

**Proposed Development at Dundee
Dock: West Extension**

Vantage Point Results Report

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Project	Proposed Development of Dundee Dock – West Extension: Vantage Point Survey Report
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1 Introduction

Background to commission

- 1.1 BSG Ecology was commissioned in April 2023 by Fairhurst on behalf of Port of Dundee (the client) to undertake vantage point surveys for birds to provide baseline data to support a Habitats Regulations Appraisal (HRA) for the proposed works at the Port of Dundee (the Site).
- 1.2 Port of Dundee proposes to undertake engineering works for an offshore wind assembly, storage and decommissioning area at the Port of Dundee. The central Ordnance Survey grid reference for the application site is NO42873078. A location plan is provided in Appendix 4.
- 1.3 As a statutory harbour authority, the Port of Dundee benefits from permitted development rights under Part 13 of The Town and Country Planning (General Permitted Development) (Scotland) Order 1992 to undertake the proposed engineering works.
- 1.4 As the proposed development falls under Schedule 2 of the Environmental Impact Assessment (Scotland) Regulations 2017, Paragraph 68 of Planning Circular 1/2017 confirms that permitted development rights only apply if the planning authority has confirmed that an EIA is not required.

Purpose of report

- 1.5 This report provides the methodology and results of the vantage point surveys that were conducted at the Site over a 12 month period.

Application site description

- 1.6 The proposed development is located entirely within the Port of Dundee and only involves land-based works: no works are proposed to the quayside or shore and no works are proposed to the marine (estuarine) environment adjacent to the application Site.
- 1.7 The application Site extends to approximately 3.7 ha and is shown in red on Drawing Number 153333/8004 (Appendix 4). To the north of the application site is Stannergate Road, to the east is an existing offshore wind assembly, storage, and decommissioning area, to the south is the River Tay estuary, and to the west is further land owned and operated by the Port of Dundee comprising light industrial buildings and dockside ware houses.

The proposed works

- 1.8 The proposed development consists of the following main elements:
- Demolition of all existing buildings and structures;
 - Creation of suitable areas of land for the offshore renewable energy component storage, assembly and decommissioning. The works will improve the ground bearing strength, provide suitable drainage and lighting, and will result in a predominantly unsealed gravel surface across the Site.
- 1.9 The construction phase of the development is expected to last 6-9 months.
- 1.10 During construction, new filter drainage will either be connected to the existing filter drainage to the east (and this will discharge to the estuary via the existing private outfall) or a new private outfall will be installed from the proposed development Site. The drainage will pass through a full retention separator tank which will detect any contaminants prior to disposal via the outfall. If contaminants are detected, an alarm will be triggered and the tank will retain the surface water, which will then be tankered off-site by road to an appropriately licensed facility. This means that only clean surface water will be discharged to the estuary.

Potential impacts

- 1.11 Fairhurst, acting on behalf of Port of Dundee, has concluded that the main potential impacts of the proposed development are limited to (Fairhurst, 2023):
- Potential for risk of contaminants within surface water during construction and operation whilst noting that the Port are a responsible operator and that the majority of the existing site benefits from an Environmental Permit issued by Scottish Environmental Protection Agency (SEPA) for the receipt, storage, and transfer of radioactive waste / naturally occurring radioactive materials NORM; and
 - Potential for temporary increase in noise levels during construction, whilst acknowledging that the Site is currently an operational port with no controls over noise levels.
- 1.12 Fairhurst also concluded that the above impacts generally fall under the following main topics:
- Noise; and
 - Flood Risk, Drainage and Water Environment.
- 1.13 Potential impact mechanisms are considered further in the HRA (BSG Ecology, 2023).

Relevant legislation and policy

Existing permits

- 1.14 A significant proportion of the proposed development Site already benefits from a permit for the receipt, storage and transfer of radioactive waste / NORM which is produced as a result of maintenance and decommissioning of equipment used in oil and gas drilling apparatus. The only part of the Site which is not currently covered by this licence is the building which is proposed for demolition.
- 1.15 Decommissioning activities within the proposed development Site will be carried out under the relevant Pollution Prevention Control or Waste Management Licence granted by the SEPA.

Designated sites

- 1.16 There are a total of 19 statutory designated sites within 10 km of the Site. Five of these are internationally recognised (Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site) and fourteen are nationally recognised (Site of Special Scientific Interest (SSSI) and one National Nature Reserve (NNR)). Table 1 below shows the distance of each of these sites from the development Site. Appendix 3 contains further information on internationally recognised sites.

Table 1: Statutory designated sites within 10 km of the Site

Site name	Distance from the Site
Firth of Tay and Eden Estuary SAC	Adjacent
Outer Firth of Forth and St Andrews Bay Complex SPA *	440 m east
Tayport – Tentsmuir Coast SSSI *	2700 m south east
Firth of Tay and Eden Estuary SPA *	3600 m east to the nearest point of the Ramsar site
Firth of Tay and Eden Estuary Ramsar *	3600 m east to the nearest point of the Ramsar site
Monifieth Bay SSSI *	3650 m east

Inner Tay Estuary SSSI *	4150 m west
Balmerino – Wormit Shore SSSI	4650 m south west
Morton Lochs SSSI *	4900 m south east
Tentsmuir NNR *	5000 m south east
Pickletillem Marsh SSSI	5950 m south
Gagie Marsh SSSI	6450 m north
Barry Links SSSI	7300 m east
St Michael's Wood Marshes SSSI	7500 m south
Barry Links SPA	8300 m east
Earlshall Muir SSSI *	8450 m south east
Whitehouse Den SSSI	8900 m north
Flisk Wood SSSI	9500 m south west
Eden Estuary SSSI *	10000 m south east

*Designated sites which are relevant to the development due to their bird interest are denoted with a * and information on these designations is included in Appendix 3.*

Personnel

- 1.17 Surveys were completed by Adam Murphy, Ecologist at BSG Ecology. Adam has worked in the ecological sector for more than four years and has carried out multiple ornithological assessments. Adam was assisted by Principal Ecologist/Ornithologist Ian Heard from BSG Ecology and Senior Ecologist Josh Havlin from BSG Ecology. Ian has more than 12 years of experience undertaking ornithological surveys across England and Scotland, with particular technical expertise of vantage point surveys having been involved with wind farm developments since 2011. Ian is also familiar with marine and littoral species having undertaken Wetland Birds Surveys (WeBS) for a number of coastal sites in England. Josh has over six years of experience working as a professional ecological consultant specialising in bird surveys.
- 1.18 This summary report was prepared by Adam Murphy and reviewed by Ian Heard. Adam has prepared ornithological reports ranging from summary reports to large scale ecological impact assessments. Ian has more than a decade of experience in ornithological reporting and has reviewed reports pertaining to bird surveys in both England and Scotland.

2 Methods

Field Survey

- 2.1 Based on the size of the Site likely predicted impacts, nature of the environment and likely receptor species a single Vantage Point (VP) location (see Appendix 1 Figure 1), was considered suitable to survey the impact risk zone.
- 2.2 The impact risk zone was determined based on the existing operations at the Port of Dundee and the likely potential impacts of the proposed works, notably noise and drainage, and the likely receptor species primarily marine birds inhabiting the Tay estuary including species listed on nationally and internationally designated sites. Relevant internationally designated sites are listed below:
 - Firth of Tay and Eden Estuary SAC (the southern boundary of the proposed development is adjacent to the SAC);
 - Outer Firth of Forth and St Andrews Bay Complex proposed SPA (440 m to the east);
 - Firth of Tay and Eden Estuary SPA (3.6 km to the east on the northern shore of the estuary and 2.6 km to the south-east on the southern shore of the estuary);
 - Firth of Tay and Eden Estuary Ramsar site (3.6 km to the east on the northern shore of the estuary and 2.6 km to the south-east on the southern shore of the estuary); and
 - Barry Links SAC (8.2 km to the east).
- 2.3 Consideration also needs to be given to areas that are not subject to an international designation but which may be 'functionally linked' to an international site if it serves a function for the interest features of that site. Functional linkage has been defined as follows (Chapman & Tyldesley, 2016):
- 2.4 *'the term 'functional linkage' refers to the role or 'function' that land or sea beyond the boundary of an international site might fulfil in terms of ecologically supporting the populations for which the site was designated or classified. Such land is therefore 'linked' to the international site in question because it provides an important role in maintaining or restoring the population of qualifying species at favourable conservation status.'*
- 2.5 Based on the current baseline of noise and drainage provided by the Port of Dundee (Ethos Environmental, 2012), the likely impacts for the proposed works and the likely receptor species a 500 m survey area was considered to be suitable.
- 2.6 The survey area consisted of a 180 degree view shed facing south over the Tay estuary. Twelve months of low tide surveys were conducted from April 2023 to March 2024, with the intention of collecting data on bird species dependant upon to the intertidal zone and therefore mostly likely to be impacted by the proposed works. Additional high tide survey effort was undertaken between May and August 2023 to capture potential foraging activity of little tern *Sternula albifrons* which are listed as a breeding species on the Firth of Tay and Eden SPA and Ramsar site citations.
- 2.7 The VP methodology involved four hour watches, two hours either side of low or high tide with respect to the survey being undertaken. Surveys were completed in suitable weather conditions including good visibility i.e. not impaired by precipitation or high winds.
- 2.8 During the VP the surveyor constantly scanned the 500 m viewing arc for target species which were considered primarily to be those species listed as qualifying criteria for nearby statutory sites, as well as all other waterfowl, waders, raptors and seabird species. Non-target species such as passerines and corvids were recorded incidentally where appropriate. Appendix 2, Table A2.3 contains a full list of all target species.
- 2.9 Additionally, surveyors recorded any sightings of marine mammal activity during surveys.
- 2.10 Survey details and timings are presented in Table 2.

Table 2: *Survey details*

Date of survey	Surveyor	Time start	Time finish	High/Low Tide time	Temperature (°C)	Wind (Beaufort)	Cloud (OKTA)	Precipitation
18/04/2023	Ian Heard	11:45	16:40	14:41 (Low)	7	2	8	Light intermittent
18/05/2023	Josh Havlin	11:30	16:54	14:54 (High)	17	2	3	No rain
19/05/2023	Josh Havlin	07:22	11:22	09:22 (Low)	12	1	0	No rain
20/06/2023	Adam Murphy	14:10	18:10	17:10 (High)	18	2	8	No rain
21/06/2023	Adam Murphy	09:31	13:31	11:31 (Low)	17	3	3	No rain
12/07/2023	Adam Murphy	15:16	19:16	17:16 (Low)	17	1	5	No rain
13/07/2023	Adam Murphy	08:56	12:56	10:56 (High)	13	1	5	No rain
09/08/2023	Adam Murphy	13:26	17:26	15:26 (Low)	17	1	7	No rain
10/08/2023	Adam Murphy	08:29	12:29	10:29 (High)	17	0	8	No rain
14/09/2023	Adam Murphy	07:33	11:33	09:33 (Low)	12	1	0	No rain
30/10/2023	Adam Murphy	07:15	11:15	09:15 (Low)	7	1	2	No rain
17/11/2023	Adam Murphy	08:51	12:51	10:51 (Low)	5	0	8	No rain
15/12/2023	Adam Murphy	08:02	12:02	10:02 (Low)	6	1	2	No rain
16/01/2024	Adam Murphy	10:06	14:06	12:06 (Low)	0	1	7	No rain
27/02/2024	Adam Murphy	08:25	12:25	10:25 (Low)	6	3	7	No rain
14/03/2024	Adam Murphy	09:24	13:24	11:24 (Low)	5	1	8	Light intermittent

Limitations

- 2.11 There were not considered to be any significant limitations to the surveys.
- 2.12 Whilst not a limitation it should be noted that the methodology measures activity levels, which may lead to ‘double counting’ of birds over the course of the 4 hour surveys. Whilst peak counts can provide an estimate of the number of birds present, the number of birds observed over the survey does not provide an estimate of the total number of birds present.

3 Results

3.1 Over the 12 month survey period, a total of 23 species were recorded including 1,208 individual birds. Of these 1,127 registrations of 13 species (table A2.1) were listed as designation criteria species for the internationally designated sites within 10 km of the Site.

3.2 A full list of birds recorded in surveys can be seen in Appendix 2 Tables A2.1 and A2.2.

Internationally designated site citation species

3.3 Herring gull *Larus argentatus* were the most prevalent of the designation criteria species, recorded in every survey. The vast majority of observations of the species were in flight, flying east and west directly in front of the vantage point. Herring gull rarely made use of the rocky shore habitat found within the red line for the development.

3.4 Oystercatcher *Haemotopus ostralegus* were present in all but one of the surveys. The surveys with the highest levels of activity were in April and June (high tide). The observations were generally limited to two birds at any one time and flocks were never in excess of three birds. Oystercatcher on occasion made use of the rocky foreshore for resting and foraging.

3.5 Black-headed gull *Chroicocephalus ridibundus* were present throughout the year except the spring and early summer when they were breeding. Birds were generally traversing the coastline and were not making use of the rocky foreshore habitat.

3.6 Common gull *Larus canus* were present in April and May in low numbers, with the largest observation being of six birds. All observations of the species were in flight and not using the rocky foreshore habitats.

3.7 Cormorant *Phalacrocorax carbo* were generally present throughout the year in low numbers. Most birds were recorded flying up and down the estuary or foraging >50 m from the vantage point. On some occasions individual birds were recorded foraging <50 m from the vantage point though these were infrequent.

3.8 Goosander *Mergus merganser* were recorded in December, January and April. In December and January they were within mixed flocks in excess of 10 individuals at rest on the estuary.

3.9 A flock of 57 greylag geese *Anas anser* was recorded in September, flying high over the vantage point.

3.10 A flock of 238 pink-footed geese *Anser brachyrhynchus* was recorded in December, flying high over the vantage point.

3.11 Eider *Somateria mollissima* were recorded in, January, March and May in low numbers. Birds were resting on the water at distances >50 m from the vantage point.

3.12 Guillemot *Uria aalge* were recorded in three surveys in the late summer, these observations included juvenile birds. Guillemot were resting on the water <50 m from the vantage point on several occasions during the surveys.

3.13 Two red-throated divers *Gavia stellata* were recorded in the January survey, both of which were foraging for a short time within 50 m of the vantage point before moving further out into the estuary.

3.14 A single observation of a lone shag *Gulosus aristotelis* was recorded in the October survey, foraging in close proximity to the vantage point.

3.15 Red-breasted merganser *Mergus serrator* were present in the January survey, as part of a mixed flock of 55 with goosander. An exact number of the red-breasted merganser could not be established due to distance, compact nature of the flock and difficulty in differentiating with goosander, though a large proportion of the flock were red-breasted merganser. The birds were at rest out in the estuary

for an extended period during the survey, never coming closer than 100 m distant from the vantage point.

Target species not listed on internationally important sites designations

- 3.16 Common sandpiper *Actitis hypoleucos* were recorded irregularly through the year, with single observations in July and August. In the May survey a pair was observed briefly on two occasions.
- 3.17 Lesser black-backed gull *Larus fuscus* were present throughout the breeding season, generally in low numbers and flying up and down the estuary. The species was not recorded between September and March.
- 3.18 A single whooper swan *Cygnus cygnus* was observed in the January survey flying up the estuary.
- 3.19 Grey heron *Ardea cinerea* were recorded on a number of occasions throughout the year, often coming to rest on the rocky foreshore by the vantage point.
- 3.20 A flock of gadwall *Anas strepera* was recorded sitting on the estuary during the December survey.
- 3.21 A single turnstone *Arenaria interpres* was recorded on the rocky foreshore during the December survey.
- 3.22 Sandwich tern *Sterna sandvicensis* were recorded foraging and travelling up and down the estuary in the August high tide survey. The peak count was for three birds, which were never within 100 m of the vantage point.
- 3.23 A single peregrine *Falco peregrinus* was recorded on three of the surveys in the breeding season. Each time the individual was hunting feral pigeons in the port area.
- 3.24 Kestrel *Falco tinnunculus* were recorded in two of the surveys during the breeding season. Both these observations were in the main port area and one occasion was a territorial interaction with a peregrine.
- 3.25 A pair of great black-backed gull *Larus marinus* were recorded in the May surveys moving out into the estuary from the port area.

Mammal observations

- 3.26 Seals were recorded on three of the surveys. Two individuals were recorded in both high and low tide surveys in May. A young harbour seal *Phoca vitulina* was observed during the November survey swimming up the estuary in close proximity to the vantage point.
- 3.27 A pair of otter *Lutra lutra* were recorded during the November survey hunting close to the vantage point.
- 3.28 No other mammals were recorded during the surveys.

4 References

BSG Ecology (2023). Proposed Development of Dundee Dock: West Extension Habitats Regulations Appraisal.

Chapman, C. & Tyldesley, D. (2016). *Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects - a review of authoritative decisions*. Natural England Commissioned Reports, Number 207.

Ethos Environmental Ltd (2012). Port of Dundee Environmental Noise Nuisance Assessment. Technical Report p5444.

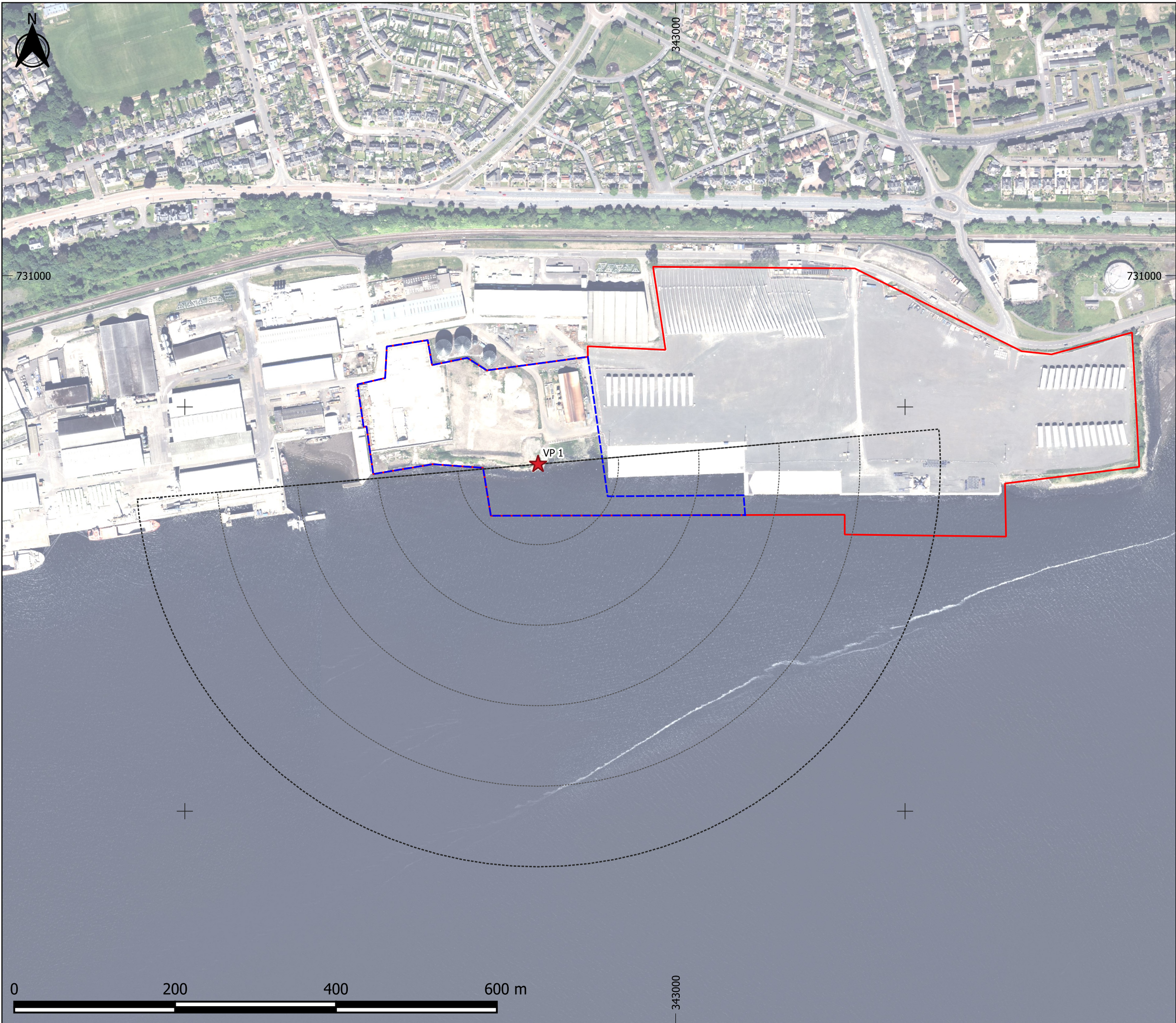
Fairhurst (2023). THE TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017. SCREENING REQUEST – PROPOSED ENGINEERING WORKS FOR AN OFFSHORE WIND ASSEMBLY, STORAGE AND DECOMMISSIONING AREA AT PORT OF DUNDEE. Ref: DW/153333/001, Date: 02 October 2023.

Ruddock, M. & Whitfield, D.P. (2007). A Review of Disturbance Distances in Selected Bird Species. A report from Natural Research (Projects) Ltd to Scottish Natural Heritage.

Appendix 1: Figures

Figure 1 : Vantage point survey map

(overleaf)



Legend

★

Vantage Point

⋯

100m increments

⋯

500m arc

▭

Survey boundary

▭

Site boundary

Geomarkers

Top Left	Top Right
342390, 730837	343285, 730837
Bottom Left	Bottom Right
342390, 730335	343285, 730335

Survey Details

Date (dd/mm/yyyy):

Start Time (hh:mm):

Finish Time (hh:mm):

Surveyor(s):

Vantage Point Details

VP Number	Bearing	Grid Reference
1	175	NO4282930766



OFFICE: NEWCASTLE
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JOB REF: P22-750

PROJECT TITLE
PORT OF DUNDEE

DRAWING TITLE
Figure X: Vantage point survey

DATE: 11/04/2023

CHECKED: IH

SCALE: 1:4,500

DRAWN: MSG

APPROVED: IH

VERSION:1.0

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Projection: OSGB 1936/British National Grid - EPSG 27700

Appendix 2: Target species and full list of birds observed during surveys

Table A2.1: Species cited on sites of international importance

Species		Number of birds recorded per survey month															
Common Name	Scientific Name	Apr	May	May (High tide)	Jun	Jun (High tide)	Jul	Jul (High tide)	Aug	Aug (High tide)	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Black-headed gull	<i>Chroicocephalus ridibundus</i>						5	3	3	8		5	21	11	10		3
Common gull	<i>Larus canus</i>	15		1													
Cormorant	<i>Phalacrocorax carbo</i>		2	1					1		15	1	7	1	3	1	
Eider	<i>Somateria mollissima</i>			2											4		1
Goosander	<i>Mergus merganser</i>	1												30	43		
Greylag goose	<i>Anas anser</i>										57						
Guillemot	<i>Uria aalge</i>								6	1	3						
Herring gull	<i>Larus argentatus</i>	53	7	18	66	64	31	19	31	32	16	18	12	28	39	39	22
Oystercatcher	<i>Haematopus ostralegus</i>	11	5	8	8	11	1	8	3	3		2	1	2	2	3	3
Pink-footed goose	<i>Anser brachyrhynchus</i>													238			
Red throated diver	<i>Gavia stellata</i>														2		
Red-breasted merganser	<i>Mergus serrator</i>														55		
Shag	<i>Gulosus aristotelis</i>											1					

Table A2.2: Species not listed on internationally designated sites

Species		Number of birds recorded per survey month															
Common Name	Scientific Name	Apr	May	May (High tide)	Jun	Jun (High tide)	Jul	Jul (High tide)	Aug	Aug (High tide)	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Common sandpiper	<i>Actitis hypoleucos</i>		4					1		1							
Gadwall	<i>Anas strepera</i>													17			
Great black-backed gull	<i>Larus marinus</i>		2	2													
Grey heron	<i>Ardea cinerea</i>		1						3	1	3	1		2	1	1	
Kestrel	<i>Falco tinnunculus</i>					1	1										
Lesser black-backed gull	<i>Larus fuscus</i>	10	1	4	2	2	1		2	3							
Peregrine	<i>Falco peregrinus</i>		1			1	1										
Sandwich tern	<i>Sterna sandvicensis</i>									9							
Turnstone	<i>Arenaria interpres</i>													1			
Whooper swan	<i>Cygnus cygnus</i>														1		

Table A2.3: List of target species for surveys *any other incidental waders and waterfowl were recorded

Common name	Scientific name
Arctic tern	<i>Sterna paradisaea</i>
Atlantic puffin	<i>Fratercula arctica</i>
Bar-tailed godwit	<i>Limosa lapponica</i>
Bearded tit	<i>Panurus biarmicus</i>
Black-headed gull	<i>Chroicocephalus ridibundus</i>
Black-legged kittiwake	<i>Rissa tridactyla</i>
Black-tailed godwit	<i>Limosa limosa</i>
Common goldeneye	<i>Bucephala clangula</i>
Common gull	<i>Larus canus</i>
Common sandpiper	<i>Actitis hypoleucos</i>
Common scoter	<i>Melanitta nigra</i>
Common tern	<i>Sterna hirundo</i>
Cormorant	<i>Phalacrocorax carbo</i>
Dunlin	<i>Calidris alpina</i>
Eider	<i>Somateria mollissima</i>
Gadwall	<i>Anas strepera</i>
Gannet	<i>Morus bassanus</i>
Goosander	<i>Mergus merganser</i>
Great black-backed gull	<i>Larus marinus</i>
Grey heron	<i>Ardea cinerea</i>
Grey plover	<i>Pluvialis squatarola</i>
Greylag goose	<i>Anas anser</i>
Guillemot	<i>Uria aalge</i>
Herring gull	<i>Larus argentatus</i>
Kestrel	<i>Falco tinnunculus</i>
Lapwing	<i>Vanellus vanellus</i>
Lesser black-backed gull	<i>Larus fuscus</i>

Little gull	<i>Hydrocoloeus minutus</i>
Little tern	<i>Sternula albifrons</i>
Long tailed duck	<i>Clangula hyemalis</i>
Manx shearwater	<i>Puffinus puffinus</i>
Marsh harrier	<i>Circus aeruginosus</i>
Oystercatcher	<i>Haemotopus ostralegus</i>
Peregrine	<i>Falco peregrinus</i>
Pink-footed goose	<i>Anser brachyrhynchus</i>
Razorbill	<i>Alca torda</i>
Red-throated diver	<i>Gavia stellata</i>
Red-breasted merganser	<i>Mergus serrator</i>
Redshank	<i>Tringa totanus</i>
Reed bunting	<i>Emberiza schoeniclus</i>
Ringed plover	<i>Charadrius hiaticula</i>
Sanderling	<i>Calidris alba</i>
Sandwich tern	<i>Sterna sandvicensis</i>
Scaup	<i>Aythya marila</i>
Sedge warbler	<i>Acrocephalus schoenobaenus</i>
Shag	<i>Gulosus aristotelis</i>
Shelduck	<i>Tadorna tadorna</i>
Slavonian grebe	<i>Podiceps auritu</i>
Snipe	<i>Gallinago gallinago</i>
Stonechat	<i>Saxicola torquata</i>
Teal	<i>Anas crecca</i>
Turnstone	<i>Arenaria interpres</i>
Velvet scoter	<i>Melanitta fusca</i>
Water rail	<i>Rallus aquaticus</i>
Whooper swan	<i>Cygnus cygnus</i>

Appendix 3: Information on relevant designated sites

Site name: Firth of Tay and Eden Estuary SAC
Site code: UK0030311
Year designated: 2005
Area: 15441.63 ha
Qualifying interest features: Annex I habitats that are a primary reason for selection of this site: • Estuaries Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: • Sandbanks which are slightly covered by sea water all the time • Mudflats and sandflats not covered by seawater at low tide Annex II species that are a primary reason for selection of this site: • Harbour seal <i>Phoca vitulina</i>
Conservation objectives: To avoid deterioration of the qualifying habitats thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and To ensure for the qualifying habitats that the following are maintained in the long term: • Extent of the habitat on site; • Distribution of the habitat within site; • Structure and function of the habitat; • Processes supporting the habitat; • Distribution of typical species of the habitat; • Viability of typical species as components of the habitat; • No significant disturbance of typical species of the habitat.
Distance: The SAC is adjacent to the application site.
Sources of information: Site citation – https://sitelink.nature.scot/site/8257 JNCC Natura 2000 Data Form – http://archive.jncc.gov.uk/ProtectedSites/SACselection/n2kforms/UK0030311.pdf Conservation Objectives – https://sitelink.nature.scot/site/8257 Supplementary advice on condition of features – https://www.environment.gov.scot/data/data-analysis/protected-nature-sites/?pagenumber=1&resetmap=true&siteid=8257 Site Improvement Plan – n/a

Site name: Firth of Tay and Eden Estuary SPA
Site code: UK9004121
Year listed: 2005
Area: 6,947.62 ha
Qualifying interest features: The Firth of Tay and Eden Estuary SPA qualifies under Article 4.1 by regularly supporting populations of European importance of the Annex I species: - Marsh harrier <i>Circus aeruginosus</i>; little tern <i>Sternula albifrons</i> and bar-tailed godwit <i>Limosa lapponica</i>. The Firth of Tay and Eden Estuary SPA further qualifies under Article 4.2 by regularly supporting populations of European importance of the migratory species: - redshank <i>Tringa totanus</i>; greylag goose <i>Anser anser</i> and pink-footed goose <i>Anser brachyrhynchus</i>. The Firth of Tay and Eden Estuary SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual waterfowl. During the period 1990/91 to 1994/95 a winter peak mean of 48,000 individual waterfowl was recorded, comprising 28,000 wildfowl and 20,000 waders, including nationally important populations of the following species: velvet scoter <i>Melanitta fusca</i>. Qualifying species: bar-tailed godwit <i>Limosa lapponica</i>; black-tailed godwit <i>Limosa limosa islandica</i>; common scoter <i>Melanitta nigra</i>; cormorant <i>Phalacrocorax carbo</i>; dunlin <i>Calidris alpina alpina</i>; eider <i>Somateria mollissima</i>; goldeneye <i>Bucephala clangula</i>; goosander <i>Mergus merganser</i>; grey plover <i>Pluvialis squatarola</i>; greylag goose <i>Anser anser</i>; little tern <i>Sternula albifrons</i>; long-tailed duck <i>Clangula hyemalis</i>; marsh harrier <i>Circus aeruginosus</i>; oystercatcher <i>Haematopus ostralegus</i>; pink-footed goose <i>Anser brachyrhynchus</i>; red-breasted merganser <i>Mergus serrator</i>; redshank <i>Tringa tetanus</i>; sanderling <i>Calidris alba</i>; shelduck <i>Tadorna tadorna</i>; and velvet scoter <i>Melanitta fusca</i>.
Conservation objectives: 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; - No significant disturbance of the species.
Distance: The SPA is 3.6 km from the application site
Sources of information: Site Citation - https://sitelink.nature.scot/site/8501 JNCC Natura 2000 Data Form – http://archive.jncc.gov.uk/pdf/SPA/UK9004121.pdf Conservation Objectives – https://sitelink.nature.scot/site/8501 Supplementary advice on condition of features – https://www.environment.gov.scot/data/data-analysis/protected-nature-sites/?pagenumber=1&resetmap=true&siteid=8501 Site Improvement Plan – n/a

Site name: Firth of Tay and Eden Estuary Ramsar site
Site code: UK13018
Year designated: 2000
Area: 6918.42 ha
Qualifying interest features: Ramsar criterion 5: - Assemblages of international importance: Species with peak counts in winter: 27,028 waterfowl Ramsar criterion 6: - Species/populations occurring at levels of international importance. Qualifying Species/populations with peak counts in winter: pink-footed goose <i>Anser brachyrhynchus</i>; greylag goose <i>Anser anser anser</i>; bar-tailed godwit <i>Limosa lapponica lapponica</i>
Conservation objectives: No specific Ramsar conservation objectives are available. It is assumed that SAC and SPA conservation objectives will apply by default.
Distance: The Ramsar site is 3.6 km from the application site.
Sources of information: Site citation - https://sitelink.nature.scot/site/8425 Ramsar Site Information Sheet - https://sitelink.nature.scot/site/8425 Conservation Objectives – n/a Supplementary advice on condition of features – https://www.environment.gov.scot/data/data-analysis/protected-nature-sites/?pagenumber=1&resetmap=true&siteid=8425 Site Improvement Plan – n/a

Site name: Outer Firth of Forth and St Andrews Bay Complex SPA
Site code: UK9020316
Year designated: 2020
Area: 272068.1 ha
Qualifying interest features: • Non-breeding species: red-throated diver <i>Gavia stellata</i>, Slavonian grebe <i>Podiceps auratus</i>, little gull <i>Larus minutus</i>, common tern <i>Sterna hirundo</i> and Arctic tern <i>Sterna paradisaea</i>. • Migratory waterfowl species: common eider <i>Somateria mollissima</i>. • Migratory seabird species: European shag <i>Phalacrocorax aristotelis</i> and Northern gannet <i>Morus bassanus</i>. • Migratory assemblage: regularly supports in excess of 20,000 individual waterfowl including nationally important populations of long tailed duck <i>Clangula hyemalis</i>, common scoter <i>Melanitta nigra</i>, velvet scoter <i>Melanitta fusca</i>, common goldeneye <i>Bucephala clangula</i> and red-breasted merganser <i>Mergus serrator</i>. • Breeding assemblage: Atlantic puffin <i>Fratercula arctica</i>, black-legged kittiwake <i>Rissa tridactyla</i>, Manx shearwater <i>Puffinus puffinus</i>, common guillemot <i>Uria aalge</i> and herring gull <i>Larus argentatus</i>. • Non-breeding assemblage: black-headed gull <i>Chroicocephalus ridibundus</i>, common gull <i>Larus canus</i>, herring gull <i>Larus argentatus</i>, common guillemot <i>Uria aalge</i>, European shag <i>Phalacrocorax aristotelis</i>, black legged kittiwake <i>Rissa tridactyla</i> and razorbill <i>Alca torda</i>.
The draft conservation objectives for the Outer Firth of Forth and St Andrews Bay Complex proposed SPA are: 1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status. 2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature: 2a. The populations of qualifying features are viable components of the site. 2b. The distributions of the qualifying features throughout the site are maintained by avoiding significant disturbance of the species. 2c. The supporting habitats and processes relevant to the qualifying features and their prey/food resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.
Distance: The SPA is 440m to the east of the development site.
Sources of information: Site citation - https://sitelink.nature.scot/site/10478 JNCC Natura 2000 Data Form – https://jncc.gov.uk/our-work/outer-firth-of-forth-and-st-andrews-bay-complex-spa/ Conservation Objectives – https://sitelink.nature.scot/site/10478 Supplementary advice to support management – https://sitelink.nature.scot/site/10478 Site Improvement Plan – n/a

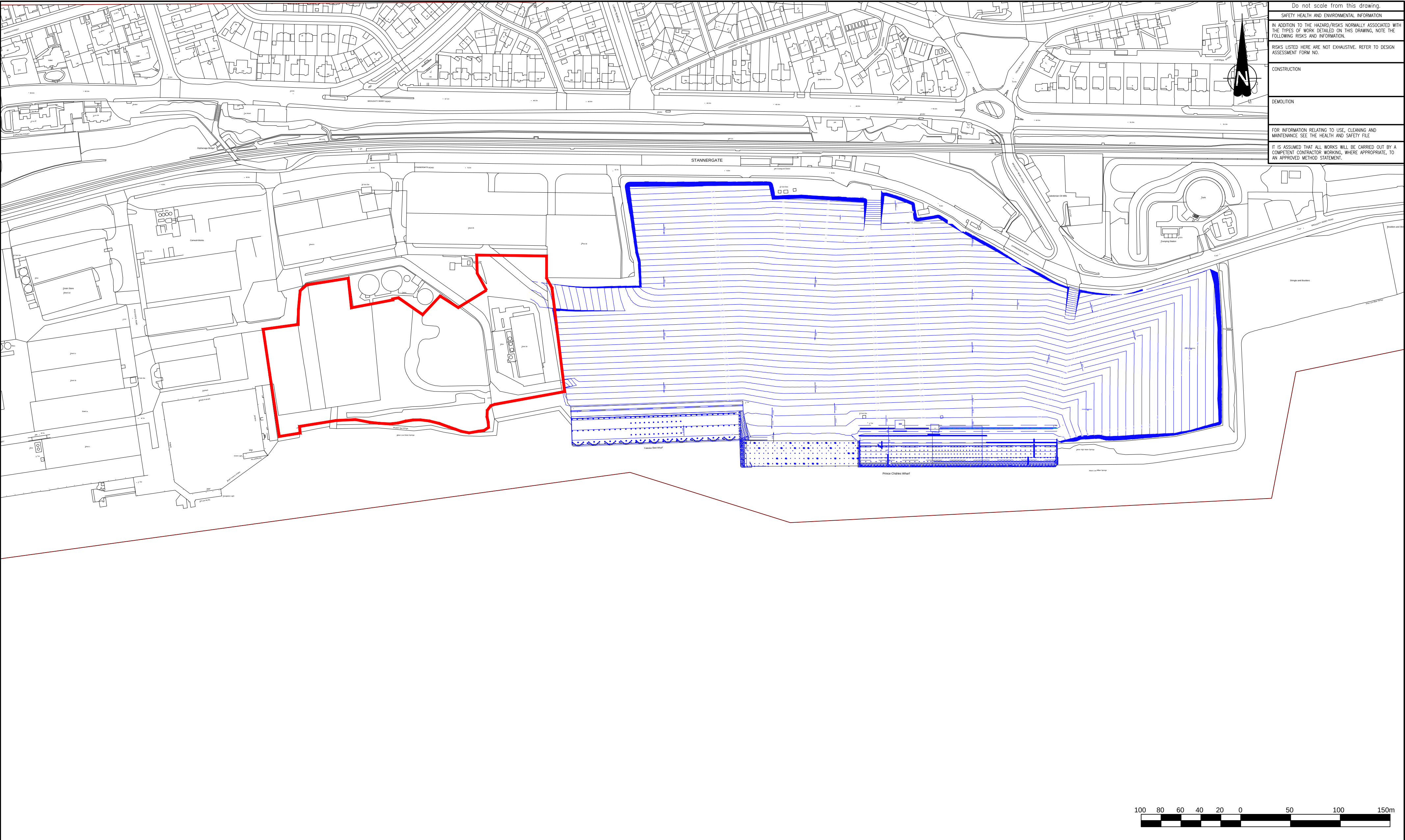
Site name: Barry Links SAC
Site code: UK0013044
Year designated: 2005
Area: 770.44 ha
Qualifying interest features: Annex I habitats that are a primary reason for selection of this site: • Embryonic shifting dunes • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") • Fixed coastal dunes with herbaceous vegetation ("grey dunes") *Priority feature • Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) *Priority feature • Humid dune slacks
Conservation objectives: To avoid deterioration of the qualifying habitat thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and To ensure for the qualifying habitat that the following are maintained in the long term: • Extent of the habitat on site; • Distribution of the habitat within site; • Structure and function of the habitat; • Processes supporting the habitat; • Distribution of typical species of the habitat; • Viability of typical species as components of the habitat; • No significant disturbance of typical species of the habitat.
Distance: The nearest part of the SAC is 8.2 km to the east of the application site.
Sources of information: Site citation - https://sitelink.nature.scot/site/8196 JNCC Natura 2000 Data Form - https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0013044.pdf Conservation Objectives - https://sitelink.nature.scot/site/8196 Scotland's Environment Condition Feature – https://www.environment.gov.scot/data/data-analysis/protected-nature-sites/?pagenumber=1&resetmap=true&siteid=8196

Table A3.1: Nationally designated sites designation criteria

Site Name	Reason for designation
Tayport – Tentsmuir SSSI	The intertidal flats regularly support a large assemblage of wintering waterfowl including nationally important passage or wintering populations of pink-footed goose, eider, long-tailed duck, common scoter, red-breasted merganser, goosander and bar-tailed godwit in numbers in excess of 1% of their British populations. The site is particularly important for wintering eider, with peak numbers exceeding 8,300, some 11.45% of the British wintering population.
Monifieth Bay SSSI	Sanderling utilise Monifieth Bay at low tide to feed on the exposed mud and sand. They roost elsewhere, mainly on Buddon Ness to the east and on Lucky Scalp on the south side of the estuary.
Inner Tay Estuary SSSI	The Tay Estuary is one of the largest estuaries in Scotland. It stretches for approximately 20km from the confluence of the Rivers Earn and Tay in the west to the Tay rail bridge in the east, and is 2.5km at its widest. The site consists primarily of intertidal sand and mud flats that extend seawards out to the main channel, the majority of which lie on the northern side of the estuary. The site is important for its wintering populations of roosting grey geese, its breeding birds, including several nationally important populations, its saltmarsh habitats, and habitats demonstrating the transition from saltmarsh to freshwater fens and dry land. Bird interest includes: Greylag goose, Pink-footed goose, Cormorant, Goldeneye, Bearded tit, Marsh harrier and Water rail.
Morton Lochs SSSI	The lochs are of regional significance as a refuge for passage and wintering wildfowl and in autumn the site regularly supports nationally important numbers of teal.
Tentsmuir NNR	The nature reserve is designated for its wader and wildfowl assemblage.
Earlshall Muir SSSI	A diverse breeding bird assemblage has been recorded including populations of shelduck, snipe, lapwing, ringed plover, sedge warbler, reed bunting and stonechat.
Eden Estuary SSSI	The Eden Estuary Site of Special Scientific Interest (SSSI) lies between St Andrews and the Firth of Tay and contains extensive intertidal flats of mud and sand with a rich invertebrate fauna. Nationally or internationally important populations of 13 species of waders and waterfowl occur in winter or on passage. A wide diversity of estuarine and coastal vegetation types are represented, including the largest extent of saltmarsh in Fife. Nationally important wintering populations of oystercatcher, black-tailed and bar-tailed godwits, grey plover and redshank use the estuary for feeding and roosting. Many other waders visit the site on passage in spring or autumn, including nationally important numbers of ringed plover. The estuary is of international importance for shelduck in winter and for red-breasted merganser in autumn. Nationally important wintering flocks of common and velvet scoter, scaup and eider occur, principally in St Andrews Bay and near the Eden Mouth. The estuary is also used by nationally important numbers of greylag geese as a nocturnal roost. The estuary is of regional significance for several other species of waterfowl and waders in winter, including pink-footed geese, wigeon, teal, dunlin and curlew. It is of importance in Fife as a feeding area for young shelduck. A small but diverse population of breeding birds occurs within the site.

Appendix 4: Application site Drawing Number 153333/8004

(overleaf)



Do not scale from this drawing.

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING RISKS AND INFORMATION.

RISKS LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DESIGN ASSESSMENT FORM NO.

CONSTRUCTION

DEMOLITION

FOR INFORMATION RELATING TO USE, CLEANING AND MAINTENANCE SEE THE HEALTH AND SAFETY FILE

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

Rev.	Date	Description	Drawn	Checked	Approved

Notes:

Key

 Site boundary

 Landside and Quayside works completed in 2022



Project Title:
PORT OF DUNDEE
WEST EXTENSION

Drawing Title:
SITE BOUNDARY

FAIRHURST
1 Arngrove Court, Barrack Road,
Newcastle-upon-Tyne, NE4 6DB
Tel: 0191 221 0505 Fax: 0844 381 4412

Scale at A2: 1:2500	Status: Planning	
Drawn: SDR	Checked: DW	Approved: DW
Date: 18/08/23	Date: 21/08/23	Date: 21/08/23
Drawing No.: 153333/8004		Revision: —