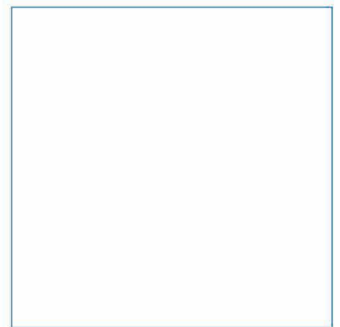
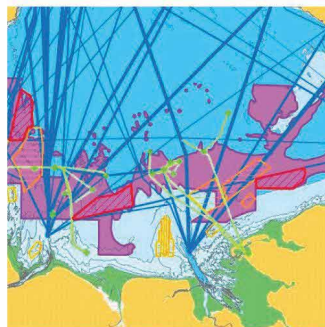
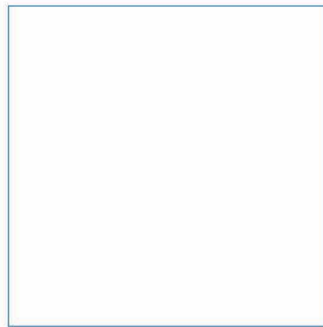


Latham Trust

Medmerry Park Brent Goose Surveys

Winter coastal bird survey 2020/21

July 2021



Innovative Thinking - Sustainable Solutions



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Image taken on the January 2021 survey showing a freshly cut Field G.
Field G had been cut the previous day.

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Nick Goldsmith	Andrew Pearson	Colin Scott
		

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ABPmer

Quayside Suite, Medina Chambers, Town Quay, Southampton, Hampshire SO14 2AQ
T: +44 (0) 2380 711844 W: <http://www.abpmer.co.uk/>

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1 Introduction

1.1 Project background

On behalf of Medmerry Park Ltd, and to inform the recent planning application (Ref 19/02840/FULEIA) for the upgrading of Medmerry Park Holiday Village, ABPmer carried out a series of winter bird surveys within and around the park estate. As instructed these bird surveys of Medmerry Park and its surrounding fields were continued during the 2020 to 2021 winter.

This report summarises the findings from the latest winter surveys. It outlines the methods and results of the latest five survey visits and the continual camera monitoring work that was undertaken between November 2020 and March 2021. This report should be read in conjunction with the previous coastal bird report, which summarised the results from the preceding surveys undertaken during the 2018/19 winter (ABPmer, 2019). In addition to the surveys undertaken between November 2018 and March 2019, static cameras were also deployed to record birds between November 2019 and February 2020 at key locations within Medmerry Park (ABPmer, 2020).

During the first monitoring period, in 2018/19, Dark-bellied Brent Goose *Branta bernicla bernicla* (hereafter Brent Goose) were observed foraging within one of the fields of the Park (ABPmer, 2019). Brent Geese were present within Field E for approximately 20 days in January 2019 (see Figure 1 for field locations and codes).

During the second winter of monitoring period, the management of Field E was changed with the removal of the grazing cows. Brent Goose were not recorded during this 2019/20 monitoring period. As part of the planning application it was requested (via official consultation with Natural England) that additional surveys should be undertaken as the current data was not deemed sufficient.

As part of the planning application, Fields F, G and I were included as potential mitigation areas for the loss of Fields E. This meant that the fields were managed with Brent Goose in mind. This included a small amount of scrub clearance (in April 2020) to improve site lines and mowing and removal of grass to a shorter sward height (in November and December 2020). It was hoped that the improved management of the habitats within Fields F, G and I would encourage Brent Goose to forage within these areas. The static camera placement was altered for the 2020/21 monitoring to account for the change in focus to Fields F, G and I.

This report is structured as follows:

- Section 2: Survey Methodology - A description of the approach taken for the survey work including the survey areas, surveyor vantage points, and static camera deployment sites;
- Section 3: Survey Results - A review of the findings from the surveys; and
- Section 4: Conclusions - A summary of the results with reference specifically to the value of the survey area for Brent Goose

2 Survey Methodology

2.1 Vantage point surveys

The latest overwinter coastal waterbird survey was undertaken between November 2020 and March 2021. An experienced ornithologist visited the proposed development site once a month (five visits in total) and surveyed nine distinct areas of the Park and the Stilt Pools (Figure 1). This included an area within the Bracklesham Bay Sites of Special Scientific Interest (SSSI).

On each visit, a surveyor counted each area multiple times over a period of several hours from various vantage points. All species of waterbird were recorded alongside a description of behaviour. Most surveys were undertaken at or around high water as these are the most likely times coastal waterbirds would be displaced from intertidal foraging areas onto fields. Some surveys were undertaken outwith the high tide period in order to understand complete tidal cycle usage; this full tidal coverage was suggested by Natural England. A range of time of day was also surveyed to included movement to and from roosting times.

In addition to counting the survey areas multiple times during a survey visit, effort was made to record the flight lines and heights of Brent Geese. This was to help inform if the Brent Geese flying over the Park were park of the Chichester Harbour or Pagham Harbour population.

2.2 Geese dropping surveys

Alongside visual observations of each area transects were walked across the fields specifically looking for Dark-bellied Brent Goose dropping (as recommended by Natural England). The presence of droppings can be used as a proxy for the presence of the species in additions to the recordings from the vantage point surveys. All fields were walked several times during the survey period.

2.3 Static wildlife surveillance cameras

As well as the daytime vantage point surveys and the goose dropping transects infrared cameras (Crenova RD1000 Trail Camera) were deployed in Fields F and I (Figure 2). Unlike previous monitoring periods where the cameras were placed in Field E, due to the change in management the cameras were placed in Fields F and I. The cameras were deployed on the first survey (24 November 2020) and removed from the Park on the last survey of the monitoring period (30 March 2021).

To conserve battery life and reduce the length of processing time of non-bird images it was decided that the cameras would take a photo every 15 minutes between 06:00 and 19:00. Previously, photos were captured 24 hours a day, but the nocturnal capability of the camera was relatively poor with the infrared only illuminating the first metre and therefore covering only a tiny fraction of the field.



Figure 1. Count areas used in the overwinter bird surveys

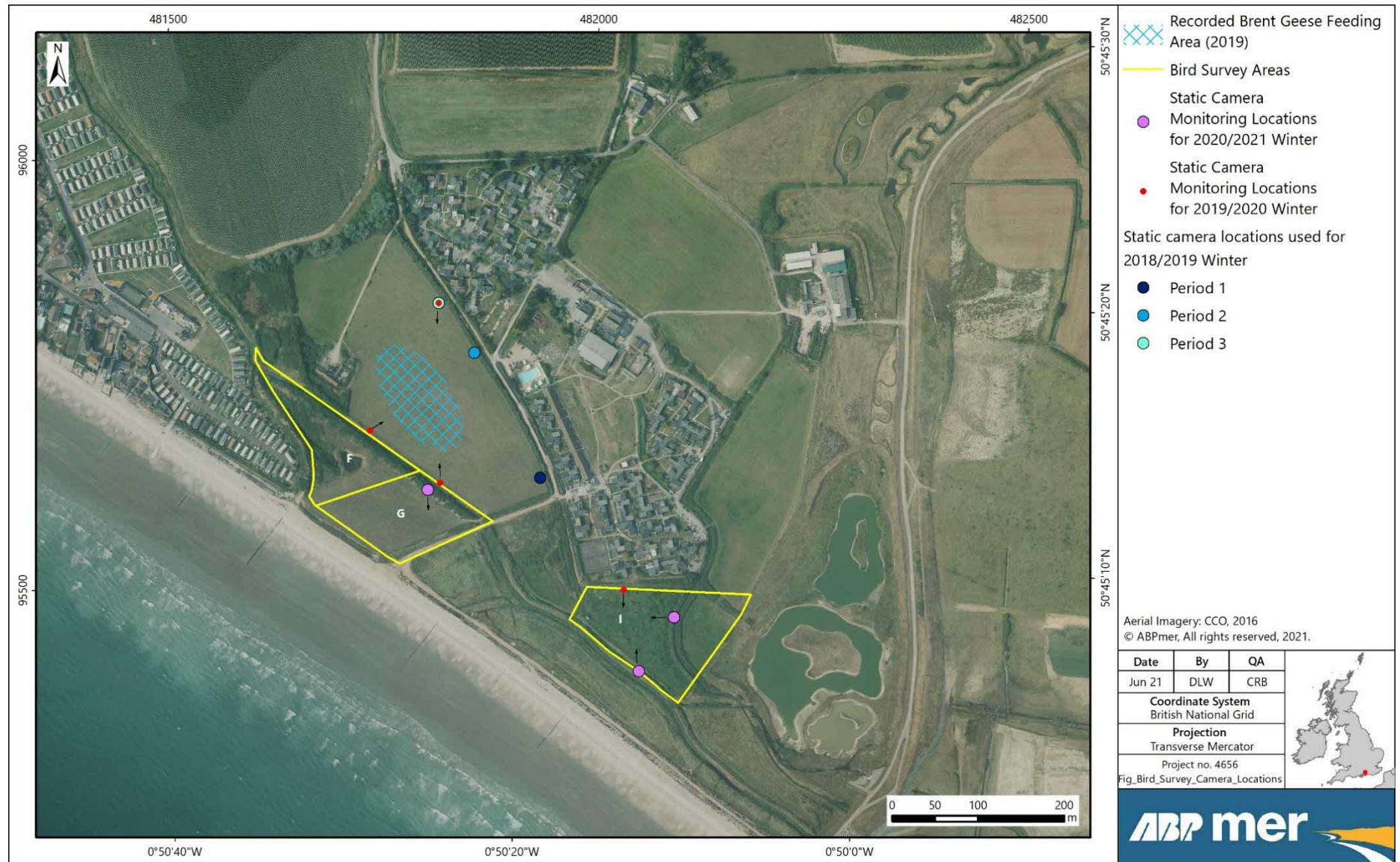


Figure 2. Locations of static camera deployment in 2018/19, 2019/20 and 2020/21

3 Survey Results

3.1 Overview

Over the course of the five survey visits, only three species of waterbird were observed using the fields of the Park, compared to 26 species recorded within the Stilt Pools (Table 1). As anticipated, the peak counts of all species occurred within the Stilt Pools, apart from a single Snipe within Field I. Five species were present on all five site visits (Black-headed Gull, Canada Goose, Coot, Lapwing and Mallard).

Table 1. Summary of species present during the five 2020 to 21 winter surveys

Species	Number of Visits Present (Park Areas)	Number of Visits Present (Stilt Pools)	Peak Count Observed
Black-headed Gull		5	65
Canada Goose		5	22
Coot	1	5	18
Lapwing		5	24
Mallard		5	35
Cormorant		4	3
Grey Heron	1	4	1
Herring Gull		4	14
Tufted Duck		4	5
Wigeon		4	77
Great Black-backed Gull		3	3
Teal		3	16
Dark-bellied Brent Goose		2	13
Gadwall		2	2
Little Egret		2	1
Mute Swan		2	2
Oystercatcher		2	2
Shelduck		2	2
Shoveler		2	18
Snipe	1		1
Avocet		1	4
Black-tailed Godwit		1	2
Common Gull		1	3
Greenshank		1	1
Little Ringed Plover		1	1
Mediterranean Gull		1	3

3.2 Vantage point surveys

During the five site visits, three species were recorded using the Medmerry Park fields. These were a single Grey Heron in Field H, two Moorhen also in Field H and one Snipe in Field I. Several of the fields were in a different condition than during previous monitoring periods and therefore the species diversity observed using the fields was greatly reduced. The largest counts during the survey period were of Wigeon with 77 individuals present in the Stilt pools in November, followed by 65 Black-headed Gull in the Stilt Pools in February.

The number of Brent Geese observed flying past/over Medmerry Park during the site visits was lower during this monitoring period compared to the first winter of surveys (2018/19). In 2018/19 up to 600 Brent Geese flew along the shore into the Royal Society for the Protection of Birds (RSPB)-managed Medmerry Nature Reserve. During the 2019/20 winter the peak numbers were approximately 100 birds. All recorded flights of Brent Geese arriving at the Stilt Pools and/or the Medmerry Nature Reserve arrived from the north east (from Chichester Harbour direction). There was a clear movement of birds at dawn, but this was not replicated during the dusk survey (January 2021).

Fields F, G and I were cut during the season (in December and January) to try and produce the same sward height as had been available in Field E previously when it was grazed by cattle. However, the grass was left in situ following the first cut (December) meaning that the conditions were not preferential.

3.3 Static cameras

A total of 13,500 photos were taken during the 2020/21 monitoring period. Coastal waterbirds were present on <1 % of these photos. No Brent Geese were recorded on any of the cameras in the two areas covered. The main species observed were gulls, including Common, Black-headed and Herring Gull (Image 1). The birds used Field I to a greater extent than Fields F and G due to the field being waterlogged and allowing good foraging opportunities.



Image 1. Example still from the static camera in Field I, showing a Black-headed Gull

Only daylight hours were surveyed with the cameras (06:00 to 19:00) so there is potential for the fields to be used outside of these. In some instances, there, were issues with the water ingress causing condensation of the lens (as seen in Image 1). On some days the condensation meant that the entire field was not viewable.

3.4 RSPB-managed Stilt Pools

Alongside the areas within Medmerry Park, an opportunity was taken to survey the Stilt Pools (Image 2) which are part of RSPB Medmerry Nature Reserve. These shallow water lagoons (with islands) comprise a freshwater flood accommodation area that was designed specifically with the intention of providing appropriate habitat for waterbirds and a large variety and diversity of birds present within this area (Table 2). A total of 26 species of coastal waterbird were recorded using the Stilt Pools for both foraging and roosting.

Table 2. Max counts of each species in the Stilt Pools per survey visit

Species	2020		2021		
	20 Nov	26 Nov	13 Dec	20 Dec	07 Jan
Avocet					4
Black-headed Gull	21	14	11	65	4
Black-tailed Godwit					2
Canada Goose	15	8	22	7	2
Common Gull				3	
Coot	18	5	4	3	2
Cormorant	2	1	1		3
Dark-bellied Brent Goose	8			13	
Gadwall		2			
Great Black-backed Gull		1		3	1
Greenshank	1				
Grey Heron	1	1			
Herring Gull	9		2	14	7
Lapwing	24	21	4	1	
Little Egret			1		1
Little Ringed Plover					1
Mallard	20	21	35	2	2
Mediterranean Gull					3
Mute Swan	2				2
Oystercatcher				2	1
Shelduck				2	1
Shoveler	18			4	
Teal		13	15	16	
Tufted Duck		2	5	2	3
Wigeon	77	18	76	9	



Image 2. Stilt Pools (looking west, with the Medmerry Park in the background)

4 Conclusions

The ongoing monitoring of the bird population in and around the Park has shown the site is not habitually used by waterbirds. The availability of a well-managed nature reserve and arable fields a short flight away meant that there were more suitable habitats for the birds to use in the vicinity.

During winter 2020/21 a notable reduction of the species diversity using the site was observed and just three species were recorded using the surveyed areas of the park. In previous years, Teal and Mallard were observed in Field H regularly, but the increase in reeds may have made the habitat less suitable or the birds less visible in 2020/21. The diversity of the adjacent RSPB Medmerry Nature Reserve's Stilt Pools has stayed the same as in previous surveys, albeit in slightly lower numbers than in previous years.

The management of Fields F, G and I for Brent Goose was not successful this year with no evidence recorded during the survey visits, the goose dropping walkovers or on the cameras. There was a slight mechanical issue that the mowed grass was left in situ for the first month and this meant that even though the sward height was preferential the dead grass was not suitable for the Brent Goose.

5 References

ABPmer, (2019). Medmerry Park Improvement Project, Winter coastal bird survey 2018/19, ABPmer Report No. R.3202. A report produced by ABPmer for Latham Trust, April 2019.

ABPmer, (2020). Medmerry Park Improvement Project, Supplementary Information on Ecology and Nature Conservation for Planning Application Ref. 19/02840/FULEIA, ABPmer Report No. R.3362. A report produced by ABPmer for Medmerry Park Ltd., May 2020.

Contact Us

ABPmer

Quayside Suite,
Medina Chambers
Town Quay, Southampton
SO14 2AQ

T +44 (0) 23 8071 1840

F +44 (0) 23 8071 1841

E enquiries@abpmer.co.uk

www.abpmer.co.uk

