**BOC Teesside CO2 Plant**

on behalf of BOC Ltd.

# Ecological Assessment Report

avian ecology

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## APPENDICES

# 1 INTRODUCTION

1.1.1 Avian Ecology Ltd. was commissioned by BOC Ltd. to undertake an Ecological Assessment in relation to a proposed $CO_2$ plant on land at BOC Teesside, North Teesside ('the Site').

1.1.2 The proposed development involves the construction of a Carbon Capture (CO2) project, located on land adjacent to the existing BOC hydrogen plant, located on industrial land within the SABIC North Tees site, North Teesside.

## 1.2 Site Overview

1.2.1 The Site, as illustrated by the red-line boundary shown on (**Figure 1**), comprises an area of industrial land of approximately 0.49 ha, located to the north of Middlesbrough at approximate central grid reference NZ 5234 2337.

1.2.2 Habitats within the Site and immediately surrounding land are dominated by hardstanding, with ephemeral / short perennial and bare ground. In addition, the Site is located immediately adjacent to industrial buildings associated with the BOC Teesside hydrogen plant.

1.2.3 In the wider context the Site is surrounded by further extensive industrial areas and waterbodies associated with the Teesmouth and Cleveland Coast Special Protection Area (SPA), Ramsar and Site of Special Scientific Interest (SSSI).

## 1.3 Scope of Assessment

1.3.1 The objectives of the Ecological Assessment presented within this Report are to:

- Identify the proximity of any designated sites for nature conservation interest and provide an assessment of any potential effects the proposed development may have on these;
- Provide baseline information on the current habitats and ecological features both within the Site and immediate surrounding area;
- Identify the presence or potential presence of any protected species or habitats and provide an assessment of any potential effects the proposed development may have on these; and,
- Provide recommendations for further pre-construction checks and / or mitigation measures, if required.

1.3.2 The Assessment has comprised a desk study review of existing ecological and ornithological information for the Site and surrounding area, together with an Extended Phase 1 habitat survey. In addition, a screening noise report was carried out by Evans Acoustics as part of the assessment.

## 1.4 Legislative Framework, Planning Policy and Guidance

1.4.1 During the preparation of this report, reference has been made to the following key pieces of legislation, planning policy and guidance listed in **Table 1.1** below.

***Table 1.1: Key legislation, planning policy and guidance.***

| **International** |
|---|
| • Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (hereafter referred to as the 'the Ramsar Convention)[1]<br>• Convention on the Conservation of European Wildlife and Natural Habitats 1979 (hereafter referred to as the 'the Bern Convention'[2];<br>• UNESCO convention on the protection of the World Cultural and Natural Heritage (1972)[3] |
| **National** |
| • The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[4];<br>• The 'Conservation of Habitats and Species Regulations 2017' (as amended) – 'the Habitats Regulations'<br>• The Wildlife and Countryside Act 1981 (as amended);<br>• The Environment Bill 2020 (currently being processed through the House of Commons)[5];<br>• Countryside and Rights of Way Act 2000;<br>• The Invasive Alien Species (Enforcement and Permitting) Order 2019[6]<br>• Infrastructure Act 2015;<br>• Protection of Badgers Act 1992;<br>• Hedgerow Regulations 1997<br>• The Wild Mammals (Protection) Act 1996<br>• Natural Environment and Rural Communities (NERC) Act (2006);<br>• The National Planning Policy Framework 2 (NPPF2, 2019)[7];<br>• 'Birds of Conservation Concern 4' (Eaton *et al*., 2015)[8];<br>• The United Kingdom Biodiversity Action Plan (UK BAP);<br>• BS 42020:2013 Biodiversity – Code of Practice for Planning and Development;<br>• Biodiversity Net Gain. Good practice principles for development[9]; |

[1] https://www.ramsar.org/
[2] https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/104
[3] https://whc.unesco.org/en/convention/
[4] https://www.legislation.gov.uk/uksi/2019/579/contents/made
[5] https://services.parliament.uk/Bills/2019-21/environment.html
[6] https://www.legislation.gov.uk/uksi/2019/527/introduction/made
[7] https://www.gov.uk/government/publications/national-planning-policy-framework--2
[8] Eaton, M., Aebischer, N., Brown, A., Hearn, R., Lock, L., Musgrove, A., Noble, D,. Stroud, D. and Gregory, R (2015). *Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man*. British Birds, 108, pp708-746.
[9] https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development-a-practical-guide/

| Local |
| --- |
| • Tees Valley Biodiversity Action Plan[10] |

1.4.2 The Conservation of Habitats and Species Regulations 2017 (as amended) remains in place following from the United Kingdom's (UK) withdrawal from the European union (EU) with only relatively minor changes that were introduced from 31st December 2020, with the 2017 regulations being transposed into national (England and Wales) legislation via the Conservation of Habitats and Species Amendment (EU Exit) Regulations 2019 which came into force on 31st December 2020. Examples of the relatively minor changes following the EU withdrawal are that the European Commission's role in the Habitats Regulations Assessment (HRA) derogation test process will be replaced by the Secretary of State for the Environment, Food and Rural Affairs (DEFRA); and that there will be changes to the procedures for designation / classification to both Special Areas of Conservation (SAC) and Special Protection Areas (SPA). The HRA regime set out in the Conservation of Habitats and Species Regulations 2017 (as amended) has therefore continued to apply in largely the same way from January 2021.

1.4.3 The 'UK Post-2010 Biodiversity Framework' succeeds the UK Biodiversity Action Plan (UK BAP) and 'Conserving Biodiversity – the UK Approach'. The lists of priority species and habitats agreed under UK BAP still form the basis of much biodiversity work and are therefore considered within this report in the context of the objectives of the Biodiversity Framework. BAPs identify habitats and species of nature conservation priority on a UK (UK BAP) and Local (LBAP) scale. UK BAPs formed the basis for statutory lists of priority species and habitats in England under Section 41 (England) of the Natural Environment and Rural Communities (NERC) Act 2006, and so are also relevant in the context of this legislation.

1.4.4 This report is provided in accordance with the provisions of British Standard 42020:2013 Biodiversity: *Code of Practice for Planning and Development*.

## 1.5 European Protected Species (EPS) Policies

1.5.1 European Protected Species (EPS), such as bats, great crested newts *Triturus cristatus* and otters *Lutra lutra*, receive full protection under the Habitat Regulations.

1.5.2 This makes it an offence to:

- deliberately capture, injure or kill any EPS;
- to deliberately disturb them; and,
- to damage or destroy a breeding site or resting place.

1.5.3 In addition, the Wildlife and Countryside Act 1981 (as amended) makes it an offence to intentionally or recklessly disturb a EPS while it is occupying a structure or place which it uses for shelter or protection, or to obstruct access to any structure or place the species uses for shelter or protection.

1.5.4 Natural England is the primary enforcing body of the Habitat Regulations and therefore responsible for implementation and compliance in England. In February 2016 Natural England published '*Wildlife licensing: comment on new policies for European protected species licence'*[11]. Following from this

[10] https://teesvalleynaturepartnership.org.uk/wp-content/uploads/2012/11/Tees-Valley-priority-habitats-and-species-updated-5-jan-2012-pdf.pdf

[11] https://www.gov.uk/government/consultations/wildlife-licensing-comment-on-NEw-policies-for-european-protected-species-licences

consultation period, in December 2016 Natural England officially introduced the four licensing policies throughout England[12].

1.5.5 The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

1.5.6 The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations 2017 (as amended) legal framework now applies to 'local populations' of EPS and not individuals/site populations.

# 2 METHODOLOGY

## 2.1 Desk Study

### *Online resources*

2.1.1 A desk study was undertaken to identify existing information on the presence of designated sites for nature conservation, protected and notable species and habitats within proximity to the Site as follows:

- Non-statutory Designated Sites for Nature Conservation within 2km of the Site;
- Statutory Designated Sites for Nature Conservation, within 5km of the Site, extended to 10km for European sites; and,
- Existing records of protected and notable faunal species, within 2km of the Site.

The following key sources were consulted:

- Natural England and JNCC websites; and,
- The Multi Agency Geographic Information for the Countryside (MAGIC) website.

2.1.2 Reference was also made to Ordnance Survey maps of the wider area and online aerial images (www.google.co.uk/maps) in order to determine any features of nature conservation interest in the wider area.

### *Reclamation Pond Wetland Bird Survey (WeBS) data*

2.1.3 The Site is located c.140m to the east of Reclamation Pond (Count Sector: 52421), a wetland area potentially 'functionally linked' with the Teesmouth and Cleveland Coast Special Protction Area (SPA)/Ramsar/SSSI. The pond is included within the British Trust for Ornithology's Wetland Bird Surveys (WeBS). Natural England and Stockton-on-Tees Borough Council (SoTBC) requested an assessment on potential impacts of the proposed development to birds considered qualifying features

[12] https://www.gov.uk/government/NEws/NEw-licensing-policies-great-for-wildlife-great-for-business

of the nearby Designated Sites to investigate whether there is a potential for a functional link between the Site, Reclamation Pond and the SPA/Ramsar/SSSI.

2.1.4 Core count data of birds using the Reclamation Pond over a 5-year period between July 2012 and July 2017 were provided by the BTO as the most recent data for this site. It is our understanding that the Reclamation Pond was filled-in around that time and subsequently there are no more recent records available (see 'Noise Assessment' below).

***Noise Assessment***

2.1.5 In the absence of an internal ecology specialist, SoTBC consulted with Natural England (NE) regarding the requirement for ecology assessment when screening the project for EIA (email dated 27th January 2021). SoTBC then provided the following response by email (dated 08th February 2021).

> *'Natural England have confirmed that an EIA will not be required, however, given the proximity to the remaining section of Reclamation Pond would expect to see some assessment of potential impacts from construction and operation on the birds that continue to use the waterbody, which effectively makes it a functional part of the SPA and Ramsar site. In particular impacts from piling and traffic noise need to be assessed, as well as an assessment of emissions from towers on the habitats of the designated sites, both directly and indirectly. This would need to assess a worst case as well as a more realistic picture of impacts.*
>
> *I think Rec Pond is still counted as part of WeBS so it would be worth you getting hold of WeBS data to help understand the level of usage of the waterbody by SPA, Ramsar and SSSI birds to enable an assessment of potential impacts of both construction and operation. I would like you to give some consideration to any biodiversity net gains you may be able to achieve.*

2.1.6 Subsequently a screening noise assessment was carried out by Evans Acoustics and is presented as **Appendix 3**.

2.1.7 **Please note**: the NE comments provided by SoTBC make specific reference to effects on Reclamation Pond. However, contemporary information indicates that, since 2017, this pool was depleted/drained and now doesn't exist (although there is a small steep sided balancing pond remaining which was always separate to Reclamation Pond). So, on this basis, this area should no longer be of concern to SoTBC or NE.

2.1.8 Adopting a precautionary approach, the **Appendix 3** screening noise assessment considers whether significant effects on the avian species using the nearest existing wetland area ('Dorman's Pool', 865m to the west of the Site) are likely from the construction and subsequent use of the proposed plant.

## 2.2 Extended Phase 1 Habitat Survey

2.2.1 An extended Phase 1 habitat survey of the Site was undertaken 30th March 2021 by Z. Hinchcliffe *MRes BSc (Hons)*, a suitably competent and qualified ecologist.

2.2.2 The survey followed UK industry standard Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Methodology (JNCC, 2010[13]) with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM), Technical Guidance Series *Guidelines for Preliminary Ecological Appraisal – Version 2* (CIEEM, 2017[14]).

[13] https://data.jncc.gov.uk/data/9578d07b-e018-4c66-9c1b-47110f14df2a/Handbook-Phase1-HabitatSurvey-Revised-2016.pdf

[14] CIEEM (2017) Guidelines for Preliminary Ecological Appraisal – Second Edition - https://cieem.net/resource/guidance-on-preliminary-ecological-appraisal-gpea/

2.2.3 The survey area comprised all areas within the Site, with additional notes made on any habitats of interest within 50m of the Site where accessible.

2.2.4 Habitats were mapped and described using a series of 'target notes' (TNs).

2.2.5 The survey was extended to include the additional recording of specific features indicating the presence, or likely presence, of protected species, invasive species and other species of conservation significance.

### *Limitations of Survey*

2.2.6 An extended Phase 1 habitat survey does not constitute a detailed botanical survey or faunal species list or provide a full protected species survey but, enables competent ecologists to ascertain an understanding of the ecology of the site in order to:

- Broadly identify the nature conservation value of a site and assess the significance of any potential impacts on habitat/species recorded; and/or,
- Confirm the need and extent of any additional specific ecological surveys that are required to identify the true nature conservation value of a site (if any).

2.2.7 The Extended Phase 1 habitat survey visit was undertaken in March 2021 and therefore just outside the optimal period for botanical surveys (approximately April to September). As the Site is predominantly industrial and dominated by hardstanding, this is not considered to represent a limitation to the survey results or their validity for impact assessment purposes.

# 3 BASELINE

## 3.1 Designated and Sites for Nature Conservation

***Statutory Designated Sites***

3.1.1 This Section should be read with reference to **Figure 2**.

3.1.2 A summary of statutory designated sites for nature conservation located within 2km of the Site, Sites of Special Scientific Interest (SSSI's) within 5km of the Site and European sites located within 10km of the Site is provided in **Table 3.1**.

3.1.3 The Site is not located within any statutory designated sites for nature conservation.

3.1.4 Teesmouth and Cleveland Coast Special Protection Area (SPA), Ramsar site and Site of Special Scientific Interest (SSSI) are however located approximately 865m to the west of the Site at their nearest points. The Site is also located within the Natural England SSSI 'Impact Risk Zone' (IRZ) for Teesmouth and Cleveland Coast SSSI.

***Table 3.1: Statutory designated sites.***
*(SSSI: Site of Special Scientific Interest, SPA: Special Protection Area, NNR: National Nature Reserve)*

| Site Name | Distance and Direction from Site | Description |
|---|---|---|
| Teesmouth and Cleveland Coast SPA | 865m West | An internationally designated site with species associated within the notification of designation include:<br>• Avocet *Recurvirostra avosetta* (Breeding)<br>• Knot *Calidris canutus* (Non-breeding)<br>• Ruff *Calidris pugnax* (Non-breeding)<br>• Redshank *Tringa totanus* (Non-breeding)<br>• Sandwich tern *Thalasseus sandvicensis* (Non-breeding)<br>• Common tern *Sterna hirundo* (Breeding)<br>• Little tern *Sterna albifrons* (Breeding); and,<br>Waterbird assemblage including:<br>• Shoveler *Anas clypeata*;<br>• Wigeon *Mareca penelope;*<br>• Gadwall *Mareca strepera*;<br>• Lapwing *Vanellus vanellus;*<br>• Sanderling *Calidris alba;*<br>• Herring gull *Larus argentatus;* and,<br>• Black-headed gull *Chroicocephalus ridibundus* |
| Teesmouth and Cleveland Coast Ramsar site | 865m West | An internationally designated site with species associated within the notification of designation include:<br>• Knot (Non-breeding); and,<br>• Redshank (Non-breeding).<br>Species associated with the designated site, although not primary qualifying features include:<br>• Little tern (Breeding);<br>• Shoveler *Spatula clypeata* (Non-breeding); and, |

| | | |
|---|---|---|
| | | • Greenshank *Tringa nebularia* (Non-breeding). |
| Teesmouth and Cleveland Coast SSSI | 865m West | A large area of sand dunes and saltmarshes with qualifying features including breeding common seals *Phoca vitulina* and breeding bird assemblage including populations of avocet, little tern and common tern. Notable non-breeding populations of birds include shelduck *Tadorna tadorna*, shoveler and gadwall, ringed plover *Charadrius hiaticula*, knot, ruff, sanderling *Calidris alba*, purple sandpiper *Calidris maritima*, redshank and Sandwich tern. In addition, there is an assemblage of more than 20,000 waterbirds during the non-breeding season |
| Teesmouth NNR | 1.6km North | Large area of coastal mudflat habitat with bird assemblage a contributing factor into the designation of the site. Birds noted within the designated include:<br>Knot, shelduck, teal, sanderling, cormorant, curlew and redshank. Outside of the breeding season and ringed plover, lapwing, oystercatcher *Haemotopus ostralegus* and snipe *Gallinago gallinago* during the breeding season. |

### *Non-statutory Designated Sites*

3.1.5 No non-statutory designated sites were identified within 2km of the Site.

### *Priority Habitats*

3.1.6 In review of MAGIC, six habitats of Principal Importance (also known as priority habitats) under Section 41 of the NERC Act/UK Biodiversity Action Plan were identified within 2km of the Site.

3.1.7 The MAGIC website, Ordnance Survey Maps and the Tees Valley Biodiversity Action Plan provided no records of priority habitats within the Site.

3.1.8 Information on priority habitats within 2km of the Site is presented in **Table 3.3** below. Where numerous records of a particular habitat were recorded, only the closest record to the Site has been provided, in order to provide context for the Site and surrounding area.

***Table 3.3: Priority habitats***

| Priority habitat name | Designation | Distance from site |
|---|---|---|
| Coastal and Floodplain Grazing Marsh | NERC S.41, UKBAP, LBAP | 865m West (Within Dorman's Pool) |
| Mudflats | NERC S.41, UKBAP, LBAP | 1.07km East |
| Lowland Fens | NERC S.41, UKBAP | 1.21km West |
| Deciduous Woodland | NERC S.41, UKBAP, LBAP | 1.32km North |
| Saline Lagoons | NERC S.41, UKBAP, LBAP | 1.41km West |
| Coastal Saltmarsh | NERC S.41, UKBAP | 1.67km North |

**Key**

**NERC S.41**: Natural Environment and Rural Communities (NERC) Act (2006)

**UKBAP**: UK Biodiversity Action Plan Priority Habitat

**LBAP**: Tees Valley Biodiversity Action Plan habitat

### *Extended Phase 1 Habitat Survey*

3.1.9 This section should be read in conjunction with the Phase 1 Habitat Plan presented as **Figure 2** and photographs presented in **Appendix 1**

3.1.10 The Site occupies an area of land totalling 0.49ha set within an industrial landscape. Habitats within the Site and wider survey area predominantly comprised of hardstanding and bare ground of little ecological value. Less disturbed areas have been allowed to establish as ephemeral / short perennials with common bent *Agrostis stolonifera*, common mugwort *Artemisia vulgaris*, common ragwort *Jacobaea vulgaris*, bramble *Rubus fruticosus agg*. and teasel *Dipsacus fullonum*. Across the Site and adjacent there are patches of buddleja *Buddleja davidii*.

3.1.11 A small concrete pool is located approximately 22m west of the Site (presumably a balancing pond). The pool is surrounded by bare ground, patches of ephemeral / short perennial and is concrete lined with tall vertical concrete walls. It was also noted that there was an oily slick observed on the surface of the pool. As such it is not considered to have ecological value and negligible potential to support protected or notable species.

3.1.12 No buildings were present onsite, although to the south of the Site was the existing hydrogen plant within the BOC works.

3.1.13 Habitats recorded within the Site are considered to be typical of dominant habitats within the wider landscape.

## 3.2 Protected and Notable Species

### *Birds*

*Breeding Birds*

3.2.1 The Site is dominated by hardstanding and bare ground as well as being part of an operational site with the BOC Hydrogen plant immediately adjacent to the south of the Site with regular human activity during standard working hours.

3.2.2 During the Extended Phase 1 survey, there was no evidence of breeding birds within the Site or any habitats noted (along with regular human disturbance) that provided suitable breeding habitat for birds.

*Reclamation Pond (Count Sector: 52421) – Wetland Bird Survey (WeBS) Data*

3.2.3 Wetland Bird Surveys (WeBS) are carried out by volunteers across the UK every month throughout the year at over 1,000 wetland sites. Consultation with SoTBC and Natural England requested an assessment of potential impacts of the proposed development to birds using the nearby Reclamation Pond located 140m to the west of the Site at its closest point.

3.2.4 WeBS core count data was received by the BTO over the period of July 2012 to June 2017. These are presented here in response to SoTBC screening comments (see Section 2); however, it should be noted that Reclamation Pond is no longer in existence.

3.2.5 Data received included an assortment of wetland species typical of the surrounding wetland habitats as well as species considered qualifying features of the adjacent Teesmouth and Cleveland Coast SPA/Ramsar/SSSI. These are shown in **Table 3.4**.

***Table 3.4: WeBS Core counts of qualifying species for Teesmouth and Cleveland Coast SPA/Ramsar/SSSI on Reclamation Pond between June 2012 - June 2017***

| Species | Peak Count during period July 2012 - June 2017 (period in brackets) |
|---|---|
| Shelduck | 207 (Breeding) |
| Wigeon | 7 (Non-breeding) |
| Gadwall | 449 (Non-breeding) |
| Shoveler | 12 (Non-breeding) |
| Lapwing | 28 (Non-breeding) |
| Avocet | 32 (Breeding) |
| Ringed plover | 9 (Breeding) |
| Sanderling | *Not recorded* |
| Purple sandpiper | *Not recorded* |
| Knot | *Not recorded* |
| Ruff | 15 (Non-breeding) |
| Redshank | 43 (Non-breeding) |
| Greenshank | 3 (Non-breeding) |
| Herring gull | 82 (Non-breeding) |
| Black-headed gull | 886 (Non-breeding) |
| Sandwich tern | 1 (Non-breeding) |
| Common tern | 1 (Breeding) |
| Little tern | *Not recorded* |

3.2.6 A full breakdown of WeBS data for Reclamation Pool is presented in **Appendix 2**.

3.2.7 It is understood that due to a nearby successful planning application, Reclamation Pool was drained around 2017 and at the point of reporting no longer exists. At the time of survey, there was no evidence of a waterbody visible from the survey Site, further confirming the Pool is no longer present. A small pond is located 127m south west of the Site is a deep pool with vertical sides and considered unsuitable for use by a large number of birds, particularly those considered qualifying species of the Teesmouth and Cleveland Coast SPA/Ramsar/SSSI.

3.2.8 The closest flooded pool, suitable for use by birds, and part of the designated Teesmouth and Cleveland Coast SPA/Ramsar/SSSI is Dorman's Pool, located 865m to the west of the Site.

*Noise assessment*

3.2.9 A screening noise assessment was carried out to assess potential disturbance effects on birds associated with the former Reclamation Pool located 160m to the west of the Site and Dorman's pool located 865m west of the Site (presented as **Appendix 3**).

***Bats***

3.2.10 A review of the MAGIC website did not identify any European Protected Species licences in relation to bats within 2km of the Site.

*Roosting Bats*

3.2.11 During the Extended Phase 1 habitat survey no mature trees or structures within the Site were noted within the Site and no trees or structures showing suitable bat roost features were noted within the adjacent 50m of the Site suggesting that the Site offers negligible potential for roosting bats.

*Foraging and Commuting Bats*

3.2.12 Habitats within the Site are considered to most closely fit the description for land of 'low' interest for foraging bats in accordance with BCT guidance[15], with continuous habitat connected to the wider landscape that could be used for commuting and also foraging habitats that are well connected to the wider landscape, however located within an area with minimal pockets of mature trees or buildings with suitable bat roost potential. In addition, the foraging habitats within the adjacent areas offer minimal suitability and are heavily industrialised.

3.2.13 Bats are subsequently not considered further within this report.

### *Badger*

3.2.14 No signs of badger, including setts, prints, latrines or pathways were found during the extended Phase 1 habitat survey.

3.2.15 It is not considered likely that badgers are present within or regularly use the Site and the species is not considered further within this report.

### *Otter*

3.2.16 No signs of otter, including holts, prints, latrines or pathways were found during the extended Phase 1 habitat survey.

3.2.17 No suitable watercourses are present within 200m of the Site, and therefore it is not considered likely that otters are present within or regularly use the Site and the species is not considered further within this report.

### *Water Vole*

3.2.18 No signs of water vole, including burrows, prints, latrines or pathways were found during the extended Phase 1 habitat survey.

3.2.19 No suitable watercourses are present within 200m of the Site, and therefore it is not considered likely that water voles are present within or regularly use the Site and the species is not considered further within this report.

### *Amphibians*

3.2.20 There are no ponds within the Site but one pool is located 22m to the west of the Site. This pool is concrete lined with steep concrete sides and showed evidence of pollution on the surface of the water. One further small pond is present within 250m of the Site to the south west, however between the Site and pond are habitats dominated by bare ground and hardstanding which are considered to offer a significant buffer to amphibians. In addition, both ponds are isolated and surrounded by poorly vegetated habitat and poor habitat connectivity to the wider environment.

3.2.21 The dominant hardstanding and industrial habitats on Site provide negligible amphibian terrestrial habitat.

3.2.22 There were no records of great crested newt returned within 2km of the Site. A review of MAGIC identified no EPS licences granted for great crested newt or great crested newt class licences returns within 2km of the Site.

[15] Bat Conservation Trust (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition).

### *Reptiles*

3.2.23 The Site is dominated by hardstanding and industrial habitats, however immediately adjacent to the Site are patches of ephemeral / short perennial with piles of rubble and litter that could be used as hibernacula. There is potential within the immediate surrounding area for common lizard *Zootoca viviparia* to use the habitats.

### *Other Notable Species*

3.2.24 No other protected or notable species are considered likely to occur within or immediately surrounding the Site.

## 3.3 Invasive Non-native Species

3.3.1 No invasive non-native species were recorded within the Site during the extended Phase 1 habitat survey.

# 4 ASSESSMENT

## 4.1 Overview

4.1.1 This section seeks to identify the potential for effects to occur on habitats and protected and notable species which could be considered as reasonably likely to occur, as a result of the proposed development. The Site's proximity to statutory and non-statutory designated sites and potential effects on their qualifying interests is discussed. Measures are proposed for the protection of sensitive habitats and species throughout the construction phase of development and recommendations are made for further pre-construction surveys and mitigation, if required.

4.1.2 This section also introduces opportunities for post-development habitat enhancement as part of the proposed project for the benefit of local biodiversity.

## 4.2 Designated Sites and Habitats

### *Statutory Designated Sites*

4.2.1 The Site does not form part of any statutory designated site for nature conservation. Four statutory designated sites were identified within 5km of the Site: Teesmouth and Cleveland Coast SPA, Ramsar site and SSSI and Teesmouth NNR.

4.2.2 There will be no direct effect on habitats within any statutory designated site for nature conservation. Standard measures to ensure runoff control and pollution prevention will also be implemented during the construction of the proposed Development and which will serve to prevent the potential for indirect habitat impacts to the wider aquatic environment.

### *Habitats Regulations Assessment*

4.2.3 Habitats Regulations Assessments (HRAs) are a statutory requirement and should be undertaken by the competent authority to ensure that plans and projects comply with the Conservation of Habitats and Species Regulations 2017 (as amended). HRA is the process by which the requirements of the Regulations are implemented and ensures that plans or projects will not adversely affect Habitats Sites (also known as European sites).

4.2.4 The Conservation of Habitats and Species Regulations 2017 (as amended) stem from the EU Birds Directive (Council Directive 79/409/EEC on the Conservation of Wild Birds) and the EU Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora). Changes are being affected by the Conservation of Habitats and Species Amendment (EU Exit) Regulations 2019 which came into force on 31 December 2020). While the UK is no longer within the EU, the Conservation of Habitats and Species Regulations 2017 (as amended) remain in place with only relatively minor changes which came into force on 31 December 2020. Parliament will however be at liberty to introduce future changes to the Conservation of Habitats and Species Regulations 2017 (as amended) since, after 31 December 2020, the UK is no longer bound by the EU Habitats and Wild Birds Directives. At the present time the position, under section 6(3) EU (Withdrawal) Act 2018 (as amended), is that the courts in the UK, with the sole exception of the Supreme Court, will continue to be bound by HRA judgements handed down by the CJEU and by domestic courts prior to 31 December 2020 when interpreting the Conservation of Habitats and Species Regulations 2017 (as amended). This is the case as long as the Conservation of Habitats and Species Regulations 2017 (as amended) remain unmodified by Parliament.

4.2.5 Following comments received by SoTBC (see Section 2), effects on 'Reclamation Pond' and 'Dorman's Pool' have been considered. 'Dorman's Pool' is part of the Teesmouth and Cleveland Coast SPA / Ramsar / SSSI whereas 'Reclamation Pond' was previously used by qualifying species of the adjacent

designated sites. It should be noted that SoTBC comments (following consultation with Natural England) referred solely to Reclamation Pond.

4.2.6 Reclamation Pond, which was located 160m to the west of the Site, is no longer in existence and subsequently no effects will occur.

4.2.7 Dorman's Pool is located approximately 865m from the Site and beyond any distance which significant visual or noise disturbance could be reasonably expected to occur (e.g. see Tidal River Development project website[16]). Industrial ground, which is unsuitable for wetland SPA/Ramsar bird species, occupies the ground between the Site and the Pool.

4.2.8 As a precaution, in response to comments received from SoTBC, a screening noise assessment has been undertaken (presented as **Appendix 3**), with the results summarised as follows:

*Former Reclamation Pool*

4.2.9 During the construction phase, it is estimated at noise from the Site will be of 61dB(A) at the nearest edge of the former Reclamation Pool and during operation, this would rise to 66dB(A). If Reclamation Pond were to still exist, this would be considered to cause a low-moderate impact on bird behaviour with next to no change in behaviour.

*Dorman's Pool*

4.2.10 During the construction phase, it is estimated at noise from the Site will be of 45dB(A) at the nearest edge of Dorman's Pool and during operation, this would rise to 50dB(A). This would be considered too low to cause any detectable impact on bird behaviour.

4.2.11 Subsequently, it is considered that the proposed development will not lead to any Likely Significant Effects (LSE) on the qualifying features of the Teesmouth and Cleveland Coast SPA and Ramsar site.

## 4.3 Habitats

4.3.1 The proposed development is to be constructed on a footprint of existing hardstanding and no notable habitats will be impacted by the proposed development. Habitats immediately adjacent to the Site include hardstanding roads and bare ground ensuring there will be no direct loss to vegetative habitats within the Site with the minor exception of 0.05ha of ephemeral / short perennials dominated by common bent grass and isolated by surrounding hardstanding.

4.3.2 No mature trees or existing buildings will be affected by the proposed development. No watercourses are to be affected either directly or indirectly (with standard pollution controls) by the proposed development.

4.3.3 Standard measures to ensure runoff control and pollution prevention will also be implemented during the construction of the proposed development; these measures will safeguard any nearby watercourses away from the Site and any connecting watercourses further afield.

## 4.4 Protected and Notable Species

***Birds***

4.4.1 All wild birds, their nests and eggs are, with few exceptions, protected under the Wildlife and Countryside Act 1981 (as amended). Over eighty species or groups of species are listed under Schedule 1 of the Act, which confers special protection with increased penalties for offences committed.

[16] https://www.tide-toolbox.eu/abouttidetoolbox/

Additional protection is provided to species listed under Directive 2009/147/EC on the conservation of wild bird (the 'Birds Directive') codified version.

4.4.2 Habitats within the Site offer negligible breeding and foraging habitat, dominated by hardstanding and being located immediately adjacent to the operational BOC hydrogen plant to the south of the Site with large human activity present on all working days.

4.4.3 Habitats immediately adjacent to the Site also offer limited breeding habitat, with the exception of ephemeral/short perennial habitat, however human disturbance is likely to severely limit the breeding opportunities for birds with the immediate surrounding area.

4.4.4 Subsequently the proposed development is unlikely to affect breeding birds either during construction or operation.

Wetland Birds (Reclamation Pond and Dorman's Pool)

4.4.5 At the time of surveying and reporting, Reclamation Pond (Site 52421) no longer exists as a flooded pool used by qualifying species of the adjacent Teesmouth and Cleveland Coast SPA/Ramsar/SSSI. As a result, there are no effects considered likely to occur.

### *Amphibians*

4.4.6 Great crested newts and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). The Act and Regulations make it an offence to kill, injure or take a great crested newt; damage, destroy or obstruct access to any place that a great crested newt uses for shelter or protection; and intentionally or recklessly disturb a great crested newt while it is occupying a structure or place that it uses for shelter or protection.

4.4.7 The great crested newt and common toad *Bufo bufo* are listed as a species of principal importance within Section 41 of the NERC Act and great crested newts are also listed as a priority species within the Tees Valley Biodiversity Action Plan and therefore, are also of material consideration within the planning process.

4.4.8 Industrial habitats within the Site offer negligible opportunities for amphibians (foraging/ hibernation), however adjacent ephemeral / short perennial may provide low quality terrestrial habitat for amphibians, although unlikely.

4.4.9 There are no ponds located within the Site, although two ponds are found within 250m of the Site, with the nearest pond being located 22m from the Site boundary. The pond is separated from the Site by a tarmac road and the pond itself is concrete with tall vertical concrete walls and apparently polluted water, so amphibians are considered unlikely to be present.

4.4.10 Adopting a precautionary approach, in order to avoid and minimise and risk of harm to amphibians through construction a series of Reasonable Avoidance Measures (RAMs) will be implemented during construction, as presented in **Appendix 4**.

### *Reptiles*

4.4.11 Widespread reptile species namely the common lizard, slow-worm *Anguis fragilis,* grass snake *Natrix helvetica* and adder *Vipera berus* are protected against killing, injuring and sale under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). These species are also listed as priority species under Section 41 of the NERC Act 2006.

4.4.12 The hardstanding habitat located within the Site offer negligible opportunities for reptile species, however, small patches of ephemeral / short perennial and piles of rubble and discarded metal sheets

and other little provide potentially suitable habitat for common lizard. Potentially suitable habitat within the Site is limited to a 0.05ha section of ephemeral / short perennial however a larger section of habitat is present to the west within 50m of the Site and reptiles may be present in small numbers.

4.4.13 Adopting a precautionary approach, in order to avoid and minimise and risk of harm to reptiles through construction a series of Reasonable Avoidance Measures (RAMs) will be implemented during construction, as presented in **Appendix 4**.

### *Invasive Non-native Species*

4.4.14 No species invasive non-native species listed under Schedule 9 of The Wildlife & Countryside Act 1981 (as amended) were recorded on Site during the Extended Phase 1 habitat survey. It is an offence to plant or otherwise cause such species to grow in the wild. This includes allowing the species to grow/spread, spreading the species or transferring polluted ground material from one area to another.

4.4.15 These species and soil containing these species are also classed as controlled waste and as such must be disposed of safely at a licensed landfill site according to the Environmental Protection Act (Duty of Care) Regulations 1991.

4.4.16 Should any invasive species encountered on Site prior to or during construction, the advice of a suitably qualified ecologist should be sort and the appropriate measures taken.

# 5 SUMMARY - ECOLOGY PRIORITY MATRIX

5.1.1 An Ecological Assessment was undertaken for the proposed development at BOC Teesside.

5.1.2 **Table 5.1.1** summarises the ecological constraints and opportunities associated with the development, and makes recommendations for pre-construction survey work and/or mitigation measures as required.

***Table 5.1.1: Ecological Constraints and Opportunities***

| Feature | | Details |
|---|---|---|
| Statutory and Non-statutory designated sites for Nature Conservation | Constraints & Opportunities | a. The Site is not located within any non-statutory designed sites for nature conservation and none occur within 2km of the Site.<br>b. Teesmouth and Cleveland SPA/Ramsar/SSSI is located approximately 865m west of the Site. It is located within the SSSI IRZ and does meet the criteria whereby Natural England would need to be consulted in relation to the potential impacts on statutory designated sites. There is considered to be no likely direct or indirect significant impacts upon birds which form a qualifying feature of any Statutory Designated Site. |
| | Protection Measures | c. Standard measures to ensure runoff control and pollution prevention will be implemented; these measures will safeguard any nearby watercourse habitats on and immediately surrounding the Site, retained terrestrial habitats and habitats within the wider environment. |
| Habitats & Flora | Constraints & Opportunities | d. The main habitat within the development footprint is hardstanding, which is generally of negligible value to wildlife. There will be a negligible loss of 0.05ha of ephemeral / short perennials. |
| | Protection Measures | e. Standard measures to ensure runoff control and pollution prevention will be implemented; these measures will safeguard any nearby watercourse habitats on and immediately surrounding the Site, retained terrestrial habitats and habitats within the wider environment. |
| Birds | Constraints & Opportunities | f. The habitats on Site (most notably the field boundary features) provide negligible suitable nesting habitat and is unlikely to support breeding birds. |
| | Legislative Compliance – WCA | g. Removal of nesting bird habitats should be undertaken outside of the bird breeding season (01 March to 31 August inclusive). If vegetation works are necessary during the breeding season, suitable nesting habitat should be searched by a suitably experienced ecologist prior to works commencing. Only when the ecologist is satisfied that no offence will occur under the legislation will works be permitted to proceed. |
| Bats | Constraints & Opportunities | h. Habitat within the Site is considered to offer no roosting habitat and negligible foraging opportunities. |
| | Legislative Compliance – WCA, HR | i. N/A |
| Badger | Constraints & Opportunities | j. No badger setts or signs of badgers were found during the extended Phase 1 survey |
| | Legislative Compliance – PBA | k. N/A |
| Otter | Constraints & Opportunities | l. No otter holts were recorded on or immediately surrounding the Site and no watercourses are present within 250m of the Site. |

| Feature | | Details |
|---|---|---|
| | | m. It is considered unlikely that otters are present within or immediately adjacent to the Site. |
| | Legislative Compliance – WCA, HR | n. N/A |
| Water Vole | Constraints & Opportunities | a. No water voles or signs of water voles were recorded on or immediately surrounding the Site and no watercourses are present within 250m of the Site.<br>b. It is considered unlikely that water voles are present within or immediately adjacent to the Site. |
| | Legislative Compliance – WCA | c. N/A |
| Amphibians | Constraints & Opportunities | d. Although unlikely, there is potentially suitable terrestrial habitat adjacent to the Site to the west within ephemeral / short perennials.<br>e. Two ponds are also located within 250m of the Site, although due to isolation for further suitable habitat and the minimal suitability of ponds themselves, it is considered unlikely that amphibians are present immediately adjacent to the Site |
| | Legislative Compliance - WCA, HR | f. Reasonable Avoidance Measures (RAMs) will be implemented to minimise risk of harm to individual animals. |
| Reptiles | Constraints & Opportunities | g. The Site offers minimal suitable habitat for reptiles except a 0.05ha section of ephemeral / short perennial and some rubble piles and piles of rubbish providing potential hibernacula.<br>h. Although unlikely, there is potential for common lizard to use the Site. |
| | Legislative Compliance – WCA | i. Reasonable Avoidance Measures (RAMs) will be implemented to minimise risk of harm to individual animals. |
| Other Species | Constraints & Opportunities | j. N/A |
| Invasive Non-native Species | Constraints & Opportunities | k. No invasive non-native plant species listed under Schedule 9 of The Wildlife & Countryside Act 1981 (as amended) were recorded on Site. |
| | Legislative Compliance – WCA | l. Should any invasive species encountered on Site prior to or during construction, the advice of a suitably qualified ecologist should be sort and the appropriate measures taken. |

***Legislative Compliance Key***
WCA: Wildlife & Countryside Act 1981 (as amended)
HR: The Conservation of Habitats and Species Regulations 2017 (as amended)
PBA: Protection of Badgers Act 1992

# FIGURES

**Figure 1: Site Location Plan**

**Figure 2: Statutory Designated Sites Plan**

**Figure 3: Phase 1 Habitat Plan**

Figure 1: Site Location Plan


Legend

Site

| Rev | Date | Description | De | App |
|---|---|---|---|---|
| 00 | 22/03/2021 | | MR | MJR |

This map contains data from the following sources:
Ordnance Survey (2021)

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1 licence number 010031673.

Co-ordinate System : British National Grid
Projection: Traverse Mercator
Datum: OSGB 1936
Units: Metres

**BOC TEESSIDE CO2 PLANT**

SITE LOCATION

avian ecology

Avian Ecology, Suite 3c Walnut Tree Farm, Northwich Road, Lower Stretton
WA4 4PG
Tel: 0843 506 5116
www.avianecology.co.uk

0 500 metres

N W E S

Figure 2: Statutory Designated Sites Plan

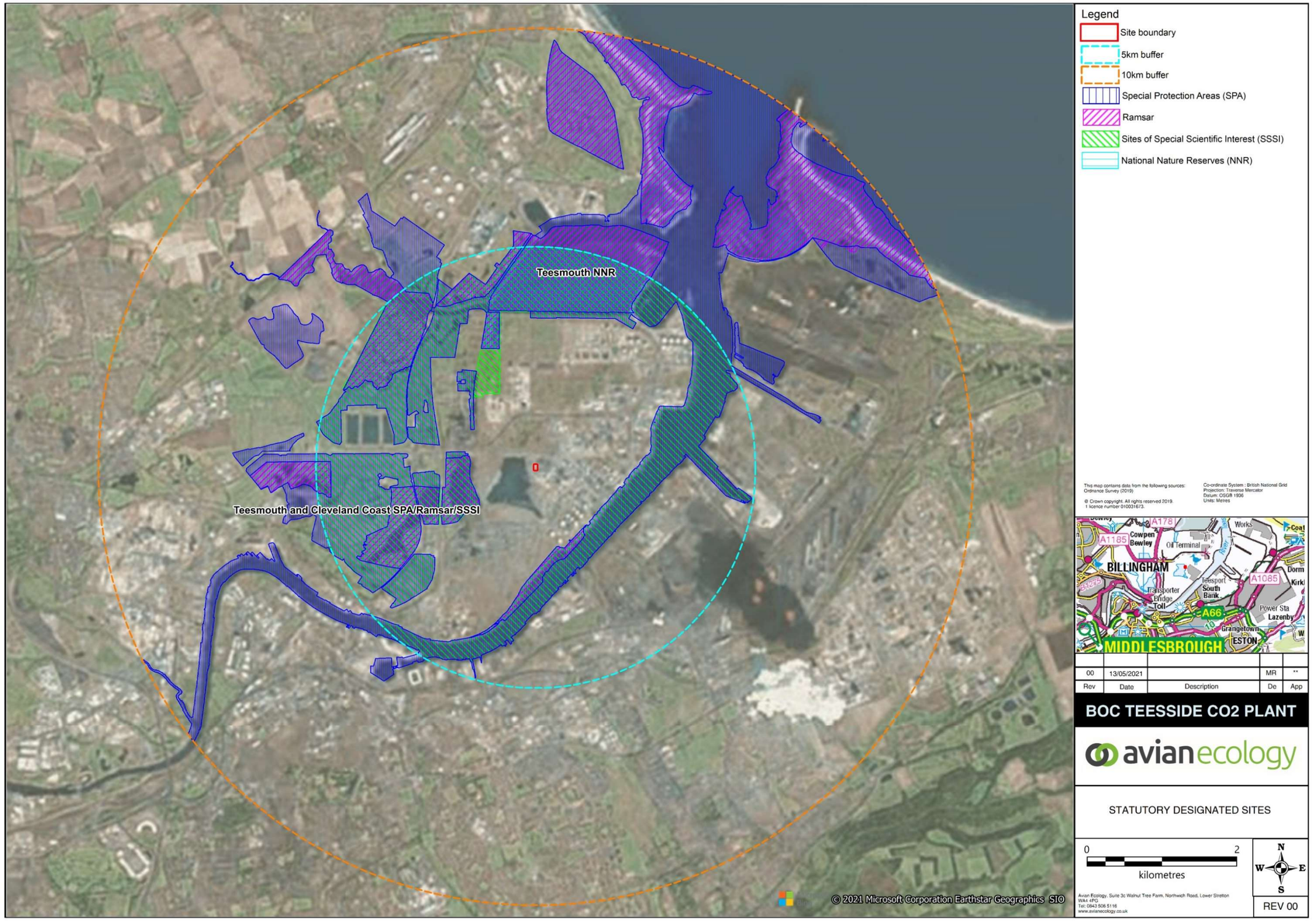
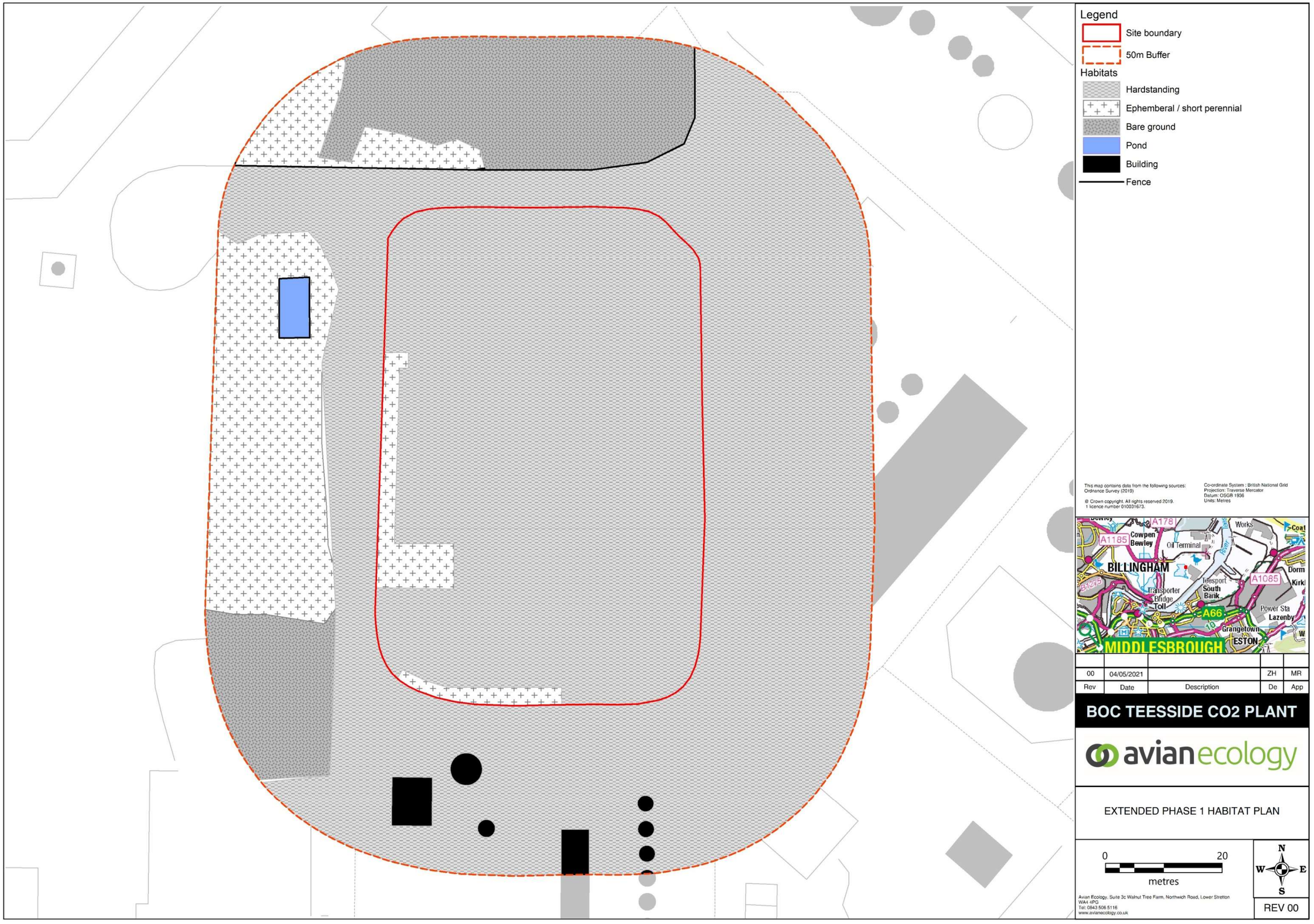


Figure 3:  Phase 1 Habitat Plan



# APPENDIX 1

# Site Photographs

| Plate | Description |
|---|---|
|  | **Photo 1**: View of the Site from the adjacent hydrogen plant to the South. |
|  | **Photo 2**: Area immediately west of the Site showing increased human activity. |
|  | **Photo 3:** The adjacent former Reclamation Pond (artificially drained at the time of survey)<br>Also note pond located offsite. |

| | |
|---|---|
|  | **Photo 4**: Adjacent operational BOC Hydrogen plant to the south. |
|  | **Photo 5**: Area of Ephemeral / short perennials with strewn litter providing potential for reptile hibernacula |
|  | **Photo 6:** Pond located adjacent to the Site with vertical concrete walls and obvious surface pollution. |

# APPENDIX 2

# Reclamation Pond (Site 52421) – Wetland Bird Survey (WeBS) 5-year Core Count Data – 2012-2017

WeBS
The Wetland Bird Survey

# Five year summary for Reclamation Pond

## *Table1: Total Counts - All Species Combined.*

*Peak monthly total = maximum of the sum of the counts of all species within each month.*
*Seasonal peaks = sum of the maximum counts of for each species within each Season.*

| Year | Peak Monthly Total | | Autumn Peak | Winter Peak | Spring Peak |
|---|---|---|---|---|---|
| **12/13** | 688 | (DEC) | 553 | 898 | 408 |
| **13/14** | 1009 | (NOV) | 1301 | 1349 | 450 |
| **14/15** | 1055 | (JUL) | 1843 | 518 | 791 |
| **15/16** | 849 | (SEP) | 1460 | 472 | 512 |
| **16/17** | 934 | (AUG) | 1601 | 160 | N/C |
| **MEAN** | | 907 | 1352 | 679 | 540 |

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# Five year summary for Reclamation Pond

## *Table2: Five-year average monthly counts of each species.*

*Figure in parentheses give number of complete and incomplete counts upon which the average is based.*
*Incomplete counts are excluded from calculations where, if included, they would depress the mean.*

| Species | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Greylag Goose (British/Irish) | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 1(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Mute Swan | 1(5,.) | 2(5,.) | 1(5,.) | 3(3,1) | 3(3,1) | 2(5,.) | 1(5,.) | 1(5,.) | 1(5,.) | 1(4,.) | 1(3,.) | 1(4,.) |
| Shelduck | 26(5,.) | 32(5,.) | 24(5,.) | 17(3,1) | 12(3,1) | 4(5,.) | 3(5,.) | 4(5,.) | 29(5,.) | 68(4,.) | 82(3,.) | 102(4,.) |
| Shoveler | 2(5,.) | 15(5,.) | 43(5,.) | 39(3,1) | 15(3,1) | 0(5,.) | 1(5,.) | 4(5,.) | 4(5,.) | 4(4,.) | 1(3,.) | 2(4,.) |
| Gadwall | 5(5,.) | 64(5,.) | 176(5,.) | 175(3,1) | 188(3,1) | 59(5,.) | 28(5,.) | 13(5,.) | 32(5,.) | 82(4,.) | 47(3,.) | 85(4,.) |
| Wigeon | 0(5,.) | 0(5,.) | 0(5,.) | 4(3,1) | 1(3,1) | 0(5,.) | 0(5,.) | 1(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Mallard | 20(5,.) | 65(5,.) | 38(5,.) | 22(3,1) | 7(3,1) | 13(5,.) | 13(5,.) | 10(5,.) | 11(5,.) | 5(4,.) | 11(3,.) | 24(4,.) |
| Pintail | 0(5,.) | 0(5,.) | 2(5,.) | 5(3,1) | 1(3,1) | 6(5,.) | 5(5,.) | 6(5,.) | 7(5,.) | 1(4,.) | 0(3,.) | 0(4,.) |
| Teal | 0(5,.) | 39(5,.) | 169(5,.) | 61(3,1) | 73(3,1) | 53(5,.) | 46(5,.) | 31(5,.) | 44(5,.) | 34(4,.) | 0(3,.) | 0(4,.) |
| Pochard | 0(5,.) | 7(5,.) | 9(5,.) | 12(3,1) | 9(3,1) | 1(5,.) | 0(5,.) | 1(5,.) | 1(5,.) | 0(4,.) | 1(3,.) | 0(4,.) |
| Tufted Duck | 10(5,.) | 36(5,.) | 45(5,.) | 28(3,1) | 28(3,1) | 28(5,.) | 19(5,.) | 17(5,.) | 21(5,.) | 19(4,.) | 2(3,.) | 7(4,.) |
| Goldeneye | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 4(3,1) | 3(5,.) | 3(5,.) | 2(5,.) | 5(5,.) | 3(4,.) | 0(3,.) | 0(4,.) |
| Goosander | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Little Grebe | 0(5,.) | 2(5,.) | 5(5,.) | 6(3,1) | 11(3,1) | 3(5,.) | 4(5,.) | 2(5,.) | 1(5,.) | 1(4,.) | 0(3,.) | 0(4,.) |
| Great Crested Grebe | 3(5,.) | 5(5,.) | 5(5,.) | 5(3,1) | 1(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 1(5,.) | 2(4,.) | 2(3,.) | 4(4,.) |
| Grey Heron | 0(5,.) | 1(5,.) | 1(5,.) | 0(3,1) | 1(3,1) | 0(5,.) | 1(5,.) | 0(5,.) | 0(5,.) | 1(4,.) | 0(3,.) | 0(4,.) |
| Little Egret | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Cormorant | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Moorhen | 0(5,.) | 2(5,.) | 1(5,.) | 2(3,1) | 1(3,1) | 4(5,.) | 4(5,.) | 4(5,.) | 3(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Coot | 57(5,.) | 87(5,.) | 151(5,.) | 219(3,1) | 248(3,1) | 195(5,.) | 116(5,.) | 67(5,.) | 42(5,.) | 32(4,.) | 26(3,.) | 45(4,.) |
| Oystercatcher | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 1(4,.) |
| Avocet | 6(5,.) | 5(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 3(4,.) | 11(3,.) | 1(4,.) |
| Lapwing | 6(5,.) | 8(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Ringed Plover | 1(5,.) | 4(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 1(5,.) | 2(5,.) | 1(4,.) | 0(3,.) | 4(4,.) |
| Little Ringed Plover | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 1(4,.) | 0(3,.) | 0(4,.) |
| Curlew | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Black-tailed Godwit | 8(5,.) | 12(5,.) | 16(5,.) | 2(3,1) | 5(3,1) | 1(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 1(3,.) | 0(4,.) |
| Ruff | 0(5,.) | 4(5,.) | 4(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Dunlin | 1(5,.) | 20(5,.) | 3(5,.) | 0(3,1) | 2(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Snipe | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Green Sandpiper | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Redshank | 1(5,.) | 8(5,.) | 11(5,.) | 1(3,1) | 2(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Spotted Redshank | 0(5,.) | 0(5,.) | 1(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Greenshank | 0(5,.) | 0(5,.) | 1(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| Black-headed Gull | 413(5,.) | 140(5,.) | 44(5,.) | 7(3,1) | 18(3,1) | 24(5,.) | 31(5,.) | 34(5,.) | 33(5,.) | 20(4,.) | 27(3,.) | 104(4,.) |

Data provided by the British Trust for Ornithology on behalf of The Wetland Bird Survey.
*These tabulations are based exclusively on data collected as part of the monthly Core Counts.*
*For some species (e.g. wintering geese) data collected by other surveys may be more appropriate for the purpose of site assessment.*
*Missing or unexpectedly low counts for gulls and terns should be treated with caution - counting these groups is optional and determination of count effort not always possible.*

*The Wetland Bird Survey is a partnership jointly funded by the British Trust for Ornithology,*
*the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee,*
*in association with the Wildfowl and Wetlands Trust,*
*with fieldwork conducted by volunteers.*

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The Wetland Bird Survey

# Five year summary for Reclamation Pond

## *Table2: Five-year average monthly counts of each species.*

*Figure in parentheses give number of complete and incomplete counts upon which the average is based.*
*Incomplete counts are excluded from calculations where, if included, they would depress the mean.*

| Species | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Little Gull** | 1(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 1(4,.) |
| **Common Gull** | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 1(5,.) | 0(5,.) | 0(4,.) | 0(3,.) | 0(4,.) |
| **Great Black-backed Gull** | 6(5,.) | 0(5,.) | 4(5,.) | 7(3,1) | 20(3,1) | 6(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 7(4,.) | 0(3,.) | 10(4,.) |
| **Herring Gull** | 16(5,.) | 0(5,.) | 2(5,.) | 3(3,1) | 11(3,1) | 3(5,.) | 1(5,.) | 1(5,.) | 0(5,.) | 6(4,.) | 0(3,.) | 9(4,.) |
| **Lesser Black-backed Gull** | 0(5,.) | 0(5,.) | 0(5,.) | 0(3,1) | 0(3,1) | 0(5,.) | 0(5,.) | 0(5,.) | 0(5,.) | 1(4,.) | 0(3,.) | 0(4,.) |
| **Sandwich Tern** | 0(3,.) | 0(1,.) | 0(1,.) | N/C | 0(1,.) | 0(2,.) | 0(1,.) | 0(2,.) | 0(1,.) | 0(1,.) | 0(1,.) | 0(1,.) |
| **Common Tern** | 0(3,.) | 0(1,.) | 0(1,.) | N/C | 0(1,.) | 0(2,.) | 0(1,.) | 0(2,.) | 0(1,.) | 0(1,.) | 0(1,.) | 1(1,.) |

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# Five year summary for Reclamation Pond

## *Table3: Five-year peak monthly counts of each species.*

*The value reported represents the highest count obtained over the five-year period during the month in question and the species in question.*

| Species | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Greylag Goose (British/Irish) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 |
| Mute Swan | 2 | 8 | 4 | 5 | 7 | 8 | 3 | 3 | 3 | 2 | 3 | 2 |
| Shelduck | 45 | 94 | 46 | 39 | 29 | 9 | 7 | 10 | 101 | 137 | 154 | 207 |
| Shoveler | 8 | 37 | 78 | 74 | 40 | 1 | 3 | 18 | 22 | 12 | 4 | 6 |
| Gadwall | 14 | 180 | 445 | 385 | 449 | 243 | 120 | 56 | 84 | 144 | 76 | 283 |
| Wigeon | 0 | 1 | 1 | 7 | 2 | 0 | 0 | 4 | 1 | 0 | 0 | 0 |
| Mallard | 49 | 117 | 78 | 46 | 12 | 27 | 46 | 26 | 21 | 13 | 15 | 36 |
| Pintail | 0 | 0 | 10 | 14 | 2 | 16 | 23 | 27 | 23 | 4 | 0 | 0 |
| Teal | 0 | 146 | 360 | 160 | 212 | 160 | 148 | 89 | 161 | 56 | 0 | 0 |
| Pochard | 2 | 13 | 38 | 19 | 17 | 7 | 0 | 3 | 3 | 1 | 2 | 1 |
| Tufted Duck | 30 | 127 | 143 | 48 | 56 | 132 | 89 | 84 | 98 | 72 | 4 | 16 |
| Goldeneye | 0 | 0 | 0 | 0 | 6 | 13 | 10 | 10 | 19 | 10 | 0 | 0 |
| Goosander | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Little Grebe | 0 | 8 | 13 | 11 | 18 | 11 | 13 | 8 | 3 | 4 | 0 | 0 |
| Great Crested Grebe | 10 | 15 | 12 | 9 | 3 | 0 | 0 | 0 | 3 | 6 | 7 | 14 |
| Grey Heron | 2 | 1 | 2 | 1 | 2 | 2 | 3 | 0 | 0 | 1 | 1 | 0 |
| Little Egret | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cormorant | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 |
| Moorhen | 1 | 6 | 2 | 3 | 2 | 14 | 12 | 11 | 10 | 1 | 0 | 1 |
| Coot | 131 | 198 | 345 | 294 | 404 | 485 | 273 | 167 | 86 | 57 | 42 | 88 |
| Oystercatcher | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Avocet | 28 | 22 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 13 | 32 | 4 |
| Lapwing | 28 | 24 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ringed Plover | 4 | 12 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 3 | 0 | 9 |
| Little Ringed Plover | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Curlew | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Black-tailed Godwit | 41 | 30 | 29 | 5 | 20 | 5 | 0 | 0 | 0 | 0 | 2 | 0 |
| Ruff | 0 | 8 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dunlin | 6 | 93 | 15 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Snipe | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Green Sandpiper | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Redshank | 3 | 31 | 43 | 3 | 6 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| Spotted Redshank | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Greenshank | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Black-headed Gull | 886 | 269 | 100 | 18 | 37 | 58 | 66 | 94 | 89 | 52 | 38 | 163 |

Data provided by the British Trust for Ornithology on behalf of The Wetland Bird Survey.
*These tabulations are based exclusively on data collected as part of the monthly Core Counts.*
*For some species (e.g. wintering geese) data collected by other surveys may be more appropriate for the purpose of site assessment.*
*Missing or unexpectedly low counts for gulls and terns should be treated with caution - counting these groups is optional and determination of count effort not always possible.*

*The Wetland Bird Survey is a partnership jointly funded by the British Trust for Ornithology,*
*the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee,*
*in association with the Wildfowl and Wetlands Trust,*
*with fieldwork conducted by volunteers.*

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# Five year summary for Reclamation Pond

## *Table3: Five-year peak monthly counts of each species.*

*The value reported represents the highest count obtained over the five-year period during the month in question and the species in question.*

| Species | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Little Gull** | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| **Common Gull** | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 5 | 2 | 0 | 0 | 0 |
| **Great Black-backed Gull** | 30 | 1 | 20 | 20 | 50 | 18 | 0 | 1 | 1 | 21 | 0 | 38 |
| **Herring Gull** | 82 | 0 | 8 | 8 | 20 | 8 | 3 | 4 | 1 | 14 | 0 | 33 |
| **Lesser Black-backed Gull** | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| **Sandwich Tern** | 1 | 0 | 0 | N/C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Common Tern** | 0 | 0 | 0 | N/C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

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# Five year summary for Reclamation Pond

## *Table4a: Five-year autumn peak counts, and month in which this was recorded, of each species.*

*The value reported represents the highest count obtained between July and October for the year in question and the species in question*
*Where a count is enclosed by parentheses this indicates that it was considered incomplete*
*i.e. those parts of the site not visited typically holds at least 25% of the species in question.*
*Incomplete counts are excluded from calculation where, if included, they would depress the mean.*
*When all counts are considered to be incomplete the maximum replaces the mean.*

| Species | 2012/2013 | 2013/2014 | 2014/2015 | 2015/2016 | 2016/2017 | Mean of Peaks |
|---|---|---|---|---|---|---|
| Mute Swan | 2 (JUL) | 8 (AUG) | 4 (SEP) | 0 | 0 | 3 |
| Shelduck | 0 | 4 (AUG) | 39 (JUL) | 46 (SEP) | 94 (AUG) | 37 |
| Shoveler | 15 (SEP) | 76 (SEP) | (33) (OCT) | 78 (SEP) | 35 (SEP) | 51 |
| Gadwall | 20 (SEP) | 385 (OCT) | (252) (OCT) | 105 (SEP) | 445 (SEP) | 241 |
| Wigeon | 7 (OCT) | 4 (OCT) | 0 | 0 | 0 | 2 |
| Mallard | 34 (AUG) | 78 (SEP) | 49 (JUL) | 58 (AUG) | 117 (AUG) | 67 |
| Pintail | 2 (OCT) | 14 (OCT) | 0 | 0 | 0 | 3 |
| Teal | 2 (OCT) | 53 (SEP) | 233 (SEP) | 360 (SEP) | 200 (SEP) | 170 |
| Pochard | 38 (SEP) | 19 (OCT) | 13 (AUG) | 0 | 0 | 14 |
| Tufted Duck | 82 (SEP) | 143 (SEP) | 1 (JUL) | 6 (AUG) | 0 | 46 |
| Goosander | 0 | 1 (OCT) | 0 | 0 | 0 | 0 |
| Little Grebe | 11 (OCT) | 13 (SEP) | 0 | 0 | 2 (SEP) | 5 |
| Great Crested Grebe | 12 (SEP) | 15 (AUG) | 0 | 0 | 0 | 5 |
| Grey Heron | 2 (SEP) | 1 (SEP) | 2 (JUL) | 1 (AUG) | 0 | 1 |
| Little Egret | 0 | 2 (SEP) | 0 | 0 | 0 | 0 |
| Cormorant | 2 (SEP) | 0 | 0 | 0 | 0 | 0 |
| Moorhen | 0 | 1 (OCT) | 2 (AUG) | 6 (AUG) | 0 | 2 |
| Coot | 294 (OCT) | 345 (SEP) | (104) (OCT) | 104 (OCT) | 57 (SEP) | 200 |
| Avocet | 0 | 0 | 0 | 4 (JUL) | 28 (JUL) | 6 |
| Lapwing | 0 | 0 | 28 (JUL) | 24 (AUG) | 2 (AUG) | 11 |
| Ringed Plover | 0 | 0 | 12 (AUG) | 2 (AUG) | 5 (AUG) | 4 |
| Curlew | 0 | 0 | 0 | 1 (AUG) | 0 | 0 |
| Black-tailed Godwit | 0 | 0 | 23 (SEP) | 27 (SEP) | 41 (JUL) | 18 |
| Ruff | 0 | 0 | 15 (SEP) | 8 (AUG) | 4 (AUG) | 5 |
| Dunlin | 0 | 0 | 93 (AUG) | 15 (SEP) | 6 (JUL) | 23 |
| Snipe | 0 | 0 | 1 (AUG) | 0 | 0 | 0 |
| Green Sandpiper | 0 | 2 (SEP) | 0 | 0 | 0 | 0 |
| Redshank | 0 | 1 (SEP) | 43 (SEP) | 10 (AUG) | 2 (SEP) | 11 |
| Spotted Redshank | 0 | 0 | 3 (SEP) | 0 | 1 (JUL) | 1 |
| Greenshank | 0 | 0 | 3 (SEP) | 3 (SEP) | 1 (SEP) | 1 |

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# Five year summary for Reclamation Pond

## *Table4a: Five-year autumn peak counts, and month in which this was recorded, of each species.*

*The value reported represents the highest count obtained between July and October for the year in question and the species in question*
*Where a count is enclosed by parentheses this indicates that it was considered incomplete*
*i.e. those parts of the site not visited typically holds at least 25% of the species in question.*
*Incomplete counts are excluded from calculation where, if included, they would depress the mean.*
*When all counts are considered to be incomplete the maximum replaces the mean.*

| Species | 2012/2013 | 2013/2014 | 2014/2015 | 2015/2016 | 2016/2017 | Mean of Peaks |
|---|---|---|---|---|---|---|
| **Black-headed Gull** | 2 (AUG) | 24 (AUG) | 886 (JUL) | 600 (JUL) | 560 (JUL) | 414 |
| **Little Gull** | 0 | 0 | 2 (JUL) | 1 (JUL) | 0 | 1 |
| **Common Gull** | 0 | 0 | 1 (SEP) | 0 | 0 | 0 |
| **Great Black-backed Gull** | 20 (SEP) | 30 (JUL) | 0 | 0 | 0 | 10 |
| **Herring Gull** | 8 (SEP) | 82 (JUL) | 0 | 0 | 0 | 18 |
| **Lesser Black-backed Gull** | 0 | 0 | 0 | 1 (SEP) | 1 (AUG) | 0 |
| **Sandwich Tern** | 0 | 0 | 1 (JUL) | N/C | N/C | 0 |

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# Five year summary for Reclamation Pond

## *Table4b: Five-year winter peak counts, and month in which this was recorded, of each species.*

*The value reported represents the highest count obtained between November and March for the winter in question and the species in question*
*Where a count is enclosed by parentheses this indicates that it was considered incomplete*
*i.e. those parts of the site not visited typically holds at least 25% of the species in question.*
*Incomplete counts are excluded from calculation where, if included, they would depress the mean.*
*When all counts are considered to be incomplete the maximum replaces the mean.*

| Species | 2012/2013 | 2013/2014 | 2014/2015 | 2015/2016 | 2016/2017 | Mean Peak |
|---|---|---|---|---|---|---|
| Greylag Goose (British/Irish) | 0 | 1 (FEB) | (0) | 4 (MAR) | 0 | 1 |
| Mute Swan | 3 (NOV) | 8 (DEC) | 2 (MAR) | 0 | 0 | 3 |
| Shelduck | 0 | 9 (MAR) | (29) (NOV) | 101 (MAR) | 31 (MAR) | 35 |
| Shoveler | 22 (MAR) | 0 | (19) (NOV) | 40 (NOV) | 0 | 16 |
| Gadwall | 84 (MAR) | 449 (NOV) | (9) (NOV) | 91 (NOV) | 15 (MAR) | 160 |
| Wigeon | 4 (FEB) | 0 | (0) | 0 | 0 | 1 |
| Mallard | 21 (MAR) | 46 (JAN) | 27 (DEC) | 13 (DEC) | 6 (MAR) | 23 |
| Pintail | 23 (MAR) | 27 (FEB) | 1 (MAR) | 16 (DEC) | 6 (MAR) | 15 |
| Teal | 17 (JAN) | 161 (MAR) | (212) (NOV) | 38 (DEC) | 36 (DEC) | 93 |
| Pochard | 11 (NOV) | 17 (NOV) | (0) | 0 | 0 | 7 |
| Tufted Duck | 132 (DEC) | 29 (NOV) | (0) | 5 (MAR) | 1 (DEC) | 42 |
| Goldeneye | 19 (MAR) | 6 (NOV) | (0) | 4 (MAR) | 0 | 7 |
| Little Grebe | 18 (NOV) | 15 (NOV) | (0) | 0 | 0 | 8 |
| Great Crested Grebe | 3 (NOV) | 0 | (0) | 0 | 0 | 1 |
| Grey Heron | 2 (NOV) | 1 (NOV) | 3 (JAN) | 0 | 0 | 1 |
| Cormorant | 1 (DEC) | 0 | 2 (FEB) | 0 | 0 | 1 |
| Moorhen | 0 | 2 (NOV) | 11 (FEB) | 2 (NOV) | 14 (DEC) | 6 |
| Coot | 400 (DEC) | 485 (DEC) | (64) (NOV) | 67 (NOV) | 30 (DEC) | 246 |
| Avocet | 0 | 0 | (0) | 0 | 2 (MAR) | 1 |
| Ringed Plover | 4 (FEB) | 0 | 6 (MAR) | 0 | 2 (MAR) | 2 |
| Black-tailed Godwit | 0 | 0 | (20) (NOV) | 0 | 0 | 4 |
| Dunlin | 0 | 0 | (7) (NOV) | 0 | 0 | 1 |
| Redshank | 6 (NOV) | 0 | (2) (NOV) | 1 (DEC) | 0 | 2 |
| Black-headed Gull | 58 (DEC) | 66 (JAN) | 94 (FEB) | 89 (MAR) | 16 (JAN) | 65 |
| Common Gull | 0 | 1 (JAN) | 5 (FEB) | 1 (DEC) | 0 | 1 |
| Great Black-backed Gull | 50 (NOV) | 12 (DEC) | (0) | 0 | 0 | 16 |
| Herring Gull | 20 (NOV) | 14 (NOV) | 4 (FEB) | 0 | 1 (JAN) | 8 |
| Lesser Black-backed Gull | 0 | 0 | 1 (MAR) | 0 | 0 | 0 |

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# Five year summary for Reclamation Pond

## *Table4c: Five-year spring peak counts, and month in which this was recorded, of each species.*

*The value reported represents the highest count obtained between April and June for the year in question and the species in question*
*Where a count is enclosed by parentheses this indicates that it was considered incomplete*
*i.e. those parts of the site not visited typically holds at least 25% of the species in question.*
*Incomplete counts are excluded from calculation where, if included, they would depress the mean.*
*When all counts are considered to be incomplete the maximum replaces the mean.*

| Species | 2012/2013 | 2013/2014 | 2014/2015 | 2015/2016 | 2016/2017 | Mean Peak |
|---|---|---|---|---|---|---|
| **Mute Swan** | 2 (APR) | 0 | 0 | 3 (MAY) | N/C | 1 |
| **Shelduck** | 18 (MAY) | 71 (JUN) | 207 (JUN) | 137 (APR) | N/C | 108 |
| **Shoveler** | 12 (APR) | 0 | 6 (JUN) | 4 (APR) | N/C | 6 |
| **Gadwall** | 48 (APR) | 144 (APR) | 283 (JUN) | 51 (APR) | N/C | 132 |
| **Mallard** | 26 (JUN) | 15 (JUN) | 20 (JUN) | 36 (JUN) | N/C | 24 |
| **Pintail** | 0 | 0 | 0 | 4 (APR) | N/C | 1 |
| **Teal** | 0 | 56 (APR) | 32 (APR) | 48 (APR) | N/C | 34 |
| **Pochard** | 0 | 0 | 2 (MAY) | 0 | N/C | 1 |
| **Tufted Duck** | 72 (APR) | 0 | 16 (JUN) | 2 (APR) | N/C | 23 |
| **Goldeneye** | 10 (APR) | 0 | 0 | 0 | N/C | 3 |
| **Little Grebe** | 4 (APR) | 0 | 0 | 0 | N/C | 1 |
| **Great Crested Grebe** | 14 (JUN) | 1 (JUN) | 0 | 0 | N/C | 4 |
| **Grey Heron** | 0 | 1 (APR) | 0 | 1 (APR) | N/C | 1 |
| **Moorhen** | 0 | 1 (APR) | 1 (JUN) | 0 | N/C | 1 |
| **Coot** | 88 (JUN) | 57 (APR) | 43 (JUN) | 18 (JUN) | N/C | 52 |
| **Oystercatcher** | 2 (JUN) | 0 | 0 | 0 | N/C | 1 |
| **Avocet** | 0 | 0 | 0 | 32 (MAY) | N/C | 8 |
| **Ringed Plover** | 0 | 0 | 8 (JUN) | 9 (JUN) | N/C | 4 |
| **Little Ringed Plover** | 2 (APR) | 0 | 0 | 0 | N/C | 1 |
| **Black-tailed Godwit** | 0 | 0 | 0 | 2 (MAY) | N/C | 1 |
| **Black-headed Gull** | 38 (MAY) | 98 (JUN) | 155 (JUN) | 163 (JUN) | N/C | 114 |
| **Little Gull** | 0 | 2 (JUN) | 0 | 0 | N/C | 1 |
| **Great Black-backed Gull** | 38 (JUN) | 2 (APR) | 3 (APR) | 0 | N/C | 11 |
| **Herring Gull** | 33 (JUN) | 1 (APR) | 14 (APR) | 2 (JUN) | N/C | 13 |
| **Lesser Black-backed Gull** | 0 | 1 (APR) | 1 (APR) | 0 | N/C | 1 |
| **Common Tern** | 1 (JUN) | N/C | N/C | N/C | N/C | 1 |

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# Five year summary for Reclamation Pond

## *Table4d: Five-year annual peak counts, and month in which this was recorded, of each species.*

*The value reported represents the highest count obtained between July and June for the year in question and the species in question*
*Where a count is enclosed by parentheses this indicates that it was considered incomplete*
*i.e. those parts of the site not visited typically holds at least 25% of the species in question.*
*Incomplete counts are excluded from calculation where, if included, they would depress the mean.*
*When all counts are considered to be incomplete the maximum replaces the mean.*

| Species | 2012/2013 | 2013/2014 | 2014/2015 | 2015/2016 | 2016/2017 | Mean Peak |
|---|---|---|---|---|---|---|
| **Greylag Goose (British/Irish)** | 0 | 1 (FEB) | 0 | 4 (MAR) | 0 | 1 |
| **Mute Swan** | 3 (NOV) | 8 (AUG) | 4 (SEP) | 3 (MAY) | 0 | 4 |
| **Shelduck** | 18 (MAY) | 71 (JUN) | 207 (JUN) | 137 (APR) | 94 (AUG) | 105 |
| **Shoveler** | 22 (MAR) | 76 (SEP) | (33) (OCT) | 78 (SEP) | 35 (SEP) | 53 |
| **Gadwall** | 84 (MAR) | 449 (NOV) | 283 (JUN) | 105 (SEP) | 445 (SEP) | 273 |
| **Wigeon** | 7 (OCT) | 4 (OCT) | 0 | 0 | 0 | 2 |
| **Mallard** | 34 (AUG) | 78 (SEP) | 49 (JUL) | 58 (AUG) | 117 (AUG) | 67 |
| **Pintail** | 23 (MAR) | 27 (FEB) | 1 (MAR) | 16 (DEC) | 6 (MAR) | 15 |
| **Teal** | 17 (JAN) | 161 (MAR) | 233 (SEP) | 360 (SEP) | 200 (SEP) | 194 |
| **Pochard** | 38 (SEP) | 19 (OCT) | 13 (AUG) | 0 | 0 | 14 |
| **Tufted Duck** | 132 (DEC) | 143 (SEP) | 16 (JUN) | 6 (AUG) | 1 (DEC) | 60 |
| **Goldeneye** | 19 (MAR) | 6 (NOV) | 0 | 4 (MAR) | 0 | 6 |
| **Goosander** | 0 | 1 (OCT) | 0 | 0 | 0 | 0 |
| **Little Grebe** | 18 (NOV) | 15 (NOV) | 0 | 0 | 2 (SEP) | 7 |
| **Great Crested Grebe** | 14 (JUN) | 15 (AUG) | 0 | 0 | 0 | 6 |
| **Grey Heron** | 2 (SEP) | 1 (SEP) | 3 (JAN) | 1 (AUG) | 0 | 1 |
| **Little Egret** | 0 | 2 (SEP) | 0 | 0 | 0 | 0 |
| **Cormorant** | 2 (SEP) | 0 | 2 (FEB) | 0 | 0 | 1 |
| **Moorhen** | 0 | 2 (NOV) | 11 (FEB) | 6 (AUG) | 14 (DEC) | 7 |
| **Coot** | 400 (DEC) | 485 (DEC) | (104) (OCT) | 104 (OCT) | 57 (SEP) | 262 |
| **Oystercatcher** | 2 (JUN) | 0 | 0 | 0 | 0 | 0 |
| **Avocet** | 0 | 0 | 0 | 32 (MAY) | 28 (JUL) | 12 |
| **Lapwing** | 0 | 0 | 28 (JUL) | 24 (AUG) | 2 (AUG) | 11 |
| **Ringed Plover** | 4 (FEB) | 0 | 12 (AUG) | 9 (JUN) | 5 (AUG) | 6 |
| **Little Ringed Plover** | 2 (APR) | 0 | 0 | 0 | 0 | 0 |
| **Curlew** | 0 | 0 | 0 | 1 (AUG) | 0 | 0 |
| **Black-tailed Godwit** | 0 | 0 | 23 (SEP) | 27 (SEP) | 41 (JUL) | 18 |
| **Ruff** | 0 | 0 | 15 (SEP) | 8 (AUG) | 4 (AUG) | 5 |
| **Dunlin** | 0 | 0 | 93 (AUG) | 15 (SEP) | 6 (JUL) | 23 |
| **Snipe** | 0 | 0 | 1 (AUG) | 0 | 0 | 0 |
| **Green Sandpiper** | 0 | 2 (SEP) | 0 | 0 | 0 | 0 |

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# Five year summary for Reclamation Pond

## *Table4d: Five-year annual peak counts, and month in which this was recorded, of each species.*

*The value reported represents the highest count obtained between July and June for the year in question and the species in question*
*Where a count is enclosed by parentheses this indicates that it was considered incomplete*
*i.e. those parts of the site not visited typically holds at least 25% of the species in question.*
*Incomplete counts are excluded from calculation where, if included, they would depress the mean.*
*When all counts are considered to be incomplete the maximum replaces the mean.*

| Species | 2012/2013 | 2013/2014 | 2014/2015 | 2015/2016 | 2016/2017 | Mean Peak |
|---|---|---|---|---|---|---|
| **Redshank** | 6 (NOV) | 1 (SEP) | 43 (SEP) | 10 (AUG) | 2 (SEP) | 12 |
| **Spotted Redshank** | 0 | 0 | 3 (SEP) | 0 | 1 (JUL) | 1 |
| **Greenshank** | 0 | 0 | 3 (SEP) | 3 (SEP) | 1 (SEP) | 1 |
| **Black-headed Gull** | 58 (DEC) | 98 (JUN) | 886 (JUL) | 600 (JUL) | 560 (JUL) | 440 |
| **Little Gull** | 0 | 2 (JUN) | 2 (JUL) | 1 (JUL) | 0 | 1 |
| **Common Gull** | 0 | 1 (JAN) | 5 (FEB) | 1 (DEC) | 0 | 1 |
| **Great Black-backed Gull** | 50 (NOV) | 30 (JUL) | 3 (APR) | 0 | 0 | 17 |
| **Herring Gull** | 33 (JUN) | 82 (JUL) | 14 (APR) | 2 (JUN) | 1 (JAN) | 26 |
| **Lesser Black-backed Gull** | 0 | 1 (APR) | 1 (APR) | 1 (SEP) | 1 (AUG) | 1 |
| **Sandwich Tern** | 0 | 0 | 1 (JUL) | N/C | 0 | 0 |
| **Common Tern** | 1 (JUN) | 0 | 0 | N/C | 0 | 0 |

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# Five year summary for Reclamation Pond

## *Table5: National and International importance of the site for each species.*

*Figures given indicate the percentage of the relevant threshold level in operation during 2016/2017 represented by the five-winter mean of peak counts for the species in question*
*e.g. 50% would indicate that the five-winter mean of peak counts is half the threshold level. It follows that values of 100% or higher indicate nationally or internationally important numbers of a given species occur on the site.*
*Where a count is enclosed by parentheses this indicates that it was considered incomplete (i.e. those parts of the site not visited typically hold at least 25% of the species in question).*
*(an asterisk indicates that a 50-bird minimum (typically used for designation) has been used rather than 1% of National population)*

| Species | Autumn peak cf National Threshold | Winter peak cf National Threshold | Spring peak cf National Threshold | Annual peak cf National Threshold | Autumn peak cf International Threshold | Winter peak cf International Threshold |
|---|---|---|---|---|---|---|
| Greylag Goose (British/Irish) | N/A | 0% | N/A | 0% | N/A | N/A |
| Mute Swan | 0% | 0% | 0% | 1% | 1% | 1% |
| Shelduck | 6% | 6% | 18% | 17% | 1% | 1% |
| Shoveler | 28% | 9% | 3% | 29% | 13% | 4% |
| Gadwall | 96% | 64% | 53% | 109% | 40% | 27% |
| Wigeon | 0% | 0% | N/A | 0% | 0% | 0% |
| Mallard | 1% | 0% | 0% | 1% | 0% | 0% |
| Pintail | 1% | 5% | 0% | 5% | 1% | 3% |
| Teal | 8% | 4% | 2% | 9% | 3% | 2% |
| Pochard | 4% | 2% | 0% | 4% | 0% | 0% |
| Tufted Duck | 4% | 4% | 2% | 5% | 0% | 0% |
| Goldeneye | N/A | 4% | 2% | 3% | N/A | 0% |

| Species | Spring peak cf International Threshold | Annual peak cf International Threshold | Autumn 5yr mean of peaks | Winter 5yr mean of peaks | Spring 5yr mean of peaks | Annual 5yr mean of peaks |
|---|---|---|---|---|---|---|
| Greylag Goose (British/Irish) | N/A | N/A | | 1 | | 1 |
| Mute Swan | 0% | 1% | 3 | 3 | 1 | 4 |
| Shelduck | 4% | 4% | 37 | 35 | 108 | 105 |
| Shoveler | 2% | 13% | 51 | 16 | 6 | 53 |
| Gadwall | 22% | 46% | 241 | 160 | 132 | 273 |
| Wigeon | N/A | 0% | 2 | 1 | | 2 |
| Mallard | 0% | 0% | 67 | 23 | 24 | 67 |
| Pintail | 0% | 3% | 3 | 15 | 1 | 15 |
| Teal | 1% | 4% | 170 | 93 | 34 | 194 |
| Pochard | 0% | 0% | 14 | 7 | 1 | 14 |
| Tufted Duck | 0% | 1% | 46 | 42 | 23 | 60 |
| Goldeneye | 0% | 0% | | 7 | 3 | 6 |

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# Five year summary for Reclamation Pond

## *Table5: National and International importance of the site for each species.*

*Figures given indicate the percentage of the relevant threshold level in operation during 2016/2017 represented by the five-winter mean of peak counts for the species in question*
*e.g. 50% would indicate that the five-winter mean of peak counts is half the threshold level. It follows that values of 100% or higher indicate nationally or internationally important numbers of a given species occur on the site.*
*Where a count is enclosed by parentheses this indicates that it was considered incomplete (i.e. those parts of the site not visited typically hold at least 25% of the species in question).*
*(an asterisk indicates that a 50-bird minimum (typically used for designation) has been used rather than 1% of National population)*

| Species | Autumn peak cf National Threshold | Winter peak cf National Threshold | Spring peak cf National Threshold | Annual peak cf National Threshold | Autumn peak cf International Threshold | Winter peak cf International Threshold |
|---|---|---|---|---|---|---|
| Little Grebe | 3% | 5% | 1% | 4% | 0% | 0% |
| Great Crested Grebe | 3% | 1% | 2% | 3% | 0% | 0% |
| Grey Heron | 0% | 0% | 0% | 0% | 0% | 0% |
| Cormorant | 0% | 0% | N/A | 0% | 0% | 0% |
| Moorhen | 0% | 0% | 0% | 0% | 0% | 0% |
| Coot | 11% | 14% | 3% | 15% | 1% | 1% |
| Oystercatcher | N/A | N/A | 0% | 0% | N/A | N/A |
| Avocet | 8% | 1% | 11% | 16% | 1% | 0% |
| Lapwing | 0% | N/A | N/A | 0% | 0% | N/A |
| Ringed Plover | 1% | 1% | 1% | 2% | 1% | 0% |
| Little Ringed Plover | N/A | N/A | *2% | *0% | N/A | N/A |
| Black-tailed Godwit | 4% | 1% | 0% | 4% | 3% | 1% |

| Species | Spring peak cf International Threshold | Annual peak cf International Threshold | Autumn 5yr mean of peaks | Winter 5yr mean of peaks | Spring 5yr mean of peaks | Annual 5yr mean of peaks |
|---|---|---|---|---|---|---|
| Little Grebe | 0% | 0% | 5 | 8 | 1 | 7 |
| Great Crested Grebe | 0% | 0% | 5 | 1 | 4 | 6 |
| Grey Heron | 0% | 0% | 1 | 1 | 1 | 1 |
| Cormorant | N/A | 0% | 0 | 1 | | 1 |
| Moorhen | 0% | 0% | 2 | 6 | 1 | 7 |
| Coot | 0% | 1% | 200 | 246 | 52 | 262 |
| Oystercatcher | 0% | 0% | | | 1 | 0 |
| Avocet | 1% | 2% | 6 | 1 | 8 | 12 |
| Lapwing | N/A | 0% | 11 | | | 11 |
| Ringed Plover | 1% | 1% | 4 | 2 | 4 | 6 |
| Little Ringed Plover | 0% | 0% | | | 1 | 0 |
| Black-tailed Godwit | 0% | 3% | 18 | 4 | 1 | 18 |

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# Five year summary for Reclamation Pond

## *Table5: National and International importance of the site for each species.*

*Figures given indicate the percentage of the relevant threshold level in operation during 2016/2017 represented by the five-winter mean of peak counts for the species in question*
*e.g. 50% would indicate that the five-winter mean of peak counts is half the threshold level. It follows that values of 100% or higher indicate nationally or internationally important numbers of a given species occur on the site.*
*Where a count is enclosed by parentheses this indicates that it was considered incomplete (i.e. those parts of the site not visited typically hold at least 25% of the species in question).*
*(an asterisk indicates that a 50-bird minimum (typically used for designation) has been used rather than 1% of National population)*

| Species | Autumn peak cf National Threshold | Winter peak cf National Threshold | Spring peak cf National Threshold | Annual peak cf National Threshold | Autumn peak cf International Threshold | Winter peak cf International Threshold |
|---|---|---|---|---|---|---|
| Ruff | *10% | N/A | N/A | *10% | 0% | N/A |
| Dunlin | 1% | 0% | N/A | 1% | 0% | 0% |
| Redshank | 1% | 0% | N/A | 1% | 0% | 0% |
| Spotted Redshank | *2% | N/A | N/A | *2% | 0% | N/A |
| Greenshank | *2% | N/A | N/A | *2% | 0% | N/A |
| Black-headed Gull | 2% | 0% | 1% | 2% | 2% | 0% |
| Little Gull | *2% | N/A | *2% | *2% | 0% | N/A |
| Common Gull | 0% | 0% | N/A | 0% | 0% | 0% |
| Great Black-backed Gull | 1% | 2% | 1% | 2% | 0% | 0% |
| Herring Gull | 0% | 0% | 0% | 0% | 0% | 0% |
| Lesser Black-backed Gull | 0% | 0% | 0% | 0% | 0% | 0% |
| Common Tern | N/A | N/A | *2% | *0% | N/A | N/A |

| Species | Spring peak cf International Threshold | Annual peak cf International Threshold | Autumn 5yr mean of peaks | Winter 5yr mean of peaks | Spring 5yr mean of peaks | Annual 5yr mean of peaks |
|---|---|---|---|---|---|---|
| Ruff | N/A | 0% | 5 | | | 5 |
| Dunlin | N/A | 0% | 23 | 1 | | 23 |
| Redshank | N/A | 1% | 11 | 2 | | 12 |
| Spotted Redshank | N/A | 0% | 1 | | | 1 |
| Greenshank | N/A | 0% | 1 | | | 1 |
| Black-headed Gull | 1% | 2% | 414 | 65 | 114 | 440 |
| Little Gull | 0% | 0% | 1 | | 1 | 1 |
| Common Gull | N/A | 0% | 0 | 1 | | 1 |
| Great Black-backed Gull | 0% | 0% | 10 | 16 | 11 | 17 |
| Herring Gull | 0% | 0% | 18 | 8 | 13 | 26 |
| Lesser Black-backed Gull | 0% | 0% | 0 | 0 | 1 | 1 |
| Common Tern | 0% | 0% | | | 1 | 0 |

# APPENDIX 3

## Evans Acoustics Screening Noise Assessment

# APPENDIX 4

# Reasonable Avoidance Measures (RAMs)

# Reptile and Amphibian Reasonable Avoidance Measures (RAMs)

***Method Statement Objectives***

1. Any development related activities on the Site, such as vegetation clearance or excavations in areas of suitable habitat (ephemeral / short perennial and artificial hibernacula) for reptiles and amphibians may potentially affect these species. As a result, safeguards must be implemented to protect these species and the Method Statement below details measures to be implemented to ensure these objectives are achieved. If these measures are followed then no impacts are likely to occur.

***Method Statement***

2. This Method Statement should be followed for the construction of the proposed development and associated works within the Site, which may affect the surrounding terrestrial habitat. Minor or short term destructive or disturbance works will also follow this Method Statement to ensure legal compliance and to ensure the objectives are achieved.

3. The following measures will be adopted throughout the construction period of the proposed development:

   - Site operatives will be informed by 'tool box' talk of the potential for reptile and amphibian species to occur on-site, what to look out for and what to do in the event that animal is found.
   - Works to be carried out within vegetated habitats on site should only commence after a careful visual inspection has determined that no animals are present. Vegetation should be reduced (by hand strimmer or similar hand tools) to a height of c.150mm prior to ground works commencing to aid visual searches and encourage individuals to temporarily move away from the working areas.
   - Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should be no greater than 45 degrees in angle. Ideally, any holes should be covered.
   - All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling.
   - Any excavated material stored overnight should be searched prior to being used as infill.

**If a reptile or amphibian is found, work must stop immediately and until the animal has moved away from the works area, if this is not possible contact should be made with a suitably experienced ecologist.**