



Habitats Regulation Appraisal Report to Inform Appropriate Assessment

Capital Dredge and Maintenance Dredge at Quay 2

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Plate 1 - Energy Park Fife from South West



Plate 2 - Energy Park Fife from South East

Habitats Regulation Appraisal Report to Inform Appropriate Assessment Capital Dredge and Maintenance Dredge at Quay 2

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1 Introduction

1.1 Purpose and Format of the Report

- 1.1.1 Ironside Farrar has produced this Habitats Regulation Appraisal to support a Marine Licence application for capital and maintenance dredging and disposal at Quay 2, Energy Park Fife.
- 1.1.2 A site location plan, dredge pocket plan, disposal plan and plan showing the designations within and adjacent to the dredge pocket are provided at the end of this document:

Drawing 50711_001 Site Location Drawing 50711_002 Proposed Dredge Pocket Drawing 50711_003 Proposed Dredge Disposal Locations Drawing 50711_004 Environmental Designations

1.2 The Energy Park, Fife

- 1.2.1 The Energy Park site comprises 138 acres (56Ha) of land with direct access to the Firth of Forth. The site was previously used as an oil rig fabrication yard by Kvaenar and now supports a range of users.
- 1.2.2 There are two operational quaysides Quayside 1 is 180m in length and was built approximately 40 years ago whilst Quayside 2 is 185m in length and was built approximately 30 years ago. Quayside 2 is the subject of this HRA.
- 1.2.3 The Levenmouth Demonstration Turbine is located adjacent to Quay 2. ORE Catapult was recently awarded a Section 36 consent variation by the Scottish Government to operate the Levenmouth turbine until 2029.
- 1.2.4 Part of the proposed dredge site at Quay 2 was last subject to a maintenance dredge in March 2015. However, this did not include the full area currently requiring dredging. It also did not extend deep enough for the current project requirements, which includes excavation into the weathered bedrock by some 1.3m to 2.0m.
- 1.2.5 Historically material dredged from Methil has been disposed at the Methil disposal ground situated to the south east of the harbour (56°09.80'N 002°58.80'W Easting 339235 Northing 697172). Sediment test results from previous dredge campaigns at both Quays 1 and 2 have confirmed material to be suitable for disposal at sea and it is proposed to deposit at the Methil disposal ground once again.
- 1.2.6 Several previous overwater ground investigations have been carried out at the site in the past decade. The most recent was in 2016, when Causeway Geotech Ltd completed a series of combined percussive and rotary boreholes to provide geotechnical information for the design of two mooring dolphins at Quays 1 and 2. Causeway recorded the general geological succession from the sea bed to be a medium dense very gravelly sand or very sandy gravel to between 0.75m and 2.90m below seabed level, and then an extremely weak sandstone or mudstone (depending on location), recovered as angular gravel.
- 1.2.7 There has been a number of studies undertaken of the landside and coastal areas at Energy

Park Fife and these have been referred to within this report to support the assessment. As a former coal bing, part of the site frontage is protected by armour stone.

Plate 3 - Fife Energy Park Aerial Photograph



Plate 4 - Levenmouth Demonstration Turbine with armour stone which connects to Quay 2 wall.

1.3 Oil and Gas Decommissioning

1.3.1 Scottish Enterprise and Fife Council have partnered with decommissioning operator 'CessCon' to deliver the EPF project. EPF will assist Scotland in becoming a world leader in decommissioning activity by developing and providing a leading edge onshore decommissioning facility on the east coast of Scotland. Building upon the region's established and proven track record in delivering excellence in the energy sector, the Facility will attract a range of skilled innovative supply chain companies, with a particular focus on the circular economy and reuse of decommissioned materials.



Plate 5 - Fife Energy Park CGI of CessCon Decom Facility (New decom slab complete and buildings consented behind existing quays. Existing BiFAB yard to east)

- 1.3.2 The proposed Facility at EPF will secure an additional 25% of decommissioning reuse, recycling and disposal contracts, delivering a step change for Scotland's decommissioning supply chain. The Facility will target decommissioning of jackets, infrastructure and modular units of up to 25,000te, with an annual target of 50,000te, complementing and adding to Scotland's existing decommissioning infrastructure.
- 1.3.3 CessCon was set up in 2016 to provide new and bespoke, cost-effective, fit for purpose and environmentally responsible decommissioning services. From their bases at Hunterston PARC near Glasgow, Queen Street, Edinburgh, and Oslo, Norway, they provide decommissioning services to the onshore oil and gas, pharmaceutical, chemical and nuclear industries. They work with all major oil and gas operators, heavy lift, transportation, and engineering design contractors in order to provide the most effective solutions for their clients.
- 1.3.4 A new decommissioning slab and associated infrastructure has been completed with grant support via Vacant and Derelict Fund and Decom Challenge Fund and a Waste Management Licence granted by SEPA. The site is due to start receiving decommissioned components in spring 2021.



Plate 6 - New extended quayside decommissioning area

1.4 Environmental Designations

1.4.1 There are a range of designated sites that have been assessed as part of this HRA Report. A summary of the main sites is provided below:

Firth of Forth SPA

- 1.4.2 The Firth of Forth SPA is a complex of estuarine and coastal habitats which spans 100 km from the south east of Scotland stretching from Alloa to the coasts of Fife and East Lothian. Habitats include extensive invertebrate-rich habitats such as saltmarshes, dune systems, maritime grasslands, heath and fen, cliff slopes, shingle, and brackish lagoons. The diversity of habitats provides important food sources and shelter for migrating and wintering waterbirds. The boundary of the SPA mostly follows that of the Firth of Forth Site of Special Scientific Interest and slightly overlaps with Forth Islands SPA.
- 1.4.3 The proposed location for the Development is outwith the SSSI/SPA site boundary, on the seaward side of the designated site. The coastline and intertidal zone at the proposed location of the Development is artificial rock armour and rip rap, implemented as coastal defence. The intertidal mud- or sandflats that constituted this part of the SSSI/SPA site no longer exist. As such, intertidal areas that would support cited wading bird species are not present near the Development location. Furthermore, coastal industrial development, is subject to detailed planning control, ensuring that the site is not significantly affected.

Firth of Tay & Eden Estuary SPA

- 1.4.4 The Firth of Tay and Eden Estuary SPA is a complex of high- quality estuarine and coastal habitats in eastern Scotland from the River Earn to the Angus coast and Fife coast. The two estuaries have been proposed within a single site because they are integral components of a large, geomorphologically complex area that incorporates a variety of estuarine and coastal habitats. The Tay is the least-modified of the large east coast estuaries in Scotland, while the Eden estuary represents a smaller 'pocket' estuary. The inner parts of the estuaries are largely sheltered from wave action, while outer areas, particularly of the Tay, are exposed to strong tidal streams, giving rise to a complex pattern of erosion and deposition of the sandbank feature at the firths' mouth. The sediments within the site support biotopes that reflect the gradients of exposure and salinity and are typical of estuaries on the east coast of the UK. The abundance, distribution and composition of the associated habitats and species they support are ecologically representative of northern North Sea estuaries.
- 1.4.5 The site is located approximately 50km north of The Energy Park as shown on Drawing 50711_004 Environmental Designations.

Forth Islands SPA

1.4.6 The Firth of Forth Islands are in or near to the Firth of Forth and are designated as a SSSI and SPA. The SPA comprises a number of separate islands or island groups, principally Inchmickery (together with the nearby Cow and Calves) off Edinburgh, Long Craig, Fidra, Lamb and Craigleith together with the Bass Rock off North Berwick, and the much larger Isle of May in the outer part of the Firth. The site also includes additional other small islands. The islands support important numbers of a range of breeding seabirds, in particular terns, auks and gulls: Artic tern, roseate tern, common tern, Sandwich tern, gannet, shag, lesser black-backed gull and puffin, as well as an important assemblage of other breeding seabirds, including razorbill, guillemot, kittiwake, herring gull, cormorant and fulmar. The colony of gannets is the largest on the east coast of the UK. The seabirds feed outside the SPA in nearby waters, as well as more distantly in the North Sea. The closest of the Forth Islands is approximately 15km to the south east of the quays at Methil.

Outer Firth of Forth and St Andrews Bay Complex proposed SPA

- 1.4.7 The Outer Firth of Forth and St Andrews Bay Complex proposed Special Protection Area (SPA) is an estuarine/marine site of 2720.68km² situated off the south-east coast of Scotland. It consists of the outer sections of the adjacent Firth of Forth and Tay, including St Andrew's Bay, together with adjacent marine waters, to the east of the Isle of May, extending in places to beyond the 12 mile Territorial Sea Limit. The site supports a complex of high- quality estuarine and coastal habitats providing diversity of habitats, food sources and shelter for migrating and wintering waterbirds.
- 1.4.8 The dredge pocket is within the SPA site boundary as it abuts both quays as shown on Drawing 50711_004 Environmental Designations. Consultation on the proposed SPA boundary has closed and consultation responses are not in the public domain but we would anticipate representation has been made to NatureScot for a review of the designated area adjacent to the quaysides given marine activity which has and will be supported. We note other port and harbour areas are not included within the proposed SPA boundary.

River Teith SAC

- 1.4.9 The River Teith SAC lies approximately 65km to the west of the dredge pocket (see Drawing 50711_004 Environmental Designations) and is important for the habitats which support River lamprey, Brook lamprey, Sea lamprey and Atlantic salmon.
- 1.4.10 The River Teith rises and flows through upland areas before crossing the Highland Boundary Fault, at the Falls of Leny and meandering through the central lowlands to the River Forth. The river provides excellent habitat with usually pristine water quality, well-vegetated banks and a substantially unaltered river channel. The river lacks any significant artificial barriers to migration, has good water quality and the necessary habitat types (extensive gravel beds and marginal silt beds) to support the river lamprey's full life-cycle.

Isle of May SAC

1.4.11 The Isle of May is approximately 28km to the east of the dredge pocket (see Drawing 50711_004 Environmental Designations) and supports a breeding colony of grey seals and is the largest east coast breeding colony of grey seals in Scotland and the fourth-largest breeding colony in the UK, contributing approximately 4.5% of annual UK pup production¹.

Berwickshire and North Northumberland Coast SAC

1.4.12 This SAC (and a number of component SSSI's) hosts a wide range of habitats and species. The north-east England coastal section is approximately 80km to the south east of the dredge pocket and hosts the most south-easterly site selected for grey seal in the UK. It is a breeding colony and supports around 2.5% of annual UK pup production.

Firth of Forth SSSI

- 1.4.13 The Firth of Forth Site of Special Scientific Interest (SSSI) covers the coastline stretching from Alloa along the Fife coast as far as Crail and along the Falkirk and Lothian coast to Dunbar. The site is important for the variety of coastal habitats which are found. The estuary west of the Forth Bridges contains extensive invertebrate-rich intertidal mudflats which provide feeding grounds for nationally and internationally important numbers of wintering and migratory birds. Behind these mudflats are often saltmarshes which, as well as supporting scarce plants and providing feeding and roosting grounds for birds, are also a natural coastal defence, absorbing the impact of waves.
- 1.4.14 The dredge pocket sits just within the site boundary as shown on Drawing 50711_004 Environmental Designations The coastline and intertidal zone at the proposed location of the Development is artificial rock armour and rip rap, implemented as coastal defence. NatureScot previously advised (email 23.11.20) that as this area is subtidal, it is not considered important as part of the SSSI designation.

¹ Isle of May - Special Areas of Conservation (jncc.gov.uk)



Plate 7 – Photograph of southernmost end of Quay 2 showing armour stone coastal protection taken at MLWS on 30.11.20

1.5 Content of the HRA Report

- 1.5.1 The remainder of this report is split into the following main sections:
 - Section 2 Habitats Regulation Appraisal Natura Site Details
 - Section 3 HRA Stage 1 What Is The Plan Or Project?
 - Section 4 HRA Stage 2 Is The Plan Or Project Directly Connected With Or Necessary To Site Management For Nature Conservation?
 - Section 5 HRA Stage 3 Is The Plan Or Project (Either Alone Or In Combination With Other Plans Or Projects) Likely To Have A Significant Effect On The Site?
 - Section 6 HRA Stage 4 Appropriate Assessment of the Implications for the Site in View of its Conservation Objectives
 - Section 7 HRA Stage 5 Can It Be Ascertained that the Proposal will Not Adversely Affect the Integrity of the Site?
 - Section 8 Environmental Commitments

2 Habitats Regulation Appraisal – Natura Site Details

Legislation

- 2.1.1 The following legislation has been taken into account when undertaking the assessment:
 - Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) (the 'Habitats Regulations');
 - European Council Directive 2009/147/EC on the Conservation of Wild Birds (the 'Birds Directive');
 - European Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the 'Habitats Directive'); and
 - The Wildlife and Countryside Act 1981 (as amended) (WCA).
- 2.1.2 Marine Scotland, as a 'competent authority' under the Regulations, must be satisfied that the proposal will not adversely affect the integrity of any European site (SACs and SPAs, known as Natura sites) either alone or in combination with other plans or projects before authorisations can be given for the proposal.

Guidance

- 2.1.3 In addition, the following guidance documents were consulted:
 - NatureScot Habitats Regulations Appraisal (HRA) on the Firth of Forth. A Guide for developers and regulators²
 - NatureScot Priority Marine Features Guidance (2016) and associated documents³
- 2.1.4 Scottish Ministers are currently in the process of identifying a suite of new marine SPAs. One of these sites is the proposed SPA for the Outer Firth of Forth and St Andrews Bay Complex. In policy terms, proposed sites have the same protection and status as designated sites, until a decision on classification of the site is made. We have therefore assessed and considered potential impacts on the Outer Firth of Forth and St Andrews Bay Complex pSPA with guidance under the following:
 - NatureScot Outer Firth of Forth and St Andrews Bay Complex Supporting Documents⁴:
 - Marine Protected Area (Proposed) Site Summary leaflet Outer Firth of Forth and St Andrews Bay Complex
 - Marine Protected Area (Proposed) Site selection document Outer Firth of Forth and St Andrews Bay Complex
 - Marine Protected Area (Proposed) Advice to support management Outer Firth of Forth and St Andrews Bay Complex

² Habitats Regulations Appraisal (HRA): Help and advice | NatureScot

³ <u>Priority Marine Features Guidance | NatureScot</u>

⁴ Outer Firth of Forth and St Andrews Bay Complex Proposed marine SPA - supporting documents | NatureScot

Baseline Information

2.1.5 There is a wealth of baseline information for the site and surrounds from a range of published sources including Appropriate Assessment completed for other recent relevant applications and we have referred to these where they assist in the assessment process. Relevant data includes:

Source	Summary of Key Findings / Information
Appropriate	Undertaken by Marine Scotland undertaken as part of proposed
Assessment for	extension to the which referenced monitoring studies undertaken
Levenmouth	during the baseline period, pre-commissioning phase and first three
Demonstration	years of operation of the existing LDT. In its response dated 23
Turbine, August	March 2018, NatureScot advised that the proposal would have a
2018 ⁵	Likely Significant Effects (LSE) on the wintering sea duck qualifying
	interests of the Firth of Forth SPA and Outer Firth of Forth and St
	Andrews Bay Complex pSPA. These potential LSE were identified in
	an EIA Update Report produced to support the S36 consent
	variatiation. Potential for 'Likely Significant Effects' related to Elder
	(non-breeding), Ked-breasted merganser (non-breeding) and Ked-
	throated diver (non-breeding). The AA concluded that the
	species would not result in adverse effects on site integrity for the
	Firth of Forth SPA or Outer Firth of Forth and St Andrews Bay
	Complex nSPA
Forthwind Offshore	The HBA considered potential impacts (disturbance / displacement
Development -HRA.	as well as collision risk) for a range of qualifying species. Wintering
2016^6 and EIA.	birds included - common scoter, velvet scoter, eider, long-tailed
	duck, red-breasted merganser and red-throated diver. Breeding
	species assessed included Northern gannet, European shag, black-
	legged kittiwake, razorbill and Atlantic puffin were assessed as a
	part of the larger 'parent' population of the Forth Islands SPA.
	Surveys included vantage point surveys, aerial surveys and use of
	WeBS data. The assessment concluded that the effects of the
	Forthwind development both alone and in-combination were not
	significant for all species considered
Scottish Enterprise –	Includes data on coastal processes at the two quays at The Energy
Marine Access Study	Park. It is understood that typical flows adjacent to the EPF are
2014 (Arup)	between 0.25m/s and 0.5m/s during neap and springs tides
	respectively. It is also understood that sediment generally travels
	antrance to Mathil Docks ⁷ . It is understood that dradsing is
	completed every 2-4 years to maintain access to Mothil Docks due
	to this sedimentation with latest completed in 2020
	to this seamentation with latest completed in 2020.

⁵ <u>PROFORMA FOR RECORDING SNH'S CONSIDERATION OF A PROPOSAL AFFECTING A POTENTIAL/DESIGNATED</u> <u>SAC OR SPA (marine.gov.scot)</u>

⁶<u>https://www.webarchive.org.uk/wayback/archive/20180529225343/http://www.gov.scot/Topics/marine/Licensing/marine/scoping/FW-Methil</u>

⁷ Scottish Enterprise, Energy Park Fife, Marine Access Study, 2014, ARUP

Natura Site Details

Name of Natura site(s) potentially affected:	1. Firth of Forth SPA
Name of component SSSI if relevant:	Firth of Forth SSSI
Name of component SSSI if relevant: Natura qualifying interest(s) & whether priority/non-priority:	Firth of Forth SSSI 1. Firth of Forth SPA Bar-tailed godwit (non-breeding) Common scoter (non-breeding)* Curlew (non-breeding)* Curlew (non-breeding)* Eider (non-breeding)* Golden plover (non-breeding) Goldeneye (non-breeding)* Goldeneye (non-breeding)* Great crested grebe (non-breeding)* Knot (non-breeding) Lapwing (non-breeding)* Long-tailed duck (non-breeding)* Oystercatcher (non-breeding)* Pink-footed goose (non-breeding)* Red-breasted merganser (non-breeding)* Red-breasted merganser (non-breeding)* Red-breasted merganser (non-breeding)* Red-throated diver (non-breeding) Ringed plover (non-breeding)* Sandwich tern (passage) Scaup (non-breeding)* Slavonian grebe (non-breeding) Volvet creater (non-breeding)
	 Wigeon (non-breeding) Waterfowl assemblage (non-breeding)
	* = assemblage qualifier only BOLD = listed as breeding in SSSI
Conservation objectives for qualifying interests:	 To avoid deterioration of the habitats of the qualifying species (listed below) 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

٠	Distribution and extent of habitats supporting the species.
•	Structure, function and supporting processes of habitats supporting the species.
•	No significant disturbance of the species.

Name of Natura site(s) potentially	2. Forth Islands SPA
affected:	
Name of component SSSI if relevant:	Forth Islands SSSI
Natura qualifying interest(s) &	2. Forth Islands SPA
whether priority/non-priority:	 Arctic tern (breeding)
	 Common tern (breeding)
	 Cormorant (breeding)*
	 Fulmar (breeding)*
	 Gannet (breeding)
	 Guillemot (breeding)*
	 Herring gull (breeding)*
	 Kittiwake (breeding)*
	 Lesser black-backed gull (breeding)
	 Puffin (breeding)
	 Razorbill (breeding)*
	 Roseate tern (breeding)
	 Sandwich tern (breeding)
	 Shag (breeding)
	 Seabird assemblage (breeding)
	* = assemblage qualifier only
Conservation objectives for	To avoid deterioration of the habitats of the
qualifying interests:	dualifying species (listed below) or significant
	disturbance to the qualifying species, thus
	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.

Name of Natura site(s) potentially	3. Outer Firth of Forth and St Andrews Bay
affected:	Complex proposed Marine SPA
Name of component SSSI if relevant:	
Natura qualifying interest(s) &	Annex 1 species:
whether priority/non-priority:	Red-throated diver
	Little gull (Larus minutus)
	Common tern
	Arctic tern
	 Slavonian grebe
	It also supports migratory populations of
	European importance of the following species:
	Common eider
	 Long-tailed duck *
	 Common scoter *
	 Velvet scoter *
	 Common goldeneye*
	 Red-breasted merganser*
	Northern gannet
	 Manx shearwater**
	European shag
	 Black-legged kittiwake**
	 Common guillemot**
	Razorbill**
	Atlantic puffin
	 Black-headed gull**,***
	Common gull **,***
	Herring gull **,***
	* Named qualifier of the non-breeding
	waterfowl assemblage
	** Named qualifier of a breeding or non-
	breeding seabird assemblage
	***Species included as part of the UK SPA
	The following conservation objectives are still in
Conservation objectives for qualifying	draft form and have not yet been agreed
interests:	 To avoid deterioration of the habitats of the
	qualifying species or significant disturbance
	to the qualifying species, subject to natural
	change, thus ensuring that the integrity of
	the site is maintained in the long-term and it
	continues to make an appropriate
	contribution to achieving the aims of the
	Birds Directive for each of the qualifying
	species.
	 This contribution will be achieved through
	delivering the following objectives for each of

 the site's qualifying features: a. Avoid significant mortality, injury and disturbance of the qualifying features, so that the distribution of the species
 and ability to use the site are maintained in the long-term; b. To maintain the habitats and food resources of the qualifying features in favourable condition.

Name of Natura site(s) potentially affected:	4. Isle of May SAC
Name of component SSSI if relevant:	Isle of May SSSI
Natura qualifying interest(s) & whether priority/non-priority:	Grey Seal
Conservation objectives for qualifying interests:	 To avoid deterioration of the habitats of the qualifying species (listed below) 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 the species. No significant disturbance of the species.

Name of Natura site(s) potentially affected:	5. Firth of Tay and Eden Estuary SAC
Name of component SSSI if relevant:	N/A
Natura qualifying interest(s) & whether priority/non-priority:	Common (harbour) seal
Conservation objectives for qualifying interests:	 To avoid deterioration of the habitats of the qualifying species (listed below) 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.

Name of Natura site(s) potentially affected:	6. Berwickshire and North Northumberland Coast SAC	
Name of component SSSI if relevant:	Bamburgh Coast and Hills SSSI Burnmouth Coast SSSI Howick to Seaton Point SSSI Lindisfarne SSSI Northumberland Shore SSSI St Abb's Head to Fast Castle SSSI The Farne Islands SSSI	
Natura qualifying interest(s) & whether priority/non-priority:	Grey seal	
Conservation objectives for qualifying interests:	 To avoid deterioration of the habitats of the qualifying species (listed below) 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 the species. 	

Name of Natura site(s) potentially affected:	7. River Teith SAC
Name of component SSSI if relevant:	
Natura qualifying interest(s) &	River lamprey
whether priority/non-priority:	Brook lamprey
	Sea lamprey
	Atlantic salmon
Conservation objectives for qualifying interests:	 To avoid deterioration of the habitats of the qualifying species (listed below) 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.

3 HRA Stage 1: What Is The Plan Or Project?

Proposal Title	Capital and Maintenance Dredge at Quay 2, Energy Park Fife.
Competent Authority	Marine Scotland
Details of proposal (inc. location, timing, methods)	Background Energy Park Fife has been earmarked as an important centre in Scotland for decommissioning of Oil and Gas infrastructure from the North Sea. Landside elements have been part funded by grants from Scottish Government under the Vacant and Derelict Land Fund (VDLF) and Decom Challenge Fund (DCF). The project is being delivered with support from both Scottish Enterprise and Fife Council. Phase 1 landside infrastructure works are due for completion in early December 2020 including preparation of a 7,000m ³ concrete laydown area, advanced water treatment system, drainage and welfare facilities. SEPA has granted both a Waste Management License and a Controlled Activities Licence for Discharge for the site.
	Planning Context Methil is included in the National Planning Framework 3 relative to energy related interests: <i>'The Fife Energy Corridor, which extends from Methil to Longannet,</i> <i>has potential for significant investment in energy-related business</i> <i>development, as do the Cockenzie and Torness areas in East Lothian.'</i> Energy Park is also recognised in the Fife Local Development Plan as a Safeguarded Employment Area.
	Site Location Relative to Designated Sites Situated approximately 40 miles north of Edinburgh and 20 miles south of Dundee, Energy Park Fife is located on the Methil waterfront and is identified within the National Renewables Infrastructure Plan. There are a range of designated sites as shown on Drawing 50711_004 Environmental Designations.
	Previous Dredging Works Part of the proposed dredge site was last subject to a maintenance dredge in March 2015. However, this did not include the full area currently requiring dredging. It also did not extend deep enough for the current project requirements, which includes excavation into the weathered bedrock by some 1.3m to 2.0m. Historically material dredged from Methil was disposed at the Methil disposal ground situated to the south east of the harbour (56°09.80'N 002°58.80'W Easting 339235 Northing 697172). Sediment test results from previous dredge campaigns at Quays 1 and 2 have confirmed material to be suitable for disposal at sea.
	Dredging Requirements - Quay 2

Both Capital and Maintenance dredging is now required at Quay 2 in order to create a suitable dredge pocket for decommissioning vessels to access the quayside. The works are required to dredge below the existing seabed by approximately 3.2m to achieve a net depth of approximately -8.2m Chart Datum (CD). An average overdig of 0.5m below this is assumed due to the lower part of the excavation being in weathered bedrock.

Description of Dredging and Material Arisings

Dredging is proposed in the dredge pockets both perpendicular and parallel to Quay 2 as shown in Drawing 50711-002. A net excavation of 80,794 m3 of material will require to be dredged to lower the seabed to -8.2m CD, which will be approximately 85,000m3 in total once over dig is accounted for to ensure the design depths are achieved. The upper layer of material to be dredged is naturally occurring silt, sand and gravels. The lower layer contains extremely weak, weathered sandstones with some mudstones. Based on the most recent volume calculations provided and assuming that the material at the dredge level is rock across the dredge area, this may result in gross dredge volumes in the region of 55,656m3 of sands, silts and gravels and 29,344m3 of weathered rock. The proposed deposition site at Methil is shown on Drawing 50711_003 Proposed Dredge Disposal Locations.

Sediment Sampling – EnviroCentre Ltd

The sediment sampling was undertaken on 24th and 25th November 2020. The works were completed from the utility vessel *Forth Warrior*, operated by Briggs Marine and Environmental Services, with EnviroCentre personnel undertaking sampling works.

Sediment cores were collected from seven locations using a vibrocorer with 75mm aluminium sample tube. At one location (BH-P2), no sediment was able to be recovered. At this location, it was considered by EnviroCentre that the core barrel was striking a hard surface and not entering into any sediment. It is noted that at this location, bathymetric survey found a shallower seabed, and anecdotal information suggests this comprises armour stone that has drifted from the shore and come to rest on the seabed adjacent to the south of Quay 2. Following several attempts, this location was abandoned and a new location (BH-P2A) was added.

At each location, core samples were supplemented by a grab sample from the seabed surface. Cores were then cut into sub-sections and extruded into a plastic core holder, split lengthways, photographed and logged prior to sub-sampling. Grab samples were also photographed and logged prior to sub-sampling. Samples were

collected into appropriate containers supplied by SOCOTEC UK Ltd and stored in iced cool boxes for onward transport.
EnviroCentre reported that sediment generally comprised of soft dark grey/black silt, interbedded with dark grey/black sandy silt. A soft orange-brown clay was encountered in BH-P2A at 1.4m depth. A hydrogen sulphide odour was noted in sediment at most locations.
Sediment Analysis
Following collection of the sediment cores and sub-sampling as described above, all samples were dispatched to the laboratories of SOCOTEC UK Ltd under chain of custody on 26 th November 2020.
Laboratory analysis was scheduled on three sub-samples from each of the seven cores. A sub-sample from the surface layer (0-15cm) was scheduled, alongside one from the middle and one from the bottom of the core, as prescribed in Marine Scotland guidance. The only exception to this was at core location BH-P1, where insufficient surface sediment was able to be recovered. As a concession, the $0.15m - 0.5m$ section of the core was instead scheduled for testing.
A total of 21 no. sediment samples were scheduled for analysis for the following determinands.
 Moisture Content; Particle Size Analysis; Specific Gravity (Sediment Density); Heavy metals (As, Cd, Cr, Cu, Hg, Ni, Pb, Zn); Organotins – Tributyl Tin and Dibutyl Tin; Polychlorinated Biphenyls; Polyaromatic Hydrocarbons; Total Hydrocarbons; Asbestos; Total Organic Carbon.
Sediment Analysis Results Exceedances of revised Action Level 1 were recorded in metals, polyaromatic hydrocarbons and total hydrocarbons. All samples recorded concentrations of contaminants below revised Action Level 2 where these are available.
Contaminant concentrations are generally consistent with those measured in sediment at the same location in 2014.
On the basis of the results, it is concluded that the material will be suitable for disposal at sea unless otherwise advised by Marine Scotland.

Dredge Methodology

The works will be undertaken via a large backhoe loading material into two split hopper barges. The barges would either be towed or sail under their own power to the Methil Disposal Site. The works would be supported by a tug for towing the barges and repositioning the dredger, and a survey launch, which will carry out daily multibeam bathymetric surveys.

Programme

It is anticipated that the capital dredge works will be of 3 to 4 weeks duration and are scheduled to commence in March 2021. This HRA however, does support an extended license application period of 6 months, to build in a time contingency element in case of any delays to the planned programmed dates from 22nd Feb to 22nd August. This avoids the peak over-wintering period. Subsequent maintenance dredge will be shorter in duration (anticipate 1 week) with timing to be confirmed but likely to be spring / summer each year.

4 Stage 2: Is The Plan Or Project Directly Connected With Or Necessary To Site Management For Nature Conservation?

No. The operation is not connected with or necessary to conservation management of the site

5 Stage 3: Is The Plan Or Project (Either Alone Or In Combination With Other Plans Or Projects) Likely To Have A Significant Effect On The Site?

5.1.1 Consultation with NatureScot and baseline data review identified the following potential Likely Significant Effects where further assessment is required under Stage 4 onward.

Qualifying Interests	Sites	Likely Significant Effects?
Birds (seabirds, waders and wildfowl)	Sites: Firth of Forth SSSI, Firth of Forth SPA, Outer Firth of Forth and St Andrews Bay Complex pSPA	Potential for loss of habitat for foraging birds as well as disturbance during the works from noise and boat movements. WEBS low tide synopsis only notes common scoter as being important in the eastern part of Largo Bay ⁸ . Monitoring for the ORE Catapult The majority of the habitats within the vicinity of the proposals comprise rocky shoreline / coastal protection and a small number of rocky outcrops. The substrate (based on sediment testing) adjacent to the piled quay wall is largely made up with sands, silts and gravels which are completely submerged even at low tide. These offer a limited foraging resource for wintering avifauna.
Grey Seals	Sites: Isle of May SAC, Berwickshire and North Northumberland Coast SAC	Grey seals range beyond these SACs and may forage in, or transit through, the areas of dredge and disposal. Seals could be disturbed by noise and boat movements as well as deposition of sediment at disposal sites as well as other activities. There may be impacts on the prey species of seals due to noise and localised turbidity changes.
Common (harbour) seal	Firth of Tay and Eden Estuary SAC	Harbour seals range beyond these SACs and may forage in, or transit through, the areas of dredge and disposal. Seals could be disturbed by noise and boat movements as well as deposition of sediment at disposal sites as well as other activities. There may be impacts on the prey species of seals due to noise and localised turbidity changes.
Cetaceans	Moray Firth SPA	The dolphins range widely beyond the SAC along the east coast of Scotland

⁸ Elkins, N, Brown, A.W, and Reid, J 'The Breeding and Wintering Birds of Fife: An Atlas for 2007-2013', BTO

Qualifying	Sites	Likely Significant Effects?
Interests		
		and may transit down to the Firth of Forth. Dolphins could be disturbed by noise and boat movements as well as deposition of sediment at disposal sites as well as other activities It is unlikely that noise from dredging from a small area over a short period of time would give rise to significant disturbance. There may be impacts on the prey species of dolphin, either from placement of infrastructure or due to noise. Bathymetric survey will be undertaken to establish that the dredge has been completed to the required depth. It is assumed this will be Multibeam Echosounding (MBES) only and survey will be of limited duration in a small area and therefore EPS Licence will not be required.
Migratory fish (salmon, lamprey)	Sites: River Teith SAC	Potential impacts on migratory routes associated with increase in turbidity, release of contaminants or impacts from noise.
Priority Marine Features (PMFs)	Firth of Forth includes PMFs noted in NatureScot ⁹ Commissioned Report with specific reference to intertidal mudflats and blue mussel beds.	The Firth of Forth includes a range of Priority Marine Features including intertidal mudflats and blue mussel beds as well as use by cetaceans and migratory fish. The area affected by the dredge pocket is an active quayside that has been affected by marine works including past dredge and coastal protection. Likely significant effects are therefore not anticipated.
Coastal processes	There have been a number of studies looking at coastal processes and sediment transport in the Firth of Forth.	It is not anticipated that the proposed capital dredge or maintenance dredge, nor disposal, at the scales required would have a likely significant effects on wider coastal processes in the Firth of Forth.

⁹ Tyler-Walters, H., James, B., Carruthers, M. (eds.), Wilding, C., Durkin, O., Lacey, C., Philpott, E., Adams, L., Chaniotis, P.D., Wilkes, P.T.V., Seeley, R., Neilly, M., Dargie, J. & Crawford-Avis, O.T. 2016. Descriptions of Scottish Priority Marine Features (PMFs). Scottish Natural Heritage Commissioned Report No. 406.

6 Stage 4: Undertake An Appropriate Assessment Of The Implications For The Site In View Of Its Conservation Objectives

6.1 Appropriate Assessment

Natura Site	1. Firth of Forth SPA (Firth of Forth	Conservation Objectives	Appropriate Assessment
	SSSI Component Part)		
Natura qualifying interest(s) & whether priority/non- priority:	 Bar-tailed godwit (non-breeding) Common scoter (non-breeding)* Cormorant (non-breeding)* Curlew (non-breeding)* Dunlin (non-breeding)* Eider (non-breeding)* Golden plover (non-breeding) Goldeneye (non-breeding)* Great crested grebe (non-breeding)* Grey plover (non-breeding)* Knot (non-breeding) Lapwing (non-breeding)* Long-tailed duck (non-breeding)* Mallard (non-breeding)* Oystercatcher (non-breeding)* Pink-footed goose (non-breeding)* Red-breasted merganser (non-breeding)* Redshank (non-breeding) Ringed plover (non-breeding)* Sandwich tern (passage) Scaup (non-breeding)* Shelduck (non-breeding) 	 To avoid deterioration of the habitats of the qualifying species (listed below) 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 the species. No significant disturbance of the species. 	 Population of the species as a viable component of the site: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area with low ecological sensitivity / habitat for foraging or resting birds. Distribution of the species within site: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area with low ecological sensitivity / habitat for foraging or resting birds. Distribution and extent of habitats supporting the species: Localised dredge pocket and established deposition site with with low ecological sensitivity / habitat for foraging or resting birds.

 Slavonian grebe (non-b Turnstone (non-breedin Velvet scoter (non-breeding) Waterfowl assemble breeding) 	oreeding) ng) eding)*) lage (non-	Structure, function and supporting processes of habitats supporting the species: There will be no significant effects on water quality (limited fines with sands and gravels making up dredge material). Best Practice applied as per section 8.
* = assemblage qualifier or BOLD = listed as breeding i	in SSSI	No significant disturbance of the species: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area with low ecological sensitivity / habitat for foraging or resting birds.

Natura Site	2. Forth Islands SPA (Forth Islands SSSI)	Conservation objectives for qualifying	Appropriate Assessment
		interests:	
Natura qualifying interest(s) & whether priority/non- priority:	 2. Forth Islands SPA Arctic tern (breeding) Cormon tern (breeding)* Fulmar (breeding)* Gannet (breeding) Guillemot (breeding)* Herring gull (breeding)* Kittiwake (breeding)* Lesser black-backed gull (breeding) Puffin (breeding) Razorbill (breeding)* Roseate tern (breeding) Sandwich tern (breeding) Shag (breeding) * = assemblage qualifier only 	 To avoid deterioration of the habitats of the qualifying species (listed below) 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 the species. No significant disturbance of the species. 	 Population of the species as a viable component of the site: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area with low ecological sensitivity / habitat for foraging or resting birds. Distribution of the species within site: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area with low ecological sensitivity / habitat for foraging or resting birds. Distribution and extent of the works and localised dredge pocket and established deposition site with with low ecological sensitivity / habitat for foraging or resting birds. Structure, function and supporting the species: There will be no significant effects on water quality (limited fines with sands

	and gravels making up dredge material). Best Practice applied as per section 8.
	No significant disturbance of the species: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area with low ecological sensitivity / habitat for foraging or resting birds.

Natura Site	3. Outer Firth of Forth and St Andrews	Conservation objectives for qualifying	Appropriate Assessment
	Bay Complex proposed Marine SPA	interests:	
Natura qualifying interest(s) & whether priority/non- priority:	Annex 1 species: Red-throated diver Little gull (Larus minutus) Common tern Arctic tern Slavonian grebe It also supports migratory populations of European importance of the following species: Common eider Long-tailed duck * Common scoter * Velvet scoter * Common goldeneye* Red-breasted merganser* Northern gannet Manx shearwater** European shag Black-legged kittiwake** Common guillemot** Razorbill** Atlantic puffin Black-headed gull**,*** Common gull **,***	 The following conservation objectives are still in draft form and have not yet been agreed. To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, subject to natural change, thus ensuring that the integrity of the site is maintained in the long-term and it continues to make an appropriate contribution to achieving the aims of the Birds Directive for each of the qualifying species. This contribution will be achieved through delivering the following objectives for each of the site's qualifying features: a. Avoid significant mortality, injury and disturbance of the qualifying features: b. To maintain the habitats and food resources of the qualifying features in favourable condition. 	To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, subject to natural change: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area with low ecological sensitivity / habitat for foraging or resting birds. Avoid significant mortality, injury and disturbance of the qualifying features, so that the distribution of the species and ability to use the site are maintained in the long-term; No direct impacts. Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area with low ecological sensitivity / habitat for foraging or resting birds within the wider resource. To maintain the habitats and food resources of the qualifying features in favourable condition: Disturbance assessed as not significant due to short duration of the works and

Natura Site	3. Outer Firth of Forth and St Andrews	Conservation objectives for qualifying	Appropriate Assessment
	Bay Complex proposed Marine SPA	interests:	
	* Named qualifier of the non-breeding waterfowl assemblage ** Named qualifier of a breeding or non-breeding seabird assemblage ***Species included as part of the UK SPA Review requirements		localised nature within existing active quayside area with low ecological sensitivity / habitat for foraging birds. There will be no significant effects on water quality (limited fines with sands and gravels making up dredge material). Best Practice measures applied as per section 8.

Natura Site	4. Isle of May SAC (Isle of May SSSI)	Conservation objectives for qualifying interests:	Appropriate Assessment
Natura qualifying interest(s) & whether priority/non- priority:	Grey Seal	 To avoid deterioration of the habitats of the qualifying species (listed below) 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. 	 Population of the species as a viable component of the site: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area within wider Firth of Forth area. Distribution of the species within site: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area within wider Firth of Forth area. Distribution and extent of the works and localised dredge pocket and established deposition site. Structure, function and supporting the species: There will be no significant effects on water quality (limited fines with sands and gravels making up dredge material). Best Practice measures applied as per section 8.

Natura Site	4. Isle of May SAC (Isle of May SSSI)	Conservation objectives for qualifying	Appropriate Assessment
		interests:	
			No significant disturbance of the
			species:
			Disturbance assessed as not significant
			due to short duration of the works and
			localised nature within existing active
			quayside area within wider Firth of
			Forth area.

Natura Site	5. Firth of Tay and Eden Estuary SAC	Conservation objectives for qualifying	Appropriate Assessment
Natura qualifying interest(s) & whether priority/non- priority:	Common (harbour) seal	 Interests: To avoid deterioration of the habitats of the qualifying species (listed below) 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 the species. No significant disturbance of the species. 	 Population of the species as a viable component of the site: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area within wider Firth of Forth area. Distribution of the species within site: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area within wider Firth of Forth area. Distribution and extent of the works and localised nature within existing active quayside area within wider Firth of Forth area. Distribution and extent of habitats supporting the species: Localised dredge pocket and established deposition site. Structure, function and supporting the species: There will be no significant effects on water quality (limited fines with sands and gravels making up dredge material). Best Practice measures applied as per section 8.

	No significant disturbance of the
	species:
	Disturbance assessed as not significant
	due to short duration of the works and
	localised nature within existing active
	quayside area within wider Firth of
	Forth area.

Natura Site	6. Berwickshire and North Northumberland Coast SAC (Burnmouth Coast SSSI, Howick to Seaton Point SSSI, Lindisfarne SSSI, Northumberland Shore SSSI, St Abb's Head to Fast Castle SSSI , The Farne Islands SSSI, Bamburgh Coast and Hills SSSI)	Conservation objectives for qualifying interests:	Appropriate Assessment
Natura qualifying interest(s) & whether priority/non- priority:	Grey seal	 To avoid deterioration of the habitats of the qualifying species (listed below) 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 the species. No significant disturbance of the species. 	 Population of the species as a viable component of the site: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area within wider Firth of Forth area. Distribution of the species within site: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area within wider Firth of Forth area. Distribution and extent of the works and localised dredge pocket and established deposition site. Structure, function and supporting the species:

	There will be no significant effects on water quality (limited fines with sands and gravels making up dredge material). Mitigation applied as per section 8.
	No significant disturbance of the species: Disturbance assessed as not significant due to short duration of the works and localised nature within existing active quayside area within wider Firth of Forth area.

Natura Site	7. River Teith SAC	Conservation objectives for qualifying interests:	Appropriate Assessment
Natura qualifying interest(s) & whether priority/non- priority:	 River lamprey Brook lamprey Sea lamprey Atlantic salmon 	 To avoid deterioration of the habitats of the qualifying species (listed below) 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 the species. No significant disturbance of the species. 	 Population of the species as a viable component of the site: Disturbance assessed as not significant due to timing of works and short duration and localised nature within existing active quayside area within wider Firth of Forth area. Distribution of the species within site: Disturbance assessed as not significant due to timing of works and short duration and localised nature within existing active quayside area within wider Firth of Forth area. Distribution and extent of habitats supporting the species: Localised dredge pocket and established deposition site. Structure, function and supporting the species: Given the nature of the material being dredged, the majority of material will not stay in suspension for long and settle relatively quickly. Similarly, when the material is deposited in the disposal areas,

th te	he plume will be local in extent and short erm in duration.
N D dı aı q	No significant disturbance of the species: Disturbance assessed as not significant due to timing of works and short duration and localised nature within existing active quayside area within wider Firth of Forth area.

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6.2 In Combination Impacts

Project	Status	Description	Potential Interaction?	Potential for Likely Significant Effects?
Levenmouth Demonstrator Turbine (LDT)	In Operation	LDT consists of a 7 megawatt (MW) turbine which measures 196.2 metres (m) from mean sea level (MSL) to blade tip and was installed in 2013. A recent S36 consent variation extended its operational consent for an additional 10 years. The extension was supported by and EIA Update Report to address the additional operational period (the physical development is unchanged). The EIA Update Report concluded that there was a potential impact associated with displacement of wintering sea ducks and therefore a likely significant effect (LSE) associated with Firth of Forth SPA and Outer Firth of Forth and St Andrews Bay Complex pSPA needed to be assessed through Appropriate Assessment. This was undertaken and concluded that the LDT would not adversely affect the site integrity of the Firth of Forth SPA and Outer Firth of Forth and St Andrews Bay Complex pSPA either in isolation or in combination with the other plans or projects as assessed.	Disturbance and Displacement of wintering sea ducks associated with dredging activity. EIA and AA undertaken for LDT suggests qualifying species are present in low numbers in the near-shore area. Dredging will be undertaken over short periods (Capital c 4 weeks and Maintenance c. 2 weeks), avoiding the peak wintering period (Capital scheduled for March 2021 although with a contingency through to end August 2021) and likely subsequent maintenance dredge annually in Spring / Summer TBC and subject to separate agreement).	No 'in combination' adverse effects with Natura Interests.
Forthwind Offshore Development - Methil	Consented. Awaiting Construction Start	The current licence and s.36 consent in respect of this project, is for the construction and operation of the Forthwind Offshore Wind Demonstration Project ("Forthwind"), approximately 1.5 km from the coast of Methil, Fife. The Forthwind development consists of 2, two-bladed lattice structure WTGs, associated	Construction has not yet commenced but is anticipated to take place over a 3 to 6 month period, followed by testing and commissioning before becoming operational.	No 'in combination' adverse effects with Natura Interests.

Project	Status	Description	Potential Interaction?	Potential for Likely Significant Effects?
		 infrastructure, 2 electricity offshore export cables with an overall project footprint of 37,400 m2. Consideration of the relevant qualifying interests was undertaken as part of the Forthwind AA and focused on key species as informed by Environmental Impact Assessment as well as monitoring survey results from the first three years of the operation of the OREC LDT. 	At present, the timescales for commencement of construction activities are unclear and the current marine licence expires on 12 September 2037 The construction works of the Forthwind development are of short duration (8 weeks) and planned outwith the main wintering period as mitigation against disturbance.	
Maintenance Dredging - Port of Dundee	Application (00008912)	Maintenance dredging at the Port of Dundee to ensure appropriate depths of water. Silt and sand is naturally deposited around the berths and in the tidal basin. Dredging operations are carried out when necessary, usually in summer for a period of 3 to 6 days per campaign. The majority of the material is removed by trailer suction dredging but may be supported by the use of a grab/backhoe dredger or plough boat. The BPEO concludes that cumulative impacts with other operations are not predicted to create a significant impact to the Firth of Tay and Eden Estuary SPA or marine ecosystem due to scale and duration of effects.	Marine Licence to cover the period from November 2020 to November 2023 and therefore would overlap with Marine Licence for dredge at Quay 2, Methil. Both operations are small scale / limited duration and are within existing active harbour / quayside areas.	No 'in combination' adverse effects with Natura Interests.
Maintenance Dredge –	Application (00008915)	Planned maintenance dredging operations at Stonehaven harbour.	Assume Licence duration of 3 years from 2021 and therefore would overlap with Marine	No 'in combination' adverse effects with Natura Interests.

Project	Status	Description	Potential Interaction?	Potential for Likely Significant Effects?
Stonehaven Harbour Aberdeen Harbour Expansion Project (Construction, Capital Dredging and Sea Disposal)	Under construction	Harbour, where the dredged spoil is to be disposed of at sea, in accordance with the applicable legislation and the conditions of the dredge licence. Works will be undertaken over two tide cycles depending on progress i.e. 2 days per campaign. New harbour facility at Nigg Bay, Aberdeen, approximately 0.8km south of the existing harbour. The works include the construction of two breakwaters, quaysides and associated infrastructure, as well as a largescale capital dredge and sea disposal operation. Extended construction due to change of contractor to complete the project and deliver the crown wall. Works expected to take 12 months commencing in 2021.	Licence for dredge at Quay 2, Methil. Both operations are small scale / limited duration and are within existing active harbour / quayside areas. The AA for the Aberdeen project concluded that there would be no adverse effect on the site integrity of the Outer Firth of Forth and St Andrews Bay Complex pSPA or the Firth of Forth SPA provided that the conditions set out in the AA are complied with. There may be overlap with Marine Licence for dredge at Quay 2, Methil, however this operation is	No 'in combination' adverse effects with Natura Interests.
			relatively small scale / limited duration.	
Maintenance Dredging and sea deposit - Tayport Harbour, Tayport	Application (00008795)	The programme of work involves the removal of up to 21,000 m3 of silt and sand that has accumulated on the bed of the harbour basin and approach channel, as a result of tidal flow and natural deposition. This work will be a maintenance dredge and is proposed to take place between 4th January 2021 and 31st December 2021.	There may be overlap with Marine Licence for dredge at Quay 2, Methil, however this operation is relatively small scale / limited duration.	No 'in combination' adverse effects with Natura Interests.
Coastal Repairs at Burntisland	Application (00008875)	Repairs and proactive works to scour & voiding - Reposition failed rock armour that has slipped down to beach. Use previous material that remains on the site. Infill scour hole in the costal defence that has	Due to be completed November 2020 therefore no interaction with proposed dredge at Methil.	No 'in combination' adverse effects with Natura Interests.

Project	Status	Description	Potential Interaction?	Potential for Likely Significant Effects?
		caused the cement bags to collapse after being washed out. Works to be carried out at low tide to allow access along beach by small excavator (to position rock armor) and small dumper truck. The works are to repair the sea wall protecting the rail line.		
Coastal repairs at Culross, Fife	Application (00008874)	Repairs and proactive works to scour & voiding.	Due to be completed November 2020 therefore no interaction with proposed dredge at Methil.	No 'in combination' adverse effects with Natura Interests.
Impact and Vibro Piling - Port of Dundee	Application (00008958)	Vibro-Piling and Impact Piling as part of Port of Dundee East expansion works. EPS Risk Assessment for Firth of Tay and Eden Estuary SAC / Firth of Tay and Eden Estuary SPA / Outer Firth of Forth and St Andrews Bay Complex proposed SPA / Barry Links SAC / Isle of May SAC/ River Tay SAC (migratory fish species) and Moray Firth SAC (bottlenose dolphin in the Firth of Tay, which may be linked to the Moray Firth population).	EPS Licence application as well as works licence to address potential impacts on cetacean interests associated with a number of designated sites. The licenced works are anticipated to occur between October 2020 and June 2022, with impact piling limited to a maximum of four hours within a 24 hour period. The works at Dundee may overlap with proposed dredge at Methil. With mitigation for works at Dundee and limited scale and duration of the works at Methil, no in combination effects are expected on the key designations.	No 'in combination' adverse effects with Natura Interests.
Pontoon - Port Edgar Marina	Application (00008879)	Provision of new 180m pontoon walkway (See Appendix). Duration of works expected to take	The installation of pontoons on the West Pier is predicted to take 30 days to complete. There is	No 'in combination' adverse effects with Natura Interests.

Project	Status	Description	Potential Interaction?	Potential for Likely Significant Effects?
		approximately four weeks and to commence following the completion of the capital dredge.	potential for an overlap in programmes. Both operations are small scale / limited duration and are within existing active harbour / quayside areas.	
Capital Dredging and Sea Deposit - Port Edgar Marina	Application (00008766)	The proposals are to dredge to a depth of between 1m and 1.5m within the dredge area around the West Pier. There will be a requirement for an annual maintenance of the dredge area, to ensure vessels can continue to use the West Pier Pontoon. The installation of the pontoon itself needs no further excavation as the steel columns will be attached to the existing concrete pier support poles. The HRA Screening undertaken concludes that 'Due to the small area affected by the proposed works, the level of SPA birds likely to be using the area for foraging and the extensive suitable foraging habitat located adjacent to the site, it is not considered that any key relationships between wintering birds and the site (namely important feeding areas, roosting areas and commuting routes) will be affected'.	The dredging works are envisaged to take 30 days to complete with works scheduled for February 2020 and predicted to take between one and two weeks. Both operations are small scale / limited duration and are within existing active harbour / quayside areas.	No 'in combination' adverse effects with Natura Interests.
Water	Application	Water Injection Dredging (WID) of engineered	Assume Licence duration of 3	No 'in combination'
Maintenance	(00000+2)	Grangemouth and Leith locks and dock entrances.	would overlap with Marine	Natura Interests.
Dredging -		Flushing the agitated material back into the estuary,	Licence for dredge at Quay 2,	
Grangemouth		from where it originated. THSD, backhoe, grab,	Methil. Dredging would be	
and Leith		plough dredging could all pose significant and	expected to be carried out over	
Docks			approximately 3 to 4 days each	

Project	Status	Description	Potential Interaction?	Potential for Likely
		detrimental risks to the infrastructure and/or incur lengthy delays to the normal operations of the ports.	Campaign. Combined, the operations cover a small area / limited duration and are within existing active harbour / quayside areas.	Significant Lifects:
Seawall Repair – Torryburn, Fife -	Application (00008820)	Maintenance to the existing seawall at Torryburn, specifically repairs and proactive works to the scouring & voiding due to rapid deterioration. We shall carry out immediate repairs to area of slip on stone revetment. Stonework need not be reset but area stabilised by use of concrete.	Was due to be completed July 2020 therefore no interaction with proposed dredge at Methil. If timescales have changed then no issues noted as operations are small area / limited duration and are within existing low sensitivity areas i.e. active quayside in case of Methil and coastal protection at Torryburn.	No 'in combination' adverse effects with Natura Interests.
Construction and Maintenance Works - Forth Road Bridge, Forth	Consented (05568/ 00008903)	From the commencement of the contract in 2015, Amey have operated and maintained the Forth Road Bridge. This Licence covers continued maintenance of the FRB. Appropriate Assessment was undertaken to support the Licence and concluded no adverse effects on the Firth of Forth SPA or Forth Islands SPA as a result of the works with the implementation of mitigation and control measures. Further consultation on noisy activities to be advanced with NatureScot as required.	Duration of the five year contract until June 2020 although may have been extended with COVID. No adverse interaction between the two projects.	No 'in combination' adverse effects with Natura Interests.

7 Stage 5: Can It Be Ascertained That The Proposal Will Not Adversely Affect The Integrity Of The Site?

7.1.1 In the light of the appraisal, the proposal for capital and maintenance dredging for a localised dredge pocket adjacent to existing quayside at Energy Park Fife will not adversely affect the integrity of Natura Sites assessed or the qualifying interests.

Natura Site	Conclusion		
1 Firth of Forth SPA	The proposal will not adversely affect the		
1.11101101101017	integrity of the site		
2 Forth Islands SPA	The proposal will not adversely affect the		
	integrity of the site		
3. Outer Firth of Forth and St	The properal will not adversely affect the		
Andrews Bay Complex proposed	integrity of the site		
Marine SPA	integrity of the site		
A Isla of May SAC	The proposal will not adversely affect the		
4. ISIE OF WAY SAC	integrity of the site		
E Finth of Tour and Edge Estuary CAC	The proposal will not adversely affect the		
5. FILLI OF TAY AND EDEN ESLUARY SAC	integrity of the site		
6. Berwickshire and North	The proposal will not adversely affect the		
Northumberland Coast SAC	integrity of the site		
7 Diver Teith SAC	The proposal will not adversely affect the		
7. KIVEL TEILII SAC	integrity of the site		

7.1.2 Mitigation is not required due to nature and scale of the dredge proposals, however, Best Practice will be applied based on the following:

Best Practice Measures	Reason
Timing of the works – dredge will be	To minimise disturbance during sensitive
undertaken in spring / summer	wintering period.
Duration of the works - capital dredge	
will be c. 4 weeks and maintenance	To minimise disturbance
dredge c. 1 week	
Sediment sampling	To protect the water environment and avoid mobilisation of contaminants within sediments.
Awareness – dredge contractors will	
be made aware of environmental	
sensitivities and environmental	To protect the environment and known
management information and method	ecological sensitivities.
statements will be agreed prior to	
start of each campaign.	

50711_001 LOCATION PLAN



2.0km

50711_002 PROPOSED DREDGE POCKETS



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	Eastings	Northings	Nat. Grid Ref.	Latitude	Longitude
BH-P01	336949.03	698580.03	NT 33695 69858	56°10.54546'	-003°00.94116'
BH-P02	336946.98	698451.26	NT 33695 69845	56°10.47603'	-003°00.94131'
BH-P02A	336977.70	698482.91	NT 33698 69848	56°10.49333'	-003°00.91208'
BH-P03	336975.61	698541.18	NT 33698 69854	56°10.52472'	-003°00.91493'
BH-P04	336960.83	698512.05	NT 33696 69851	56°10.50890'	-003°00.92879'
BH-P05	337046.40	698547.04	NT 33705 69856	56°10.52844'	-003°00.84660'
BH-P06	337111.76	698519.73	NT 33711 69852	56°10.51424'	-003°00.78305'
BH-P07	337025.11	698508.96	NT 33703 69851	56°10.50775'	-003°00.86663'
			•	•	•

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Job No. 50711

50711_003 PROPOSED DREDGE DISPOSAL LOCATIONS



1km



