National Planning Framework 3
Habitat Regulations Appraisal Record

The Scottish Government
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1 Habitats Regulation Appraisal Record for the National Planning Framework 3

1.1 Introduction to the National Planning Framework (NPF3)

1.1.1 The third National Planning Framework (NPF3) will set the context for development planning in Scotland and provide a framework for the spatial development of the country as a whole. The 12-week consultation period on the Main Issues Report (MIR) for the NPF3 ended on 23rd July 2013 with the analysis of responses published on 28th October 2013. The proposed NPF3 was laid in Parliament on 14 January 2014 and subjected to a 60 day period of Parliamentary scrutiny. The finalised NPF3 was published in June 2014.

1.1.2 The NPF3 is required to undertake Habitats Regulations Appraisal (HRA), under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), as it will be used as a material consideration by those who are responsible for deciding the outcome of applications for project consents and may contain proposals that have the potential to affect European sites. The decision on requirement constitutes Stage 1 of the HRA process as set out in guidance by Scottish Natural Heritage (SNH) (hereafter referred to as “the Guidance”).

1.2 Introduction to the Habitats Regulation Appraisal (HRA)

1.2.1 The HRA process requires an appraisal of whether the components of the NPF3, either alone or in combination, will result in ‘likely significant effects’ (LSE) on European Sites, those sites designated under the European Habitats or Birds Directives as Special Areas for Conservation (SACs), Special Protection Areas (SPAs) or as Ramsar sites. Elements of a plan with minor residual effects (MRE) should be screened for in-combination effects. If it is determined that LSE on a European site may occur then the NPF3 will be subject to an 'appropriate assessment' of its implications for the European site in view of the sites conservation objectives. It is at the Appropriate Assessment stage when it can be ascertained if the NPF3 will avoid adverse effects on the integrity of European Sites.

1.2.2 The initial HRA Screening Record, published alongside the MIR, set out the first steps of the appraisal process in terms of identifying proposed national developments with potential for LSE. This HRA Record sets out the findings from the concluding stages of the HRA. This has included further detailed screening analysis in order to identify LSE of a national development on a

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2 Ramsar sites are wetlands of international importance designated under the Ramsar Convention and are also nature conservation sites of international importance. Within Scotland, all Ramsar sites are also designated within the European Natura network.
particular European site, and appropriate assessment and identification of mitigation where required. The following section details the methodology and tasks undertaken to date.

1.3 Approach to the HRA

1.3.1 This HRA has been undertaken with reference to the Guidance. However, given the strategic and nationwide nature of the plan and in the interests of early and effective appraisal, the process to date has been adapted to suit the strategy.

1.3.2 The timing of the HRA alongside the development of the NPF3 is illustrated in Figure 1 below.

Figure 1: HRA and NPF3 production
1.3.3 To date the HRA has been undertaken in a number of phases:

1. Research to gather the evidence base; identifying sensitivities of European sites across Scotland and the potential effects of different types of development.

2. Initial screening of the proposed national developments to ascertain those that are considered too general for LSE to be identified at this stage.

3. Identifying activities associated with the national developments, the potential effects of activities both alone or in combination, and the sensitivities of European sites to these within detailed HRA screening. Essentially this process sought to establish the links and pathways between the proposed national developments and particular European sites and hence LSE.

4. An appropriate assessment of the potential for adverse effects on the integrity (AEOI) of the remaining sites and consideration of mitigation measures.

**NPF3 HRA Research project**

1.3.4 A research project commenced in late 2012 alongside the call for proposals for national developments. At this point the number, location and type of proposed national developments were unknown. However, at this early stage it was important to collect information about European sites and to consider the potential effects of development types that might be included in the NPF3. This approach is consistent with the Guidance.

1.3.5 The starting point for the research project was an analysis of all of Scotland’s SPA, SAC and Ramsar sites. Using the primary qualifying interests of the sites, environmental qualities were derived. Within the research project these are described as “a distinct feature or function that supports the qualifying features of a site.” From the environmental qualities, environmental sensitivities were then identified. These are defined as “a change in an environmental quality that has the potential to affect the qualifying features of a Natura 2000 site and thus its overall integrity”. Environmental qualities and sensitivities are displayed overleaf. These have been attributed to every European site in Scotland.
Environmental Quality | Environmental Sensitivity
--- | ---
Balanced air quality | Changes in air quality
Nutrient-balanced water | Changes in water nutrient balance
Balanced hydrological regime | Changes in hydrological regime
Balanced coastal processes | Changes in coastal processes
Physical extent | Reduced physical extent
Habitat connectivity | Reduced habitat connectivity
Balanced soil quality | Changes in soil quality
Natural predator-prey relationships | Changes in predator-prey relationships
Appropriate foraging resources | Reduction in foraging resources
Appropriate sheltering resources | Reduction in sheltering resources
Appropriate levels of noise and vibration | Changes in noise and vibration
Appropriate levels of human disturbance | Changes in human disturbance

1.3.6 Environmental sensitivities were then linked to a set of potential impact types as follows: Habitat loss/deterioration; Severance and fragmentation; Hydrological change; Sedimentation and water-borne pollution; Physical disturbance; Noise and vibration disturbance; Changes in air quality; Changes in population viability. Potential impacts are described as “the potential consequences of a proposed development on the qualifying features of a European site”.

1.3.7 Potential impact types were then linked to the conservation objectives of European sites, and to the types of development that could bring about such impacts. The purpose of this part of the research was to provide a tool to help subsequent screening and appropriate assessment by highlighting the links between development likely to be promoted in the NPF3 and European sites with features sensitive to the potential activities that the developments might promote.

1.3.8 The outputs of the research were compiled into a spreadsheet framework and also into a spatial framework using Geographical Information Systems (GIS). The GIS tool has also been used to inform the screening process.

*Initial Screening*

1.3.9 The initial phase of screening national developments focused on identifying and establishing whether a spatial representation of the proposed national developments at the MIR stage could be defined. Some of the proposed national developments represented an amalgamation of candidate developments, submitted during the call for sites, without defined boundaries and some had firmer defined spatial boundaries. Some were already in
development, or proposed as national developments in NPF2 whilst others were, at this stage, emerging concepts.

1.3.10 National developments, or elements of them, which could be mapped, were viewed in terms of potential links to European sites using both a consideration of distance and in terms of qualifying features. This approach sought to capture sites that could be affected by potential impacts of a development based on a reasonable radius, offsite supporting habitat for sites and those sites with mobile species that might be affected.

1.3.11 These European sites formed the list of sites to consider in more detail as the national developments evolved. The list was supplemented with additional sites identified by SNH that were considered to have a potential link or pathway to a national development after the publication of the MIR.

1.3.12 National developments that could not be spatially determined with reasonable certainty, and those which could not be reasonably linked by a clear pathway to a specific European Sites, were screened out of the HRA using Stage 5(3e) of the guidance. This states that effects on a particular European site cannot be identified, because the policy is too general. However, it was made clear that if during the process of developing the NPF3, greater detail became available that might establish a clear link to particular sites the results of the screening could be re-examined. The results of this first stage of screening were set out in an Initial Screening document available alongside the MIR.

1.3.13 Relevant previous HRA work was sourced and reviewed to help to inform the ongoing process of establishing the links between national developments and European sites and for use within in-combination assessment where necessary.

**HRA Record for the proposed NPF3**

1.3.14 After the completion of consultation on the MIR the national developments were refined to the final list of 14. This included the amalgamation of four proposed national developments into two and the identification of a further two national developments which required screening.

1.3.15 Each national development has been reviewed in turn, revisiting the initial screening decisions as necessary. Where a clear link or pathway to a European site or sites could not be established, the national development has been screened out of the assessment on the basis that it is too general (screening stage 5(3e) of the guidance).

1.3.16 Where national developments were considered to be of a type that might have the potential for some degree of effect, European sites of relevance,

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identified through proximity and mobility of species, were analysed in order to form a view on whether there was a clear link or pathway between the national development and the sites’ Qualifying Interest(s). This process involved the completion of a standard proforma to record information about the site based on the example within the guidance. The site records for European sites considered in the process are included within the accompanying sites annex.

1.3.17 When screening for LSE and a clear link or pathway was identified it was determined that these relationships would require an appropriate assessment. The details of the screening process can be viewed in Appendix A and are summarised in Section 2. During this process mitigation measures were identified and applied as necessary.

1.3.18 The rest of this HRA Record documents the results of the appraisal of the content of the NPF3 as considered by parliament during the 60 day period.

1.3.19 The HRA Record was signed off by SNH prior to adoption of the finalised NPF3.
2 Screening Results

2.1 Screening summary table

2.1.1 The following table details the results of the screening for LSE of national developments. The details of the assessment in full are included in Appendix A.

<table>
<thead>
<tr>
<th>National Development</th>
<th>HRA Summary</th>
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</thead>
<tbody>
<tr>
<td>Ravenscraig</td>
<td>An investigation of the relationship between the national development and a number of European sites, within a reasonable proximity, was undertaken. For the majority of these sites whilst development at Ravenscraig will result in change, a clear link or pathway could not be established and the sites were screened out under Screening Step 3c of the guidance. A potential link to the Clyde Valley Woods SAC, resulting from potential recreational pressure was identified. However, the effect was not considered to be significant and it was screened out under Screening Step 3d of the guidance. Minor residual effects were considered in combination with other plans and projects and the national development is not considered to have LSE alone or in combination with other plans and projects. Minor residual effects will remain from potential for physical damage to the qualifying habitat from a minor increase in human disturbance.</td>
</tr>
<tr>
<td>Dundee Waterfront</td>
<td>The national development was screened against a number of European sites. Potential for LSE on the following European sites has been identified: Firth of Tay and Eden Estuary SAC, Firth of Tay and Eden Estuary SPA, Isle of May SAC, Moray Firth SAC and River Tay SAC. The development has therefore been subject to an appropriate assessment.</td>
</tr>
<tr>
<td>Carbon Capture and Storage Network and Thermal Generation</td>
<td>The national development was screened against a number of European sites. Potential for LSE on the following European sites has been identified: Buchan Ness to Collieston Coast SPA, Firth of Forth SPA and Ramsar, Forth Islands SPA, Isle of May SAC, Moray Firth SAC and River Teith SAC. This is based on the potential for noise and disturbance and potentially mortality on bottlenose dolphin, bird species, Grey seal, Atlantic salmon and species of lamprey. The development has therefore been subject to an appropriate assessment.</td>
</tr>
<tr>
<td>High Voltage Electricity Transmission Network</td>
<td>At this stage the exact location of new infrastructure cannot be determined and cannot be linked with certainty to specific European sites. Therefore this national development was considered too general to reasonably consider LSE either alone or in combination. It was screened out under Stage 5: Screening Step 3(e) of the Guidance.</td>
</tr>
<tr>
<td>Pumped Hydroelectric Storage</td>
<td>The national development was screened against a number of European sites. Potential for LSE on the following European sites has been identified: Ben Lui SAC, Glen Etive and Glen Fyne SPA and Loch Etive Woods SAC. This is based on the potential for pollution and habitat loss during construction and operation of the development on the qualifying interests of the sites (a range of upland and alpine habitats and associated plant communities, golden eagles, woodland and otter). The development has therefore been subject to an appropriate assessment.</td>
</tr>
<tr>
<td>Central Scotland Green Network</td>
<td>Given that the projects and activities that may be promoted by the CSGN are not defined and cannot be ascertained at this point in time, the national development is considered too general to reasonably</td>
</tr>
<tr>
<td>National Development</td>
<td>HRA Summary</td>
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<tr>
<td>National Development</td>
<td>identify European sites that could be affected either alone or in combination. Therefore it and has been screened out of requiring further assessment under Stage 5: Screening Step 3(e) of the Guidance. Furthermore the national development includes elements of development for environmental improvement which seek to enhance the natural environment within the CSGN area. Therefore elements of this development could be considered as unlikely to have significant effects on European sites and could be screened out under Stage 5: Screening Step 3(a) of the Guidance.</td>
</tr>
<tr>
<td>Metropolitan Glasgow Strategic Drainage Plan</td>
<td>The potential for a link or pathway between the Metropolitan Glasgow Strategic Drainage Plan and the Inner Clyde Estuary SPA was investigated. However, the development is not considered to have LSE alone or in combination on the Natura network and has been screened out of requiring further assessment under Stage 5: Screening Step 3(e) of the Guidance.</td>
</tr>
<tr>
<td>National Long Distance Cycling and Walking Network</td>
<td>The national development was screened against a number of European sites. Potential for LSE on the following European sites has been identified: Airds Moss SAC, Loch of Inch and Torrs Warren SPA, Luce Bay and sands SAC, Muirkirk and North Lowther Uplands SPA, Mull of Galloway SAC, River Bladnoch SAC, River Spey SAC, River Spey - Insh marshes SPA, River Teith SAC and Upper Strathearn Oakwoods SAC. This is based on the potential for impacts on sites associated with trampling, disturbance and potential for some level of pollution. The development has therefore been subject to an appropriate assessment in relation to these sites. A potential link to the Arran Moors SPA, resulting from potential recreational pressure was identified. This could manifest in terms of disturbance and potential damage to offsite supporting habitat. However, these are deemed not to be LSE and it was screened out under Screening Step 3d of the guidance. Minor residual effects were considered in combination with other plans and projects and the national development is not considered to have LSE alone or in combination with other plans and projects. Minor residual effects remain as a result of from minor physical loss of and physical damage to supporting habitat as well as non-physical disturbance arising from land use change and increased human disturbance.</td>
</tr>
<tr>
<td>High Speed Rail</td>
<td>The potential for a link or pathway between the national development and European sites between Edinburgh and Glasgow was investigated. However, the development cannot, at this stage, give sufficient spatial detail to consider LSE as it is too general. The national development has been screened out under Stage 5: Screening Step 3(e) of the Guidance.</td>
</tr>
<tr>
<td>Strategic Airport Enhancements</td>
<td>The national development was screened against a number of European sites. Potential for LSE on the following European sites has been identified: Black Cart SPA relating to Glasgow Airport element, Firth of Forth SPA and Forth Islands SPA relating to Edinburgh Airport, Inner Moray Firth SPA and Moray and Nairn Coast SPA relating to Inverness Airport. This is based on the potential for impacts on offsite supporting habitat from the developments. The development has therefore been subject to an appropriate assessment.</td>
</tr>
<tr>
<td>Grangemouth Investment Zone</td>
<td>The national development was screened against a number of European sites. Potential for LSE on the following European sites has been identified: Firth of Forth SPA and Ramsar, Forth Islands SPA, Isle of</td>
</tr>
</tbody>
</table>
### National Development | HRA Summary
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May SAC and River Teith SAC. This is based on the potential for noise, disturbance and potentially mortality on grey seal, bird species, Atlantic salmon and species of lamprey. The development has therefore been subject to an appropriate assessment.

**Freight Handling Capacity on the Forth**
The national development was screened against a number of European sites. Potential for LSE on the following European sites has been identified: Berwickshire and North Northumberland Coast SAC, Firth of Forth SPA, Firth of Tay and Eden Estuary SAC, Forth Islands SPA, Imperial Dock, Leith SPA, Isle of May SAC and River Teith SAC. This is based on the potential for noise and disturbance and potentially mortality on grey seal, bird species, Atlantic salmon and species of lamprey. The development has therefore been subject to an appropriate assessment.

**Aberdeen Harbour**
The national development was screened against a number of European sites. Potential for LSE on the following European sites has been identified: Berwickshire and North Northumberland Coast SAC, Dornoch Firth and Morrich More SAC, Firth of Tay and Eden Estuary SAC, Fowlsheugh SPA, Isle of May SAC, Montrose Basin SPA, Moray Firth SAC, River Dee SAC and Ythan Estuary, Sands of Forvie and Meikle Loch SPA. This is based on the potential for noise and disturbance on species of seal, birds and Bottlenose dolphin. The development has therefore been subject to an appropriate assessment.

**National Digital Network**
At this stage the exact location of new cable construction cannot be determined and cannot be linked with certainty to specific European sites. Therefore this national development is considered too general to reasonably consider LSE either alone or in combination. It was therefore **screened out** under Stage 5: Screening Step 3(e) of the Guidance.

### 2.2 Screening conclusions

2.2.1 Screening identified a number of potential impact pathways between national developments and certain European sites for which LSE could not be ruled out. Given the type of effects, simple mitigation measures to avoid LSE have not been identified at the screening stage and these relationships have been subject to an appropriate assessment to consider if there will be adverse effects on the integrity of European sites.

2.2.2 Two European sites, Clyde Valley Woods SAC and Arran Moors SPA were identified as having MRE after screening and these were considered for in-combination effects. The detail of the in-combination assessment is provided in Appendix B. For both sites no internal in combination effects were noted, as other national developments do not have LSE or MRE. Furthermore no in-combination effects with other plans and projects were identified. As a result these sites were screened out and did not require an appropriate assessment. There remains potential for MRE as detailed in the table above.
3 Appropriate Assessment

3.1 Introduction

3.1.1 Following the screening assessment detailed in Section 2, a number of national developments were identified as having the potential for LSE on a number of European Sites alone and have therefore been subject to an Appropriate Assessment.

3.1.2 A precautionary approach to the assessment has been taken with regards to the potential impacts identified. Due to the strategic nature of the parameters for several of the national developments described and set out within the NPF3 there is some inherent difficulty in determining adverse effects on integrity with precision. For example the precise locations for development activity could not be ascertained in all cases, so whilst activity associated with a national development might have potential for a LSE, adverse effects on the integrity of an individual site would be difficult to establish. Therefore the HRA assessed the potential effects of the NPF3 at a level in accordance with the level of detail contained within it.

3.2 Appropriate Assessment summary table

3.2.1 Appendix A contains full details of the appropriate assessment. The following table sets out a summary of the assessment findings. With the available mitigation identified, no adverse effects on site integrity from the national developments alone are expected. However it is anticipated that MRE could remain from some national developments which therefore have been considered in combination with other national developments (in-plan) and externally with other plans and policies.

<table>
<thead>
<tr>
<th>National Development</th>
<th>Appropriate Assessment Summary</th>
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<tbody>
<tr>
<td>Ravenscraig</td>
<td>No LSE were identified at the screening stage, thus an appropriate assessment is not required. Potential for MRE on Clyde Valley Woods SAC in combination with the effects of other national developments, and other relevant plans and projects.</td>
</tr>
<tr>
<td>Dundee Waterfront</td>
<td>The Appropriate Assessment and identification of mitigation measures demonstrate that the defined national development will not result in adverse effects on site integrity. Aspects of any development not included in the national development description, such as land reclamation, have not been accounted for in this HRA. Any development seeking national development status and including land reclamation must first demonstrate no adverse effects on the site integrity of the Firth of Tay and Eden Estuary SAC through an Appropriate Assessment. However, there may be MRE arising from non-physical disturbance as a result of noise and vibration that may disturb qualifying species, and physical loss of supporting habitats.</td>
</tr>
<tr>
<td>National Development</td>
<td>Appropriate Assessment Summary</td>
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</tbody>
</table>
| Through the pathways outlined above, the following qualifying interests may be impacted: | - Firth of Tay and Eden Estuary SAC: Harbour seal  
- Isle of May SAC: Grey seal  
- Moray Firth SAC: Bottlenose dolphin  
- Firth of Tay and Eden Estuary SPA: Redshank, Little tern, Sanderling, Dunlin, Oystercatcher, Velvet scoter, Black-tailed godwit, Bar-tailed godwit, Common scoter, Eider, and Pink-footed Goose  
- River Tay SAC: Atlantic salmon, Sea lamprey, River lamprey.  

These effects have been considered in combination with the effects of other national developments, and other relevant plans and projects. |
| Carbon Capture and Storage Network and Thermal Generation | The Appropriate Assessment and identification of mitigation measures demonstrate that the defined national development will not result in adverse effects on site integrity. However, there could be MRE arising from non-physical disturbance, non-toxic contamination and physical loss of supporting habitats.  

Through the pathways outlined above, the following qualifying interests may be impacted:  
- Isle of May SAC: Grey seal  
- Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.  
- Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.  
- Moray Firth SAC: bottlenose dolphin  
- River Teith SAC: Atlantic Salmon, brook, river and sea lamprey  
- Buchan Ness to Collieston Coast SPA: Breeding populations of fulmar, guillemot, herring gull, kittiwake and shag.  

These effects have been considered in combination with the effects of other national developments, and other relevant plans and projects.  
| High Voltage Electricity Transmission Network | The national development is screened out and does not require an appropriate assessment. |
| Pumped Hydroelectric Storage                   | The Appropriate Assessment and identification of mitigation measures demonstrate that the defined national development will not result in adverse effects on site integrity. However, there may be MRE arising from damage to supporting and qualifying habitats (although mitigation should remove this risk) and non-physical disturbance.  

Through the pathways outlined above, the following qualifying interests may be impacted:  
- Ben Lui SAC: a range of upland and alpine habitats and associated plant communities |
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<th>National Development</th>
<th>Appropriate Assessment Summary</th>
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<tbody>
<tr>
<td>Glen Etive and Glen Fyne SPA: Golden eagle</td>
<td>These effects have been considered in combination with the effects of other national developments, and other relevant plans and projects.</td>
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<tr>
<td>Loch Etive Woods SAC: designated woodland habitats and otter</td>
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<tr>
<td>Central Scotland Green Network</td>
<td>The national development is <em>screened out</em> and does not require an appropriate assessment.</td>
</tr>
<tr>
<td>Metropolitan Glasgow Strategic Drainage Plan</td>
<td>The national development is <em>screened out</em> and does not require an appropriate assessment.</td>
</tr>
<tr>
<td>National Long Distance Cycling and Walking Network</td>
<td>The Appropriate Assessment and identification of mitigation measures demonstrate that the defined national development will not result in adverse effects on site integrity. However, there may be MRE arising from the physical loss of supporting habitat and potentially qualifying habitat, physical damage of habitats or species and non-physical disturbance to species. Through the pathways outlined above, the following qualifying interests may be impacted:</td>
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<tr>
<td>Arran Moors SPA: Hen Harrier (MRE identified)</td>
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<td>Airds Moss SAC: Blanket bog</td>
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<tr>
<td>Loch of Inch and Torrs Warren SPA: Birds - Greenland white fronted goose, hen harrier</td>
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<td>Luce Bay and Sands SAC: Coastal Habitat and Great Crested Newt.</td>
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<td>Muirkirk and North Lowther Uplands SPA: Birds - hen harrier, short-eared owl, merlin, peregrine falcon, golden plover.</td>
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<td>Mull of Galloway SAC: vegetated sea cliffs</td>
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<td>River Bladnoch SAC: Atlantic salmon</td>
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<td>River Spey SAC: Atlantic salmon, sea lamprey, otter, freshwater pearl mussel</td>
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<tr>
<td>River Spey – Insh Marshes SPA: Birds - Hen harrier, Osprey, Spotted Crake, Whooper swan, Wood sandpiper</td>
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<tr>
<td>River Teith SAC: Atlantic Salmon, brook, river and sea lamprey</td>
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<tr>
<td>Upper Strathearn Oakwoods SAC: Western acidic oak woodland</td>
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</tr>
<tr>
<td>High Speed Rail</td>
<td>The national development is <em>screened out</em> and does not require an appropriate assessment.</td>
</tr>
<tr>
<td>Strategic Airport Enhancements</td>
<td>The Appropriate Assessment and identification of mitigation measures demonstrate that the defined national development will not result in adverse effects on site integrity. However, there may be MRE arising from physical loss of supporting habitat and non-physical disturbance. Through the pathways outlined above, the following qualifying interests may be impacted:</td>
</tr>
<tr>
<td>Black Cart SPA: Whooper swan</td>
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<tr>
<td>Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew,</td>
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### National Development

<table>
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<tr>
<th>National Development</th>
<th>Appropriate Assessment Summary</th>
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<td>wigeon, mallard and lapwing.</td>
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<tr>
<td>- Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.</td>
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<tr>
<td>- Inner Moray Firth SPA: Common tern, osprey, bar-tailed godwit, greylag goose, red-breasted merganser, redshank, scaup and a waterfowl assemblage that in addition to some of the aforementioned species, includes curlew, oystercatcher, goosander, goldeneye, teal, wigeon and cormorant.</td>
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<tr>
<td>- Moray and Nairn Coast SPA: osprey, bar-tailed godwit, greylag goose, pink-footed goose, redshank, and a waterfowl assemblage that in addition to some of the aforementioned species, includes dunlin, oystercatcher, red-breasted merganser, velvet scoter, common scoter, long-tailed duck and wigeon.</td>
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</tr>
</tbody>
</table>

These effects have been considered in combination with the effects of other national developments, and other relevant plans and projects.

### Grangemouth Investment Zone

<table>
<thead>
<tr>
<th>National Development</th>
<th>Appropriate Assessment Summary</th>
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</thead>
<tbody>
<tr>
<td>The Appropriate Assessment and identification of mitigation measures demonstrate that the defined national development will not result in adverse effects on site integrity. However, there may be MRE arising from physical loss of supporting habitats, non-physical disturbance and non-toxic contamination.</td>
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<tr>
<td>Through the pathways outlined above, the following qualifying interests may be impacted:</td>
<td></td>
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<tr>
<td>- Isle of May SAC: Grey seal</td>
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<tr>
<td>- Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.</td>
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<tr>
<td>- Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.</td>
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<tr>
<td>- River Teith SAC: Atlantic Salmon, brook, river and sea lamprey</td>
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These effects have been considered in combination with the effects of other national developments, and other relevant plans and projects.

### Freight Handling Capacity on the Forth

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<td>Through the pathways outlined above, the following qualifying interests may be impacted:</td>
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<tr>
<td>- Berwickshire and North Northumberland Coast SAC: Grey seal</td>
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</table>
# National Development

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</thead>
<tbody>
<tr>
<td>Isle of May SAC</td>
<td>Grey seal</td>
</tr>
<tr>
<td>Firth of Forth SPA</td>
<td>Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.</td>
</tr>
<tr>
<td>Firth of Tay and Eden Estuary SAC</td>
<td>Harbour seal</td>
</tr>
<tr>
<td>Forth Islands SPA</td>
<td>Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.</td>
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<tr>
<td>Imperial Dock, Leith, SPA</td>
<td>Common tern</td>
</tr>
<tr>
<td>River Teith SAC</td>
<td>Atlantic Salmon, brook, river and sea lamprey</td>
</tr>
</tbody>
</table>

These effects have been considered in combination with the effects of other national developments, and other relevant plans and projects.

### Aberdeen Harbour

The Appropriate Assessment and identification of mitigation measures demonstrate that the defined national development will not result in adverse effects on site integrity. However, there may be MRE arising from physical loss of supporting habitats, non-physical disturbance and non-toxic contamination.

Through the pathways outlined above, the following qualifying interests may be impacted:

- Berwickshire and North Northumberland Coast SAC: Grey seal
- Dornoch Firth and Morrich More SAC: Harbour seal
- Firth of Tay and Eden Estuary SAC: Harbour seal
- Isle of May SAC: Grey seal
- Moray Firth SAC: Bottlenose dolphin
- Fowlsheugh SPA: Birds - guillemot, kittiwake, razorbill, fulmar and herring gull
- Montrose Basin SPA: Birds - dunlin, eider, greylag goose, knot, oystercatcher, pink-footed goose, redshank, Shelduck, wigeon
- River Dee SAC: Atlantic Salmon, freshwater pearl mussel
- Ythan Estuary, Sands of Forvie and Meikle Loch SPA: Birds - common tern, eider, lapwing, little tern, pink-footed goose, redshank and sandwich tern

These effects have been considered in combination with the effects of other national developments, and other relevant plans and projects.

### National Digital Network

The national development is **screened out** and does not require an appropriate assessment.
4 In-Combination Assessment at the Appropriate Assessment Stage

4.1 Introduction

4.1.1 The Habitats Regulations require that when an Appropriate Assessment of a plan is undertaken it determines whether there will be an adverse effect on European site integrity. Case law and practice in HRA has indicated that effects “either alone or in-combination with other plans or projects” should be considered at both the screening for LSE stage and also at the Appropriate Assessment stage.

4.1.2 Whilst there may be only minor residual effects from the national developments in the NPF3 individually, the combined effects of plans, projects, policies or proposals both within the plan and external to the plan, could accumulate to be significant. These relationships have been assessed within the appropriate assessment in-combination stage of HRA. Appendix B documents the details of this stage of work and the following paragraphs set out the process that was undertaken and the conclusions of the assessment.

4.2 In-plan in-combination assessment

4.2.1 The in-plan in-combination assessment determines whether MRE resulting from the proposed national developments of NPF3 act in-combination to give rise to an adverse effect on site integrity in view of the European sites conservation objectives. Further mitigation, where possible, can be applied to any cumulative adverse effects on site integrity, to ensure that the European sites conservation objectives are not compromised. Where MRE remain following the in-plan assessment, they have been assessed in-combination with external plans and policies to see whether these will result in cumulative effects.

4.3 External in-combination assessment

4.3.1 The external in-combination assessment looks at the proposed national developments that have the potential for MRE on European sites, in-combination with other relevant plans and projects. Where other plans and projects have undergone their own HRA, and where European sites correlated with sites considered in this HRA, it is the MRE that were identified that informed this external in-combination assessment.

As required by regulation 85B(1)(a) of The Conservation (Natural Habitats, &c) Regulations 1994 as amended by the The Conservation (Natural Habitats, &c) Amendment (Scotland) Regulations 2007, S.S.I. 2007/80.

4.3.2 Where external plans or projects concluded no adverse effects on site integrity but did not state whether MRE would remain, a pragmatic approach in line with the precautionary principle was taken whereby if it could not be reasonably concluded that the plan or project would not have MRE, it would be screened in for assessment.

4.4 In-combination assessment results

4.4.1 The results of the in-combination assessment, both in-plan and with external plans and policies are detailed in Appendix B. No further mitigation measures were identified in addition to those proposed at the Appropriate Assessment stage as it is considered that there are no adverse effects on site integrity either alone or in combination.

4.4.2 The NPF3 is a ‘higher tier plan’ that makes provisions which lower tier plans will take forward and implement in more detail. In many cases it is not possible to ascertain precisely where, when and how the national developments will come forward. The extent to which specific mitigation measures can be proposed at this stage is therefore limited.

4.4.3 Given that the lower-tier plans are likely to contain further details for assessment, that are not available at this strategic level, they will be able to identify and apply further mitigation measures to ensure no adverse effect on the integrity of the European sites. Furthermore, as national development projects come forward, project level HRA and both of these additional stages can apply the suggested mitigation contained within this HRA Record to ensure no adverse effect on the integrity of the European sites.

4.4.4 As stated within the HRA guidance, this method of determining no adverse effect on site integrity is not a way of deferring or delaying the appraisal process, but a way of securing mitigation measures in a lower tier plan where they cannot be secured in detail in the higher tier plan.

4.5 In-combination assessment summary table

4.5.1 The following table summarises the conclusions of the in-plan in-combination stage of the appropriate assessment set out in more detail in Appendix B.

4.5.2 From the assessment, it is concluded that there are no adverse effects on European site integrity either alone, or in combination. There are, however, MRE that may remain following the application of mitigation measures that future plans and projects will need to take into consideration.

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<table>
<thead>
<tr>
<th>European Site</th>
<th>Appropriate assessment in-combination assessment conclusions</th>
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<tbody>
<tr>
<td>Airds Moss SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of physical loss and damage resulting from some land use change and disturbance from humans associated with the National Long Distance Cycling and Walking Network national development. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Ben Lui SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of physical damage resulting from construction activity associated with the pumped hydroelectric storage national development. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Berwickshire and North Northumberland Coast SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of disturbance, toxic and non-toxic contamination, physical loss of supporting habitats and damage to qualifying interests resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Aberdeen Harbour and Freight Handling Capacity on the Forth national developments. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Black Cart SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of physical loss of habitat and non-physical disturbance arising from building construction / demolition activities construction activity associated with the Glasgow element of the Strategic Airport Enhancements national development. In the Glasgow and the Clyde Valley SDP, the plan is considered flexible enough to avoid adverse impacts on the SPA and that specific proposals that emerge through the LDP process should acknowledge the potential constraints on new developments in proximity to the SPA and highlight that suitable mitigation is dependent on the identification and development of suitable alternative roost sites if necessary. Renfrewshire Local Development Plan undertook an appropriate assessment of the potential impacts of the Glasgow Airport development on Black Cart SPA and considered that mitigation measures in the form of caveats included in policies E1 (economic Investment locations) and E5 (Glasgow Airport Operational Area) would be sufficient to ensure that the development would not have an adverse impact on the site integrity. Whilst MRE may be possible it is thought that these controls will help to avoid adverse effects on site integrity of the national development and other development associated with the airport. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Buchan Ness to Collieston Coast SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance, physical loss of supporting habitat and non-toxic contamination of qualifying features resulting from building construction / demolition and land use change associated with the Carbon Capture and Storage Network and Thermal Generation national development. The Aberdeen City and Shire SDP considered the same impact pathways and identified MRE to be considered in Local Development Plans. The Aberdeen City LDP HRA did not screen in this site and Aberdeenshire LDP HRA concluded that sufficient policy mitigation</td>
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<td>European Site</td>
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<td>was in place to avoid adverse effects on site integrity.</td>
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<td></td>
<td>Therefore there are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Dornoch Firth and Morrich More SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of disturbance, toxic and non-toxic contamination, physical loss of supporting habitat and damage to qualifying features resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Aberdeen Harbour national development. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Firth of Forth SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of disturbance, toxic and non-toxic contamination, and physical loss of habitat (including supporting habitat) resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Strategic Airport Enhancements, Carbon Capture and Storage Network and Thermal Generation, Freight Handling Capacity on the Forth and Grangemouth Investment Zone national developments. It is clear that there are a number of pressures on the Firth of Forth SPA not only from the national developments but also in combination with the proposals contained within a number of other plans. With the mitigation proposed within this HRA and included within the assessments of the relevant wider planning documents, the residual effects identified are considered to be minimal and would not in combination have adverse effects on site integrity. However, they will alongside the national developments have the potential for continuing the existing and identified pressure on this SPA. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Firth of Tay and Eden Estuary SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC and relating to the Harbour seal qualifying feature, as a result of disturbance, toxic and non-toxic contamination, physical loss of supporting habitat and damage to qualifying features resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Aberdeen Harbour, Freight Handling Capacity on the Forth and Dundee Waterfront national developments. It is considered that the mitigation within this HRA and embedded in the other plans will mean that in combination effects will not have adverse effects on site integrity. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<tr>
<td>Firth of Tay and Eden Estuary SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA, relating to the SPA qualifying features, as a result of disturbance and physical loss of supporting habitat resulting from construction activity associated with the Dundee Waterfront</td>
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<td>Forth Islands SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of disturbance, non-toxic contamination, and physical loss to qualifying features resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Strategic Airport Enhancements, Carbon Capture and Storage Network and Thermal Generation, Freight Handling Capacity on the Forth, Grangemouth Investment Zone national developments. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.</td>
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<td>Fowlsheugh SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of disturbance, non-toxic contamination, and physical loss to qualifying features resulting from construction activity, dredging, piling and land use change associated with the Aberdeen Harbour national development. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<tr>
<td>Glen Etive and Glen Fyne SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of disturbance and physical loss of habitat resulting from construction activity and land use change associated with the Pumped Hydroelectric Storage national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<tr>
<td>Imperial Dock, Leith SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of disturbance, toxic and non-toxic contamination, and physical loss to supporting habitat resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Freight Handling Capacity on the Forth national developments. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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| Inner Moray Firth SPA | The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance, and physical loss of supporting habitats resulting from building construction / demolition activity associated with the Inverness airport component of the Strategic Airport Enhancements national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all
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<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, non-toxic contamination, physical damage to species, physical loss of supporting habitats and toxic contamination resulting from dredging, increased levels of vessel movement, land use change, piling and building construction / demolition associated with the Aberdeen Harbour, Carbon Capture and Storage Network and Thermal Generation, Dundee Waterfront, Freight Handling Capacity on the Forth and Grangemouth Investment Zone national developments. It is considered that the mitigation suggested within this HRA and embedded through the requirements of relevant mitigation incorporated in the relevant plans, the in combination effect of the MRE will not be significant and therefore in combination there are no adverse effects on site integrity. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.</td>
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<tr>
<td>Loch Etive Woods SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats resulting from land use change, construction works and building construction / demolition associated with the Pumped Hydroelectric Storage national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td>Loch of Inch and Torrs Warren SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, arising from increased human disturbance and land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td>Luce Bay and Sands SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, arising from increased human disturbance and land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td>Montrose Basin SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance, physical loss of supporting habitats and non-toxic contamination, arising from building construction / demolition, dredging, land use change and piling activities associated with the Aberdeen Harbour national development. It is considered that the mitigation suggested within this HRA and embedded through the requirements of relevant mitigation incorporated in the relevant plans, such as</td>
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<tr>
<td>Moray and Nairn Coast SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance and physical loss of supporting habitats resulting from building construction / demolition activities associated with the Strategic Airport Enhancements national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<tr>
<td>Moray Firth SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, non-toxic contamination, physical damage of species, physical loss of supporting habitats and toxic contamination resulting from dredging, building construction / demolition, land use change, increased levels of vessel movement and piling activities associated with the Aberdeen Harbour, Carbon Capture and Storage and Thermal Generation Network and Dundee Waterfront national developments. It is clear that there are a number of pressures on the Moray Firth SAC and the Bottlenose Dolphin qualifying features, not only from the national developments but also in combination with the proposals contained within a number of other plans. With the mitigation proposed within this HRA and included within the assessments of the relevant wider planning documents, the residual effects identified are considered to be minimal and would not in combination have adverse effects on site integrity. However, they will alongside the national developments have the potential for continuing the existing and identified pressure on this SPA. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<tr>
<td>Muirkirk and North Lowther Uplands SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, arising from increased human disturbance and land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Mull of Galloway SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, resulting from increased human disturbance and land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA...</td>
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<td>and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<tr>
<td>River Bladnoch SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, resulting from land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>River Dee SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, non-toxic and toxic contamination, physical loss of habitats, resulting from building construction / demolition, dredging, increased levels of vessel movement, land use changes and piling associated with the Aberdeen Harbour national development. It is considered that the mitigation suggested within this HRA and embedded through the requirements of relevant mitigation incorporated in the relevant plans the in combination effect of the MRE will not be significant and therefore in combination there are no adverse effects on site integrity. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.</td>
</tr>
<tr>
<td>River Spey - Insh marshes SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, resulting from increased human disturbance and land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>River Spey SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, resulting from land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<tr>
<td>River Tay SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of disturbance such as noise and vibration, arising from construction activity associated with the Dundee Waterfront national development. No other national developments were considered to have MRE on this SAC and as a result there is no in plan in combination assessment required. It is considered that the mitigation suggested within this HRA and embedded through the requirements of relevant mitigation incorporated in the relevant plans, the in combination effect of the MRE will not be significant. Therefore in combination there are no adverse effects on site integrity. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.</td>
</tr>
<tr>
<td>European Site</td>
<td>Appropriate assessment in-combination assessment conclusions</td>
</tr>
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<td>---------------</td>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td>River Teith SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, toxic and non-toxic contamination, physical loss of habitats and physical damage of habitats, resulting from building construction / demolition, increased levels of vessel movement, piling, dredging, and land use changes associated with the Carbon Capture and Storage Network and Thermal Generation, Freight Handling Capacity on the Forth, Grangemouth Investment Zone and National Long Distance Cycling and Walking Network national developments. It is clear that there are a number of pressures on the River Teith SAC, primarily as a result of potential impacts on migratory fish as a result of activity within the forth area not only from the national developments but also in combination with the proposals contained within a number of other plans. However, with the mitigation proposed within this HRA and included within the assessments of the relevant wider planning documents, the residual effects identified are considered to be minimal and would not in combination have adverse effects on site integrity. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Upper Strathearn Oakwoods SAC</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, resulting from land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Ythan Estuary, Sands of Forvie and Meikle Loch SPA</td>
<td>The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance, non-toxic contamination and physical loss of supporting habitats, resulting from building construction / demolition, piling, dredging, and land use changes associated with the Aberdeen Harbour national developments. It is considered that the mitigation suggested within this HRA and embedded through the requirements of relevant mitigation incorporated in the identified, the in combination effect of the MRE will not be significant. Therefore in combination there are no adverse effects on site integrity. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.</td>
</tr>
</tbody>
</table>
4.6 Mitigation

4.6.1 National development status does not mean that development consent is automatically granted; rather it establishes the ‘need’ for the project. Further HRA will be required to be undertaken at subsequent stages in the development process and thus consent cannot be granted unless the requirements of this further HRA work are met. The principle of ‘need’ aside, development management regulations require national developments to be subjected to additional scrutiny through the planning process, by treating them in a similar way to ‘major developments’.

4.6.2 Given the uncertainties that exist about the scale and precise location of some elements of a national development, their timing and other detail of supporting requirements it is recognised that, in keeping with the Advocate General’s Opinion in ECJ case c-6/04 EC vs the UK, the HRA including in-combination effects will need to be revisited and updated at the development plan and project-level when more detailed information may be available. This should include, wherever possible and appropriate, detailed consideration of impacts to specific European sites potentially affected by a national development.

4.6.3 The requirement for all development plans to undertake HRA therefore provides further protection for European sites and an opportunity for further in-combination assessment with relevant new plans or projects. Furthermore, a HRA including an appropriate assessment will be required as a matter of law at project-level, wherever there is a LSE on a European/Ramsar site (including where those effects only arise because of the cumulative effect of that project and other plans and projects).

4.6.4 This requirement for plan and project level HRA and, where required appropriate assessment, is seen as one of the key additional safeguards to ensure potential adverse effects of plans are assessed “at every relevant stage of the procedure to the extent possible...”7. However, in order to demonstrate that the NPF3 will not have adverse effects on European site integrity it has been necessary to identify mitigation for a number of national developments8. This mitigation will form a starting point for incorporation into development plans and projects when taking forward proposals for national developments. Mitigation measures may be amended and superseded where further HRA work demonstrates this is necessary to avoid adverse effects on the integrity of a European site.

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7 In line with the judgement of the Advocate General in case C-6/04.
8 See Appropriate Assessment Tables in Appendix A for the following national developments: Dundee Waterfront; Carbon Capture and Storage Network and Thermal Generation; Pumped Hydroelectric Storage; National Long Distance Cycling and Walking Network; Strategic Airport Enhancements: Grangemouth Investment Zone; Freight Handling Capacity on the Forth; and Aberdeen Harbour.
4.6.5 The NPF3 will be delivered through an action programme. The Scottish Government intends for the NPF3 action programme to be a live, interactive and online document, rather than a fixed report. The mitigation identified within this HRA Record will be incorporated into this online programme, which will be updated regularly. This will allow for progress in taking forward the national developments to be made transparent, for example the provision of links to published environmental information and assessments. This will enable mitigation to be considered at the commencement of subsequent planning processes.

4.6.6 In order to demonstrate that the NPF3 will not have adverse effects on the integrity of European sites, as a result of establishing the need for mitigation through the action programme, the NPF3 includes the following statement within the ‘Delivery’ section of the document: “Mitigation set out in the Action Programme should inform subsequent planning processes and be applied as appropriate to avoid or reduce environmental effects and demonstrate no adverse effects on the integrity of European protected sites”.

4.6.7 During the subsequent development process, at development plan and project stages, where national developments screened out of this HRA will be required to undergo their own, separate, HRA processes, re-screening will be required. This is on the basis that further information and detail about the proposal will be available and that this more detailed consideration could establish a link or pathway between a European site and a national development, where none could be established on the basis of the national development description included in the NPF3. Within the HRA of these planning processes the competent authority will be required to demonstrate that there will not be adverse effects on site integrity, unless it is demonstrated that there being no alternative solutions there are imperative reasons of overriding public interest.
Appendix A: Screening and Appropriate Assessment Tables

Screening Ravenscraig

**National Development: Ravenscraig**

**Details of the national development:**
Location: Former Ravenscraig steelworks and new transport and communication connections to it.

Description of Classes of Development:
Development situated at the location consisting of:
(a) construction of buildings for business, industrial or storage and distribution use where the gross floor space is or exceeds 10,000 square metres or with a site area which is or exceeds 2 hectares.
(b) construction of residential buildings where the area of the development site is or exceeds 2 hectares.
(c) construction of new road(s) or fibre-optic cable(s) to the location where the length of the infrastructure exceeds 8 kilometres.
(d) development of a new town centre

Designation: A development within one or more of the Classes of Development described in paragraph (2) (a) to (d) is designated a national development.

Need: These classes of development within the location are needed to support the delivery of large scale proposals as required in the regeneration of Ravenscraig, currently one of the largest areas of vacant and derelict land in Europe. Its redevelopment for a range of uses makes a significant contribution to addressing concentrations of vacant and derelict land in Central Scotland. Redevelopment provides an opportunity to build in low carbon and environmental infrastructure.

**Spatial representation:** Indicative map of the Ravenscraig site and European sites
**Potential generic effects associated with this type of development:** Mixed use development of this type with residential, industrial, transport and energy components. Development of this type could result in the following effects: Habitat loss and deterioration; Hydrological change; Noise and vibration disturbance; Changes in population viability; Severance and fragmentation; Sedimentation and water borne pollution; Physical disturbance.

**Details of relevant European sites to consider:** Clyde Valley Woods SAC, Waukenwae Moss SAC, North Shotts Moss SAC, Blawhorn Moss SAC, Black Lock Moss SAC, West Fannyside Moss SAC, Slamannan Plateau SPA. It is noted that the Moss sites may be outside of the catchment area to be affected but have been considered as part of this HRA process.

**Details of previous HRA (if applicable):** The Glasgow and the Clyde Valley Strategic Development Plan states that Ravenscraig “can be spatially correlated against the Natura sites”. The HRA also states that “Following consideration of the findings of the Supplementary Environmental Report…. there are certain sites within the GCV area that have the potential to be affected by these SDP proposals”. Ravenscraig was not amongst these.

The HRA for the North Lanarkshire Local Plan undertakes an assessment of the Ravenscraig proposal in light of a number of SPA and SAC; there were no likely significant effects.

**Initial screening result:** Existing HRA work indicated that the national development is considered unlikely to have significant effects. However, given the potential for a link or pathway to be established between the national development and European sites, it was subject to further examination in the HRA to identify if there might be LSE alone or in-combination.

### Screening for National Development and European sites

<table>
<thead>
<tr>
<th>Site</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clyde Valley Woods SAC</td>
<td>The development will not result in habitat loss or deterioration (including supporting habitat), or result in fragmentation or severance issues. The SAC is sensitive to changes in the hydrological regime, however the proposed development is not considered likely to have such impacts on a catchment scale and therefore that could lead to LSE. The SAC is sensitive to some level of human disturbance, and activities such as illegal dumping of refuse have been noted on site. Most units of the designation are greater than 5km from the development site and despite the potential for some increase in recreational use from the development site, given the extent of existing built up areas, alternative recreational space and the favourable condition of the SAC, it is not considered that effects on the SAC are likely to be significant. The HRA for the North Lanarkshire Local Plan in reference to Ravenscraig states: “SAC beyond policies predicted zone of influence”. <strong>Summary:</strong> The national development is not considered to have LSE, although there is potential for some MRE to consider in combination. <strong>Result:</strong> Screened out under Screening Step 3d of the guidance.</td>
</tr>
<tr>
<td>Waukenwae Moss SAC</td>
<td>The SAC is sensitive to hydrological change and direct impacts of some agricultural activities. The development is a considerable distance from the SAC (approximately 9km) and given existing patterns of built development within the catchment it is not considered that Ravenscraig will have LSE. <strong>Summary:</strong> The national development is not considered to have LSE. <strong>Result:</strong> Screened out under Screening Step 3c of the guidance.</td>
</tr>
<tr>
<td>North Shotts Moss SAC</td>
<td>The SAC is sensitive to hydrological change and direct impacts of some agricultural activities. The development is a considerable distance from the SAC (approximately 9km) and given existing patterns of built development within the catchment it is not considered that Ravenscraig will have LSE. The HRA for the North Lanarkshire Local Plan in reference to Ravenscraig states: “SAC beyond policies predicted zone of influence”.</td>
</tr>
<tr>
<td>Location</td>
<td>Summary</td>
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<tr>
<td>---------------------------</td>
<td>------------------------------------------------------------------------</td>
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</tbody>
</table>
| Blawhorn Moss SAC         | The SAC is sensitive to hydrological change and direct impacts of some agricultural activities. The development is a considerable distance from the SAC (approximately 12km) and given existing patterns of built development within the catchment it is not considered that Ravenscraig will have LSE.  
The HRA for the North Lanarkshire Local Plan identifies Blawhorn Moss SAC as a relevant site within an adjacent authority but does not include an assessment of effects against Ravenscraig. | Screened out under Screening Step 3c of the guidance. |
| Black Lock Moss SAC       | The SAC is sensitive to hydrological change and direct impacts of some agricultural activities. The development is a considerable distance from the SAC (approximately 12km) and given existing patterns of built development within the catchment it is not considered that Ravenscraig will have LSE.  
The HRA for the North Lanarkshire Local Plan in reference to Ravenscraig states: “SAC beyond policies predicted zone of influence”. | Screened out under Screening Step 3c of the guidance. |
| Slamannan Plateau SPA     | The development will not have physical impact on the extent of the SPA with the only potential links relating to recreational use of the site. Information on the SPA indicates that current recreational use is not high and given the SPA is some distance from the proposed development (with the majority 15 – 20km from the development site), alternative recreational space, and the fact that the SPA is already close to the larger developed area of Falkirk, it is anticipated there will not be likely significant impacts on the Bean Geese population.  
The HRA for the North Lanarkshire Local Plan in reference to Ravenscraig states: “SPA beyond policies predicted zone of influence”. | Screened out under Screening Step 3c of the guidance. |
| West Fannyside Moss SAC   | The SAC is sensitive to hydrological change and direct impacts of some agricultural activities. The development is a considerable distance from the SAC (approximately 15km) and given existing patterns of built development within the catchment it is not considered that Ravenscraig will have LSE.  
The HRA for the North Lanarkshire Local Plan in reference to Ravenscraig states: “SAC beyond policies predicted zone of influence”. | Screened out under Screening Step 3c of the guidance. |

**Summary of screening for likely significant effects in combination:** The screening has identified the potential for MRE on the Clyde Valley Woods SAC. None of the other national developments within the NPF3 have been identified as also having MRE on this SAC.

To identify if there are in combination effects with plans and projects the HRA of the existing North Lanarkshire Local Plan was reviewed. This identifies the South Wishaw Community Growth Area, that will extend to within approximately 50m of the SAC, which is identified in the as having the potential for LSE. No other policies or projects are identified as having potential residual effects to consider. The HRA predicts that the protection policies in the plan and mitigation for the South Wishaw Community Growth Area policy will avoid adverse effects on site integrity and hence residual effects will not have LSE in combination with the Ravenscraig development.
<table>
<thead>
<tr>
<th>Result:</th>
<th>The national development is not considered to have LSE in combination with other plans and projects.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Screening Result:</td>
<td>The development is not considered to have LSE alone or in combination on the Natura network.</td>
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</table>
Screening Dundee Waterfront

National Development: Dundee Waterfront

Details of the national development:
Location: Dundee waterfront and new transport and communications to it.

Description of Classes of Development:
Development situated at the location consisting of:
(a) construction of buildings for business, industrial or storage and distribution use where the gross floor space is or exceeds 10,000 square metres or with a site area which is or exceeds 2 hectares.
(b) construction of residential buildings where the area of the development site is or exceeds 2 hectares.
(c) construction of new road(s), railway track(s) or fibre-optic cable(s) to the location where the length of the infrastructure exceeds 8 kilometres.

Designation: A development within one or more of the Classes of Development described in paragraph (2) (a) to (c) is designated a national development.

Need: These classes of development within the location are needed to support the delivery of large scale proposals required for the transformation Dundee. This national development supports key economic growth sectors for the city, and will assist the very significant improvement to quality of place in one of Scotland’s cities.

Spatial representation: Indicative map of Dundee Waterfront and European Sites

Potential generic effects associated with this type of development: The range of activities at the waterfront area will require the HRA to consider potential generic effects that include: Habitat loss and deterioration; Severance and fragmentation; Hydrological change; Sedimentation and water-borne pollution; Physical disturbance; Noise and vibration disturbance; Changes in air quality; Changes in population viability
Details of relevant European sites to consider: The potential for LSE on Firth of Tay and Eden Estuary SPA and SAC, Barry Links SAC, River Tay SAC in particular, as well as others such as Isle of May SAC and Moray Firth SAC, also need to be considered.

Details of previous HRA (if applicable): Relevant HRA work has undertaken for the National Renewables Infrastructure Plan (NRIP) and will be considered. Furthermore the NPF2 HRA stated “the redevelopment of the Dundee waterfront could potentially affect the designated mudflat, sandflat and estuarine habitats of the SAC, as well as altering roosting and feeding habitats and creating significant disturbance to birds within the Firth of Tay and Eden Estuary SPA, both during construction and after completion. Increased development and services from Dundee airport could also place bird populations at greater risk of disturbance and air strikes”. Potential for effects on the River Tay European sites is identified in the Dundee LDP HRA, with a policy caveat stating that any development should not have an adverse effect, either alone or in combination with other proposals or projects, on the integrity of any Natura site, as mitigation.

Initial Screening result: Given the potential for links or pathways to be established between the national development and European sites, this development was identified as requiring further examination in the HRA to identify if there might be LSE alone or in combination.

<table>
<thead>
<tr>
<th>Screening for National Development and European sites</th>
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<tbody>
<tr>
<td><strong>Barry Links SAC</strong></td>
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<td></td>
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<tr>
<td><strong>Summary:</strong></td>
</tr>
<tr>
<td><strong>Result:</strong></td>
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<tr>
<td><strong>Firth of Tay and Eden Estuary SAC</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Summary:</strong></td>
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<tr>
<td><strong>Result:</strong></td>
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</tbody>
</table>
The Firth of Tay and Eden Estuary SPA is designated for multiple species of bird in addition to a non-breeding waterfowl assemblage. Many of the species are sensitive to a range of impacts such as changes to land or river management and habitat loss, fragmentation or degradation. The national development has been identified as being a potential source of disturbance, in particular from noise associated with construction activities.

There are a number of species associated with the site which are vulnerable to disturbance from noise from construction and human foot-traffic including Redshank, Little tern, Sanderling, Dunlin, Oystercatcher, Velvet scoter, Black-tailed godwit, Bar-tailed godwit, Common scoter, Eider, and Pink-footed Goose.

The HRA for the Dundee Local Development Plan screened in several policies, namely Policy 1: Principle Economic Development Areas; Policy 5: Tourism and Leisure Developments; Policy 6: Visitor Accommodation; and Policy 30: Biomass Energy Generating Plant (as having the potential for LSE on the SAC. The NPF2 HRA highlights possibilities of construction effects on the SPA.

**Summary:** It is not possible at this stage of screening to rule out the national development from having LSE on the SPA.

**Result:** Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.

The national development is not considered likely to have a significant effect on the marine reef qualifying interest of the Isle of May SAC. However the site is also designated for a population of Grey seal that are in favourable maintained condition. They are known to haul out on outer sandbanks in the Firth of Tay.

The LSE on seals include impacts from pollution and direct impacts from collision with sea going vehicles, and potentially noise and disturbance from, and construction associated with, the national development.

The HRA for the Dundee Local Development Plan screened in several policies, namely Policy 1: Principle Economic Development Areas; Policy 5: Tourism and Leisure Developments; Policy 6: Visitor Accommodation; and Policy 30: Biomass Energy Generating Plant (as having the potential for LSE on the SAC.

**Summary:** It is not possible at this stage of screening to rule out the national development from having LSE on the grey seal population of the SAC.

**Result:** Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.

The Moray Firth SAC is some distance from the national development but includes a population of mobile Bottlenose Dolphin in a favourable recovered condition.

The LSE on the Bottlenose Dolphin include impacts from pollution and direct impacts from collision with sea going vehicles, some fishing activities and potentially noise and disturbance from and construction associated with the national development.

The HRA for the Dundee Local Development Plan screened in several policies, namely Policy 1: Principle Economic Development Areas; Policy 5: Tourism and Leisure Developments; Policy 6: Visitor Accommodation; and Policy 30: Biomass Energy Generating Plant (as having the potential for LSE on the SAC. The NPF2 HRA did not identify a link between this SAC and the national development.

**Summary:** It is not possible at this stage of screening to rule out the national development from having LSE on the Bottlenose dolphin population of the SAC.
### River Tay SAC

<table>
<thead>
<tr>
<th>Result: Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.</th>
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<tbody>
<tr>
<td><strong>River Tay SAC</strong></td>
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<td></td>
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<tr>
<td><strong>Summary:</strong></td>
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<tr>
<td><strong>Result:</strong></td>
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</tbody>
</table>

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**Summary of screening for likely significant effects in combination:** The above screening has identified potential for LSE from the national development on the Firth of Tay and Eden Estuary SAC, Firth of Tay and Eden Estuary SPA, Isle of May SAC, River Tay SAC and Moray Firth SAC. This is based on the potential for noise and disturbance on qualifying species of seal (both Grey and Harbour), migratory fish, qualifying bird interests, and qualifying Bottlenose dolphin. The screening above has not identified MRE that would require consideration in combination with other national development, or other plans and projects at the screening stage.

**Result:** The LSE identified on the qualifying interests of the European sites screened in above and the development will be subject to Appropriate Assessment.

**Overall Screening Result:** The development is considered to have potential LSE on the named Natura sites above, and will be subject to an appropriate assessment.

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### Appropriate Assessment of Dundee Waterfront

<table>
<thead>
<tr>
<th>Aspect of National Development screened as having potential for LSE:</th>
<th>Building construction / demolition (including site clearance, land remediation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Implications for European sites:</strong></td>
<td>The national development has the potential to impact the qualifying interests listed below through the following pathways:</td>
</tr>
</tbody>
</table>

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33
- Physical loss of habitat - direct (temporary / permanent) loss of habitat under the footprint of the development that may provide supporting habitat to European sites. No loss of habitat within a European site.
- Non-physical (indirect) disturbance – noise and vibration that may significantly disturb the species.
- Reduced availability / displacement of other species (including prey or symbiotic species)

Through the pathways outlined above, the following qualifying interests may be impacted:
- Firth of Tay and Eden Estuary SAC: Harbour seal
- Isle of May SAC: Grey seal
- Moray Firth SAC: Bottlenose dolphin
- Firth of Tay and Eden Estuary SPA: Redshank, Little tern, Sanderling, Dunlin, Oystercatcher, Velvet scoter, Black-tailed godwit, Bar-tailed godwit, Common scoter, Eider, and Pink-footed Goose (species potentially impacted by human disturbance).
- River Tay SAC: Atlantic salmon, Sea lamprey, River lamprey.

The relevant Conservation Objectives for the qualifying interests are:
- To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 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

All of the conservation objectives are relevant to the Grey seal qualifying interest of the Firth of Tay and Eden Estuary SAC. The potential impacts on other qualifying features listed, disturbance and displacement, would occur outside of the Natura site with which they are associated. As a result it is conservation objectives relating to the population of the species and distribution of species within the site that could be impacts.

**Assessment and mitigation:**

The assessment has identified the potential for disturbance from noise and vibration on the local harbour seal population as well as migratory fish, Grey seal, Bottlenose dolphin, and the bird species associated with the Firth of Tay and Eden Estuary SPA. For the majority of the species underwater noise and vibration is relevant but above surface noise will be relevant to the identified bird species and harbour seals that haul out in proximity to Dundee waterfront. Disturbance effects could also extend to the displacement of species that support the qualifying species (e.g. prey).

The significant effects of construction activities could be avoided by undertaking construction work at times of the year appropriate for the species in question, i.e. avoiding bird overwintering and breeding periods, most intense periods of fish migration, seal breeding season (June and July for Harbour seals, September-late November for grey seals). Consultation with SNH on most appropriate times would be undertaken through the development consenting process.

Further mitigation measures will arise from to further detailed assessment at project level (e.g. underwater noise modelling). At this stage the full detail of the development will be available. At this stage it will be possible to develop a feedback monitoring system to monitor underwater noise during construction activities as required (e.g. modify methodology if maximum underwater noise thresholds are reached).

Advice from SNH regarding Dundee Waterfront has been that a Marine Mammal Protection Plan is drawn up when taking forward development proposals. This should include a marine mammal risk
assessment with details of all planned monitoring and mitigation, for example use of Marine Mammal Observers, soft starts, bunds, management of vessel movements. It should identify and commit to mitigation options, (for example consideration of restricting the timing of the work). This needs to cover the whole area likely to be impacted (including extent of underwater noise from piling, derived from noise modelling).

Project level HRA to be undertaken, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European/Ramsar sites from projects either alone or in-combination with other plans or projects.

National development status does not include any land reclamation that may be required to facilitate development and the potential for adverse effects on the integrity of the Firth of Tay and Eden Estuary SAC and SPA have not been included in this HRA. Land reclamation could result in adverse effects on site integrity and any proposal for National Development status that may also include this element of development will only be approved where a project level appropriate assessment has ascertained that there will be no adverse effects on these Natura sites or, if this is not the case, where there are imperative over-riding reasons of public interest.

**Result:**
Taking into account the available mitigation it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance – noise and vibration that may disturb species and physical loss of habitats. These effects in combination with other similar effects will be considered further in this report.
### Screening Carbon Capture and Storage Network and Thermal Generation

<table>
<thead>
<tr>
<th>National Development: Carbon Capture and Storage Network and Thermal Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Details of the national development:</strong></td>
</tr>
<tr>
<td><strong>Location:</strong> Carbon Capture and Storage Network Infrastructure, throughout Scotland. Thermal generation at Boddam, Longannet, Grangemouth and Cockenzie.</td>
</tr>
<tr>
<td><strong>Description of Classes of Development:</strong></td>
</tr>
<tr>
<td>Development at the locations consisting of:</td>
</tr>
<tr>
<td>(a) construction of new or refurbishment of existing pipeline(s) exceeding 8 kilometres in length to provide for the transportation of captured carbon dioxide, including change of use from transporting existing substances.</td>
</tr>
<tr>
<td>(b) construction of pumping and/or compression equipment required for a carbon dioxide transportation pipeline(s) exceeding 8 kilometres in length.</td>
</tr>
<tr>
<td>(c) construction of buildings or structures for carbon capture, transportation and/or storage plant and facilities where the gross floor area is or exceeds 10,000 square metres or the site area is or exceeds 2 hectares.</td>
</tr>
<tr>
<td>(d) construction of new or refurbishments to thermal generation power stations with a generating capacity of over 50 Megawatts where that development includes onsite carbon capture plant to a level as required in the Electricity Generation Policy Statement, carbon transportation infrastructure and/or storage facilities.</td>
</tr>
<tr>
<td>(e) construction of new or refurbishments to existing onshore gas pipelines to the thermal generation locations where the generation fuel is to be gas.</td>
</tr>
<tr>
<td>(f) Onshore and Offshore carbon dioxide storage sites.</td>
</tr>
<tr>
<td><strong>Designation:</strong> A development within one or more of the Classes of Development described in paragraph (2) (a) to (f) is designated a national development.</td>
</tr>
<tr>
<td><strong>Need:</strong> These classes of development within Scotland are needed to support the delivery of a carbon capture and storage network which could establish Scotland as a centre of expertise in carbon capture and storage technology. These classes of development also support the achievement of the Scottish Government’s Electricity Generation Policy Statement aim to provide for a minimum of 2.5 gigawatts of thermal generation progressively fitted with carbon capture and storage technology. The aim is to demonstrate that carbon capture and storage is feasible at a commercial scale by 2020, with full retrofit across conventional fossil fuel power stations by 2025-30.</td>
</tr>
</tbody>
</table>
Spatial representation: Indicative map of Cockenzie, Longannet and potential Grangemouth CCS power stations and European sites

Indicative map of Boddam power station and European sites
Potential generic effects associated with this type of development: Generic effects for this type of development could include: Habitat loss and deterioration; Severance and fragmentation; Hydrological change; Sedimentation and water-borne pollution; Physical disturbance; Noise and vibration disturbance; Changes in air quality; Changes in population viability. Where sites are already in use for related activity there may be some limited construction and large scale land take.

Details of relevant European sites to consider: In particular the Buchan Ness to Collieston SAC, Buchan Ness to Collieston Coast SPA, Firth of Forth SPA, Forth Islands SPA, Inner Moray Firth SPA, Isle of May SAC, Loch of Strathbeg SPA, Moray Firth SAC, River Teith SAC, Sands of Forvie SAC, Troup, Pennan and Lion's Head SPA and Ythan Estuary, Sands of Forvie and Meikle Loch SPA

Details of previous HRA (if applicable): The NPF2 HRA considered proposals at Longannet and Cockenzie as national developments and stated “no direct habitat loss is expected because the projects will involve refurbishment and / or any new construction could be contained within existing site boundaries.” Furthermore “at this level, , taking into account the nature of the developments and availability of generic mitigation measures, these developments could take place without generating adverse effects on the Firth of Forth SPA and Ramsar site.”

Initial screening result: Given the potential for links or pathways to be established between the proposed national developments and European sites, this development was identified at the MIR stage as requiring further examination in the HRA to identify if there might be LSE alone or in combination.

Screening for National Development and European sites

| Buchan Ness to Collieston SAC | Buchan Ness to Collieston SAC is designated for vegetated sea cliffs and contains some of the best remaining examples of semi-natural plant communities such as maritime heath, acid peatland and brackish flushes that are otherwise scarce on the coast of north-east Scotland. The national development encompasses the potential construction of new or refurbishment of existing pipeline, and that Peterhead and the Firth of Forth may emerge as CCS hubs. The SAC is sensitive to changes in the following aspects: air quality, water nutrient balance, hydrological regime, soil quality, human disturbance and any reduction in physical extent. The relevant Boddam element of this national development will involve refurbishment and / or any new construction could be contained within existing site boundaries and therefore it is not expected that the potential impacts arising through the Carbon Capture and Storage and Thermal Generation will have pathways through which the qualifying interests could be impacted thereby potentially undermining its conservation objectives. The HRA for the N-RIP does not identify links from potential developments to this site. Summary: Whilst the national development will generate a level of change, in terms up upgrades to existing facilities, there is no conceivable likely significant effect on the SAC because there is not a link or pathway that could undermine the conservation objectives of the SAC. This is as a result of the National development upgrading facilities rather than construction of a new facility. Result: Screened out under screening step 3(c) of the guidance |

| Buchan Ness to Collieston Coast SPA | This SPA is designated for aggregations of breeding birds and regularly supports 95,000 seabirds, including populations of kittiwake, guillemot, herring gull, shag and fulmar. The qualifying species are sensitive to potential impacts arising from developments such as pollution of the marine environment, climate change and depletion of food resources. The national development includes proposals for upgrading of existing facilities rather than construction of a new facility inclusive of the existing pipeline that skirts the edge |
of the SPA boundary and that would carry liquid carbon from the power station to the North Sea.

It is on this basis that it is considered that the national development will have LSE on the SPA through many pathways potentially associated with new construction. The HRA for the N-RIP also does not identify links from potential developments in the region to this site.

However, the SPA is a breeding site for birds and there may be some potential for disturbance if upgrading and maintenance of the pipeline element of the power station was to occur during the Autumn Breeding season. Therefore there could be LSE.

**Summary:** The national development includes potential sources of noise disturbance to breeding birds that can be linked to potential for LSE on the qualifying features of this SPA.

**Result:** Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.

<table>
<thead>
<tr>
<th>Firth of Forth SPA and Ramsar</th>
<th>The Firth of Forth SPA and Ramsar site is designated for its aggregations of wintering and passage populations of non-breeding birds that are sensitive to a range of impacts.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Species on the site are sensitive to a range of impacts that may arise from the proposed development including changes to land management (e.g. bar-tailed godwit, curlew and ringed plover); habitat loss, degradation and fragmentation (e.g. dunlin, knot and Shelduck); human disturbance (red-throated diver are particularly sensitive to human disturbance from shoreline development); land reclamation (e.g. common scoter), wetland drainage (e.g. lapwing, redshank and wigeon), and pollution (e.g. goldeneye and velvet scoter).</td>
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<tr>
<td></td>
<td>Previous HRAs have screened in the Firth of Forth SPA and Ramsar site for an appropriate assessment due to the potential for LSEs arising from the development. The Falkirk LDP draft HRA considered that the potential loss of supporting habitat and disturbance during construction and operation along Bo'ness foreshore and Grangemouth could have a potential LSE on the qualifying species. The Stirling Proposed Local Development Plan considered the site for an Appropriate Assessment due to the potential for development activities to impact the water environment through sediment or diffuse pollution from runoff. The SEPA HRA for granting a PPC licence for Longannet power station found that there would not be an adverse effect on the integrity of the SPA.</td>
</tr>
<tr>
<td></td>
<td>The Grangemouth element of the National development involves construction on land immediately adjacent to the SPA that might act as supporting habitat for some qualifying features. The scoping opinion from SNH for the EIA of a development proposal from the Grangemouth site raised concerns regarding:</td>
</tr>
<tr>
<td></td>
<td>• Disturbance to the adjacent bird populations through noise both during construction and operation phases leading to displacement of birds from nearby habitats thus impacting on maintaining their normal distribution within the site (indirect habitat loss).</td>
</tr>
<tr>
<td></td>
<td>• Further habitat loss as a result of loss of supporting habitat.</td>
</tr>
<tr>
<td></td>
<td>• Pollution during construction and operation, the construction of water abstraction and discharge pipes within the intertidal habitats and the thermal discharge water could impact on the structure, function and supporting processes of the habitats that support the bird populations; and</td>
</tr>
<tr>
<td></td>
<td>• The combined impacts associated with these potential effects are likely to effect the bird populations as a viable component of the site.</td>
</tr>
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</table>
The scoping opinion also states that "On the basis of information currently available however, we consider that it is possible that the appropriate assessment will be unable to conclude that there will be no adverse effect on the integrity of the Firth of Forth SPA".

The HRA for NFP2 stated that construction and any growth in transportation movements during construction or operation has the potential to generate increased disturbance of species associated with the site. Whilst the developments could take place without generating significant adverse effects on the site, the NFP3 includes the proposal for a new coal fired power station with associated infrastructure such as pipeline. Therefore the planned development has the potential to result in LSE for the site and therefore requires an appropriate assessment.

**Summary:** The initial review demonstrates that there is potential for impacts from the development to have LSE for one or more of the 28 bird species that are the qualifying interests of the SPA.

**Result:** Screened in and the LSE of the national development on the SPA will be subject to an appropriate assessment.

| Forth Islands SPA | The Forth Islands SPA consists of a series of islands supporting the main seabird colonies in the Firth of Forth. Initially comprised of the islands of Inchmickery, Isle of May, Firda, The Lamb, Craigleith and Bass Rock, it was later extended to include the island of Long Craig which supports the largest colony of roseate tern in Scotland. The SPA is designated for its aggregations of breeding birds, supporting populations of European importance such as tern (arctic, roseate, sandwich and common) and migratory species including gannet, shag, lesser black-backed gull and Atlantic puffin. The SPA also regularly supports a seabird assemblage of around 90,000 individuals including terns, auks and gulls. The HRA for the N-RIP initially screened in Forth Islands SPA due to the potential for LSEs arising through dredging (and disposal of dredgings), piling, and building construction / demolition associated with development at ports along the Forth. The Falkirk HRA has not identified potential LSE on this designation. Species such as kittiwake, lesser black-backed gull and razorbill are sensitive to depletion of food resources and the NPF2 identified that the SPA has the potential to be impacted through dredging activities. **Summary:** The national development includes development and construction that will lead to activities that can be linked to potential for LSE on the qualifying features of this SPA. **Result:** Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment. |
| Inner Moray Firth SPA | The Inner Moray Firth SPA is designated for aggregations of both breeding and non-breeding birds and is recognised as a wetland of international importance in supporting a waterfowl assemblage. The site supports a number of species of both breeding and over wintering birds. The site and species have relevant sensitivities of degradation of foraging sites (Bar-tailed godwit, oystercatcher, redshank, wigeon), human disturbance (Bar-tailed godwit, common tern, curlew, osprey, oystercatcher, redshank), Habitat loss and fragmentation (common tern, curlew, redshank), and Pollution (common tern, curlew, goosander, greylag goose, oystercatcher, redshank, scaup, wigeon). Other sensitivities include pollution and changes to land management practices. The qualifying species are sensitive to potential impacts arising from developments |
such as pollution of the marine environment and depletion of food resources. However, the potential impacts arising through the Carbon Capture and Storage and Thermal Generation have no apparent pathways through which the qualifying interests could be impacted thereby undermining its conservation objectives.

The HRA for the N-RIP does not identify links from potential developments in similar locations to the locations within this national development to this site.

**Summary:** Whilst the national development will generate a level of change, in terms up upgrades to existing facilities, there is no conceivable additional effect on the SPA because there is not a link or pathway that could undermine its conservation objectives.

**Result:** Screened out under screening step 3(c) of the guidance

| Isle of May SAC | This SAC is designated for marine reefs and grey seals where it supports the fourth largest breeding colony in the UK. Due to the proximity of the SAC to the proposed development, the distribution patterns of the grey seal (the mobile qualifying feature of the site) and the potential impacts of the proposed development on the environment, there is the potential of a LSE for the grey seals. It is considered that the seals could be impacted by pollution, including water-borne pollution and noise and vibration impacts, as well as direct impacts from collision with, and potentially cork screw injuries from, sea-going vehicles arising from the proposed development. The screening phase in the HRA for N-RIP concluded that there was a possibility of a LSE for the grey seal population due to indirect disturbance including noise and vibration, or reduced availability / displacement of prey species and non-toxic contamination from changes in turbidity, arising though activities such as piling, dredging, vessel movements and building construction/demolition. This could equally apply to a development of this type. **Summary:** The national development includes development and construction that can be linked to potential for LSE on the qualifying feature (Grey seal) of this SAC. **Result:** Screened in and the LSE from the national development on the SAC will be subject to an appropriate assessment. |
| Loch of Strathbeg SPA | The Loch of Strathbeg SPA is designated for aggregations of both breeding and non-breeding birds and is recognised as a wetland of international importance in supporting a waterfowl assemblage. The qualifying species are sensitive to potential impacts arising from developments such as pollution of the marine environment and depletion of food resources. However, the potential impacts arising through the Carbon Capture and Storage and Thermal Generation have no apparent pathways through which the qualifying interests could be impacted thereby undermining its conservation objectives. The HRA for the N-RIP does not identify links from potential developments to this site. **Summary:** Whilst the national development will generate a level of change, in terms up upgrades to existing facilities, there is no conceivable additional effect on the SPA because there is not a link or pathway that could undermine its conservation objectives. **Result:** Screened out under screening step 3(c) of the guidance |
| Moray Firth SAC | The Moray Firth SAC is designated for subtidal sandbanks and a favourable maintained population of bottlenose dolphins. The main threats to the Bottlenose Dolphin include impacts from pollution and direct impacts from collision with sea-going |
vehicles, some fishing activities and potentially noise and disturbance from and construction associated with the national development.

The HRA for Aberdeen Harbour development framework identified that individuals from the Moray Firth SAC population travel south along the east coast to Aberdeen and therefore pass the proposed site at Peterhead.

Since the national development contains provision for construction of new or refurbishment of existing onshore and offshore pipeline(s) and onshore and offshore carbon dioxide storage sites among others, there is potential for them to give rise to LSE through the pathways identified above.

The HRA for N-RIP identified potential impacts to Bottlenose dolphins from the Moray Firth SAC at the Nigg N-RIP site from Non-physical disturbance arising from construction and operational activities causing non-physical disturbance due to elevated underwater noise and vibration levels, and also the displacement of prey species.

**Summary:** The national development includes development and construction that can be linked to potential for LSE on the qualifying feature (Bottlenose dolphin) of this SAC.

**Result:** Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.

### River Teith SAC

River Teith SAC qualifies for Atlantic salmon, for which the site condition is unfavourable recovering, and for Brook, River and Sea lamprey for which the site is considered to be one of the best areas in the UK and which are all in a favourable maintained condition.

The site is sensitive to various types of pollution which, either alone or in combination with other factors, limit the distribution of salmon and lamprey. Pollution can also impact lamprey through smothering spawning graves and nursery silts. River and Sea lamprey and Atlantic salmon require a clear migratory route and are therefore sensitive to obstacles such as engineering works that could impact the routes.

The Falkirk LDP draft HRA identified that the site’s qualifying interests could be affected by development proposals in coastal locations along the Firth of Forth or which affect water quality within the Firth of Forth, such as the proposed developments for the Carbon Capture and Storage and Thermal Generation national development. However the SEPA HRA for the granting of a PPC licence for Longannet power station found that there would not be an adverse effect on the integrity of the SAC. The Falkirk LDP reverences studies identifying links between the qualifying species and Longannet power station.

The SNH scoping opinion for the development proposal at Grangemouth states that “our view is that the proposal is also likely to significantly affect the Atlantic salmon and lamprey interests of the River Teith Special Area of Conservation (SAC), which is a major tributary of the River Forth through water abstraction and discharge, from and to the River Forth”.

The HRA for NPF 2 stated that port and freight development could have adverse effects on the River Teith SAC. Increased water pollution, altered sediment and hydrological regimes and potential barrier effects and disturbance caused by noise such as piling in the Firth of Forth could create barriers to fish migrating up the Forth and into the Teith. Atlantic salmon spend a proportion of their time at sea, seasonally migrating up river systems to spawn.

**Summary:** The national development includes development and construction that can
be linked to potential for LSE on the qualifying feature (Atlantic salmon, river and sea lamprey) of this SAC.

**Result:** Screened in and the LSE of the national development on the SAC will be subject to an appropriate assessment.

<table>
<thead>
<tr>
<th>Sands of Forvie SAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sands of Forvie SAC is designated for embryonic shifting dunes, shifting dunes with marram, lime-deficient dune heathland with crowberry and humid dune slacks, all of which are in a favourable maintained condition.</td>
</tr>
<tr>
<td>The SAC is dependent on the continued operation of the physical processes that occur at present and as such is sensitive to changes to those processes and to human disturbance such as trampling and changes to land use. The potential impacts arising through the Carbon Capture and Storage and Thermal Generation do not have a link or pathway through which the qualifying interests could be impacted thereby undermining its conservation objectives.</td>
</tr>
<tr>
<td>The HRA for the N-RIP does not identify links from potential developments to this site.</td>
</tr>
<tr>
<td><strong>Summary:</strong> Whilst the national development will generate a level of change, in terms up upgrades to existing facilities, there is no conceivable effect on the SAC because there is a link or pathway that could undermine its conservation objectives of the SAC and the dune systems would not be affected.</td>
</tr>
<tr>
<td><strong>Result:</strong> Screened out under screening step 3(c) of the guidance</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Troup, Pennan and Lion's Head SPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>The SPA qualifies by regularly supporting over 20,000 individual breeding seabirds, in addition to internationally important breeding populations of kittiwake and guillemot. The breeding seabird assemblage also includes fulmar, herring gull and razorbill. The qualifying species are sensitive to potential impacts arising from developments such as pollution of the marine environment and depletion of food resources. However, the potential impacts arising through the Carbon Capture and Storage and Thermal Generation have no apparent pathways through which the qualifying interests could be impacted thereby undermining its conservation objectives. This is as a result of the National development upgrading facilities rather than construction of a new facility.</td>
</tr>
<tr>
<td>The HRA for the N-RIP does not identify links from potential developments to this site.</td>
</tr>
<tr>
<td><strong>Summary:</strong> Whilst the national development will generate a level of change, in terms up upgrades to existing facilities, there is no conceivable effect on the SPA because there is not a link or pathway that could undermine its conservation objectives.</td>
</tr>
<tr>
<td><strong>Result:</strong> Screened out under screening step 3(c) of the guidance</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Ythan Estuary, Sands of Forvie and Meikle Loch SPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>The SPA is sensitive to human disturbance and the destruction, loss and degradation of the habitats used by the aggregations of breeding and non-breeding birds. It is also sensitive to pollution and artificially induced water level fluctuations.</td>
</tr>
<tr>
<td>The potential impacts arising through the Carbon Capture and Storage and Thermal Generation have no apparent pathways through which the qualifying interests could be impacted thereby undermining its conservation objectives.</td>
</tr>
<tr>
<td>The HRA for the N-RIP does not identify links from potential developments to this site.</td>
</tr>
<tr>
<td><strong>Summary:</strong> Whilst the national development will generate a level of change, in terms up upgrades to existing facilities, there is no conceivable effect on the SPA because there is not a link or pathway that could undermine its conservation objectives. This is as a result of the National development upgrading facilities rather than construction of a new facility.</td>
</tr>
<tr>
<td><strong>Result:</strong> Screened out under screening step 3(c) of the guidance</td>
</tr>
</tbody>
</table>
**Result:** Screened out under screening step 3(c) of the guidance

**Summary of screening for likely significant effects in combination:** The above screening as identified potential for LSE from the national development on the Buchan Ness to Collieston Coast SPA, Firth of Forth SPA and Ramsar, Forth Islands SPA, Isle of May SAC, Moray Firth SAC and River Teith SAC. This is based on the potential for noise and disturbance and potentially mortality on bottlenose dolphin, bird species, Grey seal, Atlantic salmon and species of lamprey.

Likely significant effects are considered in relation to potential expansion of existing activities at the existing Longannet, Cockenzie and Boddam sites and a new power station at Grangemouth. This will involve a degree of construction activity and potential effects associated with this. Whilst the national development includes a pipeline linking sites around the Forth to Boddam and the North Sea, the majority of this is already constructed and in use to support the oil and gas industry. A new pipeline link to the existing pipeline to the new Grangemouth facility would be considered a national development however the route for this is not defined and has not been planned for and determined at this stage. Therefore the appropriate assessment will consider the potential for effects associated with a new, but not spatially defined, section of pipeline and activities potentially associated with maintenance or conversion work to the existing pipeline.

Furthermore the Grangemouth element of this national development was considered to have LSE as a result of the loss of potential offsite supporting habitat for some of the qualifying interests of the Firth of Forth SPA.

**Result:** The LSE of the national development on the European sites screened in above will be subject to Appropriate Assessment.

**Overall Screening Result:** The development is considered to have potential LSE on the Natura network and will be subject to an appropriate assessment.

**Appropriate Assessment of Carbon Capture and Storage Network and Thermal Generation**

<table>
<thead>
<tr>
<th>Aspect of National Development:</th>
<th>Land use change from expansion of activities on existing sites (Longannet, Cockenzie and Boddam) and new development (Grangemouth)</th>
</tr>
</thead>
</table>

**Implications:**

The national development has the potential to impact the qualifying interests listed below through the following pathways:

- Physical loss of habitat – direct loss of habitat under the footprint of the development. Indirect loss/gain of habitat due to expansion of activities onsite.
- Physical loss of off-site supporting habitat (Firth of Forth SPA as a result of Grangemouth proposal only) – direct loss of offsite supporting habitat.
- Non-physical disturbance – noise and vibration that may disturb the species from operational activity. Reduced availability / displacement of other species (including prey)
- Non-toxic contamination – increases in suspended sediments and turbidity potentially affecting marine habitats and species.

Through the pathways outlined above, the following qualifying interests may be impacted:

- Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.
- Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged
kittiwake, herring gull, great cormorant and northern fulmar.

- Buchan Ness to Collieston Coast SPA – Breeding populations of Fulmar, Guillemot, Herring gull, Kittiwake, Shag

The relevant Conservation Objectives for the qualifying interests are:

- To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 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

**Assessment and mitigation:**
The national development is likely to result in upgrades to infrastructure at Longannet, Cockenzie and Boddam it is considered that development will be within the existing footprint of the power stations and if projects require additional land requirements this would not be included in the definition of the national development. Therefore effects from upgrades and refurbishments will not have adverse effects on site integrity for these elements of the National development as development will be confined to the footprint of the existing power stations.

The only aspect of the national development that needs consideration in this section of the appropriate assessment is the proposals at Grangemouth that will involve construction on undeveloped land immediately adjacent to the Firth of Forth SPA. The assessment has considered the potential of this development area to act as offsite supporting habitat to the SPA.

Bird data collected to inform the EIA of a proposed Biomass plant in Grangemouth included collection on the shoreline next to the proposed development area. This data observed, pink footed geese, shelduck and redshank flying over the proposed development area and populations of shelduck, knot, redshank, oystercatcher and dunlin in close proximity to the site but not actually using the development are. Discussion with SNH has confirmed that the habitat is of poor quality with qualifying features unlikely to use this habitat. Therefore whilst there is potential for disturbance of qualifying features during construction (see table below) it is not considered that land use change will result in adverse effects on site integrity.

Further certainty of this decision can be provided by the fact that a project level HRA will be undertaken, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European sites from projects either alone or in-combination with other plans or projects. It is at this stage where further detailed species and habitat surveys can be undertaken to determine the abundance of species and use of habitat and to provide a further check that the conclusion of this HRA is correct.

In regards to the potential new section of pipeline, whilst the potential route at this stage is not fully defined, and hence no specific pathway to a European site is identifiable, mitigation to avoid adverse effects on site integrity remains relevant. Firstly by stipulating that when planning the route of the pipeline, it is routed to avoid the Natura network and any offsite habitat identified as supporting site integrity. Secondly project level HRA will occur and should provide the control to avoid adverse effects on site integrity. Finally national development status can be reviewed as part of the monitoring and review of the NPF3 and if adverse effects on site integrity of any Natura site cannot be avoided this status can be revoked.

**Result:**
Taking into account the available mitigation and requirement for more detailed HRA at the project stage, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from disturbance during operation, non-toxic contamination and physical loss of supporting habitat. These effects in combination with other similar effects will be considered further in this report.
## Aspect of National Development:
Building construction / demolition (including site clearance, land remediation).

### Implications:
The national development has the potential to impact the qualifying interests listed below through the following pathways:

- **Non-physical disturbance** – noise and vibration that may disturb the species. Potential developments or structures (tall buildings, cranes) may cause significant changes to flight routes along the coast. There is also the risk of collision.

Through the pathways outlined above, the following qualifying interests may be impacted:

- **Isle of May SAC**: Grey seal
- **Firth of Forth SPA**: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.
- **Forth Islands SPA**: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.
- **Moray Firth SAC**: Bottlenose dolphin
- **River Teith SAC**: Atlantic salmon, River and Sea lamprey
- **Buchan Ness to Collieston Coast SPA** – Breeding populations of Fulmar, Guillemot, Herring gull, Kittiwake, Shag

The relevant Conservation Objectives for the qualifying interests are:

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, as a viable component of the site
- Distribution of the species within site
- No significant disturbance of the species

### Assessment and mitigation:
Construction activities considered to have the potential for adverse effects on site integrity via disturbance to species. However, mitigation is available as development comes forward that will demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of sites either alone or in-combination with other plans or projects. Required mitigation measures are as follows:

- Avoid construction on sensitive habitat (e.g. SPA bird roosting sites) through project planning and design.
- The pipeline element of the development should avoid European sites and any offsite habitat identified as supporting site integrity.
- Undertaking construction work at times of the year appropriate for the species in question, i.e. avoiding bird overwintering and breeding periods, most intense periods of fish migration, seal breeding season (June and July for harbour seals; September-late November for grey seals; the autumn breeding season for qualifying features at Buchan Ness to Collieston Coast SPA). Consultation with SNH on most appropriate times would be undertaken through the development consenting process.
- Use project planning and design to ascertain whether development will result in local changes to erosion/deposition patterns. Design mitigation accordingly in order to prevent any adverse
effect on site integrity.

- Planning and design measures required to minimise disruption e.g. location of cranes; avoid placement of tall structures within bird flight paths.

All of these mitigation measures should be considered when informing HRA of the projects this national development would support. Project level HRA will be undertaken, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European/Ramsar sites from projects either alone or in-combination with other plans or projects. As part of this process alternative effective mitigation might be identified.

**Result:**

Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance of qualifying features. These effects in combination with other similar effects will be considered further in this report.

<table>
<thead>
<tr>
<th>Aspect of National Development</th>
<th>Piling as part of construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Implications:</strong></td>
<td></td>
</tr>
<tr>
<td>The national development has the potential to impact the qualifying interests listed below through the following pathways:</td>
<td></td>
</tr>
<tr>
<td>- Physical loss (of habitats) - direct loss of habitat and deterioration of habitat due to changes in sedimentation patterns associated with vibration at coastal locations.</td>
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<tr>
<td>- Non-physical disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey, or symbiotic species)</td>
<td></td>
</tr>
</tbody>
</table>

Through the pathways outlined above, the following qualifying interests may be impacted:

- Isle of May SAC: Grey seal
- Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.
- Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.
- Moray Firth SAC – bottlenose dolphin
- River Teith SAC: Atlantic Salmon, brook, river and sea lamprey

The relevant Conservation Objectives for the qualifying interests are:

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 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
- No significant disturbance of the species

**Assessment and mitigation:**

The national development will result in some level of construction at all four locations, although potentially greater activity at Grangemouth where activity will involve the construction of a new facility as opposed to upgrades to existing infrastructure. Therefore piling may only be a relevant aspect of construction that would affect European sites connected to Grangemouth. There remains some uncertainty as CCS technology is still emerging and thus its precise requirements for construction at any given location remain uncertain.
However, mitigation is available as development is planned and constructed that can help to demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA. The suggested mitigation measures are as follows:

- Avoid construction on or close to sensitive habitat (e.g. SPA bird roosting sites) through project planning and design to place as much distance between piling and European sites as possible.
- Use project planning and design to ascertain whether proposed piling and introduced structures will result in local changes to erosion/deposition patterns. Design mitigation accordingly.
- Undertake construction work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, most intense periods of fish migration, seal and bird breeding seasons (June and July for harbour seals; September-late November for grey seals). Consult with SNH on most appropriate times.
- Use less intrusive piling methods (e.g. passive gas and soft start) and noise screens (e.g. bubble curtains in the Firth of Forth if required) during sensitive periods i.e. during fish migration and seal breeding season.
- Adhere to careful practice and use a precautionary approach to avoid or reduce impacts.

Selection of Best Available Technique (BAT) methods.

Project level HRA will be required, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European/Ramsar sites from projects either alone or in-combination with other plans or projects.

Result:
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance, and habitat deterioration. These effects in combination with other similar effects will be considered further in this report.
**Screening High Voltage Electricity Transmission Network**

<table>
<thead>
<tr>
<th>National Development: High Voltage Electricity Transmission Network</th>
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</thead>
<tbody>
<tr>
<td><strong>Details of the national development:</strong></td>
</tr>
<tr>
<td><strong>Location:</strong> Throughout Scotland</td>
</tr>
<tr>
<td><strong>Description of Classes of Development:</strong></td>
</tr>
<tr>
<td>Development consisting of:</td>
</tr>
<tr>
<td>(a) new and/or upgraded onshore electricity transmission cabling of or in excess of 132 kilovolts, and supporting pylons.</td>
</tr>
<tr>
<td>(b) new and/or upgraded onshore sub stations directly linked to electricity transmission cabling of or in excess of 132 kilovolts.</td>
</tr>
<tr>
<td>(c) new and/or upgraded onshore converter stations directly linked to onshore and/or offshore electricity transmission cable(s) of or in excess of 132 kilovolts.</td>
</tr>
<tr>
<td>(d) new and/or upgraded offshore electricity transmission cabling of or exceeding 132 kilovolts.</td>
</tr>
<tr>
<td><strong>Designation:</strong> A development within one or more of the Classes of Development described in paragraph (2) (a) to (d) is designated a national development.</td>
</tr>
<tr>
<td><strong>Need:</strong> These classes of development are needed to strongly support the delivery of an enhanced high voltage electricity transmission grid which is vital in meeting national targets for electricity generation, statutory climate change targets, and security of energy supplies.</td>
</tr>
<tr>
<td><strong>Spatial representation:</strong> The NPF3 includes a map of indicative routes and areas to be considered as energy hubs (area of co-ordinated action) which includes areas where onshore/offshore connections could be made.</td>
</tr>
<tr>
<td>These indicative routes and areas represent potential corridors without a clear spatial indication of where lines are likely to be proposed. The precise locations of lines and connections will be developed through lower tier plans and through the inception of projects.</td>
</tr>
<tr>
<td><strong>Potential generic effects associated with this type of development:</strong> The national development does not prescribe individual projects although in particular there will be infrastructure projects developing in some key coastal areas that will act as an interface between onshore and offshore energy infrastructure. Developments of this nature could have the following generic effects depending on their location: Habitat loss and deterioration; Severance and fragmentation; Hydrological change; sedimentation and water-borne pollution; Physical Disturbance; Noise and Vibration disturbance; Changes in air quality; Changes in population viability.</td>
</tr>
<tr>
<td>It can be highlighted that the national development makes allowance for upgrading of existing lines within its description which in these cases will reduce the potential effects of the development (e.g. further habitat loss) and would reduce the likely significance of effects.</td>
</tr>
<tr>
<td><strong>Details of relevant European sites to consider:</strong> The national development does not prescribe routes just broad corridors, and provides no certainty on which existing lines could be upgraded or constructed. It is considered that specific European Sites cannot be identified and considered in terms of LSE at this juncture as even broad corridors and locations presented in the NPF3 are merely indicative. There are further opportunities for potential LSE to be identified through further HRA where further grid planning is undertaken at the strategic or project level.</td>
</tr>
<tr>
<td><strong>Details of previous HRA (if applicable):</strong> The NPF2 considered the potential effects associated with grid infrastructure projects. It established that project level work would provide the opportunity to consider effects and to be able to identify mitigation to determine no adverse effects on integrity.</td>
</tr>
</tbody>
</table>
| **Initial Screening result:** The national development is formed from the combination of two proposed national developments relating to the electricity grid within the MIR. For both of the proposed national developments a clear link or pathway to a particular site was not established, however given the potential for effects from this type of development the national developments were identified as requiring further examination in the HRA to identify if there might be LSE alone or in combination, as a
precautionary measure.

**Overall Screening Result:** At this stage the exact location of new infrastructure cannot be determined and cannot be linked with certainty to specific European sites. Therefore this national development is considered too general to reasonably consider LSE either alone or in combination. It is suggested that the national development should be screened out under Stage 5: Screening Step 3(e) of the Guidance.

However, whilst at this stage links or pathways between the national development and specific European sites cannot be identified there is some potential for future development to have LSE when its location is determined. It is therefore recommended that in any further planning of this national development that identifies more specific corridors further HRA screening is undertaken as a minimum.
Screening Pumped Hydroelectric Storage

**National Development: Pumped Hydroelectric Storage**

**Details of the national development:**

**Location:** Throughout Scotland

Description of Classes of Development:

Development for pumped hydroelectric storage which would be or exceed 50 megawatts consisting of:

(a) new and/or expanded and/or refurbished water holding reservoir and dam.
(b) new and/or refurbished electricity generating plant structures or buildings.
(c) new and/or expanded and/or refurbished pump plant structures or buildings.
(d) new and/or expanded and/or refurbished water inlet and outlet pipework.
(e) new and/or refurbished substations and/or transformers directly required for the pumped hydroelectric schemes which fall within the description.
(f) new and/or replacement transmission cables directly linked to the pumped hydroelectric schemes which fall within the description.

Designation: A development within one or more of the Classes of Development described in paragraph (2) (a) to (f) is designated a national development.

Need: These classes of development are needed to support the strategic role of pumped hydroelectric storage within our electricity network by increasing the capacity through new or expanded sites. This promotes security of electricity supplies and will help to balance electricity demand with intermittency of some types of generation.

**Spatial representation:** The national development does not identify spatially new pumped storage but the NPF3 does discuss potential for upgrades at the existing Cruachan hydroelectric facility. Therefore the HRA can consider the potential for expansion of existing pumped storage facility.

**Potential generic effects associated with this type of development:** Pumped storage developments may have a range of generic effects to consider including habitat loss and deterioration, severance and fragmentation, hydrological Change, sedimentation and water-borne pollution, physical disturbance, noise and vibration disturbance, and changes in population viability.

**Details of relevant European sites to consider:** The national development covers new and/or expanded and/or refurbished. New development is not spatially identified and may only come forward in the future. Existing pumped storage can however be identified and the relationship between Ben Lui SAC, Glen Etive and Glen Fyne SPA and Loch Etive Woods SAC and the existing Cruachan Hydro Power Station which could be expanded or refurbished as part of this national development will be explored.

**Details of previous HRA (if applicable):** No previous HRA work identified.

**Initial screening result:** The national development was proposed only after the MIR stage.

**Screening for National Development and European sites**

<table>
<thead>
<tr>
<th>Site</th>
<th>Details</th>
</tr>
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<tbody>
<tr>
<td>Ben Lui SAC</td>
<td>Ben Lui SAC is designated for Base-rich fens; Alpine and subalpine calcareous grasslands; High-altitude plant communities associated with areas of water seepage; Plants in crevices on base-rich rocks; Tall herb communities; wet heathland with cross-leaved heath; montane acid grasslands; plants in crevices on acid rocks; acidic scree; species-rich grassland with mat-grass in upland areas; mountain willow scrub. The site is sensitive to land use changes, physical loss of habitat and changes to hydrological regime. Whilst the site is over 15km from the site existing electricity transmission lines run through this SAC and there could be effects associated with upgrading of existing lines.</td>
</tr>
</tbody>
</table>

**Summary:** Because of the possible impacts of the development, there may be a
likely significant effect for qualifying interests (flora and habitats).

**Result:** Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.

**Glen Etive and Glen Fyne SPA**

The Glen Etive and Glen Fyne SPA is designated for a favourable maintained breeding population of golden eagle. Currently, the main constraints to golden eagle are identified as illegal persecution and low food availability. Whilst the site is considered to be robust and in reasonable condition, parts of it are suffering from overgrazing which can result in the suppression of vegetation. This can result in the degradation of habitats necessary to sustain wild live prey. The golden eagle is also sensitive to human disturbance, especially close to nesting sites but also around hunting areas.

The national development would support developing hydroelectric resources at the existing Cruachan site and the proposed development may partially overlap the SPA. Whilst the land take from the SPA may small, this may still have the potential for LSE. There is also the potential for disturbance during construction and hence displacement from part of the territory during construction which may also be significant.

**Summary:** Because of the possible impacts of the development, there may be a likely significant effect for qualifying interest (golden eagle).

**Result:** Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.

**Loch Etive Woods SAC**

Loch Etive Woods SAC is designated for woodland comprised of alder woodland on floodplains, western acidic oak woodland and mixed woodland on base-rich soils associated with rocky slopes. It is also designated for otter which can range for up to 40km with a usual range of 18km.

The site is sensitive to potential pollution and habitat loss that may arise from any development during its construction and operation. The national development would support developing hydroelectric resources at the existing Cruachan site and as such some potential for effects has been considered.

**Summary:** Because of the possible impacts of the development, there may be a likely significant effect for qualifying interests (otter and woodland).

**Result:** Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.

**Summary of screening for likely significant effects in combination:** The above screening has identified potential for LSE from the national development on the Ben Lui SAC, Glen Etive and Glen Fyne SPA and Loch Etive Woods SAC. This is based on the potential for pollution and habitat loss during construction and operation of the development on the qualifying interests of the sites (a range of upland and alpine habitats and associated plant communities, golden eagles, woodland and otter).

**Result:** The relationships identified between the European sites screened in above and the development will be subject to Appropriate Assessment.

**Overall Screening Result:** The development is considered to have potential LSE on the Natura network and will be subject to a further appropriate assessment.
Appropriate Assessment of Pumped Hydroelectric Storage

<table>
<thead>
<tr>
<th>Aspect of National Development:</th>
<th>Land use change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Implications:</strong></td>
<td></td>
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<tr>
<td>The national development has the potential to impact the qualifying interests listed below through the following pathways:</td>
<td></td>
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<tr>
<td>• Physical loss of habitat – direct loss of habitat under the footprint of the development.</td>
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<tr>
<td>• Non-physical disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey) during operation.</td>
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<tr>
<td>• Physical damage (of habitats) – physical damage to, deterioration or fragmentation of habitat under footprint the development and associated works.</td>
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</tbody>
</table>

Through the pathways outlined above, the following qualifying interests may be impacted:
• Glen Etive and Glen Fyne SPA: Golden eagle
• Loch Etive Woods SAC: designated woodland habitats and otter

The relevant Conservation Objectives for the qualifying interests are:
To avoid deterioration of the habitats of the qualifying species (listed above) 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

**Assessment and mitigation:**
It is not possible to consider the effects of all of the proposals that could be considered as national developments as they are as yet undetermined, however the potential for expanded facilities at Cruachan has been considered in this assessment.

It is considered that development at Cruachan will have a minimal requirement for additional land, as the expansion is predominantly to be underground, and hence likely to avoid adverse effects on the integrity of Loch Etive Woods SAC and Glen Etive and Glen Fyne SPA. However there remains some potential for the loss of small areas of supporting habitat and adopting the precautionary principle, mitigation at the project level is identified as being the route to be able to demonstrate no adverse effects on site integrity. Firstly project level HRA will be required, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European/Ramsar sites from projects either alone or in-combination with other plans or projects. This provides a project level safety net where more detailed assessment can be carried out. Mitigation measures to consider are:
• Avoid construction on sensitive habitat (e.g. SPA bird roosting sites) through project planning and design. If avoidance is not possible, provide mitigation habitat elsewhere.
• Undertaking construction work at times of the year appropriate for the Golden Eagle qualifying interest.
• Use project planning and design to ascertain whether development will result in local changes to erosion/deposition patterns and to design mitigation accordingly.
• Undertake construction work at times of the year appropriate for the species in question i.e. avoiding breeding periods. Consult with SNH on most appropriate times.

**Result:**
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from physical loss of habitats and non-physical disturbance. These effects in combination with other similar effects will be considered further in this report.
**Aspect of National Development:** Building/power line construction and demolition (including site clearance, land remediation)

**Implications:**
The national development has the potential to impact the qualifying interests listed below through the following pathways:

- Physical loss of habitat – direct loss of habitat under the footprint of the development.
- Non-physical disturbance – noise and vibration that may disturb the species. Potential developments or structures (tall buildings, cranes) may cause significant changes to flight routes along the coast. There is also the risk of collision.
- Physical damage (of habitats) – physical damage to, deterioration or fragmentation of habitat under footprint the development and associated works.

Through the pathways outlined above, the following qualifying interests may be impacted:

- Glen Etive and Glen Fyne SPA: Golden eagle
- Loch Etive Woods SAC: designated woodland habitats and otter
- Ben Lui SAC: Base-rich fens; Alpine and subalpine calcareous grasslands; High-altitude plant communities associated with areas of water seepage; Plants in crevices on base-rich rocks; Tall herb communities; wet heathland with cross-leaved heath; montane acid grasslands; plants in crevices on acid rocks; acidic scree; species-rich grassland with mat-grass in upland areas; mountain willow scrub

The relevant Conservation Objectives for the qualifying interests are:
To avoid deterioration of the qualifying habitats (listed above) 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

To avoid deterioration of the habitats of the qualifying species (Golden Eagle) or significant disturbance to the qualifying species, 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 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
- No significant disturbance of the species

**Assessment and mitigation:**
Construction activities associated with expansion at Cruachan could generate noise and vibration effects in proximity to Cruachan Reservoir and potentially some effects associated with upgrading existing power lines that could include those that pass through Ben Lui SAC. Therefore there is the potential for adverse effects on site integrity via disturbance to species. Upgrading of existing lines that cross Ben Lui SAC would minimise new effects of habitat loss, however there remains some potential for physical loss of habitat depending on the process of upgrading lines.

Mitigation is available as the project develops that can help to demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA. With additional reference to the Beauly Denny power line HRA regarding the potential for effects associated with power line element. The suggested mitigation measures are as follows:
- Avoid construction on sensitive habitat (e.g. SPA bird roosting sites) through project planning and design.
- Undertake construction work (including helicopters associated with restringing power lines) at times of the year appropriate for the species in question i.e. avoiding golden eagle breeding periods. Consult with SNH on most appropriate times.
- Planning and design measures required to minimise disruption including mitigation measures to be built into construction methodology to avoid or minimise impacts.
- Transmission lines should not be commissioned until a plan for maintenance and emergency repair works has been approved.
- Use of clearly delineated exclusion zones within the work corridor to avoid construction staff and activities straying into sensitive areas.
- No permanent access tracks to be constructed in Natura sites and existing tracks to be used wherever possible.

Project level HRA to be undertaken, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European/Ramsar sites from projects either alone or in-combination with other plans or projects.

**Result:**
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from physical loss of habitat and non-physical disturbance. These effects in combination with other similar effects will be considered further in this report.
Screening Central Scotland Green Network

**National Development: Central Scotland Green Network**

**Details of the national development:**
Location: Local authorities throughout Central Scotland within the boundary identified by the Central Scotland Green Network Partnership.

Description of Classes of Development:
The project supports a wide range of environmental enhancement measures, including activities and initiatives that do not require development consent. In addition, the following development categories within the above locations are also included within the national development:
(a) development of or exceeding 2 hectares on vacant and derelict land for sustainable drainage systems or allotments.
(b) construction of new walking and cycling routes exceeding 8 kilometres.

Designation: A development within one or more of the Classes of Development described in paragraph (2) (a) and (b) is designated a national development.

Need: These classes of development support the delivery of a step change in the quality, accessibility, biodiversity and adaptability of the Central Scotland environment. Active travel projects will provide added value where they integrate with the national walking and cycling network and local authority core paths.

**Spatial representation:** Extent of the CSGN and European sites

**Potential generic effects associated with this type of development:** Whilst ultimately the CSGN seeks to expand the amount, and accessibility, of good quality green (and blue) spaces, it also aims to achieve land use change and increase in use of green networks. Potential generic effects of this type of development may still result in Habitat loss and deterioration; Severance and fragmentation; Physical disturbance; and Noise and vibration disturbance, in certain circumstances. However
precise effects would depend on the type of change and activity and its location in relation to European sites.

**Details of relevant European sites to consider:** There are a number and variety of European sites across the CSGN area. However, the national development only describes potential CSGN development and does not identify specific projects. As a result it is impossible to identify both the location of activity and a Natura site that could be affected by this.

**Details of previous HRA (if applicable):** The CSGN was included in NPF2 and included in the HRA document. This identified activities potentially promoted as part of CSGN that could affect European sites but also identifies that mitigation already forms an integral part of the project and as a result “it can be concluded with sufficient confidence at this stage that no adverse effects on the integrity of sites within the Central Belt will arise.”

**Initial screening result:** The projects and activities that may be promoted by the national development are not defined within the NPF3, and as a result cannot be meaningfully screened into an assessment. The description of the national development was considered too general to reasonably identify European sites that could be affected either alone or in combination. It was suggested that the national development should be **screened out** under Stage 5: Screening Step 3(e) of the Guidance.

**Overall Screening Result:** The overall screening judgement was reconsidered as the detail of the national development was refined. However for the reasons set out in the initial screening stage, namely that the national development cannot be meaningfully screened it will remain as **screened out** under Stage 5: Screening Step 3(e) of the Guidance.
**Screening Metropolitan Glasgow Strategic Drainage Plan**

### National Development: Metropolitan Glasgow Strategic Drainage Plan

#### Details of the national development:
- **Location:** The areas of: East Dunbartonshire Council, East Renfrewshire Council, Glasgow City Council, North Lanarkshire Council, Renfrewshire Council, South Lanarkshire Council, West Dunbartonshire Council.

- **Description of Class of Development:** Development for surface water management within the locations consisting of: (a) works, structures, buildings and pipelines where the site area is or exceeds 2 hectares.

- **Designation:** A development within the Class of Development described in paragraph (2) (a) is designated a national development.

- **Need:** This class of development will contribute to the delivery of infrastructure required for water resource and drainage management on a broad scale within the Glasgow city region. The project will play a key role in adaptation to climate change, and provide an exemplar of catchment-scale planning and management.

#### Spatial representation: Water catchment areas within the MGSDP and European sites

![Spatial representation](image_url)

#### Potential generic effects associated with this type of development:** The national development might be associated with flood alleviation measures (such as surface water management to prevent the waste water system from being overwhelmed by diverting into ‘green corridors’, flood plains or storage areas until a storm passes), waste water treatment and new infrastructure.

Generic effects for European sites from individual developments within this type of development could include: Hydrological change; Sedimentation and water-borne pollution; Physical disturbance; Noise and vibration disturbance; Changes in population viability. There are potential effects within a catchment area associated with the risks of constructing new infrastructure.
Details of relevant European sites to consider: Given the fact that most new activities will be predominantly within the urban environment and within the water catchment the only site considered relevant for this national development is the Inner Clyde Estuary SPA.

Details of previous HRA (if applicable): The HRA of the NPF2 stated that “It is not expected that this national development would generate any significant changes to the habitat upon which these species depend.”

Initial screening result: Based on the water catchment area the initial HRA identified a potential link or pathway between activities promoted by the MGSDP and the Inner Clyde Estuary SPA. The existing HRA work indicated that the national development is considered unlikely to have significant effects. However, given this potential link the national development was subject to further examination in the HRA to identify if there might be LSE alone or in combination.

### Screening for National Development and European sites

| Inner Clyde Estuary SPA | The national development does not include the detail of any specific projects, but does provide an overview of the types of development that will help to achieve its principles. The qualifying interest of the Inner Clyde Estuary SPA is Redshank. It is sensitive to noise, flood control, and impacts to their feedstock of molluscs, crustaceans, insects and earthworms, such as changing patterns of sediment movement. 

Whilst there is potential for noise effects to be associated with major developments it is most likely these will not occur within or close enough to the SPA for LSE. Furthermore, it would not be possible to determine the location of development to be able to identify potential for LSE.

Whilst water management measures and sustainable drainage could impact on sediment movements, although perhaps by reducing sediment movement during intense periods of rainfall, it is not possible to determine the location of development be able to identify potential for LSE. |

| Summary: The national development is not considered to have LSE because national development is too general to be able to do so. Therefore it is not possible to consider significant or residual effects. |

| Result: **Screened out** under Screening Step 3c of the guidance. |

**Summary of screening for likely significant effects in combination:** The national development has been screened as not having LSE and unable to determine any residual effects and as a result there will not be any in-combination effects.

**Result:** The national development is not considered to have LSE in combination with other plans and projects.

**Overall Screening Result:** The development is not considered to have LSE alone or in combination on the Natura network and is **screened out** alone and in combination.
### Screening National Long Distance Cycling and Walking Network

<table>
<thead>
<tr>
<th>National Development: National Long Distance Cycling and Walking Network</th>
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</thead>
<tbody>
<tr>
<td><strong>Details of the national development:</strong></td>
</tr>
<tr>
<td>Location: Throughout Scotland</td>
</tr>
</tbody>
</table>

**Description of Class of Development:**

(a) New and improved routes and links for walking and cycling which are likely to need planning permission

**Cycleways:**

- Route 76 of the National Cycle Network - Manor Powis Roundabout (2km of new traffic free route to avoid major roundabout on A91/A905)
- Route 765 of the National Cycle Network - Stirling to Callander: Doune-Burn of Cambus (5km of new traffic free route and 2 bridges)
- Route 753 of the National Cycle Network - Gourock-Ardrossan: Largos to Inverkip (up to 15km new traffic free & on road route) in and around Fairlie (up to 10km of new traffic free route)
- Route 73 (north) of the National Cycle Network - Arran Coastal Path, including Brodick to Corrie (9km of new traffic free route)
- Southern Upland Cycle Way (10km of new traffic routes at various locations, road crossings and traffic calming)

**Long Distance Routes**

- Clyde Walkway extension to Biggar (20km of path creation and improvements)
- Crook of Devon to Kinross (10km of path creation and improvements)
- Cross-Scotland Pilgrim Way - Tyndrum to Crieff, Glen Ogle to Tyndrum (40km of path creation and improvements)
- Darvel – Muirkirk (20km of path creation and improvements)
- John Muir Way – Strathblane to Glasgow spur (15km of path creation and improvements)
- North Solway Coastal Route - Drummore to Portpatrick (20km of path improvements)
- Speyside Way Extension - Aviemore to Newtonmore (8km of path creation and 1 bridge)

**Designation:** A development within the Class of Development described in paragraph (2) (a) is designated a national development.

**Need:**
This class of development will help deliver an integrated national network of walking and cycling routes. The routes included above have been identified for the initial phase of the network, and will make best use of existing path infrastructure. The network will significantly improve visitor experiences and increase tourism within Scotland. It will be a key asset for increasing physical activity and will support active travel. The network will link with local level core path plans and wider community networks, transport hubs and strategic tourism and recreation destinations in Scotland.

**Spatial representation:** The NPF3 provides only indicative routes across Scotland precise routes are not set other than by the descriptions above.

**Potential generic effects associated with this type of development:** The national development is unlikely to result in large scale new development, rather focusing on strengthening links between existing routes. The national development intends to result in routes that would lead to increased recreational activity and there may be some potential effects relating to physical and noise disturbance in certain locations if qualifying interests were sensitive to this.

Whilst there is scope for the proposed new walking routes to lead to associated developments to support tourism activities, such as car park facilities, lighting, or camping etc., the national development description does not cover these activities and thus there is no certainty that such development would ever arise in a location to be able to consider whether European sites would be...
impacted. Therefore specific links to individual sites are not considered, but where possible such issues have been considered in identifying mitigation measures.

Potential generic effects associated with this type of development are: Habitat loss/deterioration, Severance and fragmentation, Hydrological change, Sedimentation and water-borne pollution, Physical disturbance, Noise and vibration disturbance, and Changes in population viability.

**Details of relevant European sites to consider:** The following European sites were identified in consultation with SNH as having the potential for interactions with sections of the walking and cycling network: Airds Moss SAC, Arran Moors SPA, Glen App and Galloway Moors SPA, Loch Ken and River Dee Marshes SPA and Ramsar, Loch Leven SPA, Loch of Inch and Torrs Warren SPA, Luce Bay and Sands SAC, Muirkirk and North Lowther Uplands SPA, Mull of Galloway SAC, Renfrewshire Heights SPA, River Bladnoch SAC, River Spey SAC, River Spey – Insh Marshes SPA, River Tay SAC, River Teith SAC and Upper Strathearn Oakwoods SAC.

**Details of previous HRA (if applicable):** No previous HRA work has been identified and undertaken for this national development.

**Initial screening result:** Based on the fact that the national development description included in the MIR covered existing infrastructure and uncertainty on the location of ‘missing links’ to be prioritised, and supporting infrastructural requirements, it was considered that the national development was too general to reasonably identify European sites that could be affected either alone or in combination. The national development was initially screened out under Stage 5: Screening Step 3(e) of the Guidance.

**Overall Screening Result:** The definition of the national development was updated throughout the development of the NPF3 and this HRA has further considered whether there is a link or pathway between the national development and European sites.

### Screening for National Development and European sites

<table>
<thead>
<tr>
<th>Site</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airds Moss SAC</td>
<td>Airds Moss SAC is a low-altitude blanket bog in unfavourable recovering condition with species such as purple moor-grass, heather and deergrass. The moss site is sensitive to disturbance, loss and deterioration of habitat, as well as changes to soil and water quality. The national development includes a route from Darvel to Muirkirk, approximately 20km of path creation and improvements. Improvement implies that there is already some level of walking activity in the area. The exact route is not defined and although the SAC is close to Muirkirk the route might not pass through the site. If a route were to pass through the site there could be potential for habitat loss, deterioration and fragmentation. Some hydrological impacts may occur but may not result in LSE. <strong>Summary:</strong> There is some potential for LSE if the walking route was to pass through the SAC however this is not certain. Taking the precautionary principle the national development could have a likely significant effect on the SAC as a result of potential disturbance and loss of some habitat. <strong>Result:</strong> Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.</td>
</tr>
<tr>
<td>Arran Moors SPA</td>
<td>Arran Moors SPA is designated for Hen Harrier and is being considered for its relationship with National Long Distance Cycling and Walking Network. The Hen Harrier is vulnerable to some agricultural practices, game management, recreational activities, and degradation of habitat. The Hen harrier has a number of identified sensitivities including habitat loss and deterioration, nest destruction and the killing of Hen Harriers on grouse moors.</td>
</tr>
</tbody>
</table>
There is also a significant extent of illegal killing and other persecution.

The national development includes a link from Brodick to Corrie along the Arran Coastal Route which includes some sections of traffic free route. The exact location is not defined but a section of the route may be within 1km of the route. Whilst there is some potential for loss of supporting habitat and potentially some increase in noise associated with cycle traffic the expected level of potential habitat deterioration is unlikely to significantly impact the full expanse of supporting habitat.

**Summary:** The national development is not considered to have LSE, although it is considered that there are MRE to consider in combination.

**Result:** Screened out under Screening Step 3d of the guidance.

### Glen App and Galloway Moors SPA

Glen App and Galloway Moors SPA is designated for Hen Harrier which is vulnerable to some agricultural practices, game management, recreational activities, and degradation of habitat.

The Hen harrier has a number of identified sensitivities including habitat loss and deterioration, nest destruction and the killing of Hen Harriers on grouse moors. There is also a significant extent of illegal killing and other persecution.

The national development includes 10km of new traffic routes at various locations, road crossings and traffic calming along the Southern Upland Cycleway. The current route of the Southern Upland Way is currently some distance south of the SPA. Whilst there is some potential for loss of supporting habitat and potentially some increase in noise associated with cycle traffic the expected level of potential habitat deterioration is not likely to have significantly effects on the SPA.

**Summary:** Whilst the national development will generate a level of change there is no conceivable effect on the SPA because there is not a clear link or pathway that would undermine its conservation objectives.

**Result:** Screened out under Screening Step 3c of the guidance.

### Loch Ken and River Dee Marshes SPA and Ramsar

The site is designated for Greenland white-fronted geese and also supports an internationally important wintering population of greylag geese. These species have identified and relevant sensitivities that include changes to land use, habitat degradation, loss and fragmentation and predation.

The proposed road crossings and traffic calming along the Southern Upland cycleway could potentially have some interaction with the species if improvements were to take place on areas of supporting habitat, but there is no suggestion that this is the case. As a result the National description cannot be considered to have a likely significant effect.

**Summary:** Whilst the national development will generate a level of change there is no conceivable effect on the SPA because there is not a clear link or pathway that would undermine its conservation objectives.

**Result:** Screened out under Screening Step 3c of the guidance.

### Loch Leven SPA

Loch Leven SPA supports a population of European importance of wintering Icelandic whooper swans, Icelandic/Greenlandic pink-footed geese and shoveler. It also qualifies by supporting a wintering waterfowl assemblage of European importance which includes large populations of cormorant, gadwall, teal, pochard, tufted duck and goldeneye.

The national development includes a 10km section of path creation and improvement to extend the hillfoots way to Kinross. The SPA is situated the other side of Kinross and the M90 to the proposed pathway. As the route is not defined at this stage it is
not possible to determine if there will be impacts on offsite supporting habitat for the species.

**Summary:** The development is to be screened out under screening step 3(e) of the guidance due to the route not being finalised at this stage and therefore it is not possible to determine precisely where effects may occur or which sites, if any, will be affected.

**Result:** Screened out under screening step 3(e) of the guidance

<table>
<thead>
<tr>
<th>Loch of Inch and Torrs Warren SPA</th>
<th>The SPA qualifies by supporting populations of European importance including the Greenland White-fronted Goose and Hen Harrier. The site therefore has relevant sensitivities of changes to land use, habitat degradation, loss and fragmentation and persecution and predation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The national development includes a section of coastal path between Drummore to Portpatrick to the south of the SPA which might impact on supporting habitat to the SPA should the species use these sites.</td>
</tr>
<tr>
<td><strong>Summary:</strong> The national development has some potential to result in change which can be linked to LSE on the SPA via potential disturbance and change to habitat.</td>
<td><strong>Result:</strong> Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Luce Bay and Sands SAC</th>
<th>Luce Bay and Sands SAC is designated for a range of habitat including subtidal sandbanks, shallow inlets and bays, intertidal mudflats and sandflats, coastal dune heathland, shifting dunes and associated grassland. The site also supports a population of Great Crested Newt. Relevant sensitivities include human disturbance and trampling.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The national development includes a section of coastal path between Drummore to Portpatrick which has the potential to run through or adjacent to the edge of the SAC. As a result there is potential for some LSE from increased footfall through the area.</td>
</tr>
<tr>
<td><strong>Summary:</strong> The national development has some potential to result in change which can be linked to LSE on the SAC via potential disturbance and change to habitat.</td>
<td><strong>Result:</strong> Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Muirkirk and North Lowther Uplands SPA</th>
<th>The SPA qualifies for supporting breeding populations of hen harrier, short-eared owl, merlin, peregrine falcon, and golden plover. The populations of the species are all sensitive to habitat loss and deterioration, nest destruction and land use changes and disturbance. In addition hen harriers and peregrine in general have suffered from persecution.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Much of the SPA sits between Darvel and Muirkirk and it’s likely that new or improved footpaths will be within the SPA. There is therefore some potential for LSE as a result of habitat loss and change and potentially disturbance to species from humans and potentially dogs.</td>
</tr>
<tr>
<td><strong>Summary:</strong> The national development has some potential to result in change which can be linked to LSE on the SPA via potential disturbance and loss of some habitat.</td>
<td><strong>Result:</strong> Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.</td>
</tr>
</tbody>
</table>

| Mull of Galloway SAC | The Mull of Galloway SAC has considerable biogeographical importance for its vegetated cliffs containing a number of important species. Relevant sensitivities will include potential impacts from trampling where the proposed path may pass through or immediately adjacent to the SAC. As a result it is considered that there is potential |

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Renfrewshire Heights SPA

The SPA is designated for Hen Harrier which is vulnerable to some agricultural practices, game management, recreational activities, degradation of habitat and of relevance to the national development noise disturbance and potentially predation.

The national development includes a 15km new traffic free and on road route between Largs and Inverkip on the National Cycle Route 753 which will run along the coast passing 18km from the SPA. It is considered that the likely route will be some distance from the designation and unlikely to impact on supporting habitat. Therefore no LSE is predicted.

**Summary:** Whilst the national development will generate a level of change there is no conceivable effect on the SPA because there is not a clear link or pathway that would undermine its conservation objectives.

**Result:** Screened out under Screening Step 3c of the guidance.

River Bladnoch SAC

The River Bladnoch SAC supports a high-quality salmon population in south-west Scotland, which still supports a spring run of salmon. The relevant sensitivities to this national development include pollution, potentially physical degradation of spawning and nursery habitat and potentially barriers to movement.

The national development includes the Southern Upland Cycle Way improvements that will result in 10km of new traffic routes at various locations, road crossings and traffic calming. There is some potential for pollution and hydrological change associated with construction activities. However effects are not certain to arise.

**Summary:** Whilst not certain, the national development has some potential to result in crossings on the River Bladnoch which can be linked to LSE on the SAC via hydrological impacts and potential physical barriers to the movement of migratory fish.

**Result:** Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.

River Spey SAC

The River Spey SAC is designated for Atlantic Salmon, Otter, Freshwater Pearl Mussel and Sea lamprey. Relevant sensitivities include pollution for all species and habitat Loss (Otter).

The national development includes an extension of the Speyside Way to Newtonmore and includes 8km of path creation and one bridge. The specific route isn’t defined however it is possible that some construction activity, in particular where the route might be constructed over the Spey or its tributaries, some risk of pollution, change in water quality and barriers to movement could be possible. Whilst the certainty of impact is low, taking the precautionary principle there is some potential for impact and for this to result in LSE.

**Summary:** The national development has some potential to result in construction activity that conceivably be linked to LSE on the SAC via pollution risk.

**Result:** Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.

River Spey - Insh marshes

The River Spey – Insh marshes SPA is designated for Osprey, Spotted Crake, Wood Sandpiper, Hen Harrier and Whooper Swan. Relevant sensitivities include habitat...
SPA

loss, degradation and fragmentation (Hen harrier, Osprey, Spotted Crake, Whooper swan, Wood sandpiper), and human disturbance (Osprey, Whooper swan).

The National development includes an extension of the Speyside Way to Newtonmore and includes 8km of path creation and one bridge. The specific route isn’t defined however it is possible that some construction activity could result in disturbance or impacts (e.g. habitat loss and fragmentation) on offsite supporting habitat. Whilst the impact is by no means certain, taking the precautionary principle there is some potential for impact and for this to result in LSE.

Summary: The national development has some potential to result in activities which can be linked to LSE on the SPA.

Result: Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.

River Tay SAC

The River Tay SAC is designated for freshwater habitats that support vegetation and habitats. The SAC also supports and is designated for the following mobile species: Atlantic salmon, Brook Lamprey, Sea Lamprey, Brook Lamprey, River Lamprey and Otter. Relevant sensitivities include pollution and impacts on riverside habitat for Otter.

The national development is includes 20km of path creation and improvements between Glen Ogle and Tyndrum. At present the route is expected to use a disused railway westwards along Glen Dochart parallel with the A85 to Grianlairich. The route will continue via Strathfillan to Tyndrum along the road corridor.

Some resurfacing of the disused railway may take place and potentially run off to water courses could be associated with this. However, given its geographical location it has been identified that the route will not pass tributaries to the River Tay. Furthermore, it is considered that there would not be pollution that would have a likely significant effect on the site.

Summary: Whilst the national development will generate some change there is no conceivable effect on the SAC because there is not a clear link or pathway that would undermine its conservation objectives.

Result: Screened out under Screening Step 3c of the guidance.

River Teith SAC

River Teith SAC qualifies for Atlantic salmon, for which the site condition is unfavourable recovering, and for brook, river and sea lamprey for which the site is considered to be one of the best areas in the UK and which are all in a favourable maintained condition.

The site is sensitive to various types of pollution which, either alone or in combination with other factors, limit the distribution of salmon and lamprey. Pollution can also impact lamprey through smothering spawning graves and nursery silts. River and Sea lamprey and Atlantic salmon require a clear migratory route and are therefore sensitive to obstacles such as engineering works that could impact the routes.

The national development includes a 5km of traffic free route and two bridges on Route 765 of the National Cycle Network from Doune to Burn of Cambus. The specific route isn’t defined however it is possible that some construction activity, in particular where bridges might be constructed over tributaries to the Teith, some risk of pollution and change in water quality could be possible, also construction of bridges could cause obstruction to migratory movement. Whilst the certainty of impact is low taking the precautionary principle there is some potential for impact and for this to result in LSE.

Summary: The national development has some potential to result in change which can be linked to LSE on the SAC via pollution risk.
### Upper Strathearn Oakwoods SAC

Upper Strathearn Oakwoods SAC is designated for Western acidic oak woodland, for which the site condition is unfavourable, no change.

The site is sensitive to direct impacts arising from the development such as pollution and hydrological change associated with construction activities, as well as recreational disturbance once the route is completed.

### Summary

The national development has some potential to result in activities which can be linked to LSE on the SAC.

### Result

Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.

### Summary of screening for likely significant effects in combination

The above screening has identified potential for LSE from the national development on Airds Moss SAC, Loch of Inch and Torrs Warren SPA, Luce Bay and Sands SAC, Muirkirk and North Lowther Uplands SPA, Mull of Galloway SAC, River Bladnoch SAC, River Spey SAC, River Spey - Insh marshes SPA, River Teith SAC and Upper Strathearn Oakwoods SAC. This is based on the potential for impacts on sites associated with trampling, disturbance and potential for pollution.

Minor residual effects on Arran Moors SPA were identified at screening and the impact pathways between the European sites and the SPA have been considered in combination. Firstly, in-plan there were no in combination effects as other National Developments were not considered to have MRE on the SPA. To identify if there are in combination effects with other plans and projects the HRA of the Ayrshire and Arran Forestry and Woodland Strategy, considered to be a plan that could have impacted on the SPA, did not reveal potential for any in combination effects.

### Result

The relationships identified between those European sites screened in above and the development will be subject to further Appropriate Assessment.

### Overall Screening Result

The national development is considered to have potential LSE on the Natura network and will be subject to a further appropriate assessment.

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**Appropriate Assessment of National Long Distance Cycling and Walking Network**

### Aspect of National Development: Route construction / improvement

### Implications

The national development will significantly improve visitor experiences and increase tourism within Scotland and could result in activities that would lead to increased recreational activity through supporting active travel.

The national development has the potential to impact the qualifying interests listed below through the following pathways:

- Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint of new route construction.
- Physical damage (of habitats and species) – from hydrological impacts such as changes to water flow / level. Some species, such as Atlantic salmon, are sensitive to possible new physical barriers to migration in water courses
- Non-physical (indirect disturbance) – from noise and vibration disturbance that may disturb the species.

Through the pathways outlined above, the following qualifying interests may be impacted:

- Airds Moss SAC: Blanket bog
- Loch of Inch and Torrs Warren SPA: Birds - Greenland white fronted goose, hen harrier
- Luce Bay and Sands SAC: Coastal Habitat and Great Crested Newt.
- Muirkirk and North Lowther Uplands SPA: Birds - hen harrier, short-eared owl, merlin, peregrine falcon, golden plover.
- River Bladnoch SAC: Atlantic salmon
- River Spey SAC: Atlantic salmon, sea lamprey, otter, freshwater pearl mussel
- River Spey – Insh Marshes SPA: Birds - Hen harrier, Osprey, Spotted Crake, Whooper swan, Wood sandpiper
- River Teith SAC: Atlantic Salmon, brook, river and sea lamprey
- Upper Strathearn Oakwoods SAC: Western acidic oak woodland

The relevant Conservation Objectives for the qualifying interests are:
To avoid deterioration of the qualifying habitat (listed above) 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
- Processes supporting the habitat

To avoid deterioration of the habitats of the qualifying species (listed above) 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, including range of genetic types for salmon, as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- No significant disturbance of the species

Assessment and mitigation:

There is considerable difficulty in identifying whether construction activities of creating paths and footbridges at potentially just a few locations along walking routes, that only have the possibility of interacting with a European site will have adverse effects on a sites integrity. There is scope for these activities to take place without having a discernible effect at all. However there are mitigation measures available to provide certainty that there will not be adverse effects on site integrity. The suggested mitigation measures are as follows:

- Optimising route alignment so that where possible, European sites are avoided.
- Detailed method statements covering all works can provide guidance for how projects will be implemented.
- Observing seasonality by timing construction / maintenance to ensure that it does not occur at sensitive times of the year, for example the bird breeding season, during winter roosting or fish migratory periods.
- Planning the careful placement of anything that needs construction to ensure that consideration is given to the potential for wider impacts on a distant Natura site or its associated qualifying interests.
- Undertaking species / habitat surveys - where the exact line of a path or trail is not yet determined, surveys should be undertaken to ensure there is sufficient data to inform an assessment if significant construction will be required.
- All works should comply with legal requirements and guidelines. This includes formal processes such as the requirement for planning permission and adherence to guidelines such as the Pollution Prevention Guidance published by SEPA.

Where routes are taken forward by other strategic plans or programmes, that provide greater detail on routes and associated activities, further HRA should be undertaken to ensure that there are no adverse effects on the integrity of European/Ramsar sites from projects either alone or in-combination
with other plans or projects.

**Result:**
Taking into account the available mitigation it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from the physical loss of habitats, physical damage of habitats or species and non-physical disturbance to species. These effects in combination with other similar effects will be considered.

<table>
<thead>
<tr>
<th>Aspect of National Development:</th>
<th>Increased recreational use</th>
</tr>
</thead>
</table>

**Implications:**
The national development will significantly improve visitor experiences and increase tourism within Scotland. It could result in increased recreational activity through supporting active travel.

The national development has the potential to impact the qualifying interests listed below through the following pathways:

- **Physical damage (of qualifying habitats and species) and deterioration of qualifying and supporting habitats** - The effect of this is that increased recreational use may also increase the risk of predation by, and disturbance linked to dogs
- **Non-physical (indirect disturbance)** – from noise and vibration disturbance that may disturb the species. This includes the potential to increase disturbance out with designated site boundaries by the increased use of link paths

Through the pathways outlined above, the following qualifying interests may be impacted:

- **Airds Moss SAC: Blanket bog**
- **Loch of Inch and Torrs Warren SPA: Birds - Greenland white fronted goose, hen harrier**
- **Luce Bay and Sands SAC: Coastal habitat and great crested newt**
- **Muirkirk and North Lowther Uplands SPA: Birds - hen harrier, short-eared owl, merlin, peregrine falcon, golden plover.**
- **Mull of Galloway SAC: Vegetated sea cliffs**
- **River Spey – Insh Marshes SPA: Birds - osprey, whooper swan**
- **Upper Strathearn Oakwoods SAC: Western acidic oak woodland**

The relevant Conservation Objectives for the qualifying interests are:
To avoid deterioration of the habitats of the qualifying species (listed above) 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
- No significant disturbance of the species

**Assessment and mitigation:**
There is considerable difficulty in identifying whether increased footfall along walking routes that remain uncertain in their precise location will actually result in any effects. There is scope for these activities to take place without having a discernible effect at all. However, it is determined that in order to demonstrate that the will be no adverse effects on site integrity the following mitigation measures should be implemented:

- Understanding the impacts on increase visitor numbers is important. When proposing specific routes data on visitor numbers should be compared to predicted increases in numbers to assess any impacts. Factors such as the impacts of dogs and seasonality of use should also be taken into account.
- Early identification of issues at the planning stage can allow for properly considered and
located screening or planting separating users and dogs from the most sensitive locations.

- Signs and interpretation can be used to help influence the behaviour of users by diverting people from sensitive areas or keeping dogs on leads. Where routes are planned in or around sensitive areas such signing should be included. However as behaviour change is not enforceable this is merely a supporting measure and should not be relied upon alone.
- Planning the careful placement of any new facilities and entry and exit points to use the paths, in order to ensure that consideration is given to the potential for wider impacts where an increased use of linking path could have subsequent effects on a Natura site or its associated qualifying interests.

Where routes are taken forward by other strategic plans or programmes, providing greater detail on routes, further HRA should be undertaken to ensure that there are no adverse effects on the integrity of European/Ramsar sites from projects either alone or in-combination with other plans or projects. Projects promoted by these should include the suggested mitigation.

**Result:**
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from increased recreational use. These effects in combination with other similar effects will be considered further in this report.
**Screening High Speed Rail**

### National Development: High Speed Rail

**Details of the national development:**
Location: Central and Southern Scotland to the border with England

Description of Classes of Development:
Development within the location consisting of:
(a) the construction of new and/or upgraded railway track and electrification solution (overhead cabling and pylons or on track) for the purpose of delivering high speed rail.
(b) the construction of new and/or refurbished multi-modal railway stations to service the high speed rail lines.

Designation: A development within one or more of the Classes of Development described in paragraph (2) (a) and (b) is designated a national development.

Need: The classes of development support the development of a high speed rail network to Scotland. This aims to provide a more efficient, lower carbon travel option to connect Scotland with London. A link between Edinburgh and Glasgow as an initial phase would realise early benefits from the project, and aims to release capacity on the existing rail network serving cities north of the Central Belt.

**Spatial representation:** The NPF3 provides only an indicative representation of a potential route between Edinburgh and Glasgow and linking to England. There is no route set or defined at this point.

**Potential generic effects associated with this type of development:** It is possible that part of the high speed rail would involve upgrading existing sections of the rail network. However some new links might equally be required. Generic effects associated with this type of development might therefore be: Habitat Loss and Deterioration; Severance and Fragmentation; Physical Disturbance; Noise and Vibration Disturbance; Changes in Population Viability. It is possible that some significant effects could result from this type of development, but establishing links to specific European sites might be difficult.

**Details of relevant European sites to consider:** At this stage of planning the national development does not have a confirmed spatial definition beyond the Glasgow-Edinburgh corridor. Given the long term nature of the proposal there may be further opportunities to consider revised options and develop a more spatial understanding in future NPF HRA and certainly within project level HRA.

Sites considered within the Glasgow-Edinburgh corridor are Black Lock Moss SAC, Blawhorn Moss SAC, Braehead Moss SAC, Clyde Valley Woods SAC, Cranley Moss SAC, North Shotts Moss SAC, Slamannan Plateau SPA, Waukenwae Moss SAC.

**Details of previous HRA (if applicable):** The NPF2 included high speed rail as a national development and the HRA established that European sites “Cannot be defined at this stage. No clear route for the project has yet been identified.” Furthermore “It remains too early to define whether or not the development will affect Natura sites in central Scotland.”

**Initial screening result:** Given the uncertainty on the likely location of new infrastructure promoted as part of this national development, it was considered that it is too general to reasonably identify European sites that could be affected either alone or in combination. The intention was to screen out the national development under Stage 5: Screening Step 3(e) of the Guidance. However, further examination of the relationship between the definition of the national development and sites within the Glasgow-Edinburgh corridor was undertaken.

### Screening for National Development and European sites

<table>
<thead>
<tr>
<th>Site</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Lock Moss SAC</td>
<td>The SAC is designated for active and degraded raised bogs which are sensitive to drainage and changes to physical extent and soil quality. It is possible that the development would require both upgrading of</td>
</tr>
</tbody>
</table>
existing sections of rail network as well as new links. This could potentially impact the site through habitat loss and deterioration and changes to the hydrological regime. However, as the exact route for the high speed rail is yet to be determined, it is difficult to determine whether there will be a pathway through which the site will be impacted.

**Summary**: The development is to be screened out under screening step 3(e) of the guidance due to the route not being finalised at this stage and therefore it is not possible to determine precisely where effects may occur or which sites, if any, will be affected.

**Result**: Screened out under screening step 3(e) of the guidance

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blawhorn Moss SAC</td>
<td>The SAC is designated for active and degraded raised bogs which are sensitive to drainage and changes to physical extent and soil quality. It is possible that the development would require both upgrading of existing sections of rail network as well as new links. This could potentially impact the site through habitat loss and deterioration and changes to the hydrological regime. However, as the exact route for the high speed rail is yet to be determined, it is difficult to determine whether there will be a pathway through which the site will be impacted. <strong>Summary</strong>: The development is to be screened out under screening step 3(e) of the guidance due to the route not being finalised at this stage and therefore it is not possible to determine precisely where effects may occur or which sites, if any, will be affected. <strong>Result</strong>: Screened out under screening step 3(e) of the guidance</td>
</tr>
<tr>
<td>Braehead Moss SAC</td>
<td>The SAC is designated for active and degraded raised bogs which are sensitive to drainage and changes to physical extent and soil quality. It is possible that the development would require both upgrading of existing sections of rail network as well as new links. This could potentially impact the site through habitat loss and deterioration and changes to the hydrological regime. However, as the exact route for the high speed rail is yet to be determined, it is difficult to determine whether there will be a pathway through which the site will be impacted. <strong>Summary</strong>: The development is to be screened out under screening step 3(e) of the guidance due to the route not being finalised at this stage and therefore it is not possible to determine precisely where effects may occur or which sites, if any, will be affected. <strong>Result</strong>: Screened out under screening step 3(e) of the guidance</td>
</tr>
<tr>
<td>Clyde Valley Woods SAC</td>
<td>Clyde Valley Woods SAC is sensitive to changes in the hydrological regime and some level of human disturbance. It is possible that the development would require both upgrading of existing sections of rail network as well as new links. This could potentially impact the site through habitat loss and deterioration and changes to the hydrological regime. However, as the exact route for the high speed rail is yet to be determined, it is difficult to determine whether there will be a pathway through which the site will be impacted. <strong>Summary</strong>: The development is to be screened out under screening step 3(e) of the guidance due to the route not being finalised at this stage and therefore it is not possible to determine precisely where effects may occur or which sites, if any, will be affected. <strong>Result</strong>: Screened out under screening step 3(e) of the guidance</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
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</tr>
<tr>
<td>Cranley Moss SAC</td>
<td>Cranley Moss SAC is designated for active and degraded raised bogs which are sensitive to drainage, grazing and changes to physical extent and soil quality. It is possible that the development would require both upgrading of existing sections of rail network as well as new links. This could potentially impact the site through habitat loss and deterioration and changes to the hydrological regime. However, as the exact route for the high speed rail is yet to be determined, it is difficult to determine whether there will be a pathway through which the site will be impacted. <strong>Summary:</strong> The development is to be screened out under screening step 3(e) of the guidance due to the route not being finalised at this stage and therefore it is not possible to determine precisely where effects may occur or which sites, if any, will be affected. <strong>Result:</strong> Screened out under screening step 3(e) of the guidance</td>
</tr>
<tr>
<td>North Shotts Moss SAC</td>
<td>The SAC is designated for active and degraded raised bogs which are sensitive to drainage and changes to physical extent and soil quality. It is possible that the development would require both upgrading of existing sections of rail network as well as new links. This could potentially impact the site through habitat loss and deterioration and changes to the hydrological regime. However, as the exact route for the high speed rail is yet to be determined, it is difficult to determine whether the site will be impacted. <strong>Summary:</strong> The development is to be screened out under screening step 3(e) of the guidance due to the route not being finalised at this stage and therefore it is not possible to determine precisely where effects may occur or which sites, if any, will be affected. <strong>Result:</strong> Screened out under screening step 3(e) of the guidance</td>
</tr>
<tr>
<td>Slamannan Plateau SPA</td>
<td>Slamannan Plateau SPA is designated for Taiga Bean Geese. These may potentially be impacted by the development due to the additional collision risk associated with the overhead cables. The species is also sensitive to habitat loss and degradation due to drainage and changing management practises. It is possible that the development would require both upgrading of existing sections of rail network as well as new links. However, as the exact route for the high speed rail is yet to be determined it is difficult to determine whether the site will be impacted. The NPF2 included high speed rail as a national development and the HRA established that European sites “Cannot be defined at this stage. No clear route for the project has yet been identified.” Furthermore “It remains too early to define whether or not the development will affect Natura sites in central Scotland.” <strong>Summary:</strong> The development is to be screened out under screening step 3(e) of the guidance due to the route not being finalised at this stage and therefore it is not possible to determine precisely where effects may occur or which sites, if any, will be affected. <strong>Result:</strong> Screened out under screening step 3(e) of the guidance</td>
</tr>
<tr>
<td>Waukenwae Moss SAC</td>
<td>The SAC is designated for active and degraded raised bogs which are...</td>
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</tbody>
</table>
It is possible that the development would require both upgrading of existing sections of rail network as well as new links. This could potentially impact the site through habitat loss and deterioration and changes to the hydrological regime. However, as the exact route for the high speed rail is yet to be determined, it is difficult to determine whether there will be a pathway through which the site will be impacted.

**Summary:** The development is to be screened out under screening step 3(e) of the guidance due to the route not being finalised at this stage and therefore it is not possible to determine precisely where effects may occur or which sites, if any, will be affected.

**Result:** Screened out under screening step 3(e) of the guidance

**Summary of screening for likely significant effects in combination:** It remains too early to define whether or not the development will affect Natura sites in central Scotland. It is possible that the development would require both upgrading existing sections of rail network as well as new links. This HRA has identified potential European sites along the corridor for high speed rail that should be considered for effects. However, as the exact route for the high speed rail between Edinburgh and Glasgow is yet to be determined it is difficult to determine whether the site will be impacted.

The NPF2 included high speed rail as a national development and the HRA established that European sites “Cannot be defined at this stage. No clear route for the project has yet been identified.” Furthermore “It remains too early to define whether or not the development will affect Natura sites in central Scotland.” This assessment concurs with this view. Further Strategic HRA may be an option for future versions of the NPF that could contain more detail however it is consider that the most effective HRA will be at the project level, allowing for effects to be identified and mitigation to be built into the project as required. It is expected that generic mitigation measures, including locational decisions, siting, design and construction methods and timing, will be readily available to ensure that there are no adverse effects from the project on SPAs or SACs. These can be built into future HRA when more detail of the resulting project will be available.

**Result:** Whilst a development of this nature could have LSE on sites it is not possible at this point to identify a clear link or pathway between the project intention and European sites.

**Overall Screening Result:** For the reasons set out in the initial screening stage, namely that the national development does not give sufficient detail to identify spatial projects it will remain as **screened out** under Stage 5: Screening Step 3(e) of the Guidance.
## Screening Strategic Airport Enhancements

### National Development: Strategic Airport Enhancements

### Details of the national development:
Glasgow Prestwick Airport, Glasgow International Airport, Edinburgh Airport, Aberdeen Airport, Inverness Airport; adjoining land identified for mixed, industrial and business use at Edinburgh, Glasgow and Prestwick Airports.

### Description of Classes of Development:
Development at and transport routes to the locations consisting of:
(a) any extension of the site boundary of the airport for airport operational uses as identified in a current airport masterplan that is supported by the development plan for the area.
(b) new and/or expanded terminal buildings where the gross floor space exceeds 10,000 square metres or the development is or exceeds 2 hectares.
(c) construction of buildings for business, industrial or storage and distribution use requiring a near airport location where the gross floor space is or exceeds 10,000 square metres or the development is or exceeds 2 hectares in the area identified for associated business development at Edinburgh, Glasgow and Prestwick Airports.
(d) new National Showground facilities south of the A8 where the gross floor space is or exceeds 10,000 square metres or the development is or exceeds 2 hectares.
(e) construction of new walking and cycling routes exceeding 8 kilometres.
(f) construction of surface water management schemes where the area of development would exceed 2 hectares.

### Designation: A development within one or more of the Classes of Development described in paragraph (2) (a) to (f) is designated a national development.

### Need:
These strategic airports act as national gateways to and from Scotland. These classes of development support the key gateway and hub function of the airports. All the airports identified have published masterplans for their development – development proposals vary between the airports. Areas adjacent to Glasgow and Edinburgh Airports have been identified for commercial and mixed uses supporting the economic development opportunities which are particularly suited to these locations. At Edinburgh provision is also made for the re-location of the Royal Highland Showground, ensuring that the major land users in the area continue to have a co-ordinated approach to development.
Spatial representation: Indicative map of Aberdeen Airport and European sites

Indicative map of Edinburgh Airport and European sites
Indicative map of Glasgow Airport and European sites

Indicative map of Prestwick Airports and European sites
Potential generic effects associated with this type of development: The following potential generic effects have been identified: Habitat Loss and Deterioration; Severance and Fragmentation; Hydrological Change; Sedimentation and Water-borne Pollution; Physical Disturbance; Noise and Vibration Disturbance; Changes in Population Viability. However, many of the proposed actions might take place on the existing footprint of the developed areas and some of these generic effects will not be relevant to each of the airport proposals.

Details of relevant European sites to consider: Changes at Aberdeen Airport might need to be considered for potential effects on European sites in proximity to the airport and also those sites designated for migratory birds. European sites to consider further might include: Fowlsheugh SPA; Sands of Forvie SAC; River Dee SAC; Ythan Estuary, Sands of Forvie and Meikle Loch SPA; Loch of Skene SPA.

Sites relevant to proposals at Edinburgh Airport might include: Firth of Forth SPA; Forth Islands SPA; River Teith SAC.

Sites relevant to proposals at Glasgow Airport might include: Black Cart SPA; Inner Clyde Estuary SPA; Renfrewshire Heights SPA.

Sites relevant to proposals at Prestwick Airport might include: Muirkirk and North Lowther Uplands SPA; Renfrewshire Heights SPA; Arran Moors SPA.

Sites relevant to proposals at Inverness Airport might include: Inner Moray Firth SPA; Moray and Nairn Coast SPA; Cromarty Firth SPA; Loch Flemington SPA; Moray Firth SAC; Cawdor Woods SAC.

Details of previous HRA (if applicable): The NPF2 HRA considered development at Aberdeen and Prestwick Airports concluding no European sites would be affected by NPF2 proposals, Edinburgh and Glasgow Airports were noted as having potential links to European sites and species. The airports also feature in relevant development plans, and some of these have been subject to HRA.

Initial screening result: The initial screening work for the MIR identified potential for a link or pathway to be established between the airport proposals and European sites that required further examination in the HRA to identify if there might be LSE alone or in combination. Previous HRA work has also been reviewed and limited effects have been identified.
<table>
<thead>
<tr>
<th>Screening for National Development and European sites</th>
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<tbody>
<tr>
<td><strong>Arran Moors SPA</strong></td>
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<tr>
<td><strong>Summary:</strong></td>
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<tr>
<td><strong>Result:</strong></td>
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<tr>
<td><strong>Black Cart SPA</strong></td>
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</table>
### Summary:
The national development promotes activities that will enhance activity at the airport and will result in some construction activity. This can be linked to potential for LSE on the SPA. Whilst previous assessments have identified potential available mitigation this HRA takes a precautionary approach and the relationship between the airport and this SPA will be examined further.

**Result:** Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.

### Cawdor Woods SAC

Cawdor Woods SAC is a broad leaved mixed and yew woodland in currently unfavourable condition approximately 6km from Inverness Airport. The relevant sensitivities of the SAC are changes in air quality and linked to that potential change in soil quality.

The Inverness Airport masterplan does not include specific aims to significantly increase the volume of air traffic which would impact on air quality. Furthermore there are not proposals that will have impacts on the extent of the habitat.

**Summary:** Whilst previous assessments have identified potential available mitigation this HRA takes a precautionary approach and the relationship between the airport and this SPA will be examined further.

**Result:** Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.

### Cawdor Woods SAC

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The Inverness Airport masterplan does not include specific aims to significantly increase the volume of air traffic which would impact on air quality. Furthermore there are not proposals that will have impacts on the extent of the habitat.

**Summary:** Whilst previous assessments have identified potential available mitigation this HRA takes a precautionary approach and the relationship between the airport and this SPA will be examined further.

**Result:** Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.

### Cromarty Firth SPA

The SPA is designated for its provision of foraging ground for Osprey, for supporting whooper swan, bar-tailed godwit and a number of other species of wintering birds.

Disturbance and collision with aircraft is a particular issue with some species including knot and whooper swan. Bar-tailed godwit, dunlin, oystercatcher and wigeon are considered to be sensitive to degradation of foraging sites due to land reclamation or changing management practices. There are a number of other sensitivities, including human disturbance, pollution, and habitat loss and fragmentation but these are not considered to be directly linked to the airport that is more than 13km away on the opposite side of the Moray Firth.

There is some potential for improvements around Inverness airport that could result in pressures for change of land use around the airport. However, it is not considered that this provides supporting habitat essential to the integrity of the SPA.

**Summary:**Whilst the national development will generate change to the airport there is no likely significant effect on the SAC because there is not a clear link or pathway that would undermine the conservation objectives of the SAC.

**Result:** Screened out under Screening Step 3c of the guidance.

### Firth of Forth SPA and Ramsar

The Firth of Forth SPA and Ramsar site is designated for its aggregations of wintering and passage populations of non-breeding birds that are sensitive to a range of impacts including changes to land management (e.g. bar-tailed godwit, curlew and ringed plover); habitat loss, degradation and fragmentation (e.g. dunlin, knot and Shelduck); human disturbance (red-throated diver are particularly sensitive to human disturbance from shoreline development); land reclamation (e.g. common scoter), wetland drainage (e.g. lapwing, redshank and wigeon), and pollution (e.g. goldeneye and velvet scoter).

The national development includes potential new National Showground facilities South of the A8 which could result in changes to some agricultural grassland, of which some has the potential to be used as supporting habitat for species. The airport itself separates land to the south of the A8 and the Forth which makes this area less favourable to birds than other locations closer to the SPA. The West Edinburgh Planning Framework alteration and current Edinburgh LDP HRA identify...
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Summary</th>
<th>Result</th>
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<tbody>
<tr>
<td><strong>Forth Islands SPA</strong></td>
<td>The Forth Islands SPA regularly supports populations of European importance, breeding and migratory, and regularly supporting 90,000 seabirds. The condition of species varies between species. The SPA has a number of sensitivities including human disturbance, depletion of food resources, Organochloride poisoning, Coastal oil pollution, habitat loss arising through coastal developments, erosion, vegetation overgrowth and Climate change due to its geographically bounded distribution. The National development includes potential new National Showground facilities South of the A8 which could result in changes to some agricultural grassland, of which some has the potential to be used as supporting habitat for species. The airport itself does separate land to the south of the A8 and the Forth which may be sufficient to currently deter birds from using this area. The West Edinburgh Planning Framework alteration and current Edinburgh LDP HRA do not identify LSE on the SPA from development of the airport.</td>
<td>The national development could result in some construction and land use change which can be linked to the SPA. Taking the precautionary principle the relationship between the airport and this SPA will be examined further.</td>
<td>Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.</td>
</tr>
<tr>
<td><strong>Fowlsheugh SPA</strong></td>
<td>This SPA is designated for aggregations of breeding birds and regularly supports 145,000 seabirds. Species included in this aggregation are guillemot and kittiwake, as well as nationally important populations of razorbill, fulmar and herring gull. The site has sensitivities to marine pollution amongst others but none of the sensitivities can be linked to potential redevelopments at Aberdeen Airport located approximately 28km away. The Aberdeen City LDP HRA Record does not identify links from the airport to this SPA.</td>
<td>Whilst the national development will generate a level of change there is no conceivable effect on the SPA because there is not a clear link or pathway that would undermine the conservation objectives of the SPA.</td>
<td>Screened out under Screening Step 3c of the guidance.</td>
</tr>
<tr>
<td><strong>Inner Clyde Estuary SPA</strong></td>
<td>The Inner Clyde Estuary SPA is designated for Redshank that have sensitivities to noise, flood control, and impacts to their feedstock of molluscs, crustaceans, insects and earthworms, such as changing patterns of sediment movement. Whilst there is potential for noise generation associated with development of the Glasgow Airport site it is not considered that noise effects will be of a sufficient level to result in LSE on Redshank.</td>
<td>Whilst the national development will generate activity at Glasgow airport there is no conceivable effect on the SPA because there is not a clear link or pathway that would undermine the conservation objectives of the SPA.</td>
<td>Screened out under Screening Step 3c of the guidance.</td>
</tr>
</tbody>
</table>
### Inner Moray Firth SPA

The Inner Moray Firth SPA supports a number of species of breeding and overwintering birds. The site and species have relevant sensitivities to degradation of foraging sites (Bar-tailed godwit, oystercatcher, redshank, wigeon), human disturbance (Bar-tailed godwit, common tern, curlew, osprey, oystercatcher, redshank), Habitat loss and fragmentation (common tern, curlew, redshank), and pollution (common tern, curlew, goosander, greylag goose, oystercatcher, redshank, scaup, wigeon).

The national development is close to the airport and has areas of agricultural grassland around it that may act as supporting foraging and roosting habitat for species of birds.

Whilst the national development makes allowances for some changes that could result in pressures on surrounding agricultural land, the Inverness Airport master plan implies that development is likely to be predominantly within the existing footprint of the airport. There is potential for some expansion to the north onto agricultural land on this basis there is a link between the national development and the SPA.

**Summary:** The national development could result in development activity at Inverness Airport which can be linked to the SPA via potential construction effects and loss of supporting habitat.

**Result:** Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.

### Loch Flemington SPA

The SPA is close to the airport, approximately 2km away, and is designated for a small but nationally significant (10%) population of breeding Slavonian grebe in unfavourable condition. The main relevant threats to this species are from human disturbance and operations around breeding lakes where it remains during the breeding season.

Proposals at Inverness Airport could have the potential to generate noise and thus impacts on the species. However, despite the proximity of the site it is not considered that noise effects will be of a sufficient level to result in LSE on Slavonian grebe.

**Summary:** Whilst the national development will generate some noise effects there is no conceivable effect on the SPA because there is not a clear link or pathway that would result in LSE.

**Result:** Screened out under Screening Step 3c of the guidance.

### Loch of Skene SPA and Ramsar

The Loch of Skene SPA is designated for wintering population of whooper Swan and a migratory over winter population of Greylag Goose. Based on the vulnerabilities of these species the sensitivities of the site are the destruction and degradation of habitats, human disturbance, land management changes, pollution and collision with aircraft, overhead lines and wind turbines.

The site is approximately 10km away from the national development which may result in some development that could change the extent of the airport although the Aberdeen Airport Masterplan considers that this will be minimal. The Aberdeen Masterplan does consider increasing passenger numbers of which new infrastructure will support however, at this strategic level it is not possible to determine with any certainty that collision risk would increase. Furthermore the Aberdeen City LDP and NPF2 HRA Record do not identify links from the airport to this SPA.

**Summary:** Whilst the national development will generate some change it will not alter existing aircraft flight numbers or patterns and so there is no conceivable effect on the SPA because there is not a clear link or pathway that would result in LSE (i.e. change to collision risk).
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<thead>
<tr>
<th>Location</th>
<th>Result</th>
<th>Sensitivities</th>
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<tbody>
<tr>
<td>Moray and Nairn Coast SPA</td>
<td><strong>Screened out under Screening Step 3c of the guidance.</strong></td>
<td>The site and species have relevant sensitivities of degradation of foraging sites (bar-tailed godwit, dunlin, oystercatcher, redshank, wigeon), loss of breeding and wintering habitats (dunlin, redshank), and human disturbance (bar-tailed godwit, dunlin, osprey, oystercatcher, redshank). The SPA is approximately 13km from the airport and whilst this is a reasonable distance there remains some development activity to the north onto agricultural land that could be considered as supporting habitat. Therefore there is a potential link between the national development and the SPA.</td>
</tr>
<tr>
<td>Moray Firth SAC</td>
<td><strong>Screened out under Screening Step 3c of the guidance.</strong></td>
<td>The Moray Firth SAC is designated for subtidal sandbanks and a favourable maintained population of bottlenose dolphins. The main threats to bottlenose dolphin with regards to the proposed development are from disturbance, such as through aircraft noise and construction works. Whilst there is potentially some construction associated with the national development at Inverness airport it is considered that the airport has a sufficient buffer to the Moray Firth to avoid LSE on bottlenose dolphin.</td>
</tr>
<tr>
<td>Muirkirk and North Lowther Uplands SPA</td>
<td><strong>Screened out under Screening Step 3c of the guidance.</strong></td>
<td>The Muirkirk and North Lowther Uplands SPA qualifies by regularly supporting breeding populations of hen harrier, short-eared owl, merlin, peregrine, and golden plover. The site has relevant sensitivities to loss, damage and disturbance of habitat. Potential development at Prestwick airport could result in some level of potential disturbance but at 20km away will not have an effect on the SPA.</td>
</tr>
<tr>
<td>Renfrewshire Heights SPA</td>
<td><strong>Screened out under Screening Step 3c of the guidance.</strong></td>
<td>The SPA is designated for Hen Harrier which is vulnerable to some agricultural practices, game management, recreational activities, and degradation of habitat. Given that the proposals for development at Glasgow and Prestwick Airports are confined to the area within and around its current footprint it is considered that the national development would not result in LSE on the SPA. The Renfrewshire LDP, South Ayrshire LDP and NPF2 HRAs did not consider that there was a clear link between airport proposals and the SPA.</td>
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</table>

**Summary:** The national development will result in potential loss of supporting habitat which could have LSE on the SPA. The national development will generate development activity there is no conceivable effect on the SPA because there is not a clear link or pathway that would undermine its conservation objectives. Therefore there are no LSE. **Result:** Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.
link or pathway that would undermine its conservation objectives. Therefore there are no LSE.

**Result:** Screened out under Screening Step 3c of the guidance.

**River Dee SAC**

The River Dee SAC is designated for Atlantic salmon, otter and freshwater pearl mussel. The site is sensitive to hydrological change, disturbance, pollution and habitat loss including the loss of spawning and nursery habitats.

The SAC is located approximately 17km from the proposed development and given the scope of this national development links to the SAC were not established. Furthermore the Aberdeen City LDP and NPF2 HRA Record do not identify links from the airport to this SAC.

**Summary:** Whilst the national development will generate a level of change and development there is no conceivable effect on the SAC because there is not a clear link or pathway that would undermine its conservation objectives. Therefore there are no LSE.

**Result:** Screened out under Screening Step 3c of the guidance.

**River Teith SAC**

River Teith SAC qualifies for Atlantic salmon, for which the site condition is unfavourable recovering, and for brook, river and sea lamprey for which the site is considered to be one of the best areas in the UK and which are all in a favourable maintained condition.

The site is sensitive to various types of pollution which, either alone or in combination with other factors, limit the distribution of salmon and lamprey. Pollution can also impact lamprey through smothering spawning graves and nursery silts. River and Sea lamprey and Atlantic salmon require a clear migratory route and are therefore sensitive to obstacles such as engineering works that could impact the routes.

The national development does create some provision for change but it is unlikely that activity at the airport or associated flood risk prevention activity would lead to LSE on the qualifying features.

**Summary:** Whilst the national development will generate a level of change and development there is no conceivable effect on the SAC because there is not a clear link or pathway that would undermine its conservation objectives. Therefore there are no LSE.

**Result:** Screened out under Screening Step 3c of the guidance.

**Sands of Forvie SAC**

Sands of Forvie SAC is designated for embryonic shifting dunes, shifting dunes with marram, Lime-deficient dune heathland with crowberry and humid dune slacks, all of which are in a favourable maintained condition. The SAC is dependent on the continued operation of the physical processes that occur at present and as such is sensitive to changes to those processes and to human disturbance such as trampling and changes to land use. The SAC is located approximately 17km from the proposed development and given the scope of this national development links to the SAC were not established.

The Aberdeen City LDP HRA Record does not identify links between the airport and the SAC.

**Summary:** Whilst the national development will generate a level of change and development there is no conceivable effect on the SAC because there is not a clear link or pathway that would undermine its conservation objectives. Therefore there are no LSE.

**Result:** Screened out under Screening Step 3c of the guidance.
Ythan Estuary, Sands of Forvie and Meikle Loch SPA

The SPA is sensitive to human disturbance and the destruction, loss and degradation of the habitats used by the aggregations of breeding and non-breeding birds. It also has sensitivities to pollution and artificially induced water level fluctuations.

The national development is located approximately 17km from the SPA and given its scope links to the SPA were not established. Furthermore, the Aberdeen City LDP and NPF2 HRA Record do not identify links from the airport to this SPA.

Summary: Whilst the national development will generate a level of change and development there is no conceivable effect on the SPA because there is not a clear link or pathway that would undermine its conservation objectives. Therefore there are no LSE.

Result: Screened out under Screening Step 3c of the guidance.

Summary of screening for likely significant effects in combination: The above screening has identified potential for LSE from the national development on the Black Cart SPA, Firth of Forth SPA, Forth Islands SPA, Inner Moray Firth SPA, and Moray and Nairn Coast SPA. This is based on the potential for impacts on offsite supporting habitat from the developments.

The Aberdeenshire Local Development Plan HRA identified four policies and one proposal as having potential in combination effects. However, only policy for wind farms and wind turbines also considered potential collision risk and the assessment established that sufficient policy safeguarding measures were in place. The HRA did not identify wider plans or projects with the potential for LSE.

Result: The relationships identified between those European sites screened in above and the development will be subject to further Appropriate Assessment.

Overall Screening Result: The national development is considered to have potential LSE on the Natura network and will be subject to a further appropriate assessment.

Appropriate Assessment of Strategic Airport Enhancements

<table>
<thead>
<tr>
<th>Aspect of National Development</th>
<th>Building construction and land use change of potentially supporting habitat</th>
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<tbody>
<tr>
<td><strong>Implications:</strong></td>
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<tr>
<td>The national development has the potential to impact the qualifying interests listed below through the following pathways:</td>
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<td>• Physical loss of habitat – direct loss of supporting habitat under the footprint of the development.</td>
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<td>• Non-physical disturbance – noise and vibration that may disturb the species. Potential developments or structures (tall buildings, cranes) may cause significant changes to flight routes along the coast. There is also the risk of collision.</td>
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Through the pathways outlined above, the following qualifying interests may be impacted:

- Black Cart SPA: Whooper swan
- Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scapu, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.
- Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.
- Inner Moray Firth SPA: Common tern, osprey, bar-tailed godwit, greylag goose, red-breasted merganser, redshank, scapu and a waterfowl assemblage that in addition to some of the aforementioned species, includes curlew, oystercatcher, goosander, goldeneye, teal, wigeon and
- Cormorant.
- Moray and Nairn Coast SPA: osprey, bar-tailed godwit, greylag goose, pink-footed goose, redshank, and a waterfowl assemblage that in addition to some of the aforementioned species, includes dunlin, oystercatcher, red-breasted merganser, velvet scoter, common scoter, long-tailed duck and wigeon.

The relevant Conservation Objectives for the qualifying interests are:
To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 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
- No significant disturbance of the species

**Assessment and mitigation:**

For all of the European sites identified above the consideration has been whether proposed developments at the airports will result in the removal of offsite supporting habitat and whether this would have an adverse effect on site integrity.

When considering the Edinburgh Airport proposals, specifically relocation of the national showground to South of the A8, it is considered that given the presence of existing major development, including Edinburgh airport itself and the A8, that additional development will not have adverse effects on site integrity, although some potential for MRE may remain for the Firth of Forth SPA and Forth Islands SPA.

For the other sites it is considered that there are mitigation measures available, and that can be applied to the airport projects within the description of the national development, to provide certainty that there will not be adverse effects on site integrity. The suggested mitigation measures are as follows:

- Project planning and design to avoid construction on sensitive habitat supporting the European site. If avoidance is not possible, provide mitigation habitat elsewhere.
- Undertake construction work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods. Consult with SNH on most appropriate times.
- Planning and design measures required to minimise disruption including mitigation measures to be built into construction methodology to avoid or minimise impacts.
- Project level HRA to be undertaken, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European/Ramsar sites from projects either alone or in-combination with other plans or projects.

**Result:**
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from physical loss of habitat and non-physical disturbance. These effects in combination with other similar effects will be considered further in this report.
Screening Grangemouth Investment Zone

**National Development: Grangemouth Investment Zone**

**Details of the national development:**
Location: The Port of Grangemouth, the adjacent chemicals business area identified by the Development Plan for Falkirk and access routes to the area.

Description of Classes of Development: Development consisting of:
(a) construction of a new freight handling facilities where resultant building or structure is or exceeds 10,000 square metres, or the area of development is or exceeds 2 hectares.
(b) construction of a new building or structure for business and/or industrial uses where the resultant building or structure is or exceeds 10,000 square metres, or the site area is or exceeds 2 hectares.
(c) construction of flood defence structures and/or the undertaking of works for flood defence within the location where the area of development is or exceeds 2 hectares.
(d) the construction of new and/or replacement roads to provide an improved road connection and junction between the location and the M9 motorway where the resultant roads, including motorway junctions exceed 8 kilometres.
(e) the construction of new and/or replacement roads to provide an improved road connection and junction between the location and the M8 motorway where the resultant roads, including motorway junctions exceed 8 kilometres.
(f) the construction of new and/or replacement railway track to and within the location to provide an enhanced railhead for freight handling purposes.

Designation: A development within one or more of the Classes of Development described in paragraph (2) (a) to (f) is designated a national development.

Need: The classes of development are needed to support the key infrastructure and industry at the Grangemouth Investment Zone, strengthening its nationally important role in freight handling, providing energy-related infrastructure and facilitating wider economic activity. There is a continuing need for a co-ordinated approach to development in this area to minimise impacts on the community and environment.

**Spatial representation:** Grangemouth Investment Zone and European Sites
Potential generic effects associated with this type of development: Developments of this nature could have a number of potential generic effects including: Habitat loss and deterioration; Severance and fragmentation; Hydrological change; Sedimentation and water-borne pollution; Physical disturbance; Noise and vibration disturbance; Changes in air quality; Changes in population viability. However, given the focus of this development within the existing footprint of Grangemouth, some of these effects may be more relevant than others.

Details of relevant European sites to consider: In particular the Firth of Forth SPA, but also the Forth Islands SPA, Isle of May SAC and the River Teith SAC.

Details of previous HRA (if applicable): The NPF2 HRA considered the Grangemouth Freight Hub and noted that this could “cause significant disturbance to the nesting and feeding habitats of designated bird species for which the Firth of Forth SPA has been designated. There is also potential to affect the Forth Islands SPA, as a result of increased shipping and associated dredging activities.” Furthermore “Port and freight development could have adverse effects on the River Teith SAC. The SAC is designated for Atlantic salmon and lamprey populations. Increased water pollution, altered sediment and hydrological regimes in the Firth of Forth could create barriers to fish migrating up the Forth and into the Teith.” The Falkirk LDP is in progress and HRA material and relevant HRA information will be available to assist in particular in-combination assessment.

Initial screening result: Given the potential for a link or pathway to be established between the national development and European sites, this development was identified for further examination in to identify if there might be LSE alone or in combination.

Screening for National Development and European sites

<p>| Firth of Forth SPA and Ramsar | The Firth of Forth SPA and Ramsar site is designated for its aggregations of wintering and passage populations of non-breeding birds that are sensitive to a range of impacts. Whilst the focus of the development is within the existing footprint of Grangemouth and does not include in its description anything promoting dredging activity, the national development has been identified as being a potential source of noise and vibration disturbance. Potential new developments include freight handling facilities and buildings and structures as well as new developments to road and rail networks. Species on the site are sensitive to a range of impacts that may arise from the proposed development including disturbance from construction activity and pollution (e.g. goldeneye and velvet scoter). Previous HRAs have scoped in the Firth of Forth SPA and Ramsar site for an appropriate assessment due to the potential for LSE arising from the development. The Falkirk LDP HRA considered that the potential loss of supporting habitat and disturbance during construction and operation along Bo’ness foreshore and Grangemouth could have a potential LSE on the qualifying species. The Stirling Proposed Local Development Plan considered the site for an Appropriate Assessment due to the potential for development activities to impact the water environment through sediment or diffuse pollution from runoff. The HRA for NFP2 stated that a further AA would be required at the project level for Grangemouth Freight Hub and for Additional Freight Capacity on the Forth owing to their potential impacts on the Firth of Forth SPA and Ramsar site. Summary: Because of the potential impacts of the development, there may be a likely significant effect on a qualifying feature or features. Result: Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment. |
|---|
| Forth Islands | The Forth Islands SPA consists of a series of islands supporting the main seabird colonies in the Firth of Forth. Initially comprised of the islands of Inchmickery, Isle |</p>
<table>
<thead>
<tr>
<th>SPA</th>
<th>of May, Firda, The Lamb, Craigleith and Bass Rock, it was later extended to include the island of Long Craig which supports the largest colony of roseate tern in Scotland. The SPA is designated for its aggregations of breeding birds, supporting populations of European importance such as tern (arctic, roseate, sandwich and common) and migratory species including gannet, shag, lesser black-backed gull and Atlantic puffin. The SPA also regularly supports a seabird assemblage of around 90,000 individuals including terns, auks and gulls. Since the nearest island is situated around 25km from the potential development, direct impacts to the site through habitat loss are not predicted. The Falkirk LDP draft HRA considered that the site would not experience any effect from the proposals as it is too distant from the plan area and too maritime in its influences. However, some species are now thought to be present in the Grangemouth area. Species such as kittiwake, lesser black-backed gull and razorbill are sensitive to depletion of food resources and the NPF 2 identified that the site has the potential to be impacted through anticipated increases to water-borne freight and dredging activities. The HRA for the N-RIP initially screened in Forth Islands SPA due to the potential for LSEs arising through dredging (and disposal of dredgings), piling, and building construction / demolition. Summary: The national development includes development that can be linked to potential for LSE on the SPA. Result: Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isle of May SAC</td>
<td>This SAC is designated for marine reefs and grey seals and supports the fourth largest breeding colony in the UK. Due to the proximity of the SAC to the proposed development, the distribution patterns of the grey seal (the mobile qualifying feature of the site) and the potential impacts of the proposed development on the environment, there is the potential of a LSE for the grey seals. It is considered that the seals could be impacted by pollution, including water-borne pollution and noise and vibration impacts, as well as direct impacts from collision with, and potentially cork screw injuries from, sea-going vehicles arising from the proposed development. The screening phase in the HRA for N-RIP established that there was a possibility of a LSE for the the grey seal population due to indirect disturbance including noise and vibration, or reduced availability / displacement of prey species and non-toxic contamination from changes in turbidity, arising though activities such as piling, dredging, vessel movements and building construction/demolition. The scoping response from SHN to the Aberdeen harbour expansion EIA also recommended the inclusion of Isle of May SAC due to the potential for a LSE on grey seals arising from the proposed development. Summary: The national development includes development and construction that can be linked to potential for LSE on the seal qualifying feature of this SAC. Result: Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.</td>
</tr>
</tbody>
</table>
River Teith SAC has qualifying features of Atlantic salmon, for which the site condition is unfavourable recovering, and for brook, river and sea lamprey for which the site is considered to be one of the best areas in the UK and which are all in a favourable maintained condition.

The site is sensitive to various types of pollution which, either alone or in combination with other factors, limit the distribution of salmon and lamprey. Pollution can also impact lamprey through smothering spawning graves and nursery silts. River and Sea lamprey and Atlantic salmon require a clear migratory route and are therefore sensitive to obstacles such as engineering works that could impact the routes.

The Falkirk LDP draft HRA identified that the site's qualifying interests could be affected by development proposals in coastal locations along the Firth of Forth or which affect water quality within the Firth of Forth, such as the proposed development within the Grangemouth Investment Zone.

The HRA for NPF 2 stated that port and freight development could have adverse effects on the River Teith SAC. Increased water pollution, altered sediment and hydrological regimes in the Firth of Forth could create barriers to fish migrating up the Forth and into the Teith. Atlantic salmon spend a proportion of their time at sea, seasonally migrating up river systems to spawn.

Summary: The national development includes development and construction that can be linked to potential for LSE on the qualifying feature of this SAC (Atlantic salmon, brook, river and sea lamprey).

Result: Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.

Summary of screening for likely significant effects in combination: The above screening has identified potential for LSE from the national development on Firth of Forth SPA and Ramsar, Forth Islands SPA, Isle of May SAC and River Teith SAC.

This is based on the potential for noise and disturbance from construction on grey seal, bird species, Atlantic salmon and species of lamprey. The national development does not include dredging (and disposal) activity and increase in freight movement, but this will be explored due to its association with new freight handling facilities as part of the national development.

Result: The relationships identified between the European sites screened in above and the development will be subject to further Appropriate Assessment.

Overall Screening Result: The development is considered to have potential a significant effect on the Natura network and will be subject to a further appropriate assessment.

Appropriate Assessment of Grangemouth Investment Zone

## Aspect of National Development:
Dredging (and disposal of dredgings)

### Implications:
The national development has the potential to impact the qualifying interests listed below through the following pathways:

- **Physical loss (of habitats)** – direct loss of supporting habitat under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns.
- **Non-physical disturbance** – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey, or symbiotic species).
- **Non-toxic contamination** – increases in suspended sediments and turbidity potentially affecting marine habitats and species.
Through the pathways outlined above, the following qualifying interests may be impacted:

- Isle of May SAC: Grey seal.
- Firth of Forth SPA: Birds — red-throated diver, slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.
- Forth Islands SPA: Birds — arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.
- River Teith SAC: Atlantic salmon, brook, river and sea lamprey

The relevant Conservation Objectives for the qualifying interests are:

- To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:
  - Population of the species, including range of genetic types for salmon, as a viable component of the site
  - Distribution of the species within site
  - No significant disturbance of the species

**Assessment and mitigation:**

It is not clear whether dredging and disposal of dredging will be required for any development qualifying as a national development under the other criteria within the description provided in the NPF3. If such activity is associated with an element of the national development there could be adverse effects on site integrity for the Firth of Forth SPA, although dredging is not expected to occur within the boundary of the SPA. Therefore in order to demonstrate no adverse effects on site integrity the projects promoted as national development will be required to undertake project level HRA and it is at this stage that it will be clear whether dredging activities will be included.

Should proposals at Grangemouth require an element of dredging outside of the Firth of Forth SPA the suggested mitigation measures are as follows:

- Use project level planning and design to ascertain whether dredging will result in local changes to erosion / deposition patterns. Design mitigation accordingly.
- Undertake dredging work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, the most intense periods of fish migration, seal breeding season (September-late November for grey seals). Consult with SNH on most appropriate times.
- Adhere to careful dredging practice and use a precautionary approach to avoid or reduce impacts. Timing of dredging and disposal operations, selection of Best Available Technique (BAT) dredging methods.
- Sensitive areas subject to potential erosion could be recharged with sediment (e.g. by overspilling during dredging).
- Use dredging techniques most appropriate to the seabed type to avoid excessive sediment mobilisation and adverse impacts on interest features (e.g. minimising overspill).

**Result:**

Whilst the national development itself does not include dredging activity the potential for adverse effects on integrity from dredging has been reviewed and taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from physical loss of supporting habitats, non-physical disturbance and non-toxic contamination. These effects in combination with other similar effects will be considered further in this report.
**Aspect of National Development:**

**Piling**

**Implications:**
The national development has the potential to impact the qualifying interests listed below through the following pathways:

- Non-physical disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey, or symbiotic species).
- Non-toxic contamination – increases in suspended sediments and turbidity potentially affecting marine habitats and species.

Through the pathways outlined above, the following qualifying interests may be impacted:

- Isle of May SAC: Grey seal
- Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.
- Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.
- River Teith SAC: Atlantic Salmon, brook, river and sea lamprey

The relevant Conservation Objectives for the qualifying interests are:
To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, as a viable component of the site
- Distribution of the species within site
- No significant disturbance of the species

**Assessment and mitigation:**
Construction activities that might involve piling are considered to have the potential for adverse effects on site integrity via disturbance to species. However, mitigation is available as development comes forward that can help to demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA. The suggested mitigation measures are as follows:

- Avoid construction on or close to sensitive habitat (e.g. SPA bird roosting sites) through project planning and design. If avoidance is not possible, provide mitigation habitat elsewhere.
- Use project planning and design to ascertain whether proposed piling and introduced structures will result in local changes to erosion/deposition patterns. Design mitigation accordingly.
- Undertake construction work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, most intense periods of fish migration, seal breeding season (September-late November for grey seals). Consult with SNH on most appropriate times.
- Use less intrusive piling methods (e.g. passive gas and soft start) and noise screens such as bubble curtains during sensitive periods i.e. during fish migration and seal breeding season.
- Adhere to careful practice and use a precautionary approach to avoid or reduce impacts. Selection of Best Available Technique (BAT) methods.

**Result:**
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be
adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance, non-toxic contamination and physical loss of habitats. These effects in combination with other similar effects will be considered further in this report.

<table>
<thead>
<tr>
<th>Aspect of National Development:</th>
<th>Building construction / demolition (including site clearance, land remediation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Implications:</strong></td>
<td>The national development has the potential to impact the qualifying interests listed below through the following pathways:</td>
</tr>
<tr>
<td></td>
<td>• Physical loss of habitat – direct loss of supporting habitat under the footprint of the development. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
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<td></td>
<td>• Non-physical disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey).</td>
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<td></td>
<td>• Non-toxic contamination – increases in suspended sediments and turbidity potentially affecting marine habitats and species.</td>
</tr>
<tr>
<td></td>
<td>Through the pathways outlined above, the following qualifying interests may be impacted:</td>
</tr>
<tr>
<td></td>
<td>• Isle of May SAC: Grey seal</td>
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<tr>
<td></td>
<td>• Firth of Forth SPA: Birds – red-throated diver, slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.</td>
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<tr>
<td></td>
<td>• Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.</td>
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<td></td>
<td>• River Teith SAC: Atlantic Salmon, brook, river and sea lamprey.</td>
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<td></td>
<td>The relevant Conservation Objectives for the qualifying interests are:</td>
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<td></td>
<td>To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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</td>
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<tr>
<td></td>
<td>To ensure for the qualifying species that the following are maintained in the long term:</td>
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<tr>
<td></td>
<td>• Population of the species, including range of genetic types for salmon, as a viable component of the site</td>
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<tr>
<td></td>
<td>• Distribution of the species within site</td>
</tr>
<tr>
<td></td>
<td>• Distribution and extent of habitats supporting the species</td>
</tr>
<tr>
<td></td>
<td>• Structure, function and supporting processes of habitats supporting the species</td>
</tr>
<tr>
<td></td>
<td>• No significant disturbance of the species</td>
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</table>

**Assessment and Mitigation:**
Other construction activities considered to have the potential for adverse effects on site integrity via disturbance to species. However, mitigation is available as development comes forward that can help to demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA. The suggested mitigation measures are as follows:

- Avoid construction on sensitive habitat (e.g. SPA bird roosting sites) through project planning and design. If avoidance is not possible, provide mitigation habitat elsewhere.
- Use project planning and design to ascertain whether development will result in local changes to erosion/deposition patterns. Design mitigation accordingly.
- Undertake construction work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, most intense periods of fish migration, seal breeding season (September-late November for grey seals). Consult with SNH on most appropriate times.
Mitigation and monitoring measures applied to the source of impact will mitigate this impact (e.g. implementing measures to avoid adverse effects on prey species will avoid effects on marine mammals / birds).

Planning and design measures required to minimise disruption e.g. location of cranes; avoid placement of tall structures within bird flight paths.

Result:
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance, non-toxic contamination and physical loss of supporting habitats. These effects in combination with other similar effects will be considered further in this report.

Aspect of National Development: Increased levels of vessel movement

Implications:
The national development has the potential to impact the qualifying interests listed below through the following pathways:

- Physical damage (of habitats and species) – collision risk through increased vessel movement
- Non-physical disturbance – noise and vibration that may disturb the species
- Toxic contamination – toxic effects on marine species from potential oil spillages etc.
- Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species

Through the pathways outlined above, the following qualifying interests may be impacted:

- Isle of May SAC: Grey seal
- Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.
- Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.
- River Teith SAC: Atlantic Salmon, brook, river and sea lamprey

The relevant Conservation Objectives for the qualifying interests are:
To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, as a viable component of the site
- Distribution of the species within site
- No significant disturbance of the species

Assessment and mitigation:

Whilst not specifically promoted as part of the national development the construction of new freight handling facilities could result in an increase in freight traffic (see also the national development Freight Handling Capacity on the Forth). An increase in freight movement is considered to have the potential for adverse effects on site integrity via disturbance and collision with species. However it is also considered that mitigation is available as development comes forward that can help to demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA. The suggested mitigation measures are as follows:
- Time construction activities to reduce noise impacts and physical dangers posed by increased vessel traffic.
- General good housekeeping measures to avoid spillages and implementation of contingency plans should spills occur.
- Time construction activity to avoid the most intense periods of fish migration.

**Result:**
Taking into account the available mitigation at the project level, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance, non-toxic contamination and increased risk of collision. These effects in combination with other similar effects will be considered further in this report.
Screening Freight Handling Capacity on the Forth

National Development: Freight Handling Capacity on the Forth

Details of the national development:
Location: Existing and disused ports and harbours on the Forth Estuary and transport access to them.

Description of Classes of Development:
Development consisting of:
(a) the construction of new and/or expanded multi-modal container freight handling facilities where resultant building or structure is or exceeds 10,000 square metres, or the area of development is or exceeds 2 hectares.
(b) the construction of new and/ or replacement road infrastructure exceeding 8 kilometres connecting existing road networks to the freight handling facility.
(c) the construction of new and/or upgraded railway track exceeding 8 kilometres connecting existing networks to the freight handling facility.

Designation: A development within one or more of the Classes of Development described in paragraph (2) (a) to (c) is designated a national development.

Need: These classes of development are required to support continued demand for freight handling facilities to service North Sea freight shipping routes. Potential sites around the Firth of Forth are in close proximity to a large share of Scotland’s population, and are accessible from transport routes to allow for onward transport of freight.

Spatial representation: Forth Estuary European Sites

Potential generic effects associated with this type of development: A new freight terminal and freight capacity and associated activities could have the following potential generic effects: Habitat Loss and Deterioration; Severance and Fragmentation; Hydrological Change; Sedimentation and Water-borne Pollution; Physical Disturbance; Noise and Vibration Disturbance; Changes in Air Quality; Changes in Population Viability.
Details of relevant European sites to consider: In particular the Firth of Forth SPA, but also the Berwickshire and North Northumberland Coast SAC, Forth Islands SPA, Firth of Tay and Eden Estuary SAC, Imperial Dock Leith SPA, Isle of May SAC and River Teith SAC.

Details of previous HRA (if applicable): The HRA of NPF2 considered additional freight capacity, identifying some potential for significant effects from associated activities. It also considered the potential for in combination effects. Furthermore it was considered that sufficient mitigation would be available to avoid adverse effects.

Initial screening result: At the time of the MIR the precise location of the national development was not determined, and remains so in the description for this development. However given the potential for a link or pathway to be established between the activities of the development and European sites, it was confirmed that the national development would be subject to further examination in the HRA to identify if there might be LSE alone or in combination. Precise locational effects are difficult to identify although there is existing freight movement to Rosyth. However, the potential for additional freight movements across the Forth can be considered.

Screening for National Development and European sites

<table>
<thead>
<tr>
<th>Berwickshire and North Northumberland Coast SAC</th>
<th>The Berwickshire and North Northumberland Coast SAC features include reefs, sea caves, shallow inlets and bays, and intertidal mudflats and sandflats. The diverse stretch of coastline supports grey seals for which the site is also designated. Due to the distance of the site from the proposed development, it is not anticipated that the coastal habitats will be impacted. However, Grey seals spend most of the year at sea and can travel up to 145km from haul-out sites whilst foraging. As a result of this it is considered that the seals could be impacted by pollution, including water-borne pollution and noise and vibration impacts, as well as direct impacts from collision with sea-going vehicles arising from the proposed development, inclusive of potential cork screw injuries. The HRA for the NPF 2 did not assess the site when examining the potential impacts arising from increased freight capacity on the Forth, however, SNH have recommended that this site be included in the assessment owing to the potential impacts to grey seals. Summary: The national development includes development and construction that can be linked to potential for LSE on the qualifying feature of this SAC. Result: Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firth of Forth SPA</td>
<td>The Firth of Forth SPA and Ramsar site is designated for its aggregations of wintering and passage populations of non-breeding birds that are sensitive to a range of impacts. The national development has been identified as being a potential source of disturbance to the qualifying species of the European site. Potential new developments include freight handling facilities, buildings and structures and new developments to road and rail networks. Species on the site are sensitive to a range of impacts that may arise from the proposed development including changes to land management (e.g. bar-tailed godwit, curlew and ringed plover); habitat loss, degradation and fragmentation (e.g. dunlin, knot and Shelduck); human disturbance (red-throated diver are particularly sensitive to human disturbance from shoreline development); land reclamation (e.g. common scoter), wetland drainage (e.g. lapwing, redshank and wigeon), and pollution (e.g. goldeneye and velvet scoter).</td>
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</tbody>
</table>
Previous HRAs have scoped in the Firth of Forth SPA and Ramsar site for an appropriate assessment due to the potential for LSEs arising from the development. The Falkirk LDP draft HRA considered that the potential loss of supporting habitat and disturbance during construction and operation along Bo'ness foreshore and Grangemouth could have a potential LSE on the qualifying species. The Stirling Proposed Local Development Plan considered the site for an Appropriate Assessment due to the potential for development activities to impact the water environment through sediment or diffuse pollution from runoff. The HRA for NFP2 stated that a further appropriate assessment would be required at the project level for Grangemouth Freight Hub and for Additional Freight Capacity on the Forth owing to their potential impacts on the Firth of Forth SPA and Ramsar site.

**Summary:** The national development includes development and construction that can be linked to potential for LSE on the qualifying features of the Forth SPA.

**Result:** Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.

### Firth of Tay and Eden Estuary SAC

The Firth of Tay and Eden Estuary SAC is designated for marine features such as estuaries, mudflats and sandflats, sandbanks and harbour seals.

Due to the distance of the site from the proposed development, it is not anticipated that the coastal habitats will be impacted. However, harbour seals are a mobile species and as a result of this it is considered that they could be impacted by pollution, including water-borne pollution and noise and vibration impacts, as well as direct impacts from collision with sea-going vehicles arising from the proposed development.

The HRA for the NPF2 did not assess the site when examining the potential impacts arising from increased freight capacity on the Forth, however, SNH have recommended that this site be included in the assessment owing to the potential impacts to harbour seals.

**Summary:** The national development includes development and construction that can be linked to potential for LSE on the qualifying feature (harbour seal) of this SAC.

**Result:** Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.

### Forth Islands SPA

The Forth Islands SPA consists of a series of islands supporting the main seabird colonies in the Firth of Forth. Initially comprised of the islands of Inchmickery, Isle of May, Firda, The Lamb, Craigleith and Bass Rock, it was later extended to include the island of Long Craig which supports the largest colony of roseate tern in Scotland.

The SPA is designated for its aggregations of breeding birds, supporting populations of European importance such as tern (arctic, roseate, sandwich and common) and migratory species including gannet, shag, lesser black-backed gull and Atlantic puffin. The SPA also regularly supports a seabird assemblage of around 90,000 individuals including terns, auks and gulls.

The HRA for the N-RIP initially screened in Forth Islands SPA due to the potential for LSEs arising through dredging (and disposal of dredgings), piling, and building construction / demolition.

**Summary:** The national development includes development and construction that can be linked to potential for LSE on the qualifying features of the Forth Islands SPA.
<table>
<thead>
<tr>
<th><strong>Result</strong>: Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.</th>
</tr>
</thead>
</table>
| **Imperial Dock, Leith SPA** | Imperial Dock, Leith, SPA covering around 1,000 square metres features aggregations of breeding common tern. The main feeding area is located within 10km of the colony in the Firth of Forth, and supports the sprat which is their main prey. Studies have shown that tern populations are particularly sensitive to fluctuations in prey levels and can experience breeding failure or abandon breeding sites when food stocks are reduced.  
Common tern are vulnerable to declines in food stocks which may potentially be brought about through increased through dredging (and disposal of dredging), piling, and building construction / demolition.  
The previous HRA for NPF2 did not consider additional freight capacity on the Forth would potentially affect the site however, it recognised that the development may involve dredging and disposal of materials from dredging therefore for this assessment, it is believed that the potential for a LSE cannot be excluded due to the potential impacts of the development on the tern and its food resources. |
| **Summary**: The national development includes development and construction that can be linked to potential for LSE on the qualifying feature of the SPA. |
| **Result**: Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment. |
| **Isle of May SAC** | This SAC is designated for marine reefs and grey seals where it supports the fourth largest breeding colony in the UK. Due to the proximity of the SAC to the proposed development, the distribution patterns of the grey seal (the mobile qualifying feature of the site) and the potential impacts of the proposed development on the environment, there is the potential of a LSE for the grey seals.  
It is considered that the seals could be impacted by pollution, including water-borne pollution and noise and vibration impacts, as well as direct impacts from collision with sea-going vehicles arising from the proposed development.  
The screening phase in the HRA for N-RIP established that there was a possibility of a LSE for the the grey seal population due to indirect disturbance including noise and vibration, or reduced availability / displacement of prey species and non-toxic contamination from changes in turbidity, arising though activities such as piling, dredging, vessel movements and building construction/demolition.  
The scoping response from SHN to the Aberdeen harbour expansion EIA also recommended the inclusion of Isle of May SAC due to the potential for a LSE on grey seals arising from the proposed development. |
| **Summary**: The national development includes development and construction that can be linked to potential for LSE on the qualifying feature (Grey seal) of this SAC. |
| **Result**: Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment. |
| **River Teith SAC** | The River Teith SAC is qualified for Atlantic salmon, for which the site condition is unfavourable recovering, and for brook, river and sea lamprey for which the site is considered to be one of the best areas in the UK and which are all in a favourable maintained condition.  
The site is sensitive to various types of pollution which, either alone or in combination with other factors, limit the distribution of salmon and lamprey. Pollution can also impact lamprey through smothering spawning graves and |
| | |
nursery silts. River and Sea lamprey and Atlantic salmon require a clear migratory route and are therefore sensitive to obstacles such as engineering works that could impact the routes.

The Falkirk LDP draft HRA identified that the site’s qualifying interests (River Lamprey, Sea Lamprey and Atlantic Salmon) could be affected by development proposals in coastal locations along the Firth of Forth or which affect water quality within the Firth of Forth, such as the proposed developments for the freight handling capacity on the Forth.

The HRA for NPF 2 stated that port and freight development could have adverse effects on the River Teith SAC. Increased water pollution, altered sediment and hydrological regimes in the Firth of Forth could create barriers to fish migrating up the Forth and into the Teith. Atlantic salmon spend a proportion of their time at sea, seasonally migrating up river systems to spawn.

Summary: The national development includes development and construction that can be linked to potential for LSE on the qualifying feature (Atlantic salmon, Brook, River and Sea lamprey) of this SAC.

Result: Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.

Summary of screening for likely significant effects in combination: The above screening has identified potential for LSE from the national development on Berwickshire and North Northumberland Coast SAC, Firth of Forth SPA, Firth of Tay and Eden Estuary SAC, Firth Islands SPA, Imperial Dock, Leith SPA, Isle of May SAC and River Teith SAC. This is based on the potential for noise and disturbance and potentially mortality on harbour and grey seal, bird species, Atlantic salmon and species of lamprey.

Result: The relationships identified between the European sites screened in above and the development will be subject to further Appropriate Assessment.

Overall Screening Result: The development is considered to have potential LSE on the Natura network and will be subject to a further appropriate assessment.

**Appropriate Assessment of Freight Handling Capacity on the Forth**

<table>
<thead>
<tr>
<th>Aspect of National Development:</th>
<th>Dredging (and disposal of dredgings)</th>
</tr>
</thead>
</table>

**Implications:**
The national development has the potential to impact the qualifying interests listed below through the following pathways:

- Physical loss (of habitats) – direct loss of supporting habitat under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns.
- Non-physical disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey, or symbiotic species)
- Non-toxic contamination – increases in suspended sediments and turbidity potentially affecting marine habitats and species.

Through the pathways outlined above, the following qualifying interests may be impacted:

- Berwickshire and North Northumberland Coast SAC – Grey seal.
- Isle of May SAC: Grey seal.
- Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.
- Firth of Tay and Eden Estuary SAC – Harbour seal.

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• Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.
• Imperial Dock, Leith, SPA – Common tern.
• River Teith SAC: Atlantic Salmon, Brook, River and Sea lamprey.

The relevant Conservation Objectives for the qualifying interests are:
To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:
• Population of the species, including range of genetic types for salmon, as a viable component of the site
• Distribution of the species within site
• No significant disturbance of the species

Assessment and mitigation:

Whilst the national development description does not specifically include reference to dredging activity it could be a feature of new and replacement harbour facilities. Therefore in order to demonstrate no adverse effects on site integrity the projects promoted as national development will be required to undertake project level HRA and it is at this stage that it will be clear whether dredging activities will be included.

Project HRA will need to demonstrate that there are no adverse effects on the integrity of European sites from projects either alone or in-combination with other plans or projects. Potential mitigation available at this point includes:

• Avoid construction on sensitive habitat (e.g. SPA bird roosting sites) through project planning and design.
• Use project level planning and design to ascertain whether dredging will result in local changes to erosion / deposition patterns. Design mitigation accordingly.
• Undertake dredging work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, the most intense periods of fish migration, seal breeding season (September-late November for grey seals). Consult with SNH on most appropriate times.
• Adhere to careful dredging practice and use a precautionary approach to avoid or reduce impacts. Timing of dredging and disposal operations, selection of Best Available Technique (BAT) dredging methods.
• Requirement for mitigation measures is subject to further detailed assessment at project level (e.g. numerical modelling).
• Sensitive areas (e.g. intertidal mudflat) subject to potential erosion could be recharged with sediment (e.g. by overspilling during dredging).
• Use dredging techniques most appropriate to the seabed type to avoid excessive sediment mobilisation and adverse impacts on interest features (e.g. minimising overspill).

Result:
Taking into account the availability of mitigation measures, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from physical loss of supporting habitats, non-physical disturbance and non-toxic contamination. These effects in combination with other similar effects will be considered further in this report.

<table>
<thead>
<tr>
<th>Aspect of National Development:</th>
<th>Piling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implications:</td>
<td>The national development has the potential to impact the qualifying interests listed below through through the following pathways:</td>
</tr>
</tbody>
</table>
• Physical loss (of habitats) - direct loss of supporting habitat. Indirect loss/gain of habitat due to changes in sedimentation patterns.
• Non-physical disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey, or symbiotic species).
• Non-toxic contamination – increases in suspended sediments and turbidity potentially affecting marine habitats and species.

Through the pathways outlined above, the following qualifying interests may be impacted:
• Berwickshire and North Northumberland Coast SAC – Grey seal.
• Isle of May SAC: Grey seal.
• Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.
• Firth of Tay and Eden Estuary SAC – Harbour seal.
• Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.
• Imperial Dock, Leith, SPA – Common tern.
• River Teith SAC: Atlantic salmon, Brook, River and Sea lamprey.

The relevant Conservation Objectives for the qualifying interests are:
To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:
• Population of the species, including range of genetic types for salmon, 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

Assessment and mitigation:
Construction activities that might involve piling have been considered to have the potential for adverse effects on site integrity via disturbance to species. However, mitigation is available as development comes forward that can help to demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA. Measures include the following:
• Avoid construction on or close to sensitive habitat (e.g. SPA bird roosting sites) through project planning and design. If avoidance is not possible, provide mitigation habitat elsewhere.
• Use project planning and design to ascertain whether proposed piling and introduced structures will result in local changes to erosion/deposition patterns. Design mitigation accordingly.
• Undertake construction work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, most intense periods of fish migration, seal breeding season (September-late November for grey seals). Consult with SNH on most appropriate times.
• Use less intrusive piling methods (e.g. passive gas and soft start) and noise screens (e.g. bubble curtains) during sensitive periods i.e. during fish migration and seal breeding season
• Adhere to careful practice and use a precautionary approach to avoid or reduce impacts. Selection of Best Available Technique (BAT) methods.
Project level HRA will be required, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European sites from projects either alone or in-combination with other plans or projects.

**Result:**
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance, non-toxic contamination and physical loss of supporting habitats. These effects in combination with other similar effects will be considered further in this report.

### Aspect of National Development: Land use change

#### Implications:
The national development has the potential to impact the qualifying interests listed below through the following pathways:

- **Physical loss of habitat** – direct loss of supporting habitat under the footprint of the development.
- **Indirect loss/gain of habitat** due to changes in sedimentation patterns.
- **Non-physical disturbance** – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey)
- **Non-toxic contamination** – increases in suspended sediments and turbidity potentially affecting marine habitats and species.

Through the pathways outlined above, the following qualifying interests may be impacted:

- Berwickshire and North Northumberland Coast SAC – Grey seal.
- Isle of May SAC: Grey seal.
- Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.
- Firth of Tay and Eden Estuary SAC – Harbour seal.
- Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.
- Imperial Dock, Leith, SPA – Common tern.
- River Teith SAC: Atlantic salmon, Brook, River and Sea Lamprey.

The relevant Conservation Objectives for the qualifying interests are: To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, 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.

### Assessment and mitigation:
The national development is open for new and improved harbour facilities on the Forth. It is considered likely that development will be at existing harbours and with minimal requirement for additional land, hence likely to avoid adverse effects on the integrity of a site. However there remains some potential and adopting the precautionary principle mitigation at the project level is identified as being able to demonstrate no adverse effects on site integrity. Firstly project level HRA will be required to be undertaken, encompassing all phases of development, to ensure that there are no
adverse effects on the integrity of European sites from projects either alone or in-combination with other plans or projects. Mitigation measures this process may consider are:

- Avoid construction on sensitive habitat (e.g. SPA bird roosting sites) through project planning and design.
- Use project planning and design to ascertain whether development will result in local changes to erosion/deposition patterns. Design mitigation accordingly.
- Undertake construction work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, most intense periods of fish migration, seal breeding season (June and July for harbour seals; September-late November for grey seals). Consult with SNH on most appropriate times.
- Mitigation and monitoring measures applied to the source of impact will mitigate this impact (e.g. implementing measures to avoid adverse effects on prey species will avoid effects on marine mammals / birds)

**Result:**
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance, non-toxic contamination and physical loss of supporting habitats. These effects in combination with other similar effects will be considered further in this report.

<table>
<thead>
<tr>
<th>Aspect of National Development:</th>
<th>Increased levels of vessel movement</th>
</tr>
</thead>
</table>

**Implications:**
The national development has the potential to impact the qualifying interests listed below through the following pathways:

- Physical damage (of habitats and species) – collision risk through increased vessel movement
- Non-physical disturbance – noise and vibration that may disturb the species
- Toxic contamination – toxic effects on marine species from potential oil spillages etc.
- Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species

Through the pathways outlined above, the following qualifying interests may be impacted:

- Berwickshire and North Northumberland Coast SAC – Grey seal
- Isle of May SAC: Grey seal
- Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.
- Firth of Tay and Eden Estuary SAC – Harbour seal
- Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.
- Imperial Dock, Leith, SPA – Common tern
- River Teith SAC: Atlantic Salmon, brook, river and sea lamprey

The relevant Conservation Objectives for the qualifying interests are:

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, as a viable component of the site
- Distribution of the species within site
Assessment and mitigation:

The construction of new freight handling facilities will result in an increase in freight traffic. An increase in freight movement is considered to have the potential for adverse effects on site integrity via disturbance and collision with species. However it is also considered that mitigation is available as development comes forward that can help to demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA. Measures include the following:

- Time construction activities to reduce noise impacts and physical dangers posed by increased vessel traffic.
- General good housekeeping measures to avoid spillages and implementation of contingency plans should spills occur.
- Time construction activity to avoid the most intense periods of fish migration.

Project level HRA will be required to be undertaken, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European sites from projects either alone or in combination with other plans or projects.

Result:

Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance, non-toxic contamination and increased risk of collision. These effects in combination with other similar effects will be considered further in this report.

<table>
<thead>
<tr>
<th>Aspect of National Development:</th>
<th>Building construction / demolition (including site clearance, land remediation)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Implications:</strong></td>
<td></td>
</tr>
<tr>
<td>The national development has the potential to impact the qualifying interests listed below through the following pathways:</td>
<td></td>
</tr>
<tr>
<td>Physical loss of habitat – direct loss of supporting habitat under the footprint of the development.</td>
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<tr>
<td>Non-physical disturbance – noise and vibration that may disturb the species. Potential developments or structures (tall buildings, cranes) may cause significant changes to flight routes along the coast. There is also the risk of collision.</td>
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</tr>
<tr>
<td>Through the pathways outlined above, the following qualifying interests may be impacted:</td>
<td></td>
</tr>
<tr>
<td>Berwickshire and North Northumberland Coast SAC – Grey seal</td>
<td></td>
</tr>
<tr>
<td>Isle of May SAC: Grey seal</td>
<td></td>
</tr>
<tr>
<td>Firth of Forth SPA: Birds – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scaup, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.</td>
<td></td>
</tr>
<tr>
<td>Firth of Tay and Eden Estuary SAC – Harbour seal</td>
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<tr>
<td>Forth Islands SPA: Birds – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.</td>
<td></td>
</tr>
<tr>
<td>Imperial Dock, Leith, SPA: Common tern</td>
<td></td>
</tr>
<tr>
<td>River Teith SAC: Atlantic Salmon, brook, river and sea lamprey</td>
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</tr>
<tr>
<td>The relevant Conservation Objectives for the qualifying interests are:</td>
<td></td>
</tr>
<tr>
<td>To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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</td>
<td></td>
</tr>
</tbody>
</table>
To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, as a viable component of the site.
- Distribution of the species within site.
- No significant disturbance of the species.

**Assessment and Mitigation:**
Construction activities considered to have the potential for adverse effects on site integrity via disturbance to species. However, mitigation is available as development comes forward that can help to demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA. Measures include the following:

- Avoid construction on sensitive offsite habitat (e.g. SPA bird roosting sites) through project planning and design.
- Use project planning and design to ascertain whether development will result in local changes to erosion/deposition patterns. Design mitigation accordingly.
- Undertake construction work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, most intense periods of fish migration, seal breeding season (September-late November for grey seals). Consult with SNH on most appropriate times.
- Mitigation and monitoring measures applied to the source of impact will mitigate this impact (e.g. implementing measures to avoid adverse effects on prey species will avoid effects on marine mammals / birds).
- Planning and design measures required to minimise disruption e.g. location of cranes; avoid placement of tall structures within bird flight paths.

Project level HRA will be undertaken, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European sites from projects either alone or in-combination with other plans or projects.

**Result:**
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance and physical loss of supporting habitats. These effects in combination with other similar effects will be considered further in this report.
## Screening Aberdeen Harbour

### National Development: Aberdeen Harbour

**Details of the national development:**

**Location:** Nigg Bay.

Description of Classes of Development: Development situated at the location for:
(a) the construction of new and/or replacement harbour facilities where resultant building or structure is or exceeds 10,000 square metres, or the area of development is or exceeds 2 hectares.
(b) the construction of new and/or replacement road infrastructure from existing networks.
(c) the provision of water supply and related infrastructure directly for new harbour facilities.

Designation: A development within one or more of the Classes of Development described in paragraph (2) (a) to (c) is designated a national development.

Need: These classes of development support the expansion of Aberdeen Harbour. Current constraints will increasingly limit the ability of the harbour to provide crucial services and limits opportunities for business growth at this nationally important facility. Nigg Bay has been identified as the preferred development option, as a result of the constraints of the existing sites.

### Spatial representation: Aberdeen Harbour and European sites

![Map of Aberdeen Harbour and European sites](image)

**Potential generic effects associated with this type of development:** Given the mix of activities within the existing Harbour area and a potential expansion area, the following potential effects will be considered: Habitat loss and deterioration; Severance and fragmentation; Hydrological change; Sedimentation and water-borne pollution; Physical disturbance; Noise and vibration disturbance; Changes in air quality; Changes in population viability.

**Details of relevant European sites to consider:** In particular the River Dee SAC (which has Atlantic Salmon and freshwater Pearl Mussel Interest Features), but also other coastal European sites including those with mobile species (birds and marine mammals) could be considered further. For example Berwickshire and North Northumberland Coast SAC, Buchan Ness to Collieston Coast SPA.
Buchan Ness to Collieston SAC, Dornoch Firth and Morrich More SAC, Firth of Tay and Eden Estuary SAC and SPA, Fowlsheugh SPA, Inner Moray Firth SPA, Isle of May SAC, Sands of Forvie SAC, Loch of Strathbeg SPA, Montrose Basin SAC, River Dee SAC, Troup, Pennan and Lion’s Heads SPA, Moray Firth SAC and Ythan Estuary, Sands of Forvie and Melkie Loch SPA.

**Details of previous HRA (if applicable):** The HRA of the National Renewables Infrastructure Plan (NRIP) has looked into the effects of some activity at Nigg Bay on European sites. The HRA record for the Aberdeen City LDP will also be reviewed for the alone and in-combination assessments. The SDP identifies Aberdeen Harbour as a key asset in the Aberdeen City Strategic Growth Area. An HRA of the SDP will also provide information for in combination assessment.

**Initial Screening Result:** Given the potential for links or pathways to be established between the national development and European sites, this development was identified at the MIR stage as requiring further examination in the HRA to identify if there might be LSE alone or in combination.

**Screening for National Development and European sites**

| Berwickshire and North Northumberland Coast SAC | The SAC is designated for marine features including reefs, sea caves and shallow inlets and bays. It is also supports and is designated for grey seals, with the extensive and diverse stretch of coastline being the most south-easterly site in Scotland selected for the species. The northern boundary of the SAC is located approximately 135 km south of the proposed development therefore only the mobile qualifying feature, the grey seals, may be impacted by the development due to their distribution patterns and sensitivities. It is considered that the seals could be impacted by pollution, including water-borne pollution and noise and vibration impacts, as well as direct impacts from collision with sea-going vehicles, and potentially cork screw injuries arising from activities associated with the national development. This is however a precautionary opinion as this presumes a very large range for seal species. The scoping response from SHN to the Aberdeen harbour expansion EIA recommended the inclusion of Berwick and North Northumberland Coast SAC due to the potential for a LSE on grey seals arising from the proposed development. The HRA of the NRIP looked at similar proposals for a broadly similar area. However, it did not consider that the proposed development would have LSE on the site. **Summary:** The national development promotes development activity that can be linked to potential for LSE on the qualifying feature (grey seal) of the SAC. **Result:** Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment. |
| Buchan Ness to Collieston SAC | Buchan Ness to Collieston SAC is designated for vegetated sea cliffs and contains some of the best remaining examples of semi-natural plant communities such as maritime heath, acid peatland and brackish flushes that are otherwise scarce on the coast of north-east Scotland. The SAC is sensitive to changes in the following aspects: air quality, water nutrient balance, hydrological regime, soil quality, human disturbance and any reduction in physical extent. Given that the site is located a considerable distance (approximately 20km north) from the proposed development, there is not predicted to be a significant impact on the habitat of the SAC. The HRA for the Aberdeen Harbour Development Framework and the EIA scoping response from SNH for the Aberdeen Harbour |
Expansion also did not establish a link between the SAC and the proposed development at Aberdeen Harbour.

The HRA of the NRIP looked at similar proposals for a broadly similar area however, it did not consider that the proposed development would have LSE on the site.

**Summary:** The national development is not considered to have LSE on the qualifying features (habitats) as the SAC is not in close proximity to Nigg bay

**Result:** Screened out under Screening Step 3c of the guidance

### Buchan Ness to Collieston Coast SPA

This SPA is designated for aggregations of breeding birds and regularly supports 95,000 seabirds, including nationally important populations of kittiwake, guillemot, herring gull, shag and fulmar. It is sensitive to the depletion of food resources, coastal oil pollution and climate change.

The site is located 20km north of the proposed development and the HRA for the Aberdeen Harbour Development Framework and the EIA scoping response from SNH for the Aberdeen Harbour Expansion did not establish a link between the SPA and the proposed development at Aberdeen Harbour.

The HRA of the NRIP looked at similar proposals for a broadly similar area however, it did not consider that the proposed development would have LSE on the site.

**Summary:** The national development is not considered to have LSE on the qualifying features of the SPA

**Result:** Screened out under Screening Step 3c of the guidance

### Dornoch Firth and Morrich More SAC

The SAC is designated for several marine features including the most northerly large, complex estuary in the UK, mudflats, sandflats and sandbanks, pioneer glasswort saltmarsh and Atlantic salt meadows, several types of qualifying dune systems, and reefs for which the area is said to support a significant presence.

The SAC also supports a favourable maintained population of otter and an unfavourable recovering population of harbour seal. With a usual range of around 18km (with a maximum of up to 40km), it is highly unlikely that the otter will visit the area surrounding the national development.

However, the distribution patterns of the harbour seal and the potential impacts of the proposed development on the environment, mean that the potential for a likely significant effect cannot be excluded. The seals may be impacted by pollution, including water-borne pollution and noise and vibration impacts, as well as direct impacts from collision with sea-going vehicles arising from the proposed development and potentially cork screw injuries to seals.

The scoping response from SNH to the Aberdeen harbour expansion EIA recommended the inclusion of Dornoch Firth and Morrich More SAC due to the potential for a LSE on harbour seals arising from the proposed development.

The HRA of the NRIP looked at similar proposals for a broadly similar area however, it did not consider that the proposed development would have LSE on the site.

**Summary:** The national development promotes development activity that can be linked to potential for LSE on the qualifying feature (harbour seal) of the SAC.

**Result:** Screened in and the relationship between the national development and
<table>
<thead>
<tr>
<th>Location</th>
<th>Details</th>
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<tbody>
<tr>
<td>SAC</td>
<td>The SAC will be subject to an appropriate assessment. The SAC is designated for estuaries, mudflats, sandflats and sandbanks and is located approximately 100km south along the coast from the proposed development. The shallow sandy sediments are typically colonised by burrowing fauna of worms, crustaceans, molluscs and echinoderms, as well as sand-eels which are an important source of food for birds. The SAC is also designated for Harbour seals, where the population is in an unfavourable and declining condition. The seals may be impacted by pollution, including water-borne pollution and noise and vibration impacts, as well as direct impacts from collision with sea-going vehicles arising from the proposed development and potentially cork screw injuries to seals. Due to the proximity of the SAC to the proposed development, the distribution patterns of the harbour seal and the potential impacts of the proposed development on the environment, the potential for a LSE cannot be excluded. Additionally, the scoping response from SNH to the Aberdeen harbour expansion EIA recommended the inclusion of Firth of Tay and Eden Estuary SAC due to the potential for a LSE on harbour seals arising from the proposed development. The HRA of the NRIP screened in the site for Forth and Tay NRIP sites however sufficient mitigation measures were available to ensure that there would be no LSE on the integrity of the site. <strong>Summary:</strong> The national development promotes development activity that can be linked to potential for LSE on the qualifying feature (seal) of the SAC. <strong>Result:</strong> Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.</td>
</tr>
<tr>
<td>SPA</td>
<td>Firth of Tay and Eden Estuary SPA: The SPA is located approximately 100km south along the coast from the proposed development and features aggregations of breeding and non-breeding including many species of wintering birds. However, whilst there are a number of species associated with the site that are vulnerable to impacts similar to those potentially arising from the development, no pathway has been established that could lead to a LSE to the qualifying interests of the SPA due to the distance between the site and the potential development. The HRA for the Aberdeen Harbour Development Framework and the EIA scoping response from SNH for the Aberdeen Harbour Expansion did not consider the developments to have any LSE with regards to the SPA. The HRA of the NRIP screened in the site for the Dundee NRIP site however sufficient mitigation measures were available to ensure that there would be no LSE on the integrity of the site. The Firth of Tay and Eden Estuary SPA was not considered for developments further north than Dundee, which include Montrose and Aberdeen. <strong>Summary:</strong> The national development is not considered to have LSE on the SPA. <strong>Result:</strong> Screened out under Screening Step 3c of the guidance.</td>
</tr>
<tr>
<td>SPA</td>
<td>This SPA is designated for aggregations of breeding birds and regularly supports 145,000 seabirds. Species included in this aggregation are guillemot and kittiwake, as well as nationally important populations of razorbill, fulmar and herring gull. Located approximately 25km south of the proposed development, the site is</td>
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sensitive to pollution of the marine environment which may potentially arise from the proposed development.

Whilst the HRA for the Aberdeen Harbour Development Framework did not consider Fowlsheugh SPA in the screening assessment, within the EIA scoping response for the Aberdeen Harbour Expansion SNH stated that there was not enough information available to determine whether there would be a LSE on the site. As a result of this, because of the possible impacts of the development, there may be a LSE (or the potential for a LSE cannot be excluded) on a qualifying feature.

The HRA of the NRIP looked at similar proposals for a broadly similar area however, it did not consider that the proposed development would have LSE on the site

**Summary:** The national development promotes development activity that can be linked to potential for LSE on the qualifying features of the SPA.

**Result:** Screened in and the relationship between the national development and SPA will be subject to an appropriate assessment.

<table>
<thead>
<tr>
<th>Inner Moray Firth SPA</th>
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</thead>
<tbody>
<tr>
<td>The Inner Moray Firth SPA is designated for aggregations of both breeding and non-breeding birds and is recognised as a wetland of international importance in supporting a waterfowl assemblage.</td>
</tr>
<tr>
<td>Species are sensitive to degradation of foraging sites and migrational staging areas as well as being sensitive to human disturbance and the loss and fragmentation of habitats, for example through wetland drainage. Other sensitivities include pollution and changes to land management practices.</td>
</tr>
<tr>
<td>However, the development is a considerable distance from the SPA (approximately 135km direct or 215km via the coast) and the HRA for the Aberdeen Harbour Development Framework and the EIA scoping response from SNH for the Aberdeen Harbour Expansion did not consider the developments to have any LSE with regards to the SPA, therefore the national development is not considered to have any LSE on the site.</td>
</tr>
<tr>
<td>The HRA of the NRIP did not consider that site was required to be screened into its assessment for sites other than Nigg Bay (Moray Firth).</td>
</tr>
<tr>
<td><strong>Summary:</strong> The national development is not considered to have LSE.</td>
</tr>
<tr>
<td><strong>Result:</strong> Screened out under Screening Step 3c of the guidance</td>
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<thead>
<tr>
<th>Isle of May SAC</th>
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<tbody>
<tr>
<td>This SAC is designated for marine reefs and grey seals where it supports the fourth largest breeding colony in the UK. Due to the proximity of the SAC to the proposed development, the distribution patterns of the grey seal (the mobile qualifying feature of the site) and the potential impacts of the proposed development on the environment, there is the potential of a LSE for the grey seals.</td>
</tr>
<tr>
<td>It is considered that the seals could be impacted by pollution, including water-borne pollution and noise and vibration impacts, as well as direct impacts from collision with sea-going vehicles arising from the proposed development.</td>
</tr>
<tr>
<td>The scoping response from SNH to the Aberdeen harbour expansion EIA recommended the inclusion of Isle of May SAC due to the potential for a LSE on grey seals arising from the proposed development.</td>
</tr>
<tr>
<td>The HRA of the NRIP considered the Isle of May SAC for developments along the coast as far north as Montrose. The site was not considered to be potentially</td>
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<tr>
<td>Location</td>
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<tr>
<td>----------</td>
</tr>
<tr>
<td>Aberdeenshire</td>
</tr>
<tr>
<td>Loch of Strathbeg SPA and Ramsar</td>
</tr>
<tr>
<td>Montrose Basin SPA</td>
</tr>
<tr>
<td>Moray Firth SAC</td>
</tr>
<tr>
<td>Area</td>
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<td>--------------------</td>
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<tr>
<td><strong>The main threats to bottlenose dolphin with regards to the proposed development</strong> are from disturbance, such as through noise and construction works, collisions with boats and reduced water quality.</td>
</tr>
<tr>
<td>The scoping response from SHN to the Aberdeen harbour expansion EIA recommended the inclusion of Moray Firth SAC due to the potential for a LSE on bottlenose dolphins arising from the proposed development. Additionally the Aberdeen Harbour development framework undertook an Appropriate Assessment for the Moray Firth SAC as it was identified that there was a risk that certain proposals and/or objectives in the Aberdeen Harbour Development Framework would be likely to have a significant effect on the integrity of the site.</td>
</tr>
<tr>
<td>The HRA for N-RIP identified potential impacts to bottlenose dolphins from the Moray Firth SAC at the Nigg N-RIP site from Non-physical disturbance arising from construction and operational activities causing non-physical disturbance due to elevated underwater noise and vibration levels, and also the displacement of prey species.</td>
</tr>
<tr>
<td><strong>Summary:</strong> The national development promotes development activity that can be linked to potential for LSE on the qualifying feature (Bottlenose Dolphin) of the SPA.</td>
</tr>
<tr>
<td><strong>Result:</strong> Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.</td>
</tr>
<tr>
<td><strong>River Dee SAC</strong></td>
</tr>
<tr>
<td>The scoping response from SHN to the Aberdeen harbour expansion EIA recommended the inclusion of the River Dee SAC due to the potential for a LSE on its qualifying interests arising from the proposed development. Additionally the Aberdeen Harbour development framework undertook an Appropriate Assessment for the River Dee SAC as it was identified that there was a risk that certain proposals and/or objectives in the Aberdeen Harbour Development Framework would be likely to have a significant effect on the integrity of the site.</td>
</tr>
<tr>
<td>The HRA of the NRIP screened in the River Dee SAC for appropriate assessment based on the potential for developments at Aberdeen to have significant adverse effects on the integrity of the site.</td>
</tr>
<tr>
<td><strong>Summary:</strong> The national development promotes development activity that can be linked to potential for LSE on the qualifying features of the SPA.</td>
</tr>
<tr>
<td><strong>Result:</strong> Screened in and the relationship between the national development and SAC will be subject to an appropriate assessment.</td>
</tr>
<tr>
<td><strong>Sands of Forvie SAC</strong></td>
</tr>
<tr>
<td>The SAC is located approximately 20km from the proposed development at its closest point. Given the scope of this national development description links</td>
</tr>
<tr>
<td>Location</td>
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<tr>
<td>----------</td>
</tr>
<tr>
<td>Troup, Pennan and Lion’s Head SPA</td>
</tr>
<tr>
<td>Ythan Estuary, Sands of Forvie and Meikle Loch SPA</td>
</tr>
</tbody>
</table>

**Summary of screening for likely significant effects in combination:** The above screening has identified potential for LSE from the national development on the Berwickshire and North Northumberland Coast SAC, Dornoch Firth and Morrich More SAC, Firth of Tay and Eden Estuary SAC, Fowlsheugh SPA, Isle of May SAC, Montrose Basin SPA, Moray Firth SAC, River Dee SAC and Ythan Estuary, Sands of Forvie and Meikle Loch SPA. This is based on the potential for noise and disturbance on species of seal, birds and Bottlenose dolphin.

**Result:** The relationships identified between the European sites screened in above and the development will be subject to further Appropriate Assessment.

**Overall Screening Result:** The development is considered to have potential LSE on the Natura
Appropriate Assessment of Aberdeen Harbour

<table>
<thead>
<tr>
<th>Aspect of National Development:</th>
<th>Dredging (and disposal of dredgings)</th>
</tr>
</thead>
</table>

**Implications:**
The national development has the potential to impact the qualifying interests listed below through the following pathways:

- Physical loss (of habitats) – direct loss of supporting habitat under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns.
- Non-physical disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey, or symbiotic species)
- Non-toxic contamination – increases in suspended sediments and turbidity potentially affecting marine habitats and species.

Through the pathways outlined above, the following qualifying interests may be impacted:

- Berwickshire and North Northumberland Coast SAC: Grey seal
- Dornoch Firth and Morrice More SAC: Harbour seal
- Firth of Tay and Eden Estuary SAC: Harbour seal
- Isle of May SAC: Grey seal
- Moray Firth SAC: Bottlenose dolphin
- Fowlsheugh SPA: Birds - guillemot, kittiwake, razorbill, fulmar and herring gull
- Montrose Basin SPA: Birds - Dunlin, eider, greylag goose, knot, oystercatcher, pink-footed goose, redshank, Shelduck, wigeon
- River Dee SAC: Atlantic Salmon, freshwater pearl mussel
- Ythan Estuary, Sands of Forvie and Meikle Loch SPA: Birds - common tern, eider, lapwing, little tern, pink-footed goose, redshank and sandwich tern

The relevant Conservation Objectives for the qualifying interests are:

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, as a viable component of the site
- Distribution of the species within site
- No significant disturbance of the species
- Distribution and viability of freshwater pearl mussel host species
- Structure, function and supporting processes of habitats supporting freshwater pearl mussel host species

**Assessment and mitigation:**
Although the description of the national development description does not specifically include dredging activity within its status, following the precautionary principle it has been assumed that dredging could be a feature of the construction of new and replacement harbour facilities.

In order to demonstrate no adverse effects on site integrity (either alone or in combination) the projects promoted as national development will be required to undertake project level HRA and it is at this stage that it will be clear whether dredging activities will be included. Potential mitigation available at this point includes:

- Avoid construction on sensitive habitat (e.g. SPA bird roosting sites) through project planning and design.
- Use project level planning and design to ascertain whether dredging will result in local
changes to erosion / deposition patterns. Design mitigation accordingly.

- Undertake dredging work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, the most intense periods of fish migration, seal breeding season (June and July for harbour seals; September-late November for grey seals). Consult with SNH on most appropriate times.
- Mitigation and monitoring measures applied to the source of impact will mitigate reduced availability of other species (e.g. implementing measures to avoid adverse effects on salmon movements will avoid effects on freshwater pearl mussels).
- Adhere to careful dredging practice and use a precautionary approach to avoid or reduce impacts. Timing of dredging and disposal operations, selection of Best Available Technique (BAT) dredging methods.
- Requirement for mitigation measures is subject to further detailed assessment at project level (e.g. numerical modelling).
- Sensitive areas (e.g. intertidal mudflat) subject to potential erosion could be recharged with sediment (e.g. by over spilling during dredging).
- Use dredging techniques most appropriate to the seabed type to avoid excessive sediment mobilisation and adverse impacts on interest features (e.g. minimising overspill).

Result:
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance, physical loss of supporting habitats and non-toxic contamination. These effects in combination with other similar effects will be considered further in this report.

### Aspect of National Development: Piling

**Implications:**
The national development has the potential to impact the qualifying interests listed below through the following pathways:

- Physical loss (of habitats) - direct loss of supporting habitat. Indirect loss/gain of habitat due to changes in sedimentation patterns.
- Non-physical disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey, or symbiotic species).
- Non-toxic contamination – increases in suspended sediments and turbidity potentially affecting marine habitats and species.

Through the pathways outlined above, the following qualifying interests may be impacted:

- Berwickshire and North Northumberland Coast SAC: Grey seal.
- Dornoch Firth and Morrich More SAC: Harbour seal.
- Firth of Tay and Eden Estuary SAC: Harbour seal.
- Isle of May SAC: Grey seal.
- Moray Firth SAC: Bottlenose dolphin.
- Fowlsheugh SPA: Birds - guillemot, kitiwake, razorbill, fulmar and herring gull.
- River Dee SAC: Atlantic Salmon, freshwater pearl mussel.
- Ythan Estuary, Sands of Forvie and Meikle Loch SPA: Birds - common tern, eider, lapwing, little tern, pink-footed geese, redshank and sandwich tern.

The relevant Conservation Objectives for the qualifying interests are:
To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, as a viable component of the site
• Distribution of the species within site
• No significant disturbance of the species
• Distribution and viability of freshwater pearl mussel host species
• Structure, function and supporting processes of habitats supporting freshwater pearl mussel host species

**Assessment and mitigation:**
Construction activities that might involve piling have been considered to have the potential for adverse effects on site integrity via disturbance to species. However, mitigation is available as development comes forward that can help to demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA. Measures include the following:

• Avoid construction on or close to sensitive habitat (e.g. SPA bird roosting sites) through project planning and design.
• Use project planning and design to ascertain whether proposed piling and introduced structures will result in local changes to erosion/deposition patterns. Design mitigation accordingly.
• Undertake construction work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, most intense periods of fish migration, seal breeding season (June and July for harbour seals; September-late November for grey seals). Consult with SNH on most appropriate times.
• Use less intrusive piling methods (e.g. passive gas and soft start) and noise screens (e.g. bubble curtains) during sensitive periods i.e. during fish migration and seal breeding season.
• Mitigation measures applied to the source of impact will mitigate reduced availability of other species (e.g. implementing measures to avoid adverse effects on salmon movements will avoid effects on freshwater pearl mussels).
• Adhere to careful practice and use a precautionary approach to avoid or reduce impacts. Selection of Best Available Technique (BAT) methods.

Project level HRA will be required, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European/Ramsar sites from projects either alone or in combination with other plans or projects.

**Result:**
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance, non-toxic contamination and physical loss of supporting habitat. These effects in combination with other similar effects will be considered further in this report.

<table>
<thead>
<tr>
<th>Aspect of National Development:</th>
<th>Land use change</th>
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<tbody>
<tr>
<td><strong>Implications:</strong></td>
<td>The national development has the potential to impact the qualifying interests listed below through following the pathways:</td>
</tr>
<tr>
<td></td>
<td>• Physical loss of habitat – direct loss of supporting habitat under the footprint of the development. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
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<tr>
<td></td>
<td>• Non-physical disturbance – noise and vibration that may disturb the species. Reduced availability/displacement of other species (including prey).</td>
</tr>
<tr>
<td></td>
<td>• Non-toxic contamination – increases in suspended sediments and turbidity potentially affecting marine habitats and species.</td>
</tr>
</tbody>
</table>

Through the pathways outlined above, the following qualifying interests may be impacted:
• Berwickshire and North Northumberland Coast SAC: Grey seal.
• Dornoch Firth and Morrich More SAC: Harbour seal.
• Firth of Tay and Eden Estuary SAC: Harbour seal.
• Isle of May SAC: Grey seal.
• Moray Firth SAC: Bottlenose dolphin.
• Fowlsheugh SPA: Birds - guillemot, kittiwake, razorbill, fulmar and herring gull.
Montrose Basin SPA: Birds - dunlin, eider, greylag geese, knot, oystercatcher, pink-footed geese, redshank, Shelduck, wigeon.

River Dee SAC: Atlantic salmon, freshwater pearl mussel, otter.

Ythan Estuary, Sands of Forvie and Meikle Loch SPA: Birds - common tern, eider, lapwing, little tern, pink-footed geese, redshank and sandwich tern.

The relevant Conservation Objectives for the qualifying interests are:

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, 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
- Distribution and viability of freshwater pearl mussel host species
- Structure, function and supporting processes of habitats supporting freshwater pearl mussel host species

Assessment and mitigation:

The national development description includes reference to new infrastructure for port development, road and water infrastructure and this could involve some requirement for construction on areas of land previously undeveloped and potentially providing offsite supporting habitat. In particular for birds but also for change in the foreshore that might affect marine species.

The NPF3 does not describe precise activities and location of these that will arise from a development fitting national development status. Therefore any mitigation to avoid adverse effects on site integrity will need to be applied via project level HRA, encompassing all phases of development. Mitigation measures this process may consider are:

- Avoid construction on sensitive offsite habitat (e.g. SPA bird roosting sites) through project planning and design. If avoidance is not possible, provide mitigation habitat elsewhere.
- Use project planning and design to ascertain whether development will result in local changes to erosion/deposition patterns. Design mitigation accordingly.
- Undertake construction work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, most intense periods of fish migration, seal breeding season (June and July for harbour seals; September-late November for grey seals). Consult with SNH on most appropriate times.
- Mitigation and monitoring measures applied to the source of impact will mitigate this impact (e.g. implementing measures to avoid adverse effects on salmon movements will avoid effects on freshwater pearl mussels).

Result:

Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising from non-physical disturbance, non-toxic contamination and physical loss of supporting habitat. These effects in combination with other similar effects will be considered further in this report.

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<tr>
<th>Aspect of National Development:</th>
<th>Increased levels of vessel movement</th>
</tr>
</thead>
</table>

Implications:

The national development has the potential to impact the qualifying interests listed below through the following pathways:
• Physical damage (of habitats and species) – collision risk through increased vessel movement
• Non-physical disturbance – noise and vibration that may disturb the species
• Toxic contamination – toxic effects on marine species from potential oil spillages etc.
• Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species

Through the pathways outlined above, the following qualifying interests may be impacted:
• Berwickshire and North Northumberland Coast SAC: Grey seal
• Dornoch Firth and Morrich More SAC: Harbour seal
• Firth of Tay and Eden Estuary SAC: Harbour seal
• Isle of May SAC: Grey seal
• Moray Firth SAC: Bottlenose dolphin
• River Dee SAC: Atlantic Salmon, freshwater pearl mussel, otter

The relevant Conservation Objectives for the qualifying interests are:
To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:
• Population of the species, including range of genetic types for salmon, as a viable component of the site
• Distribution of the species within site
• No significant disturbance of the species
• Distribution and viability of freshwater pearl mussel host species
• Structure, function and supporting processes of habitats supporting freshwater pearl mussel host species

Assessment and mitigation:

The construction of new port facilities will be likely to result in an increase in freight traffic. An increase in freight movement is considered to have the potential for adverse effects on site integrity via disturbance and collision with species. However it is also considered that mitigation is available as development comes forward that can help to demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA. Measures include the following:

• Time construction activities to reduce noise impacts and physical dangers posed by increased vessel traffic
• General good housekeeping measures to avoid spillages and implementation of contingency plans should spills occur
• Time construction activity to avoid the most intense periods of fish migration

Project level HRA will be required to be undertaken, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European/Ramsar sites from projects either alone or in-combination with other plans or projects.

Result:
Taking into account the available mitigation, it is possible for this HRA to conclude there will not be adverse effects on site integrity. However, there may be MRE arising arising from non-physical disturbance, non-toxic contamination and increased risk of collision. These effects in combination with other similar effects will be considered further in this report.
<table>
<thead>
<tr>
<th>Aspect of National Development:</th>
<th>Building construction / demolition (including site clearance, land remediation)</th>
</tr>
</thead>
</table>

**Implications:**
The national development has the potential to impact the qualifying interests listed below through the following pathways:

- Physical loss of habitat – direct loss of supporting habitat under the footprint of the development.
- Non-physical disturbance – noise and vibration that may disturb the species. Potential developments or structures (tall buildings, cranes) may cause significant changes to flight routes along the coast. There is also the risk of collision.

Through the pathways outlined above, the following qualifying interests may be impacted:

- **Fowlsheugh SPA:** Birds - guillemot, kittiwake, razorbill, fulmar and herring gull.
- **Montrose Basin SPA:** Birds - dunlin, eider, greylag geese, knot, oystercatcher, pink-footed geese, redshank, Shelduck, wigeon.
- **River Dee SAC:** Atlantic salmon, freshwater pearl mussel, otter.
- **Ythan Estuary, Sands of Forvie and Meikle Loch SPA:** Birds - common tern, eider, lapwing, little tern, pink-footed geese, redshank and sandwich tern.

The relevant Conservation Objectives for the qualifying interests are:

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, 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 species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, as a viable component of the site
- Distribution of the species within site
- No significant disturbance of the species
- Distribution and viability of freshwater pearl mussel host species

**Assessment and mitigation:**

Construction activities considered to have the potential for adverse effects on site integrity via disturbance to species. However, mitigation is available as development comes forward that can help to demonstrate no adverse effects on site integrity. These measures will need to be incorporated into the project level HRA. Measures include the following:

- Avoid construction on sensitive habitat (e.g. SPA bird roosting sites) through project planning and design.
- Use project planning and design to ascertain whether development will result in local changes to erosion/deposition patterns. Design mitigation accordingly.
- Undertake construction work at times of the year appropriate for the species in question i.e. avoiding bird overwintering and breeding periods, most intense periods of fish migration, seal breeding season (June and July for harbour seals; September-late November for grey seals). Consult with SNH on most appropriate times.
- Mitigation and monitoring measures applied to the source of impact will mitigate this impact (e.g. implementing measures to avoid adverse effects on prey species will avoid effects on marine mammals / birds).
- Planning and design measures required to minimise disruption e.g. location of cranes; avoid placement of tall structures within bird flight paths.

Project level HRA will be undertaken, encompassing all phases of development, to ensure that there are no adverse effects on the integrity of European/Ramsar sites from projects either alone or in combination with other plans or projects.

**Result:**
Taking into account the available mitigation it is possible for this HRA to conclude there will not be
adverse effects on site integrity. However, there may be MRE arising from physical loss of supporting habitats and non-physical disturbance. These effects in combination with other similar effects will be considered further in this report.
### Screening National Digital Network

**National Development: National Digital Network**

<table>
<thead>
<tr>
<th>Details of the national development:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Throughout Scotland</td>
</tr>
</tbody>
</table>

Description of Class of Development: Development which consists of:
(a) the construction of new broadband cabling where the length of the cabling exceeds 8 kilometres.

Designation: A development within the Class of Development described in paragraph (2) (a) is designated a national development.

Need: These classes of development support the delivery of enhanced digital infrastructure in Scotland which is vital for continued sustainable economic growth. The Highlands and Islands Area will form a focus for development.

**Spatial representation:** The NPF3 includes indicative routes across the highlands and islands. Mapping is at present merely indicative but could involve some element of subsea cabling. However locations are not set out in enough detail for clear locations to be considered within this strategic level document.

**Potential generic effects associated with this type of development:** Development of this type will require some works to bury cables, but this will be most likely in accessible locations (such as along existing roads and infrastructure routes). Potential generic effects identified with development of this type could be habitat Loss and Deterioration, severance and fragmentation, physical disturbance, hydrological change, noise and vibration disturbance, changes in population viability.

However, much of the network associated with developing a digital network is most likely to occur along areas of existing infrastructure (e.g. along existing road routes) where impacts will be minimal and less likely to be significant.

**Details of relevant European sites to consider:** The national development does not prescribe routes and work on likely corridors is on-going. The NPF3 sets out indicative potential routes based on work undertaken by Highlands and Islands Enterprise. As routes are indicative it is not considered that specific European Sites can be identified and considered in terms of identifying impact pathways that will have LSE.

**Details of previous HRA (if applicable):** Previous relevant HRA work has not been undertaken.

**Screening result:** At this stage the location of new cable construction routes are not confirmed or determined within the NPF3 and thus indicative routes cannot be considered to result in LSE on European sites. Therefore this national development is considered too general to reasonably consider LSE either alone or in combination. It is suggested that the national development should be **screened out** under Stage 5: Screening Step 3(e) of the Guidance.

However, whilst at this stage links or pathways between the national development and specific European sites cannot be identified there is some potential for future development to have LSE when its location is determined. It is therefore recommended that in any further planning of this national development that identifies more specific corridors further HRA screening is undertaken as a minimum. There may also be opportunities to develop a code of practice, similar to that which covers digital fibre installation in England and Wales, that can help to provide mitigation to avoid adverse effects on site integrity should the need arise.
Appendix B: In combination assessments

<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Impact Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in-Combination Effects</th>
<th>External in-Combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arran Moors SPA</td>
<td>Hen Harrier</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical (indirect disturbance) – from noise and vibration disturbance that may disturb the species. This includes the potential to increase disturbance out with designated site boundaries by the increased use of linking paths.</td>
<td>Increased human disturbance</td>
<td>National Long Distance Cycling and Walking Network.</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE therefore no external in-combination effects identified.</td>
<td>No LSE either alone or in-combination, MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical loss (of habitats and species)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint the development.</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network.</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE therefore no external in-combination effects identified.</td>
<td>No LSE either alone or in-combination, MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical damage (of habitats and species)</td>
<td>Physical damage (of habitats and species) - The effect of this is that increased recreational use may also increase the risk of predation and disturbance linked to dogs.</td>
<td>Increased human disturbance</td>
<td>National Long Distance Cycling and Walking Network.</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE therefore no external in-combination effects identified.</td>
<td>No LSE either alone or in-combination, MRE are expected to remain.</td>
</tr>
</tbody>
</table>

Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SPA as a result of disturbance, physical loss and damage resulting from some land use change and disturbance from humans associated with the National Long Distance Cycling and Walking Network national development. There are no likely significant effect either alone or in combination. Only MRE are expected to remain.

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* Plans and projects included in combination that consider Arran Moors SPA: Ayrshire and Arran Forestry and Woodland Strategy.
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Impact Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in–Combination Effects</th>
<th>External in-Combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
</table>
| Clyde Valley Woods SAC| Broad-leaved, mixed and yew woodland | Physical damage (of habitats and species) - The effect of this is that increased recreational use may also increase the risk of increased physical damage | Increased human disturbance     | Ravenscraig                    | No internal in combination effects to consider. | North Lanarkshire Local Development Plan: MRE identified for this pathway.  
South Lanarkshire Local Development Plan: Buffers around development proposals were considered sufficient to remove pathway to European site with no in-combination impact. There were MRE identified for this pathway. | The in combination effects are not considered to be of a significance to result in LSE on site integrity and only MRE expected to remain following development. |

Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of physical damage to habitat resulting from increased human disturbance associated with the Ravenscraig national development. There are no likely significant effect either alone or in combination. Only MRE are expected to remain.

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10 Plans and projects included in combination that consider Clyde Valley Woods SAC: North Lanarkshire Local Development Plan HRA, South Lanarkshire Local Development Plan HRA.
### Appropriate Assessment stage in-combination assessment

<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Impact Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in-Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airds Moss SAC</td>
<td>Blanket Bog</td>
<td>Physical loss (of habitats and species)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint the development</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical damage (of habitats and species) – from hydrological impacts such as changes to water flow / level</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical damage (of habitats and species) through increased recreational use</td>
<td>Increased human disturbance</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td></td>
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</tbody>
</table>

**Overall site conclusion:**
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of physical loss and damage resulting from some land use change and disturbance from humans associated with the National Long Distance Cycling and Walking Network national development. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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11 Plans and projects included in combination that consider Airds Moss SAC: Ayrshire and Arran Forestry and Woodland Strategy.
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in–Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben Lui SAC</td>
<td>Base-rich fens; Alpine and subalpine calcareous grasslands; High-altitude plant communities associated with areas of water seepage; Plants in crevices on base-rich rocks; Tall herb communities; wet heathland with cross-leaved heath; montane acid grasslands; plants in crevices on acid rocks; acidic scree; species-rich grassland with mat-grass in upland areas; mountain willow scrub</td>
<td>Physical damage (of habitats)</td>
<td>Physical damage (of habitats) – physical damage to, deterioration or fragmentation of habitat under footprint the development and associated works</td>
<td>Construction works</td>
<td>Pumped hydroelectric storage</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
</tbody>
</table>

Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of physical damage resulting from construction activity associated with the pumped hydroelectric storage national development. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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12 Plans and projects included in combination that consider Ben Lui SAC: Stirling Local Development Plan, Cononish Gold mine.
European Site | Qualifying Interest | Pathway | Pathway Detail | Activity | National Developments with MRE | In Plan – Combination Effects | External In- combination Effects | Residual Effects
---|---|---|---|---|---|---|---|---
Berwickshire and North Northumberland Coast SAC | Grey Seals | Non-physical (indirect) disturbance | Non-physical (indirect) disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species). | Building construction / demolition | Aberdeen Harbour Freight Handling Capacity on the Forth | The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain. | SESplan identified MRE with further assessment required at lower-tier plan level (LDPs) to determine potential effects but lower tier plans did not identify MRE to consider. | With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

Non-toxic contamination | Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species. | Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling | Aberdeen Harbour Freight Handling Capacity on the Forth | The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain. | SESplan identified MRE with further assessment required at lower-tier plan level (LDPs) to determine potential effects but lower tier plans did not identify MRE to consider. | With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

Physical damage (of habitats and species) | Physical damage (of habitats and species) – collision risk through increased vessel movement. | Increased levels of vessel movement | Aberdeen Harbour Freight Handling Capacity on the Forth | The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain. | SESplan identified MRE with further assessment required at lower-tier plan level (LDPs) to determine potential effects but lower tier plans did not identify MRE to consider. | With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

Physical loss (of habitats) | Physical loss (of habitats) – direct loss, deterioration or fragmentation of supporting habitat under footprint the development, e.g. under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns. | Dredging (and disposal of dredgings) Land Use Change Piling Building construction / demolition | Aberdeen Harbour Freight Handling Capacity on the Forth | The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain. | SESplan identified MRE with further assessment required at lower-tier plan level (LDPs) to determine potential effects but lower tier plans did not identify MRE to consider. | With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

Toxic contamination | Toxic contamination – toxic effects on marine species from potential oil spillages etc. | Increased levels of vessel movement | Aberdeen Harbour Freight Handling Capacity on the Forth | The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain. | SESplan identified MRE with further assessment required at lower-tier plan level (LDPs) to determine potential effects but lower tier plans did not identify MRE to consider. | With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of disturbance, toxic and non-toxic contamination, physical loss of supporting habitats and damage to qualifying interests resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Aberdeen Harbour and Freight Handling Capacity on the Forth national developments. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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13 Plans and projects included in combination that consider Berwickshire and North Northumberland Coast SAC: SESplan, Edinburgh Local Development Plan

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<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in-Combination Effects</th>
<th>External In-combination Effects[^14]</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Cart SPA</td>
<td>Whooper swan</td>
<td>Physical loss (of habitats and species)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint the development</td>
<td>Building construction / demolition</td>
<td>Strategic Airport Enhancements (Glasgow)</td>
<td>No internal in combination effects to consider.</td>
<td>Glasgow and the Clyde Valley Strategic Development Plan: At this strategic plan level, it is likely that this proposal is flexible enough to avoid adverse impact on the SPA. Development considered in Renfrewshire LDP. Renfrewshire Local Development Plan: Appropriate mitigation provided by caveats to policies E1 and E5 to ensure no LSE on site, some potential for MRE.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-physical disturbance – noise and vibration that may disturb the species. Potential developments or structures (tall buildings, cranes) may cause significant changes to flight routes along the coast. There is also the risk of collision.</td>
<td>Building construction / demolition</td>
<td>Strategic Airport Enhancements (Glasgow)</td>
<td>No internal in combination effects to consider.</td>
<td>Glasgow and the Clyde Valley Strategic Development Plan: At this strategic plan level, it is likely that this proposal is flexible enough to avoid adverse impact on the SPA. Development considered in Renfrewshire LDP. Renfrewshire Local Development Plan: Appropriate mitigation provided by caveats to policies E1 and E5 to ensure no LSE on site, some potential for MRE.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
</tbody>
</table>

Overall site conclusion:

The HRA considered the potential for effects on the conservation objectives of the SPA as a result of physical loss of habitat and non-physical disturbance arising from building construction / demolition activities construction activity associated with the Glasgow element of the Strategic Airport Enhancements national development. In the Glasgow and the Clyde Valley SDP, the plan is considered flexible enough to avoid adverse impacts on the SPA and that specific proposals that emerge through the LDP process should acknowledge the potential constraints on new developments in proximity to the SPA and highlight that suitable mitigation is dependent on the identification and development of suitable alternative roost sites if necessary. Renfrewshire Local Development Plan undertook an appropriate assessment of the potential impacts of the Glasgow Airport development on Black Cart SPA and considered that mitigation measures in the form of caveats included in policies E1 (economic Investment locations) and E5 (Glasgow Airport Operational Area) would be sufficient to ensure that the development would not have an adverse impact on the site integrity. Whilst MRE may be possible it is thought that these controls will help to avoid adverse effects on site integrity of the national development and other development associated with the airport.

There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

[^14]: Plans and projects included in combination that consider Black Cart SPA: Glasgow and the Clyde Valley Strategic Development Plan, Renfrewshire Local Development Plan, Glasgow Airport Masterplan.
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in-Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buchan Ness to Collieston Coast SPA</td>
<td>Seabird assemblage including nationally important populations of fulmar, guillemot, herring gull, kittiwake and shag</td>
<td>Non-physical (indirect) disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Building construction / demolition Land Use Change</td>
<td>Carbon Capture and Storage Network Thermal Generation</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeen City and Shire SDP HRA: Consider MRE</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td>Physical loss (of habitats)</td>
<td>Direct loss of supporting habitat under the footprint of the development. Indirect loss/gain of habitat due to expansion of activities onsite.</td>
<td>Land Use Change</td>
<td>Carbon Capture and Storage Network and Thermal Generation</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeen City and Shire SDP HRA: Consider MRE</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-toxic contamination</td>
<td>Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species</td>
<td>Land Use Change</td>
<td>Carbon Capture and Storage Network and Thermal Generation</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeen City and Shire SDP HRA: Consider MRE</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
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</tr>
</tbody>
</table>

**Overall site conclusion:**

The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance, physical loss of supporting habitat and non-toxic contamination of qualifying features resulting from building construction / demolition and land use change associated with the Carbon Capture and Storage Network and Thermal Generation national development. The Aberdeen City and Shire SDP considered the same impact pathways and identified MRE to be considered in Local Development Plans. The Aberdeen City LDP HRA did not screen in this site and Aberdeenshire LDP HRA established that sufficient policy mitigation was in place to avoid adverse effects on site integrity.

Therefore there are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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Plans and projects included in combination that consider Buchan Ness to Collieston Coast SPA: Aberdeen City and Shire SDP HRA, Aberdeen City LDP HRA, Aberdeenshire LDP HRA.
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in–Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dornoch Firth and Morrich More SAC</td>
<td>Harbour seal</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling Building construction / demolition</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Non-toxic contamination</td>
<td></td>
<td>Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species</td>
<td>Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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<td></td>
</tr>
<tr>
<td>Physical damage (of habitats and species)</td>
<td></td>
<td>Physical damage (of habitats and species) – collision risk through increased vessel movement</td>
<td>Increased levels of vessel movement</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td>Physical loss (of habitats)</td>
<td></td>
<td>Physical loss (of habitats) – direct loss of supporting habitat under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>Dredging (and disposal of dredgings)</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td>Toxic contamination</td>
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<td>Increased levels of vessel movement</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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</table>

Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of disturbance, toxic and non-toxic contamination, physical loss of supporting habitat and damage to qualifying features resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Aberdeen Harbour national development. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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30 Plans and projects included in combination that consider Dornoch Firth and Morrich More SAC: Inner Moray Firth Local Development Plan, National Renewables Infrastructure Plan.
<table>
<thead>
<tr>
<th>European Site</th>
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<th>Pathway</th>
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<tr>
<td>Firth of Forth SPA</td>
<td>Species potentially impacted by the activities are – red-throated diver, Slavonian grebe, golden plover, bar-tailed godwit, sandwich tern, pink footed goose, Shelduck, knot, redshank and a wintering waterfowl assemblage comprised of great crested grebe, cormorant, scap, eider, long-tailed duck, common scoter, velvet scoter, goldeneye, red-breasted merganser, oystercatcher, ringed plover, grey plover, dunlin, curlew, wigeon, mallard and lapwing.</td>
<td>Non-physical (indirect disturbance)</td>
<td>Building construction / demolition</td>
<td>Strategic Airport Enhancements Carbon Capture and Storage Network and Thermal Generation Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>SESplan: Identifies that further assessment required at lower-tier plan level (LDPs) is required to determine impact of MRE.</td>
<td>Falirk LDP Draft HRA: MRE relating to disturbance of species at offsite roosting sites and along the coastline.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-physical (indirect disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Land Use Change Building construction / demolition Dredging (and disposal of dredgings) Increased levels of vessel movement Piling</td>
<td>Carbon Capture and Storage Network and Thermal Generation Freight Handling Capacity on the Forth Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>SESplan: Identifies that further assessment required at lower-tier plan level (LDPs) is required to determine impact of MRE.</td>
<td>Clackmannanshire LDP identifies MRE and proposes new wording for a number of policies as part of the appropriate assessment.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td></td>
<td></td>
<td>Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species</td>
<td>Land Use Change Dredging (and disposal of dredgings) Increased levels of vessel movement Piling</td>
<td>Carbon Capture and Storage Network and Thermal Generation Freight Handling Capacity on the Forth Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<tr>
<td></td>
<td></td>
<td>Physical loss of habitats – direct</td>
<td>Dredging (and disposal of)</td>
<td>Strategic Airport Enhancements</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>SESplan: Identifies that further assessment required at lower-tier plan level (LDPs) is required to determine impact of MRE.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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</table>

17 Plans and projects included in combination that consider The Firth of Forth SPA: Clackmannanshire Local Development Plan, TAYplan, Edinburgh Local Development Plan, Falkirk Local Development Plan, Mid Fife Local Plan, Fife Shoreline Management Plan 2, Dunfermline and West Fife Local Plan, Stirling Local Development Plan, National Renewables Infrastructure Plan
<table>
<thead>
<tr>
<th>European Site Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
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<td>loss, deterioration or fragmentation of habitat (including supporting habitat) under footprint the development, e.g. under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>dredgings) Land Use Change Piling Building construction / demolition</td>
<td>Freight Handling Capacity on the Forth Grangemouth Investment Zone Carbon Capture and Storage Network and Thermal Generation</td>
<td>mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>required to determine impact of MRE. Fife Shoreline Management Plan identified MRE on habitats from shoreline management. Clackmannanshire LDP identifies MRE and proposes new wording for a number of policies as part of the appropriate assessment Falkirk LDP Draft HRA: MRE relating to potential loss of offsite supporting roosting sites. Stirling Local Development Plan: MRE identified for this pathway Edinburgh LDP HRA: MRE identified for this pathway Dunfermline and West Fife Local Plan: MRE identified for this pathway TAYplan: No adverse effects but potential for MRE</td>
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<td>Toxic contamination – toxic effects on marine species from potential oil spillages etc.</td>
<td>Increased levels of vessel movement</td>
<td>Freight Handling Capacity on the Forth Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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</table>

**Overall site conclusion:**

The HRA considered the potential for effects on the conservation objectives of the SPA as a result of disturbance, toxic and non-toxic contamination, and physical loss of habitat (including supporting habitat) resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Strategic Airport Enhancements, Carbon Capture and Storage Network and Thermal Generation, Freight Handling Capacity on the Forth and Grangemouth Investment Zone national developments. It is clear that there are a number of pressures on the Firth of Forth SPA not only from the national developments but also in combination with the proposals contained within a number of other plans. With the mitigation proposed within this HRA and included within the assessments of the relevant wider planning documents, the residual effects identified are considered to be minimal and would not in combination have adverse effects on site integrity. However, they will alongside the national developments have the potential for continuing the existing and identified pressure on this SPA.

There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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**European Site Qualifying Interest:**

- National Developments with MRE
- In Plan in–Combination Effects
- External In-combination Effects
- Residual Effects
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<tbody>
<tr>
<td>Firth of Tay and Eden Estuary SAC</td>
<td>Harbour Seal</td>
<td>Non-physical (indirect) disturbance</td>
<td>Non-physical (indirect) disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling Building construction / demolition</td>
<td>Aberdeen Harbour Dundee Waterfront Freight Handling Capacity on the Forth Aberdeen Harbour Freight Handling Capacity on the Forth</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain. Dundee LDP HRA: MRE identified for this pathway TAYplan: No adverse effects but potential for MRE.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td>Aberdeen Harbour Freight Handling Capacity on the Forth Aberdeen Harbour Freight Handling Capacity on the Forth</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain. Dundee LDP HRA: MRE identified for this pathway TAYplan: No adverse effects but potential for MRE.</td>
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<tr>
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<td></td>
<td>Physical damage (of habitats and species)</td>
<td>Physical damage (of habitats and species) – collision risk through increased vessel movement</td>
<td>Increased levels of vessel movement</td>
<td>Aberdeen Harbour Freight Handling Capacity on the Forth Aberdeen Harbour Freight Handling Capacity on the Forth</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain. No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td>Physical loss (of habitats)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of supporting habitat under footprint the development, e.g. under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns</td>
<td>Dredging (and disposal of dredgings) Land Use Change Piling Building construction / demolition</td>
<td>Aberdeen Harbour Freight Handling Capacity on the Forth Aberdeen Harbour Freight Handling Capacity on the Forth</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain. Dundee LDP HRA: Consider MRE TAYplan: No adverse effects but potential for MRE.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain. No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SAC and relating to the Harbour seal qualifying feature, as a result of disturbance, toxic and non-toxic contamination, physical loss of supporting habitat and damage to qualifying features resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Aberdeen Harbour, Freight Handling Capacity on the Forth and Dundee Waterfront national developments. It is considered that the mitigation within this HRA and embedded in the other plans will mean that in combination effects will not have adverse effects on site integrity. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firth of Tay and Eden Estuary SPA</td>
<td>Redshank, Little tern, Sanderling, Dunlin, Oystercatcher, Velvet scoter, Black-tailed godwit, Bar-tailed godwit, Common scoter, Eider, and Pink-footed Goose.</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical (indirect disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Building construction / demolition</td>
<td>Dundee Waterfront</td>
<td>No internal in combination effects to consider.</td>
<td>Fife Shoreline Management Plan 2: MRE identified for this pathway</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td>Redshank, Little tern, Sanderling, Dunlin, Oystercatcher, Velvet scoter, Black-tailed godwit, Bar-tailed godwit, Common scoter, Eider, and Pink-footed Goose.</td>
<td>Physical loss (of habitats)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of supporting habitat under footprint the development. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>Building construction / demolition</td>
<td>Dundee Waterfront</td>
<td>No internal in combination effects to consider.</td>
<td>Fife Shoreline Management Plan 2: MRE identified for this pathway</td>
<td>Dundee LDP HRA: MRE identified for this pathway TAYplan: No adverse effects but potential for MRE identified for this pathway</td>
</tr>
</tbody>
</table>

Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SPA, relating to the SPA qualifying features, as a result of disturbance and physical loss of supporting habitat resulting from construction activity associated with the Dundee Waterfront national development. It is considered that the mitigation suggested within this HRA and embedded through the requirements of relevant policy caveats embedded in the relevant plans that were identified, such as in policy 30 of the Dundee LDP, that in combination, there are no adverse effects on site integrity. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.

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<tr>
<td>Forth Islands SPA</td>
<td>Species potentially impacted by the activities are – arctic tern, roseate tern, common tern, sandwich tern, northern gannet, European shag, lesser black-backed gull, Atlantic puffin and a seabird assemblage that in addition to the aforementioned species includes razorbill, guillemot, black-legged kittiwake, herring gull, great cormorant and northern fulmar.</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical disturbance – noise and vibration that may disturb the species. Potential developments or structures (tall buildings, cranes) may cause significant changes to flight routes along the coast. There is also the risk of collision.</td>
<td>Building construction / demolition</td>
<td>Strategic Airport Enhancements Carbon Capture and Storage Network and Thermal Generation Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>SESplan: Further assessment required at lower-tier plan level (LDPs)</td>
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<td>TAYplan: No adverse effects but potential for MRE</td>
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**Notes:**
- Planned projects included in combination that consider Forth Islands SPA: SESplan, TAYplan, Edinburgh Local Development Plan, Falkirk Local Development Plan, Fife Shoreline Management Plan 2, Dunfermline and West Fife Local Plan, Stirling Local Development Plan.
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**Overall site conclusion**

The HRA considered the potential for effects on the conservation objectives of the SPA as a result of disturbance, toxic and non-toxic contamination, and physical loss and damage to supporting habitats and qualifying features resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Strategic Airport Enhancements, Carbon Capture and Storage Network and Thermal Generation, Freight Handling Capacity on the Forth, Grangemouth Investment Zone national developments. It is considered that the mitigation suggested within this HRA and embedded through the requirements of mitigation in the relevant plans, that in combination there are no adverse effects on site integrity. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.
## European Site

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<tr>
<td>Fowlsheugh SPA</td>
<td>guillemot, kittiwake, razorbill, fulmar and herring gull.</td>
<td>Non-physical disturbance – noise and vibration that may disturb the species. Potential developments or structures (tail buildings, cranes) may cause significant changes to flight routes along the coast. There is also the risk of collision.</td>
<td>Building construction / demolition</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
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<td>Physical loss (of habitats) – direct loss of habitat under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
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<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>No external in-combination effects</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical loss (of habitats) - direct loss of habitat. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>Land Use Change, Piling</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>No external in-combination effects</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint the development</td>
<td>Building construction / demolition</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>No external in-combination effects</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
</tbody>
</table>

### Overall site conclusion:

The HRA considered the potential for effects on the conservation objectives of the SPA as a result of disturbance, non-toxic contamination, and physical loss to qualifying features resulting from construction activity, dredging, piling and land use change associated with the Aberdeen Harbour national development. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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21 Plans and projects included in combination that consider Fowlsheugh SPA: Aberdeen City and Shire SDP, Aberdeenshire Local Development Plan.
Overall site conclusion:

The HRA considered the potential for effects on the conservation objectives of the SPA as a result of disturbance and physical loss of habitat resulting from construction activity and land use change associated with the Pumped Hydroelectric Storage national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan--Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperial Dock, Leith, SPA</td>
<td>Common Terrestrial</td>
<td>Non-physical (indirect) disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Building construction / demolition Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling</td>
<td>Freight Handling Capacity on the Forth</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td>Non-toxic contamination</td>
<td></td>
<td>Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species</td>
<td>Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling</td>
<td>Freight Handling Capacity on the Forth</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td>Physical loss (of habitats)</td>
<td></td>
<td>Physical loss (of habitats) – direct loss of supporting habitat under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>Dredging (and disposal of dredgings)</td>
<td>Freight Handling Capacity on the Forth</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td>Physical loss (of habitats)</td>
<td></td>
<td>Physical loss (of habitats) - direct loss of supporting habitat. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>Land Use Change Piling</td>
<td>Freight Handling Capacity on the Forth</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td>Physical loss (of habitats)</td>
<td></td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of supporting habitat under footprint the development</td>
<td>Building construction / demolition</td>
<td>Freight Handling Capacity on the Forth</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td>Toxic contamination</td>
<td></td>
<td>Toxic contamination – toxic effects on marine species from potential oil spillages etc.</td>
<td>Increased levels of vessel movement</td>
<td>Freight Handling Capacity on the Forth</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
</tbody>
</table>

Overall site conclusion:

The HRA considered the potential for effects on the conservation objectives of the SPA as a result of disturbance, toxic and non-toxic contamination, and physical loss to supporting habitat resulting from construction activity, dredging, increased vessel movements, piling and land use change associated with the Freight Handling Capacity on the Forth national developments. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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23 Plans and projects included in combination that consider Imperial Dock, Leith, SPA: Edinburgh Local Development Plan
### Overall site conclusion:

The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance, and physical loss of supporting habitats resulting from building construction / demolition activity associated with the Inverness airport component of the Strategic Airport Enhancements national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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**24 Plans and projects included in combination that consider Inner Moray Firth SPA: Inner Moray Firth Local Development Plan**
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in–Combination Effects</th>
<th>External In-combination Effects&lt;sup&gt;20&lt;/sup&gt;</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isle of May SAC</td>
<td>Grey Seal</td>
<td>Non-physical disturbance</td>
<td>Non-physical disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species</td>
<td>Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling Building construction / demolition</td>
<td>Aberdeen Harbour Carbon Capture and Storage Network and Thermal Generation Dundee Waterfront Freight Handling Capacity on the Forth Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>SESplan: Further assessment required at lower-tier plan level (LDPs) Dundee LDP HRA: MRE identified for this pathway, mitigation proposed</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-toxic contamination</td>
<td>Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species</td>
<td>Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling</td>
<td>Aberdeen Harbour Carbon Capture and Storage Network and Thermal Generation Dundee Waterfront Freight Handling Capacity on the Forth Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>SESplan: Further assessment required at lower-tier plan level (LDPs) Dundee LDP HRA: MRE identified for this pathway, mitigation proposed</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical damage (of habitats and species)</td>
<td>Physical damage (of habitats and species) – collision risk through increased vessel movement</td>
<td>Increased levels of vessel movement Land Use Change Piling</td>
<td>Aberdeen Harbour Freight Handling Capacity on the Forth Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>SESplan: Further assessment required at lower-tier plan level (LDPs) Dundee LDP HRA: MRE identified for this pathway, mitigation proposed</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical loss (of habitats)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of supporting habitat under footprint the development, e.g. under footprint of dredge and disposal of dredgings Indirect loss/gain of habitat due to changes in sedimentation patterns</td>
<td>Dredging (and disposal of dredgings) Building construction / demolition Land Use Change Piling</td>
<td>Aberdeen Harbour Carbon Capture and Storage Network and Thermal Generation Dundee Waterfront Freight Handling Capacity on the Forth Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>SESplan: Further assessment required at lower-tier plan level (LDPs) Dundee LDP HRA: MRE identified for this pathway, mitigation proposed</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
</tbody>
</table>

<sup>20</sup> Plans and projects included in combination that consider Isle of May SAC: National Renewable Infrastructure Programme, SESplan, Dundee Local Development Plan, TAYplan, Edinburgh Local Development Plan, Dunfermline and West Fife Local Plan
<table>
<thead>
<tr>
<th>European Site Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in–Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxic contamination</td>
<td>Toxic contamination – toxic effects on marine species from potential oil spillages etc.</td>
<td>Increased levels of vessel movement</td>
<td>Aberdeen Harbour Freight Handling Capacity on the Forth Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>No external in-combination effects</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
</tbody>
</table>

**Overall site conclusion:**
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, non-toxic contamination, physical damage to species, physical loss of supporting habitats and toxic contamination resulting from dredging, increased levels of vessel movement, land use change, piling and building construction / demolition associated with the Aberdeen Harbour, Carbon Capture and Storage Network and Thermal Generation, Dundee Waterfront, Freight Handling Capacity on the Forth and Grangemouth Investment Zone national developments. It is considered that the mitigation suggested within this HRA and embedded through the requirements of relevant mitigation incorporated in the relevant plans, the in combination effect of the MRE will not be significant and therefore in combination, there are no adverse effects on site integrity. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
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<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in–Combination Effects</th>
<th>External In-combination Effects[^2]</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loch Etive Woods SAC</td>
<td>Otter</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical (indirect) disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Land Use Change</td>
<td>Pumped hydroelectric storage</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Otter, alder woodland on floodplains, western acidic oak woodland and mixed woodland on base-rich soils associated with rocky slopes</td>
<td>Physical loss (of habitats)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint the development</td>
<td>Land Use Change Building construction / demolition</td>
<td>Pumped hydroelectric storage</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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<tr>
<td>Otter, alder woodland on floodplains, western acidic oak woodland and mixed woodland on base-rich soils associated with rocky slopes</td>
<td>Physical damage (of habitats)</td>
<td>Physical damage (of habitats) – physical damage to, deterioration or fragmentation of habitat under footprint the development and associated works</td>
<td>Construction works</td>
<td>Pumped hydroelectric storage</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
</tbody>
</table>

**Overall site conclusion:**

The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats resulting from land use change, construction works and building construction / demolition associated with the Pumped Hydroelectric Storage national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

[^2]: No additional plans and projects were identified to consider in combination with Loch Etive Woods SAC
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
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<th>In Plan in-Combination Effects</th>
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<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loch of Inch and Torrs Warren SPA</td>
<td>Greenland White fronted goose and hen harrier</td>
<td>Non-physical (indirect disturbance) – from noise and vibration disturbance that may disturb the species. This includes the potential to increase disturbance out with designated site boundaries by the increased use of link paths</td>
<td>Increased human disturbance</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Non-physical (indirect disturbance) – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physical damage (of habitats and species)</td>
<td>Physical damage (of habitats and species) – from hydrological impacts such as changes to water flow / level. Some species, such as Atlantic salmon, are sensitive to possible new physical barriers to migration in water courses</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Physical damage (of habitats and species) - The effect of this is that increased recreational use may also increase the risk of predation and disturbance linked to dogs</td>
<td>Increased human disturbance</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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<td></td>
<td>Physical loss (of habitats)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint the development</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
</tbody>
</table>

Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SPA as a result of nonysical disturbance, physical loss of habitats and physical damage of habitats, arising from increased human disturbance and land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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27 Plans and projects included in combination that consider Loch of Inch and Torrs Warren SPA: Dumfries and Galloway Local Development Plan
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in-Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luce Bay and Sands SAC</td>
<td>Large shallow inlets and bays Embryonic shifting dunes white dunes grey dunes Atlantic decalcified fixed dunes Sandbanks which are slightly covered by sea water all the time mudflats and sandflats not covered by seawater at low tide great crested newt</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical (indirect disturbance) – from noise and vibration disturbance that may disturb the species. This includes the potential to increase disturbance out with designated site boundaries by the increased use of link paths</td>
<td>Land Use Change Increased human use</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Large shallow inlets and bays: Embryonic shifting dunes white dunes grey dunes Atlantic decalcified fixed dunes Sandbanks which are slightly covered by sea water all the time mudflats and sandflats not covered by seawater at low tide great crested newt</td>
<td>Physical damage (of habitats and species)</td>
<td>Physical damage (of habitats and species) – from hydrological impacts such as changes to water flow / level.</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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<td>Physical loss (of habitats)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint the development</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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</tr>
</tbody>
</table>

Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, arising from increased human disturbance and land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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20 Plans and projects included in combination that consider Luce Bay and Sands SAC: Dumfries and Galloway Local Development Plan.
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in-Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montrose Basin SPA</td>
<td>Dunlin, Eider, Greylag Goose, Knot, Oystercatcher, Pink Footed goose, Redshank, Shelduck, Wigeon</td>
<td>Non-physical (indirect) disturbance</td>
<td>Non-physical disturbance – noise and vibration that may disturb the species. Potential developments or structures (tall buildings, cranes) may cause significant changes to flight routes along the coast. There is also the risk of collision.</td>
<td>Building construction / demolition</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeenshire LDP HRA: MRE identified for this pathway, mitigation proposed</td>
<td>TAYplan: No adverse effects but potential for MRE</td>
</tr>
<tr>
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<td></td>
<td>Dunlin, Eider, Greylag Goose, Knot, Oystercatcher, Pink Footed goose, Redshank, Shelduck, Wigeon</td>
<td>Non-physical (indirect) disturbance</td>
<td>Dredging (and disposal of dredgings) Land Use Change Piling</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeenshire LDP HRA: MRE identified for this pathway, mitigation proposed</td>
<td>TAYplan: No adverse effects but potential for MRE</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td>Dunlin, Eider, Greylag Goose, Knot, Oystercatcher, Pink Footed goose, Redshank, Shelduck, Wigeon</td>
<td>Non-toxic contamination</td>
<td>Dredging (and disposal of dredgings) Land Use Change Piling</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeenshire LDP HRA: MRE identified for this pathway, mitigation proposed</td>
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<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td></td>
<td>Dunlin, Eider, Greylag Goose, Knot, Oystercatcher, Pink Footed goose, Redshank, Shelduck, Wigeon</td>
<td>Physical loss of habitats</td>
<td>Physical loss of habitats – direct loss of supporting habitat under footpath of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>Dredging (and disposal of dredgings)</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeenshire LDP HRA: MRE identified for this pathway, mitigation proposed</td>
<td>TAYplan: No adverse effects but potential for MRE</td>
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<td>Dunlin, Eider, Greylag Goose, Knot, Oystercatcher, Pink Footed goose, Redshank, Shelduck, Wigeon</td>
<td>Physical loss of habitats</td>
<td>Physical loss of habitats - direct loss of supporting habitat. Indirect loss/gain of supporting habitat due to changes in sedimentation patterns.</td>
<td>Land Use Change Piling</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeenshire LDP HRA: MRE identified for this pathway, mitigation proposed</td>
<td>TAYplan: No adverse effects but potential for MRE</td>
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<tr>
<td></td>
<td>Dunlin, Eider, Greylag Goose, Knot, Oystercatcher, Pink Footed goose, Redshank, Shelduck, Wigeon</td>
<td>Physical loss of habitats</td>
<td>Physical loss of habitats – direct loss, deterioration or fragmentation of supporting habitat under footpath the development</td>
<td>Building construction / demolition</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeenshire LDP HRA: MRE identified for this pathway, mitigation proposed</td>
<td>TAYplan: No adverse effects but potential for MRE</td>
</tr>
</tbody>
</table>

Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance, physical loss of supporting habitats and non-toxic contamination, arising from building construction / demolition, dredging, land use change and piling activities associated with the Aberdeen Harbour national development. It is considered that the mitigation suggested within this HRA and embedded through the requirements of relevant mitigation incorporated in the relevant plans, such as the requirements for renewables development set out in the Aberdeenshire Local Development Plan, the in combination effect of the MRE will not be significant and therefore in combination, there are no adverse effects on site integrity. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.

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29 Plans and projects included in combination that consider Montrose Basin SPA: Aberdeenshire Local Development Plan, TAYplan

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### European Site Qualifying Interest Pathway Pathway Detail Activity National Developments with MRE In Plan in-Combination Effects External In-combination Effects Residual Effects

<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in-Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moray and Nairn Coast SPA</td>
<td>Bar-tailed godwit, Common scoter, Dunlin, Greylag Goose, Long tailed duck, Osprey, Oystercatcher, Pink Footed goose, Red-breasted merganser, Redshank, Velvet scoter, Wigeon</td>
<td>Non-physical disturbance – noise and vibration that may disturb the species. Potential developments or structures (tall buildings, cranes) may cause significant changes to flight routes along the coast. There is also the risk of collision.</td>
<td>Building construction / demolition</td>
<td>Strategic Airport Enhancements</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td>Moray and Nairn Coast SPA</td>
<td>Bar-tailed godwit, Common scoter, Dunlin, Greylag Goose, Long tailed duck, Osprey, Oystercatcher, Pink Footed goose, Red-breasted merganser, Redshank, Velvet scoter, Wigeon</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of supporting habitat under footprint the development</td>
<td>Building construction / demolition</td>
<td>Strategic Airport Enhancements</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
</tbody>
</table>

**Overall site conclusion:**

The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance and physical loss of supporting habitats resulting from building construction / demolition activities associated with the Strategic Airport Enhancements national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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Note: No additional plans and projects were identified to consider in combination with Moray and Nairn Coast SPA.
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan In-Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moray Firth SAC</td>
<td>Bottlenose dolphin</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical (indirect disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling Building construction / demolition</td>
<td>Aberdeen Harbour Carbon Capture and Storage Network and Thermal Generation Dundee Waterfront</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>Aberdeen City Local Development Plan: MRE identified for this pathway, mitigation proposed Aberdeen City and Shire SDP HRA: MRE identified for this pathway, mitigation proposed Dundee LDP HRA: MRE identified for this pathway, mitigation proposed Aberdeen Harbour Development Framework: C MRE identified for this pathway, mitigation proposed Nigg Development Masterplan HRA (Cromarty Firth): MRE identified for this pathway, mitigation proposed TAYplan: No adverse effects but potential for MRE</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<tr>
<td></td>
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<td>Non-toxic contamination</td>
<td>Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species</td>
<td>Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling</td>
<td>Aberdeen Harbour Carbon Capture and Storage Network and Thermal Generation</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>Aberdeen City Local Development Plan: MRE identified for this pathway, mitigation proposed Aberdeen City and Shire SDP HRA: MRE identified for this pathway, mitigation proposed Dundee LDP HRA: Consider MRE identified for this pathway, mitigation proposed Aberdeen Harbour Development Framework: C MRE identified for this pathway, mitigation proposed Nigg Development Masterplan HRA (Cromarty Firth): MRE identified for this pathway, mitigation proposed TAYplan: No adverse effects but potential for MRE</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Physical damage (of habitats and species) – collision risk through increased vessel movement</td>
<td>Increased levels of vessel movement</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeen City Local Development Plan: MRE identified for this pathway, mitigation proposed Aberdeen City and Shire SDP HRA: MRE identified for this pathway, mitigation proposed Nigg Development Masterplan HRA (Cromarty Firth): MRE identified for this pathway, mitigation proposed TAYplan: No adverse effects but potential for MRE</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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</table>

31 Plans and projects included in combination that consider Moray Firth SAC: National Renewables Infrastructure Plan, Aberdeen City and Shire SDP, Aberdeen City Local Development Plan, Aberdeen Harbour Development Framework, Dundee Local Development Plan, TAYplan, Nigg Development Masterplan, Inner Moray Firth Local Development Plan
<table>
<thead>
<tr>
<th>European Site Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan In-Combination Effects</th>
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<th>Residual Effects</th>
</tr>
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<tbody>
<tr>
<td>Physical loss (of habitats)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of supporting habitat under footprint the development, e.g. under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>Dredging (and disposal of dredgings) Building construction / demolition Land Use Change Piling</td>
<td>Aberdeen Harbour Carbon Capture and Storage Network and Thermal Generation Dundee Waterfront</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>Aberdeen City Local Development Plan: MRE identified for this pathway, mitigation proposed Aberdeen City and Shire SDP HRA: MRE identified for this pathway, mitigation proposed Dundee LDP HRA: Consider MRE identified for this pathway, mitigation proposed Nigg Development Masterplan HRA (Cromarty Firth): MRE identified for this pathway, mitigation proposed TAYplan: No adverse effects but potential for MRE</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<tr>
<td>Toxic contamination</td>
<td>Toxic contamination – toxic effects on marine species from potential oil spillages etc.</td>
<td>Increased levels of vessel movement</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeen City Local Development Plan: MRE identified for this pathway, mitigation proposed Nigg Development Masterplan HRA (Cromarty Firth): Consider MRE</td>
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</table>

Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, non-toxic contamination, physical damage of species, physical loss of supporting habitats and toxic contamination resulting from dredging, building construction / demolition, land use change, increased levels of vessel movement and piling activities associated with the Aberdeen Harbour, Carbon Capture and Storage and Thermal Generation Network and Dundee Waterfront national developments. It is clear that there are a number of pressures on the Moray Firth SAC and the Bottlenose Dolphin qualifying features, not only from the national developments but also in combination with the proposals contained within a number of other plans. With the mitigation proposed within this HRA and included within the assessments of the relevant wider planning documents, the residual effects identified are considered to be minimal and would not in combination have adverse effects on site integrity. However, they will alongside the national developments have the potential for continuing the existing and identified pressure on this SPA.

There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.
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<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
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<th>Activity</th>
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<th>In Plan in–Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
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<tbody>
<tr>
<td>Muirkirk and North Lowther Uplands SPA</td>
<td>Golden Plover, Hen Harrier, Merlin, Peregrine, Short-eared owl</td>
<td>Non-physical (indirect disturbance) — from noise and vibration disturbance that may disturb the species. This includes the potential to increase disturbance out with designated site boundaries by the increased use of link paths</td>
<td>Increased human disturbance Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td>Physical damage (of habitats and species) — from hydrological impacts such as changes to water flow / level.</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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<td>Physical damage (of habitats and species) - The effect of this is that increased recreational use may also increase the risk of predation and disturbance linked to dogs</td>
<td>Increased human disturbance</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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<td>Physical loss (of habitats) — direct loss, deterioration or fragmentation of habitat under footprint the development</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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**Overall site conclusion:**
The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, arising from increased human disturbance and land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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22 Plans and projects included in combination that consider Muirkirk and North Lowther Uplands SPA: Dumfries and Galloway proposed Local Development Plan, Glasgow and the Clyde Valley Strategic Development Plan, Ayrshire and Arran Forestry and Woodland Strategy.
### European Site Qualifying Interest Pathway

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<tr>
<th>European Site</th>
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</thead>
<tbody>
<tr>
<td>Mull of Galloway SAC</td>
<td>Vegetated sea cliffs</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical (indirect disturbance) – from noise and vibration disturbance that may disturb the species. This includes the potential to increase disturbance out with designated site boundaries by the increased use of link paths.</td>
<td>Increased human disturbance Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
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<td>Physical damage (of habitats and species)</td>
<td>Physical damage (of habitats and species) – from hydrological impacts such as changes to water flow / level.</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
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<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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<td>Physical loss (of habitats)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint the development</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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### Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, resulting from increased human disturbance and land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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33 Plans and projects included in combination that consider Mull of Galloway SAC: Dumfries and Galloway proposed Local Development Plan
<table>
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<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in-Combination Effects</th>
<th>External In-combination Effects&lt;sup&gt;33&lt;/sup&gt;</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>River Bladnoch SAC</td>
<td>Atlantic Salmon</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical (indirect disturbance) – from noise and vibration disturbance that may disturb the species.</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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<tr>
<td></td>
<td></td>
<td>Physical damage (of habitats and species)</td>
<td>Physical damage (of habitats and species) – from hydrological impacts such as changes to water flow / level. Some species, such as Atlantic salmon, are sensitive to possible new physical barriers to migration in water courses</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
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<td>Physical loss (of habitats)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint the development</td>
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<td>National Long Distance Cycling and Walking Network</td>
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Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, resulting from land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

<sup>33</sup> Plans and projects included in combination that consider River Bladnoch SAC: Dumfries and Galloway proposed Local Development Plan, South Ayrshire Proposed Local Development Plan, Ayrshire and Arran Forestry and Woodland Strategy.
<table>
<thead>
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<th>European Site</th>
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</tr>
</thead>
<tbody>
<tr>
<td>River Dee SAC</td>
<td>Atlantic Salmon, Freshwater Pearl Mussel, Otter</td>
<td>Non-physical (indirect) disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Building construction / demolition Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeen City Local Development Plan: MRE identified for this pathway, mitigation proposed Aberdeen City and Shire SDP HRA: MRE identified for this pathway, mitigation proposed Aberdeenshire LDP HRA: MRE identified for this pathway, mitigation proposed Aberdeen Harbour Development Framework: MRE identified for this pathway, mitigation proposed</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
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<td>Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species</td>
<td>Dredging (and disposal of dredgings) Increased levels of vessel movement Land Use Change Piling</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeen City Local Development Plan: MRE identified for this pathway, mitigation proposed Aberdeen City and Shire SDP HRA: MRE identified for this pathway, mitigation proposed Aberdeenshire LDP HRA: MRE identified for this pathway, mitigation proposed Aberdeen Harbour Development Framework: MRE identified for this pathway, mitigation proposed</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical loss (of habitats) – direct loss of habitat. Indirect loss/gain of habitat due to changes in sedimentation patterns</td>
<td>Dredging (and disposal of dredgings)</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeen City Local Development Plan: MRE identified for this pathway, mitigation proposed Aberdeen City and Shire SDP HRA: MRE identified for this pathway, mitigation proposed Aberdeenshire LDP HRA: MRE identified for this pathway, mitigation proposed Aberdeen Harbour Development Framework: MRE identified for this pathway, mitigation proposed</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical loss (of habitats) - direct loss of habitat. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>Land Use Change Piling</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeen City Local Development Plan: MRE identified for this pathway, mitigation proposed Aberdeen City and Shire SDP HRA: MRE identified for this pathway, mitigation proposed Aberdeenshire LDP HRA: MRE identified for this pathway, mitigation proposed Aberdeen Harbour Development Framework: MRE identified for this pathway, mitigation proposed</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
</tbody>
</table>

35 Plans and projects included in combination that consider River Dee SAC: Aberdeen City and Shire Strategic Development Plan, Aberdeen City Local Development Plan, Aberdeen Harbour Development Framework, Aberdeenshire Local Development Plan, Cairngorms Local Development Plan
<table>
<thead>
<tr>
<th>European Site Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in–Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint the development</td>
<td>Building construction / demolition</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeen City Local Development Plan: MRE identified for this pathway, mitigation proposed</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toxic contamination – toxic effects on marine species from potential oil spillages etc.</td>
<td>Increased levels of vessel movement</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>No external in combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
</tbody>
</table>

**Overall site conclusion:**
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, non-toxic and toxic contamination, physical loss of habitats, resulting from building construction / demolition, dredging, increased levels of vessel movement, land use changes and piling associated with the Aberdeen Harbour national development. It is considered that the mitigation suggested within this HRA and embedded through the requirements of relevant mitigation incorporated in the relevant plans the in combination effect of the MRE will not be significant and therefore in combination, there are no adverse effects on site integrity. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.
Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, resulting from land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in–Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>River Spey – Insh Marshes SPA</td>
<td>Hen Harrier Osprey Spotted Crake Whooper swan Wigeon Wood sandpiper</td>
<td>Non-physical (indirect disturbance) – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Non-physical (indirect disturbance) – noise and vibration that may disturb the species. This includes the potential to increase disturbance out with designated site boundaries by the increased use of link paths</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Physical damage (of habitats and species)</td>
<td>Physical damage (of habitats and species) – from hydrological impacts such as changes to water flow / level.</td>
<td>Physical damage (of habitats and species) – from hydrological impacts such as changes to water flow / level.</td>
<td>Physical damage (of habitats and species) – increased human disturbance</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Physical loss (of habitats)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of supporting habitat under footprint the development</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of supporting habitat under footprint the development</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of supporting habitat under footprint the development</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in-combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
</tbody>
</table>

Overall site conclusion:

The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, physical loss of habitats and physical damage of habitats, resulting from increased human disturbance and land use changes associated with the National Long Distance Cycling and Walking Network national development. No other national developments were considered to have MRE on this site to consider and the review process did not identify other plans or projects to consider in combination. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in this HRA and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

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27 Plans and projects included in combination that consider River Spey – Insh Marshes SPA: Cairngorms Local Development Plan, A9 Dualling between Kintraig and Dalraddle
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in-Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>River Tay SAC</td>
<td>Atlantic Salmon, River lamprey, Sea lamprey</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical (indirect) disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Building construction / demolition</td>
<td>Dundee Waterfront</td>
<td>No internal in combination effects to consider.</td>
<td>Dundee LDP HRA: MRE identified for this pathway, mitigation proposed. TAYplan: No adverse effects but potential for MRE</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
</tbody>
</table>

**Overall site conclusion:**
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of disturbance such as noise and vibration, arising from construction activity associated with the Dundee Waterfront national development. No other national developments were considered to have MRE on this SAC and as a result there is no in plan in combination assessment required. It is considered that the mitigation suggested within this HRA and embedded through the requirements of relevant mitigation incorporated in the relevant plans, the in combination effect of the MRE will not be significant. Therefore in combination, there are no adverse effects on site integrity. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.

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38 Plans and projects included in combination that consider River Tay SAC: Dundee LDP HRA, TAYplan
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in–Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>River Teith SAC</td>
<td>Atlantic salmon, brook lamprey, sea lamprey</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical (indirect disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Building construction / demolition</td>
<td>Increased levels of vessel movement Piling Dredging (and disposal of dredgings) Land Use Change</td>
<td>Carbon Capture and Storage Network and Thermal Generation Freight Handling Capacity on the Forth Grangemouth Investment Zone National Long Distance Cycling and Walking Network</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td>Atlantic salmon, brook lamprey, river lamprey, sea lamprey</td>
<td>Non-toxic contamination</td>
<td>Non-toxic contamination – increases in suspended sediment and turbidity potentially affecting marine habitats and species</td>
<td>Building construction / demolition</td>
<td>Increased levels of vessel movement Piling Dredging (and disposal of dredgings) Land Use Change</td>
<td>Carbon Capture and Storage Network and Thermal Generation Freight Handling Capacity on the Forth Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>Falkirk HRA: MRE due to impact on water quality</td>
<td></td>
</tr>
<tr>
<td>Atlantic salmon, brook lamprey, river lamprey, sea lamprey</td>
<td>Physical damage (of habitats and species) – from hydrological impacts such as changes to water flow / level. Some species, such as Atlantic salmon, are sensitive to possible new physical barriers to migration in water courses</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td></td>
<td>Falkirk HRA: MRE identified for this pathway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atlantic salmon, river lamprey, sea lamprey</td>
<td>Physical loss (of habitats)</td>
<td>Physical loss of habitats – direct loss, deterioration or fragmentation of supporting habitat under footprint of development, e.g. under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>Dredging (and disposal of dredgings) Piling Land Use Change Building construction / demolition</td>
<td>Carbon Capture and Storage Network and Thermal Generation Freight Handling Capacity on the Forth Grangemouth Investment Zone National Long Distance Cycling and Walking Network</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brook lamprey</td>
<td>Land Use Change</td>
<td>Building construction / demolition</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td></td>
<td>Falkirk HRA: MRE identified for this pathway</td>
<td></td>
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</tr>
</tbody>
</table>

*S Plans and projects included in combination that consider River Teith SAC: SESplan, Clackmannanshire Local Development Plan, Edinburgh Local Development Plan, Falkirk Local Development Plan*
### European Site Qualifying Interest

<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan In-Combination Effects</th>
<th>External In-combination Effects</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic salmon, river lamprey, sea lamprey</td>
<td>Toxic contamination</td>
<td>Toxic contamination – toxic effects on marine species from potential oil spillages etc.</td>
<td>Increased levels of vessel movement</td>
<td>Freight Handling Capacity on the Forth Grangemouth Investment Zone</td>
<td>The national developments highlighted potential MRE after mitigation for this impact pathway. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td>Falkirk HRA: MRE identified for this pathway</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
</tbody>
</table>

### Overall site conclusion:

The HRA considered the potential for effects on the conservation objectives of the SAC as a result of non-physical disturbance, toxic and non-toxic contamination, physical loss of habitats and physical damage of habitats, resulting from building construction / demolition, increased levels of vessel movement, piling, dredging, and land use changes associated with the Carbon Capture and Storage Network and Thermal Generation, Freight Handling Capacity on the Forth, Grangemouth Investment Zone and National Long Distance Cycling and Walking Network national developments. It is clear that there are a number of pressures on the River Teith SAC, primarily as a result of potential impacts on migratory fish as a result of activity within the forth area not only from the national developments but also in combination with the proposals contained within a number of other plans. However, with the mitigation proposed within this HRA and included within the assessments of the relevant wider planning documents, the residual effects identified are considered to be minimal and would not in combination have adverse effects on site integrity.

There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Impact Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in–Combination Effects</th>
<th>External In-combination Effects&lt;sup&gt;40&lt;/sup&gt;</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Strathearn Oakwoods SAC</td>
<td>Western acidic oak woodland</td>
<td>Physical loss (of habitats and species)</td>
<td>Physical loss (of habitats) – direct loss, deterioration or fragmentation of habitat under footprint the development</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in–combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical damage (of habitats and species) – from hydrological impacts such as changes to water flow / level</td>
<td>Land Use Change</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in–combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical damage (of habitats and species) through increased recreational use</td>
<td>Increased human disturbance</td>
<td>National Long Distance Cycling and Walking Network</td>
<td>No internal in combination effects to consider.</td>
<td>No external plans or policies were identified that result in MRE on this site therefore no external in–combination effects identified.</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
<td></td>
</tr>
</tbody>
</table>

Overall site conclusion:
The HRA considered the potential for effects on the conservation objectives of the SAC as a result of physical loss and damage resulting from some land use change and disturbance from humans associated with the National Long Distance Cycling and Walking Network national development. There are no adverse effects on site integrity either alone or in combination. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.

<sup>40</sup> Plans and projects included in combination that consider Upper Strathearn Oakwoods SAC – Tayplan Habitat Regulations Appraisal
<table>
<thead>
<tr>
<th>European Site</th>
<th>Qualifying Interest</th>
<th>Pathway</th>
<th>Pathway Detail</th>
<th>Activity</th>
<th>National Developments with MRE</th>
<th>In Plan in-Combination Effects</th>
<th>External In-combination Effects&lt;sup&gt;41&lt;/sup&gt;</th>
<th>Residual Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ythan Estuary, Sands of Forvie and Mekie Lock SPA</td>
<td>Common tern, eider, lapwing, little tern, pink-footed geese, redshank and sandwich tern</td>
<td>Non-physical (indirect disturbance)</td>
<td>Non-physical disturbance – noise and vibration that may disturb the species. Potential developments or structures (tall buildings, cranes) may cause significant changes to flight routes along the coast. There is also the risk of collision.</td>
<td>Building construction / demolition</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeenshire LDP HRA: MRE identified for this pathway</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-physical (indirect) disturbance – noise and vibration that may disturb the species. Reduced availability / displacement of other species (including prey or symbiotic species)</td>
<td>Dredging (and disposal of dredgings)</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeenshire LDP HRA: MRE identified for this pathway</td>
<td>Aberdeen City and Shire SDP HRA: MRE identified for this pathway</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-toxic contamination</td>
<td>Increases in suspended sediment and turbidity potentially affecting marine habitats and species</td>
<td>Dredging (and disposal of dredgings)</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeenshire LDP HRA: MRE identified for this pathway</td>
<td>Aberdeen City and Shire SDP HRA: MRE identified for this pathway</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical loss (of habitats)</td>
<td>Direct loss of supporting habitat under footprint of dredge and disposal of dredgings. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>Dredging (and disposal of dredgings)</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>No external in combination effects identified</td>
<td>With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site, only MRE are expected to remain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical loss (of habitats)</td>
<td>Direct loss of supporting habitat. Indirect loss/gain of habitat due to changes in sedimentation patterns.</td>
<td>Land Use Change Piling</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeenshire LDP HRA: MRE identified for this pathway</td>
<td>Aberdeen City and Shire SDP HRA: MRE identified for this pathway</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical loss (of habitats)</td>
<td>Direct loss, deterioration or fragmentation of supporting habitat under footprint the development</td>
<td>Building construction / demolition</td>
<td>Aberdeen Harbour</td>
<td>No internal in combination effects to consider.</td>
<td>Aberdeenshire LDP HRA: MRE identified for this pathway</td>
<td>Aberdeen City and Shire SDP HRA: MRE identified for this pathway</td>
</tr>
</tbody>
</table>

Overall site conclusion:

The HRA considered the potential for effects on the conservation objectives of the SPA as a result of non-physical disturbance, non-toxic contamination and physical loss of supporting habitats, resulting from building construction / demolition, piling, dredging, and land use changes associated with the Aberdeen Harbour national developments. It is considered that the mitigation suggested within this HRA and embedded through the requirements of relevant mitigation incorporated in the identified, the in combination effect of the MRE will not be significant. Therefore in combination, there are no adverse effects on site integrity. With the proposed mitigation in place and the requirement for all proposed developments to undergo project level HRA to ensure no adverse effects on the integrity of the site either alone or in combination, only MRE are expected to remain.

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<sup>41</sup> Plans and projects included in combination that consider Ythan Estuary, Sands of Forvie and Mekie Lock SPA: Aberdeenshire Local Development Plan, Aberdeen City and Shire SDP