



SOUTH EAST DEVON
HABITAT REGULATIONS
PARTNERSHIP

South East Devon Habitat Regulations Executive Committee

*Exe Estuary wildlife refuge monitoring –
2nd Annual report*

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November 2020



Exeter
City Council



Legal comment/advice:

There is no direct legal comment to be made at this time, each and any individual issue will need to be considered as it arises.

Finance comment/advice:

There are no specific financial implications within the report requiring separate comment, the associated monitoring costs being £8,752 in the year.

Public Document:	Yes
Exemption:	None
Review date for release	None

Recommendations

It is proposed that the Executive Committee:

1. Notes the interim results from the second annual wildlife refuge monitoring report.
2. Receives an overarching review of monitoring results after completion of the third year of monitoring (2021).

Equalities impact: Low

Risk: Low. This report provides the results of the second annual report of the Exe estuary wildlife refuge monitoring programme. Monitoring is ongoing, so these results are interim and contribute to a three year programme dataset. The objective of the programme is to determine the efficacy of the approach to preventing recreational disturbance to the protected bird species on the Exe estuary. This is important because without robust and effective mitigation which enables the partner authorities to be certain of no net impact to protected sites, continued development as outlined in respective local plans and within 10km of the estuary is at risk of legal challenge.

1. Summary

1.1 As a Special Protection Area (SPA) regularly supporting a community of at least 20,000 waterbirds, the Exe estuary is afforded legal protection against the deterioration of its habitats and disturbance (and deterioration) of the species for which it has been designated.

1.2 Disturbance can modify the feeding and roosting habits of protected bird species and place additional energetic stress through increased activity and lost feeding opportunities. This is likely to reduce fitness and survival, particularly if it occurs during periods when they are already stressed by other factors, such as poor weather, food shortage or prior to/after long distance migration.

1.3 Ongoing and regular monitoring of bird species and numbers via the Wetland Bird Monitoring Scheme (WeBS¹) shows that the majority of the internationally important populations of Dark-bellied Brent Goose, Wigeon and Oystercatcher in the estuary are found at Dawlish Warren National Nature Reserve (NNR) and Exmouth Local Nature Reserve (LNR). Protecting these habitats and species from disturbance goes to the heart of the mitigation strategy for the Exe estuary.

¹ *The Wetland Bird Survey (WeBS) is the monitoring scheme for non-breeding waterbirds in the UK, a partnership coordinated by the British Trust for Ornithology (BTO).*

1.7 The Executive Committee approved the recommendations to establish wildlife refuges, at Exmouth from 15 Sept – 31 Dec and all year round at Dawlish Warren, in October 2017. No fines or enforcement were suggested or recommended and an annual monitoring programme, to report over a 3 year period, was integral to the recommendations.

1.8 Following a competitive tendering process, Footprint Ecology were awarded the contract and began monitoring the areas in February 2018, prior to the official launch of the refuges². This was so that, in time, it would be possible to discern whether there were any observable changes in behaviour prior to and after the refuges were officially established.

2. The study.

2.1 The main objectives of the monitoring are:

- To determine (as far as is practicable) whether the Wildlife Refuges at Dawlish Warren and Exmouth a) work to reduce disturbance to water birds from recreational activities within these areas and b) positively contribute to the ability of the Exe Estuary to support designated bird populations in the SPA.
- To undertake a 3 year programme of monitoring (by direct observation) of the Exmouth (15 Sept – 31 Dec) & Dawlish Warren (all year) Wildlife Refuge areas, to ascertain their efficacy. Gather sufficient new data to establish the base line for new refuge areas.
- To ascertain the type, frequency and impact of disturbance events at the Exmouth Wildlife Refuge area outside of the date range of the refuge, when SPA designated species are present.
- To determine the level of adherence to the refuge areas (whether leading to a disturbance event or not).

2.2 Essential components of the survey include the following elements:

- To survey, record and quantify any disturbance events (type, response, distance, impact, species, number, time, tide) caused to water birds from different types of human activity within the refuges – on the water, inter-tidal and foreshore. This should also include activities in the refuges which do not result in disturbance.
- To survey and assess the effects on waterbirds of any consequences of displacement of water based recreational activity to other ecologically important areas in the Exe Estuary.
- Use existing studies to inform survey methodology, to ensure a growing and consistent evidence base. To use any available data (such as WeBS) to help gauge any discernible changes in the patterns of waterbird population and distribution as a result of the Wildlife Refuges.
- To compile an annual report including summary of results, interpretation of the data, full results and any issues arising.

² The first annual monitoring report was approved by the Executive Committee at their meeting on 16 July 2019.

- To compile an overarching report after a period of 3 years monitoring. This report to include comprehensive summary of results, interpretation of the data and (if appropriate) recommendations for future management.

2.3 To ensure clear and concise output from the 3 year programme, 5 key questions need to be answered by the monitoring survey. These questions look to establish how effective the refuges are:

- 1) How well are the Wildlife Refuges adhered to in general?
- 2) Are the Wildlife Refuges working to reduce disturbance to the designated bird species on the Exe?
- 3) Have the Wildlife Refuges positively affected the ability of the Exe Estuary to support designated bird populations? I.e. if a reduction in disturbance is observed, is this enough to conclude no adverse effect on site integrity for the SPA features?
- 4) If there is an insufficient reduction in disturbance to conclude no adverse effect on site integrity for the SPA features, what further actions in these areas can be taken to avoid and minimise the disturbance to waterbirds from recreational activities?
- 5) Do any particular activities continue to cause disturbance within the refuges?

2.4 As in the first year of the survey, two different monitoring approaches have been utilised:

- Core Counts, involving continued observation over a fixed time period (1 hour and 45 minutes), recording the birds present, human activity, and any interactions between people and birds, and;
- Vantage Point Counts (VPC), involving quick, 'snapshot', counts recording the number of birds present and the distribution of human activity.

2.5 Core Counts provide detailed data relating to the responses of birds and prolonged observation across a fixed recording area. This approach builds on the Exe Disturbance Study and has been developed in line with a series of studies across the UK. Each count involves the following elements:

- Two counts of birds, one count at the start and one at the end of the survey period;
- A diary of all potential disturbance events observed during the 1 hour and 45 minutes following the first count;
- A record of the response of selected bird species to each of the potential disturbance events recorded in the 'diary', including counts of birds present and the number of birds flushed, etc., and;
- Any additional information.

2.8 VPC are much quicker and easier to carry out, cover a much wider area, and are undertaken much more frequently than the Core Counts. The VPC therefore provide the best indication of how frequently there are people inside the refuges. These consisted of 'snapshot' counts, each lasting around 15 minutes, whereby a wide expanse of the estuary was scanned with binoculars from pre-selected vantage points, and a count made of any people, activities, and birds present. These counts are simple to complete and provide an easily replicated approach which meant that the Habitat Mitigation Officers were able to undertake these counts, providing supplementary data to the Core Counts.

2.9 Four survey locations are consistent throughout the 3 year monitoring programme – two at Exmouth and two at Dawlish Warren. To ensure coverage across a range of conditions and circumstances, visits are timed to coincide, as far as possible, with the following:

- A range of weather conditions, including some dates with strong winds when water sports and sailing are likely to take place;
- Any particular events that were known to be taking place;
- Weekends and weekdays and different times of day, and;
- A range of tide states.

2.10 Monitoring is ongoing and it is important to note that the data and results in the second annual report are part of a larger body of counts to be undertaken over a three year period.

3. Monitoring results – Year Two summary

3.1 Key findings from the second annual report, contained here as Appendix A, represents data collected from the period April 2019 to March 2020 and are as follows:

Bird numbers compared to the previous year

- High numbers of birds were again present in and around both refuges.
- The bird Core Counts from Exmouth and Dawlish Warren were highest in the autumn/early winter, while this was less apparent at Cockwood (on the western side of estuary north of Dawlish Warren).

Bird numbers within and outside refuges

- Vantage Point Count data showed a greater proportion of wildfowl were present inside the Exmouth refuge when it was active, compared to other times of the year, but fewer waders were recorded within the refuge boundary throughout the year.
- A larger proportion of waders and wildfowl were recorded from within the Dawlish refuge than outside its boundary throughout the year.

Combined levels of recreational use inside and outside of the refuges

- The Exmouth side of the estuary again had a much higher level of recreational use than the Dawlish side, with many more dog walkers, walkers, and watersports recorded at the Exmouth Duck Pond in particular.

- The number of dog walkers recorded during the Core Counts from the Exmouth side of the estuary had more than doubled since the first year of the study.
- There was still little evidence that the refuges are deterring visitors to the respective areas in general, for example the Core Count data showed watersports and dog walkers continuing to use the general Duck Pond area (i.e. including areas outside the refuge) when the refuge was active.
- Vantage Point Count data showed recreational use outside the Exmouth refuge peaking in late summer, before decreasing to low levels which were then maintained throughout the refuges active period.

Incursions into the refuges

- A relatively small number of incursions into the refuges were again noted within the Vantage Point Count data.
- However, the number of incursions into the Exmouth refuge was higher compared to the first year of the study (20 incursions in 2019/20 compared to 12 in 2018/19). Fewer Vantage Point Counts were included in the current year's analyses, potentially indicating that a larger number of incursions may have occurred³.
- The Core Count data identified a large relative increase in the number of incursions into both refuges in comparison to the first year of the study, particularly at Exmouth where incursions were predominantly carried out by dog walkers.

Impacts of recreational activity on birds present

- Observations of bird responses to activities taking place within the refuges recorded a total of 66 waders and 43 wildfowl flushed, during the active period.
- Comparison of data from different time windows, when the refuges were active or not, again suggests there is a higher likelihood of a behavioural response occurring when the refuges are active, with higher proportions of birds taking flight or responding.

3.2 In summary, the data therefore indicates that the refuges continue to support large numbers of birds, and that incursions into the refuges (when they are active) are still relatively infrequent (but nevertheless have increased since last year). The data also show that although observed human-bird interactions on the estuary have decreased, when they do occur they generally have a marked impact in terms of a behavioural response from the birds present .

3.3 The report goes on to state that the data collected shows that that at least half of bird-dog walker interactions observed within the study area caused the birds to flush. Water-based activities also continue to be an issue, with windsurfing within the Exmouth refuge in particular continuing to be problematic.

³ Some counts were undertaken during this period but could not be submitted to Footprint Ecology due to issues related to Covid-19 lockdown and furlough. The counts which were undertaken have now been passed to Footprint and therefore will be incorporated into next year's overarching final report.

3.3 The final year of monitoring will highlight whether the changes observed in the number of incursions continue, and whether there are shifts in how the areas are used by birds, over time.

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Natural England comment:

It is concerning that the data shows an increase in number of walkers and dogs using the Exmouth refuge since 2018/19. We hope that there will be a focus this coming winter on further raising awareness of the sensitivities of the refuges and encouraging dog walkers to use alternative sites.