

## ROUGH FIRTH

### *Site description*

Rough Firth is a small inlet on the Dumfries & Galloway coast, 6 km to the south of Dalbeattie. The estuary is formed by the outflow of Urr Water, which empties into the west Solway Firth. The firth is typified by a rocky and steep-rising shoreline, with expanses of saltmarsh especially prominent at the head of the river. Intertidal mud flats are exposed at low tide throughout the estuary, and at this time a causeway to Rough Island is negotiable. Part of the site, at Rockcliffe, is managed by National Trust Scotland. There is some indication of coastal squeeze of saltmarsh, and cockling in the Solway Firth may affect movements of birds between the area and Rough Firth. Yachting is a popular pastime at the site, and tourism, though restricted in location, may lead to bird disturbance. However, disturbance is most heavily created by walkers, especially with unrestrained dogs on intertidal areas. Rough Firth has been counted at low water for the first time under the WeBS Low Tide scheme.

### *General bird distribution 2004/05*

*Area covered 539 ha; Mean total birds 1,509; Mean bird density 2.8 birds per ha.*

Fifteen different species were recorded on Rough Firth at low water, mostly in fairly small numbers. On the marshes such as Glen Marsh at the head of the firth, Lapwing were concentrated at high average density (2.83 birds per ha). These marshes were also used by Wigeon, the most numerous species recorded, which were concentrated as far downriver as Kippford, though scattered individuals were present up to the river mouth (Figure 70). The

species was at greatest average winter density on Glen Marsh, where just under 8 birds per ha were recorded grazing or loafing on the saltmarsh. The muddy creeks in the north, especially between Kippford and the Glen Isle peninsula to the west, were favoured by Redshank, which were present in stable numbers through the winter. Mallard were also comparatively most densely congregated in this area, with additional similar size flocks at the mouth of the river. To the west of Glen Isle, an expanse of intertidal mud reaches to Castle Hill, and this area supported a stable flock of foraging Shelduck averaging 88 birds through the winter, but few other species except Oystercatcher and the widely and thinly spread Curlew. Oystercatcher was the most abundant wader at Rough Firth, being recorded at relatively high density on most count sectors south of Kippford (Figure 70). The intertidal area out to Castlehill Point on average held highest Oystercatcher density (2 birds per ha). The stonier habitat on the east shore between Rockcliffe and Castlehill Point attracted small numbers of Ringed Plover, whilst in December a group of 200 Scaup was seen in the river channel at the mouth of the estuary. Other species recorded at the site in low densities included Cormorant, Grey Heron, Pintail, Goldeneye, Red-breasted Merganser and Greenshank.

### *Comparative bird distribution*

Rough Firth was covered for the first time under the WeBS Low Tide Count scheme in 2004/05; it is therefore not possible to make comparisons with distributions from other years.

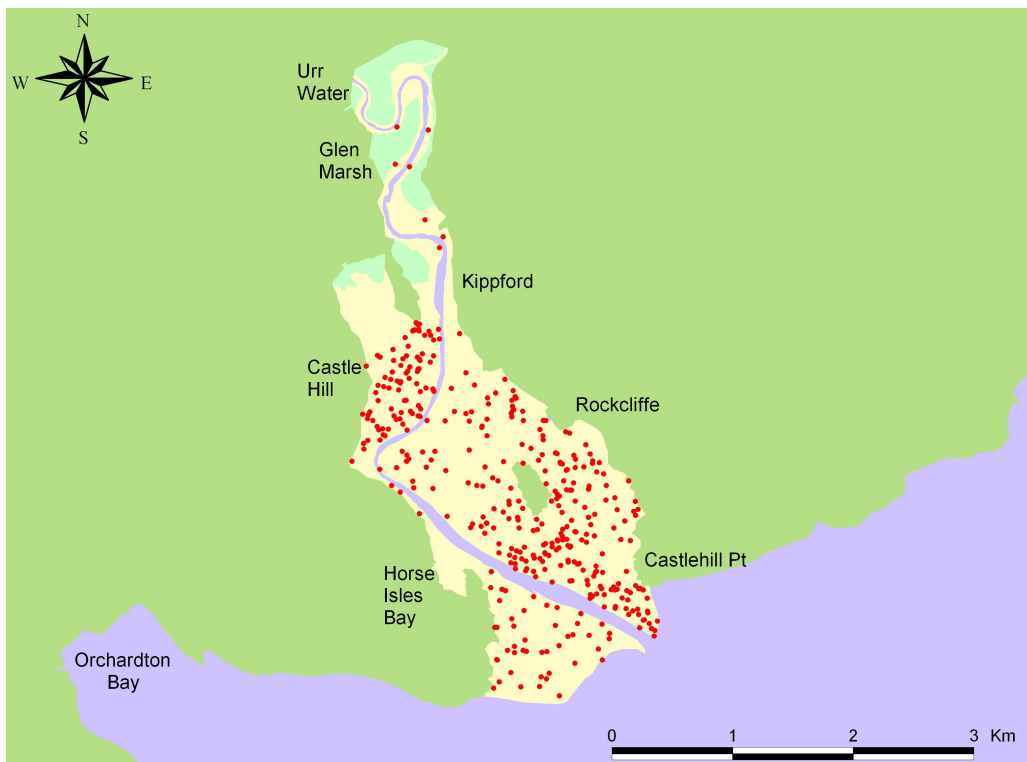
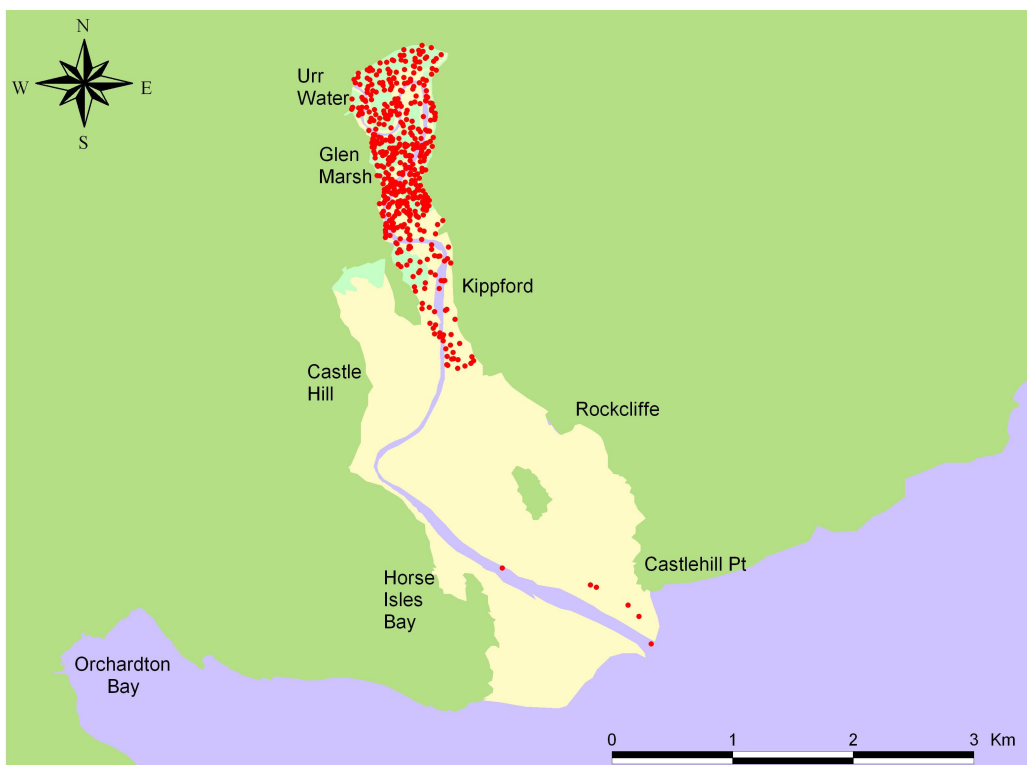


Figure 70. Low Tide distribution of Wigeon (above) and Oystercatcher (below) for the winter of 2004/05. Yellow = intertidal; pale blue = subtidal; pale green = nontidal.

## SOLWAY FIRTH (SOUTH)

### *Site description*

The Solway Firth demarcates the Anglo-Scots border, and in 2004/05 count sectors on the southern (English) shore were surveyed. The area covered extended from Rockcliffe Marsh and the River Eden channel west to Cardurnock Flats and Skinburness Marsh. There are nine main inputs to the Solway Firth, leading to a considerable amount of fresh water and deposited sediment. This produces an active system of shifting channels, flats and saltmarshes, many of the latter only inundated on exceptionally high tides. Sand is the predominate substrate, though there are areas of mud and fine silt and rockier substrates, some supporting mussels. The Solway Firth is of utmost importance for non-breeding birds and is afforded the highest protection (Ramsar, SPA, SSSI), forming a link in the chain of west coast estuaries used by migratory and wintering birds. Urban development is scarce on the south of the estuary, with most of the area comprising pasture, marsh or merse. Most of the littoral sediment is in favourable condition, though overgrazing and coastal squeeze are concerns. Another problem facing the estuary is silt deposition, especially at the eastern end. Other potential issues of conservation concern are shellfishing and recreational disturbance including wildfowling.

### *General bird distribution 2004/05*

*Area covered 5,492 ha; Mean total birds 26,485; Mean bird density 4.8 birds per ha.*

The most important area of the Solway Firth surveyed in 2004/05 was Moricambe Bay. This large inlet contains extensive intertidal flats and substantial saltmarsh, thus attracting a variety of species. Few species held in (inter)nationally important numbers were found in notable densities east of Bowness-on-Solway, though widely spread species such as Shelduck and Curlew were scattered across the whole estuary. Whooper Swan, Pink-footed Goose, Barnacle Goose and Wigeon were predominantly limited to the marshes of Moricambe Bay. Of these, Skinburness Marsh was also noteworthy for high densities of Pintail and Teal; Whitrigg and Newton Marshes for Golden Plover. Ringed Plover and Redshank were also distributed at highest

density in Moricambe Bay, both also scattered on intertidal habitat elsewhere. Waders such as Oystercatcher, Grey Plover, Knot and Dunlin were present throughout Moricambe Bay, across Cardurnock Flats and upriver to Bowness. The latter species showed the highest average site density (1.37 birds per ha). Other species of national importance, including Cormorant and Turnstone, were thinly scattered around the estuary. Small numbers of Scaup were also recorded around the scars near the channels of Moricambe Bay.

### *Comparative bird distribution*

For comparison with distribution of birds in 1999/00, two species issued with Medium WeBS Alerts - Mallard and Bar-tailed Godwit - were selected. It should be noted that comparisons were only possible with those sectors covered on the south shore in 2004/05 and thus interpretation of distributional changes is subject to caution.

Mallard were fairly evenly spread across the area surveyed, with birds present from the River Eden at Burghmarsh Point through to Moricambe Bay. Within Moricambe Bay, density of Mallard around Skinburness Marsh shows clear change between the winters examined. Average winter density in this area decreased from 0.61 to just 0.08 birds per ha, and increases on some adjacent sectors are smaller by comparison to the decline. It is difficult to compare changes in overall site density owing to differential coverage between winters, but it is possible that changes in site use at Skinburness Marsh may have contributed to the Alerts identified.

Bar-tailed Godwit is a species with a typically restricted distribution on the South Solway Firth. The two main feeding areas are at Grune Point, north of Skinburness Marsh, and off Bowness (though there may be additional feeding areas south of the present extent of survey: Hartley 2002). There appears to have been local movement of small numbers of the species between count sectors at Bowness, but no more than might be expected by disturbance or similar factors. However, at Grune Point, sector density declined from 0.68 to 0.07 birds per ha. It is possible that there have been counteractive movements to areas beyond the survey area in 2004/05, or it may

be that site-level declines of the species, as identified by WeBS Alerts (Maclean *et al.* 2005), are reflected in the differing distributions.

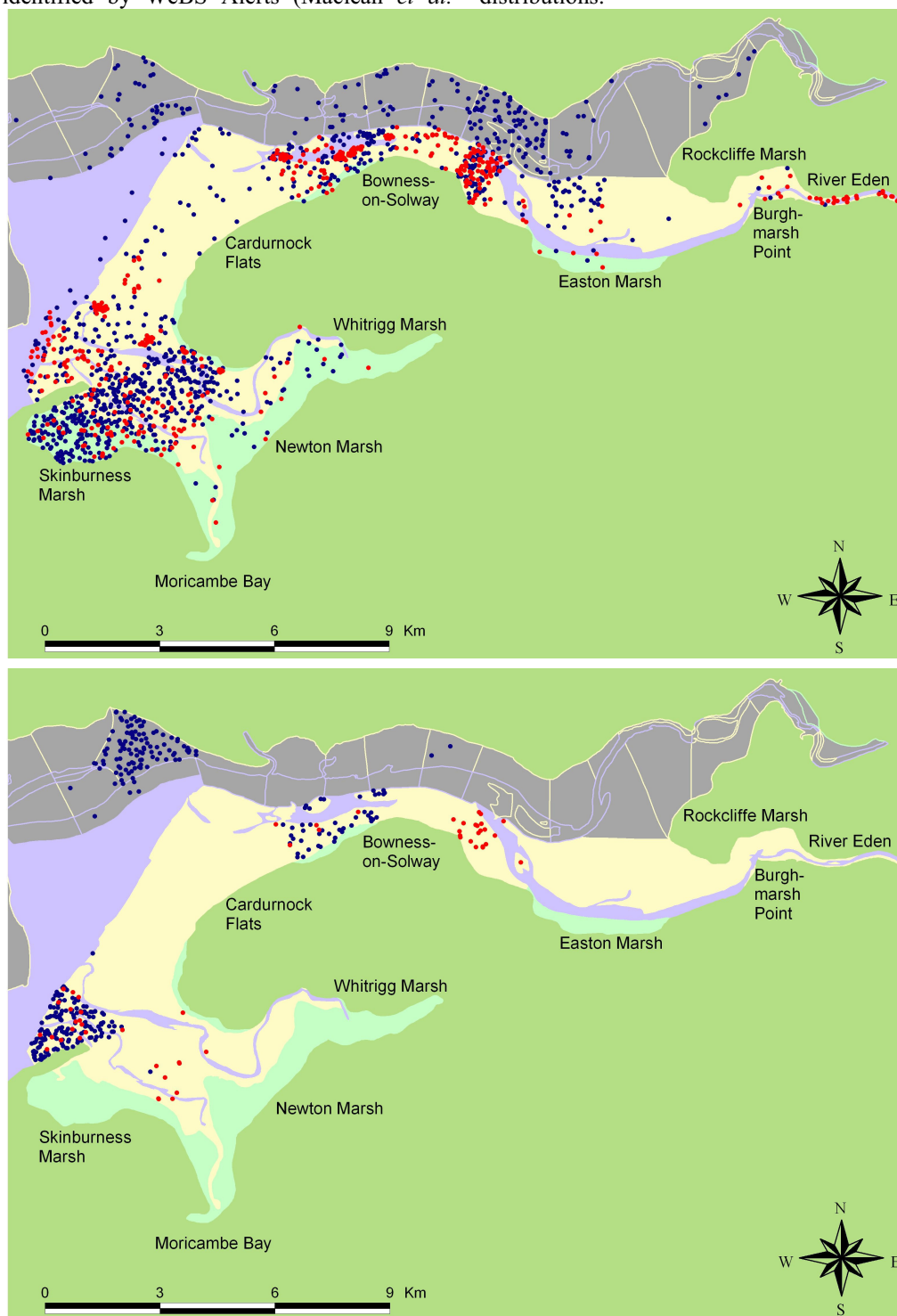


Figure 71. Low Tide distribution of Mallard (above) and Bar-tailed Godwit (below) for the winters of 2000/01 (blue dots) and 2004/05 (red). Yellow = intertidal; pale blue = subtidal; pale green = nontidal. Grey areas not counted in later winter.