
CONTENTS

APPENDIX 9E: BREEDING BIRDS	1
1.0 INTRODUCTION.....	1
2.0 RELEVANT LEGISLATION	1
3.0 METHODS	3
4.0 SURVEY RESULTS.....	5
5.0 REFERENCES.....	9
FIGURE 9E.1 BREEDING BIRD SURVEY AREA	10

TABLES

Table 9E.1: Weather Conditions and Survey Times	5
Table 9E.2: Breeding Birds within the Survey Area	5
Table 9E.3: Breeding Bird Diversity Criteria.....	7

APPENDIX 9E: BREEDING BIRDS

1.0 Introduction

1.1.1 This Appendix to the Preliminary Ecological Information Report (PEIR) presents the results of a breeding bird survey undertaken for the Proposed Development. The terms of reference used in this report are consistent with those defined within the main chapters of the PEIR (Volume 1).

1.2 Survey Scope

1.2.1 Five walked transects were undertaken by an AECOM ornithologist between April and June 2018 inclusive to record species by sight and call, and any evidence of breeding activity such as adults with young, adults carrying food and occupied nests.

1.2.2 The survey area included all accessible habitats within the main OCGT power station area including an approximate 10m buffer. This area is herein referred to as the 'Survey Area' and is shown on Figure 9E.1. Habitats within the existing VPI Immingham CHP Plant were excluded from the breeding bird survey because they comprised hardstanding and power plant infrastructure and therefore provided negligible opportunities for nesting birds.

2.0 Relevant Legislation

2.1.1 Annex 1 species are Species listed on Annex 1 of EC Directive 2009/147/EC on the Conservation of Wild Birds, requiring the UK Government to take special measures, including the designation of Special Protection Areas (SPA), to ensure the survival and reproduction of these species throughout their area of distribution.

2.1.2 The legislative provisions for the protection of wild birds in the UK are contained primarily within Sections 1-7 of the Wildlife and Countryside Act 1981 (as amended) (W&CA). Under the W&CA, a wild bird is defined as any bird of a species that is resident in or is a visitor to (in a wild state) the European Territory of any member state.

2.1.3 The W&CA makes it an offence to:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is being built or in use; and
- Take or destroy the eggs of any wild bird.

2.1.4 Special penalties exist for offences related to species listed on Schedule 1 of the W&CA, for which there are additional offences of disturbing these birds and / or their dependent young at their nests. For some species included in Schedule ZA1 under the Natural Environment and Rural Communities (NERC) Act (2006) it is an offence to take, damage or destroy the nest even when the nest is not in use.

2.2 Species of Conservation Concern

- 2.2.1 Species listed on the Royal Society for the Protection of Birds (RSPB) Birds of Conservation Concern (BoCC) Red List (Eaton et al., 2015) are those that have declined in numbers and / or range by at least 50 % over the last 25 years, or the longer term (defined as the entire period used for assessments since the first BoCC review, starting in 1969), those that have shown an historical population decline between 1800 and 1995 and species that are of global conservation concern. Species on the Red List are of the most urgent conservation concern.
- 2.2.2 Amber List species include those that have shown a moderate decline in numbers and / or range (25 - 49 %) over the last 25 years' those that have been previously Red Listed for historical decline followed by an increase of at least 100 % over 25 years or the longer term period and those with total populations of less than 300 breeding pairs. Also included are those species which represent a significant proportion (greater than 20 %) of the European breeding or wintering population, those for which at least 50 % of the British population is limited to 10 sites or less, and those of unfavourable conservation status in Europe.
- 2.2.3 The remaining species are placed on the Green list, indicating that they are of low conservation priority. These species still receive full protection through the provisions of the Wildlife and Countryside Act.
- 2.2.4 These lists confer no legal status. However, they are useful when assessing the significance of predicted impacts and determining the level of mitigation that may be required when birds are affected by development or any other activity. Furthermore, inclusion on the Red List is a factor in determining the species for which national or local Biodiversity Action Plans (BAPs) are developed.

2.3 The NERC Act (2006)

- 2.3.1 The NERC Act came into force on 1 Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act.
- 2.3.2 The S41 list is used to guide decision - makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.
- 2.3.3 There are 49 bird species of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the UK Biodiversity Action Plan (UK BAP) and which continue to be regarded as conservation priorities under the UK Post - 2010 Biodiversity Framework. Appendix A in the Preliminary Ecological Appraisal (PEA) Report (Appendix 9A in Volume 3) provides further details of the legislation and policy related to breeding birds.

3.0 Methods

3.1 Desk Study

3.1.1 A desk study was undertaken as part of the scope of works for the Phase 1 Habitat survey and is reported in detail in the PEA Report (Appendix 9A in PEIR Volume 3). Breeding bird records were obtained from the local ecological records centre (Greater Lincolnshire Nature Partnership) for the entirety of the Survey Area and a radius of 1 km around it.

3.2 Breeding Bird Survey

3.2.1 The bird surveys followed a modified version of the Common Birds Census (CBC) method first defined by Marchant (1983) and subsequently described in Bibby et al. (2000), such that five repeat survey visits were carried out, rather than ten. This is adequate to provide a good indication of the assemblage and distribution of breeding birds for the purposes of the impact assessment. Dates and weather conditions during the surveys are provided in Table 9E.1.

3.2.2 The surveys involved walking a transect route that allowed visual inspection of the whole of the survey area and permitted closer investigation of habitat features of particular ornithological value. The location of observed species was recorded on a map using British Trust for Ornithology (BTO) species codes and behaviour notation.

3.2.3 Surveys were performed after sunrise and before 10:10am in suitable weather conditions (unrestricted visibility, winds less than Beaufort Scale 5 and not in continuous rain).

3.2.4 The survey maps were analysed to determine breeding activity for species of conservation concern and / or protected species according to the following categories:

- Possible breeding (Po) – species present during the survey period in possible nesting habitat, but with no indication of breeding. Presumed passage migrants are not included;
- Probable breeding (Pr) – observations of one or more of the following activities during the survey period:
 - Singing male heard, or breeding calls heard;
 - Pair observed in suitable nesting habitat during the survey period;
 - Display or courtship;
 - Birds visiting a probable nest site; and
 - Birds seen to be carrying nesting material.
- Confirmed breeding (Co) – observations of any one or more of the following activities during the survey period:
 - Agitated behaviour or anxiety calls from adults suggesting a nest or young close by;

- Distraction display or injury feigning from adults;
 - A nest has obviously been used or egg shells found;
 - Adults seen carrying food for young;
 - Adults seen carrying faecal sac away from nest site;
 - Nest with eggs;
 - Nest with young or downy young in the case of waders, game birds etc;
 - Recently fledged young; and
 - Soliciting calls from young birds.
- Non-breeding (Nb) – species present during the survey period however the habitat type within the survey area is unsuitable for the particular species (for example passage migrants).

3.3 Limitations

- 3.3.1 Access to parts of the Survey Area that were within the operational area of the Total Lindsey Oil Refinery (TLOR) site was restricted during Visit 5 and therefore breeding birds within the fenced boundary of TLOR were surveyed from the adjacent plots. However, visibility into this area from outside the fence was good, with much of the surrounding land raised slightly above offering good views with binoculars. The access restrictions are therefore not considered to have limited the gathering of robust breeding bird data for the purposes of an impact assessment. Previous visits (Visits 1-4) included a walkover of the TLOR area and therefore there were no limitations in terms of survey coverage for these visits.
- 3.3.2 No surveys were carried out in March. However, given the particularly cold late winter/ early spring conditions in 2018 this is not considered to be a significant limitation. There was no suitable habitat within the survey area for early breeding species such as barn owl (*Tyto alba*), and therefore there is no risk of these species being missed by the commencement of surveys in April.

4.0 Survey Results

4.1 Weather Conditions and Timings of Surveys

4.1.1 The weather conditions reported during the breeding bird surveys are presented in Table 9E.1 below. All surveys were undertaken in suitable weather conditions for breeding bird survey with light winds and no or very light rain.

Table 9E.1: Weather Conditions and Survey Times

Survey Date	Temp	Wind speed/direction	Cloud Cover	Sunrise	Survey Times
26/04/18	11°C	F3 – 4 S	80 %	05.36	08:30 – 10:00
04/05/18	14°C	F1 W	70 – 90 %	05.21	08:15 - 10:00
10/05/18	12°C	F1 – 2 W	80 %	05.10	08:25 - 09:55
24/05/18	12°C	F1 – 2 N	90 – 100 %	04.48	08:30 – 10:05
15/06/18	16°C	F2 S	85 %	04:35	09:22 – 10:10

4.2 Breeding Birds Recorded

4.2.1 Twenty two species of bird were recorded within the Survey Area during the field surveys; 15 of those were probably or possibly breeding (refer to Table 9E.2). Birds classified as non - breeding were recorded over-flying the Survey Area.

Table 9E.2: Breeding Birds within the Survey Area

Species	Latin Name	Legal Status	Breeding Status	Number of Territories
Blackbird	<i>Turdus merula</i>		Po	2 (1 within Main OCGT & 1 edge)
Blackcap	<i>Sylvia atricapilla</i>		Pr	1 (edge)
Carrion Crow	<i>Corvus corone</i>		Po	1 (edge)
Chaffinch	<i>Fringilla coelebs</i>		Pr	1 (edge)
Dunnock	<i>Prunella modularis</i>	NERC S41	Pr	3 (2 within Main OCGT & 1 edge)
Goldfinch	<i>Carduelis carduelis</i>		Pr	1 (edge)
Great tit	<i>Parus major</i>		Po	1 (edge)
Green Woodpecker	<i>Picus viridis</i>		Nb	N/A
Kestrel	<i>Falco tinnunculus</i>		Nb	N/A

Species	Latin Name	Legal Status	Breeding Status	Number of Territories
Lesser Whitethroat	<i>Sylvia curruca</i>		Pr	2 (1 within Main OCGT & 1 edge)
Linnet	<i>Linaria cannabina</i>	NERC S41	Po	1 (within Main OCGT)
Magpie	<i>Pica pica</i>		Po	1 (edge)
Mallard	<i>Anas platyrhynchos</i>		Nb	N/A
Pied Wagtail	<i>Motacilla alba</i>		Nb	N/A
Red-legged partridge	<i>Alectoris rufa</i>		Po	1 (within Main OCGT)
Reed Bunting	<i>Emberiza schoeniclus</i>	NERC S41	Po	1 (within Main OCGT)
Robin	<i>Erithacus rubecula</i>		Pr	1 (edge)
Sparrowhawk	<i>Accipiter nisus</i>		Nb	N/A
Swallow	<i>Hirundo rustica</i>		Nb	N/A
Whitethroat	<i>Sylvia communis</i>		Pr	2 (within Main OCGT)
Wood Pigeon	<i>Columba palumbus</i>		Nb	N/A
Wren	<i>Troglodytes troglodytes</i>		Pr	3 (1 within Main OCGT & 2 edge)
<ul style="list-style-type: none"> • Co: Confirmed breeding; Pr: Probable breeding; Po: Possible breeding; Nb: Non-breeding; edge: refers to a territory that overlaps the site boundary; ■ BoCC Red List species, of most concern; ■ BoCC Amber List species, of moderate concern; □ BoCC Species of least concern 				

4.3 Specially Protected Species

4.3.1 No species on Annex 1 of the EU Birds directive and/ or Schedule 1 of the W&CA were recorded during the survey.

4.4 NERC Section 41 Species of Principal Concern

4.4.1 There were three species listed in the NERC Act's Section 41 (S41) Species of Principal Importance recorded within the Survey Area (dunnock *Prunella modularis*, linnet *Linaria cannabina* and reed bunting *Emberiza schoeniclus*), all of which are judged to be a probable or possible breeding species.

4.5 Species of Conservation Concern

- 4.5.1 A single BoCC Red listed species was recorded: linnet (possibly breeding, with a single territory within site).
- 4.5.2 Two BoCC Amber listed species were recorded breeding: dunnock and reed bunting. In addition, two non-breeding Amber listed species were recorded: kestrel (*Falco tinnunculus*) and mallard (*Anas platyrhynchos*). Records of kestrel included overflying birds, and a pair was observed nesting on the pylon within the TLOR site outside the Survey Area.

4.6 Evaluation

- 4.6.1 The breeding bird assemblage within the survey area comprised 15 species predominantly of farmland, hedgerow and scrub habitat. Fuller (1980) defines the importance of a site based on the number of species of breeding bird it supports (Table 9E.3). Based on these criteria, the breeding bird assemblage of the Survey Area is of below local importance.

Table 9E.3: Breeding Bird Diversity Criteria

National	Regional	County	Local
85+	70-84	50-69	25-49

Source: Fuller (1980)

- 4.6.2 It should be noted that Fuller's analysis was developed in the 1970's. Since then species diversity has declined significantly (Eaton *et al.*, 2015). As a result, Fuller's thresholds are too high for today's breeding bird populations. However, despite these changes in bird populations, and whilst also giving consideration to the number of species of conservation interest, it is still considered that the breeding bird assemblage at the Survey Area is of Negligible importance.
- 4.6.3 As well as assessing the site's overall conservation value it is necessary to assess its value for individual species. It may be the case that significant numbers of a single species make a site a critical location for the regional or national population of that species. This would in turn increase the site's value and significance for breeding birds.
- 4.6.4 Three species of conservation concern (linnet, dunnock and reed bunting) were considered to hold territories within or partially within the Survey Area. These designations do not mean that these species are particularly rare, rather that they have been demonstrated to have undergone declines in numbers and/ or range in recent years. Linnet, dunnock and reed bunting are common and widespread species within the local area and therefore the very small breeding populations present within the Survey Area are considered to be of negligible importance.
- 4.6.5 The remaining species breeding within the Survey Area are common and widespread at a regional level. Considering the availability of suitable habitat within the locality they are also likely to be common and widespread at a local level. Therefore the breeding populations of the following species of low conservation

priority are considered to be of Negligible importance: blackbird (*Turdus merula*), blackcap (*Sylvia atricapilla*), carrion crow (*Corvus corone*), chaffinch (*Fringilla coelebs*), goldfinch (*Carduelis carduelis*), great tit (*Parus major*), lesser whitethroat (*Sylvia curruca*), magpie, red-legged partridge (*Alectoris rufa*), robin (*Erithacus rubecula*), whitethroat (*Sylvia communis*) and wren (*Troglodytes troglodytes*).

5.0 References

Bibby, C.J., Burgess, N.D., Hill, D.A. and Mustoe, S.H. (2000). *Bird Census Techniques 2nd Edition*. British Trust for ornithology, Tring.

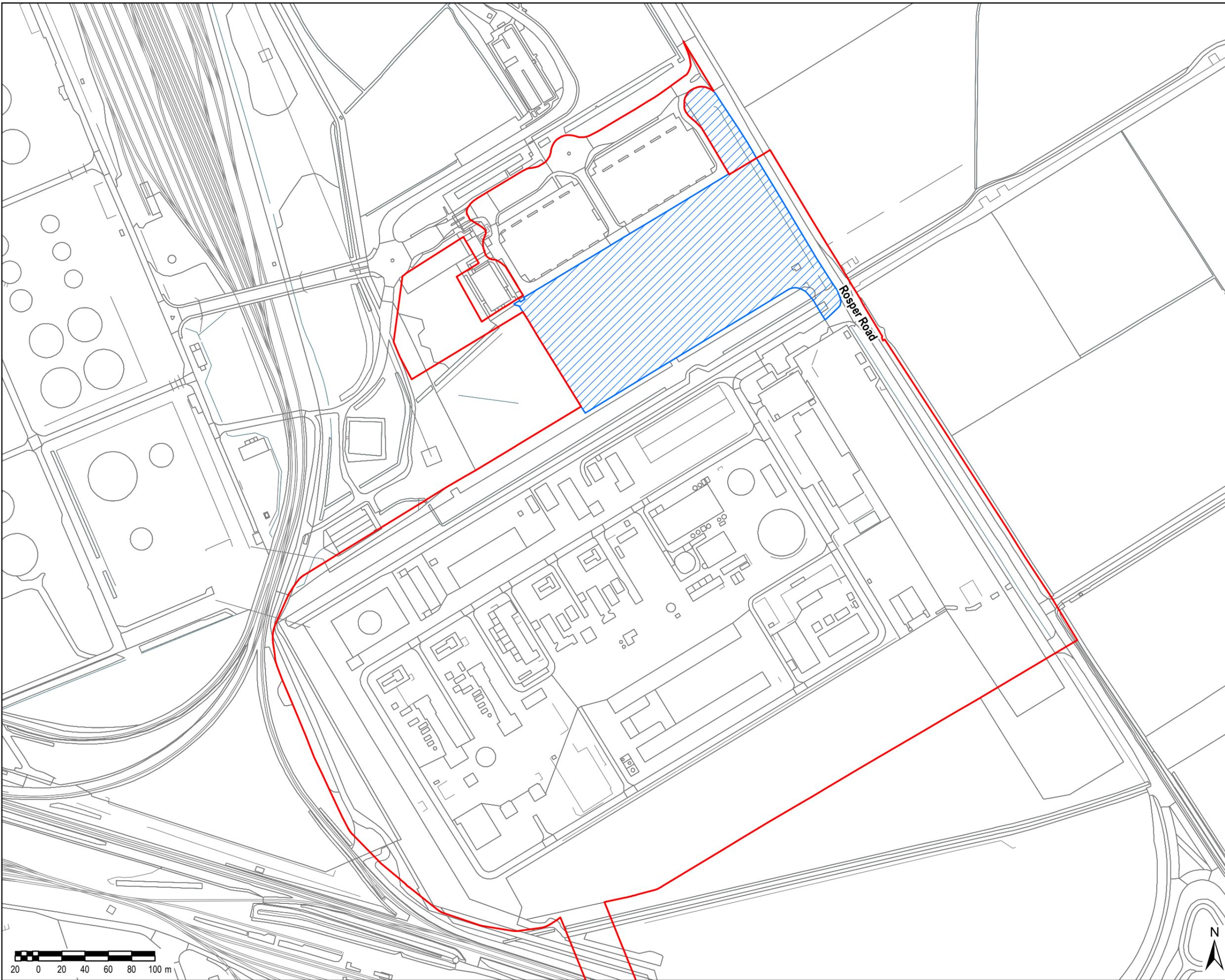
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Marchant, J.H. (1983). *British Trust for Ornithology (BTO) Common Birds Census Instructions*. BTO, Tring.

Figure 9E.1 Breeding Bird Survey Area

File Name: K:\5004 - Information Systems\60547702\Immingham Gas Pipeline\02_Maps\Power Plant Site\OCGT Draft PEIR\Ecology\PEA Appendix to the PEIR\Figure 9E.1 Breeding Bird Survey Locations.mxd



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PROPOSED 299MW OCGT POWER STATION - DRAFT PRELIMINARY ENVIRONMENTAL INFORMATION REPORT

Drawing Title
BREEDING BIRD SURVEY LOCATIONS

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