4.23 THAMES ESTUARY

LTC site code:	DA
Centre grid:	TQ6675
JNCC estuarine review site:	115-118
Habitat zonation:	3492 ha intertidal, 3540 ha subtidal, 90 ha nontidal
Statutory status:	Thames Estuary and Marshes SPA (UK9012021), Benfleet and Southend Marshes SPA (UK9009171), Thames Estuary and Marshes Ramsar (7UK141), Benfleet and Southend Marshes Ramsar (7UK071)
Winter waterbird interest:	Little Grebe, Cormorant, White-fronted Goose, Dark-bellied Brent Goose, Shelduck, Wigeon, Gadwall, Teal, Pintail, Shoveler, Tufted Duck, Oystercatcher, Avocet, Ringed Plover, Golden Plover, Grey Plover, Lapwing, Knot, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank, Turnstone, Waterbird assemblage

SITE DESCRIPTION

The Thames Estuary, for the purposes of WeBS, is usually taken to include the coast between the Rivers Medway and Crouch and upstream to Barking in east London. Most of the intertidal habitat is muddy in character with extensive areas of saltmarsh around Canvey Island; the narrow strip of saltmarsh along the north Kent coast was once more extensive but was embanked to create coastal wet grassland. Much of the area is surrounded by sea-walls due to the relatively low-lying adjoining land coupled with rising relative sea-levels. Land claim has removed about 12% of the Thames Estuary, mostly before the 19th century. Much of the site is heavily industrialised with major ports, chemical works and extensive areas of housing. The north Kent coastline is more rural in character although there are still a few remaining open areas adjoining the inner Thames. Issues of particular conservation concern include port developments and proposals for a new airport at Cliffe Marshes.

COVERAGE AND INTERPRETATION

The Thames Estuary was covered for the scheme during the two winters 1993–94 and 1998–99, with no missing months. During the 1993–94 winter, only the inner Thames between Barking and Tilbury was covered, although the coverage was comprehensive along this stretch. A greater degree of coverage was achieved in 1998–99, but this was still only partial. Much of the area of intertidal creeks behind Canvey Island was not included, with other missing sections at Grain on the north Kent coast, at Mucking Flats and on some parts of the inner Thames, especially the south shore between Northfleet and Thamesmead. Importantly, the vast expanse of Maplin Sands was not covered during either winter. Figure 4.23.1 shows the positions of the count sections used in the two winters. It should be noted that a few of the sections counted during 1993–94 were lumped as larger sections in 1998–99; further details can be obtained from the National Organiser.

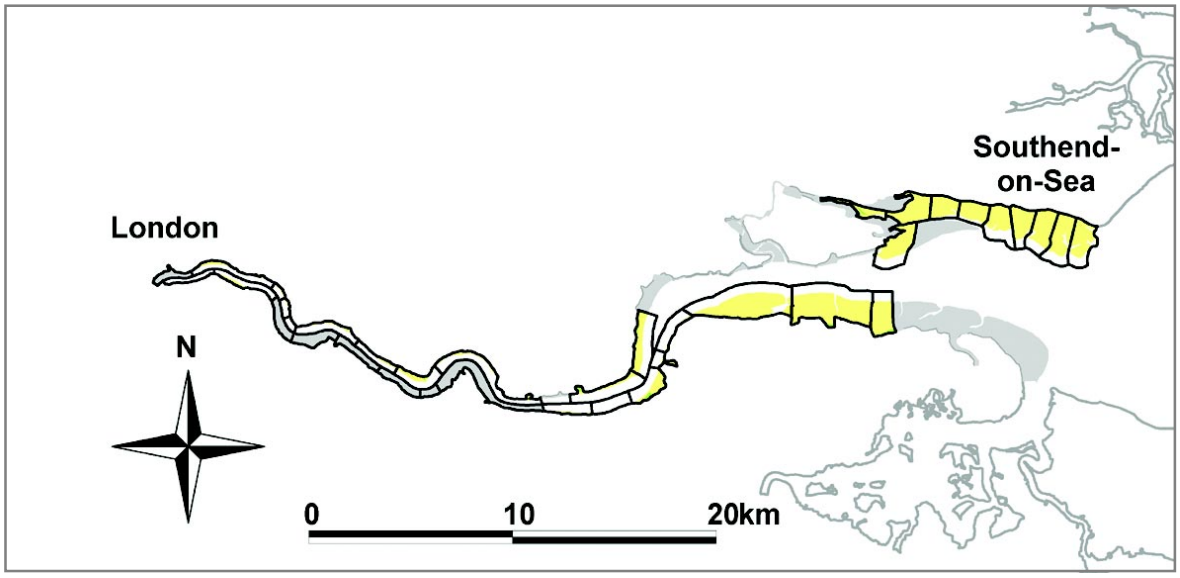


Figure 4.23.1: **LTC sections at the Thames Estuary, winters 1993–94 and 1998–99**

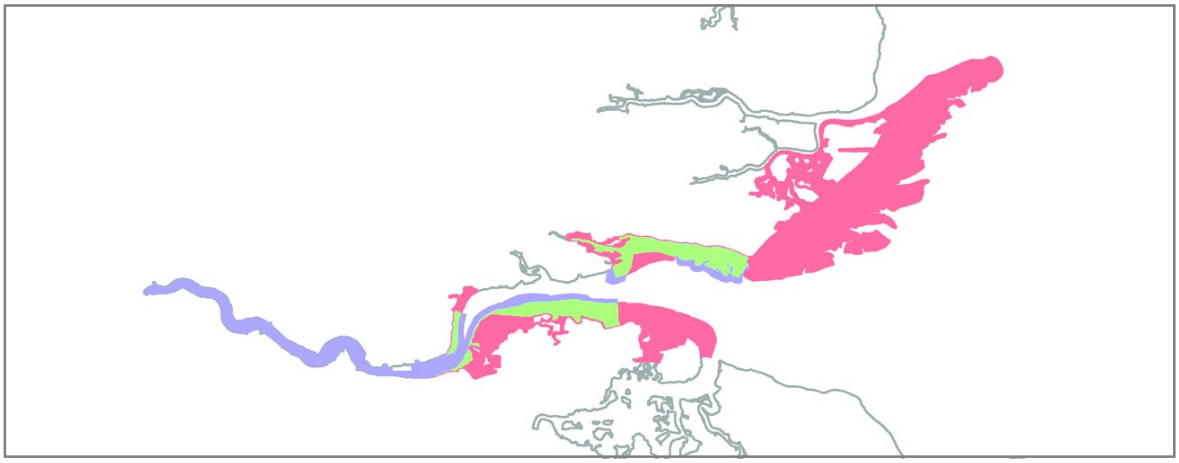


Figure 4.23.2: LTC and SPA boundaries, with overlap, at the Thames Estuary

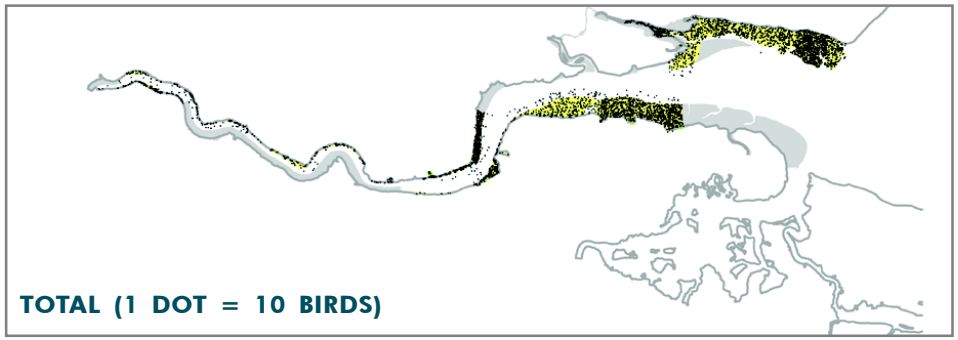
Figure 4.23.2 shows how the Thames Estuary overlaps with the SPAs in the area. Of these, the area covered during this period by the LTCs did not overlap at all with the Foulness SPA (although the latter has been included in the figure as an integral part of the Thames Estuary). The Benfleet and Southend Marshes SPA was covered effectively by the counts, with the exception of the saltmarshes along Hadleigh Ray. The Thames Estuary and Marshes SPA was partially covered by the LTCs, but the easternmost parts of the Kent shore were uncounted, as was the northern part of Mucking Flats. In addition, adjacent nontidal marshes within the SPA were not covered by the LTCs. Conversely, none of the Thames upstream of East Tilbury Marshes is designated as SPA but this area was covered by the LTCs. The two Ramsar sites are mostly coincident with their respective SPA boundaries, with the exception that the Thames Estuary and Marshes Ramsar contains a somewhat more extensive area of non-tidal grassland than the SPA.

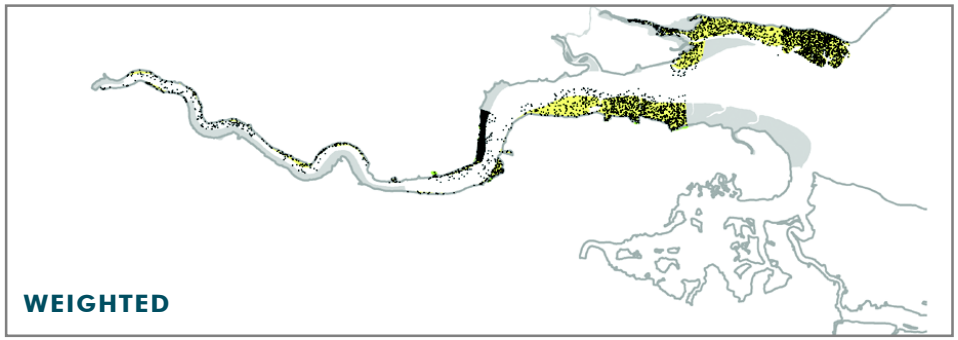
The Thames Estuary, as considered by WeBS, forms part of a larger complex of sites with the Medway and Swale Estuaries to the south and the Crouch-Roach and other sites to the north. Interchange between these sites can occur freely on a regular basis, especially around the extensive grazing marshes and muddy channels of Foulness.

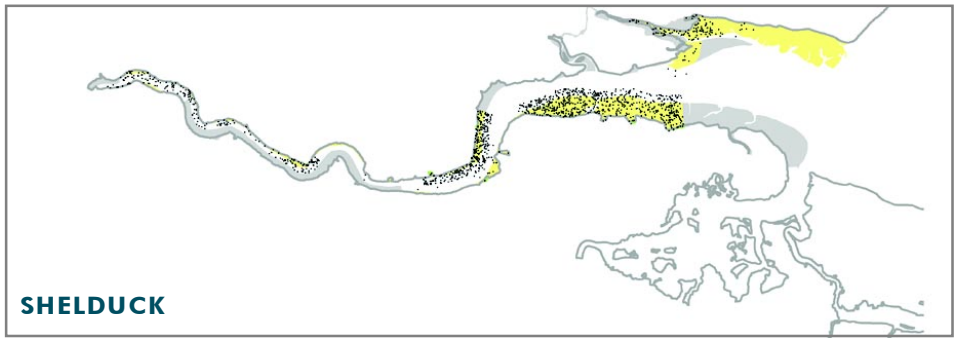
WATERBIRD DISTRIBUTION

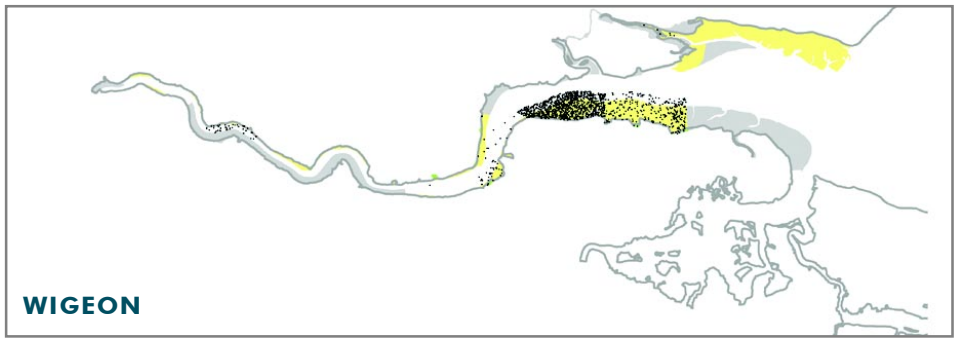
Low tide distribution maps from the winter of 1998–99 are presented for 22 of the 25 species of principal interest listed above. For clarity, smaller dots are used to display the distributions of many of these species. Additional maps of total birds and total birds weighted by 1% threshold value are also presented (Figure 4.23.3). Of the remaining species, only small numbers of White-fronted Geese and Tufted Ducks were recorded during 1998–99, along with no Little Grebes; these species make use of the adjacent nontidal habitats. However, up to 166 Tufted Ducks were noted on the inner Thames during 1993–94 and the species was potentially missed during the incomplete coverage achieved of this area during 1998–99.

Due to the incomplete coverage achieved, care must be taken when attempting to interpret the maps. With this in mind, the totals and weighted totals maps pick out the shore north of Coalhouse Fort (off East Tilbury Marshes) as well as Higham Creek, Hadleigh Ray, Southend Flats and on the south shore from Egypt Bay eastwards. High densities were also recorded on the inner Thames, although much smaller numbers of birds were involved due to the narrower shores here. Many of the individual species were widespread but showed concentrations in one or more areas. Such species included Shelduck (not the Southend area), Lapwing (few Southend), Dunlin (especially East Tilbury and Higham Bight), Curlew (few inner estuary) and Redshank (few Blythe Sands). Other species were mostly found on the outer parts of the site, notably Brent Goose, Oystercatcher, Grey Plover (including East Tilbury), Knot, Sanderling, Bar-tailed Godwit and Turnstone. Wigeon were most numerous on Blythe Sands with a small inner concentration at Aveley Bay. Gadwall, Pintail and Shoveler were all relatively scarce. Avocets were highly concentrated on the East Tilbury shoreline, with most of the Black-tailed Godwits also here and along the North Kent shore. Ringed Plovers were in their highest densities at Thamesmead, West Thurrock to Coalhouse and Hadleigh Ray. Golden Plovers were mostly found at Hadleigh Ray and Higham Bight. Hadleigh Ray was also a key area for Teal. Cormorants were widespread but particularly numerous on the inner Thames around Coldharbour.









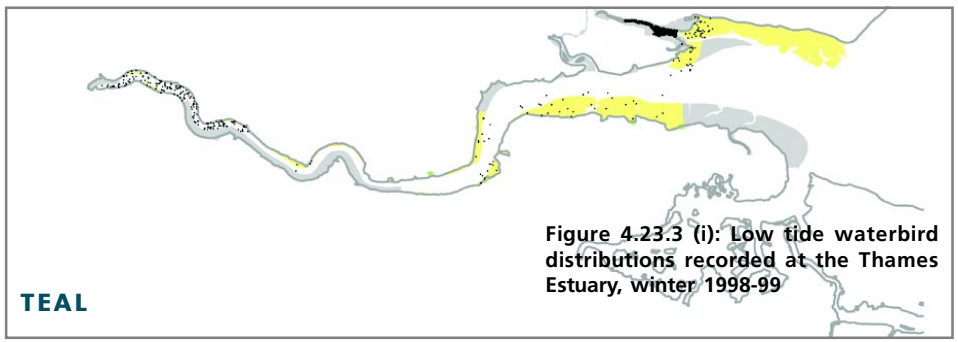
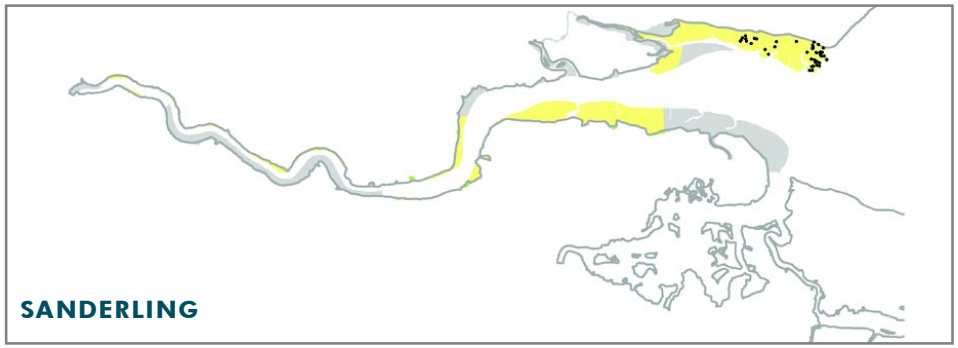
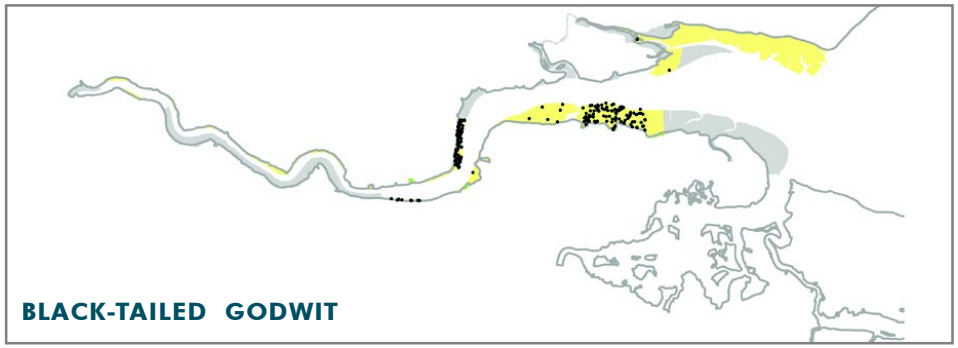
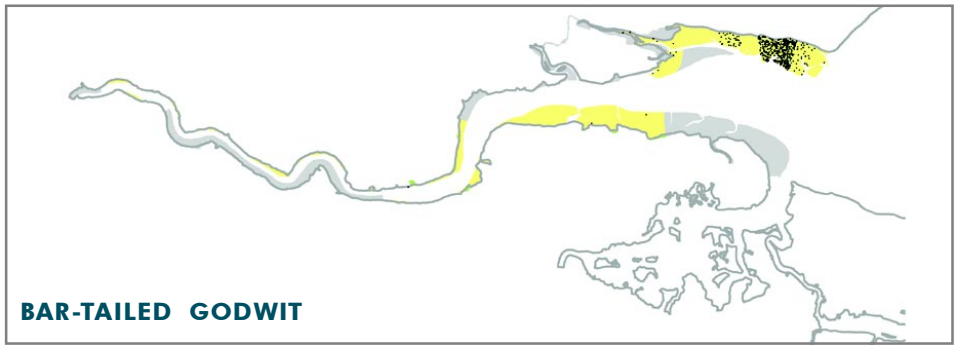


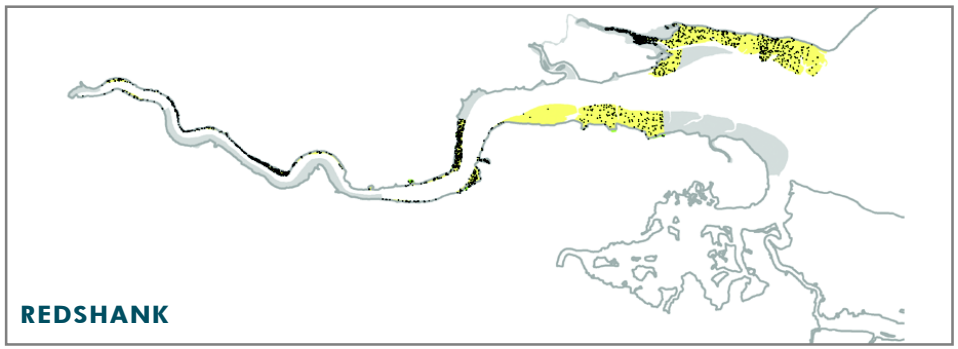
Figure 4.23.3 (i): Low tide waterbird distributions recorded at the Thames Estuary, winter 1998-99

Figure 4.23.3 (ii): Low tide waterbird distributions recorded at the Thames Estuary, winter 1998-99









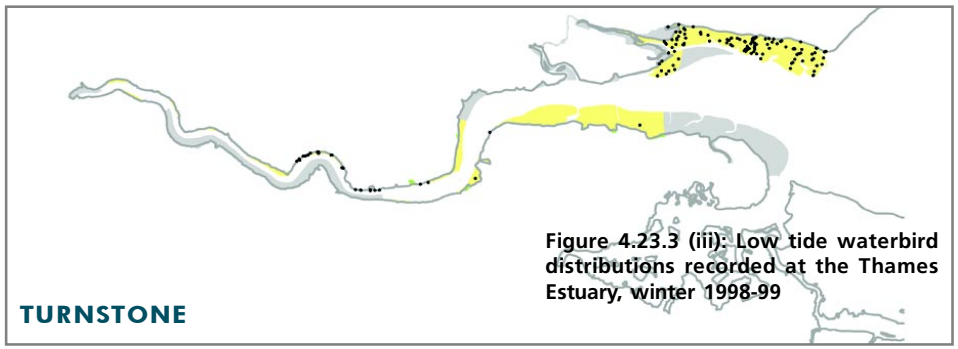


Figure 4.23.3 (iii): Low tide waterbird distributions recorded at the Thames Estuary, winter 1998-99

4.24 MEDWAY ESTUARY

LTC site code:	CM
Centre grid:	TQ8471
JNCC estuarine review site:	119
Habitat zonation:	3064 ha intertidal, 1951 ha subtidal, 737 ha nontidal
Statutory status:	Medway Estuary and Marshes SPA (UK9012031), Medway Estuary and Marshes Ramsar (7UK068)
Winter waterbird interest:	Little Grebe, Great Crested Grebe, Cormorant, Bewick's Swan, Dark-bellied Brent Goose, Shelduck, Wigeon, Teal, Pintail, Shoveler, Oystercatcher, Avocet, Ringed Plover, Grey Plover, Lapwing, Dunlin, Black-tailed Godwit, Curlew, Redshank, Waterbird assemblage

SITE DESCRIPTION

The Medway is a large estuarine site which merges with the Thames Estuary at its outlet between the Isle of Grain and Sheerness on the Isle of Sheppey. At its eastern end it is also connected to the Swale Estuary. The shoreline is deeply indented and there are many islands and areas of saltmarsh, along with large areas of brackish grazing marshes. There are major dockyards around the estuary, as well as two power stations and two defunct oil refineries. The main issues of conservation concern are port developments (such as at Lappel Bank, where an area of intertidal mudflats was lost), illegal shooting and fishing, pollution and disturbance from boats and jet skis. Most importantly, the predicted rise in sea-level induced by climate change will lead to habitat loss as much of the site is hemmed in by sea walls and development (A. Johnson pers. comm.).

COVERAGE AND INTERPRETATION

The Medway Estuary was counted at low tide during all four months of the 1996–97 winter. Figure 4.24.1 shows the positions of the 33 sections counted for the survey.

Figure 4.24.2 shows the relationship between the SPA and LTC boundaries at the Medway. The main areas designated as SPA but not counted for the LTCs are nontidal marshes around the edges of the estuary, notably including much of the area either side of the Ladies Hole Point to Kingsferry Bridge stretch of channel. This channel itself was counted for the 1992–93 Swale Estuary LTCs but

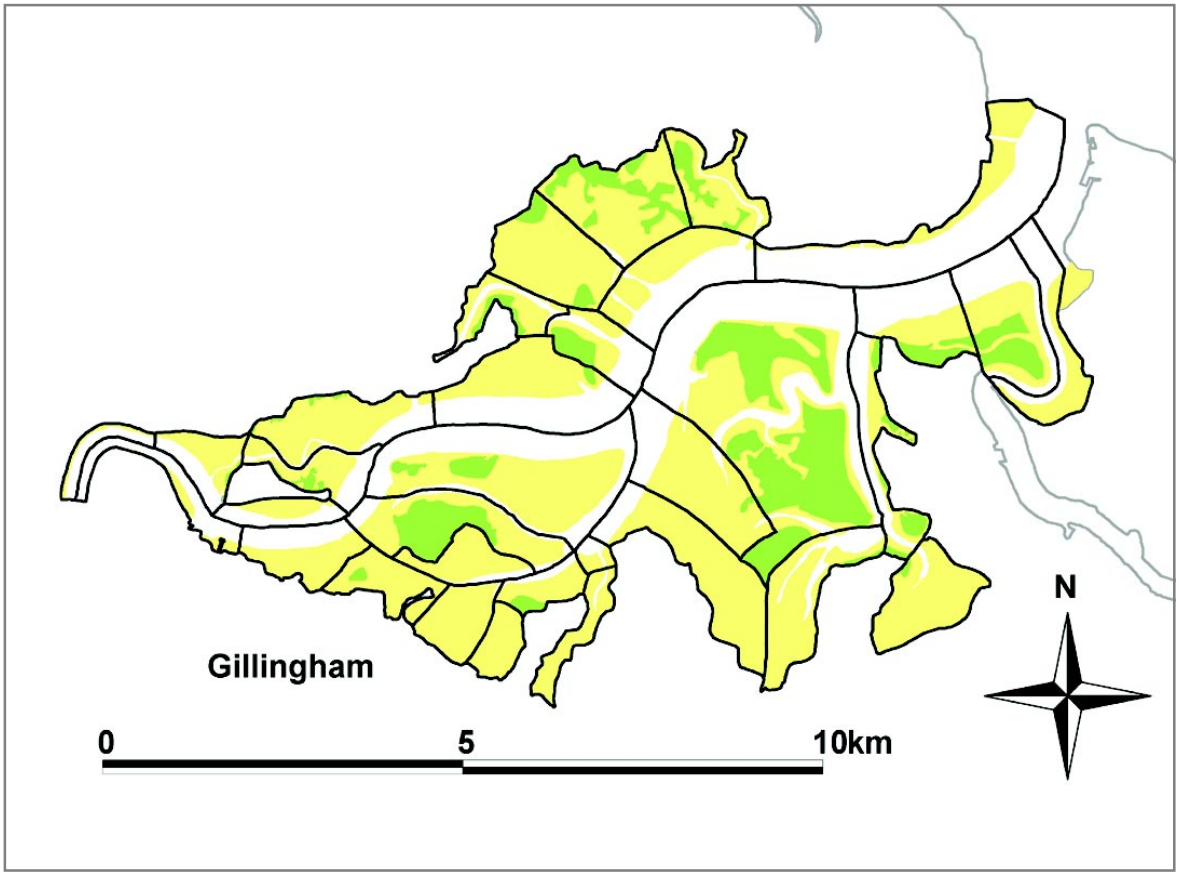


Figure 4.24.1: LTC sections at the Medway Estuary, winter 1996–97

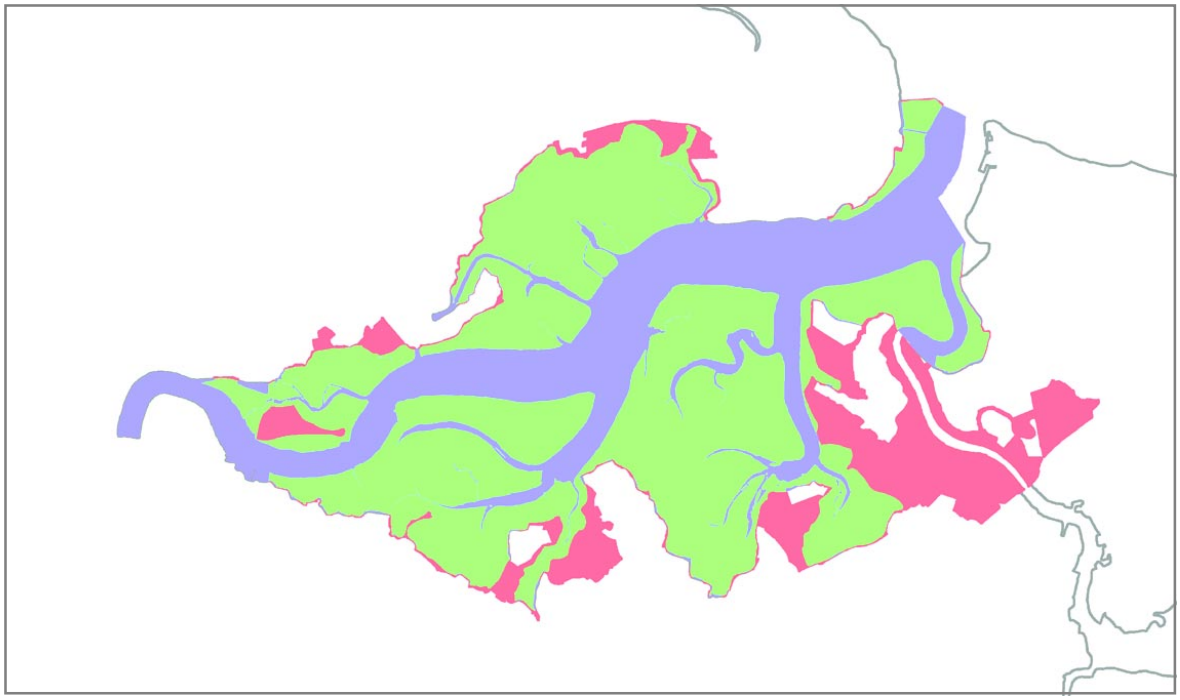


Figure 4.24.2: LTC and SPA boundaries, with overlap, at the Medway Estuary

in light of the SPA boundary should, in future, ideally be transferred to the Medway for the purposes of LTCs. In the west, the SPA boundary did not reach as far upstream as the area covered by the LTCs. The boundaries of the Ramsar site are almost entirely coincident with those of the SPA.

The Medway Estuary is in close proximity to two other major estuarine sites, the Thames and the Swale. Movements of birds between these sites seems likely to occur on a daily basis, especially along the main channel between the Isle of Sheppey and the mainland. Movements of birds between the estuarine and non-estuarine components of the area should also be considered carefully when attempting to describe bird usage of the SPA.

WATERBIRD DISTRIBUTION

Low tide distribution maps from the winter of 1996–97 are presented for 18 of the 19 species of principal interest listed above. For clarity, smaller dots are used to display the distribution of Dunlin. Additional maps of total birds and total birds weighted by 1% threshold value are also presented (Figure 4.24.3). The remaining species, Little Grebe, was recorded in very small numbers during the survey and the majority presumably make more use of adjacent nontidal habitats.

The totals map reveals a complex picture, but with the highest concentrations of birds at Stoke Ooze, the north side of Deadmans Island, from Copperhouse Marshes to Otterham Creek and at Bedlams Bottom. These high bird densities were strongly driven by Dunlin, the dominant species over most of the site. Bedlams Bottom is given emphasis by the weighted totals map, due largely to the concentrations here of Pintail and Avocet. Both of these species, along with Shoveler, occurred relatively sparsely elsewhere in the south of the site. Of the other very numerous species, Wigeon and Teal were concentrated towards the east of the site but Shelducks were a little more widespread, despite a higher concentration along the southern edge. Lapwing and Redshank were similarly present throughout but most strongly along the south edge of the site. Brent Geese were found throughout with high concentrations at Otterham Creek, Halstow Creek and Colemouth Creek, whereas Oystercatchers showed a preference for Ham Ooze. Grey Plovers and Ringed Plovers were widespread, Grey Plovers being especially common at Stoke Ooze. Curlews were evenly spread throughout but Black-tailed Godwits were patchily distributed in four relatively restricted zones of the estuary. Small numbers of Bewick's Swans were found at Bedlams Bottom. Great Crested Grebes and Cormorants were both widespread throughout the estuary.

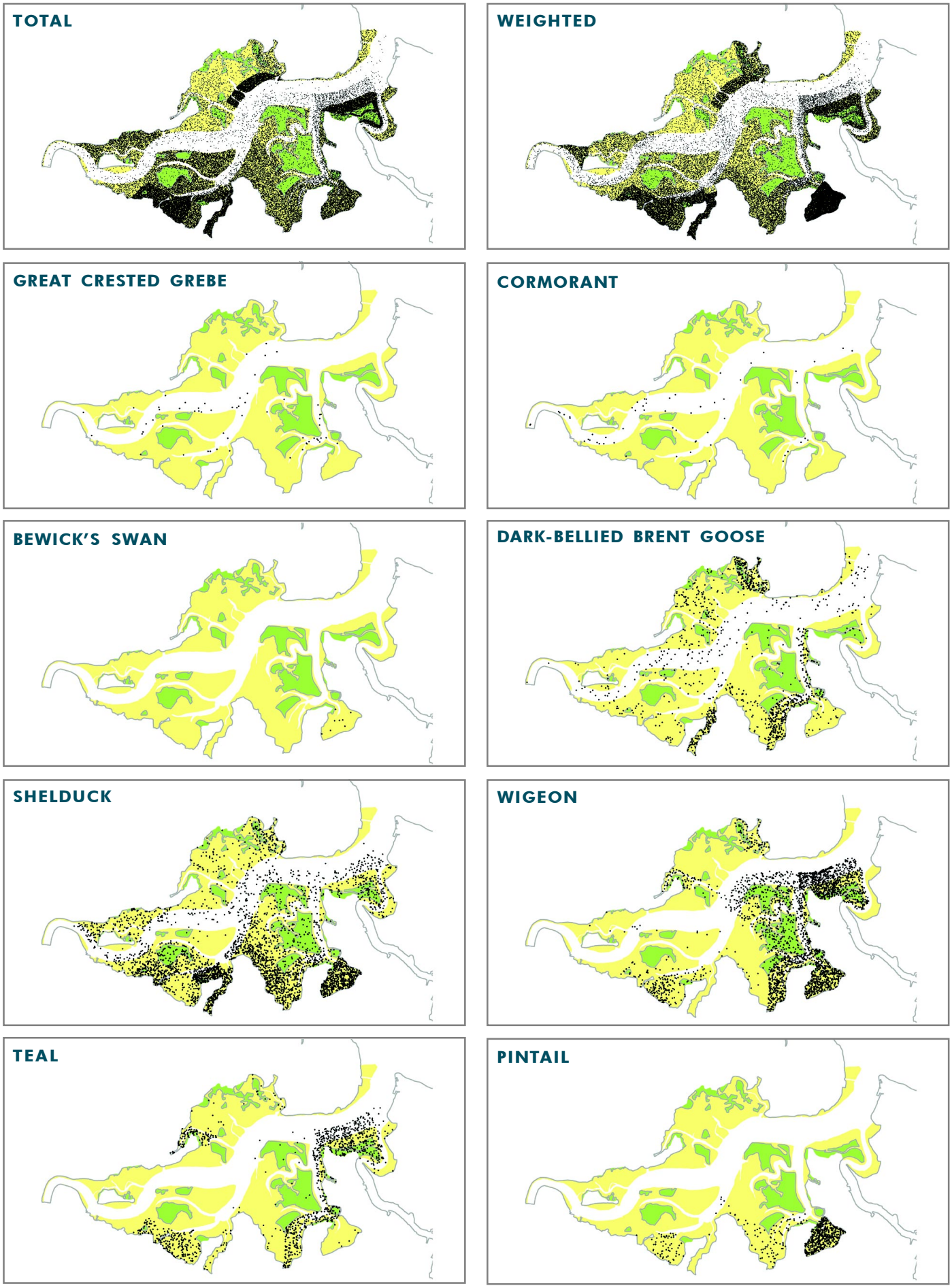


Figure 4.24.3 (i): Low tide waterbird distributions recorded at the Medway Estuary, winter 1996-97

Figure 4.24.3 (ii): Low tide waterbird distributions recorded at the Medway Estuary, winter 1996-97