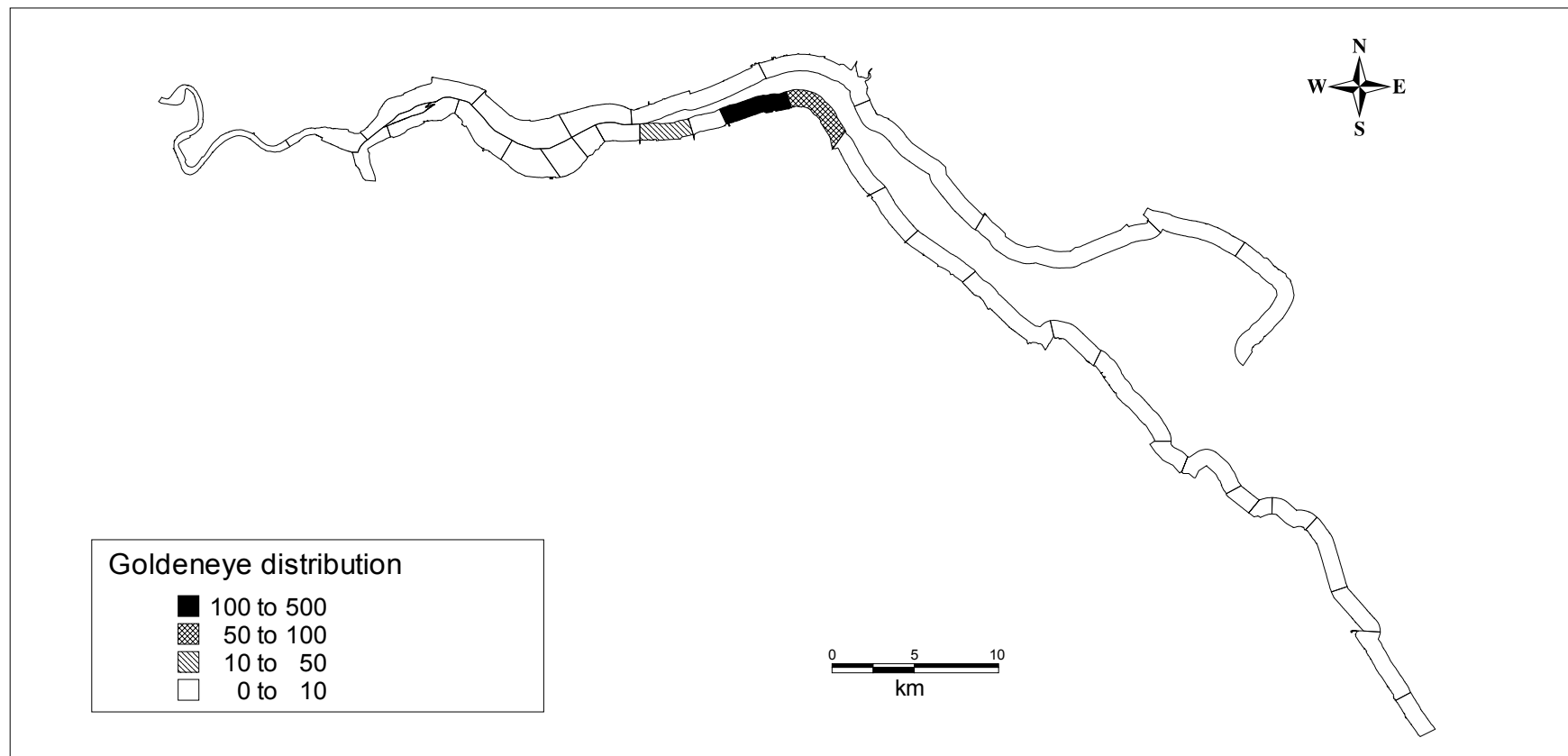
The Humber has only qualified as being of national significance for this species since the early 1990's. Since then the population has continued to increase, with the peak maxima for the estuary recorded in 1998/99 with 581 birds present in December (Catley 2000). Since 1992/93, the winter peak has not fallen below 350 and reached a new high of 584 in December 2000 (Catley 2001).

There appears to be no historical record of flocks of goldeneye wintering on the inner Humber between Killingholme and Barton but during the late 1980's and through the 1990's goldeneye has become a regular wintering species in the area. The opening of the New Holland Bulk Services grain and animal food import and export terminal at New Holland in 1984 had a remarkably sudden impact on the goldeneye wintering on the estuary as well as on some other wildfowl (Catley 2001).

### **Conservation status**

The goldeneye is protected under Schedule 1 Part 2 of the WCA 1981; Listed in Annex II/2 of EC Birds Directive (79/409/EEC); Appendix II of the Bonn Convention; Appendix III of the Berne Convention; UK Species of Medium Conservation Concern (Amber List).

- 5 year annual peak mean of 467 (96/97-00/01).
- 5 year winter peak mean of 467 (96/97-00/01).
- 2000/01 maxima of 498 (winter).
  
- 1.9% of GB population (winter).
- 0.1% of biogeographic population (winter).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	1.20	2.00	1.00	1.60	0.00	0.00	0.00	0.00	0.20	2.40	7.40			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.00	0.20	0.00	0.00	0.60	0.00	0.00	4.20	22.20	4.20	446.80	64.40	0.00	0.20
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	1.60	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.20	1.20	0.40	2.40	0.00	

**5 year mean annual peak maxima for goldeneye by sector, Source; Core WeBS counts 1996-2001.**

## References

\*CATLEY, G., 2000. Humber Estuary wetland bird survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.

CATLEY, G., 2001. *Goldeneye on the Humber*. [Online]: Lincolnshire Bird Club Article. Available: [http://www.lincsbirdclub.co.uk/articles/goldeneye\\_humber.htm](http://www.lincsbirdclub.co.uk/articles/goldeneye_humber.htm) [Accessed 5 September 2002].

CUTTS, N.D., personal observation, 2001. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.

LACK, P., 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.

MATHER, J.R., 1986. *The birds of Yorkshire. An account of their historical and present status and distribution*. London: Croom Helm Ltd.

PRATER, A.J., 1981. *Estuary birds of Britain and Ireland*. Calton: T. & A.D. Poyser.

## Hen harrier *Circus cyaneus*

**Key Sites:** Blacktoft Sands, Welwick and Saltfleetby.

**EC Wild Birds Directive:** Listed in Annex I.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	N/A	N/A	N/A
<b>Wintering</b>	8	1.0%**	<0.1%
<b>Passage</b>		Insufficient data	Insufficient data

### Wintering Status:

Year	1997/98	1998/99	1999/00	2000/01	2001/02	5 year mean
<b>Number of birds*</b>	8	9	7	8	8	8

\*Wintering numbers from I. Higginson pers comm. (2003), and J. Walker pers comm. (2003). Annual count data available for Blacktoft Sands and annual winter minima for Saltfleetby to Theddlethorpe Dunes only. The actual annual wintering total is believed to be around 15 individuals.

\*\*Threshold taken from Lack (1986) as cited in Stroud *et al.*, (2001)

### Description

The hen harrier is a winter visitor and passage migrant on the Humber. The male is a striking blue-grey with darker head and breast, the female a mottled brown. Prey items are generally small rodents and gamebirds which, during the winter, are caught from a variety of open habitats including arable fields, coastal grassland, saltmarsh and reedbed. Although the majority of birds using the Humber originate from Scotland, it is possible that there is an influx of continental (including Scandinavian) birds during hard weather (Mather 1986). During the winter, they gather at communal roost sites at the end of the day in reedbeds or marshes, which can hold significant numbers of individuals (sometimes over 20) (Lack 1986).

### Distribution within the Humber

#### Non-breeding

In the Humber, hen harrier are regularly seen at Spurn Head during the autumn passage but generally roost at Welwick, Blacktoft Sands and Saltfleetby during the winter season.

Data for 1994/95-1998/99 recorded a peak mean of six birds at Blacktoft Sands and up to 9 individuals used to be present at Saltfleetby to Theddlethorpe Dunes. Recent (2000/01) data for the Blacktoft site recorded a maximum of five birds; two adult males and three females,

and a minimum of 4 wintering birds have been present at Saltfleetby to Theddlethorpe Dunes in recent years (I. Higginson pers comm, 2003 and J. Walker, pers comm., 2003). These birds disperse out to hunt during the day, including the adjacent marshes of the estuary and inland onto the Thorne and Hatfield Moors (RSPB 2002).

The Welwick saltmarsh is regularly used as a roost for this species, although long-term published data is not available. Up to four birds were recorded using the site in 2001, with a maximum of seven over the last 10 years (M. Coverdale pers. comm. 2002).

On the south bank of the estuary, the roost concentrations are largely restricted to the coastal margin. Historically, the Saltfleetby-Theddlethorpe NNR supported a roost of up to nine individuals, but this declined in the early 1980's, possibly as a result of management work on the preferred maritime fen habitat, during which time the roost moved to Donna Nook, with four or five birds regularly using this area. However, in recent years the roost has moved back to Saltfleetby, with maxima of between four and five birds regularly recorded (J. Walker pers. comm. 2002).

Based on information supplied by various personal communications, it would appear that the Humber population is generally evenly distributed between Blacktoft, Welwick and Saltfleetby, and currently stands at around 15 birds, but with some variation in this figure on a yearly basis.

### **Seasonality**

Winter visitors generally start to arrive in late September, peaking in October and passage can continue into early November. At Blacktoft Sands, the wintering population generally peaks in January/February, with numbers declining to the end of April, when birds leave the site for their breeding grounds (RSPB 2001 & 2002).

### **Historical changes and trends**

Until the mid 1800's the hen harrier was a widespread breeder in Britain. However, persecution and loss of heath, scrub and bog contributed to the decline of breeding and wintering birds (Batten *et al* 1990). Upland afforestation between the 1940's and 1970's favoured hen harrier recolonisation of the Scottish mainland, northern England and Wales but numbers of breeders have failed to increase since the 1970's (Batten *et al* 1990). A small number of pairs have successfully bred in the upland areas of the Yorkshire/Lancashire border, but success rates are still hampered by persecution and egg collection (Mather 1986).

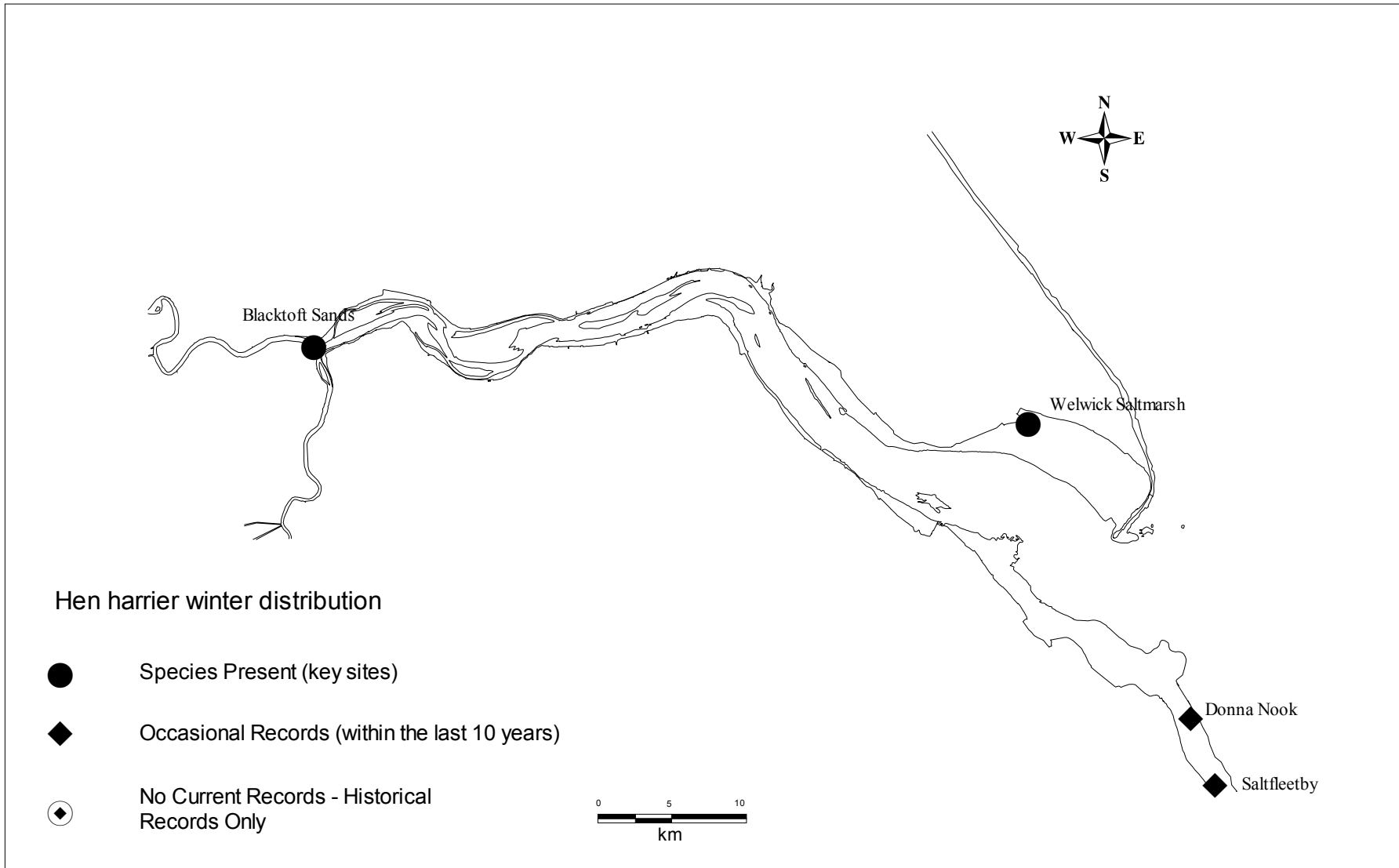
Ornithological reports from the RSPB reserve at Blacktoft Sands suggest numbers of hen harrier have remained stable for the past 20 years. However, wintering numbers are linked to breeding levels, and although in general, mainland Scottish numbers have remained stable, and Irish records have increased, a 50% decline has been seen in the Orcadian population over the last decade (Stroud *et al* 2001). A similar decline has been observed in the English population, and this may have a long-term impact on the wintering population on the Humber.

## **Conservation status**

Protected under Schedule 1 Part 1 and Schedule 4 of WCA 1981; Listed in Annex I of EC Birds Directive; Appendix II of the Berne Convention; Species of European Conservation Concern (SPEC 3); UK Species of High Conservation Concern (Red List).

- 5 year annual minimum mean of 8 birds (winter 1997/98 – 2001/02).
- 2000/01 maxima of 15 (winter).
  
- 1%+ of GB population (winter).
- <0.01% of biogeographic population (winter).





## References

- BATTEN, L.A., BIBBY, C.J., CLEMENT, P., ELLIOT, G.D. & PORTER, R.F., 1990. *Red data birds in Britain*. London: T. & A.D. Poyser.
- COVERDALE, M., personal communication, 2002. Spurn Bird Observatory, Kew Villa, Kilnsea, Hull, East Yorkshire, HU12 0UG.
- LACK, P., 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.
- MATHER, J.R., 1986. *The birds of Yorkshire. An account of their historical and present status and distribution*. London: Croom Helm Ltd.
- RSPB, 2001. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report 2000*. Royal Society for the Protection of Birds, UK.
- RSPB, 2002. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report 2001*. Royal Society for the Protection of Birds, UK.
- STROUD, D.A., CHAMBERS, D., COOK, S., BUXTON, N., FRASER, B., CLEMENT, P., LEWIS, P., MCLEAN, I., BAKER, H. & WHITEHEAD, S., eds., 2001. *The UK SPA network: its scope and contents. Volume 2 Species Accounts*. Peterborough: JNCC.
- WALKER, J., personal communication, 2002. Assistant Site Manager, Saltfleetby-Theddlethorpe National Nature Reserve.
- WALKER, J., personal communication, 2003. Assistant Site Manager, Saltfleetby-Theddlethorpe National Nature Reserve.

## Marsh harrier *Circus aeruginosus*

**Key Sites:** Blacktoft Sands and other sites around the estuary.

EC Wild Birds Directive: Listed in Annex I.

### Humber Population Status:

	Number	% of National Population	% of Biogeographic Population
<b>Breeding</b>	10 females	6.3%*	N/A
<b>Wintering</b>	N/A	N/A	N/A
<b>Passage</b>	Insufficient data	Insufficient data	Insufficient data

\*National population thresholds (based on number of females\*\*) is taken from Stone *et al.*, (1997), as cited in Stroud *et al.*, (2001).

### Breeding Status

Year	1998	1999	2000	2001	2002	5 year mean
<b>Numbers of nests**</b>	c.11	c.8	c.10	9	12	10

(Numbers from I. Higginson pers comm. 2003, RSPB 2001, N.D.Cutts, pers. obs. 2001-2003)

\*\*As marsh harriers are polygamous (ie; males may breed with more than one female in any given season), the national population threshold is based on the number of females, and for the Humber the number of nests has been equated to the number of females.

### Description

The marsh harrier is the biggest of the three species of harrier breeding in the UK. It is a scarce or locally common summer visitor with the UK population generally wintering in the Mediterranean area and sub-Saharan Africa; although a small population now over-winter in the UK (Lack 1986; Taylor *et al* 2000). Breeding takes place amongst reeds or sedges, usually within extensive reedbeds, but a small number of birds have also recently nested in intensively farmed arable areas (Gibbons *et al* 1993). In both summer and winter, marsh harriers hunt over a great variety of open habitats by slowly quartering the grounds, returning to reedbeds to roost at night. Their food consists mostly of birds, rabbits and small mammals (Underhill-Day 1985).

### Distribution within the Humber

In the past, polygamous behaviour has been noted amongst breeding marsh harriers on the Humber, but in recent years, observations suggest that birds have mainly formed discrete pairings (P. Short pers comm. 2004). In 2002 a total of twelve pairs of marsh harriers nested on the Humber, of which two pairs were found within the Blacktoft Sands Nature Reserve (I. Higginson pers. comm. 2003). The remaining birds were located in reedbeds along the Humber margins.

## Historical changes and trends

In the western Palaearctic, the marsh harrier disappeared from many areas during the 20<sup>th</sup> Century. This was due to drainage, claim of wetlands and persecution, although in the UK it has been suggested that it was the proliferation of organochlorine pesticides which led to the decline (Gibbons *et al* 1993). However, from the mid 1970's numbers began to increase rapidly throughout much of Europe, with the British population following a similar trend. At present the situation for the marsh harrier is relatively favourable and the population is steadily increasing, to the extent that it has been moved from the Red to the Amber List of Species of Conservation Concern (Gregory *et al* 2002).

On the Humber, after sporadic nesting in the 1960's, a small breeding population was established in the early 1980's and grew steadily until nine pairs nested in 2001. At Blacktoft Sands, the stronghold of the Humber population, numbers have decreased in the last 5 years from seven pairs in 1995 to two pairs in 2002. Paradoxically, in recent years marsh harriers have established new territories in reedbeds adjacent to Blacktoft Sands (N.D. Cutts pers. obs. 2001; L. Mander pers. obs. 2002).

Formerly rare in winter, small numbers of marsh harriers now over-winter in the UK particularly in the Norfolk area (Taylor *et al* 2000) and in the last couple of years, marsh harriers have been commonly recorded on the estuary in the early part of the winter (RSPB 2001), with at least one bird present in the upper Humber over the winter 2002/3 (N.D. Cutts pers. obs. 2003).

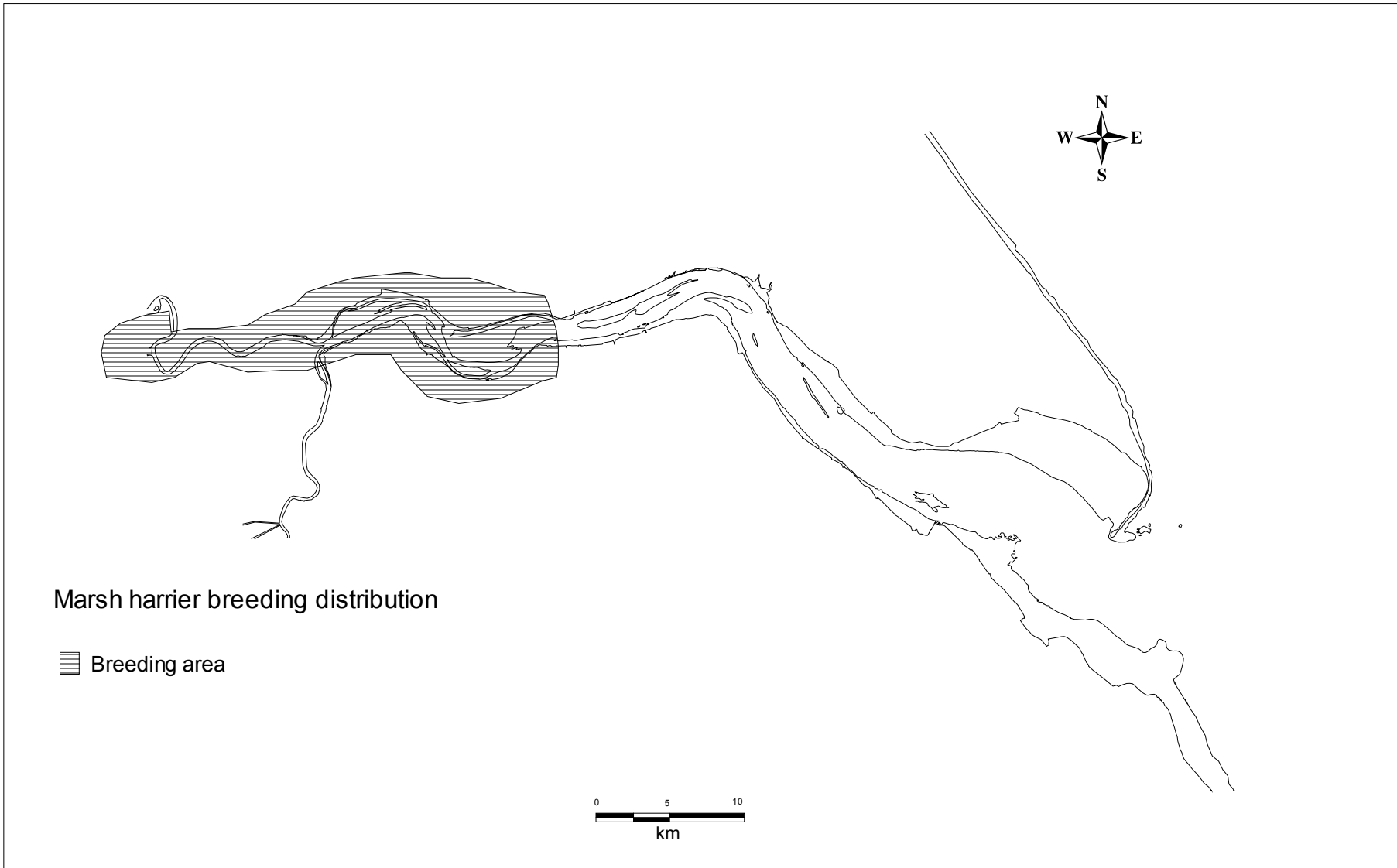
## Seasonality

Marsh harriers are migratory, normally arriving in the UK in April/May. The young leave in August and the adult birds leave in September/October, although some may remain throughout the winter.

## Conservation status

Protected under Schedule 1 Part 1 and Schedule 4 of the WCA 1981; Listed in Annex I of the EC Birds Directive (79/409/EEC); Appendix II of the Bonn Convention; Appendix II of the Berne Convention; UK Species of Medium Conservation Concern (Amber List).

- 5 year mean of 10 nests (summer 98-02).
- 2002 maxima of 12 pairs (summer).
- 6.3% of GB population.



## References

- CUTTS, N.D., personal observations, 2001 - 2003. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.
- GIBBONS, D.W., REID, J.B. & CHAPMAN, R.A., 1993. *The new atlas of breeding birds in Britain and Ireland: 1998-1991*. London: T. & A.D. Poyser.
- GREGORY, R.D., WILKINSON, N.I., NOBLE, D.G., ROBINSON, J.A., BROWN, A.F., HUGHES, J., PROCTOR, D.A., GIBBONS, D.W. & GALBRAITH, C.A., 2001. The population status of birds in the United Kingdom, Channel Islands and Isle of Man: an analysis of conservation concern 2002-2007. *British Birds*, **95**, pp. 410-450.
- HIGGINSON, I., personal communication, 2003. RSPB Blacktoft Sands Nature Reserve, Hillcrest, High Street, Whitgift, Goole, East Yorkshire, DN14 8HL.
- LACK, P., 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.
- MANDER, L., personal observation, 2002. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.
- RSPB, 2001. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report 2000*. Royal Society for the Protection of Birds, UK.
- SHORT, P., personal communication, 2004. RSPB Blacktoft Sands Nature Reserve, Hillcrest, High Street, Whitgift, Goole, East Yorkshire, DN14 8HL.
- STROUD, D.A., CHAMBERS, D., COOK, S., BUXTON, N., FRASER, B., CLEMENT, P., LEWIS, P., MCLEAN, I., BAKER, H. & WHITEHEAD, S., eds., 2001. *The UK SPA network: its scope and contents. Volume 2 Species Accounts*. Peterborough: JNCC.
- TAYLOR, M., ALLARD, P., SEAGO, M. & DORLING, D., 2000. *The birds of Norfolk*. Mountfield: Pica Press.
- UNDERHILL-DAY, J.C., 1985. The food of breeding marsh harrier *Circus aeruginosus* in East Anglia. *Bird Study*, **32**, pp. 199-206.

## Water rail *Rallus aquaticus*

**Key Sites:** The Barton to New Holland Clay Pits complex and Blacktoft Sands.

EC Wild Birds Directive: Listed in Annex II/2.

### Humber Population Status:

	Number	% of National Population	% of Biogeographic Population
<b>Breeding</b>	28 pairs	4% */**	N/A
<b>Wintering</b>	Insufficient data	Insufficient data	Insufficient data
<b>Passage</b>	Insufficient data	Insufficient data	Insufficient data

\* National population threshold taken from Gibbons et al, 1993, as cited in Stroud *et al.*, 2001.

### Breeding Status:

Year	1998	1999	2000	2001	2002	5 year mean
<b>Numbers of pairs</b>	18	c.30	c.30	c.30	c.30	28**

(Numbers from I. Higginson pers comm. Blacktoft Sands, 2003).

\*\* NB: It should be noted that the 5 year mean and percentage of national population derived from this are based on figures for Blacktoft Sands only, and will be an underestimate of the actual Humber population as this species is known to breed elsewhere on the estuary.

### Description

Water rails currently breed extensively in reedbeds and wetlands in the UK (Gibbons *et al* 1993). This bird can be easily located at many wetlands by its 'sharming' calls, but is often difficult to see. Water rails are omnivorous and eat chiefly insects and their larvae, but also snails, small vertebrates such as frogs and fish, carrion and vegetable matter.

### Distribution within the Humber

#### Breeding

The species is resident on the Humber with additional birds over-wintering.

Breeding water rails are centred on reedbed and clay pit habitats around the Humber Estuary. The Barton Clay Pits complex and Blacktoft Sands are key areas for the species, although during the winter, most reedbeds associated with water and even fringing dyke systems may support an individual.

According to Mather (1986) the majority of breeding records in the Humber have come from Blacktoft Sands Nature Reserve, with the site continuing to be important to the present day, with a 5 year mean for the period 1994-1999 of 20 pairs, and a 2002 maxima of 30 pairs (RSPB 2000; I. Higginson pers. comm. 2003). Water rails occur along the south bank of the Humber at the Barton to New Holland Clay Pits complex where 24 pairs bred in 2002 (G. Catley pers. comm. 2003).

## **Historical changes and trends**

National population levels and trends are somewhat unclear, with Sharrock (1976) suggesting between 2000-4000 pairs while Gibbons *et al* (1993) identified between 450-900 pairs, but with the proviso that more intensive census work might confirm a more abundant population.

Chislett (1952) considered the species as a rare breeding bird in Yorkshire, although it possibly occurred at several places every year, but with no confirmed breeding around the Humber Estuary. Mather (1986) quoted that definite proof of breeding had been obtained at only 11 sites in Yorkshire, amongst them Blacktoft Sands where two pairs nested in 1974. In recent years, records of breeding pairs in Blacktoft Sands have increased and ornithological reports from the RSPB site have recorded at least 30 pairs nesting for the past two years (RSPB 2002; I. Higginson pers. comm. 2003).

## **Seasonality**

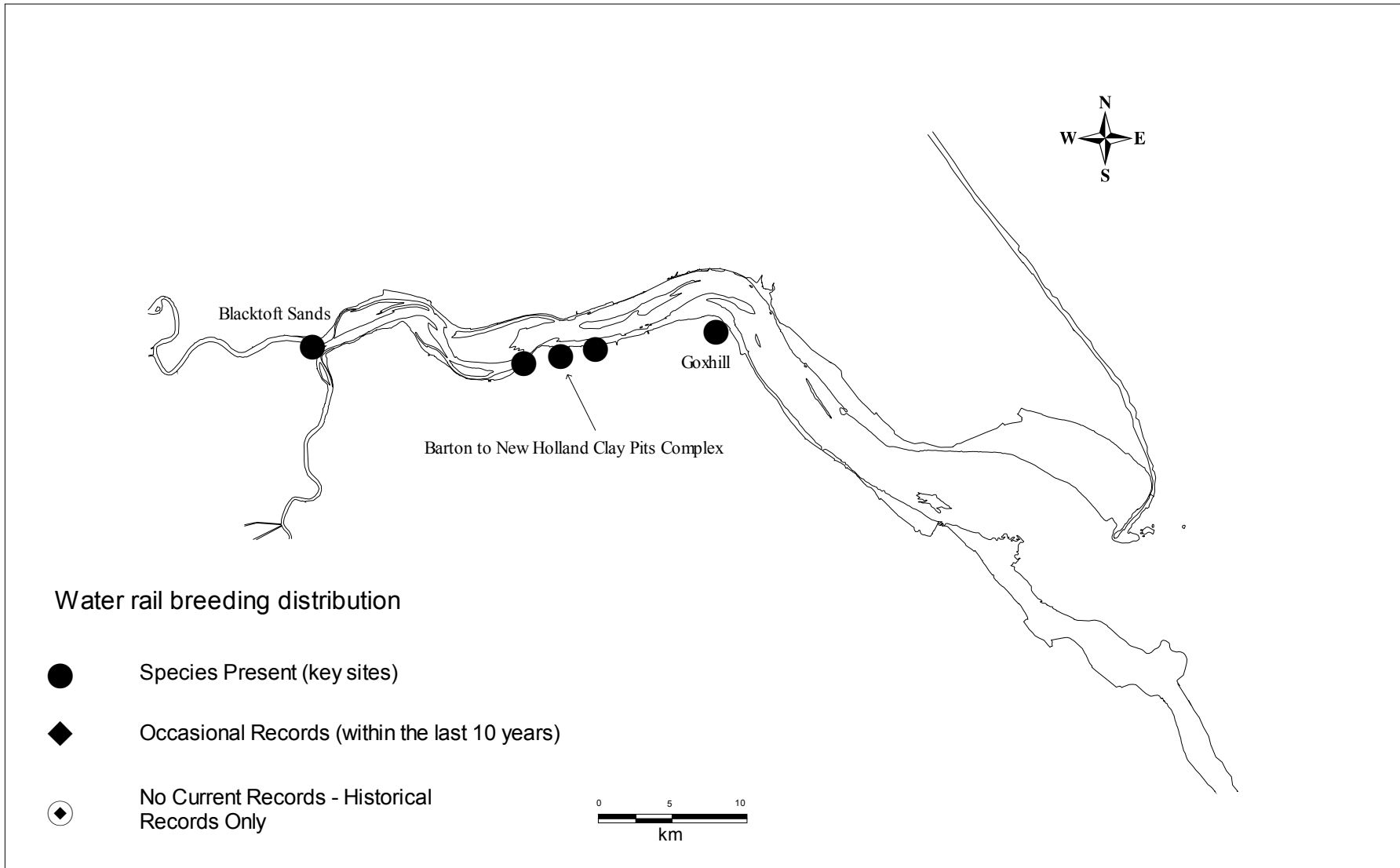
Birds establish territories between late March and the end of April. Pairs are normally double brooded giving a protracted breeding season from mid March to July.

## **Conservation status**

Listed in Annex II/2 of the EC Birds Directive (79/409/EEC), Appendix III of the Berne Convention; UK Species of Medium Conservation Concern (Amber List).

- c30 pairs (summer).
- Minimum of 4% of GB breeding population.





## References

- CATLEY, G., personal communication, 2003. 13 West Acridge, Barton-on-Humber, North Lincolnshire, DN18 5AJ.
- CHISLETT, R., 1952. *Yorkshire birds*. A. Brown & Sons, UK.
- GIBBONS, D.W., REID, J.B. & CHAPMAN, R.A., 1993. *The new atlas of breeding birds in Britain and Ireland: 1988–1991*. London: T. & A.D. Poyser.
- HIGGINSON, I., personal communication, 2003. RSPB Blacktoft Sands Nature Reserve, Hillcrest, High Street, Whitgift, Goole, East Yorkshire, DN14 8HL.
- MATHER, J.R., 1986. *The birds of Yorkshire*. An account of their historical and present status and distribution. London: Croom Helm Ltd.
- RSPB, 2000. *Blacktoft Sands RSPB Nature Reserve. Review of management achievements*. Royal Society for the Protection of Birds, unpublished report, UK.
- RSPB, 2002. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report 2001*. Royal Society for the Protection of Birds, unpublished report, UK.
- SHARROCK, J.T.R., 1976. *The atlas of breeding birds in Britain and Ireland*. Calton: T. & A.D. Poyser.
- STROUD, D.A., CHAMBERS, D., COOK, S., BUXTON, N., FRASER, B., CLEMENT, P., LEWIS, P., MCLEAN, I., BAKER, H. & WHITHEHEAD, S., eds., 2001. *The UK SPA network: its scope and contents. Volume 2 Species Accounts*. Peterborough: JNCC.

## Oystercatcher *Haematopus ostralegus*

**Key Sites:** Spurn Bight, Cleethorpes to Grainthorpe, Pyewipe, Cherry Cobb.

**EC Wild Birds Directive:** Listed in Annex II/2.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	Insufficient data	Insufficient data	Insufficient data
<b>Wintering</b>	3,503	1.1%	0.3%
<b>Passage</b>	Insufficient data	Insufficient data	Insufficient data

### Description

Oystercatchers are the most easily spotted and distinctive of the waders which breed and over-winter in England. Whilst a large number of birds are resident breeders in Britain, their numbers are increased during the winter with migrants from Iceland and Norway. In winter the species is present around the majority of the coastline. The oystercatcher is largely associated with sandy estuaries and rocky coasts where it feeds predominantly on cockles *Cerastoderma*, mussels *Mytilus* and the small bivalve *Macoma*. Oystercatcher use their powerful bills to hammer open bivalve shells or insert the bill between the valves.

### Distribution within the Humber

In 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 from Cherry Cobb to Immingham Docks (Catley 2000). However, a small population does occur during the spring/summer in the upper Humber around Read's Island (Catley 2000).

### Breeding

Catley (2000) reported 26-29 pairs of breeding oystercatcher in 1999 based on the 1998/99 low tide count. These territories were found to be concentrated at Spurn Point and Easington Lagoons, with half of the Humber breeding population recorded at this site. However, oystercatcher breeding territories can be found at suitable locations along the Humber Estuary on the flood defence banks, adjacent saltmarsh, grassland and on adjacent terrestrial sites.

### Non-breeding

**Roosting sites:** Key roost sectors are located at Spurn, Northcoates and Cleethorpes. These roosts are important throughout the year although other sites are important for roosting during key periods. For example, the Welwick area and Sunk Island reach are important in the autumn and winter, with Cherry Cobb and Read's Island being important during the summer (Catley 2000).

**Feeding sites:** Catley (2000) reports that feeding distribution is closely linked to the distribution of key roosting sites, with birds tending to establish high tide roosts close to key feeding areas. In addition, Catley (2000) noted that the most important feeding areas throughout the year were located at Spurn and between Horse Shoe Point and Grainthorpe. These sites supported up to 66% of the total population.

### Seasonality

On the Humber Estuary an increase in numbers occurs during September with a large influx of oystercatcher arriving from the Wash (Goodall 1981; Tasker & Milsom 1979) demonstrating an interchange between the Wash and the Humber populations. Overall numbers decrease slightly through the winter but small increases may occur during hard weather. The population falls during February, March and April to a small summering and breeding population throughout May, June and July. A marked southerly passage of oystercatcher is regularly noted between July to September along the coast whilst in addition, a small westerly passage occurs on the upper Humber during July and August (Mather 1986; Catley 2000).

### Historical changes and trends

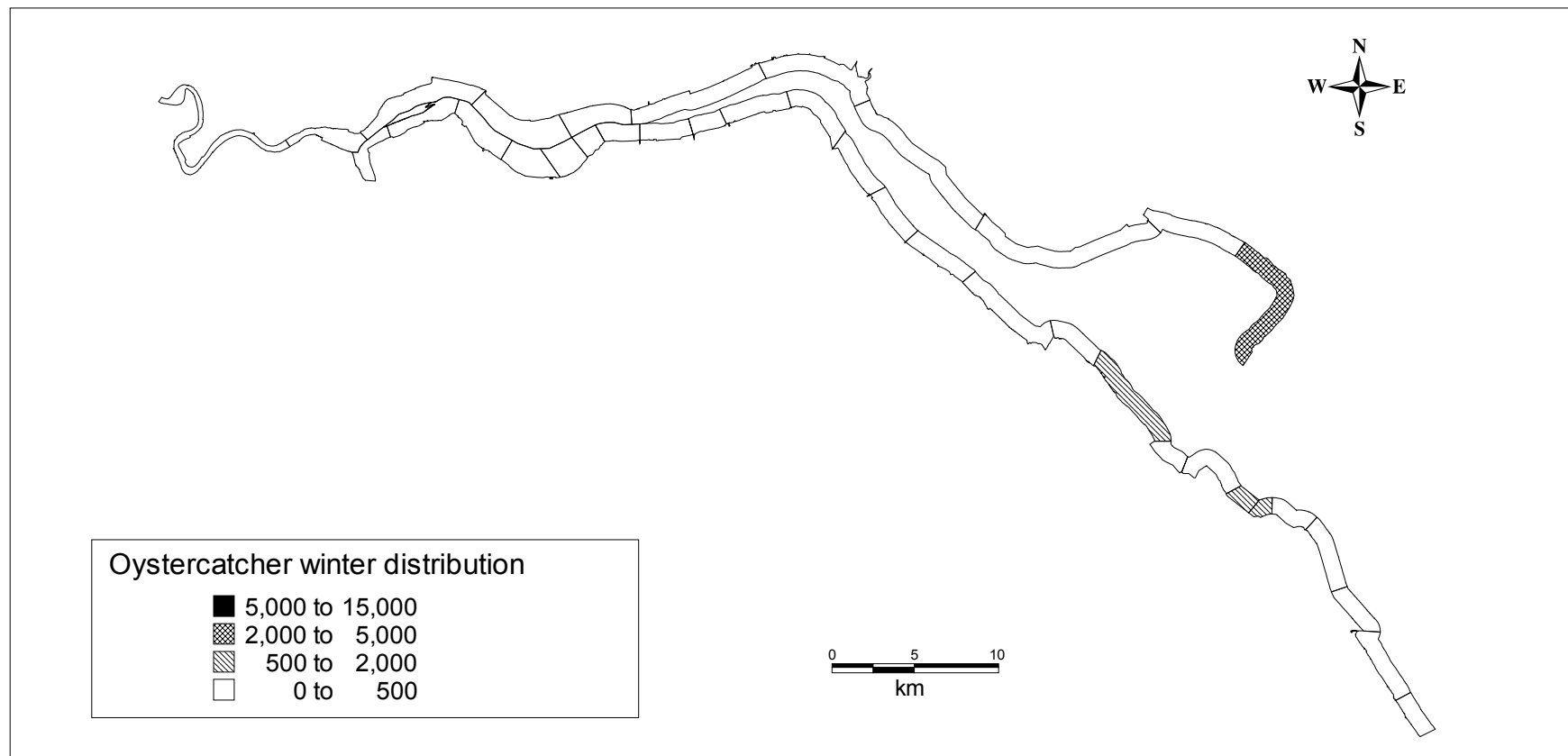
**Breeding population:** There was a rapid increase in the numbers of breeding oystercatcher in England between the 1960's and the 1980's. In the Humber, assessing any similar change is difficult given an absence of comprehensive survey data for breeding oystercatchers. However in 1979, Tasker & Milsom (1979) reported an increase in the size of the breeding population since Pashby's survey in 1969, with distribution appearing to be similar to that at present (although with an apparent increase in the number of pairs in the Spurn/Easington Lagoons area). They noted the oystercatcher as a sporadic species at Spurn with only one pair recorded breeding at the Easington Lagoons, whilst 14 pairs are thought to have bred recently in the Spurn/Easington Lagoons area.

**Non-breeding population:** Despite between-year fluctuations, the UK annual index from the Wetland Bird Survey shows a slight increase in non-breeding numbers since the 1970's with a stabilisation in recent years (Musgrove *et al* 2001). A local decline in numbers of oystercatcher has been linked to low food abundance in a numbers of estuaries. For example, during the 1990's there was a decline in wintering oystercatchers on the Wash, thought to be a result of cockle and mussel stock depletion (Taylor *et al* 2000). The Humber population has increased since the early 1970's to reach a peak number of 6,140 birds during the winter of 1993/94. Since then, peak winter counts on the Humber have seen a general decline and numbers have subsequently fallen to levels similar to those of the early 1970's.

### Conservation status

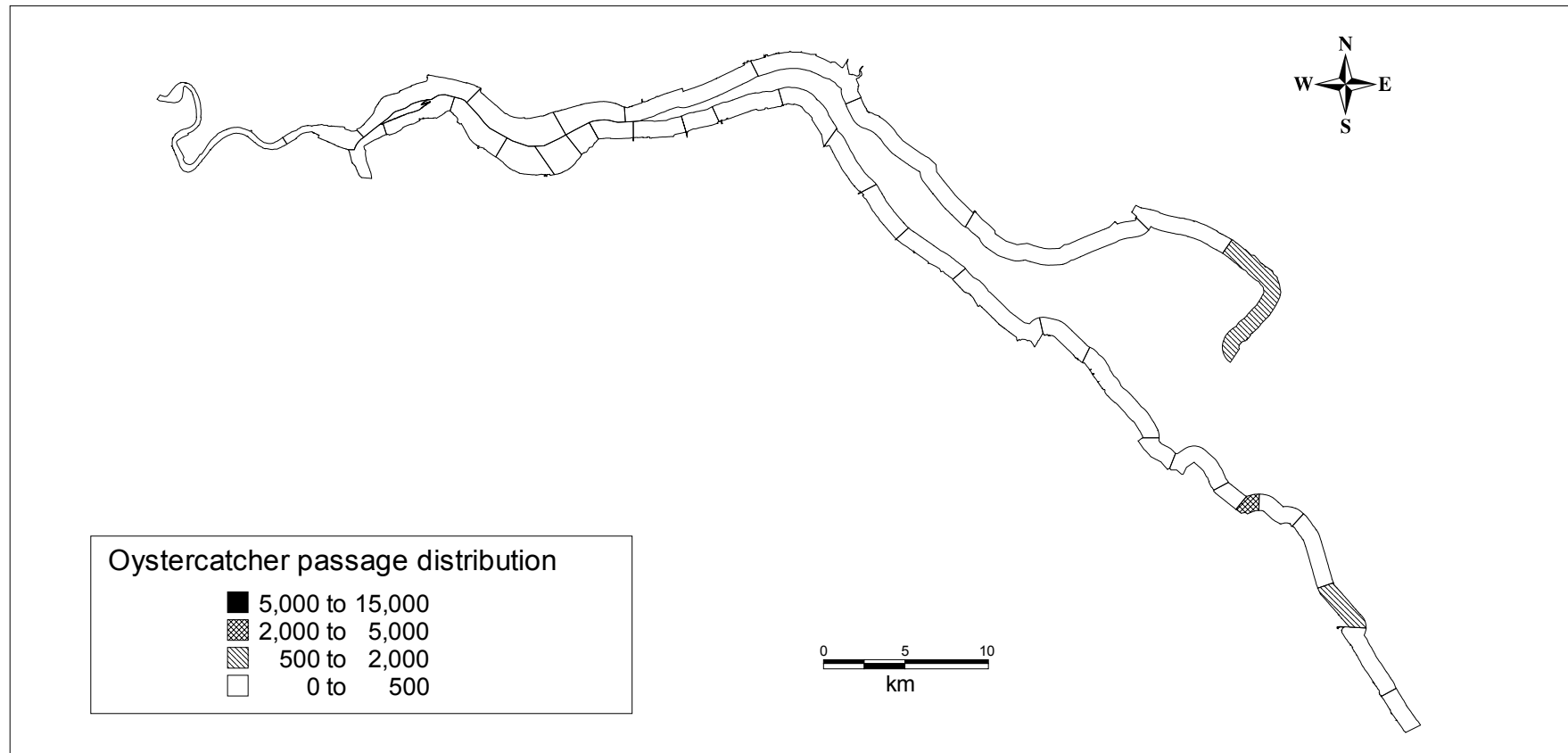
Protected under WCA 1981; Annex II/2 of EC Birds Directive; Appendix III of the Berne Convention; UK Species of Medium Conservation Concern (Amber List).

- 5 year winter peak mean of 3,503 (96/97-00/01).
- 1.1% of GB population (winter).
- 0.3% of biogeographic population (winter).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	3.75	6.00	4.00	2.25	0.25	5.75	9.75	84.33	135.33	335.25	2,036.66			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.60	0.00	0.40	0.80	16.20	3.40	0.00	0.40	0.20	0.00	1.00	0.20	0.00	5.20
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	1.00	120.00	3.60	653.40	320.00	216.00	970.66	1,130.00	233.20	23.00	49.50	79.40	17.60	

**5 year mean annual peak maxima for wintering oystercatcher by sector, Source; Core WeBS counts 1996-2001.**



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	5.33	8.00	3.33	2.00	0.75	6.50	3.00	56.00	234.00	145.33	1,177.50			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	1.60	0.20	0.60	0.25	27.00	24.80	0.00	1.00	3.20	0.80	0.75	1.25	1.60	1.40
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	1.80	56.40	2.75	490.60	439.33	130.66	26.50	2,032.50	270.60	68.50	673.00	97.25	5.80	

**5 year mean annual peak maxima for passage oystercatcher by sector, Source; Core WeBS counts 1996-2001.**

## References

\*CATLEY, G., 2000. Humber Estuary Wetland Bird Survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.

GOODALL, A.L., 1981. *The Grainthorpe wader study 1980-81*. Lincolnshire Bird Report.

MATHER, J.R., 1986. *The birds of Yorkshire. An account of their historical and present status and distribution*. London: Croom Helm Ltd.

MUSGROVE, A.J., POLLITT, M.S., HALL, C., HEARN, R.D., HOLLOWAY, S.J.  
MARSHALL, P.E. ROBINSON, J.A. & CRANSWICK, P.A., 2001. *The wetland bird survey 1999-2000: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.

\*TASKER, M. & MILSON, T.P., 1979. *Birds of the Humber Estuary*. Hull: Department of Zoology, University of Hull.

TAYLOR, M., ALLARD, P., SEAGO, M. & DORLING, D., 2000. *The Birds of Norfolk*. Sussex: Pica Press.

## Avocet *Recurvirostra avocetta*

**Key Sites:** Blacktoft Sands & Read's Island.

**EC Wild Birds Directive:** Listed in Annex I and II/2.

### Humber Population Status:

	No. of individuals/pairs	% of National Population	% of Biogeographic Population
<b>Breeding</b>	64 pairs	8.6%*	N/A
<b>Wintering</b>	59 individuals	1.7%	0.1%
<b>Passage</b>	Insufficient data	Insufficient data (National passage population not defined)	Insufficient data (Biogeographic passage population not defined)

\* National population thresholds taken from Ogilvie, M.A., & the rare breeding birds panel, 2002

### Breeding Status

Year	1998	1999	2000	2001	2002	5 year mean
<b>Numbers of pairs</b>	41	46	71	75	c.89	64.4

(Breeding numbers from I. Higginson pers comm. 2003).

### Description

In Britain, the avocet is now resident. A relatively small number of the avocets breeding in Western Europe winter along the North Sea coast, with concentrations on the south coast of the British Isles and the Netherlands while the majority move to the Atlantic coast. In England, breeding avocets favour shallow, brackish coastal lagoons, with bare or sparsely vegetated low islands (Gibbons *et al* 1993) whereas wintering birds tend to frequent estuaries in which the substratum is largely fine mud (Lack 1986). Avocets are colonial breeding birds and construct little or no nest, laying their eggs in a scrape on bare ground. Avocets feed mainly on aquatic insects and their larvae, crustaceans and worms, and are therefore closely associated with shallow, highly productive saline and brackish water around 2-5cm deep (Gibbons *et al* 1993).

### Distribution within the Humber

#### Breeding

Breeding avocets in the Humber are confined to saline lagoons. Avocets are regular breeders at Blacktoft Sands Nature Reserve where 29 pairs nested in 2002. A second colony has been recently established on Read's Island with around 60 pairs present in 2002. Given the location of the main colony, the area between Blacktoft Sands Nature Reserve and Faxfleet supports over 70% of the Humber population from March to June (Catley 2000). During the



breeding season some birds are also regularly noted on Whitton Sands and the fringing mudflats of the upper Humber, these birds being associated with the breeding colony (N.D. Cutts pers. obs. 2002).

### **Non-breeding**

At the end of the breeding season, birds from Blacktoft Sands (adults and juveniles) move down to the estuary to join the Read's Island population (Catley 2000). In 1999, a flock of 134 birds was present on Read's Island and analysis of the WeBS low tide data from 1999 shows that in July and August, Read's Island is of national importance for the species with the entire Humber population present in this area (Catley 2000).

A very low number of birds are recorded during the winter before the return of the species in March. The peaks of 82 recorded in March 2000 (Musgrove *et al* 2001) and 126 recorded in March 2001 (Pollitt *et al.*, 2003) therefore do not reflect a wintering population, but birds on passage or those returning to their breeding ground on the Humber Estuary. Catley (2000) suggests a general absence of this species from the Humber during November to January. It should be noted that the Humber is at the extremity of the wintering range.

The Humber population is therefore concentrated at Blacktoft Sands and Read's Island and records away from these two sites are not common, except on passage.

### **Seasonality**

In the Humber, avocets arrive in late February and March. Usually eggs are laid in May and most of the young fledge by late July. After the breeding season, avocets form flocks, which mostly move to wintering grounds further south. On the Humber the species is absent during the mid winter.

### **Historical changes and trends**

#### **Breeding**

Europe is estimated to hold between 26,762 and 29,435 pairs, over half of them in the Netherlands, Denmark, Spain and Turkey (Hagemeiyer & Blair 1997). Numbers in Europe have increased markedly over the course of the last century, notably since the late 1940's.

Avocets re-colonised England in 1947, with the previous record of avocets nesting in Britain dating back to around 1837. Avocets became re-established in Suffolk and until the 1970's they bred only in that county (Cadbury & Olney 1978). There has been considerable range expansion and population increase since the mid 1970's and the species now breeds regularly in Norfolk, Suffolk and Essex. 1992 marked the return of the avocet to Yorkshire (Blacktoft Sands Nature Reserve) after an absence of 155 years (RSPB 1992), benefiting from targeted conservation action at the Blacktoft RSPB Reserve, with the creation of several lagoons. Since then, the population has grown rapidly and in 2002 there were 29 pairs breeding at Blacktoft Sands with the rapid increase in colony size and active conservation measures on Read's Island allowing a further avocet colony to be established. After the creation of the saline lagoons on Read's Island the first successful breeding of avocet on the site occurred in 1990, when 15 pairs nested.

Given its nest construction and colonial status, the species can be subject to predation and extensive losses from flooding. This has been the case at Blacktoft Sands, with breeding success substantially reduced by flood events in recent years.

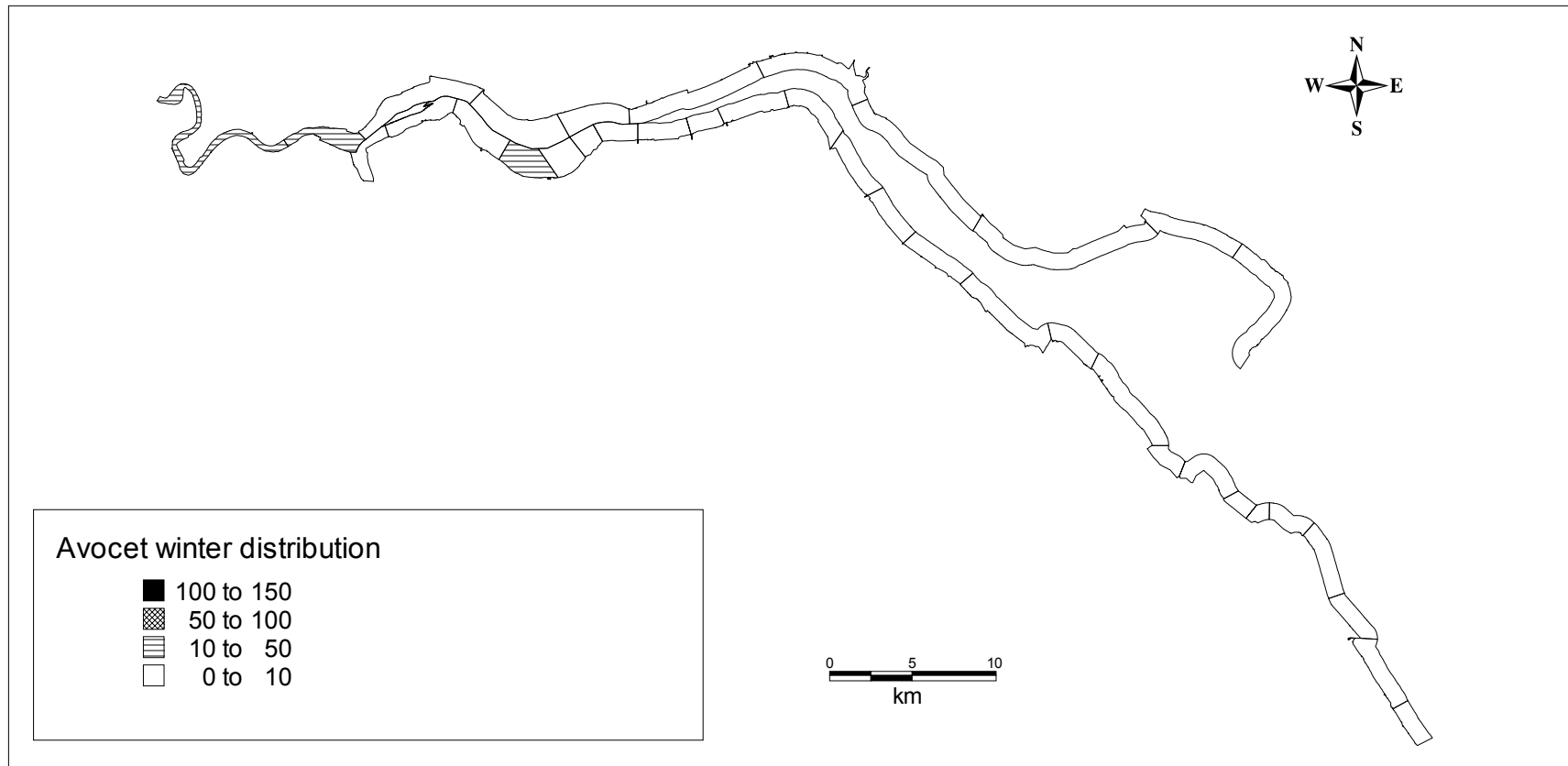
### **Non-breeding**

Regular wintering began as the birds re-colonised England, initially restricted to the south-west of England but now extending from the River Tamar in the south west, eastwards to Kent and north to Norfolk (Taylor *et al* 2000). There has been a steady increase in the total number of avocet wintering in Britain since the 1950's when they first started regular wintering (Lack 1986). Some of these wintering birds belong to the British population but others are known to come from breeding localities elsewhere in north-west Europe (Taylor *et al* 2000). In the Humber, numbers have remained low in the winter despite the increase in colony size, although passage birds during March are included in the WeBS winter totals.

### **Conservation status**

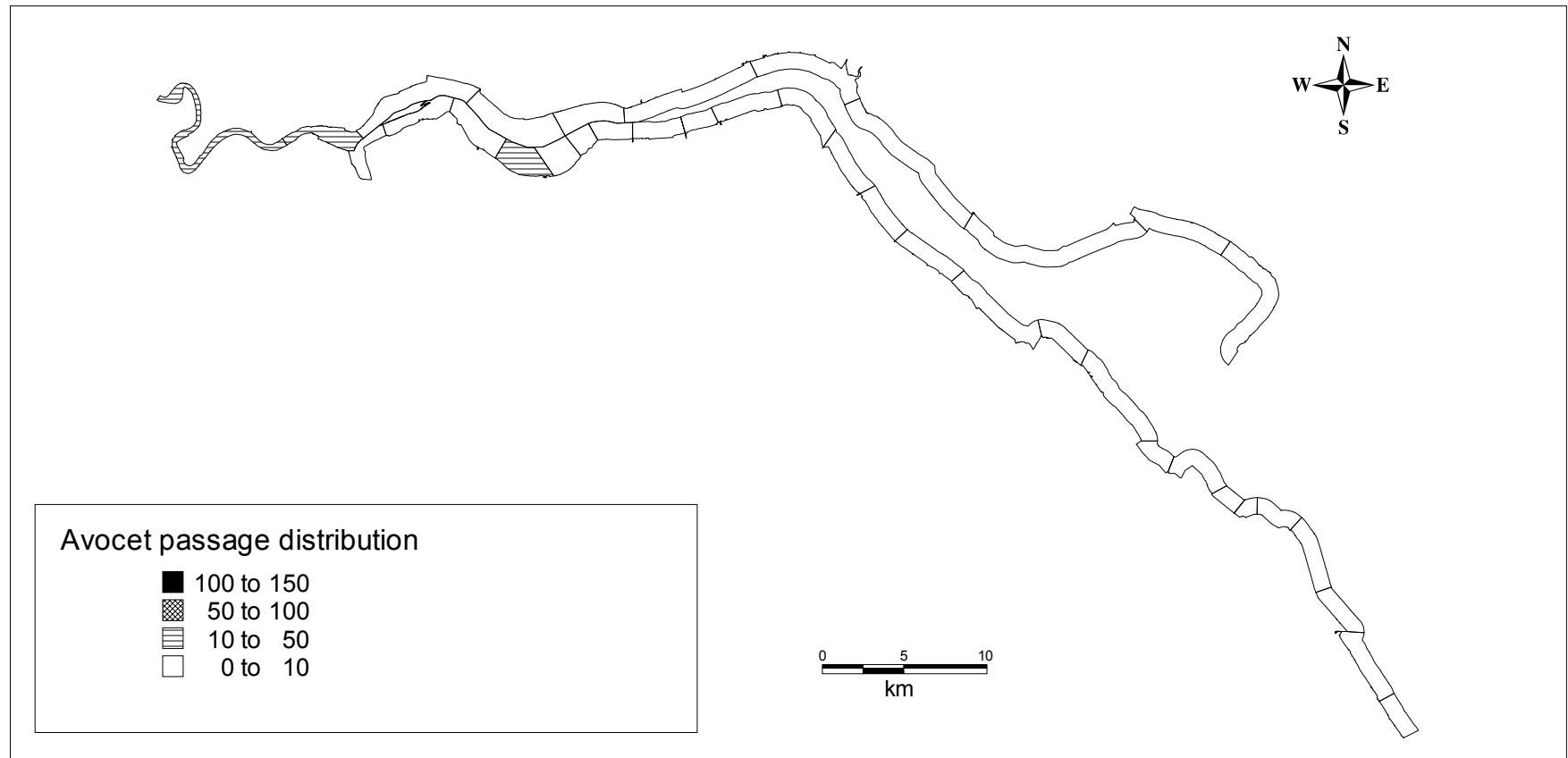
Protected under the WCA 1981; Listed in Annex I and Annex II/2 of the EC Birds Directive (79/409/EEC); Appendix II of the Bonn Convention; Appendix II of the Berne Convention; Species of European Conservation Concern (SPEC 3 & SPEC 4); UK Species of Medium Conservation Concern (Amber List).

- 5 year winter peak mean of 59 (1996/97 – 2000/01)
- 2002 maxima of c89 pairs (summer).
- 2001 maxima of 126 individuals (winter)
  
- 8.6% of GB population (breeding)
- 1.7% of GB population (winter).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	18.00	22.00	2.25	0.75	0.00	0.00	0.00	0.25	0.00	0.00	0.00			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.00	0.00	0.00	0.60	37.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.20	0.00	0.00	

**5 year mean annual peak maxima for wintering avocet by sector, Source; Core WeBS counts 1996-2001.**



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	44.00	43.00	14.50	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.33			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.00	0.00	0.00	0.25	44.00	0.00	3.60	0.00	0.00	0.20	0.00	0.00	0.00	0.00
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	

**5 year mean annual peak maxima for passage avocet by sector, Source; Core WeBS counts 1996-2001.**

## References

CADBURY, C.J. & OLNEY, P.J.S., 1978. Avocet population dynamics in England. *British Birds*, **71**, pp. 102-121.

\*CATLEY, G., 2000. Humber Estuary wetland bird survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.

CUTTS, N.D., personal observation, 2002. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.

GIBBONS, D.W., REID, J.B. & CHAPMAN, R.A., 1993. *The new atlas of breeding birds in Britain and Ireland: 1988–1991*. London: T. & A.D. Poyser.

GREGORY, R.D., WILKINSON, N.I., NOBLE, D.G., ROBINSON, J.A., BROWN, A.F., HUGHES, J., PROCTOR, D.A., GIBBONS, D.W. & GALBRAITH, C.A., 2001. The population status of birds in the United Kingdom, Channel Islands and Isle of Man: an analysis of conservation concern 2002-2007. *British Birds*, **95**, pp. 410-450.

HAGEMEIYER, W.J.M. & BLAIR, M.J., eds., 1997. *The EBCC atlas of European breeding birds: their distribution and abundance*. London: T. & A.D. Poyser.

HIGGINSON, I., personal communication, 2003. RSPB Blacktoft Sands Nature Reserve, Hillcrest, High Street, Whitgift, Goole, East Yorkshire, DN14 8HL.

LACK, P., 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.

MATHER, J.R., 1986. *The birds of Yorkshire*. An account of their historical and present status and distribution. London: Croom Helm Ltd.

MUSGROVE, A., POLLIT, M., HALL, C., HEARN, R., HOLLOWAY, S., MARSHALL, P., ROBINSON, J. & CRANSWICK, P., 2001. *The Wetland Bird Survey 1999-2000 Wildfowl and Wader Counts*. Slimbridge: BTO/WWT/RSPB/JNCC.

OGILVIE, M.A. & THE RARE BREEDING BIRDS PANEL, 2002. *Rare Breeding Birds in the United Kingdom in 2000*. *British Birds* **95** pp542-582.

POLLITT, M.S., HALL, C., HOLLOWAY, S.J HEARN, R.D., MARSHALL, P.E. ROBINSON, J.A., MUSGROVE, A., ROBINSON, J., & CRANSWICK, P.A., 2003. *The wetland bird survey 2000-2001: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.

RSPB, 1992. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report for 1991-92*. Royal Society for the Protection of Birds, UK.

RSPB, 2002. RSPB Blacktoft Sands Nature Reserve. *Ornithological Report for 2001*. Royal Society for the Protection of Birds, UK.

TAYLOR, M., ALLARD, P., SEAGO, M. & DORLING, D., 2000. *The birds of Norfolk*.  
Mountfield: Pica Press.

## Ringed plover *Charadrius hiaticula*

**Key Sites:** Pyewipe, Saltend and Cleethorpes to Buck Beck.

EC Wild Birds Directive: Not listed.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	Insufficient data	Insufficient data	Insufficient data
<b>Wintering</b>	403	1.2%	0.6%
<b>Passage</b>			
<b>Spring</b>	796	2.7%	0.4%
<b>Autumn</b>	1,766	5.9%	0.9%

### Description

The ringed plover breeds along the Arctic shores of eastern Canada, Greenland and Eurasia as well as in Iceland, Scandinavia and Western Europe. The species is migratory with only the British populations being partially resident. In winter, numbers are bolstered by the arrival of birds from the continent. Ringed plover breed around all low coasts in Britain and Ireland (Gibbons *et al* 1993) nesting on shingle or sand by the coast and occasionally on inland sites such as gravel pits. In winter they are attracted to mudflats and muddy beaches where they feed on small shellfish, molluscs, worms and insects.

### Distribution within the Humber

Ringed plover use the Humber in large numbers during migration periods, with a smaller wintering population and only a few breeding pairs.

### Breeding

Breeding birds are generally located in five areas of the estuary with 47 pairs using the Humber in 1999 (Catley 2000). The principal site, with more than 30 pairs in 1999, was the Spurn area. Nesting occurred along the shingle supralittoral zone on the Bight and at Beacon Ponds. Occasional pairs breed elsewhere on the estuary where conditions are suitable, including artificial habitats such as extensive gravelled areas (e.g. Saltend Chemical Works).

### Non-breeding

**Roosting sites:** Catley (2000) identified four main roosts in the Humber Estuary holding more than 20 birds. These were located in the following sectors: Pyewipe to Buck Beck, Cleethorpes to Humberston Fitties, Whitton to Chowderness and Spurn Bight. Additional high water roost sites on the north bank are located near a derelict jetty at West Wharf (Hull) and at Saltend. This latter roost has recently been established and is located on the recently constructed bunds and infill material associated with the Queen Elizabeth Dock Extension Project. This site regularly attracts around 100 individuals over the winter and up to 500 individuals during passage (N.D. Cutts pers. obs. 2002). Birds from these two roosts

disperse with the falling tide, particularly moving to the east, onto the mudflats at Saltend and Cherry Cobb. Small roosts can also be found on flood banks and adjacent arable fields around the estuary as well as on derelict industrial sites (N.D. Cutts pers. obs. 2002).

**Feeding sites:** The low tide count programme along the Humber Estuary recorded ringed plover in higher numbers than the WeBS core (high tide) counts, suggesting that some high water roosts are being missed during the census. Distribution within the estuary changes with the seasons. Many sectors support a feeding wintering population while some hold important numbers during passage. Wintering birds favour the intertidal area between Pyewipe and Buck Beck, with this area also being an important site in the autumn. Further out on the south shore, large numbers of ringed plover occur during spring passage. On the north bank, the Saltend site has recently become important for the species, supporting nationally important numbers during passage, in addition to a regionally important wintering flock (mean annual peak maxima of 166 individuals between 1997 and 2002) representing perhaps a third of the Humber population (IECS 2002).

### **Seasonality**

Ringed plovers return migration through the Humber is usually experienced in August and September, although movement through the estuary commences in mid July and continues into early October with wintering birds arriving in November. Spring migration starts in late April, peaks in mid to late May, with some movement still recorded in early to mid June (Catley 2000).

### **Historical changes and trends**

In recent years the species' distribution has spread inland, especially in England, most likely associated with the increase in the number of gravel pits and reservoirs (Gibbons *et al* 1993). Populations wintering on estuaries have remained constant since at least the 1970's (Musgrove *et al* 2001).

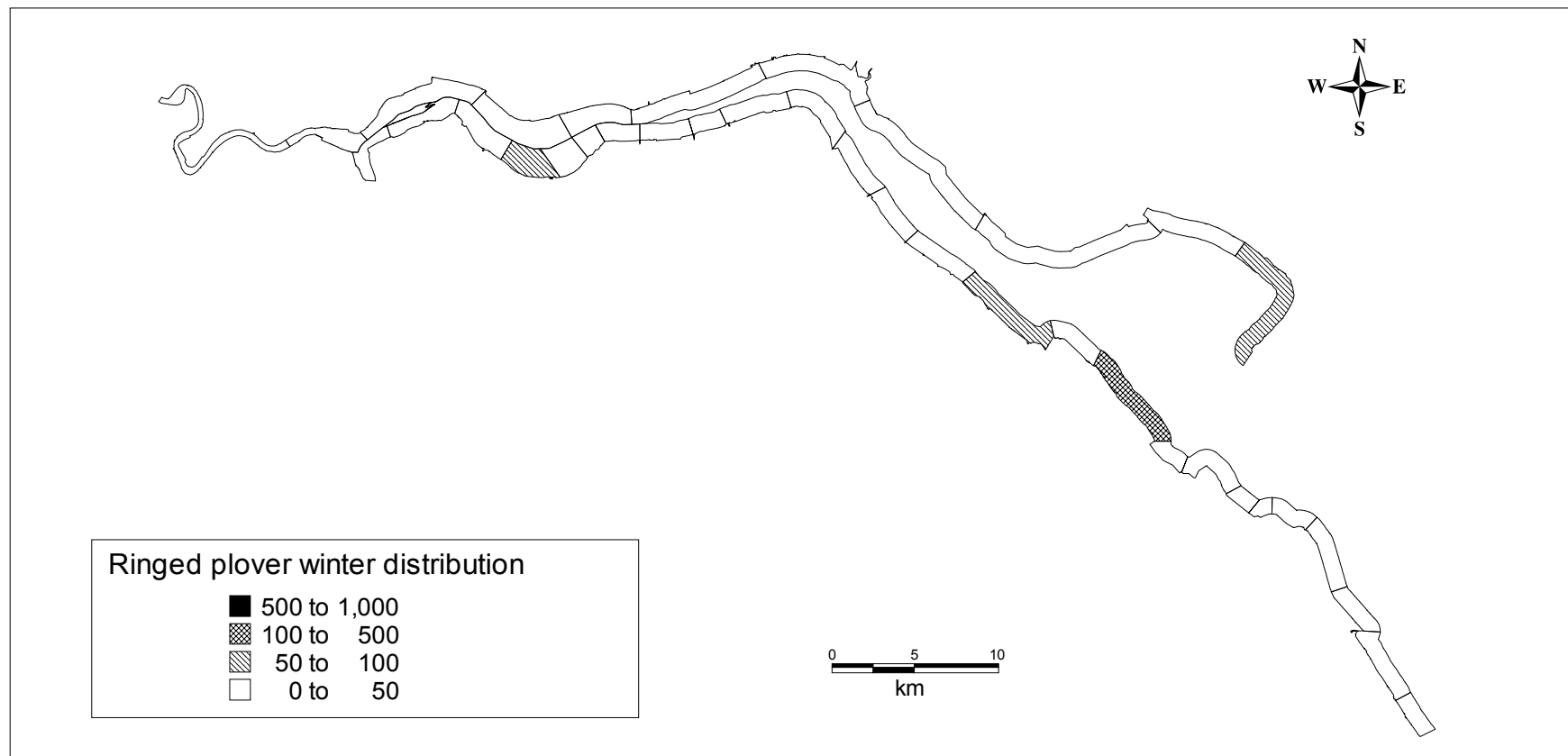
On the Humber, there appears to have been an increase in the number of wintering birds in the last few years, with a 1989-1994 peak mean of 313 birds (Cranswick *et al* 1995) and a 1996/97-2000/01 peak mean of 403 birds. Peak numbers for the last 3 years were the highest of the decade with a 3 year mean annual peak (1998/99 – 2000/01) maxima of 460 birds.

### **Conservation status**

Protected under WCA 1981; EC Birds Directive (79/409/EEC); Appendix II of the Berne Convention; Appendix II of the Bonn Convention; UK Species of Medium Conservation Concern (Amber List).

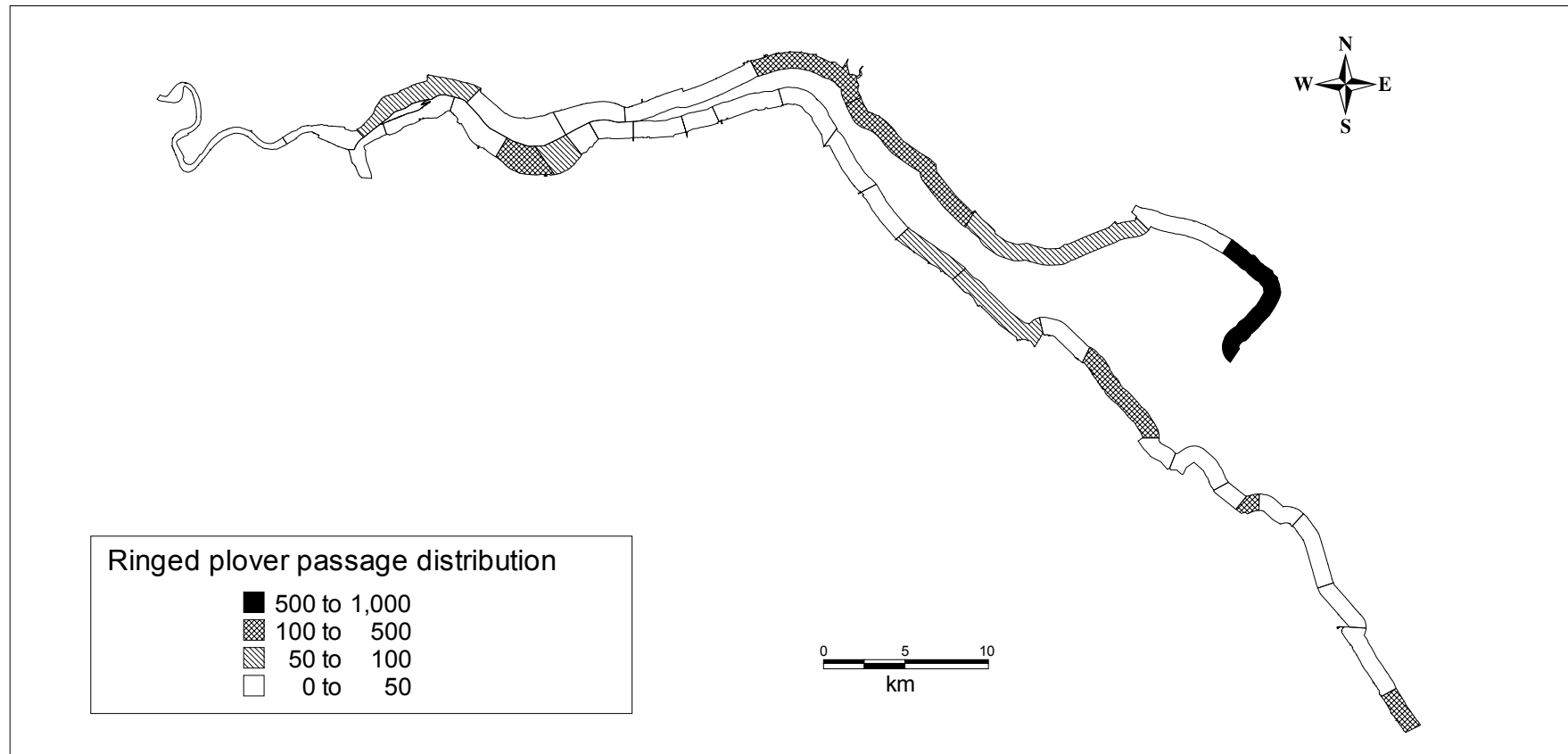
- 5 year winter peak mean of 403 (winter 96/97-00/01); 5 year passage peak mean of 1,766 (autumn 96/97-00/01).
- 2000/01 maxima of 409 (winter) and 1,818 (autumn passage).
- 1.2% of GB population (winter) 5.9% of GB population (autumn passage).
- 0.6% of biogeographic population (winter) 0.9% of biogeographic population (autumn).





North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	0.50	1.00	2.25	7.25	4.00	13.50	44.25	9.00	2.00	0.00	61.30			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.40	0.00	0.00	12.40	59.80	11.20	0.00	0.00	0.00	0.00	0.80	9.00	7.60	14.60
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	12.60	73.60	1.20	162.00	24.00	28.00	0.20	0.00	4.00	5.80	13.60	35.00	22.60	

**5 year mean annual peak maxima for wintering ringed plover by sector, Source; Core WeBS counts 1996-2001.**



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	13.00	10.00	98.33	10.00	4.50	16.75	105.00	473.00	50.33	0.50	602.00			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	5.00	0.00	0.00	0.00	325.20	50.00	0.00	0.00	0.00	4.00	1.80	3.40	21.25	48.00
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	77.50	70.40	1.00	281.20	19.50	28.67	0.00	117.00	9.00	10.25	28.20	46.75	116.20	

**5 year mean annual peak maxima for passage ringed plover by sector, Source; Core WeBS counts 1996-2001.**

## References

- \*CATLEY, G., 2000. Humber Estuary Wetland Bird Survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.
- CRANSWICK, P.A., WATERS, R. J., EVANS, J. & POLLITT, M.S., 1995. *The wetland bird survey 1993-1994: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- CUTTS, N.D., personal observation, 2002. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.
- GIBBONS, D.W., REID, J.B. & CHAPMAN, R.A., 1993. *The new atlas of breeding birds in Britain and Ireland: 1998-1991*. London: T. & A.D. Poyser.
- IECS, 2002. *Ornithological Monitoring, Saltend: Summary Trend Report #12 October 2000 to December 2000*. Hull: Institute of Estuarine and Coastal Studies (IECS), University of Hull. Report to SCCL.
- MUSGROVE, A.J., POLLITT, M.S., HALL, C., HEARN, R.D., HOLLOWAY, S.J. MARSHALL, P.E. ROBINSON, J.A. & CRANSWICK, P.A., 2001. *The wetland bird survey 1999-2000: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- POLLITT, M.S., HALL, C., HOLLOWAY, S.J HEARN, R.D., MARSHALL, P.E. ROBINSON, J.A., MUSGROVE, A., ROBINSON, J., & CRANSWICK, P.A., 2003. *The wetland bird survey 2000-2001: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.

## Golden plover *Pluvialis apricaria*

**Key Sites:** Brough, Winteringham, Saltend, Cherry Cobb, Welwick, Pyewipe.

**EC Wild Birds Directive:** Listed in Annex I, II/2 and III/2.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	N/A	N/A	N/A
<b>Wintering</b>	30,709	12.3%*	3.8%
<b>Passage</b>			
<b>Spring</b>	382	Insufficient data	0%
<b>Autumn</b>	17,996	(National passage population not defined)	2.2%

\*Threshold taken from Cayford and Waters (1996) as cited in Stroud *et al.*, (2001)

### Description

The golden plover is a Palearctic wader, breeding in northern latitudes from Iceland to central Siberia and Greenland, also including upland areas in northern Britain. The golden plover is partially migratory in the UK and wholly migratory elsewhere in its range, with large flock movements from their northern breeding grounds to winter in the British Isles, the Low Countries and the Iberian Peninsula during the autumn. In most parts of Britain, grassland is the preferred feeding habitat, but in northern England, Wales and Northern Ireland, feeding and roosting occurs on intertidal mudflats in addition to inland feeding (Lack 1986).

Prey items vary between habitats, with insects, worms and plants taken on inland sites and molluscs thought to be taken on intertidal mudflats.

### Distribution within the Humber

#### Non-breeding

The Humber and the Wash are the only estuaries in the UK which support internationally important wintering populations of golden plover (Pollitt *et al.*, 2003). Golden plover occur in fairly large numbers in fields around the estuary but with a sizeable majority on the intertidal mudflats, particularly during migration periods (Tasker & Milsom 1979). This latter usage may reflect the reduced availability of terrestrial habitats with standing crops present. Golden plover show significant diurnal movements within the estuary as well as leaving the estuary for more terrestrial feeding areas, with usage on the Humber found to be higher at low tide (Catley 2000) with birds dispersing on adjacent farmland at high tide to roost or feed. The intertidal areas of the Humber are therefore important as roosting and loafing sites for this species, with feeding often undertaken some distance inland.

In the upper estuary, major concentrations occur at Trent Falls and between Whitton Sand and Brough on the north bank, with around 4000 birds regularly present. They are also

present around Winteringham Haven to South Ferriby, including Read's Island on the south shore (N.D. Cutts pers. obs. 2001; Catley 2000) although it is not clear whether these are separate populations. A substantial high water roost of national importance can occur on Brough Airfield, with arable fields on Broomfleet Island also used. In addition, a population uses the Howdendyke area, with movement from the Howdendyke Lee roost onto adjacent fields to roost and feed depending on tide, with up to *c.* 1000 individuals having been recorded on this site (N.D. Cutts pers. obs. 2001; B. Greenacre pers. comm. 2002). It is unclear whether these birds use the main mudflats of the estuary on occasion, although during rising tides, flocks have been observed moving off the Whitton Sand and moving inland up the River Ouse past Faxfleet, although the ultimate destination of these birds is unknown (N.D. Cutts pers. obs. 2001).

East of the Humber Bridge large numbers of golden plover frequent the area between New Holland and East Halton Skitter on the south shore. This includes the fields of the Grues and between Saltend and Sunk Island on the north bank, as well as the fields between Saltend and Paull and Cherry Cobb Outstray. The latter concentration is usually the largest on the estuary with in excess of 10,000 birds regularly recorded in November/December (IECS 1999a; Catley 2000), although movement of this flock, or part of it, across the estuary onto the Grues area regularly occurs (N.D. Cutts pers. obs. 2001). A further distinct flock is also regularly recorded in the outer estuary, with flocks of national importance recorded on the Welwick to Easington reach and on the Pyewipe mudflat on the south bank. Again it is unclear whether movements occur between these two sites, or whether movement is laterally along the banks. Adjacent fields are used as high water roosts, including the arable field immediately downstream from the Stallingborough power station (N.D. Cutts pers. obs. 2001).

Each of the individual golden plover flocks outlined above are regularly recorded in excess of the nationally important qualifying threshold, whilst on occasion, flocks in the middle Humber may represent a third of the total Humber peak population, 5% of the UK total population and well over 50% of the international importance qualifying threshold (IECS 2002a).

The waterfowl feeding study along the south bank in 1989/1990 (Eco Surveys 1991) found that flocks used the intertidal zone as a day time roost when mud was available and that the only stretch on which birds fed in any numbers was Grainthorpe. Monitoring by IECS, predominately on the north bank, has identified a broadly similar pattern, however some feeding has been observed on the mudflats, particularly during the period of initial arrival onto the intertidal zone during the ebb tide phase, with up to 10% of over-wintering flocks feeding, this increasing to perhaps 25% for passage flocks.

On the Humber, there is considerable interchange between flocks within different areas of the estuary, including between banks (flock ranges), and this tends to complicate any specific area based analysis (Catley 2000). However, the area between Saltend and Welwick generally supports half of the Humber population during the autumn and winter. Monitoring by IECS has regularly recorded flocks of national importance at Saltend and on Foulholme Sands, with interchange between the two sites observed (N.D. Cutts pers. obs. 2001; L. Mander pers. obs. 2002). However, despite some degree of flock movement around the estuary, the species tend to be faithful to only a few key areas for feeding and roosting. These areas tend to be situated in large areas of agricultural land, or on extensive intertidal mudflats, and as such have been subject to relatively few long-term disruption events. Thus

the propensity of the species to respond to habitat modification or to colonise new areas is not well understood, particularly given the relatively short time the species has been present in any significant numbers on the estuary. However the individual flocks within the Humber do appear to have several preferred sites or 'flock ranges' within their range, with flexibility to use these depending on external factors such as prey availability, crop status and level of disturbance activity (IECS 1999b).

### **Seasonality**

The species arrives on the Humber during July (with early returns in late June) with birds then undergoing moult. Numbers build-up progressively in the early autumn, but often with a small drop during October as passage flocks move on, followed by the arrival of larger wintering flocks into the Humber during November. This period of peak usage is maintained into January although this depends on weather conditions, as in extreme hard weather conditions birds move south westwards and may even leave Britain, and numbers can therefore be at their lowest during hard weather in the Humber (Tasker & Milsom 1979). Alternatively, cold weather to the north can cause an influx of flocks into the Humber Estuary, whilst warm winters can mean an early departure in January. Only small numbers use the Humber on spring passage, but significant passage flocks occur during the autumn.

Seasonal variations in the number of birds recorded by sector do occur and analysis of WeBS low tide count data (Catley 2000) showed that the New Holland to East Halton sectors produced significant low tide totals in September through November but not thereafter. Pyewipe by contrast was clearly of greater importance during the winter period. Indeed, IECS monitoring at Saltend and Cherry Cobb has seen significant intra-monthly variations in usage during the winter, with flock variation ranging from well in excess of national importance to a near absence during consecutive bi-weekly surveys, often with a flock interchange identified between the two sites (IECS 2001 & 2002b).

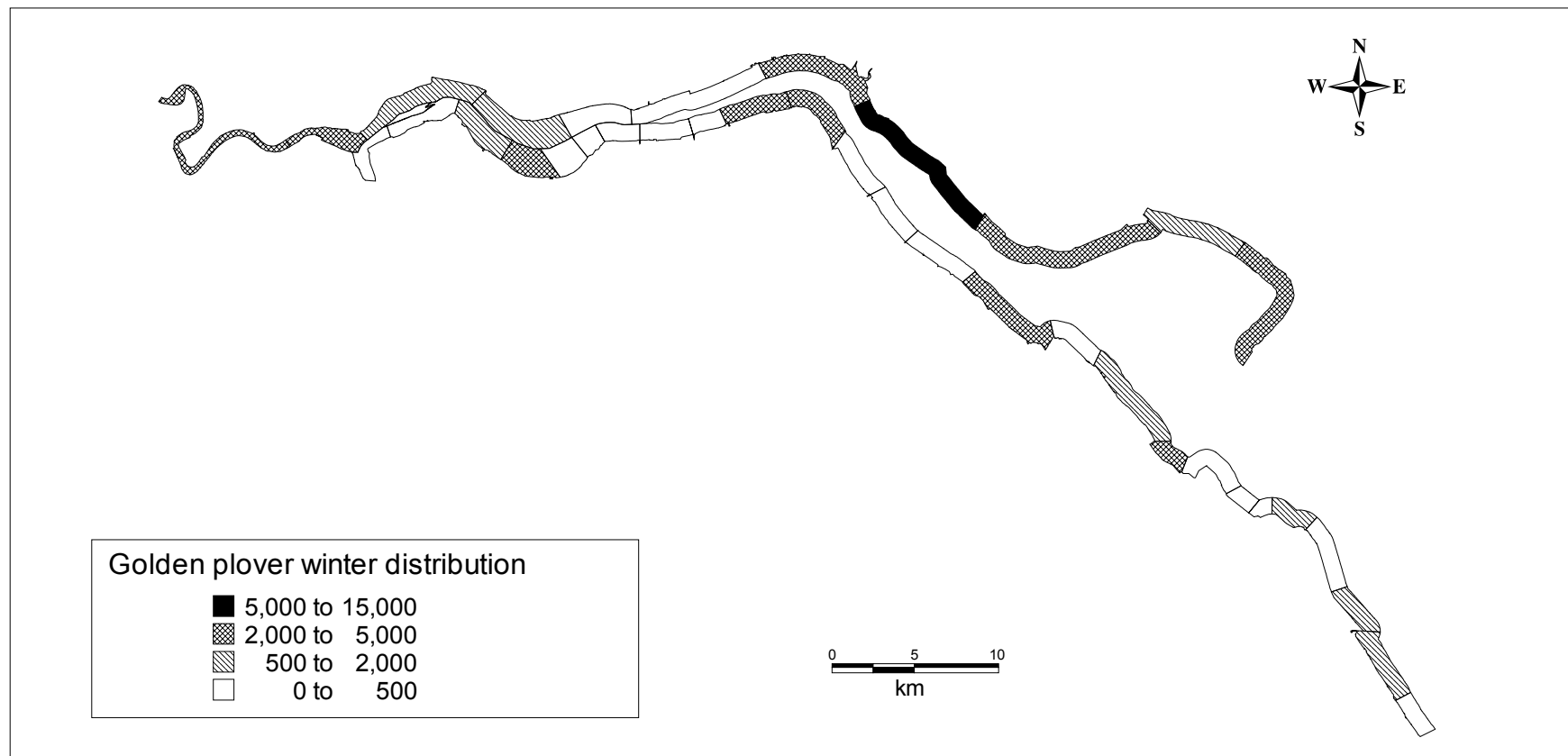
### **Historical changes and trends**

The weather and particularly the temperature strongly influence the winter distribution and abundance of golden plover in the UK (Kirby & Lack 1993). Large fluctuations occur in the Humber from one season to another, however, despite this, the population has shown a huge increase of 1500% since the mid 1980's to the present level. Before 1983 the population of golden plover on the Humber was below 2,000 individuals and the estuary ranked 8th in terms of importance (Salmon 1983). A trend of increasing numbers along the east coast occurred thereafter with the Forth, the Wash, Blackwater and the Humber recording notable increases in the late 1980's and early 1990's. However in recent years declines have been noted in the British population, although the 1999/00 WeBS maxima was the highest recorded (Musgrove *et al* 2001).

### **Conservation status**

Protected under Schedule 2 Part 1 and Schedule 3 Part 3 of WCA 1981; Listed in Annex I, Annex II/2 and Annex III/2 of EC Birds Directive (79/409/EEC); Appendix II of the Bonn Convention; Appendix III of the Berne Convention; Species of European Conservation Concern (SPEC 4); UK Species of Medium Conservation Concern (Amber List).

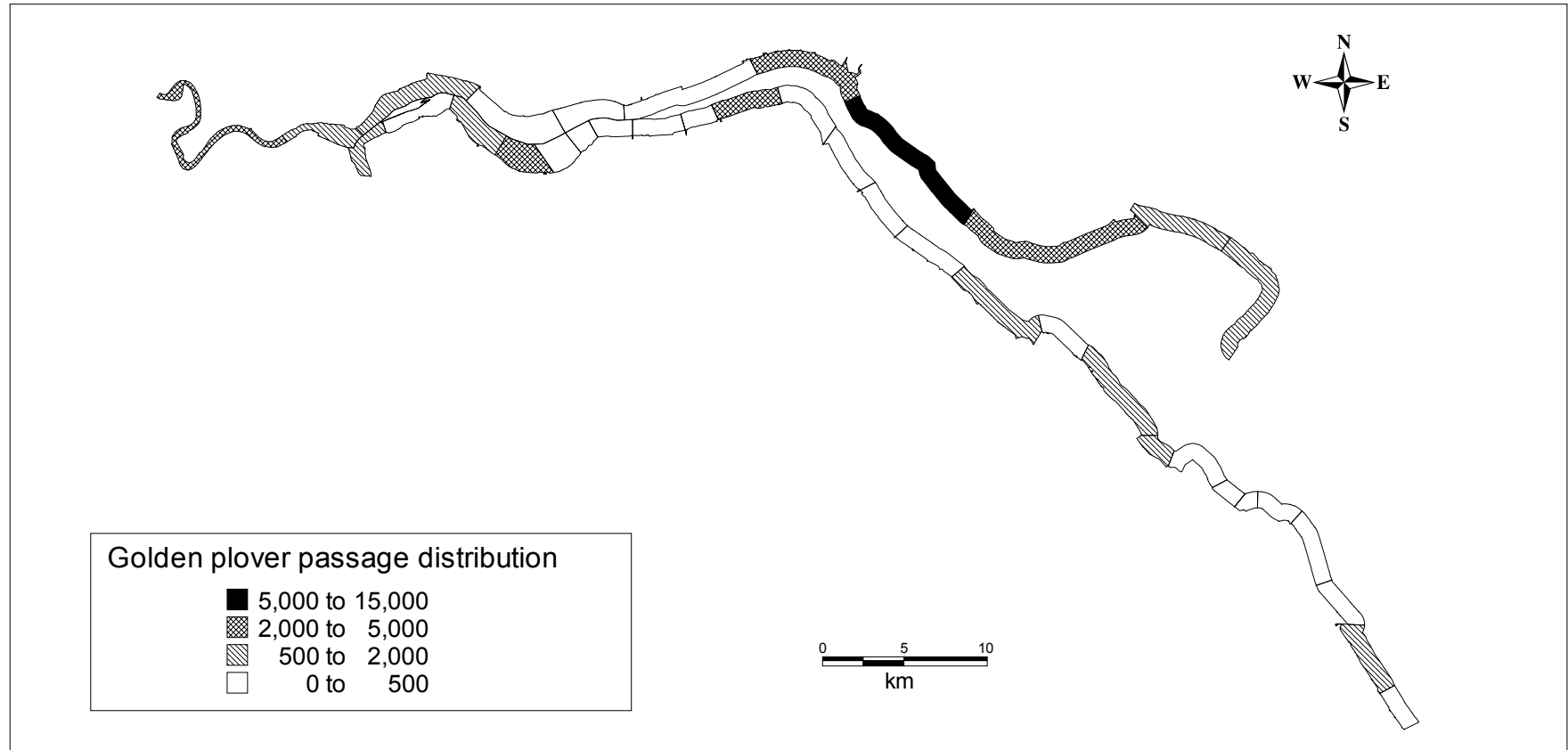
- 5 year winter peak mean of 30,709 (96/97-00/01); 5 year passage peak mean of 17,996 (autumn 96/97 – 00/01).
- 2000/01 maxima of 38,494 (autumn passage).
  
- 12.3% of GB population (winter).
- 3.8% of biogeographic population (winter).
- 2.2% of biogeographic population (autumn passage).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	2,025.00	3,250.00	1,807.50	1,225.00	1.50	0.00	3,496.25	10,883.33	4,199.50	1,053.33	2,984.00			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	317.80	0.00	0.00	589.00	2,330.00	60.00	117.40	25.20	85.60	34.60	3,325.00	2,410.00	318.20	3.20
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	2,766.00	0.00	1,744.00	2,135.00	481.00	16.00	50.00	981.20	221.25	1,801.60	1,886.60	441.40	

**5 year mean annual peak maxima for wintering golden plover by sector, Source; Core WeBS counts 1996-2001.**





North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	2,310.00	950.00	1,426.75	237.00	0.75	0.00	2,235.25	7,595.50	2,221.00	1,250.00	1,947.25			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	800.00	0.00	0.00	833.60	2,360.00	304.00	0.00	0.00	0.00	0.20	2,223.33	40.80	242.80	0.20
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	778.60	0.00	722.00	653.33	55.40	147.75	292.00	202.00	188.25	129.00	919.00	46.40	

**5 year mean annual peak maxima for passage golden plover by sector, Source; Core WeBS counts 1996-2001.**

## References

- \*CATLEY, G., 2000. Humber Estuary wetland bird survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.
- CUTTS, N.D., personal observation, 2001. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.
- \*ECO SURVEYS, 1991. *Winter wildfowl and wader feeding area study along the Lincolnshire and South Humberside Coast*. Report to the National Rivers Authority.
- GREENACRE, B., personal communication, 2002.
- IECS, 1999a. *Middle Humber avifaunal usage*. Hull: Institute of Estuarine and Coastal Studies, University of Hull. Report to Stevenson & Wheeler.
- IECS, 1999b. *Avifaunal Disturbance Assessment: Flood Defence Work, Saltend*. Hull: Institute of Estuarine and Coastal Studies, University of Hull. Report to the Environment Agency.
- IECS, 2001. *Ornithological Monitoring, Saltend: Summary Trend Report #10 July to September 2000, Autumn passage*. Hull: Institute of Estuarine and Coastal Studies, University of Hull. Report to CES.
- IECS, 2002a. *Thorngumbald managed realignment: Review of avifaunal usage data*. Hull: Institute of Estuarine and Coastal Studies, University of Hull.
- IECS, 2002b. *Ornithological Monitoring, Thorngumbald: Summary Trend Report #3 July to September 2002, Autumn passage*. Hull: Institute of Estuarine and Coastal Studies, University of Hull. Report to the Environment Agency.
- KIRBY, J.S. & LACK, P.C., 1993. Spatial dynamics of wintering lapwings and Golden Plover in Britain and Ireland, 1981/82 to 1983/84. *Bird Study*, **40**, pp. 38-50.
- LACK, P., 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.
- MANDER, L., personal observation, 2002. Institute of Estuarine & Coastal Studies (IECS), University of Hull, Cottingham Road, Hull, HU6 7RX, UK.
- MUSGROVE, A., POLLIT, M., HALL, C., HEARN, R., HOLLOWAY, S., MARSHALL, P., ROBINSON, J. & CRANSWICK, P., 2001. *The wetland bird survey 1999-2000 wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- POLLITT, M.S., HALL, C., HOLLOWAY, S.J HEARN, R.D., MARSHALL, P.E. ROBINSON, J.A., MUSGROVE, A., ROBINSON, J., & CRANSWICK, P.A., 2003. *The wetland bird survey 2000-2001: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.

SALMON, D.G., 1983. *Wildfowl and wader counts 1982-1983. The results of the national wildfowl counts and birds of estuaries enquiry*. Slimbridge: The Wildfowl Trust.

STROUD, D.A., CHAMBERS, D., COOK, S., BUXTON, N., FRASER, B., CLEMENT, P., LEWIS, P., MCLEAN, I., BAKER, H. & WHITEHEAD, S., eds., 2001. *The UK SPA network: its scope and contents. Volume 2 Species Accounts*. Peterborough: JNCC.

\*TASKER, M. & MILSOM, T.P., 1979. *Birds of the Humber Estuary*. Hull: Department of Zoology, University of Hull.

## Grey plover *Pluvialis squatarola*

**Key Sites:** Spurn Bight, Tetney, Grainthorpe and Saltfleet basins.

**EC Wild Birds Directive:** Listed in Annex II/2.

### Humber Population Status:

	No. of individuals	% of National Population	% of Biogeographic Population
<b>Breeding</b>	N/A	N/A	N/A
<b>Wintering</b>	1,704	3.2%	0.7%
<b>Passage</b>			
<b>Spring</b>	1,035	1.5%*	0.4%
<b>Autumn</b>	1,590	2.3%*	0.6%

\*Threshold taken from Stone *et al.*, (1997)

### Description

Grey plover are bigger than golden plover and have a much greyer plumage. They breed in high Arctic areas beyond Europe but occur widely at coastal sites during winter. In England they are common migrants and winter visitors to most coastal areas but rarely occur inland. In England, 90% of the British wintering population occurs on estuaries (Batten *et al* 1990). Grey plover are concentrated on the larger and muddier estuaries in the south east and north west of England (Lack 1986). They feed mainly on the middle and upper shore levels on estuaries where individuals are usually well dispersed, feeding at lower densities than many other species. They take a wide variety of burrowing intertidal invertebrates, requiring large, open mudflats.

### Distribution within the Humber

#### Non-breeding

In the Humber Estuary, grey plover are essentially birds of the tidal mudflats of the outer estuary, particularly from Spurn to Paull and from Cleethorpes to Grainthorpe. In the inner estuary, beyond a demarcation line from Cleethorpes to Cherry Cobb, grey plover are much less regularly recorded, although small flocks are recorded at Pyewipe.

**Feeding Sites:** On the south bank, the preferred areas are the Tetney, Grainthorpe and Saltfleet basins, with smaller numbers around and between these sites (Eco Surveys 1991). On the north shore of the Humber, high numbers occur between Paull to Spurn Bight (Tasker & Milsom 1979). Catley (2000) identified Sunk Island and Spurn (Sectors NH and K) as having good consistent numbers of feeding birds throughout the year. However distribution within these large sectors varied. The study by Tasker & Milsom (1979) found that within Spurn Bight, there was a change in feeding distribution between the seasons and years. However, the reasons for this were not clear and could be related to several factors including substratum type or a varying distribution of food supply.

**Roosting Sites:** Grey plover can be seen at high tide roosts around the north and south shores of the outer Humber where flocks of many hundreds are recorded. Tasker & Milsom (1979) reported that the majority of roosting birds used an area located on Spurn Bight, although Welwick was also of particular importance. Recent low water counts reported by Catley (2000) also show the importance of Cherry Cobb on the north shore as a roosting site, but with large flocks (100's) of roosting grey plover also found on the Sunk Island reach, Welwick and Spurn. The Welwick sector at high water, produced a count of 2000 birds in autumn 1998. Large roosting sites are also located in the Cleethorpes sectors and around North Cotes on the south shore (Catley 2000).

### **Seasonality**

Non-breeding birds are the first autumn arrivals, followed by breeding adults and juveniles, with numbers rapidly building up through August to a September/October peak. Numbers thereafter steadily decline due to a small southerly movement, with numbers rising again in January, probably due to movement across the North Sea of birds which have moulted on the Wadden Sea (Eco Surveys 1991). Numbers build up rapidly from March to May as birds arrive on spring passage. Return migration takes place in May and is on the same scale as the autumn migration (Catley 2000).

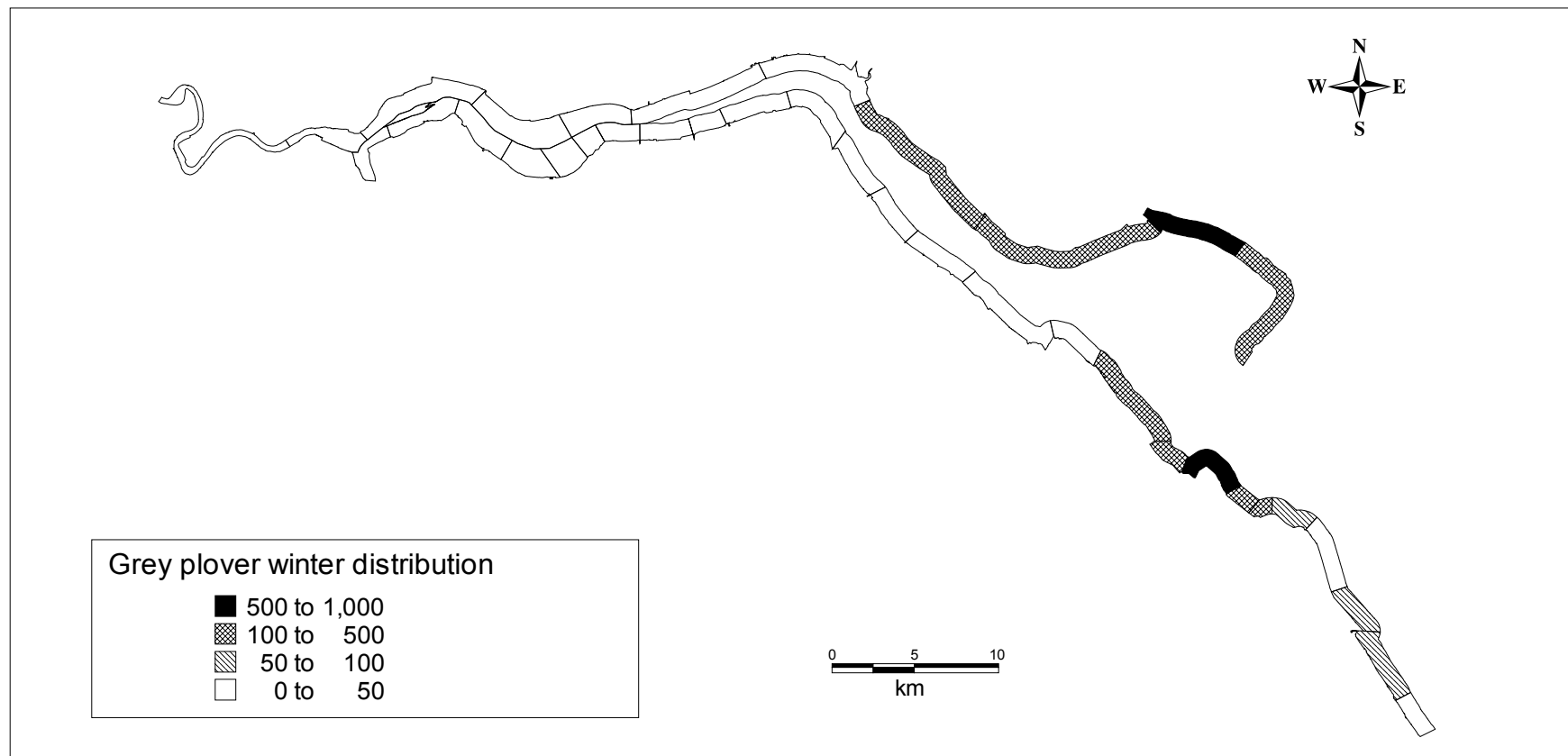
### **Historical changes and trends**

Since the 1970's, the British population has shown a long-term increase in numbers, reflected in the continuing upward trend of the UK index (Musgrove *et al* 2001). However in recent years, a number of sites in the UK have witnessed a steady decline in grey plover numbers, although the national figures for 2000/01 go against that trend (Pollitt *et al.*, 2003). The species appears to have been reasonably abundant on the Humber between the 1950's and 1970's. Mather (1986) referred to numbers on the north shore as being often as many as 200 birds at a time. During the past 25 years on the Humber, numbers have increased significantly from winter peak counts of 500 in the 1970's to 1,400-1,800 in the 1990's, and over 3,000 in the winter of 1997/98 (Musgrove *et al* 2001).

### **Conservation status**

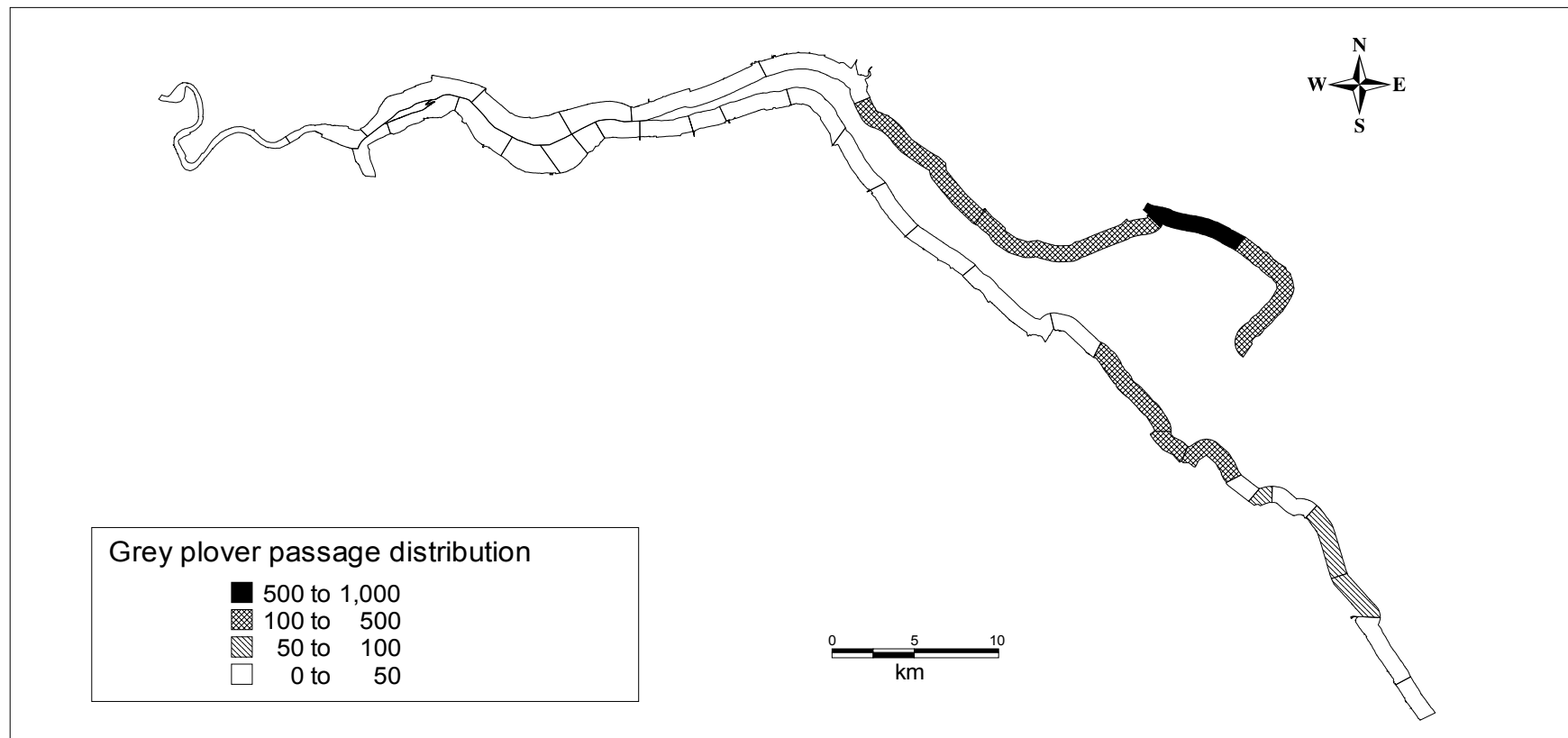
The species is protected under the WCA 1981; Listed in Annex II/2 of EC Birds Directive (79/409/EEC); Appendix II of the Bonn Convention; Appendix III of the Berne Convention; UK Species of Medium Conservation Concern (Amber List).

- 5 year winter peak mean of 1,704 (96/97-00/01); 5 year passage peak mean of 1,590 (autumn 96/97 – 00/01).
- 2000/01 maxima of 1,541. (spring passage).
- 3.2% of GB population (winter).
- 2.3% of GB population (autumn passage).
- 1.5% of GB population (spring passage).



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	0.75	0.00	0.00	0.00	0.00	0.00	0.00	310.25	259.75	512.50	246.00			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.20	0.00	0.00	1.40	2.00	2.40	0.00	0.00	0.40	0.00	0.60	0.20	0.00	0.20
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	1.20	15.20	0.00	239.80	181.60	673.20	125.33	199.00	98.00	38.60	97.75	79.20	22.20	

**5 year mean annual peak maxima for wintering grey plover by sector, Source; Core WeBS counts 1996-2001.**



North Bank Humber	NA1	NA2	NB	NC	ND	NE	NF	NG	NH	NJ	NK			
WeBS mean annual maxima	1.50	0.00	0.67	12.50	0.00	0.00	6.00	381.66	137.00	852.50	242.50			
Inner South Bank Humber	ISA	ISB3	ISB1	ISC	ISD	ISE1	ISE2	ISF1	ISF2	ISF3	ISG	ISH	ISI	ISJ
WeBS mean annual maxima	0.80	0.40	0.20	3.40	18.00	0.00	0.00	0.00	0.00	0.00	0.40	1.20	0.00	1.80
Outer South Bank Humber	ISK	MSA	MSB	MSC	MSD	MSE	MSF	OSA	OSB	OSC	OSD	OSE	OSF	
WeBS mean annual maxima	0.00	34.80	0.00	465.20	210.25	291.40	44.75	85.66	36.40	71.66	81.25	49.00	5.60	

**5 year mean annual peak maxima for passage grey plover by sector, Source; Core WeBS counts 1996-2001.**

## References

- BATTEN, L.A., BIBBY, C.J., CLEMENT, P., ELLIOT, G.D. & PORTER, R.F., 1990. *Red data birds in Britain*. London: T. & A.D. Poyser.
- \*CATLEY, G., 2000. Humber Estuary wetland bird survey. Twelve months of high and low tide counts September 1998 to August 1999. Peterborough: *English Nature Research Reports*, No. 339.
- \*ECO SURVEYS, 1991. *Winter wildfowl and wader feeding area study along the Lincolnshire and south Humberside coast*. Report to the National Rivers Authority.
- LACK, P. 1986. *The atlas of wintering birds in Britain and Ireland*. Calton: T. & A.D. Poyser.
- MATHER, J.R., 1986. *The birds of Yorkshire. An account of their historical and present status and distribution*. London: Croom Helm Ltd.
- MUSGROVE, A., POLLIT, M., HALL, C., HEARN, R., HOLLOWAY, S., MARSHALL, P., ROBINSON, J. & CRANSWICK, P., 2001. *The wetland bird survey 1999-2000 wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- POLLITT, M.S., HALL, C., HOLLOWAY, S.J HEARN, R.D., MARSHALL, P.E. ROBINSON, J.A., MUSGROVE, A., ROBINSON, J., & CRANSWICK, P.A., 2003. *The wetland bird survey 2000-2001: Wildfowl and wader counts*. Slimbridge: BTO/WWT/RSPB/JNCC.
- STONE, B.H., SEARS, J., CRANSWICK, P.A., GREGORY, R.D., GIBBONS, D.W., REHFISCH, M.H., AEBISCHER, N.J. & REID, J.B., 1997. *Population Estimates of Birds in Britain and in the United Kingdom*. British Birds 90 pp 1 – 22.
- \*TASKER, M. & MILSOM, T.P., 1979. *Birds of the Humber Estuary*. Hull: Department of Zoology, University of Hull.