

FIVE ESTUARIES OFFSHORE WIND FARM

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Natural England Outer Trial Bank Survey Report 2024



Cover Note

By Justin Hart

This report summarises the findings of a survey conducted in 2024 of the gull colony located on the Outer Trial Bank. The survey aimed to count the numbers of nesting birds (principally lesser black-backed gulls and herring gulls) and estimate their productivity. It tested a combination of approaches to the survey, using a generic walk-over method and the more innovative use of a drone. The surveyors also made observations of the site's vegetation cover, checked for the presence of rats and signs of nest predation.

The survey comprised four visits roughly a month apart (21st May, 19th June, 17th July and 15th August). Access to the site was achieved on foot from shore during spring tides when the sea had receded low and for long enough to do so.

The concept was to use the first walkover survey to count active nests with eggs or small chicks and then the later surveys to count the number of chicks and estimate productivity. The drone would be used early in the season, prior to a walkover survey, to take aerial photos of the sitting birds so each occupied nest could be more accurately differentiated between gull species. The aerial photos complement the counting process because sitting gulls take flight during the walkover surveys and, in their absence, the exposed nests and eggs are too similar to differentiate between species.

A maximum of 1310 gull nests were counted in May. This compared to 1327 counted in 2023 by RSPB and the peak number of 3640 counted in 2000. The ratio of lesser black-backed gull to herring gull nests was estimated to be 40:60, respectively, but could not be differentiated more accurately using the aerial photos this season. This was because permission to fly the drone was not obtained until the June visit when it was already too late to capture most of the nesting birds sitting on eggs. A nesting peregrine also restricted operational flight height and so images of the birds taken were too small to be useful. The possibility of a repeat occurrence should be considered for any future survey work. Nonetheless, the estimated ratio was similar to the 2023 survey although the decline in lesser black-backed gulls since 2000 appears to remain a long-term trend. Counts of chicks and fledged young during the later visits suggested gull productivity was good (mean value of 0.71 chicks per nest compared to the equivalent UK national figure of 0.53) despite the presence of rats and signs of predation, potentially by rats, found.

More accurate counts of each species and their productivity are achievable, and the results of future surveys can be improved by ensuring the drone obtains suitable aerial photos during the egg stage of the gulls' nesting cycle and by introducing a chick colour ringing scheme. The chick ringing will be especially useful as counting the ratio of ringed and un-ringed chicks during the later survey visits can improve the accuracy of the productivity estimate. Further work to identify the causes of egg and chick loss using best practice guidelines is recommended. Furthermore, subsequent re-sightings of these birds nesting elsewhere could provide evidence of connectivity with other colonies, including those within the National Site Network for this species.

Gaps in our knowledge regarding Outer Trial Bank remain, notably regarding the causes of the gull population decline (environmental, food, rat or other predator related) and their relative importance, but the survey findings provide useful data and information to help improve understanding. Further work is recommended to identify the causes of egg or chick loss and manage the rat population using best practice guidelines.

Outer Trial Bank 2024

Summary by Matt Lonsdale

The Outer Trial bank is a man-made island built in the 1970s as a trial to store freshwater 2 miles off the Lincolnshire coast, Northeast of the river Nene but the island itself is actually in Norfolk, this creates huge difficulty with access and monitoring as it's a 2 mile walk across saltmarsh and mudflats that can only be completed when tide is low as well as the weather needing to be good due to disturbance caused. The walk takes an average of 50mins and there is only a 3-hour tidal window to complete the survey.

As part of the Wash NNR the team undertook skeleton monitoring of the site in an attempt to gauge the numbers of large gulls breeding on the island, as well as any potential problems with predation mainly around the presence and effects of rats on the large Gull population.

In 2023 the outer trial bank was surveyed for the first time since 2018 as part of the RSPB's large gull study and we committed to continue the monitoring and coverage for 2024. We spent a total of about 10 staff days including getting permissions and getting together figures etc.

In 2024 we conducted four surveys on the outer trial bank to monitor the numbers of breeding Lesser Black Backed and Herring Gull. We spaced the visits about a month apart, Ideally, we would have liked to conduct a pre site visit in April but unfortunately, we couldn't manage to get the visit in.

In addition to the large Gulls, a pair of Peregrine Falcons bred on the dilapidated structure next to the Outer trial bank and fledged One young.

The four visits were 21st May, 19th June, 17th July, 15th August.

On the 21^{st of} May 4 members of staff visited to conduct a full walkthrough nest count on the island, each nest was marked using a piece of pasta. We found a total of 1220 active nests including 25 newly hatched chicks and c90 predated nests. So, a total of 1310 nests across the island. From birds seen it was estimated to be a 60/40 split in favour of herring gull in terms of presence and numbers of nests.

On 19th June we managed to gain drone permissions from the Holbeach ranges so this was the main purpose of our visit on this date. Unfortunately, although we manged to get some great images of the outer trail bank and can look at the vegetation from the images, but we flew the drone a little too high and can't manage to count sitting birds from the images. From ground observations we estimated around 200 AON still as well as 500 chicks noted.

On 17th July we counted a total of 750 fledged young of the large gulls as well as at least 95 remaining chicks on the island but these are particularly hard to see in vegetation, so we suspected there to be many more hiding out of sight.

On 15th August an additional 191 fledged young were noted from this visit meaning a total of at least 941 Herring/LBB gulls fledged from the island. Considering the challenges around monitoring and predation this seems like a good success. This would give us a productivity of 0.71 per pair.

Comparisons

Number of large gull nests combined numbers for Lesser Black Backed Gull and Herring Gull as with this year's survey we couldn't differentiate between the two species. These figures show a

continued sharp decline from 2018 to 2023/24 as well as a change in species ratio from 2018 to 2023/24. In 2018 the species ratio was

Year	2018	2023	2024
Number of AON's	2,295	1,348	1310

Species Ratio	2018	2023	2024
Herring gull	44%	57%	*60%
LBB Gull	56%	43%	*40%

^{*}Estimated

Predation

Clear signs of predation were noted on our visits to the outer trail bank with 2 rats seen on the May visit and a single seen on the August visit. Throughout every visit though clear signs of Rats presence could be seen across the island with countless burrows as well as predated eggs and scavenged adults. It is difficult with the limited number of visits to work out the exact effect that the rats are having on the colony, but I think it is having are large impact. On the final visit it was also noted the number of dead large young seen with at least 9 noted as well as a couple of adults, almost all had consequently been scavenged.



Rat burrow, OTB

Predated Egg, OTB





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