

## FAL COMPLEX

### *Site description*

The Fal Complex in south Cornwall consists of a series of slow-current tidal creeks and rivers that empty into the main estuary channel known as Carrick Roads. With the Helford River, the Fal forms a ria: a drowned river valley, with typically low freshwater input and supporting a variety of marine habitats. The major intertidal areas occur in the network of creeks and river branches flowing into Carrick Roads. Much of the main channel itself is sided by rocky shore, which is not often surveyed for WeBS at low tide. At the head of the complex is the city of Truro, whilst the fishing town of Falmouth lies at the mouth; elsewhere, non-estuarine habitat tends to be agricultural. The habitat structure of the Fal Complex qualifies it as part of the Fal & Helford Special Area of Conservation (SAC). Part of the site is also designated as the Lower Fal & Helford Intertidal SSSI, which is judged to be in Favourable Condition. Principal threats to the site exist from coastal erosion and land claim.

### *General bird distribution 2004/05*

*Area covered 313 ha; Mean total birds 1,170; Mean bird density 3.7 birds per ha.*

Twenty-seven species of waterbird were recorded on the Fal Complex, most in fairly small average winter numbers. Species such as Little Egret and Greenshank were thinly but widely spread around the site, whereas wildfowl including Mute Swan and Mallard were most highly concentrated on the lower Tresillian River. Mean Shelduck density was highest on the Tresillian River, with the nearby Truro River also holding notably high mean densities. The same area supported aggregations of Oystercatcher and Lapwing, and these species were also concentrated on the Percuil River. Black-tailed Godwit density was greatest on the Truro River and at Restronguet Creek, whilst the muddy sediment at the latter also attracted Redshank, found also at high density on the upper reaches of the Tresillian River.

### *Comparative bird distribution*

The Fal Complex does not hold great numbers of waterbirds, but is notable for nationally

important numbers of some relatively scarce species (e.g. Black-necked Grebe, Greenshank). Here, distributions of two waders are focused upon; Dunlin and Curlew. Coverage was similar in the two winters, with only three sectors not counted on both occasions (Figure 64).

Average site density of Dunlin in 1995/96 reached 1.73 birds per ha, with the majority of sectors holding the species. In 2004/05, density of Dunlin across the site had declined to 0.45 birds per ha, suggesting a change in distribution of the species. Figure 64 illustrates this case, with some areas showing decreased densities and some holding no Dunlin at all; only three sectors covered supported Dunlin in 2004/05. Greatest changes were recorded on the intertidal sections of the Truro River, and at Penryn. At the former location, mean winter density of Dunlin decreased by approximately 15 birds per ha between 1995/96 and 2004/05. At Penryn, relatively high mean site density of just under 5 birds per ha in 1995/96 compared with a complete absence of Dunlin in the later winter. Further changes were evident at Restronguet Creek, with evidence of a movement of birds upstream. It may be that reduced densities reflect a general trend for Dunlin to winter in the east of the country (Austin & Rehfish 2004), or there may be a site-specific explanation.

Changes in Curlew distribution were also apparent at Restronguet Creek, with 1.5 birds per ha fewer recorded in 2004/05. Decreases in mean Curlew density were evident on a site basis as well, with a figure of 1.19 birds per ha declining to 0.78 in 2004/05. Although Curlew were recorded on all sectors counted in both winters, densities were greater on 75% of these in the earlier winter. Greatest declines were recorded on the Percuil River upstream of St. Mawes (2.90 to 1.46 birds per ha) and on the lower stretch of the Tresillian River (2.95 to 1.21 birds per ha). Interestingly, Curlew were recorded at higher densities on the upper stretch of this river than in 1995/96, indicating a within-site movement between years. It is unclear what factors may have contributed to changing densities of Curlew.

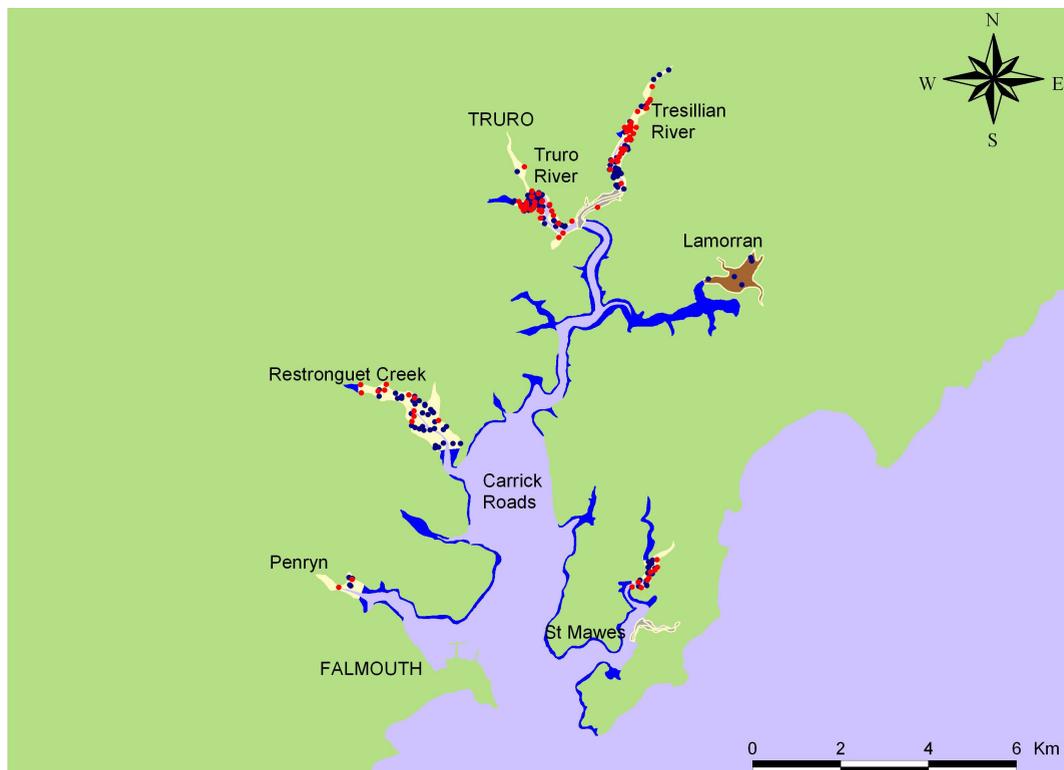
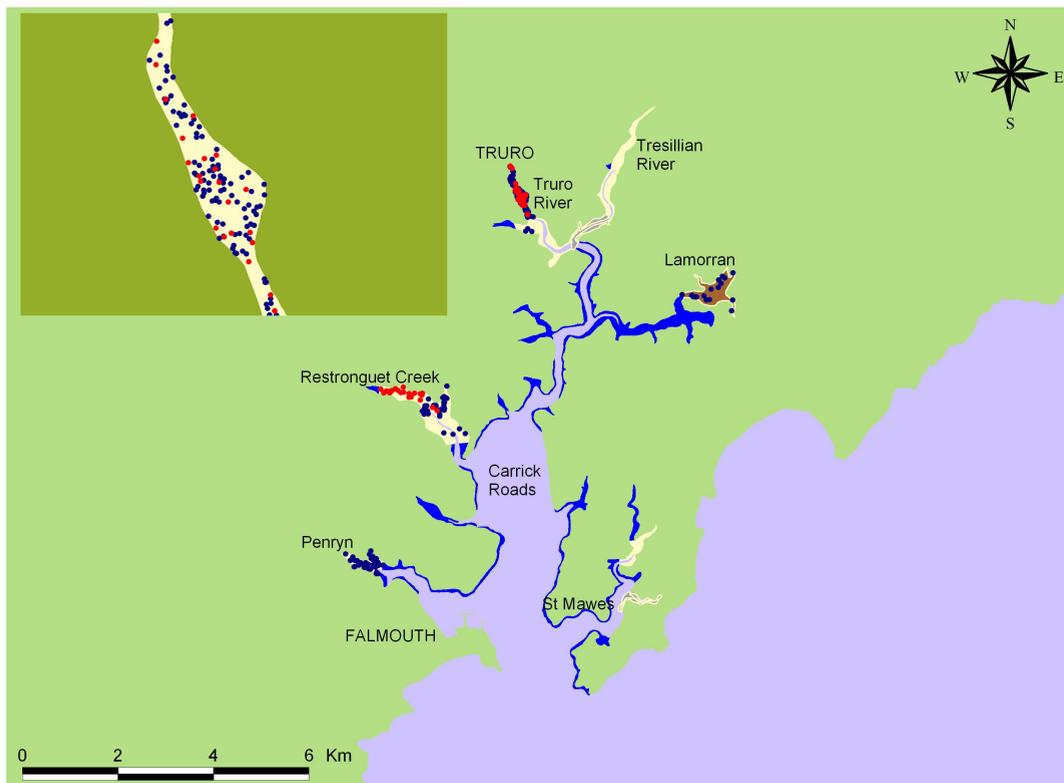


Figure 64. Low Tide distribution of Dunlin (above) and Curlew (below) for the winters of 1995/96 (blue) and 2004/05 (red); 1 dot = 3 birds. Inset shows Truro River in detail. Yellow = intertidal; pale green = nontidal; pale blue = subtidal. Grey areas not covered in earlier winter, brown in later winter; dark blue areas never covered.

## FOWEY ESTUARY

### *Site description*

The small Fowey Estuary in Cornwall lies to the east of St. Austell, with the villages of Lostwithiel at the head of the river and Fowey at the mouth. The estuary is extremely undeveloped, lying in a patchwork of agricultural fields, meadows and fragmented woodland. The estuary contains some saltmarsh, with the majority of the intertidal habitat on the middle reaches. The Fowey Estuary Partnership oversees management of the estuary. Pressures on waterbirds exist from recreational disturbance such as sailing and tourism.

### *General bird distribution 2004/05*

*Area covered 103 ha; Mean total birds 237; Mean bird density 2.3 birds per ha.*

The Fowey does not hold vast numbers of waterbirds, and only 12 species of waterbird were recorded on the site in 2004/05. Of these, Mallard and Curlew were most abundant and are discussed in greater detail. Shelduck was the only other species to occur in mean numbers exceeding 30 for the winter, with fairly stable numbers throughout. The birds were almost exclusively found on the upper estuary, north of St Winnow Point at the confluence of the Fowey and Lerryn Rivers. Other species only counted on the upper count section included Little Grebe, Canada Goose and Oystercatcher, all at very low density. The lower count section, stretching approximately 2.5 km south from St Winnow Point, contains less intertidal habitat and features a wider river channel. Consequently, Cormorant, Mute Swan and Grey Heron were concentrated at low density here. Redshank were also largely restricted to the lower reaches of the estuary. Mean winter counts of nine Little Egrets indicate that the estuary is still used by these birds, their distribution fairly evenly spread along the river. Finally, an occasional Kingfisher was noted on the estuary.

### *Comparative bird distribution*

The Fowey was last counted for the WeBS Low Tide Scheme in 1995/96 and thus the count in 2004/05 was a welcome update. The same two count sections were counted in both winters and so coverage of the major intertidal areas was complete. Overall species composition on the two counts showed no great changes, and two species - Mallard and Curlew - were most abundant in both winters of survey. Distribution across the estuary is considered in detail for the two species.

Although not exploiting intertidal habitat like some waterbirds, Mallard are commonly recorded on WeBS Low Tide Counts, and at the Fowey Estuary the winter site mean has remained remarkably consistent between surveys; in 1995/96, an average of 104 birds was recorded, whilst in 2004/05 the figure was 101. Densities for the two count sectors are slightly different for the two winters, but no more than might be expected from, for example, movements of birds in response to the tide (Figure 65). It therefore seems that current Mallard distribution on the Fowey is extremely similar to that when last surveyed nine winters previously.

Winter average numbers of Curlew were lower in 2004/05 than 1995/96, by 20 birds. However, distribution was very similar, with Curlew scarcely recorded below the confluence of the Fowey and Lerryn Rivers on either survey (Figure 65). The majority of intertidal habitat is found on the upper reaches of the estuary, where the river widens south of Lostwithiel, and it is here that Curlew were likely to be foraging on the exposed mud. The peak count in the earlier winter reached 103, but only 64 in the later winter. However, without this exceptionally high count, the site mean in both winters was comparable. There does not therefore appear to have been great changes in Curlew abundance or distribution.

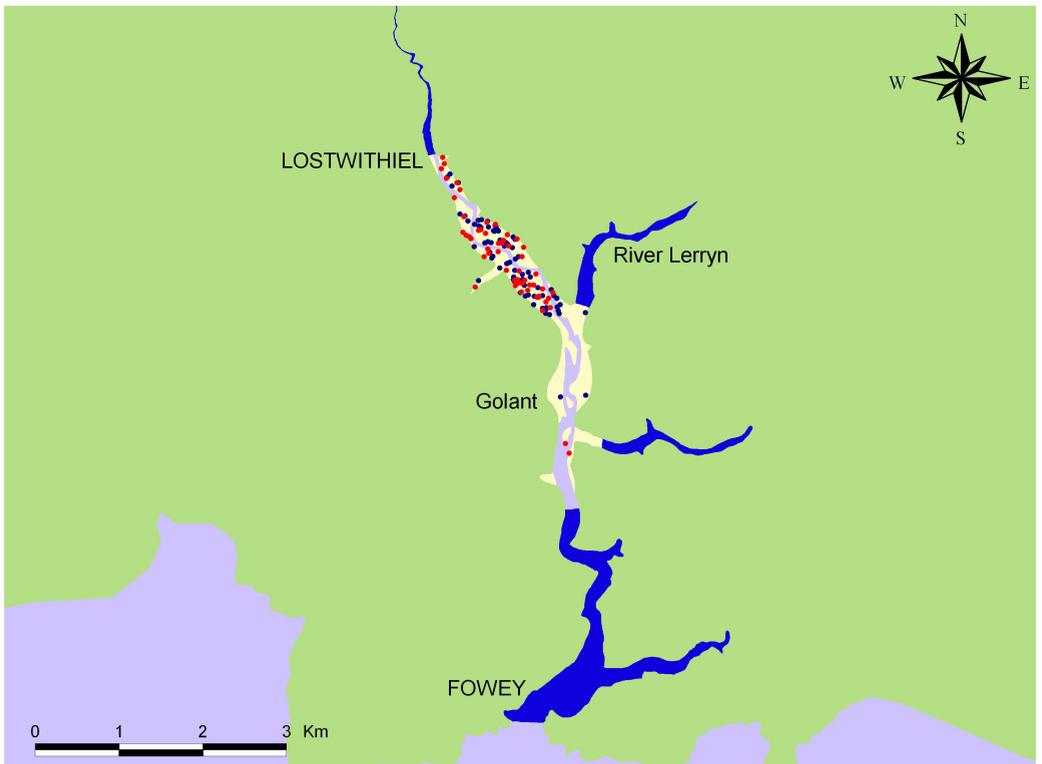
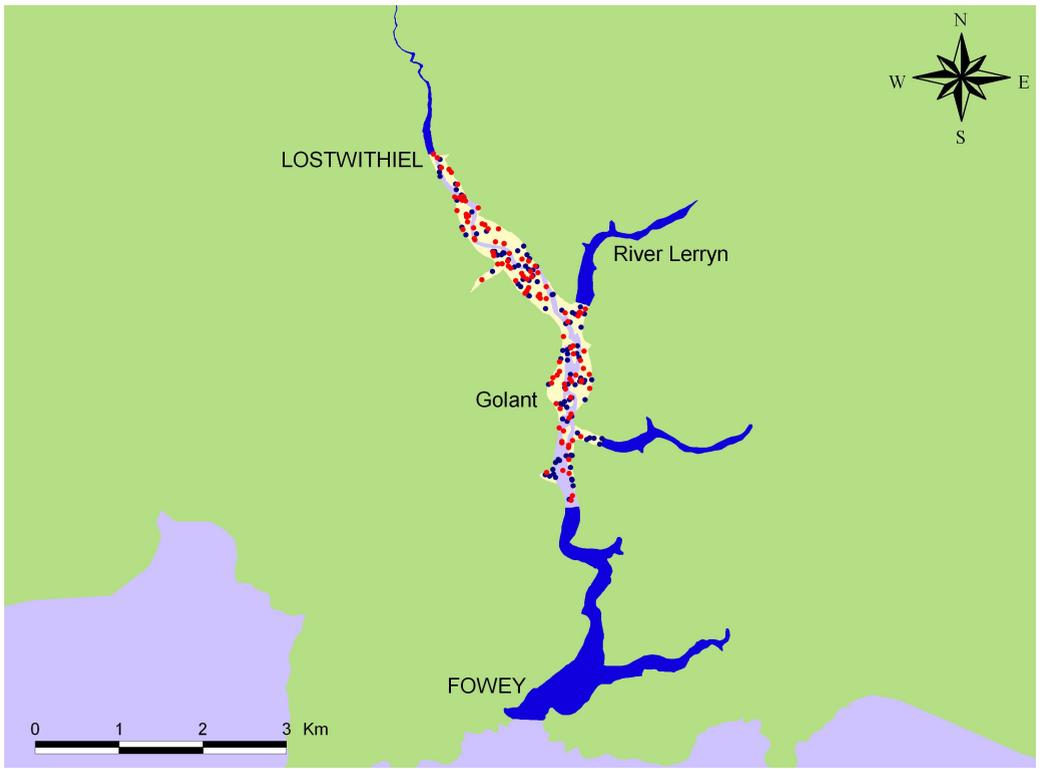


Figure 65. Low Tide distribution of Mallard (above) and Curlew (below) for the winters of 1995/96 (blue dots) and 2004/05 (red). Yellow = intertidal; pale blue = subtidal. Dark blue areas never covered.