

## Exe Disturbance Study: Summary

The Exe Disturbance Study (December 2011), which was commissioned by the Exe Estuary Management Partnership, presents the results and analysis from two winters of extensive surveys on the Exe estuary of recreational activities and birds responses to activity, and draws conclusions based on that analysis. Conclusions include

- There is evidence that disturbance is currently influencing the distribution and behaviour of birds on the Exe. These impacts may be sufficiently widespread and frequent to result in the estuary being less able to support the waterbirds for which it is protected.
- In general terms the numbers of birds appear low at the busiest locations of the Duck Pond and at Topsham in relation to adjacent count sectors.
- The parts of the estuary with the lowest levels of access (such as Shutterton Creek) are also the parts of the estuary with the highest bird counts.
- At various locations the number of birds varied in response to the levels of access over the previous 45 minutes; i.e. when more people had been present, fewer birds were recorded.
- A range of activities result in areas of intertidal habitat being 'unavailable' to the waterbirds for which the estuary is protected.
- A kitesurfer or windsurfer can result in around 8ha of intertidal habitat being 'unavailable' to the birds for the duration of the activity.
- In comparison with other sites studied, the Exe appears busier and has higher proportions of disturbance events per hour.
- By reducing the area available for the birds to feed disturbance is likely to result in a reduction in the ability of the estuary to support the bird populations for which it is protected.

The disturbance study did not attempt to assess the consequences of the effects highlighted above on the fitness and survival chances of the affected waterbird populations. The available budget for the study would not allow such in-depth assessment. However it nonetheless provides a clear picture that birds are being substantially affected by current levels of access to and around the estuary.

Work has been undertaken to develop individual-based models to predict the consequences of environmental change for shorebird and wildfowl populations. All models are limited by how up to date and comprehensive the data is that is used to populate them. One such model was primarily developed for oystercatchers on the Exe estuary, when access levels were likely to be very different to those currently experienced and certainly those forecast into the future arising from a rapidly increasing local population. Modelling by West *et al* in 2002 predicted the impact of human disturbance on oystercatchers using the Exe estuary in winter. The modelling showed that disturbance had the potential to be more damaging than actual habitat loss, but suggested that at the levels of access then occurring on the Exe, disturbance was not predicted to result in increased mortality.

Currently, of the 10 species that have been evaluated for the Exe Estuary by the Wetland Bird Survey<sup>1</sup> Alerts<sup>2</sup> system, which identifies changes in numbers of waterbirds, High and

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1 WeBS, a partnership between the British Trust for Ornithology, RSPB and the Joint Nature Conservation Committee in association with the Wildfowl and Wetlands Trust, which monitors non-breeding waterbirds in the UK, to identify population sizes, determine trends in numbers and distribution, and identify important sites for waterbirds.

2 The WeBS Alerts system provides a method of identifying changes in numbers of waterbirds at a variety of spatial and temporal scales. The WeBS Alerts report provides a review of the status of species on sites in the UK which are designated due to their conservation value. Species that have undergone major changes in numbers are flagged, by the issuing of an Alert.

Medium Alerts have been triggered for five species over different timescales:

High alert: Oystercatcher (since classification) and Lapwing (short term, long term and since classification)

Medium alert: Dark-bellied Brent Goose (since classification); Red-breasted Merganser (medium term and since classification), Grey Plover (medium term and since classification), oyster catcher (medium and long term) and lapwing (long term).

Since the Estuary is classified a Special Protection Area under the Wild Birds Directive<sup>3</sup> and a Ramsar site under the Ramsar Convention<sup>4</sup>, we have international obligations to protect it and the waterbird populations for which it is classified. This enshrines the precautionary principle, ie. it is not acceptable to wait until disturbance levels are such that the estuary's waterbird populations is in decline before taking action; measures must be put in place to avoid harm in the first place.

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<sup>3</sup> Council Directive 2009/147/EC on the conservation of wild birds.

<sup>4</sup> The Convention on Wetlands of International Importance.