Scottish & Southern Electricity Networks

SHE Transmission

Habitat Regulations Appraisal (HRA)

St Fergus Gas 132 / 11 kV Substation

September 2020

Scottish & Southern Electricity Networks

QUALITY MANAGEMENT

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Scottish & Southern Electricity Networks

CONTENTS

1 INTRODUCTION

1.1.1 Environmental Resources Management Ltd (ERM) has been commissioned by Scottish Hydro Electric Transmissions plc (SHE Transmission) to collate information regarding potential impacts associated with the proposed St Fergus Gas 132 / 11 kV substation. This would install and keep installed a new 132 / 11 kV substation in Buchan in north Aberdeenshire, with overhead line (OHL) diversion and cable works to tie in the existing transmission lines to the new development under section 37 of the Electricity Act hereafter referred to as 'the Proposed Development'.

1.1.2 This document has been produced to inform the Habitats Regulations Appraisal (HRA) process for the Proposed Development. It provides information to enable the screening of the Proposed Development with respect to its potential to have a likely significant effect (LSE) on European and Ramsar sites of nature conservation importance.

2 PROJECT DESCRIPTION

2.1 Background

2.1.1 SHE Transmission holds a licence under the Electricity Act 1989 for the transmission of electricity in the North of Scotland and has a statutory duty under Schedule 9 of the Electricity Act to develop and maintain an efficient, co-ordinated and economical electrical transmission system in its licence area.

2.1.2 SHE Transmission is proposing to install a new substation to replace the 132/11kV transformers which are located within the existing substation in St Fergus Gas Terminal. This is in order to provide reinforcement of the existing network.

2.2 Proposed Development

2.2.1 The Proposed Development consists of a 132 / 11 kV substation, with OHL diversion works to tie in the existing transmission lines to the new development (see Figures 2.1 and 2.2.)

2.2.2 The substation compound will include two transformer buildings 21 m wide by 39 m long with a ridge height of 10.6 m. There will be a separate control building 18 m by 14 m long with a ridge height of 5.5 m. The buildings will be clad with steel panelling and finished in a dull green colour. Both compounds will be surrounded by a 2.5 metre high steel palisade security fence coloured grey.

2.2.3 The new terminal tower will be up to 32.3 m high. The maximum height of other new equipment within the CSE compound is 5 m. The CSE compound and tower will be surrounded by a palisade fence 2.5 m high.

2.2.4 The substation will not be illuminated at night during normal operations. Floodlights will be installed at the substation but would only be used in the event of a fault during the hours of darkness or during the over-run of planned works. No floodlights will be installed at the CSE compound.

2.2.5 New access tracks to the substation and CSE compound will be constructed. A new junction with the A90 is required and this will be used for construction and operation. CSE construction access will be temporary along a route to be determined by the Principal Contractor once detailed design has taken place.

PRELIMINARY DESIGN ONLY
NOT FOR CONSTRUCTION

FOR PLANNING

ST. FERGUS GAS TERMINAL

ST FERGUS EAST
132/11kV SUBSTATION

PERMANENT TARMAC ROAD & SUBSTATION
PLANNING APPLICATION: APP/2019/2300

TEMPORARY ACCESS CREATED FOR CLASS 40
PERMITTED DEVELOPMENT CABLING WORKS

TOWER CENTRE / CABLE SEALING
END COMPOUND LIMIT OF
DEVIATION OF UP TO 15m.
MOVEMENT TO BE INLINE WITH
OHL IN DIRECTION OF TOWER 207.

TEMPORARY TRACKWAY PANELS

LAYDOWN AREA

POND

PROPOSED 132kV CABLE
SEALING END COMPOUND

NEW TERMINAL TOWER 206R
E: 408763 N: 853650

EXISTING TOWER 206 TO BE REMOVED

15

207

FOUNDATION
UPGRADE

REFER TO SITE CLEARANCE
FOR DETAILS ON TREE
CLEARANCE.

P5
408864,
853679

5m LIMIT OF DEVIATION
FROM POLE CENTRE

ALL TRACKWAY ROUTES TO
BE AGREED ON SITE WITH THE
LANDOWNER

CRANE PAD

206

EXISTING OHL

P4
408812.19,
853612.87

10m LIMIT OF DEVIATION
FROM POLE CENTRE

LAYDOWN AREA

FOUNDATION UPGRADE

205

TEMPORARY WOODPOLE DIVERSION

P3
408734.03,
853579.32

10m LIMIT OF DEVIATION
FROM POLE CENTRE

P1
408535,
853560

P2
408655.69,
853545.69

10m LIMIT OF DEVIATION
FROM POLE CENTRE

5m LIMIT OF DEVIATION
FROM POLE CENTRE

204

NOTES:-

1. REFER TO ABERDEENSHIRE COUNCIL PLANNING APPLICATION APP/2019/2300 FOR DETAILS OF SUBSTATION.

2. REFER TO SSEN DRAWING NUMBER 0011-OHL 132 11kV SA1 SA2-LAY-0813-1-001-01 FOR DETAILS OF SITE CLEARANCE.

3. REFER TO SSEN DRAWING NUMBER 0011-SFEE-GA-1109-1-001-01 FOR DETAILS OF THE TERMINAL TOWER & CSE COMPOUND

SCALE AT 1:2500
0m 62.5m 125m 187.5m 250m

Scottish & Southern Electricity Networks

DRAWING STATUS :
FOR ACCEPTANCE

SSEN CONTRACT NUMBER	LT197
SSEN MDR NUMBER	0011-OHL 132 11kV SA1 SA2-LAY-0802-1-002-01

SSEN REVISION	DATE	HISTORY
01	28/05/20	FIRST ISSUE
02	13/07/20	UPDATED AS PER SSEN COMMENTS
03	04/09/20	UPDATED AS PER SSEN COMMENTS

ISSUE	P04	REMARKS:	UPDATED AS PER SSEN COMMENTS
DRAWN	PH		
CHKD 1	DS		
CHKD 2	-		
APPD	JC	DATE	04/09/2020
ISSUE	P03	REMARKS:	UPDATED AS PER SSEN COMMENTS
DRAWN	MW		
CHKD 1	DS		
CHKD 2	-		
APPD	JC	DATE	13/07/2020
ISSUE	P02	REMARKS:	UPDATED AS PER SSEN COMMENTS
DRAWN	PH		
CHKD 1	DS		
CHKD 2	-		
APPD	JC	DATE	10/06/2020
ISSUE	P01	REMARKS:	FIRST ISSUE
DRAWN			
CHKD 1			
CHKD 2			
APPD		DATE	

CIRCUIT:
SA1 / SA2

Scottish & Southern Electricity Networks

TITLE :
FIGURE 2.1
SECTION 37 SITE LOCATION PLAN

DRAWN	PH	DATE	27/05/2020	ACAD
CHKD 1	DS	DESIGN	-	A2
CHKD 2	-	APPD	JC	

PROJECT:
ST FERGUS EAST 132kV/11kV S/S

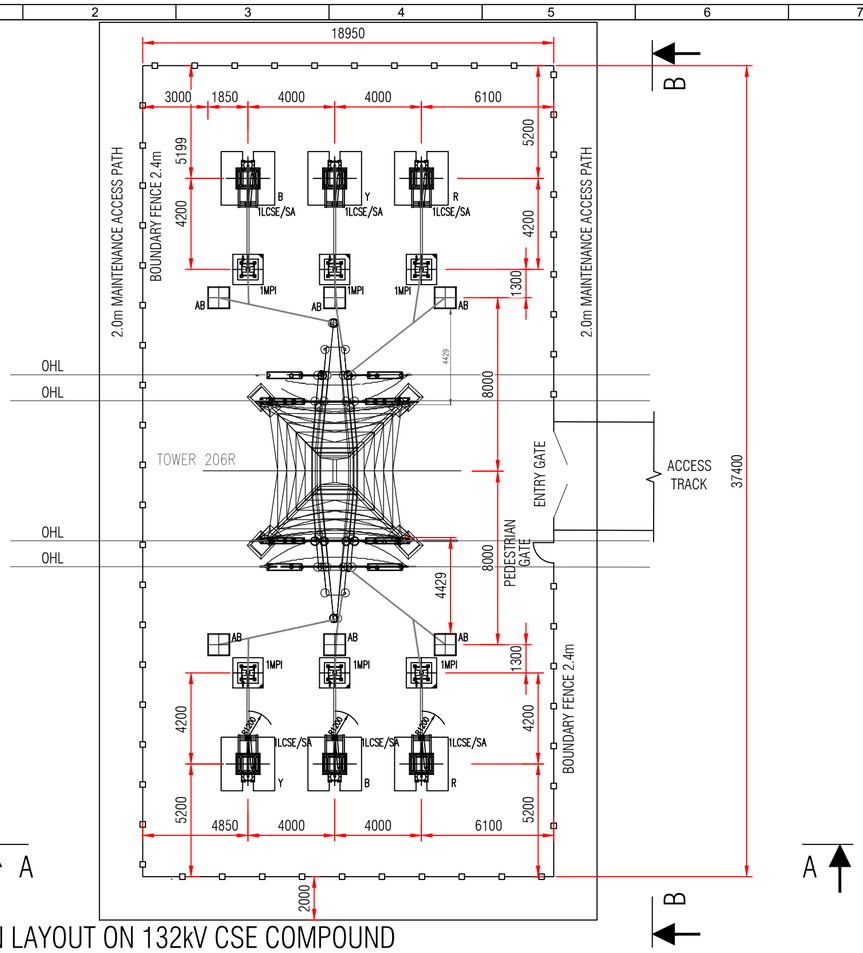
JOB NUMBER :
ULAH5321

Balfour Beatty

SCALE : 1:2500 | SHEET : 1 OF 1

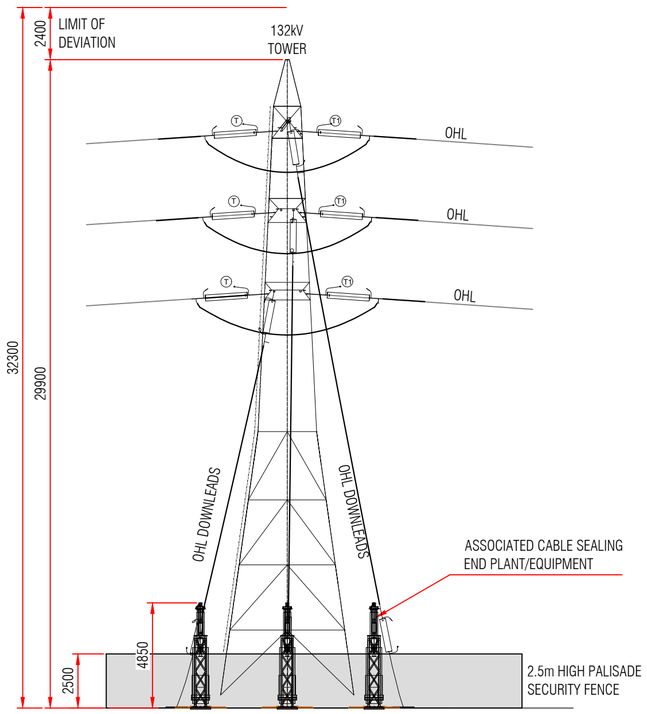
BIM CODE:
5C6I3M-PTDO-OHLLA-OHL_X-DR-PM-200009

ISSUE: P04 | STATUS: S3



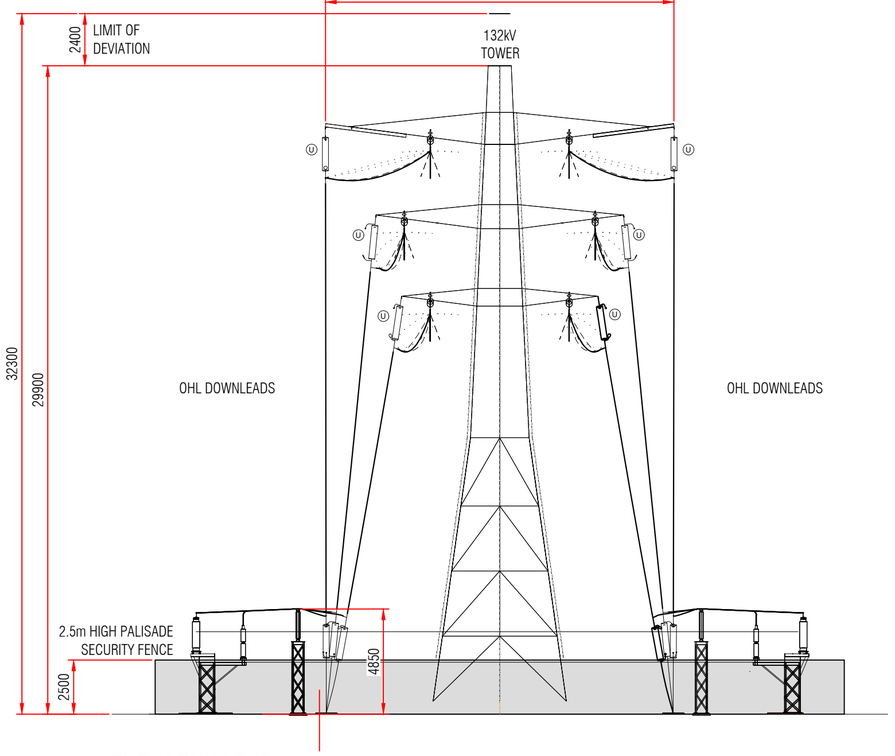
PLAN LAYOUT ON 132kV CSE COMPOUND

SCALE 1:200



ELEVATION A-A

SCALE 1:200



ELEVATION B-B

SCALE 1:200

SUBSTATION MINIMUM ELECTRICAL CLEARANCES

REQUIREMENTS TO BE IN ACCORDANCE WITH SSE SUBSTATION DESIGN SPECIFICATION DOC No. SP-PS-399

REF	CLEARANCE (mm)	132kV
E	PHASE TO EARTH	1200
Ph	PHASE TO PHASE	1400
S	DESIGN CLEARANCE FOR SAFETY	3500
SD	SAFETY DISTANCE	1400
Ds	WORKING & ACCESS CLEARANCE (VERTICAL)	3500
Dsh	WORKING & ACCESS CLEARANCE (HORIZONTAL)	2900
IH	INSULATION HEIGHT (PEDESTRIAN ACCESS)	2400

SCALE AT 1:200

0m 5m 10m 15m 20m

NOTES:-

1. ALL DIMENSIONS GIVEN IN MILLIMETRES (mm) U.N.O.
2. 132kV TERMINAL TOWER IS SHOWN AS L4 (M) DT E3.
3. EQUIPMENT SHOWN WITHIN CSE COMPOUND INCLUDES ANCHOR BLOCKS, POST INSULATORS, SURGE ARRESTORS AND CABLE SEALING ENDS. EQUIPMENT IS INDICATIVE AT THIS STAGE AND MAY BE SUBJECT TO CHANGE AT DETAIL DESIGN STAGE.
4. ENTRY GATE POSITION MAY ALTER DEPENDING ON BEST DESIGN TO CORRELATE WITH PROPOSED TEMPORARY ACCESS TRACK.
5. CSE COMPOUND PLATFORM LEVEL SET AT 8.3M AOD.
6. FILL BELOW CSE COMPOUND TO ACHIEVE 8.3M AOD OMITTED UNTIL DETAIL DESIGN STAGE. ANTICIPATED FILL OF 1.5M REQUIRED.
7. THE TOWER TYPE SHOWN IS L4 (M) DT E3. THE SETTING LEVEL IS +600MM WITH OVERALL TOWER HEIGHT OF 29.9M. IF THE TOWER POSITION MOVES WITHIN THE L.O.D THEN THE TOWER TYPE MAY CHANGE TO L4 (M) DT E6 WITH OVERALL TOWER HEIGHT OF 32.3M.

PRELIMINARY DESIGN ONLY
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FOR PLANNING

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DRAWING STATUS :
FOR S37 APPLICATION

SSEN CONTRACT NUMBER		LT197
SSEN MDR NUMBER		0011-SFEE-GA-1109-1-001-01
SSEN REVISION	DATE	HISTORY
01	13/07/20	FIRST ISSUE
02	08/09/20	UPDATED TO NEW ODSE SETUP

ISSUE	P02	REMARKS:	
DRAWN	PH	UPDATED TO SHOW NEW ODSE SETUP	
CHKD 1	GM		
CHKD 2	DS		
APPD	JC	DATE	08.09.2020
ISSUE	P01	REMARKS:	
DRAWN		FIRST ISSUE	
CHKD 1			
CHKD 2			
APPD		DATE	

CIRCUIT:
SA1 / SA2

Scottish & Southern Electricity Networks

TITLE : Figure 2.2

SECTION 37 - ST FERGUS 132/11kV SUBSTATION PROPOSED TERMINAL TOWER AND CABLE SEALING END COMPOUND - GA AND ELEVATIONS

DRAWN	PH	DATE	09/07/2020
CHKD 1	DS	DESIGN	-
CHKD 2	-	APPD	JC

ACAD A2

PROJECT:
ST FERGUS EAST 132kV/11kV S/S

JOB NUMBER :
ULAH5321

Balfour Beatty

SCALE : As Shown

SHEET : 1 OF 1

BIM CODE:
5C6I3M-PTD-ZZZZ-ZZ-CM-EDO-ZZZZ-049380

ISSUE: P02

STATUS: S3

2.3 Construction Activities

2.3.1 Key tasks during construction of the substation are as follows.

- Site clearance, including removal of existing vegetation; creation of temporary welfare and material laydown area;
- Creation of a level platform through processing of site won materials and import of commercial aggregates, as required;
- Connection into drainage network;
- Concrete foundations/bases for substation building and electrical equipment;
- Installation of new transformers;
- Restoration of ground temporarily disturbed during construction;
- Landscape earthworks and tree/shrub planning;
- Erection of security fence around the site perimeter; and
- Commissioning.

2.3.2 Key tasks during construction of the CSE compound and new tower are as follows.

- Site clearance, including removal of existing vegetation; creation of temporary welfare and material laydown area;
- Diversion of existing OHL onto wood pole (conductors will be at between 7 -10 m in height);
- Creation of a level platform through processing of site won materials and import of commercial aggregates, as required;
- Concrete foundations/bases for new tower and electrical equipment;
- Installation of electrical plant e.g cable sealing ends and tower. Scaffolding will be required for cable jointing;
- Restoration of ground temporarily disturbed during construction;
- Erection of security fence around the site perimeter;
- Commissioning; and
- Removal of temporary OHL diversion.

2.3.3 Key tasks during construction of the double circuit cable (two cables) are as follows.

- Establishment of suitable laydown areas for material;
- Delivery of materials to site;
- Excavation of two trenches (approximately 0.5 m wide and to a depth of 1.5 m);
- Installation of uPVC cable ducting an d surrounding stabilised backfill (Cement Bound Sand or sand); and
- Remedial works to reinstate the immediate vicinity of the works and any ground disturbed, to pre-existing use.

2.3.4 The new substation site will have a footprint of approximately 0.65 ha. The CSE compound will have a footprint of approximately 0.10 ha.

2.4 Site Traffic

2.4.1 During the construction phase of the new substation, access to and from the site will be required by heavy good vehicles (HGVs) and light vehicles. The site will be accessed from a new junction with the A90.

2.4.2 Traffic movements to site will include steelwork, imported hardcore, fuel deliveries and personnel traffic. Aberdeenshire Council will be advised of final traffic numbers along with a construction traffic management plan by the appointed contractor.

2.4.3 Abnormal Indivisible Load (AIL) deliveries will be required to the Project site for the delivery of the 132/11kV transformers.

2.5 Site Establishment and Laydown Area

2.5.1 A temporary staff welfare and material laydown area will be established to the south of the proposed substation site. The area would be regraded and revegetated on completion of construction.

2.6 Program and Hours of Working

2.6.1 It is anticipated that construction would take place over a 18 month period. Detailed programming of the works will be the responsibility of the appointed contractor in agreement with SHE Transmission.

2.6.2 Construction activities would in general be undertaken during daytime periods. This would involve work between approximately 07:00 to 19:00 in the summer and 07:30 to 17:30 (or as daylight allows) in the winter, for 7 days a week. Any variation in these working hours would be agreed in advance with Aberdeenshire Council on an as-required basis. All deliveries would take place during agreed weekday hours only.

2.7 Operation of the Project

2.7.1 The proposed substation would normally be unmanned, with regular operational switching being managed remotely through the SSE National Control Centre.

2.7.2 Substation plant will require maintenance and inspection at monthly intervals and some maintenance work would be undertaken most years. There would be other occasional visits as required for operational duties. This level of activity is consistent with the current substation.

2.8 Requirement for Habitats Regulation Assessment

2.8.1 Where a development has the potential, either alone or in combination with other plans or projects, to result in likely significant effects on one or more European sites(1) (2), it is subject to the requirements of The Conservation of Habitats and Species Regulations (2017) (the Habitats Regulations) with regards to Section 37 developments, and the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended in Scotland) for Town and Country Planning developments.

2.8.2 If a development is likely to affect a European site and/or a European marine site, a report must be provided with the application showing the site(s) that may be affected together with sufficient information to enable the Competent Authority to undertake a Habitat Regulations Appraisal (HRA). For this Proposed Development, the Competent Authority is Aberdeenshire Council for the substation and double circuit cable, and the Energy Consents Unit for CSE tower, compound and temporary overhead line diversion. Both competent authorities are advised by Scottish Natural Heritage.

(1) These are Special Areas of Conservation (SACs), candidate Special Areas of Conservation (cSACs) and Special Protection Areas (SPAs). this protection is also extended to proposed SPAs and proposed SACs. Where Ramsar site interests coincide with qualifying interests protected under an SPA or an SAC it is Scottish government policy to extend the same protection to these features. .

(2) Scottish Government (2019) Implementation of Scottish Government policy on protecting Ramsar sites. Guidance Document.

3 METHODOLOGY

The approach to the HRA has followed that set out in the Conservation of Habitats and Species Regulations 2017, as amended ('The Habitats Regulations') and SNH guidance on the consideration of plans or projects affecting SACs and SPAs [(1)] [(2)]. It has also taken account of a range of other guidance material including that produced by the European Commission (EC) (2018a [(3)]), (2018b) [(4)] 2007 [(5)]; 2002 [(6)].

3.1 Overview of HRA Process

3.1.1 The HRA process comprises four main stage, these are:

- **Stage 1 Screening** to identify the likely effects of a project on a European Site and consider whether the effects are likely to be significant;
- **Stage 2 Appropriate Assessment** to determine whether the integrity of the European site will be adversely affected by the project;
- **Stage 3 Assessment of Alternative Solutions** to establish if there are any that will result in a lesser effect on the European site; and
- **Stage 4 Imperative Reasons of Overriding Public Interest (IROPI)** and **Compensatory Measures** to establish whether it is necessary for the project to proceed despite the effects on the European site, and to confirm that necessary compensatory measures are in place to maintain the coherence of the Natura 2000 network.

3.1.2 Each of the stages is discussed in more detail in the following sections.

Stage 1 – Screening

3.1.3 The purpose of the screening stage is to identify likely impacts upon European sites, as a result of either a project alone or in combination with other plans and projects and consider whether these impacts are likely to be significant.

3.1.4 In order to determine if the Project is likely to have any significant effects on the designated sites the following issues have been considered:

- could the proposals affect the qualifying interest and are they sensitive / vulnerable to the effect;
- the probability of the effect happening;
- the likely consequences for the site's conservation objectives if the effect occurred; and
- the magnitude, duration and reversibility of the effect.

3.1.5 The objective of the screening stage is to conclude whether;

1. no likely significant effect will occur;
2. a likely significant effect will occur; or
3. it cannot be concluded that there will be no likely significant effect.

(1) SNH (2014) Natura 2000 Casework Guidance – How to consider plans and projects affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

(2) SNH (2019) Guidance Note - The handling of mitigation in Habitats Regulations Appraisal - the People Over Wind CJEU judgement

(3) European Commission (2018) Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. EC

(4) European Commission (2018) Guidance on Energy Transmission Infrastructure and EU nature legislation. EC

(5) European Commission (2007) Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC. EC

(6) European Commission (2002) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites. Methodological Guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. EC

3.1.6 If the screening stage concludes the second or third outcome, then an Appropriate Assessment (AA) is triggered. The implications of the identified likely significant effect(s) on the European designated site, in view of its specific conservation objectives and qualifying features and the nature, scale and location of the potential impact should be assessed. The term Habitat Regulations Appraisal encompasses both the initial screening stage and, where required, the follow on Appropriate Assessment (AA) stage.

Stage 2 – Appropriate Assessment

3.1.7 An AA is required to determine potential effects of a project upon the integrity of European sites. It should provide and analyse sufficient information to allow Aberdeenshire Council (for the substation and cabling) and Energy Consents Unit (for CSE tower, compound and temporary overhead line diversion), as the competent authorities to determine whether the aspects of the project pertinent to their consents will or will not adversely affect the integrity of European sites. AA should exclusively focus on the qualifying features of the European site and it must consider any impacts on the conservation objectives of those qualifying interests. It should also be based on, and supported by evidence that is capable of standing up to scientific scrutiny. EC guidance states that without proper reasoning the assessment does not fulfil its purpose, and cannot be considered 'appropriate' and therefore cannot be consented. In terms of what is reasonable, guidance states "*to identify the potential risks, so far as they may be reasonably foreseeable in the light of such information as can be reasonably obtained*" (1).

3.1.8 In undertaking an AA, there are two phases;

- a scientific evaluation of all the likely significant effects of the project on the relevant qualifying interests of a Natura site; and
- a conclusion based on outcomes of the scientific evaluation whether the integrity of a Natura 2000 site will be compromised.

3.1.9 The emphasis for AA is to prove that no adverse impacts due to a project will occur which would undermine a Natura 2000 sites integrity.

3.1.10 Site integrity can be defined as:

"*the coherence of its ecological structure and function, across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified*" (2).

3.1.11 The assessment will also take into account any avoidance or mitigation measures which will be implemented to avoid or reduce the level of impact from the project. The Competent Authority may also consider the use of conditions or restrictions to help avoid adverse effects on site integrity.

3.1.12 If the AA concludes that there will be an adverse effect on the integrity of the European site, or that there is uncertainty and a precautionary approach is taken, then consent can only be granted if there are no alternative solutions, Imperative Reasons of Overriding Public Interest (IROPI) is applicable and compensatory measures have been secured.

Stage 3 - Assessment of Alternative Solutions

3.1.13 All feasible alternatives have to be analysed to ensure that there are none which *"better respect the integrity of the site in question"* and its contribution to the overall coherence of the Natura 2000 network (EC, 2007).

(1) Scottish Natural Heritage (SNH) (2001) Natura Casework Guidance: Consideration of Proposals Affecting SPAs and SACs. SNH Guidance Note Series. SNH

(2) Scottish Natural Heritage (SNH) 2014 Natura Casework Guidance: How to consider plans and projects affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). SNH

Alternatives could include the location of the site, its scale and design, and the way in which it is constructed and operated. The 'zero' option also has to be considered.

3.1.14 The comparisons of alternatives should not allow other assessment criteria (*e.g.* economics) to overrule ecological criteria (EC, 2007). However, the same guidance also refers to the opinion for the case C-239/04 (1), where the opinion of the Advocate General was that *"the choice does not inevitably have to be determined by which alternative least adversely affects the site concerned. Instead, the choice requires a balance to be struck between the adverse effect on the integrity of the SPA and the relevant reasons of overriding public interest".*

Stage 4 - Imperative Reasons for Overriding Public Interest and Compensation Measures

3.1.15 Where a development has an adverse effect on the integrity of a European site and there are no alternative solutions consent can only be granted if there are imperative reasons of overriding public interest, including those of social or economic nature which would require the realisation of a project. A definition of 'overriding public interest' does not occur in the directive, however examples considered are:

- human health, public safety or beneficial consequences of primary importance to the environment; or
- any other reasons which are considered by the Competent Authority to be IROPI taking account of the opinion of the EC; and
- if the site does not host a priority habitat or species then IROPI must be demonstrated, and the reasons can include those of a social or economic nature.

3.1.16 If the importance of the project is deemed to outweigh the effects which will result on the European site, and there are no alternatives, compensatory measures must be secured before consent is granted. Compensatory measures are independent of the project and are intended to offset the adverse effects of a project, corresponding specifically to the negative effects on habitats and species concerned.

3.1.17 To be acceptable, compensatory measures should:

- take account of the comparable proportions of habitats and species which are adversely affected;
- be within the same bio-geographical range within which the European site is located;
- provide functions which are comparable to those which justified the selection of the of the original site; and
- have clearly defined implementation and management objectives so the measures can achieve the aim of maintaining the overall coherence of the network.

3.2 Consultation

3.2.1 A summary of the comments received from stakeholders, together with how they have been addressed within this HRA Screening Report, is provided in Table 3.1 below.

(1) Commission of the European Communities V Portugese Republic [2006] Case C.239/04

Table 3.1 - Summary of consultation undertaken on the HRA Screening Report

CONSULTEE	COMMENT	ADDRESSED
Scottish Natural Heritage – meeting held on 21st December 2018 to discuss ornithology impacts from the project,	Potential effects on Loch of Strathbeg SPA. There is potential for significant environmental effects for pink footed geese and whooper swans due to the presence of two sets of overhead wires, increasing collision risk.	HRA Screening focuses on the Loch of Strathbeg SPA.

4 ENVIRONMENTAL BASELINE

4.1.1 The Project baseline has been informed by a range of published and publically available data including:

- SNH Information Services (SNHi) – Data on designated sites and notable species;
- Scottish Biodiversity List;

Recent species records for the area obtained from North East Scotland Biological Records Centre (NESBRC)

4.1.2 Based on the data collected from consultation and desk based study, the following surveys have been undertaken to inform the ecological assessment:

- Extended Phase 1 Habitat Survey [1].

4.1.3 To inform the ornithology baseline, the following surveys have been undertaken:

- winter Vantage Point (VP) surveys following guidance issued by SNH [2] were carried out between October 2018 and February 2019;
- breeding bird surveys, based on a scaled down Common Birds Census (CBC) (refer to SNH, 2017; Gilbert *et al*., 1998 [3] [4]) were undertaken over three visits between April and June 2019.

4.1.4 The scope and methods for all bird surveys were based on standard and approved approaches. All surveys were undertaken by suitably experienced and trained ecologists.

4.1.5 A summary of the baseline environment is presented in the Project Environmental Appraisal.

[1] In accordance with JNCC Phase 1 survey 2010 methodology

[2] SNH. Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds. Guidance. Version 1. July 2016.

[3] SNH (2017) Recommended bird survey methods to inform impact assessment of onshore wind farms. March 2017. SNH, Battleby.

[4] Gilbert, G., Gibbons, D.W. & Evans, J. (1998) Bird Monitoring Methods. RSPB, Sandy.

5 SCREENING OF EUROPEAN SITES AND FEATURES

5.1 Approach to Initial Screening

5.1.1 This stage is essentially a site-identification / selection process which effectively identifies all those designated sites and the relevant features which are at risk of likely significant effects (LSE), should those features be sensitive to the relevant effects.

5.1.2 The criteria used in this first stage of selection takes account of the location of the European sites (including Ramsar sites) in relation to the Proposed Development, the area of influence (AOI) of potential impacts associated with the Proposed Development and the ecology and distribution of qualifying features. These criteria are described in Table 5.1.

Table 5.1 Criteria Used for Initial Screening of Relevant European Sites

CRITERIA USED FOR SCREENING OF RELEVANT EUROPEAN SITES	
1	European or Ramsar site with physical overlap with the Proposed Development
2	European or Ramsar site with adjoining 'functionally linked habitat' with physical overlap with the Proposed Development
3	European or Ramsar site with a qualifying feature located within the potential area of influence (the AOI) associated with the Proposed Development; the area of influence is considered to be a radius of 10 km of the Project.
4	European or Ramsar site with qualifying mobile species whose range (e.g. foraging, migratory, overwintering, breeding or natural habitat range) may interact with potential effects from the Proposed Development

5.1.3 Details of European Protected sites initially screened in under one or more of the above criteria are provided in *Table 5.2* and illustrated in *Figure 5.1*. The qualifying features for each site are detailed, using publically available information obtained from the Magic[1], SiteLink[2] and JNCC[3] websites. The most recent SPA citation (amended in April 2018) was on SNH SiteLink, and this version of the citation has been used to inform the HRA.

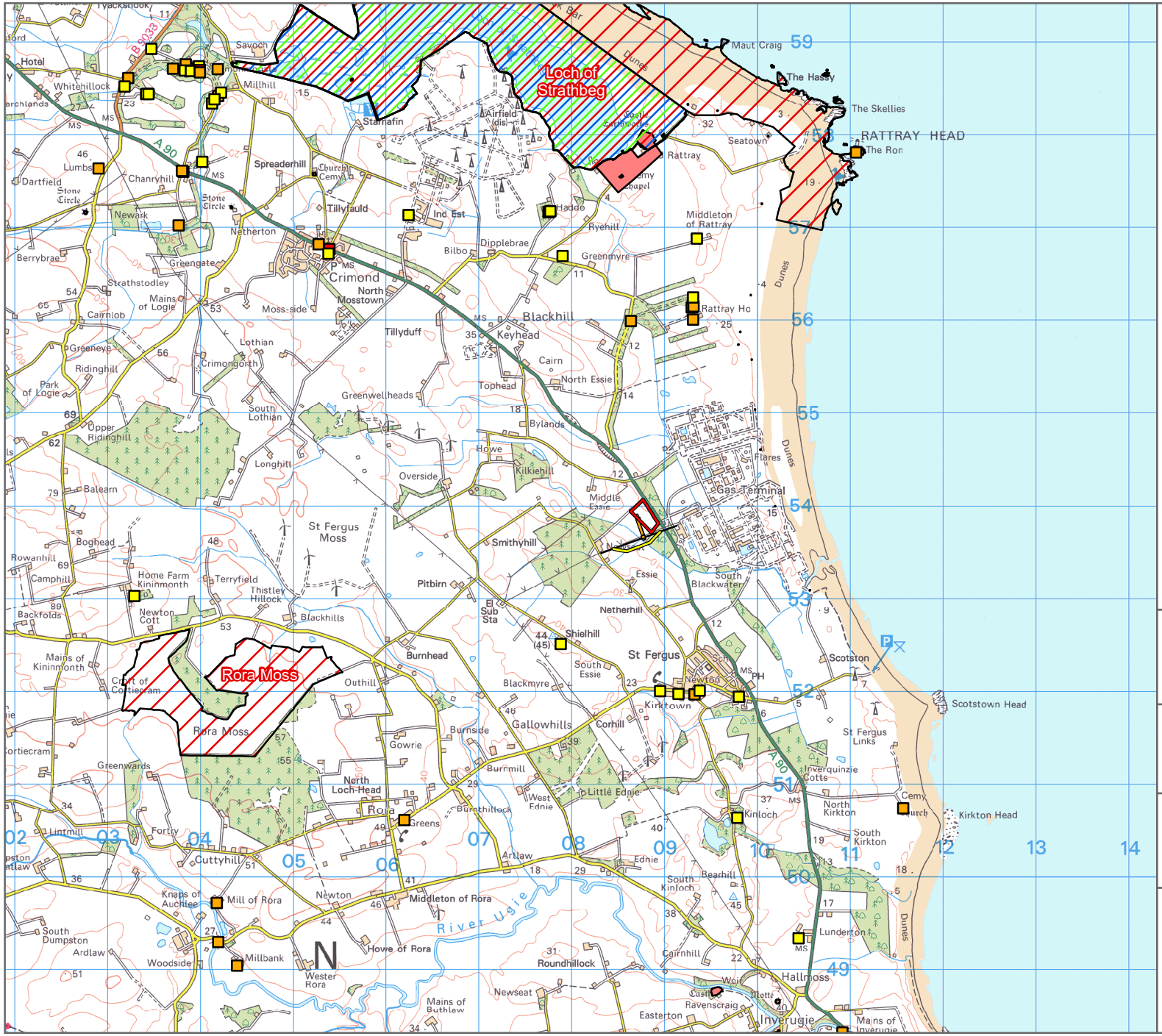
1 The MAGIC website provides geographic information about the natural environment from across government. The information covers rural, urban, coastal and marine environments across Great Britain. It is presented in an interactive map which can be explored http://www.magic.gov.uk/ accessed 15.01.2019

[2] Scottish Natural Heritage: https://sitelink.nature.scot/home accessed 15.01.2019

[3] Joint Nature Conservation Committee : http://jncc.defra.gov.uk/page-4 accessed 15.01.2019

Table 5.2 Initial Screening of Relevant European Sites

EUROPEAN SITE NAME (SITE CODE)	AREA OF SITE (HA)	APPROXIMATE DISTANCE FROM PROPOSED DEVELOPMENT (KM)	QUALIFYING FEATURES OF INTEREST
Special Protection Area (SPA)			
Loch of Strathbeg (UK9002211)	616.26	3.4 km	Sandwich tern (*Strerna sandvicensis*) (280 pairs, 2.0% of the breeding GB population) Barnacle goose (*Branta leucopsis*) (520 individuals, 1.6% of the wintering GB population) Whooper swan (*Cygnus Cygnus*) (245 individuals, 4% of the wintering GB population) Greylag goose (*Anser anser*) (5,565 individuals, 6% of the wintering Iceland, UK and Ireland populations) Pink-footed goose (*Anser brachyrhynchus*) (27,500 individuals, 25% of the wintering Eastern Greenland, Iceland and UK populations) Wintering waterfowl assemblage in excess of 20,000 individuals - 32,600 individuals, including the above species, as well as teal (*Anas crecca*) (1,270 individuals, 1% of the GB population) and goldeneye (*Bucephala clangula*) (150 individuals, 1% of the GB population).
Ramsar Sites			
Loch of Strathbeg (RS778)	615.94	3.4 km	**Ramsar Criterion 1** The loch constitutes the largest dune slack pool in Britain and the largest water body in the north-east Scottish lowlands and is one of very few naturally eutrophic lochs of the size in the region. **Ramsar criterion 5** Assemblages of international importance: Species with peak counts in winter: 4,7841 waterfowl (5 year peak mean 1998/99-2002/2003) **Ramsar criterion 6** Pink-footed goose - 34797 individuals, representing an average of 14.4% of the Greenland, Iceland/UK population (5 year peak mean 1998/9-2002/3) Whooper swan - 290 individuals, representing an average of 1.3% of the Iceland/UK/Ireland population (5 year peak mean 1998/9- 2002/3) Barnacle goose - 3418 individuals, representing an average of 6.3% of the Greenland/Ireland, UK population (3,418)



SCALE: See Scale Bar | VERSION: A02
SIZE: A4 | DRAWN: JS
PROJECT: 0478671 | CHECKED: PW
DATE: 02/10/2019 | APPROVED: KG

Figure 5.1
Proposed Site and Surrounding Environment

ERM

PROJECTION: British National Grid

Path: \\uklonsv04\Data\Edinburgh\Projects\0478671 SSE SHETL St Fergus Sub.AB\00 GIS\MAPS\ENVIRONMENT\0478671_RevisedSiteLocation_A02.mxd

5.2 Effects Considered in Assessment

5.2.1 The potential effects upon European site(s) as a result of the Proposed Development that have been considered within this HRA report are listed in the following sections.

5.2.2 No potential effects on supporting habitats within the SPA/Ramsar site are predicted. Although wetland habitats are a feature of Loch of Strathbeg Ramsar site but are not a feature of the Loch of Strathbeg SPA, they are not subject to HRA(1).

5.2.3 As all bird features of the Loch of Strathbeg Ramsar site are also qualifying interest features of the Loch of Strathbeg SPA, effects on these features have been considered together.

5.2.4 Potential effects on ornithology features outside of the SPA/Ramsar site are considered to comprise of:

- indirect loss of bird habitats due to the displacement of birds (disturbance and/or displacement) by construction works and operation;
- accidental mortality due to collision with project infrastructure; and
- potential barrier effects as a result of the presence of infrastructure.

5.2.5 All other impacts arising from the Proposed Development are not likely to have significant effects due to the lack of connectivity and/or distance such that there is no pathway of effect between the European sites and the Proposed Development.

(1) Scottish Government (2019) Implementation of Scottish Government policy on protecting Ramsar sites. Guidance Document.

6 DETERMINATION OF LIKELY SIGNIFICANT EFFECTS

6.1 Introduction

6.1.1 The only European site initially screened in for assessment of likely significant effects (LSE) is documented in Table 5.2. This site was selected for screening using the criteria outlined in Table 5.1. There is therefore a need to consider the potential for LSE on that sites in relation to the Proposed Development.

6.1.2 In addition, in Section 5.2, the likely effects that may result during construction, operation and maintenance and decommissioning of the Proposed Development (and are relevant to the receptors being considered here) are identified to enable these to be considered. This section combines that information for the Proposed Development alone and presents the assessment of LSE, thus providing the necessary information for Stage 1 of the Habitats Regulations Appraisal process.

6.1.3 The assessment of LSE is based on the Proposed Development's current understanding of the baseline environment and the scope and nature of the proposed project activities, together with the relevant information available for the designated sites. Consultee and advisor responses to this document, and refinements to the Proposed Development design may change this assessment.

6.1 Assessment of Likely Significant Effects (LSE)

6.1.1 The assessment and conclusions with regards to LSEs on the Loch of Strathbeg SPA/Ramsar site and the relevant features identified has been carried out taking account of the AOI of potential impacts, location of the European site under consideration and (where known) the distribution of qualifying features in relation to the Project. The information is presented below in Table 6.1.

Scottish & Southern Electricity Networks

Table 6.1 Assessment of LSE

DESIGNATED SITE	FEATURES SCREENED IN	RELEVANT EFFECT	CONSIDERATION OF LSE	CONCLUSION OF LSE
Loch of Strathbeg SPA/ Ramsar Site	Sandwich Tern (SPA only)	Indirect loss of bird habitats due to the displacement of birds (disturbance and/or displacement) by construction works and operation	Sandwich tern are a marine species and thus will utilise marine habitats. Therefore they will not be significantly displaced from foraging and resting areas by the onshore construction activity or the final development. Additionally, no Sandwich tern flights were recorded during baseline surveys. Therefore, there are no likely significant effects.	No LSE
		Accidental mortality due to collision with project infrastructure	No Sandwich tern flights were recorded during baseline surveys. Therefore, there are no likely significant effects.	No LSE
		Potential barrier effects as a result of the presence of infrastructure	No Sandwich tern flights were recorded during baseline surveys. Therefore, there are no likely significant effects.	No LSE
	Barnacle Goose	Indirect loss of bird habitats due to the displacement of birds (disturbance and/or displacement) by construction works and operation	Although the Proposed Development does not physically overlap the SPA, barnacle goose flight activity was recorded during baseline surveys. If the works take place over winter, there is potential for disturbance of birds from fields around the works, resulting in a loss of foraging habitat, within the foraging range of this species for birds from the SPA. Therefore, it cannot be concluded that there will be no likely significant effect.	Potential for LSE
		Accidental mortality due to collision with project infrastructure	Barnacle goose flight activity was recorded across the proposed temporary OHL during baseline surveys, although no flights were recorded at collision risk height. Therefore, it cannot be concluded that there will be no likely significant effects.	Potential for LSE
		Potential barrier effects as a result of the presence of infrastructure	Barnacle goose flight activity was recorded across the proposed temporary OHL during baseline surveys, although **no** flights across the temporary OHL were recorded at collision risk height. Additionally, the installation of the temporary OHL of the Proposed Development at the same height as the existing OHL may present a potential barrier to this species. Therefore, it cannot be concluded that there will be no likely significant effects.	Potential for LSE

	Whooper Swan	Indirect loss of bird habitats due to the displacement of birds (disturbance and/or Displacement) by construction works and operation	Although the Proposed Development does not physically overlap the SPA, whooper swan flight activity was recorded during baseline surveys. If the works take place over winter, there is potential for disturbance of birds from fields around the works, resulting in a loss of foraging habitat, within the foraging range of this species for birds from the SPA. Therefore, it cannot be concluded that there will be no likely significant effect.	Potential for LSE
		Accidental mortality due to collision with project infrastructure	Whooper swan flight activity was recorded across the proposed temporary OHL during baseline surveys, with one flight recorded crossing the temporary OHL at collision risk height. Therefore, it cannot be concluded that there will be no likely significant effects.	Potential for LSE
		Potential barrier effects as a result of the presence of infrastructure	Whooper swan flight activity was recorded across the proposed temporary OHL during baseline surveys, with one flight recorded crossing the temporary OHL at collision risk height. Additionally, the installation of the temporary OHL of the Proposed Development at the same height as the existing OHL may present a potential barrier to this species. Therefore, it cannot be concluded that there will be no likely significant effects.	Potential for LSE
	Greylag Goose (SPA only)	Indirect loss of bird habitats due to the displacement of birds (disturbance and/or displacement) by construction works and operation	Although the Proposed Development does not physically overlap the SPA, greylag goose flight activity was recorded during baseline surveys. If the works take place over winter, there is potential for disturbance of birds from fields around the works, resulting in a loss of foraging habitat, within the foraging range of this species for birds from the SPA. Therefore, it cannot be concluded that there will be no likely significant effect.	Potential for LSE
		Accidental mortality due to collision with project infrastructure	Greylag goose flight activity was recorded across the proposed temporary OHL during baseline surveys, although no flights were recorded at collision risk height. Therefore, it cannot be concluded that there will be no likely significant effects.	Potential for LSE
		Potential barrier effects as a result of the presence of infrastructure	Greylag goose flight activity was recorded across the proposed temporary OHL during baseline surveys, although no flights were recorded at collision risk height. Additionally, the installation of the temporary OHL of the Proposed Development at the same height as the existing OHL may present a potential barrier to this species. Therefore, it cannot be concluded that there will be no likely significant effects.	Potential for LSE

	Pink-footed Goose	Indirect loss of bird habitats due to the displacement of birds (disturbance and/or displacement) by construction works and operation	Although the Proposed Development does not physically overlap the SPA, pink-footed goose flight activity was recorded during baseline surveys. If the works take place over winter, there is potential for disturbance of birds from fields around the works, resulting in a loss of foraging habitat, within the foraging range of this species for birds from the SPA. Therefore, it cannot be concluded that there will be no likely significant effect.	Potential for LSE
		Accidental mortality due to collision with project infrastructure	Pink-footed goose flight activity was recorded across the proposed temporary OHL during baseline surveys, with flights recorded at collision risk height. Therefore, it cannot be concluded that there will be no likely significant effects.	Potential for LSE
		Potential barrier effects as a result of the presence of infrastructure	Pink-footed goose flight activity was recorded across the proposed temporary OHL during baseline surveys, with flights recorded at collision risk height. Additionally, the installation of the temporary OHL of the Proposed Development at the same height as the existing OHL may present a potential barrier to this species. Therefore, it cannot be concluded that there will be no likely significant effects.	Potential for LSE
	Wintering Waterfowl Assemblage	Indirect loss of bird habitats due to the displacement of birds (disturbance and/or displacement) by construction works and operation	Although the Proposed Development does not physically overlap the SPA, flight activity of birds from the winter waterfowl assemblage (pink-footed goose, whooper swan, barnacle geese and greylag geese) was recorded during baseline surveys. If the works take place over winter, there is potential for disturbance of birds from fields around the works, resulting in a loss of foraging habitat, within the foraging range of this species for birds from the SPA. Therefore, it cannot be concluded that there will be no likely significant effect.	Potential for LSE
		Accidental mortality due to collision with project infrastructure	Wintering waterfowl assemblage flight activity was recorded across the proposed temporary OHL during baseline surveys, with flights recorded at collision risk height. Therefore, it cannot be concluded that there will be no likely significant effects.	Potential for LSE
		Potential barrier effects as a result of the presence of infrastructure	Wintering waterfowl assemblage flight activity was recorded across the proposed temporary OHL during baseline surveys, with flights recorded at collision risk height. Additionally, the installation of the temporary OHL of the Proposed Development at the same height as the existing OHL may present a potential barrier to this species. Therefore, it cannot be concluded that there will be no likely significant effects.	Potential for LSE

6.2 In Combination Assessment

No National or Major developments within 5 km and 2 km respectively consented or submitted for approval in the last three years have been identified. One Major development, Installation of a 36.6 MW Solar SV Park at Bilbo Solar Farm at Crimond was identified approximately 3 km from the Project. The SNH response to the planning application for the solar farm concluded that the proposals would not adversely affect the population of the SPA species as viable components of the site, their distribution within the site and the habitats supporting them [(1)] . Given the small footprint of permanent habitat loss as a result of the proposed Project, and the abundance of other suitable available foraging habitat not affected by either project, no in-combination effects are predicted.

6.3 Summary of LSE and Effects taken forward to Appropriate Assessment

6.3.1 A summary of the European sites, features and potential impacts for which a potential for a LSE has been identified as a result of the Proposed Development is summarised below in Table 6.3.

Table 6.2 - European sites and features for which Potential LSEs have been identified

SITE	FEATURE	PROJECT PHASE	EFFECT
Loch of Strathbeg SPA/Ramsar Site	Barnacle goose	Construction Operation Decommissioning	Disturbance/displacement Collision risk Barrier Effects
	Whooper swan	Construction Operation Decommissioning	Disturbance/displacement Collision risk Barrier effects
	Greylag goose (SPA only)	Construction Operation Decommissioning	Disturbance/displacement Collision risk Barrier effects
	Pink-footed goose	Construction Operation Decommissioning	Disturbance/displacement Collision risk Barrier effects
	Wintering waterfowl assemblage	Construction Operation Decommissioning	Disturbance/displacement Collision risk Barrier effects

(1) SNH (2019) Response to Full Planning Permission for Installation of a 35MW Solar SV Park and Associate Infrastructure APP/2019/0296 https://upa.aberdeenshire.gov.uk/onlineapplications/files/13A2BA4B1D92127BDBD53756C618BB65/pdf/APP2019_0296-SCOTTISH_NATURAL_HERITAGE_RESPONSE-8596745.pdf

7 APPROPRIATE ASSESSMENT

7.1 Introduction

7.1.1 The findings of the Screening Assessment reporting in Section 6 (and summarised in Table 6.3) showed that an Appropriate Assessment (AA) was required, as likely significant effects cannot be ruled out for four qualifying interest features of the Loch of Strathbeg SPA/Ramsar site. The likely significant effects result from:

- the potential for displacement from foraging areas;
- the potential for barrier effects if the temporary OHL is present outside the breeding bird season; and
- the potential for collision impacts to result from the temporary OHL if it is present outside the breeding bird season.

7.1.2 This section assesses the impacts of the Project on the relevant qualifying interest features of the Loch of Strathbeg SPA/Ramsar site, in relation to the conservation objectives for the site. Its aim is to identify whether no adverse effect on the integrity of the European sites can be concluded as described in Section 3 or whether adverse effects on the integrity of the Loch of Strathbeg SPA/Ramsar site will result.

7.2 Conservation Objectives

7.2.1 The conservation objectives for the Loch of Strathbeg are:

- to avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and
- to ensure for the qualifying species that the following are maintained in the long term:
    - population of the species as a viable component of the site;
    - distribution of the species within site;
    - distribution and extent of habitats supporting the species;
    - structure, function and supporting processes of habitats supporting the species; and
    - no significant disturbance of the species.

7.3 Assessment of Effects

7.3.1 **Indirect loss of bird habitats due to the displacement of birds (disturbance and/or displacement) by construction works and operation**

7.3.2 Construction of the substation and temporary OHL could result in temporary disturbance and displacement of geese and swans from the SPA during the construction period. The operational substation will result in a permanent loss of approximately 0.65 ha of potential foraging habitat (improved and poor semi-improved grassland, arable land and marshy grassland). During construction, geese are likely to displaced further by construction activity. Geese and swans have relatively large foraging ranges from overnight roost sites, with foraging ranges of up to 20km from the Loch of Strathbeg reported[1] [2]. The majority of habitat within 20 km of the SPA/Ramsar site is arable land which provides abundant suitable foraging habitat for geese and swans

(1) see Mitchell (2012). Mapping the distribution of feeding Pink-footed and Iceland Greylag Geese in Scotland. (distribution maps for pink footed geese foraging areas 20 km of the Loch of Strathbeg SPA (p56-7).

(2) https://www.nature.scot/professional-advice/land-and-sea-management/managing-wildlife/managing-geese/loch-strathbeg-local-goose-management-scheme (accessed 26.08.19).

from the Loch of Strathbeg. Even assuming only 50% of the terrestrial habitat within 20 km of the SPA is suitable foraging habitat, the area of habitat that will be permanently lost will be <0.01% (1). During the construction period, displacement will affect a slightly larger area as geese are likely to avoid an area around the construction activity. However the impact will be temporary, and will still affect less than 0.1% of conservative estimate of the foraging habitat available to birds from the Loch of Strathbeg SPA/Ramsar site.

7.3.3 During baseline surveys, geese were recorded foraging in fields under the existing OHL. Given the tolerance exhibited to existing OHLs, it is considered unlikely that geese will show any additional avoidance to the temporary OHL whilst it is in place.

7.3.4 In addition, there is an active goose management scheme in place for the Loch of Strathbeg SPA/Ramsar site, where geese are actively encouraged away from or 'scared' off fields into a designated undisturbed feeding refuge (2). The closest area currently eligible for the management scheme is approximately 500 m north of the proposed new substation location. The level of disturbance caused by the Project is likely to be less than that undertaken as part of the management scheme, and the undisturbed feeding refuge will provide suitable foraging areas within the core foraging range from the SPA for any displaced birds. No impacts on foraging teal or goldeneye are predicted as these predominantly forage in aquatic habitats.

7.3.5 As a result, the Project is not predicted to result in an adverse effect on the integrity of the Loch of Strathbeg SPA/Ramsar site.

7.3.6 **Accidental mortality due to collision with project infrastructure**

7.3.7 Baseline vantage point (VP) surveys of the existing OHL (including the proposed location of the temporary OHL) were undertaken over winter 2018/19 (see EA Appendix B.3). The results are presented in Table 7.1 below.

Table 7.1 – Winter Geese and Waterfowl Flight Data from 2018/19 VP Surveys

Species	Number of flights in the 2km viewshed	Number of birds in flights in the 2km viewshed	Number of flights at collision risk height crossing proposed temporary OHL	Number of birds within flights at collision risk height crossing proposed temporary OHL	Loch of Strathbeg SPA population (3)	% Proportion of Loch of Strathbeg SPA population of flights crossing OHL
Pink footed goose (*Anser brachyrynchus*)	168	3,357	10 (4)	319	27,500	1.16
Whooper swan (*Cygnus cygnus*)	13	89	0	n/a	245	0
Greylag goose (*Anser anser*)	8	236	0	n/a	5,565	0
Barnacle goose (*Branta leucopsis*),	3	87	0	n/a	520	0
Teal (*Anas crecca*);	0	0	0	n/a	1,270	0

(1) Assuming a 20 km foraging range extending for 33º around the Loch of Strathbeg SPA (to account for the proportion of theoretical circle around the SPA that is terrestrial rather than marine), and then assuming that 50% of that area is suitable foraging habitat.

(2) https://www.nature.scot/professional-advice/land-and-sea-management/managing-wildlife/managing-geese/loch-strathbeg-local-goose-management-scheme (accessed 26.08.19).

(3) SNH i-site Loch of Strathbeg SPA citation https://sitelink.nature.scot/site/8537

(4) Three flights with flocks of less than 10 birds, and seven flights with between 20 and 80 birds)

Species	Number of flights in the 2km viewshed	Number of birds in flights in the 2km viewshed	Number of flights at collision risk height crossing proposed temporary OHL	Number of birds within flights at collision risk height crossing proposed temporary OHL	Loch of Strathbeg SPA population (3)	% Proportion of Loch of Strathbeg SPA population of flights crossing OHL
Goldeneye (*Bucephala clangula*)	0	0	0	n/a	150	0
Unidentified grey geese (1)	28	1,467	0	n/a	n/a	0

7.3.8 The VP surveys recorded a relatively small number of pink-footed geese flights (10) at collision risk height across the location of the proposed temporary OHL with no other target species observed in flight at this height band. Pink-footed geese are recognised as showing good avoidance of structures that present a collision risk. The latest guidance from SNH gives a wind farm avoidance rate for all geese species as 99.8% (2). During the baseline surveys, pink footed geese were recorded landing and taking off from below the existing OHL without any collisions. The temporary OHL line will closely follow the route of the existing OHL, such that the works will not introduce a new feature into an area without OHLs. The temporary OHL will be in place for a maximum of 6 months.

7.3.9 Given the relatively short length of the temporary OHL (approximately 600 m), the short duration that it will be in place, the relatively low level of flight activity recorded at collision height during baseline surveys (10 flights of pink-footed goose), and the high level of avoidance exhibited by geese (99.8% avoidance for windfarms), the level of collision mortality associated with the proposed works is predicted to be negligible. It will not result in a long term reduction in the population or distribution of any qualifying interest features of the SPA.

7.3.10 As a result, the Project is not predicted to result in an adverse effect on the integrity of the Loch of Strathbeg SPA/Ramsar site.

7.3.11 **Barrier effects as a result of the presence of infrastructure**

7.3.12 Barrier effects have been reported when new infrastructure interrupts traditional migration routes or foraging corridors for birds, mainly in relation to wind farms (3).

7.3.13 During baseline surveys, both whooper swan and pink-footed geese were recorded flying across the existing OHL into St Fergus substation at or above collision risk height, indicating that the current OHL infrastructure in the area does not act as a barrier to bird movements. The proposed temporary OHL will be approximately 10 m shorter than and run parallel to the existing OHL for 600 m. Any localised avoidance by birds to fly above or around the line will not entail a large energetic requirement, given the small extent of the temporary OHL. Given the recorded flights across the existing OHL, and the small extent of the proposed temporary OHL the

(1) Flying too high to identify, well above collision risk height

(2) SNH (2017) Avoidance Rates for the onshore SNH Wind Farm Collision Risk Model. SNH https://www.nature.scot/sites/default/files/2018-09/Wind%20farm%20impacts%20on%20birds%20-%20Avoidance%20rates%20guidance%20-%20table.pdf

(3) SNH (2017) Recommended bird survey methods to inform impact assessment of onshore wind farms. https://www.nature.scot/sites/default/files/2018-06/Guidance%20Note%20-%20Recommended%20bird%20survey%20methods%20to%20inform%20impact%20assessment%20of%20onshor

proposed development is not predicted to result in barrier effects that would affect the population or distribution of SPA/Ramsar site qualifying interest features.

7.3.14 As a result, the Project is not predicted to result in an adverse effect on the integrity of the Loch of Strathbeg SPA/Ramsar site.

7.4 Proposed Mitigation Measures

7.4.1 Proposed mitigation measures will follow the mitigation hierarchy where possible, with measures to avoid impacts considered before measures to reduce, then reinstate and finally offset impacts.

7.4.2 If practicable and in order to avoid impacts on SPA qualifying interest features, SHE Transmission will undertake the proposed works outside of the passage migration and winter season, when SPA birds are not present in Scotland. Works will be undertaken according to the SHE Transmission Bird Species Protection Plan (SPP).

7.4.3 If, due to the requirement to replace the substation as soon as is feasible to maintain energy supply, works cannot be undertaken out with the passage migration and winter season, given the area of additional line is small and temporary, and within an area where geese and swans are habituated to the existing OHL no mitigation, such as line-marking, is considered necessary.

7.4.4 A summary of the European sites, features for which LSE has been identified, and the assessment of effects on the integrity of Loch of Strathbeg SPA/Ramsar site is presented below in Table 7.2.

Table 7.2 – Summary of Appropriate Assessment Stage

SITE	FEATURE	ADVERSE EFFECT INTEGRITY?
Loch of Strathbeg SPA/Ramsar Site	Barnacle Goose	No
	Whooper Swan	No
	Greylag Goose	No
	Pink-footed Goose	No
	Wintering Waterfowl Assemblage	No