HABITATS REGULATIONS ASSESSMENT –STAGE 1 & 2

Point of Ayr Cable Route Foreshore Works

Town and Country Planning Act 1990

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EXECUTIVE SUMMARY

Liverpool Bay CCS Limited (the 'Applicant') a member of the Eni SpA group commissioned WSP UK Ltd (WSP) to provide Ecological Consultancy services.

This Habitats Regulations Assessment (HRA) will support the TCPA Application for consent to install an underground section of Horizontal Directional Drilling (HDD) conduit under Gronant Dunes originating from the HDD Entry Pit (consented under Planning Application FUL/000246/23), to a buried HDD Exit Pit at the Mean High Water Spring line, and burial of a combined electrical and fibre optic cable across Talacre Beach and Foreshore to the Mean Low Water Spring (MLWS) line (the Proposed Development).

This report provides information to enable the assessment of the Proposed Development under Stage 1 (Screening) and Stage 2 (Appropriate Assessment) in accordance with the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations').

Seven statutory sites are within 10 km of the Proposed Development Red Line Boundary, with an additional statutory site within 22 km of the Proposed Development Red Line Boundary, but being hydrologically linked. The Proposed Development is within the Dee Estuary Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar, adjacent to the Liverpool Bay SPA and close to the following international sites: Mersey Narrows and North Wirral Foreshore SPA and Ramsar site (8 km), Halkyn Mountain SAC (10.5 km) and River Dee and Bala Lake / Afin Dyfrdwy a Llyn Tegid SAC (22 km). These sites are protected under the Conservation of Habitats & Species Regulations 2017 (as amended). All sites are designated for a variety of wetland bird species, with other qualifying species, including natterjack toad, great crested newt, sea, river and brook lamprey, salmon, petalwort and supporting habitats including dunes and mudflats.

Stage 1 Screening identified the potential for Likely Significant Effects (LSEs) on the Dee Estuary SAC and Ramsar and the River Dee and Bala Lake / Afin Dyfrdwy a Llyn Tegid SAC due to indirect impacts to mudflats and sandflats not covered by water at low tide, for direct impacts on the following Annex 1 species of bird: teal, black tailed godwit, curlew and redshank. Other LSEs include indirect impacts to the following Annex 1 fish species: salmon, sea, river and brook lamprey. Additionally, it has not been able to screen out indirect impacts to petalwort, due to lack of survey data. The precautionary principle has therefore been applied to this species.

All LSEs have been subject to further assessment of the potential for adverse effects on the integrity of the national site network sites at Stage 2 Appropriate Assessment. Various mitigation measures, for inclusion in the CEMP, will be implemented within the Proposed Development, including pollution prevention, dust prevention,

biosecurity, timing of works to avoid the natterjack toad breeding season and ornithological wintering periods, ECoW presence on site and sensitive reinstatement.

The Stage 2 Appropriate Assessment concluded there will be no Adverse Effects on Site Integrity (AESI) in relation to any of the European Sites or their associated qualifying habitats or species. This is on the provision that appropriate mitigation measures are secured and fully implemented during construction and decommissioning.

1. INTRODUCTION

1.1. INTRODUCTION

1.1.1. This combined Habitats Regulations Screening and Information to Inform an Appropriate Assessment Report has been prepared by WSP UK Ltd ('WSP') on behalf of Liverpool Bay CCS Limited (the 'Applicant') a member of the Eni SpA group.

1.1.2. The report will accompany the Town & Country Planning Act (TCPA) Application for consent to install an underground section of Horizontal Directional Drilling (HDD) conduit under Gronant Dunes originating from the HDD Entry Pit (consented under Planning Application FUL/000246/23), to a buried HDD Exit Pit at the Mean High Water Spring (MHWS) line, and burial of a combined electrical and fibre optic cable across Talacre Beach and Foreshore to the Mean Low Water Spring (MLWS) line (the Proposed Development).

1.1.3. This would form part of a wider HyNet Northwest Project ('the Project') that will transport carbon dioxide captured from existing industry in North Wales and North West England, as well as from new hydrogen production facilities that are proposed as part of the Project. The captured carbon dioxide will be stored in depleted offshore gas reservoirs.

1.1.4. This report has been produced with regard to Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations').

1.1.5. This Habitats Regulations Assessment (HRA) considers the potential for adverse effects on the integrity of 'European Sites' (as defined within Section 3.2 of this report), resulting from the Proposed Development.

1.1.6. This report provides information to enable the HRA Stage 1: Screening of the Proposed Development, and Stage 2: Appropriate Assessment to be completed by the 'Competent Authority'. The Competent Authority for the TCPA application is Flintshire County Council (FCC).

1.1.7. A description of the Proposed Development and associated ecological baseline assessments to inform the development are provided in Sections 2 and 5.

1.1.8. The methodology for the HRA relevant to Stages 1 and 2 is set out in Section 3 of this report.

1.1.9. The identified European Sites are provided in Section 4 whilst consideration of potential effects of the Proposed Development upon the European Sites (including in-combination effects) and whether

these are likely to be significant is provided in Section 6. Where Likely Significant Effects (LSE) are identified, these are addressed under Appropriate Assessment within Section 7.

1.2. PROJECT AND CONSENTED DEVELOPMENT BACKGROUND

1.2.1. Liverpool Bay CCS Limited (the Applicant) was granted planning permission (Application Reference: FUL/000246/23), subject to planning conditions, in May 2024, to construct new infrastructure and modify existing facilities at the Point of Ayr (PoA) Terminal in Flintshire to operate with carbon dioxide (Consented Development). The Consented Development is one element of the HyNet North-West Project (The Project), which will transport carbon dioxide captured from industries in North Wales and North-West England. The captured carbon dioxide will be stored in depleted offshore gas reservoirs.

1.2.2. The New Douglas offshore platform (OP) in Liverpool Bay, North Wales, proposed as part of the Project, requires the establishment of a combined electrical and fibre-optic cable connection to the OP. This infrastructure is essential for the reception and distribution of CO_2 to the storage sites as part of the Project.

1.2.3. Consequently, due to overlapping consenting regimes between the marine and terrestrial jurisdictions, the installation of these electrical and fibre optic cables, from the MHWS line to the OP, also requires a Marine Licence from Natural Resources Wales' (NRW) Marine Licensing Team. The Marine Licence was granted on 21 May 2025.

1.2.4. In response to feedback received on the Marine Licence application for the marine component of the Project, the installation of the electrical and fibre optic cables has undergone a realignment to mitigate impacts on vessel traffic navigating in and out of the Port of Mostyn. NRW has granted a Marine Licence (Licence number: CML2365), on the revised alignment.

1.2.5. The foreshore area of the revised alignment of the cable falls outside the Red Line Boundary (RLB) of the Consented Development, and a new Town and Country Planning Act (TCPA) application is proposed for the revised cable alignment in the foreshore area. The Proposed Development for the current TCPA application comprises "*Installation of an underground section of Horizontal Directional Drilling (HDD) conduit under Gronant Dunes originating from the HDD Entry Pit (consented under FUL/000246/23), to a buried HDD Exit Pit at the Mean High Water Spring (MHWS) line, and burial of a combined electrical and fibre optic cable across Talacre Beach and Foreshore to*

the Mean Low Water Spring (MLWS) line, located to the north-west of the Point of Ayr (PoA) gas terminal".

2. PROPOSED DEVELOPMENT

2.1. PROPOSED DEVELOPMENT DESCRIPTION

2.1.1. The Proposed Development is located to the north-west of the Point of Ayr (PoA) gas terminal in Flintshire. The Proposed Development comprises an underground section of Horizontal Directional Drilling (HDD) conduit originating from the HDD Entry Pit (already consented under FUL/000246/23 and not part of the Proposed Development), to a buried HDD Exit Pit at the MHWS line, and burial of a combined electrical and fibre optic cable across Talacre Beach and foreshore to the Mean Low Water Spring (MLWS) line.

2.1.2. The construction programme for the Proposed Development is dictated by the availability of the cable laying vessel (CLV) which is only available between March and August 2026. To meet this programme requirement the HDD will need to start by February 2026.

2.1.3. Figure B.1, Annex B shows the planning application area for the Consented Development, with the solid red line showing the planning application RLB for the Proposed Development. The new alignment is approximately 250 m further East along Talacre Beach.

2.2. CONSTRUCTION INFORMATION

2.2.1. The new underground foreshore cables will be installed broadly in a northwest direction from the HDD entry pit (already consented under FUL/000246/23 and not part of the Proposed Development) to the MLWS. The preferred method for the installation of the cables across the intertidal area, given the known geological conditions, is to use a plough to excavate and bury the cable as it moves along the cable route. The plough would likely be pulled from offshore towards the HDD exit pit, which lies just below MHWS. In the event that the plough proved unsuitable for the cable installation across the intertidal area, a cable trencher may be employed. This is typically a mobile tracked machine, which will create the small trench and install the cables as it moves along the cable route. The trench will then be backfilled.

2.2.2. The installation of the cables under the Talacre dune system will utilise HDD equipment. This technique will be used to minimise disturbance to the ecologically sensitive dune system. The HDD process involves drilling a tunnel between an entry and exit pits from which the HDD will start and end. The pit will entail a temporary steel prefabricated containment sump to capture any drilling fluid emitted from the drilling process. This will be of the order of 10 m^3 capacity. The target depth of burial for the cables is 2.5 m.

2.2.3. HDD machines are approximately truck-sized and track-mounted and require a minimal support area of approximately 10 m x 10 m. The machine's start / finish points will be set up at an appropriate location beyond the edges of the dune system. This technique will allow the foreshore cables to be installed below the dune system without causing disturbance to the ground surface.

2.2.4. The exit pit for the Gronant dune system HDD on the intertidal side will be placed between 2-3 m below ground level into the sand, with pumps and storage tanks sited close to the pit to contain any fluid. As the pit will be at the same depth as the proposed cable depth, and given the Applicant's experience with similar installations, it is not expected that any external cable protection will be required. Access to the beach will be from the Talacre beach car park. Temporary matting will be placed to facilitate vehicle access within the Foreshore Area over the soft sand as necessary.

2.2.5. Once the conduits under the dunes have been installed, the first cables will be brought into the area via a CLV and pulled ashore. The CLV will be beached as far up the intertidal stretch of beach as possible. The cables will then be guided by excavators and brought down on to rollers, pre-installed on the beach, pegged at approximately 3 m intervals. It will then be attached to the HDD pulling equipment, including a winch, pulled to the HDD exit pit, and drawn under Gronant dunes. Once the pull is complete, the cables will be buried on the beach using an intertidal trenching machine, plough, or by excavators. With the foreshore work completed, the vessel will then lay the cables to the MLWS at the Foreshore (and on to the Offshore Douglas Complex). The process will then be repeated for the second cable.

2.2.6. Temporary fencing will be installed to safeguard the public and workforce and to provide security. This will be removed on completion of the work.

2.2.7. Temporary track mats will be placed along the Foreshore Area to facilitate vehicle movements over the soft sand as necessary.

2.2.8. The works associated with the foreshore compound, temporary access route and drilling works is unlikely to exceed 8 weeks in total. This is anticipated to be separated into two different periods: one for installation of the HDD conduits (estimated at 2 weeks), and another for the cable pulls (estimated at 6 weeks), during which certain locations will be closed off to the public. Disturbance in this area would therefore be limited to a relatively short period of time.

2.2.9. A singular Centralised Compound will be established under the Consented Development which will be utilised by the Proposed Development.

3. HABITATS REGULATIONS ASSESSMENT PROCEDURE

3.1. INTRODUCTION

3.1.1. This section sets out the applicable methodologies and assumptions for the assessment of the Proposed Development with regards to the requirements of the Habitats Regulations.

3.2. THE HABITATS REGULATIONS

3.2.1. The Habitats Regulations transpose the requirements of the Habitats Directive into UK law. The Habitats Regulations apply to plans and projects that may have significant effects on sites designated under the Habitats Directive and 'the Wild Birds Directive' (Council Directive 79/409/EEC). Sites designated under the Directives include Special Protection Areas (SPAs) and Special Areas of Conservation (SACs).

3.2.2. Competent Authorities, in this case FCC, must assess plans and projects for their potential to cause LSE on the identified relevant designated sites. Should LSE be identified by the initial screening process it is necessary to further consider the effects by way of an AA. The AA determines whether the plan or project would lead to adverse effects on the integrity of these site(s). If adverse effects on site integrity are identified, the plan or project cannot be permitted without meeting strict additional tests.

3.2.3. Overall, this process of assessment is known as Habitats Regulations Assessment (HRA) and further details of the applicable legislative context are summarised below.

3.2.4. Following the UK's exit from the European Union (EU), The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 resulted in amendments to the Habitats Regulations. Defra guidance (2021) (Ref. 3.1) states that SACs and SPAs in the UK no longer form part of the EU's Natura 2000 ecological network. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Ref. 3.2) created a national site network on land and at sea, including both the onshore and offshore marine areas in the UK. The national site network includes:

- existing SACs and SPAs; and
- new SACs and SPAs designated under these Regulations.

3.2.5. Any references to Natura 2000 in the Habitats Regulations and in guidance now refers to the new national site network. Despite the

changes in terminology, the 2019 regulations did not make any substantive changes to the process for undertaking HRA.

3.2.6. Maintaining a coherent network of protected sites with overarching conservation objectives is still required to:

- Fulfil the commitment made by government to maintain environmental protections; and
- Continue to meet the UK's international legal obligations, such as the Bern Convention, the Oslo and Paris Conventions (OSPAR), Bonn and Ramsar Conventions.

3.2.7. It is also a matter of government policy parts 6.4.18 and 6.4.19 of Planning Policy Wales (PPW) (Ref. 3.3) that sites designated under the 1971 Ramsar Convention for their internationally important wetlands (commonly known as Ramsar sites) and potential SPAs (pSPAs) are also considered in the same way as SACs, SPAs and candidate SACs (cSACs). As a matter of good practice, potential SACs (pSACs) should also be considered in the same way.

3.2.8. The Flintshire Local Development Plan 2015-2030, adopted on the 24th January 2023 (Ref. 3.4) lists the following relevant policy:

- EN6: Sites of Biodiversity and Geodiversity Importance

"Development will not be permitted that would result in an adverse effect on the integrity of sites of international nature conservation importance. Proposals where adverse effects on site integrity cannot be ruled out would not be supported."

3.2.9. For this report, the range of sites of international nature conservation importance are considered under the grouped term 'European Sites'.

3.3. STAGES OF HABITATS REGULATIONS ASSESSMENT

3.3.1. Guidance on the Habitats Directive (Ref. 3.5) sets out the step wise approach which should be followed to enable Competent Authorities to discharge their duties under the Habitats Directive and provides further clarity on the interpretation of Articles 6 (3) and 6 (4). The process used is usually summarised in four distinct stages of assessment:

- Stage 1: Screening: the process which identifies whether effects upon a European Site of a plan or project are possible, either alone or in combination with other plans or projects and considers whether these effects are likely to be significant. Following the European Court of Justice case in People Over Wind and Sweetman v Coillte Teoranta (Case 323/17) (Ref. 3.6), all Stage 1 assessments must be undertaken without taking into account proposed

mitigation measures intended to reduce or avoid negative impacts of the project on European sites;

- Stage 2: Appropriate Assessment: the detailed consideration of the effect on the integrity of the European Site of the plan or project, either alone or in combination with other plans or projects, with respect to the site's conservation objectives and its structure and function. In addition, further details of any mitigation required to lessen impacts needs to be detailed at this stage to allow further consideration during the AA process;
- Stage 3: Assessment of alternative solutions: the process which examines alternative ways of achieving the objectives of the plan or project that avoid adverse effects on the integrity of the European Site; and
- Stage 4: Assessment where no alternative solutions exist and where adverse effects remain: an assessment of whether the development is necessary for Imperative Reasons of Overriding Public Interest (IROPI) and, if so, an assessment of the compensatory measures needed to maintain the overall coherence of the national site network.

3.3.2. The integrity of a site is defined as the coherence of the site's ecological structure and function, across the whole of its area, which enables it to sustain the habitat, complex of habitats and/or populations of species for which the site has been designated (Ref. 3.5). An adverse effect on integrity is likely to be one which prevents the site from making the same contribution to 'Favourable Conservation Status' (FCS) as it did at the time of designation.

3.3.3. The precautionary principle is applied at all stages of the HRA process. In relation to Stage 1 Screening, this means that projects or plans where effects are considered likely and those where uncertainty exists as to whether effects are likely to be significant, must be subject to Stage 2 (AA) of the HRA process.

3.4. PURPOSE OF THIS REPORT

3.4.1. In accordance with the Habitats Regulations, an AA must be made by the Competent Authority when, in view of a European Site's objectives, a project:

- Is likely to have a significant effect on a European Site (either alone or in combination with other projects and/or plans); and
- Is not directly connected with or necessary to the management of the European Site.

3.4.2. This report provides information to enable the HRA Stage 1: Screening of the Proposed Development and Stage 2: Appropriate Assessment to be carried out. The purpose of this report is firstly to establish whether or not the Proposed Development would have an LSE upon European Sites (Stage 1). Where the potential for LSE is identified, the report then provides information to support an assessment of the potential for an adverse effect on the integrity of the European Sites (Stage 2).

3.5. STAGE 1: SCREENING METHODOLOGY

3.5.1. The screening methodology uses pathways to link development impacts and effects on European Sites that may be vulnerable to those impacts. Each development impact is considered, and its pathway assessed to understand the likelihood of an impact resulting in an LSE on a European Site.

3.5.2. When screening in/out European Sites and their features of interest, it needs to be established whether there is a pathway between the likely development impacts (causes), and the possible effect they may have on qualifying interest features of European Sites. Where there are no pathways to affect a European Site from the Proposed Development, they are not considered further. Where a pathway is identified, consideration is then given to whether there is a 'mechanism' for LSE to occur. The screening methodology considers the sensitivity of the qualifying interest features in question to the identified impact pathways.

3.5.3. If it is considered there will be no LSE upon the qualifying interest features from the potential identified impact pathways alone and in combination with other plans and projects and an AA is not required.

3.5.4. If LSE are identified, or if mitigation is required, further information to inform Stage 2: AA is likely to be required.

3.6. STAGE 2: APPROPRIATE ASSESSMENT

3.6.1. Where Stage 1 identifies LSE, Stage 2 then considers LSE in greater detail, including consideration of mitigation measures where these may be applied to avoid or reduce an effect on the integrity of the European Sites concerned.

3.6.2. If information is not sufficient to confirm that an adverse effect upon the European Site's integrity can be ruled out and mitigation measures are not sufficient to rule out an adverse effect on site integrity, Stage 3 is undertaken to investigate alternative solutions.

3.6.3. The methods used to make such an assessment in Stage 2 depend on the nature of the likely effects, and the interest features, conservation objectives and conservation status of the site potentially affected. Section 4, below, sets out European sites and qualifying features that have been screened in and out of further assessment in Stage 1, along with a justification for doing so.

4. RELEVANT DESIGNATED SITES

4.1.1. There are seven European Sites within 10 km of the RLB (as shown on Figure B.2, Annex B) for the Proposed Development. These sites are:

- The Dee Estuary/Aber Dyfrdwy SAC (England/Wales);
- The Dee Estuary SPA (England/Wales);
- The Dee Estuary Ramsar (England/Wales);
- Liverpool Bay SPA (England/Wales);
- Mersey Narrows and North Wirral Foreshore SPA (England);
- Mersey Narrows and North Wirral Foreshore Ramsar (England); and
- Halkyn Mountain SAC (Wales).

4.1.2. In addition, a further site, which lies a distance of 22 km away, has been included in the assessment. This is because the site is hydrologically linked and the qualifying species are highly mobile. The site is:

- River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC.

4.1.3. The Dee Estuary/Aber Dyfrdwy SAC, SPA and Ramsar and Liverpool Bay SPA are cross-border sites, with constituent parts in both England and Wales. Therefore, these European Sites are covered by a number of documents (such as Core Management Plans) prepared by the respective country agencies. This is in addition to the Natura 2000 standard data forms which were prepared by Joint Nature Conservation Committee (JNCC) for submission to the EU. Where applicable, information from both NRW and Natural England (NE) is included within this document.

4.1.4. The reasons for designation of each of the European Sites is summarised in Annex A1 below. The known vulnerabilities of the European Sites are summarised in Annex A2, collated from the Natura 2000 standard data forms, Ramsar information sheets (available from JNCC, Ref. 4.1 and Core Management Plans (Ref. 4.2 – 4.5) available from NRW and Site Improvement Plans available from NE.

4.1.5. In addition, the conservation objectives of the European Sites have been summarised within Annex A3, which collates information from site conservation objectives available from NE and Core Management Plans available from NRW. The overall aim of the conservation objectives is to maintain the European Sites in FCS. The Habitats

Directive provides further interpretation of the meaning of FCS within Article 1 parts a, e and i as below:

'(a) conservation means a series of measures required to maintain or restore the natural habitats and the populations of species of wild fauna and flora at a favourable status as defined in (e) and (i)

(e) conservation status of a natural habitat means the sum of the influences acting on a natural habitat and its typical species that may affect its long-*term natural distribution, structure and functions as well as the long-term survival of its typical species within the territory referred to in Article 2. The conservative status of a natural habitat will be taken as "favourable" when:*

- *its natural range and areas it covers within that range are stable or increasing, and*
- *the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and*
- *the conservation status of its typical species is favourable as defined in (i);*

(i) *conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2; The conservation status will be taken as "favourable" when:*

- *population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and*
- *the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis'.*

5. ECOLOGICAL BASELINE ASSESSMENT

5.1. SITE-SPECIFIC SURVEYS

5.1.1. Areas within the Consented Development Area and adjacent habitats, where relevant, were subject to a variety of ecological surveys in 2021/2022. The purpose of these surveys was to provide a baseline assessment, and to confirm the presence or likely absence of protected species and habitats to inform the Consented Development, including the requirements of the Habitats and Species Regulations 2017.

5.1.2. The targeted species surveys completed in 2021 and 2022, in support of the Consented Development, are now considered to be out-of-date in terms of good practice (CIEEM, 2019) as they are more than 18 months old. Therefore, the conclusions of this report are based on that background, supplemented with a walkover survey of habitats undertaken in April 2025 as well as updated desk study records and voluntary survey reports provided by ENI.

5.1.3. Areas within the Proposed Development area and adjacent habitats, where relevant, were subject to an ecological walkover in April 2025. The purpose of the walkover was to update and validate the results of the 2021/2022 surveys, alongside mapping additional habitats associated with the Proposed Development.

5.1.4. The site-specific survey data provided by Eni includes 2023-24 autumn/winter ornithological report (Ref 5.1) and the 2024 Talacre natterjack toad *Epidalea calamita* report (Ref 5.2).

5.2. BIRDS – BREEDING/WINTERING BIRDS

5.2.1. As per the Consented Development, the Proposed Development lies directly within the Dee Estuary/Aber Dyfrdwy SAC, SPA and Ramsar site. To inform the Consented Works, breeding and wintering bird surveys were undertaken in April 2021 to March 2022. For the purpose of the Proposed Development, this data has been updated using ornithological data obtained from Cofnod (Local Environment Record Centre for Wales) with data from the breeding and wintering bird surveys commissioned by Eni and with information taken from the Gronant Little Tern Report 2020 (North Wales Little Tern Group, 2020). This data has been used to inform of the presence, distribution and population size of Annex I species within the RLB, to give an overall idea of the bird assemblages present and whether any species that are notified features of the international sites are regularly present.

5.2.2. A desk-based data search was undertaken in April 2025. Ornithological data was received from Cofnod (Local Environment Record Centre for Wales). Qualifying bird species for the designated sites was included within this data.

5.2.3. Ornithological monitoring of landholdings around the PoA Gas Terminal, were first commissioned by EniUK Ltd in 1992 and have been repeated every year since, with the aim of monitoring the effects of the gas terminal construction and operation and the associated land management practices upon bird populations.

5.2.4. The most recent monitoring report from Eni (ExCal, 2024) combines monitoring data collected from September 2023 to the end of March 2024, and provides more recent survey data than the ornithological surveys undertaken by WSP from 2021 to 2022, which were used to inform the Consented Development.

5.2.5. The ENI ornithology surveys cover three main survey areas. For this report the data obtained from the survey area at Warren Farm (40 ha), which is located to the west of the gas terminal / Lawndy Farm and north of the coastal fields, is used. This survey area is close to the Proposed Development, with the northern fields at Warren Farm adjoining the southern edge of the Proposed Development.

METHODS

5.2.6. The April 2021 to March 2022 field surveys were undertaken along two transect routes covering land within the Consented Development RLB, which included the PoA Terminal and the former PoA Colliery site to the south and south-east of the Terminal sand dunes, mud and sandflats, wetlands, improved grassland, scrub and ex-industrial land. The Consented Development RLB extended westwards beyond Gronant Dunes, with the most westward extent of the survey transects being the eastern edge of Presthaven Holiday Park, as shown on Figure B.1, Annex B.

5.2.7. The two transects were undertaken monthly from April 2021 to March 2022 and aimed to record bird data from all areas which may be directly affected by the Consented Development within the RLB. This included the proposed temporary Localised Compound within Talacre Beach car park to the north-east and an associated proposed access route which runs westwards to the location where the Consented Development traversed the beach, sand dunes and Warren Farm, *en route* to the PoA Terminal. For both transects, birds within extensive intertidal habitats (including saltmarsh and sandflats) were recorded if they were within 300 m of the transect.

5.2.8. For this assessment, which covers the Proposed Development, only the data pertinent to Warren Farm has been included.

5.2.9. The Winter and Autumn Passage Bird Survey received from ENI was undertaken using the British Trust for Ornithology's prescribed methodology.

5.2.10. Surveys have been split between circuit and focus counts. Circuit counts consist of a whole farm survey moving between hides overlooking Warren Farm during the hour before and the hour after a high or low tide. Focus counts allow for more detailed observations at each vantage point and note species number and disturbance events. Counts are made from a fixed position (e.g. hides) and consist of a whole farm survey, recording peak numbers as birds move to and from the area during the hour.

5.2.11. Four visits per month were made to Warren Farm between September 2023 and March 2024. These visits were split between one focus count at high tide and three circuit counts (2 at high tide and 1 at low tide).

RESULTS

5.2.12. The data supplied by Cofnod included a total of 213 individual records of birds within the last 10 years (2015-2025) that are listed as qualifying species or included in the waterbird assemblage for the designated sites. These records comprised of four species, which are summarised in Table 5-1 below.

Table 5-1 – Records of Qualifying Bird Species Received from Cofnod

English name	Latin name	Relevant Designated Site	Earliest year	Latest year	Total records
Black-tailed Godwit	*Limosa limosa*	Dee Estuary SPA (Wintering)	2015	2024	185
Little Gull	*Hydrocoloeus minutus*	Liverpool Bay SPA (Wintering)	2020	2024	2
Little Tern	*Sternula albifrons*	Liverpool Bay SPA (Breeding)	2015	2024	20
Common Scoter	*Melanitta nigra*	Liverpool Bay SPA (Wintering)	2015	2024	6

5.2.13. Count data from the Warren Farm surveys undertaken by ENI from September 2023 – March 2024 has been presented in Table 5-2 for each of the notified features of the Dee Estuary SPA qualifying under Article 4.2. The passage period is defined as March to April and August to September and the wintering period as October to February. Bar-tailed Godwit is the only qualifying feature under Article 4.1 as Common Tern, Little Tern and Sandwich Tern were not recorded during the surveys.

5.2.14. Count data from the April 2021 to March 2022 field surveys of the Warren Farm Ponds and adjacent land has been presented in Table 5-3 for each of the notified features of the Dee Estuary SPA. The passage period is defined as March to April and August to September and the wintering period as October to February. No tables are provided for the features that qualify under Article 4.1 (Common Tern, Little Tern and Sandwich Tern) as none of these species were recorded during the surveys.

5.2.15. The mean monthly project count per transect (n=12) and the peak project count for birds recorded within the RLB during the 12-month survey period are given and then presented as a percentage of the SPA population as provided on the SPA citation document (Ref. 5.3). These data are, however, the five-year mean of annual peak counts between 1994/95 to 1998/99, over 20 years old at the time of the assessment, so more up-to-date data for the Dee Estuary is also provided. The more up-to-date data are taken from the most recent report from the Wetland Bird Survey (WeBS) (Ref. 5.4) and represent the mean peak count for each species for the period 2015/16 to 2019/20.

5.2.16. Where the mean or peak count exceeds 1% of the SPA citation population or the current five-year peak mean from the WeBS report, the figure is shown in bold red.

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Table 5-2 - Counts at Warren Farm of Article 4.2 and 4.1 species for the survey period September 2023 to March 2024 undertaken by ENI

Species	Season	Mean Monthly Project Count	Peak Project Count	SPA Citation Population	Mean Monthly Project Count as a % of the SPA Population	Peak Project Count as a % of the SPA Population	WeBS five-year average 2015/16 to 2019/20	Mean monthly count as % of WeBS five-year average
Redshank	Passage	3.5	14	8795	0	0.16	9614	0
Shelduck	Wintering	2	20	7725	0.02	0.26	9602	0.02
Teal*	Wintering	77.6	236	5251	1.5	4.5	6062	1.3
Pintail	Wintering	0.2	2	5407	0	0	5355	0
Oystercatcher	Wintering	0.6	3	22677	0	0	23309	0
Grey Plover	Wintering	0	0	1643	0	0	910	0
Knot	Wintering	0	0	12394	0	0	17197	0
Dunlin	Wintering	2	20	22769	0	0	16922	0
Black-tailed Godwit*	Wintering	128	887	1747	14.4	51	6206	2.06
Curlew*	Wintering	47	144	3899	1.2	3.7	3553	1.32
Redshank*	Wintering	21.5	140	5293	0.4	2.6	9614	0.2

Peak counts: teal, November 2023, black-tailed godwit, December 2023, curlew, November 2023 and redshank (wintering) November 2023

Table 5-3 – Counts of Article 4.1 and 4.2 species at the Warren Farm ponds and adjacent land for the survey period April 2021 to March 2022

Species	Season	Mean Monthly Project Count	Peak Project Count	SPA Citation Population	Mean Monthly Project Count as a % of the SPA Population	Peak Project Count as a % of the SPA Population	WeBS five-year average 2015/16 to 2019/20	Mean monthly count as % of WeBS five-year average
Redshank	Passage	1.75	6	8795	0.02	0.07	9614	0.01
Shelduck	Wintering	0	0	7725	0	0	9602	0
Teal*	Wintering	127	310	5251	2.41	5.90	6062	2.09
Pintail	Wintering	0	0	5407	0	0	5355	0
Oystercatcher	Wintering	0	0	22677	0	0	23309	0
Grey Plover	Wintering	0	0	1643	0	0	910	0
Knot	Wintering	0	0	12394	0	0	17197	0
Dunlin	Wintering	0	0	22769	0	0	16922	0
Black-tailed Godwit*	Wintering	72	270	1747	4.12	15.45	6206	1.16
Curlew*	Wintering	22	64	3899	0.56	1.64	3553	0.61
Redshank	Wintering	8	34	5293	0.15	0.6	9614	0.08

Peak counts: Teal, December 2021, Black-tailed Godwit, January 2022 and Curlew, November 2021

Where the mean or peak count exceeds 1% of the SPA citation population or the current five-year peak mean from the WeBS report, the figure is shown in bold red.

5.2.17. The Warren Farm ponds supported a range of species, including five of the notified features of the Dee Estuary SPA. Of these, teal, curlew and black-tailed godwit were represented in peak project count numbers that exceeded the 1% of the SPA population threshold using data from the citation and the more recent WeBS data. In terms of mean monthly counts, teal, black-tailed godwit and redshank (wintering) again exceeded the 1% SPA population threshold.

Little Tern Colony at Gronant

5.2.18. Little Terns are a qualifying species for both the Dee Estuary and Liverpool Bay SPA's. Gronant Beach is an internationally important site for this species as it contributes to over 10% of the entire UK breeding population as well as supplementing other colonies.

5.2.19. Little Terns are migratory, arriving at breeding colonies at the end of April into May, with eggs generally laid in late May / early June. They are the smallest of the five tern species that breed in the UK and subsequently have a smaller foraging range, with a maximum distance of 11 km and most foraging activity occurring within 1 km of the coast during the breeding season.

5.2.20. Information from the Gronant Little Tern Report 2020 was included within the Consented Development, but some information regarding more recent tern data is provided below. An updated (post 2020) Gronant Little Tern Report was not available at the time of writing.

5.2.21. The 2022 season saw 211 breeding pairs recorded, the highest count seen at Gronant, marking an increase of 23.4% from the previous count in 2018. In addition, a total of 209 fledglings were confirmed, the second highest recorded at Gronant. The baseline for sustaining a little tern colony is widely accepted to be 0.74 fledgelings per pair (FPP), and this season's colony saw a figure of 0.99 FPP.

5.2.22. The Little Tern Colony at Gronant beach is actively managed as a long-term conservation project, delivered via Denbighshire Countryside Services. The project includes the erection of a 3.5 km compound around the tern colony to protect it from disturbance. A 3 km electric fence will also be utilised to create 11 pens on a shingle ridge amongst the sand dunes near Gronant.

5.3. GREAT CRESTED NEWTS

5.3.1. To inform the Proposed Development a desk study was undertaken in April 2025 to review existing baseline information available in the public domain and to obtain information held by relevant third parties. For the desk study exercise, records were collated within various radii

around the RLB of the Proposed Development. This approach is consistent with current good practice guidance published by the Chartered Institute of Ecology and Environmental Management (Ref. 5.5 and Ref. 5.6).

5.3.2. GCN are a qualifying feature of only one of the European Sites taken into account in this assessment, which is the Halkyn Mountain SAC (details provided previously in Section 4), located 10.5 km away from the Proposed Development. Desktop study records within the last 10 years (2015-2025) identified two records of GCN between 2018-2019.

5.3.3. To inform the Consented Development waterbodies were assessed for their suitability to support GCN using the standard Habitat Suitability Index (HSI) assessment method (Ref. 5.7 and Ref. 5.8). This assessment has not been repeated for the Proposed Development.

5.3.4. HSI surveys were undertaken from July 2021 to January 2022. The lead surveyors for each survey had at least five-years of experience surveying GCN and hold a NRW survey licence.

5.3.5. Presence/likely absence surveys were also undertaken in March 2022 to June 2022 to inform the Consented Development in accordance with current best practice guidance (Ref. 5.9). The lead surveyors for each survey had at least five-years of experience surveying GCN and hold a NRW survey licence. Surveys were not undertaken on waterbodies where data had already been collected by the Applicant.

5.3.6. GCN were not recorded within any identified waterbodies surveyed as part of the assessment.

5.4. BOTANICAL SURVEY

5.4.1. A survey was undertaken in April 2025 with habitats recorded using a combination of Phase 1 Habitat (JNCC, 2010) and UKHabitat (UKHab) (UKHab Ltd., 2023) methodology. Both methods were utilised to allow the original Phase 1 Habitat mapping from the Consented Development to be extended and compared with the habitats within the Proposed Development RLB.

5.4.2. In addition to the habitat mapping an assessment was made of the presence or absence of any botanical qualifying species or habitats that support the qualifying species for the internationally designated sites.

5.4.3. The Study Area represents a sand dune system including:

- Scrub and Modified Grassland.
- Sand dunes.
- Dune grassland and dune slacks.

- Foredunes.
- Mobile dunes.
- Intertidal Habitat.

5.4.4. Several Annex I habitats were recorded across the dunes, as below:

- Shifting dunes with marram (H2120)
- Humid dune slacks (H2190)
- Dune grassland (H2130)
- Intertidal mudflats and sandflats (H1140)

5.4.5. The botanical survey therefore revealed the presence of several Annex I habitats, which are qualifying features of the Dee Estuary/Aber Dyfrdwy SAC within the RLB. Under the Habitats Regulations, potential effects upon Annex I habitats are considered as part of this HRA.

Petalwort (*Petalophyllum ralfsii*) Survey

5.4.6. Petalwort is an Annex II species that is also a qualifying feature of the Dee Estuary/Aber Dyfrdwy SAC.

5.4.7. The Petalwort survey undertaken in 2025 included re-visiting the previous locations of this species as recorded in Newton (2011) (Ref. 5.11). This previous report was the latest of a series of monitoring reports which were produced between 1995 and 2011.

5.4.8. Petalwort was also included in the surveys undertaken to inform the Consented Development in 2022.

5.4.9. Optimal habitat for Petalwort consists of constantly moist soil/sand, but not waterlogged ground. The ground should be only sparsely vegetated as this species is easily outcompeted by vascular plants.

5.4.10. Petalwort was not re-found at the former 2011 locations in either 2025 or 2022.

5.4.11. Whilst there are historic records of this species close within the RLB, no records were retrieved during the 2025 or the 2022 surveys.

5.5. NATTERJACK TOAD

5.5.1. A desk study was undertaken in April 2025 to review existing baseline information, including natterjack toad, available in the public domain and to obtain information held by relevant third parties. For the desk study exercise, records were collated within various radii around the RLB of the Proposed Development. This approach is consistent with current good practice guidance published by the Chartered Institute of Ecology and Environmental Management (Ref. 5.5 and Ref. 5.6).

5.5.2. Natterjack toad is a qualifying feature of only one of the European Sites taken into account in this assessment, which is the Dee Estuary Ramsar (details provided previously in Section 3). The Proposed Development falls within the Ramsar boundary. Desktop study records within the last 10 years (2015-2025) identified 165 records of natterjack toad between 2015-2024.

5.5.3. ENI undertake annual surveys for natterjack toad, with the aim of monitoring the population present. The survey methods include spawn string counts within ponds and night-time adult toad counts.

5.5.4. The 2024 spawn string count for Talacre was 121, an increase from 58 in 2023. The spawn string count for 2022 was 53, and for 2021 was 75.5 with no counts undertaken in 2020 due to Covid-19 restrictions. The 5-year average is 66 with the 10-year average at 99.

5.5.5. The 2024 nocturnal count of adult toads was 83, recorded on the 4th April 2024. This compared to 38 on the 20th April 2022 and 21 on the 6th May 2021. No counts were undertaken in 2023.

5.5.6. Natterjack toad are known to be present in the area and have the potential be present within the Proposed Development area. A peak count of 83 adults have been recorded in 2024 with a spawn string count of 121 in the same year and 165 records present in the desk study data. On the assumption that these are 83 individual natterjack toads, this would constitute less than 0.5% of the estimated UK population.

5.6. LAMPREY (SEA LAMPREY AND RIVER LAMPREY)

5.6.1. The RLB lies within the Dee Estuary / Aber Dyfrdwy SAC of which river lamprey and sea lamprey are both qualifying features. They are both migratory species with similar lifecycles. Adults migrate upstream to spawning areas, which are usually stony or gravelly stretches of flowing water. Larvae occupy nursery silts, with sea lamprey maturing in marine environments, and river lamprey in estuaries. Both species are sensitive to pollution and are classified as hearing generalists, which means that noise and vibration during construction could disturb these species more than others.

5.6.2. To inform the Consented Development, it was attempted to obtain data on the presence of Annex II species of fish communities within the impacted linear watercourses and the intertidal areas.

5.6.3. Traditional electro-fishing surveys were deemed to be impractical for the proposed Survey Area, due to Health and Safety constraints and saline intrusion of the watercourses causing conductivity issues. Therefore, the presence/likely absence of lamprey species in the four

watercourses that may be affected by the Proposed Development was determined through the collection and analysis of environmental DNA (eDNA) samples.

5.6.4. It should be noted that for the Consented Development DNA sampling was carried out to inform baseline conditions and was not intended to be lamprey-specific. The intention of the sampling was to generally identify the fish communities present, of which river lamprey and sea lamprey are individual species and would be captured within the results if present at the time of the sampling.

5.6.5. eDNA samples were collected from four watercourses during February 2022 to identify fish species present.

5.6.6. A limitation of eDNA sampling is that absolute abundance and population structure of species cannot be detected. However, semi-quantitative data is obtained from eDNA samples, with rank abundance of species providing a good reflection of the fish community.

5.6.7. Following consultation with NRW in 2022, it was decided intertidal and marine fish surveys were not required, and that existing data could be utilised to assess the impact of the Proposed Development on intertidal and marine fish assemblages.

5.6.8. The results of the 2022 surveys concluded that eDNA for either river lamprey or sea lamprey was not detected during the surveys. However, as these results do not prove absolute absence and both Sea and River Lamprey are qualifying features of The Dee Estuary/Aber Dyfrdwy SAC, they were assumed to be present within the RLB and, consequently, a precautionary approach is to be applied to the assessment of LSE in relation to these species.

5.6.9. As a result of the above surveys, survey limitations and discussions with NRW in 2022 it was decided no further survey work was required for the Proposed Development, with the same precautionary approach to be applied to this assessment in relation to river and sea lamprey.

5.7. ATLANTIC SALMON AND OTHER DIADROMOUS FISH SPECIES

5.7.1. Both the Consented Development and Proposed Development are hydrologically connected to The River Dee and Bala Lake SAC/Afon Dyfrdwy a Llyn Tegid. Therefore, to inform the Consented Development data on the fish communities present within linear watercourses and the intertidal areas impacted by the Proposed Development was gathered to inform the HRA of the presence of Annex II species.

5.7.2. Atlantic salmon, a migratory species, is a qualifying feature of the SAC. Adults migrate upstream to spawning areas, which are usually gravelly stretches of flowing water. After a period of one to six years young salmon migrate downstream to sea. The species is subject to pressures including pollution, physical barriers to migration, and physical degradation of spawning and nursery habitat.

5.7.3. Traditional electro-fishing surveys were deemed to be impractical for the proposed Survey Area, due to Health and Safety constraints and saline intrusion of the watercourses causing conductivity issues. Therefore, the presence/likely absence of Atlantic salmon and other diadromous fish species in the four watercourses that may be affected by the Consented Development was determined through the collection and analysis of environmental DNA (eDNA) samples.

5.7.4. It should be noted that for the Consented Development eDNA sampling was carried out to inform baseline conditions and was not intended to be species-specific. The intention of the sampling was to generally identify the fish communities present, of which Atlantic salmon is an individual species and would be captured within the results if present at the time of the sampling.

5.7.5. eDNA samples were collected from four watercourses during February 2022, as detailed above, to identify fish species present.

5.7.6. Atlantic salmon eDNA was not detected during the surveys. However, these results do not prove absolute absence. The eDNA of European eel *Anguilla anguilla,* a diadromous fish species, was however, recorded in two of the sampled watercourses. As Atlantic salmon are likely to be present within the Dee Estuary, migrating up the River Dee to The River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid SAC, they, and other diadromous fish species are assumed to be present within the RLB and, consequently, a precautionary approach is to be applied to the assessment of LSE in relation to these species.

5.7.7. The same precautionary approach is to be applied to this assessment in relation to salmon.

5.8. CONSULTATION

5.8.1. Consultation occurred for the Consented Development via a meeting with NRW undertaken on 4 March 2022. The following point remains pertinent to this assessment and is provided below.

5.8.2. It was highlighted that works should avoid the sensitive overwintering period for birds, and that consideration be given to Article 4.4 of the

Birds Directive (relating to the avoidance of pollution or deterioration of SPA habitats) for the whole of the Proposed Development.

5.8.3. As part of the pre-application consultation of the draft planning applications, the HRA was presented to statutory consultees and members of the public for their comment. Comments received in relation to this assessment are summarised in the bullet points below:

- Additional information relating to the decommissioning phase;
- Additional information regarding Intertidal Phase 1 Survey and assessment of the impacts to intertidal habitats;
- Reflection of cable depth information within assessments;
- Additional mitigation measures to be secured within a Construction Environment Management Plan (CEMP);
- Clarification regarding qualifying features of the designated sites;
- Rescoping to include the River Dee and Bala Lake SAC in assessments due to the potential presence of qualifying features using the Dee Estuary for migration;
- Consideration of the in-combination effects of Awel y Môr for the HyNet TCPA application; and
- Additional information relating to noise modelling effects on the little tern colonies.

5.8.4. These comments have been reviewed and incorporated within this report as required.

6. STAGE 1: SCREENING OF POTENTIAL EFFECTS

6.1. APPROACH

6.1.1. The Proposed Development is not directly connected with or necessary for the management of the European Sites and has not been conceived solely to further the conservation of the European Sites. Therefore, further consideration of the Proposed Development within the HRA process is required.

6.1.2. The Proposed Development has been subject to Stage 1 of the HRA or 'test of likely significance' to assess the potential for likely significant effects of the Proposed Development on European Sites. This screening exercise has considered whether cause-effect pathways exist between the Proposed Development and the European Sites that have been identified within the Zone of Influence (ZoI), see below.

6.1.3. Due to case law mentioned in paragraph 3.3.1 of this document, the screening assessment was prepared and completed whilst omitting proposed mitigation measures for the Proposed Development. The following mitigation measures were not included during Stage 1:

- The Construction Environmental Management Plan (CEMP);
- Ecological Management Plans (EcMPs);
- Specific/targeted mitigation measures to avoid or minimise impacts of construction and operational disturbance on qualifying species or habitats of international sites; and
- Pollution prevention controls.

6.2. ZONE OF INFLUENCE

OVERVIEW

6.2.1. The ZoI is defined by the potential impacts arising from the Proposed Development and the potential pathways for those impacts to reach and affect qualifying features of European Sites, resulting in effects upon those qualifying features. Table 6-1, below, details the ZoI for potential effects (in the absence of mitigation) of the Proposed Development on European Sites. This takes into account the very localised extent of the Proposed Development and temporary nature of the majority of construction works required.

Table 6-1 - Potential pathways between effect, cause and likely Zone of Influence

Effect	Cause	Likely ZoI
Direct and indirect habitat loss (including functional habitat) and/or mortality of species	Vegetation and site clearance, construction activities (including movement of plant/machinery)	Within the RLB of the Proposed Development.
Disturbance of qualifying species	Noise, dust, vibration and light pollution resulting from construction activities	Within 300 m of the RLB of the Proposed Development.
Fragmentation of habitats and/or species	Habitat loss resulting in severance of connectivity	Within the RLB of the Proposed Development.
Hydrological effects	Pollution and contamination incidents onshore associated with hydrological effects (including run-off). The marine cable laying vessel (CLV) Basic Specification shows a typical CLV which operates on marine diesel. This type of volatile, non-persistent	Downstream: Determined by the type, dynamics and morphology of the connected watercourse (as detailed within the assessment) Upstream: the tidal extent

Effect	Cause	Likely ZoI
	and light fuel evaporates easily and quickly (i.e. within 24 hours), therefore a ZoI for this type of hydrological impact is not considered within the assessment.	
Air quality effects	Emissions resulting from traffic movements during construction, operation and decommissioning. Dust pollution and contamination incidents as a result of construction activities.	200 m from routes likely to experience a significant change in traffic. 50 m from the boundary of new infrastructure works i.e., from the RLB (Ref. 6.2)

DIRECT HABITAT LOSS

6.2.2. Land take within the boundary of a European Site (either temporary or permanent) could remove a proportion of the habitats which forms (or supports) the qualifying interests for which the European Site is designated.

6.2.3. Land take from adjacent habitats that are functionally linked (for example clearance of areas of heathland habitat from an area adjacent to a SAC designated for heathland habitats) may also be relevant, if these support the overall status of habitats within the designated site. Land take could lead to the following impacts on European Site qualifying interests:

- Permanent habitat removal;
- Temporary removal/disturbance of habitats; and
- Reduction in foraging opportunities (removal/disturbance of habitats used by designated interest species).

6.2.4. The assessment of land take impacts has considered the following when assessing the potential for adverse effects on integrity:

- Extent of habitat loss/disturbance within European Site boundaries;
- Type of habitat(s) affected, including assessment of whether they could support designated habitats/designated interest species;
- Functional linkages between habitat lost within the Proposed Development boundary and surrounding European Sites; and
- Avoidance and mitigation measures to be employed during implementation of the Proposed Development.

INDIRECT HABITAT LOSS

6.2.5. In the absence of a CEMP or pollution prevention, there is a potential spillage risk resulting from inappropriate material storage or vehicle/machinery leakages that may cause indirect habitat loss via pollution and degradation.

DISTURBANCE TO BIRDS

6.2.6. Visual or noise disturbance resulting from major development schemes can affect bird species. The susceptibility of birds to disturbance such as this depends on the intensity, frequency and duration of the source of disturbance (Ref. 6.3). In general, infrequent, high-intensity activities tend to cause more disturbance than continuous low-intensity activities (Ref. 6.3). In terms of visual disturbance, human figures are tolerated less well than vehicles and vehicle-movements (Ref. 6.3). With noise disturbance, birds appear to

quickly habituate to continual noises, but large amplitude 'startling' components may cause undue disturbance (Ref. 6.3).

6.2.7. Although different species vary in their tolerance of disturbance, waterbirds such as those qualifying within the Dee Estuary SPA, SAC and Ramsar are generally susceptible to disturbance and tend to preferentially select roosting or foraging sites where levels of disturbance are low. Larger bird species which form flocks in open habitats tend to be more vulnerable to disturbance than smaller species in more enclosed habitats.

6.2.8. Taken in isolation, disturbance from a single development may simply result in birds being displaced into alternative habitat further from the source of disturbance. In many cases this may have no discernible effect on the population of the species concerned. However, if birds are unable to compensate for lost feeding time, disturbance can affect their ability to maintain their energy reserves and may therefore affect individuals' chances of surviving cold weather. Sustained disturbance can also affect numbers of birds using a site in the longer term (Ref. 6.4). The impact of disturbance on whole sites depends on the availability and carrying capacity of alternative habitats within the site. The carrying capacity of sites is rarely known with certainty and as such a precautionary approach should be adopted.

6.2.9. Visual disturbance is possible if works take place adjacent to areas used by SPA/Ramsar-qualifying bird species.

6.2.10. Noise disturbance is likely during construction. The noise levels which potentially cause disturbance to birds are similar to thresholds set for people i.e., not exceeding 75 dBA (A-weighted decibels). Examples of studies that have considered the impacts of noise on birds during the winter period include the following:

- Waders: lower abundance of waders where noise levels > 56 dB (Hirvonen, 2001) (Ref. 6.5)
- Waders: sudden noise at 80 dBA elicits a flight response at up to 250 m (Environment Agency, 2005) (Ref. 6.6)
- All waterfowl: long term plant noise to 85 dBA and personnel disturbance moderate to low. Birds were seen to accept a wide range of steady state noise levels from 55 dBA to 85 dBA. (IECS, 2007) (Ref. 6.7)

6.2.11. Artificial lighting can have a negative impact on birds; through disorientation, alteration of daily activity patterns, collision with lit structures (Ref. 6.8)

6.2.12. An example of a study that has reviewed the potential impacts of relevant disturbance sources such as plant noise and construction/demolition noise on coastal and estuarine waterbirds is Borgmann (2011) (Ref. 6.9). This study stated that although responses to disturbance are quite variable, establishing set back distances of 250 m from groups of diving ducks, other waterfowl, wading birds and shorebirds will likely lessen the impacts to the most sensitive species.

6.2.13. The most comprehensive recent review considering the impacts of disturbance when informing estuarine and planning and construction projects is Cutts *et al.* (2013) (Ref. 6.10). This study points out that different species of bird have different tolerance thresholds to noise disturbance (and visual disturbance) and, therefore, construction works and other operations impact upon different species in different ways. The converse to disturbance is habituation as birds can become more tolerant with increased exposure to regular activities.

6.2.14. Although the precise distance at which birds may be disturbed will vary by species and in response to a range of site-specific factors it has been assumed based on the findings of Cutts *et al.* (2013) (Ref. 6.10) that significant disturbance is unlikely beyond a distance of 300 m. Species-specific information on disturbance tolerance are provided in Table 6-3 and Table 6-4 for each of the notified features of the Dee Estuary SPA/SAC/Ramsar.

DISTURBANCE TO NATTERJACK TOAD

6.2.15. Natterjack Toads breed in shallow (5 – 10 cm deep) ephemeral pools that warm quickly. The species tends to breed later in the year than other anurans (frogs and toads). Spawning begins in April or May depending on weather conditions; however, spawn may be laid as late as the first week of August depending upon rainfall and the availability of ephemeral pools. Newly metamorphosed toadlets leave the water from mid-May to July, peaking in June at most sites.

6.2.16. Favourable habitat for Natterjack Toad exists within the dunes and dune slacks of the Gronant dune system, as well as immediately south within grazed grassland fields at Warren Farm. The Gronant dune system contains natural dune slack ephemeral pools, as well as artificially created scrapes, both providing favourable pools for breeding Natterjack Toad. In addition, the short-grazed sward within improved grassland fields immediately south of the Gronant dune system at the Proposed Development provides favourable foraging habitat for this species.

6.2.17. HDD is the assumed methodology for installing the cables through the Dee Estuary/ Aber Dyfdwy SAC qualifying habitats. This method removes the potential for both direct and indirect impacts to the population of Natterjack Toad. During cabling activities as the cables are laid >2.5 m below the surface, avoiding direct disturbance to the land.

DISTURBANCE TO FISH SPECIES

6.2.18. Adult Sea Lamprey enter the estuaries of many North Atlantic rivers from April onwards, but relatively little is known about the precise habitats occupied by adult Sea Lampreys (Ref. 6.13). Although adults are sometimes caught at sea, the precise conditions in which they occur have not been described, nor is it certain which fish are the main prey species. Most adults found in fresh water are either migrating upstream to spawn or dying after spawning. Habitat seems only to be important in relation to their ability to get to the spawning beds (Ref. 6.13), and direct impacts to rivers (i.e., potential spawning habitat) are not anticipated.

6.2.19. Atlantic salmon utilise freshwater environments for the reproductive and nursery phases of their lifecycle, and the marine environment for adult development and rapid growth. Adult Atlantic salmon migrate from the Atlantic Ocean to freshwater to spawn in areas of rivers with clean gravel from October onwards (Ref. 6.14).

6.2.20. The Proposed Development includes trenching within the intertidal zone, and therefore pollution events and noise/vibration could directly disturb this species, if works are undertaken during high tide.

AIR QUALITY

6.2.21. The ZoI for air quality impacts as a result of vehicular emissions is defined as the corridor(s) within 200 m of routes likely to experience a significant change in traffic. Air quality impacts as a result of construction traffic emissions have been screened out of the assessment as construction traffic flows are anticipated to be minimal and all construction plant and equipment are fitted, as standard, with modern, compliant emissions control systems and would not trigger the need for a quantitative assessment. Impacts as a result of operational traffic emissions are also screened out as there are no emission sources from the electrical cable to any environmental medium. As a result, emissions from construction and operational traffic would not give rise to significant effects on habitats surrounding the Proposed Development.

6.2.22. Works during the construction and operational stages of the Proposed Development are likely to give rise to dust emissions, which would be incurred within the European Sites and within 50 m of them. This has been noted particularly for the Dee Estuary SAC/SPA/Ramsar in relation to:

- Trackout of machinery and equipment during ploughing (construction stage); and
- Earthworks during HDD (construction stage).

6.2.23. In the absence of mitigation, dust emissions and deposition could lead to long-term degradation of habitats within the Dee Estuary SAC/SPA/Ramsar and resulting in a reduction in available habitat for the species that use them.

6.3. SUMMARY OF WORKS ON, ADJACENT TO OR NEAR THE DEE ESTUARY/ABER DYFRDWY SAC, SPA AND RAMSAR

6.3.1. The Proposed Development falls within the Dee Estuary/Aber Dyfrdwy SAC/SPA/Ramsar. The cable route runs through the SPA and Ramsar and SAC. The location of the RLB in relation to the European Sites is shown on Figure B.2, Annex B associated with this Report.

6.3.2. The HRA for the Consented Application assessed the original design proposals which included trenching across the dune habitat that forms part of the Dee Estuary/Aber Dyfrdwy SAC, SPA and Ramsar site. 'Horizontal Directional Drilling' (HDD) was only referenced at Stage 2 AA when it was introduced as embedded mitigation. For the purposes of the Proposed Development, the design for the trenchless crossing under the dune habitat already includes 'Horizontal Directional Drilling' (HDD) with the target depth for the cables being >2.5 m deep. This method will therefore be assessed at Stage 1.

6.4. CONSIDERATION OF EFFECTS IN ISOLATION

6.4.1. Utilising the information included within Sections 1, 2, 3 4 and 5, above, the Proposed Development has been screened to identify whether potential impact pathways between the Proposed Development and the European Sites exist that are likely to result in significant effects upon the European Sites.

6.4.2. Screening matrices have been prepared and are documented below in

6.4.3. Table 6-2 to Table 6-9. The matrices detail the potential effects upon the European Sites as a result of the Proposed Development.

Table 6-2 – Potential effects upon The Dee Estuary/Aber Dyfrdwy SAC

Name of European Site and EU Code	The Dee Estuary/Aber Dyfrdwy SAC (UK0030131)				
Closest Point of European Site to Red Line Boundary of Proposed Development	0 km				
Likely Significant Effect: ✓ No Likely Significant Effect: X Not within ZoI: N/A					
Qualifying Feature	Likely Effects of the Proposed Development				
	Direct habitat loss and/or mortality	Disturbance of qualifying species	Fragmentation of habitats/species	Hydrological effects	Air quality effects
Mudflats and sandflats not covered by seawater at low tide	X(a)	X(a)	X(a)	✓ (a)	X(a)

Salicornia and other annuals colonising mud and sand	N/A	N/A	N/A	N/A	N/A
Atlantic salt meadows *Glauco-Puccinellietalia maritimae*	N/A	N/A	N/A	N/A	N/A
Estuaries	N/A	N/A	N/A	N/A	N/A
Annual vegetation of drift lines	N/A	N/A	N/A	N/A	N/A
Vegetated sea cliffs of the Atlantic and Baltic Coasts	N/A	N/A	N/A	N/A	N/A
Embryonic shifting dunes	X (b)	X (b)	X (b)	✓ (b)	✓ (b)
Shifting dunes along the shoreline with *Marram*	X (b)	X (b)	X (b)	✓ (b)	✓ (b)

Fixed coastal dunes with herbaceous vegetation	X (b)	X (b)	X (b)	✓ (b)	✓ (b)
Humid dune slacks	X(c)	X(c)	X(c)	X(c)	X(c)
Sea Lamprey	X (d)	✓(d)	✓(d)	✓(d)	✓(d)
River Lamprey	X (d)	✓(d)	✓(d)	✓(d)	✓(d)
Petalwort	X (e)	X (e)	X (e)	X (e)	X (e)

a) The majority of the Foreshore Cables installation method will be trenched, using a plough at a depth of approximately 2.5 m in the intertidal area. The plough will excavate and bury the cable as it moves along the cable route. The zone of disturbance for the cable installation is expected to be around 15 metres total width for each trench. The spatial extent of the effect will be very small and of short duration. This will involve the direct impact to the mudflats and sandflats, and other habitats directly north of the dune habitat, along the beach, at the HDD exit pit. It is possible that siltation and turbidity effects may arise following the works in this area, however, the construction methodology has been designed to lay cable during low tide and this will reduce the potential for sediment plumes and impacts from siltation and turbidity. Consequently, undertaking cable laying activities at low tide will reduce the risk of releasing sediment-bound contaminants as the plough will excavate and backfill the trenches as it moves along the cable route. In addition, the Intertidal Survey Report (Ref. 6.15) identified that the habitats present within the intertidal area *"…are all commonly occurring habitats around the UK with rapid recovery rates following physical disturbance of the sediments"*. A search of the biotopes identified within this report through The Marine Life Information Network (Ref 6.16) lists these habitats as having 'High' resilience following disturbance and that recovery is dependent on the return of suitable sediment and recruitment of individuals. "*Once suitable substratum returns, recolonization is likely to be rapid, especially for rapidly reproducing species such as polychaetes, oligochaetes and some amphipods and bivalves*" (Ref 6.16). Furthermore, sediment dispersion numerical modelling undertaken for the Consented Development indicated that that while suspended sediment plumes showed periods of increase during cable laying activities, the suspended material is retained within the sediment cell and therefore assimilated into the existing sediment transport regime. It also found the majority of material would be deposited within 30 m of the cable laying operations (with coarser material being deposited closer). The physical act of disturbing the sediment at low tide is therefore unlikely to result in an LSE. Effects of heat on benthic ecology are not considered to result in LSE due to the depth that the cables are buried. However, the potential exists for accidental pollution events to take place during cable installation activities. Accidental spills of fuel or oils or other chemicals used during the installation, operation or decommissioning of the cable have the potential to adversely affect the intertidal ecology of this area. It is also considered that there is a risk of introducing non-native invasive species into this habitat. Therefore, an LSE cannot be ruled out in the absence of mitigation.

b) Horizontal Directional Drilling (HDD) is the assumed methodology through the Dee Estuary/Aber Dyfrdwy SAC qualifying habitats. This method of construction will prevent direct habitat loss, and disturbance and fragmentation of habitats. However, works during the construction phase of the Proposed Development

are expected to give rise to localised dust emissions, and potential pollution events that could deposit on the qualifying habitats of the SAC. This may negatively affect photosynthesis, respiration and transpiration in the vegetation communities. Therefore, an LSE cannot be ruled out in the absence of mitigation.

c) An intertidal temporary access route for the Proposed Development is proposed along the boundary of the dune habitat, which comprises bare sand. Works adjacent to the dune habitat will be limited to these vehicle movements from/to the works area. Therefore, disturbance from noise, vibration or pollution events is expected to be negligible. Additionally, the route will be matted to minimise damage to the underlying habitat. On this basis, no LSE are predicted to arise.

d) There will be no direct impacts to watercourses within the SAC. Noise and vibrational disturbance during trenching and cable pulling may affect breeding activity if carried out at sensitive times of the year, and pollution events could lead to habitat degradation and/or mortality of fish. Therefore, an LSE would be predicted in the absence of mitigation.

e) As per paragraph 5.4., petalwort was not recorded during the walkover botanical survey or in previous surveys. On this basis no LSEs are predicted to arise.

Table 6-3 – Potential effects upon The Dee Estuary SPA

Name of European Site and EU Code	The Dee Estuary SPA (UK9013011)				
Closest Point of European Site to Red Line Boundary of Proposed Development	0 km				
Likely Significant Effect: ✓ No Likely Significant Effect: X Not within ZoI: N/A					
Qualifying Feature	Likely Effects of the Proposed Development				
	Direct habitat loss and/or mortality	Disturbance of qualifying species	Fragmentation of habitats/species	Hydrological effects	Air quality effects
Little Tern	X(a)	✓ (a)	X(a)	X(a)	X(a)
Common Tern	N/A	N/A	N/A	N/A	N/A
Sandwich Tern	N/A	N/A	N/A	N/A	N/A
Pintail	N/A	N/A	N/A	N/A	N/A
Teal	X(c)	✓(b)	X(c)	X(c)	X(c)
Dunlin	N/A	N/A	N/A	N/A	N/A
Knot	N/A	N/A	N/A	N/A	N/A

Oystercatcher	N/A	N/A	N/A	N/A	N/A
Black-tailed Godwit	X(c)	✓(b)	X(c)	X(c)	X(c)
Bar-tailed Godwit	N/A	N/A	N/A	N/A	N/A
Curlew	X(c)	✓(b)	X(c)	X(c)	X(c)
Grey Plover	N/A	N/A	N/A	N/A	N/A
Shelduck	N/A	N/A	N/A	N/A	N/A
Redshank	X(c)	✓(b)	X(c)	X(c)	X(c)
Red Knot	N/A	N/A	N/A	N/A	N/A

a) The nearest Little Tern breeding colony to the Proposed Development is at Gronant Beach, which lies approximately 2 km west of the Proposed Development. The Little Tern has a foraging range of up to 11km Goodship and Furness (2022) (Ref. 6.17) gives the potential disturbance distance for Little Tern during the breeding season as 100 m to 300 m and assesses their overall likely sensitivity to disturbance as 'medium'. Due to the international significance of this breeding colony (contributing to over 10% of the entire UK breeding population as well as supporting other colonies) It is considered that in the absence of mitigation, therefore, it cannot be ruled out that there will be a LSE on these species with regard to disturbance.

The bird survey counts found teal, Black-tailed Godwit, Curlew, and Redshank all to be present within the RLB at Warren Farm.

Noise modelling for the PoA terminal area was also undertaken as part of the Consented Development TCPA. The results for the following activities in and around the PoA terminal are as follows:

- HDD at Station Road – 51 dB L_{Aeq} (short duration but continuous operation for a period of 48 hours)
- Open trenching cabling – 45 dB L_{Aeq}

These are all average noise levels ($L_{Aeq)}$ from all equipment/plant operating

For context, existing ambient noise levels at locations on Station Road, slightly to the west on the wetlands is in the region of 64 - 66 dB L_{Aeq} during the daytime. To the east of the wetlands, at the foreshore, ambient daytime noise levels are in the region of 57 dB L_{Aeq}. Therefore, noise levels are not considered to be a significant source of disturbance for these birds.

Similarly, noise modelling for the Warren Ponds area is as follows:

- HDD (foreshore) – 57 dB L_{Aeq}
- Open trench works (foreshore) - 46 dB L_{Aeq}

At the closest noise survey measurement location to Warren Farm ponds existing ambient daytime noise levels ranged between 38 – 68 dB L_{Aeq}, with the average noise level measured at 53 dB L_{Aeq}.

The source of disturbance to birds in these areas are more likely to arise from the temporary active presence of workers on Site during construction in habitat used by these species. High level disturbance stimuli are likely to arise from the following activities:

- Sudden single noise of over 60 dB (at the bird location).
- Continuous/repetitive noise over 72 dB (at the bird location).
- Close proximity of activities to birds e.g. works or works access undertaken less than 100 m from bird activity.

- Works on foreshore, where there is potentially a substantially greater level of impact compared to similar works on bank crest. Some habituation may be possible.
- Workers operating outside of plant e.g. single operative working on the bank may have a greater impact than an operational excavator or other plant.
- Workers vacating plant e.g. when an operator vacates an excavator or other plant, then disturbance levels can increase.
- Works access e.g. access by operators along bank crest to and from plant can have a greater disturbance effect than the plant operation.
- Large/fast moving machinery e.g. slow moving vehicles can have a lower impact than fast. However, vehicles stopping can cause a flight response.
- 3rd parties accessing along the foreshore.

b) It is considered that in the absence of mitigation, therefore, it cannot be ruled out that there will be a LSE on these species with regard to disturbance.

c) Direct habitat loss (which will be temporary in nature), fragmentation effects, hydrological and air quality impacts are not predicted to result in LSEs to these species.

Table 6-4 – Potential effects upon The Dee Estuary Ramsar

Name of Site	Dee Estuary Ramsar				
Closest Point of European Site to the Red Line Boundary of TCPA Proposed Development	0 km (RLB is adjacent)				
Key Likely Significant Effect: ✓ No Effect: X Not present within ZoI: N/A					
Qualifying Feature	Likely Effects of the Proposed Development				
	Direct habitat loss and/or mortality	Disturbance of qualifying species	Fragmentation of habitats/species	Hydrological effects	Air quality effects
Mudflats and sandflats not covered by seawater at low tide	X(a)	X(a)	X(a)	✓(a)	X(a)
Salicornia and other annuals colonising mud and sand	N/A	N/A	N/A	N/A	N/A

Atlantic salt meadows	N/A	N/A	N/A	N/A	N/A
Estuaries	N/A	N/A	N/A	N/A	N/A
Annual vegetation of drift lines	N/A	N/A	N/A	N/A	N/A
Vegetated sea cliffs of the Atlantic and Baltic Coasts	N/A	N/A	N/A	N/A	N/A
Embryonic shifting dunes	X(b)	X(b)	X(b)	✓(b)	✓(b)
Shifting dunes along the shoreline with Marram	X(b)	X(b)	X(b)	✓(b)	✓(b)
Fixed coastal dunes with herbaceous vegetation	X(b)	X(b)	X(b)	✓(b)	✓(b)
Humid dune slacks	X(c)	X(c)	X(c)	X(c)	X(c)
Natterjack toad	X(d)	X(d)	X(d)	X(d)	X(d)
Redshank	X(f)	✓(e)	X(f)	X(f)	X(f)
Teal	X(f)	✓(e)	X(f)	X(f)	X(f)
Shelduck	N/A	N/A	N/A	N/A	N/A

Oystercatcher	N/A	N/A	N/A	N/A	N/A
Curlew	X(f)	✓(e)	X(f)	X(f)	X(f)
Pintail	N/A	N/A	N/A	N/A	N/A
Grey Plover	N/A	N/A	N/A	N/A	N/A
Knot	N/A	N/A	N/A	N/A	N/A
Dunlin	N/A	N/A	N/A	N/A	N/A
Black-tailed Godwit	X(f)	✓(e)	X(f)	X(f)	X(f)
Bar-tailed Godwit	N/A	N/A	N/A	N/A	N/A

(a) An intertidal plough will be used to lay cable on completion of creation of the cable route through the dunes. The zone of disturbance for the cable installation is expected to be around 15 metres total width for each cable. The two cables to the Douglas Offshore Platform are expected to be laid at a minimum separation distance of 30 metres, within two separate trenches. The minimum cables burial depth (top of cables) is expected to be between two and three metres. This will involve the direct impact to the mudflats and sandflats, and other habitats directly north of the dune habitat along the beach at the HDD exit pit. It is possible that siltation and turbidity effects may arise following the works in this area, however, the construction methodology has been designed to lay cable during low tide and this will reduce the potential for sediment plumes and impacts from siltation and turbidity. Consequently, undertaking cable laying activities at low tide will reduce the risk of releasing sediment-bound contaminants as trenches will be back-filled following cable installation. The physical act of disturbing the sediment is therefore unlikely to result in an LSE. Effects of heat on benthic ecology are not considered to result in LSE due to the depth that the cables are buried and absence of a heat source. However, the potential exists for accidental pollution events to take place during cable installation activities. Accidental spills of fuel or oils or other chemicals used during the installation or decommissioning of the cable have the potential to adversely affect the intertidal ecology of this area. It is also considered that there is a risk of introducing non-native invasive species into this habitat Therefore, an LSE cannot be ruled out in the absence of mitigation.

(b) HDD is the construction methodology through the qualifying dune habitats of the Dee Estuary Ramsar site. This method of construction will prevent direct habitat loss, disturbance and fragmentation of habitat. However, works during the construction phase of the Proposed Development are expected to give rise to significant localised dust emissions and potential pollution events. This could deposit on the qualifying habitats of the Ramsar. This may negatively affect photosynthesis, respiration and transpiration in the vegetation communities present. Therefore, in the absence of mitigation, an LSE cannot be ruled out.

(c) An intertidal temporary access route for the Proposed Development is proposed along the boundary of the dune habitat, which comprises bare sand. Works adjacent to the dune habitat will be limited to these vehicle movements only, being used for movement from/to the works area. Therefore, disturbance from noise, vibration or pollution events is

expected to be negligible. Additionally, the route will be matted to minimise damage to the underlying habitat. On this basis, no LSE are predicted to arise.

(d) HDD is the assumed methodology for installing the cables through the Dee Estuary/ Aber Dyfdwy Ramsar qualifying habitats. This method removes the potential for both direct and indirect impacts to the population of Natterjack Toad during cabling activities as the cables are laid approximately 1 m below the surface, avoiding direct disturbance to the land above. On this basis no LSEs are predicted to arise.

(e) The bird survey counts found, Teal, Black-tailed Godwit, Curlew, and Redshank all to be present within the RLB. Redshank, Teal, Curlew and Black-tailed Godwit were present during the Warren Farm count. It is considered that in the absence of mitigation, therefore, it cannot be ruled out that there will be an LSE on these species with regard to disturbance and temporary habitat loss.

(f) Direct habitat loss (which will be temporary in nature), fragmentation effects, hydrological and air quality impacts are not predicted to result in LSE to these species.

Table 6-5 – Potential effects upon The Liverpool Bay SPA

Name of European Site and EU Code	Liverpool Bay SPA (UK9020294)				
Closest Point of European Site to the Red Line Boundary of TCPA Proposed Development	0 km (RLB falls adjacent)				
Key Likely Significant Effect: ✓ No Effect: X					
Qualifying Feature	Likely Effects of the Proposed Development				
	Direct habitat loss and/or mortality	Disturbance of qualifying species	Fragmentation of habitats/species	Hydrological effects	Air quality effects
Red-throated Diver	X(a)	X(a)	X(a)	X(b)	X(a)
Little Gull	X(a)	X(a)	X(a)	X(b)	X(a)
Common Scoter (in non-breeding season)	X(a)	X(a)	X(a)	X(b)	X(a)
Waterbird assemblage (with	X(a)	X(a)	X(a)	X(b)	X(a)

additional species red-breasted merganser and great Cormorant					
Little Tern	X(a)	X(a)	X(a)	X(b)	X(a)
Common Tern (in breeding season)	X(a)	X(a)	X(a)	X(b)	X(a)

(a) The Proposed Development falls adjacent to the SPA, and none of the qualifying species would be directly impacted. As such, direct habitat loss and fragmentation would not occur.

(b) While the Proposed Development is hydrologically linked to the SPA, effects are considered to be so minimal that no LSE is anticipated.

Table 6-6 – Potential effects upon Halkyn Mountain SAC

Name of European Site and EU Code	Halkyn Mountain SAC (UK0030163)				
Closest Point of European Site to the Red Line Boundary TCPA Proposed Development	10.5 km				
Key Likely Significant Effect: ✓ No Effect: X Not within ZoI: N/A					
Qualifying Feature	Likely Effects of the Proposed Development				
	Direct habitat loss and/or mortality	Disturbance of qualifying species	Fragmentation of habitats/species	Hydrological effects	Air quality effects
Calaminarian grasslands of the *Violetalia calaminariae*	X(a)	N/A	X(a)	X(c)	N/A
European dry heaths	X(a)	N/A	X(a)	X(c)	N/A

Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)	X(a)	N/A	X(a)	X(c)	N/A
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)	X(a)	N/A	X(a)	X(c)	N/A
Great crested newt	X(b)	X(b)	X(b)	X(c)	N/A

(a) The Proposed Development falls outside the SAC and, due to distance, none of the qualifying habitat (or functionally linked habitat) would be directly or indirectly impacted. As such, direct and indirect habitat loss and fragmentation would not occur.

(b) The Proposed Development falls c10.5 km outside of the SAC. Due to the distance between the Proposed Development and the SAC, no LSE is anticipated in relation to direct habitat loss, mortality, disturbance or fragmentation.

(c) The Proposed Development is not hydrologically linked to the SAC and, therefore, no LSE is anticipated.

Table 6-7 – Potential effects upon The Mersey Narrows and North Wirral Foreshore SPA

Name of European Site and EU Code	Mersey Narrows and North Wirral Foreshore SPA (UK9020287)				
Closest Point of European Site to Red Line Boundary TCPA Proposed Development	9.6 km				
Key Likely Significant Effect: ✓ No Effect: X Not within ZoI: N/A					
Qualifying Feature	Likely Effects of the Proposed Development				
	Direct habitat loss and/or mortality	Disturbance of qualifying species	Fragmentation of habitats/species	Hydrological effects	Air quality effects
Bar-tailed Godwit	N/A	N/A	N/A	N/A	N/A
Common Tern	N/A	N/A	N/A	N/A	N/A
Little Gull	N/A	N/A	N/A	N/A	N/A
Knot	N/A	N/A	N/A	N/A	N/A

a) No LSE on any receptors are predicted. This is due to the distance between the SPA and the Proposed Development, resulting in a sufficient buffer to avoid any impacts, either direct or indirect.

Table 6-8 – Potential effects upon The Mersey Narrows and North Wirral Foreshore Ramsar

Name of Site	Mersey Narrows and North Wirral Foreshore Ramsar				
Closest Point of European Site to the Red Line Boundary TCPA Proposed Development	3.86 km				
Key Likely Significant Effect: ✓ No Effect: X Not within ZoI: N/A					
Qualifying Feature	Likely Effects of the Proposed Development				
	Direct habitat loss and/or mortality	Disturbance of qualifying species	Fragmentation of habitats/species	Hydrological effects	Air quality effects
Bar-tailed Godwit	N/A	N/A	N/A	N/A	N/A
Little Gull	N/A	N/A	N/A	N/A	N/A
Common Tern	N/A	N/A	N/A	N/A	N/A
Knot	N/A	N/A	N/A	N/A	N/A
Cormorant	N/A	N/A	N/A	N/A	N/A
Oystercatcher	N/A	N/A	N/A	N/A	N/A

Grey Plover	N/A	N/A	N/A	N/A	N/A
Sanderling	N/A	N/A	N/A	N/A	N/A
Dunlin	N/A	N/A	N/A	N/A	N/A
Redshank	✓(a)	✓(a)	N/A	N/A	N/A

(a) The bird survey counts found Redshank to be present within the RLB; therefore, there is potential for this species to be found within the RLB during construction. **It is considered that in the absence of mitigation, it cannot be ruled out that there will be a Likely Significant Effect on this species from disturbance and temporary habitat loss.**

Table 6-9 – Potential effects upon The River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC

Name of Site	River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC				
Closest Point of European Site to the Red Line Boundary TCPA Proposed Development	22.5 km				
Key Likely Significant Effect: ✓ No Effect: X Not within ZoI: N/A					
Qualifying Feature	Likely Effects of the Proposed Development				
	Direct habitat loss and/or mortality	Disturbance of qualifying species	Fragmentation of habitats/species	Hydrological effects	Air quality effects
Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	N/A	N/A	N/A	N/A	N/A

Atlantic salmon	X (a)	✓(a)	✓(a)	✓(a)	✓(a)
Floating water-plantain	N/A	N/A	N/A	N/A	N/A
Sea lamprey	X (a)	✓(a)	✓(a)	✓(a)	✓(a)
Brook lamprey	X (a)	✓(a)	✓(a)	✓(a)	✓(a)
River lamprey	X (a)	✓(a)	✓(a)	✓(a)	✓(a)
Bullhead	N/A	N/A	N/A	N/A	N/A
Otter	N/A	N/A	N/A	N/A	N/A

(a) Direct impacts to watercourses within the SAC will be avoided. However, noise and vibrational disturbance during HDD and cable pulling may affect migratory and breeding activity if carried out at sensitive times of the year, and pollution events could lead to habitat degradation and/or mortality of fish. **Therefore, in the absence of mitigation, an LSE cannot be ruled out.**

6.5. POTENTIAL IN-COMBINATION EFFECTS

6.5.1. A short-list of ten “Other Developments” for the in-combination assessment were included. The table provides justification (spatial, temporal and other justifications) for the inclusion or exclusion of each of the Other Developments from the short-list. Table 6-10, below, provides a summary of the potential in-combination LSE identified.

6.5.2. Potential for in-combination LSE was confirmed in relation to three of the Other Developments; 1a, 1b and 1c. In addition, in-combination LSE are assumed in relation to an additional one of the Other Developments (1d).

Table 6-10 – Potential In-Combination Effects that may result in LSE

Other Development Reference	Planning Regime/Reference	Description of Other Development	Assessment of Potential In-Combination LSE
1a	Consented Development FUL/000246/23	Liverpool Bay CCS Limited was granted planning permission, subjected to planning conditions, in May 2024, to construct new infrastructure and modify existing facilities at the Point of Ayr (PoA) Terminal in Flintshire to operate with carbon dioxide. This includes; retention and use of existing structures, plant and ancillary development (including access roadway and landscaping) forming the Point of Ayr gas terminal for the transport of carbon dioxide and the demolition/removal of redundant structures at the terminal; construction and use of new infrastructure required for carbon dioxide service at the Point of Ayr gas terminal; retention and use of the existing 20 inch diameter gas pipeline, condensate pipes and associated cables from the Point of Ayr gas terminal to the Mean Low Water Spring mark for the transport of carbon dioxide and associated	This Consented Development is located adjacent to the Proposed Development. Yes. Potential in-combination (cumulative) impacts of disturbance to aquatic species of The Dee Estuary SAC/Ramsar and The River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid SAC, and bird species of The Dee Estuary SPA if construction is undertaken at the same time as the Proposed Development.

Other Development Reference	Planning Regime/Reference	Description of Other Development	Assessment of Potential In-Combination LSE
		activities; removal of the Shut Down Valve compound associated with the existing 20 inch diameter gas pipeline from the Point of Ayr gas terminal to the Mean Low Water Spring mark and appropriate restoration/remediation; construction and use of two 33kV electricity and fibre optic connections from Point of Ayr gas terminal to the Mean Low Water Spring mark; and construction and use of two kiosks and associated fenced compounds located on the line of the proposed 33kV electricity and fibre optic connections.	
1b	NSIP - PINS Reference: EN070007 :HyNet North West CO_2 Pipeline Development Consent Order (DCO Proposed Development)	A newbuild CO_2 pipeline that will transport CO_2 produced and captured by future hydrogen producing facilities and existing industrial premises in north-west England and north Wales for offshore storage. The CO_2 pipeline will comprise both newbuild and existing pipelines that will be covered under the DCO (DCO Proposed Development). Distance	Yes. Potential in-combination (cumulative) impacts of disturbance to qualifying species of The Dee Estuary SAC/SPA/Ramsar and River Dee and Bala Lake SAC if construction is undertaken at the same time.

Other Development Reference	Planning Regime/Reference	Description of Other Development	Assessment of Potential In-Combination LSE
		from Proposed development is 1.1 km, South East.	
1c	HyNet – CO_2 Offshore Works. Transportation and Storage Project	Continuation of cables from the Proposed Development out to the offshore platforms and works to the offshore platforms. Note: Other Development 1b is different to Other Development 1d (below) as it relates to the cables as opposed to the pipelines.	This Other Development is located adjacent to the Proposed Development. Yes. Potential in-combination (cumulative) impacts of disturbance to aquatic species of The Dee Estuary SAC/Ramsar and The River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid SAC, and bird species of The Dee Estuary SPA if construction is undertaken at the same time as the Proposed Development.
1d	HyNet – CO_2 Offshore Storage	Eni offshore pipelines, wellheads, platforms and other facilities for CO_2 storage; Marine licence and CO_2 storage permit; The construction period expected is within 2024-2030; and The development directly connects to the Proposed Development and extends northwards out to sea.	This development is located adjacent to the Proposed Development as they are a continuation of one another, with the Proposed Development relating infrastructure landwards of MLWS and the Offshore Storage project relating to infrastructure seawards of the MHWS. As such, on a

Other Development Reference	Planning Regime/Reference	Description of Other Development	Assessment of Potential In-Combination LSE
			precautionary approach, it is assumed that there is potential for in-combination (cumulative) impacts of disturbance to qualifying species of The Dee Estuary SAC/SPA/Ramsar and The River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid SAC if construction is undertaken at the same time as the Proposed Development.
2	TCPA – Flintshire County Council (FCC) Reference: FUL/000077/22	Erection of 21 affordable dwellings with adoptable highway access	No. The development is 3.34 km away. The other Development falls outside the European Sites, with no functionally linked land. No potential impact pathways identified.
3	TCPA – FCC Reference: 43/2024/1247/MD	Change of use / conversion / part extension / part demolition to create mixed use development, comprising 18 no. apartments (Use Class C3), 5 no. holiday lets (Use Class C6), Café/Bar/Commercial Unit, Office Hub, car parking, landscaping and all associated works.	No. The development is 4.8 km away. The other Development falls outside the European Sites, with no functionally linked land. No potential impact pathways identified.

Other Development Reference	Planning Regime/Reference	Description of Other Development	Assessment of Potential In-Combination LSE
4	TCPA – FCC Reference: 43/2023/0071	Erection of 45 dwellings, construction of a new vehicular access, landscaping and associated works	No. The development is 3.65 km away and falls outside the European Sites. The Other Development confirmed that there will be no direct or indirect impacts to any European Sites as a result of the development. The other development site does not support qualifying habitats or species (or functionally linked land) of the European Sites. No potential impact pathways identified.
5	Ref 041031 Point Of Ayr Caravan Camp	Installation of 6 no. LPG gas storage tanks	No. This development falls outside the European Sites and does not support qualifying habitats or species (or functionally linked land) of the European Sites. No potential impact pathways identified.
6	FUL/000077/22	Erection of 21 affordable dwellings with adoptable highway access	No. The development is 3.34 km away and falls outside the European Sites. The other Development falls outside the European Sites, with no

Other Development Reference	Planning Regime/Reference	Description of Other Development	Assessment of Potential In-Combination LSE
			functionally linked land. No potential impact pathways identified
7	43/2024/1247/MD	Change of use / conversion / part extension / part demolition to create mixed use development, comprising 18 no. apartments (Use Class C3), 5 no. holiday lets (Use Class C6), Café/Bar/Commercial Unit, Office Hub, car parking, landscaping and all associated works.	No. The development is 4.8 km away and falls outside the European Sites, with no functionally linked land. No potential impact pathways identified

6.6. SCREENING CONCLUSION

6.6.1. In the absence of appropriate mitigation measures, the following LSE are predicted:

6.6.2. The Proposed Development will occur within Annex I habitats mudflats and sandflats not covered by seawater at low tide, for which the Dee Estuary/Aber Dyfrdwy SAC and Dee Estuary Ramsar are designated. Consequently, LSE on these habitats are predicted to arise from the Proposed Development alone, as described in Section 6.4.

6.6.3. LSE cannot be screened out on the following Annex 1 species of bird; little tern, teal, black tailed godwit, curlew and redshank, which are qualifying species of the Dee Estuary/Aber Dyfrdwy SPA, Dee Estuary Ramsar. Consequently, LSE on these ornithological features have the potential to arise from the Proposed Development alone, as described in Section 6.4.

6.6.4. Additionally, LSE cannot be screened out on the following Annex 1 fish species, salmon and sea, river and brook lamprey for which the Dee Estuary/Aber Dyfrdwy SAC and River Dee & Bala Lake SAC are designated. Consequently, LSE on these qualifying features have the potential to arise from the Proposed Development alone, as described in Section 6.4.

6.6.5. Potential for in-combination LSE was confirmed in relation to three Other Developments adjacent to the Proposed Development. In addition, there is potential for in-combination effects in relation to an additional one Other Development.

6.6.6. All LSE identified are subject to further assessment of the potential for adverse effects on the integrity of the European sites. This is discussed further in Section 7 of this document.

7. APPROPRIATE ASSESSMENT (AA)

7.1. APPROACH

7.1.1. This section considers the potential effects identified during screening (Section 6) in more detail in terms of their nature and extent. The objective of the AA section is to establish whether the Proposed Development will adversely affect the integrity of the European Sites, taking into account mitigation measures and the potential for further in-combination effects that may arise from other plans or projects.

7.1.2. The following steps have been incorporated into the assessment so far to help determine the need for an AA:

- Gathering information on, and exploring the reasons for, the relevant European Site designations;
- Determining the nature of the environmental conditions required to maintain the integrity of the European Sites and the trends in associated environmental processes; and
- Identifying whether the Proposed Development could lead to an impact on any identified processes that support the European Sites;

7.1.3. The purpose of the AA, therefore, is to:

- Determine whether the identified impact could result in an adverse effect on the integrity of the European Sites; and
- Develop mechanisms to enable the delivery of measures to avoid or mitigate any identified potential effects.

7.2. DEE ESTUARY/ABER DYFRDWY SAC AND RAMSAR

7.2.1. The Stage 1: Screening identified that the Proposed Development may result in LSE on some of the qualifying habitats of the Dee Estuary/Aber Dyfrdwy SAC and Ramsar through various pathways. These include:

Table 7-1 – Dee Estuary/Aber Dyfrdwy SAC and Ramsar features

Feature	LSE	How LSE Will Arise	Mitigation
Mudflats and sandflats not covered by seawater at low tide	Hydrological effects during cable installation	Accidental pollution events. Impacts including release of sediment bound contaminants and associated deposition during installation using a cable plough or trencher and any repair / maintenance activities. The spread of invasive non-native species may arise from marine vessels through release of ballast water and from larval release from the hulls of vessels and intertidal ploughing/trenching activities during cable installation and operation.	The Dee Estuary SAC covers 10,573.73 ha of intertidal mudflats and sandflats not covered by seawater at low tide. The intertidal cable works have the potential to impact 1.8 ha (worst case scenario, using the cable trenching machine), equating to 0.017% of this habitat type within the SAC. Therefore, effects to this habitat type are considered to be of negligible significance due to the scale of the impacts and the resilience of the habitat. To mitigate these impacts further the ploughing of the intertidal zone, cable laying activities and backfilling will take place, as far as practicable during low tide, so that any suspension of sediment or release of any sediment bound contaminants within the water column will be limited. The cable trenches will be backfilled immediately by machine and with subsequent infilling from deposited suspended sediments, upon laying of the cable to minimise damage and disturbance to the habitat, any disturbance will be temporary and localised. The habitat will rapidly recover following any physical disturbance.

Feature	LSE	How LSE Will Arise	Mitigation
			A Biosecurity Risk Assessment (BRA) and draft invasive non-native species (INNS) Management Plan will be submitted for agreement with the local authority in relation to all marine operation activities associated with the Proposed Development. This will include the use of the specialised vessels required to undertake the cabling work. Mitigation will include inspections and appropriate cleaning of any vessels used together with an updated survey prior to the start of works to map any INNS. Any INNS recorded will be demarcated and avoided as far as is feasible. Should any vessels, plant, equipment or PPE come into contact with any INNS material they will be thoroughly cleaned before leaving the working area. This will ensure the risk of any spread of INNS is controlled. To ensure any pollution events don't occur the intertidal works will be undertaken at low tide, where possible, allowing any potential pollution events to be contained and localised within the works area. Accidental pollution events plans and control measures will be incorporated into the CEMP and will include regular checks and maintenance of equipment and

Feature	LSE	How LSE Will Arise	Mitigation
			machinery, proper storage of any chemicals and/ or fuels. Access to spill kits on site. To prevent the release of any sediment bound contaminants the work will be undertaken, where possible, at low tide and trenches backfilled through natural deposition.
Embryonic shifting dunes	Habitat loss and disturbance, fragmentation, hydrological and air quality effects	This habitat exists within and adjacent to the proposed cable route that forms part of the Proposed Development. In the absence of mitigation, works to construct the cable route would lead to disturbance, loss and fragmentation of existing shifting dune habitat. In addition, if the equipment to be used for the works is faulty or poorly maintained, this could result in pollution incidents, either when operational or tracking in and out. The proposed route is located directly adjacent to and within the intertidal zone; therefore, any pollution incidents in this location may give rise to significant hydrological effects in the form of contamination of the water and associated habitats.	The Proposed Development will use HDD for the burial of the cables. This will prevent any habitat loss, direct disturbance and fragmentation effects. The HDD exit pit falls within the intertidal working area, directly adjacent to the embryonic shifting dune habitat. At the exit pit, a 10 m^3 containment sump will be present to contain any spillage of any drilling fluid. To further avoid potential contamination by drilling fluid, minimal use of a plant-friendly alternative to bentonite, which will be contained within the working area, will be used during HDD. Drilling mud will be cleaned up by hand using hand shovels, buckets, and soft-bristled brooms, minimising damage to existing vegetation. This will form part of the wider pollution prevention measures. Dust prevention measures will include: vehicle tracking will be along the

Feature	LSE	How LSE Will Arise	Mitigation
		Air quality impacts may also arise as a result of dust emissions and deposition from the tracking / movement and operation of machinery. Significant dust deposition on the dune habitat could lead to long-term habitat degradation and eventual loss. The LSE constitute some of the threats to the SAC, as identified in the Core Management Plan for the site. These threats include physical loss and damage, and both toxic and non-toxic contamination. As such, the LSE are in direct contravention of the overall conservation objectives for the site, as defined by NRW.	proposed access route between the Talacre Beach car park and the HDD exit pit will be covered by matting to prevent compaction of the habitat below and facilitate access across the bare sand, but will also reduce disturbance of bare sand below, thereby reducing dust emissions.
Shifting dunes along the shoreline	Habitat loss and disturbance, fragmentation, hydrological and air quality effects	This habitat exists within and adjacent to the proposed cable route that forms part of the Proposed Development. In the absence of mitigation, works to construct the cable route would lead to disturbance, loss and fragmentation of existing shifting dune habitat. In addition, if the equipment to be used for the works is faulty or	As mentioned above, the Proposed Development will use HDD for the burial of the cables, beneath the dunes to prevent any habitat loss, direct disturbance and fragmentation effects. The HDD exit pit falls within the intertidal working area, close to the shifting dune habitat. The containment sump will be present to contain any spillage of any drilling fluid. To further avoid potential contamination by drilling

Feature	LSE	How LSE Will Arise	Mitigation
		poorly maintained, this could result in pollution incidents, either when operational or tracking in and out. The proposed route is located directly adjacent to and within the intertidal zone; therefore, any pollution incidents in this location may give rise to significant hydrological effects in the form of contamination of the water and associated habitats. Air quality impacts may also arise from dust emissions and deposition from the tracking / movement and operation of machinery. Significant dust deposition on the dune habitat could lead to long-term habitat degradation and eventual loss. The LSE constitute some of the threats to the SAC, as identified in the Core Management Plan for the site. These threats include physical loss and damage, and both toxic and non-toxic contamination. As such, the LSE are in direct contravention of the overall conservation objectives for the site, as defined by NRW.	fluid, minimal use of a plant-friendly alternative to bentonite, which will be contained within the working area, will be used during HDD. Drilling mud will be cleaned up by hand using hand shovels, buckets, and soft-bristled brooms, minimising damage to existing vegetation. This will form part of wider pollution prevention measures for the site. Dust prevention measures will also be implemented to avoid any significant air quality effects. Including, as mentioned, vehicle tracking along the proposed access route between the Talacre Beach car park and the HDD exit pit will be covered by matting to prevent compaction of the habitat below and facilitate access across the bare sand, but will also reduce disturbance of bare sand below, thereby reducing dust emissions.

Feature	LSE	How LSE Will Arise	Mitigation
Fixed coastal dunes with herbaceous vegetation	Habitat loss and disturbance, fragmentation, hydrological and air quality effects	This habitat exists within and adjacent to the proposed cable route that forms part of the Proposed Development. In the absence of mitigation, works to construct the cable route would lead to disturbance, loss and fragmentation of existing shifting dune habitat. In addition, if the equipment to be used for the works is faulty or poorly maintained, this could result in pollution incidents, either when operational or tracking in and out. The proposed route is located directly adjacent to and within the intertidal zone; therefore, any pollution incidents in this location may give rise to significant hydrological effects in the form of contamination of the water and associated habitats. Air quality impacts may also arise from dust emissions and deposition from the tracking / movement and operation of machinery. Significant dust deposition on the dune habitat	As mentioned above, the Proposed Development will use HDD for the burial of the cables to prevent any habitat loss, direct disturbance and fragmentation effects. The HDD exit pit falls within the intertidal working area, close to the shifting dune habitat. The containment sump will be present to contain any spillage of any drilling fluid. To further avoid potential contamination by drilling fluid, minimal use of a plant-friendly alternative to bentonite, which will be contained within the working area, will be used during HDD. Drilling mud will be cleaned up by hand using hand shovels, buckets, and soft-bristled brooms, minimising damage to existing vegetation. This will form part of wider pollution prevention measures., Dust prevention measures, as outlined previously, will also be implemented to avoid any significant air quality effects. Including, vehicle tracking along the proposed access route between the Talacre Beach car park and the HDD exit pit will be covered by matting to prevent compaction of the habitat below and facilitate access across the bare sand,

Feature	LSE	How LSE Will Arise	Mitigation
		could lead to long-term habitat degradation and eventual loss. The LSE constitute some of the threats to the SAC, as identified in the Core Management Plan for the site. These threats include physical loss and damage, and both toxic and non-toxic contamination. As such, the LSE are in direct contravention of the overall conservation objectives for the site, as defined by NRW.	but will also reduce disturbance of bare sand below, thereby reducing dust emissions.
River Lamprey and Sea Lamprey	Habitat disturbance, fragmentation, hydrological and air quality effects	Lamprey may be indirectly affected during trenching from noise and vibrational disturbance, which could affect spawning behaviour if carried out at sensitive times. In addition, if the equipment to be used for the works is faulty or poorly maintained, this could result in pollution incidents, leading to contamination of the water and associated habitats, and potential mortality of Lamprey. Air quality impacts may also arise from dust emissions and deposition from the tracking / movement and operation of	To minimise the likelihood of significant indirect impacts on fish species, trenching works will avoid the core spawning period for lamprey, which is typically April to May, where practicable. Dust prevention measures, as outlined previously, will also be implemented to avoid any significant air quality effects. Including, vehicle tracking along the proposed access route between the Talacre Beach car park and the HDD exit pit will be covered by matting to prevent compaction of the habitat below and facilitate access across the bare sand, but will also reduce disturbance of bare sand below, thereby reducing dust emissions.

Feature	LSE	How LSE Will Arise	Mitigation
		machinery. Potential impacts from electromagnetic fields (EMF). .	The cable will be buried at c2.5 m below the surface. EMF will therefore have no impact on marine life, including fish species.

7.2.2. Providing the mitigation measures described above are secured and implemented, there are not expected to be any Adverse Effects on Site Integrity (AESI) of the SAC from the Proposed Development.

7.3. RIVER DEE AND BALA LAKE/AFON DYFRDWY A LLYN TEGID SAC

7.3.1. The Stage 1: Screening identified that the Proposed Development may result in LSE on some of the qualifying habitats of the River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid SAC through various channels. The LSE and associated mitigation for lamprey is addressed in Table 7-1 above. The LSE and associated mitigation for Atlantic Salmon is addressed in Table 7-2 below.

Table 7-2 River Dee and Bala Lake/Afon Dyfrdwy A Llyn Tegid SAC features

Feature	Impact	How LSE Will Arise	Mitigation
Atlantic salmon	Habitat disturbance, hydrological and air quality effects	Atlantic salmon may be indirectly affected during the sub-tidal cable laying including the presence of a vessel and associated cable laying activities resulting in the generation of noise and vibrational disturbance. This could affect migratory behaviour if carried out at sensitive times. In addition, if the	The intertidal cable installation will be undertaken at low tide and the plough will excavate and bury the cable as it moves along the cable route to reduce potential impacts from sediment plumes and potential sediment bound contaminant mobilisation. The construction period will be limited to the minimum practicable time for completing the works, to minimise the duration of potential disturbance impacts to Atlantic salmon.

Feature	Impact	How LSE Will Arise	Mitigation
		equipment to be used for the works is faulty or poorly maintained, this could result in pollution incidents, leading to contamination of the water and associated habitats, and potential mortality of Atlantic salmon.	

7.3.2. Providing the mitigation measures described above are secured and implemented, there are not expected to be any Adverse Effects on Site Integrity (AESI) of the SAC from the Proposed Development.

7.4. DEE ESTUARY SPA/RAMSAR - BREEDING, PASSAGE AND WINTERING BIRDS

7.4.1. For ease of reference and the overlapping nature of the assessment, LSE in relation to bird species have been grouped together in this section, covering all European Sites that may be affected by the Proposed Development.

7.4.2. Data from the survey counts are presented in Table 5-2 and Table 5-3, which consider the location at Warren Farm adjacent to the Proposed Development which may impact upon the notified features of the Dee Estuary SPA/Ramsar site.

7.4.3. An LSE has been identified for different species at each of these locations as not all species were present at each location during the twelve-month survey period. (see species.

7.4.4. Table 7-3).

7.4.5. Impacts of noise and visual disturbance during construction may affect little tern, redshank, teal, black-tailed godwit, and curlew. In addition, some temporary habitat loss could affect redshank. These LSE, if incurred at sensitive times of the year for these species, could affecting breeding, passage or overwintering behaviours and, in turn, affect the long-term survival of the bird populations present. These would be in direct contravention of the conservation objectives of the SPA and Ramsar sites, which, in summary, are to maintain the populations of each bird species recorded at favourable levels relative to the five-year mean peak and maintain the existing coverage of habitats utilised by these species.

Table 7-3 – Notified features of the Dee Estuary SPA/Ramsar

Species	Associated Designation	>1% of SPA Citation Population	>1% of WeBS five-year peak mean	Species-specific Information on Disturbance	Mitigation
Little Tern	Dee Estuary SPA	Yes	N/A	Little tern are considered to have a medium level of sensitivity to disturbance. Birds that are within 300m should be considered when commencing work.	Mitigation details are provided below in paragraph 7.4.5 – 7.4.8
Redshank	Dee Estuary SPA and Ramsar	No	No	Redshank are considered very tolerant of moderate and high-level visual disturbance stimuli. However, birds that are closer than 100 m should be considered when commencing works. Redshank are considered particularly sensitive to noise stimuli but will forage close to plant	None required as Redshank numbers did not exceed 1% of the SPA citation population or the WeBS five-year peak mean.

Species	Associated Designation	>1% of SPA Citation Population	>1% of WeBS five-year peak mean	Species-specific Information on Disturbance	Mitigation
				(<50 m) and to workers (>75 m) meaning a source noise threshold of 100 to 105 dB can be applied with caution required above 87 to 92 dB.	
Teal	Dee Estuary SPA and Ramsar	Yes (c)	Yes (c)	There is very little information about the sensitivity of Teal to disturbance, so for this assessment the results for Mallard from Cutts *et al.* (2013) (**Ref. 6.10**) are used as proxy. This species is relatively tolerant of moderate and high-level visual disturbance; however, birds that are closer than 200 m should be	Wintering Teal only exceeded 1% of the SPA population and five-year WeBS peak mean at the Warren Farm ponds and adjacent land area with the peak count occurring in December 2021. Mitigation details are provided below in paragraph 7.4.5. – 7.4.7.

Species	Associated Designation	>1% of SPA Citation Population	>1% of WeBS five-year peak mean	Species-specific Information on Disturbance	Mitigation
				considered at the commencement of works. Ross & Lilley (2014) (Ref. 7.1) also found that Teal were only displaced at distances less than 50 m.	
Black-tailed Godwit	Dee Estuary SPA and Ramsar	Yes (c)	Yes (c)	Black-tailed Godwit are considered tolerant of moderate visual disturbance. Birds that are closer than 250 m should be considered when commencing works. Black-tailed Godwit are considered moderately sensitive to noise stimuli and will approach works to within 100 m. At this distance using noise response	Wintering Black-tailed Godwit only exceeded 1% of the SPA population and five-year WeBS peak mean at the Warren Farm ponds and adjacent land area with the peak count occurring in January 2022. Mitigation details are provided below in paragraph 7.4.5. – 7.4.7.

Species	Associated Designation	>1% of SPA Citation Population	>1% of WeBS five-year peak mean	Species-specific Information on Disturbance	Mitigation
				data, the source level required to create high level disturbance would be 110 to 115 dB.	
Curlew	Dee Estuary SPA and Ramsar	Yes (c)	No	Curlew are considered to be wary of moderate and high-level disturbance. Birds that are closer than 300 m should be considered when commencing works. Curlew are moderately sensitive to noise stimuli and at 100 m the noise level required to illicit a high-level disturbance is 107 to 112 dB, increasing to 117 to 122 dB at 300 m.	Wintering Curlew exceeded 1% of the SPA population at the Warren Farm ponds Mitigation details are provided below in paragraphs 7.4.5. – 7.4.7

7.4.6. Mitigation would involve avoidance of construction works during periods of significant numbers or levels of activity of these species within the potential disturbance distance buffer of 300 m from works. The requirement for this mitigation would be informed by an ECoW, who would monitor the bird activity within this buffer in relation to time of year and state of tide. Avoidance of sensitive periods of the year would be implemented when birds from European sites are likely to be present in significant numbers, and the construction period would be limited to the minimum practicable time for completing the works to minimise the duration of any significant impacts. The risk of disturbance would be monitored and works with potential to cause disturbance will cease, as directed by the ECoW, until such time that the bird species are no longer within the Zone of Influence, if such a threat exists.

7.4.7. Temporal restrictions outlined here would broadly cover the period of September to March, inclusive. To avoid potential disturbance of bird species associated with the European sites, works should take place between April and August, inclusive. However, if this is not feasible and works must be carried out between September and March, this can only be carried out under supervision of the ECoW.

7.4.8. If any birds are showing disturbance behaviour within the 300 m buffer zone during any stage of the works, the ECoW would stop work until it can be determined that disturbance has subsided.

7.4.9. With regards to Little Tern, should construction works take place between April and July inclusive, the ECoW will identify any potential habitat with the potential to be used for little tern nesting within 300 m of the development and check for little tern breeding activity before any works are undertaken. If nesting Little Tern are present within 300 m of the Proposed Development, no works will be undertaken until breeding is completed.

7.4.10. With the recommended mitigation in place regarding the avoidance of disturbance due to temporal restrictions on any works where required, via the use of an ECoW to inform the requirement for mitigation it can be concluded that there will be no AESI of the Dee Estuary SPA/Ramsar with regard to birds.

7.5. CONCLUSION ON CONSIDERATION OF EFFECTS IN ISOLATION

7.5.1. Based on the AA completed, it can be concluded that there will be **no AESI in relation to any of the European Sites or their associated qualifying habitats or species**. This is on the provision that appropriate mitigation measures are secured and fully implemented during construction.

7.6. CONCLUSION IN-COMBINATION WITH OTHER DEVELOPMENTS

7.6.1. Other Developments 1a, 1b, 1c, 1d are schemes that are part of the Project (HyNet North West). Therefore, it is reasonable to assume that these developments will secure appropriate mitigation to avoid any adverse impacts on the integrity of the European Sites.

7.6.2. For Other Development 1d it is proposed to apply to the NRW Marine Licensing Team for a Marine Licence, which will seek consent under The Marine Works (Environmental Impact Assessment) (Amendment) Regulations 2017. Obtaining a Marine Licence will require clear demonstration that appropriate mitigation measures will be implemented as part of Other Development 1d. Therefore, with a Marine Licence in place and appropriate mitigation implemented for the duration of the works, no in-combination AESI are predicted for the Proposed Development and Other Development 1d.

7.6.3. Overall, in consideration of the above, it is predicted that there would be **no in-combination adverse effects on the integrity of the European Sites**.

8. REFERENCES

Ref. 3.1 – Defra (2021) Changes to the Habitats Regulations 2017 https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017 [Accessed 27/04/2022]

Ref. 3.2 – HM Government (2019) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Ref. 3.3 – Welsh Government. Planning Policy Wales. Edition 11. 2021 https://gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf [Accessed 27/04/2022]

Ref. 3.4 – The Flintshire Local Development Plan 2015-2030, Adopted Plan 24th January 2023 https://www.flintshire.gov.uk/en/PDFFiles/Planning/Examination-Library-Documents/FINAL-LDP-Written-Statement-English.pdf [Accessed 01/03/2023]

Ref. 3.5 – European Commission (2000). Managing Natura 2000 Sites, the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. https://ec.europa.eu/environment/nature/natura2000/management/docs/art6/EN_art_6_guide_jun_2019.pdf [Accessed [26/04/2022]

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Ref. 4.1 – JNCC (2016). SAC and SPA Standard Data Forms and Ramsar Information Sheets. Available online: http://www.jncc.gov.uk/ [Accessed 27/04/2022]

Ref. 4.2 – NRW (formerly Countryside Council for Wales (CCW)) (2008a. Core Management Plan (including conservation objectives) for River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid SAC. https://naturalresources.wales/media/673374/River_Dee___Bala_Lake_32_Plan.pdf [Accessed 27/04/2022].

Ref. 4.3 – NRW (formerly CCW) (2008b) Core Management Plan (including conservation objectives) for Deeside and Buckley Newt sites SAC. https://naturalresources.wales/media/671740/Deeside_and_Buckley_WES32_Plan_English.pdf [Accessed 27/04/2022].

Ref. 4.4 – NRW (formerly CCW) (2008c) Core Management Plan (including conservation objectives) for Mynydd Helygain / Halkyn Mountain SAC.

https://naturalresources.wales/media/672548/Halkyn%20SAC%20Plan%20_Eng_.pdf [Accessed 27/04/2022].

Ref. 4.5 – NRW (formerly CCW) (2008d) Core Management Plan (including conservation objectives) for Dee Estuary / Aber Dyfrdwy SPA. https://naturalresources.wales/media/671834/Dyfi%20SPA-Plan%20English.pdf [Accessed 27/04/2022].

Ref. 4.6 – JNCC (2009) Information Sheet on Ramsar Wetlands. Available at: https://jncc.gov.uk/jncc-assets/RIS/UK11082.pdf [Accessed 27/04/2022]

Ref. 4.7 – Natural England (2015) Site Improvement Plan: Liverpool Bay/ Bae Lerpwl. Available at: http://publications.naturalengland.org.uk/publication/5296526586806272?category=6329101765836800 [Accessed 24/07/2022]

Ref. 4.8 – Natural Resources Wales (2012) Liverpool Bay / Bae Lerpwl Special Protection Area. Available at: https://naturalresources.wales/media/678824/liverpool-bay-bae-lerpwl-spa-conservation-advice.pdf [Accessed 24/07/2022]

Ref. 4.9 – Natural England (2015) Site Improvement Plan: Dee Estuary/Aber Dyfrdwy & Mersey Narrows http://publications.naturalengland.org.uk/publication/6579320399069184?category=6329101765836800 [Accessed 24/07/2022]

Ref. 4.10 – Natural Resources Wales (2013) Mynydd Helygain / Halkyn Mountain Special Area of Conservation https://naturalresources.wales/media/672548/Halkyn SAC Plan_Eng_.pdf [Accessed 24/07/2022]

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Annexures

Annex A

HRA TABLES

Annex A1 – Relevant European Sites

Site Name	Distance from the Red Line Boundary	Summary of reasons for designation
The Dee Estuary/Aber Dyfrdwy SAC (EU Code - UK0030131)	0 km (within the Proposed Development RLB)	The Dee Estuary/Aber Dyfrdwy SAC covers 15,805.27 ha and spans across England and Wales. Annex I habitats that are a primary reason for the selection of this site: • Mudflats and sandflats not covered by seawater at low tide • *Salicornia* and other annuals colonising mud and sand • Atlantic salt meadows Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: • Estuaries • Annual vegetation of drift lines • Vegetated sea cliffs of the Atlantic and Baltic Coasts • Embryonic shifting dunes • Shifting dunes along the shoreline with *Ammophila arenaria* • Fixed coastal dunes with herbaceous vegetation • Humid dune slacks Annex II species present as a qualifying feature, but not a primary reason for site selection: • sea lamprey (*Petromyzon marinus*) • river lamprey (*Lampetra fluviatilis*) • petalwort (*Petalophyllum ralfsii*)
The Dee Estuary SPA (EU Code - UK9013011)	0 km (within the Proposed Development RLB)	The Dee Estuary SPA covers 14,294.95 ha and spans across England and Wales. The reasons for designation are as follows:

Site Name	Distance from the Red Line Boundary	Summary of reasons for designation
		The SPA qualifies under Article 4.1 of the Wild Birds Directive as it is used regularly by 1% or more of the Great Britain populations of the following species listed in Annex I in any season: • common tern (*Sterna hirundo*) (breeding season) • little tern (*Sterna albifrons*) (breeding season) • sandwich tern (*Sterna sandvicensis*) (on passage) • bar-tailed godwit (*Limosa lapponica*) (over winter) The SPA qualifies under Article 4.2 of the Wild Birds Directive as it is used regularly by 1% or more of the biogeographical populations of the following regularly occurring migratory species (other than those listed in listed in Annex I) in any season: • redshank (*Tringa totanus*) (on passage and over winter) • shelduck (*Tadorna tadorna*) (over winter) • teal (*Anas crecca*) (over winter) • pintail (*Anas acuta*) (over winter) • oystercatcher (*Haematopus ostralegus*) (over winter) • grey Plover (*Pluvialis squatarola*) (over winter) • knot (*Calidris canutus islandica*) (over winter) • dunlin (*Calidris alpina*) (over winter) • black-tailed Godwit (Limosa limosa) (over winter) • curlew (*Numenius Arquata*) (over winter) The SPA also qualifies under Article 4.2 of the Wild Birds Directive as it is used regularly by over 20,000 waterbirds in any season (assemblage qualification). In the non-breeding season, the area regularly supports 120,726 individual waterbirds, including great crested grebe

Site Name	Distance from the Red Line Boundary	Summary of reasons for designation
		(*Podiceps cristatus*), cormorant (*Phalacrocorax carbo*), shelduck, wigeon, teal, pintail, oystercatcher, grey plover, lapwing, knot, sanderling (*Calidris alba*), dunlin, black-tailed godwit, bar-tailed godwit, curlew and redshank.
The Dee Estuary Ramsar (EU Code - UK11082)	0 km (within the Proposed Development RLB)	The Dee Estuary Ramsar covers 14,303.02 ha and spans across England and Wales. The site qualifies under Ramsar Criterion 1 because it contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographical region. This includes the following Annex I Habitats: • Estuaries • Mudflats and sandflats not covered by seawater at low tide • Annual vegetation of drift lines • Vegetated sea cliffs of the Atlantic and Baltic coasts • *Salicornia* and other annuals colonising mud and sand • Atlantic salt meadows • Embryonic shifting dunes • Shifting dunes along the shoreline with *Ammophila arenaria* • Fixed dunes with herbaceous vegetation • Humid dune slacks The site qualifies under Ramsar Criterion 2 because it supports vulnerable, endangered, or critically endangered species or threatened ecological communities: • natterjack toad (*Epidalea calamita*)

Site Name	Distance from the Red Line Boundary	Summary of reasons for designation
		The site qualifies under Ramsar Criterion 5 because it supports an assemblage of waterbirds of international importance: • In the non-breeding season, the area regularly supports 120,726 individual waterbirds (five-year peak mean 1994/95 - 1998/99). The site qualifies under Criterion 6 because it regularly supports 1% of the individuals in the populations of the following species or subspecies of waterbird: Peak counts in spring/autumn: • redshank Peak counts in winter: • teal • shelduck • oystercatcher • curlew • pintail • grey Plover • knot • dunlin • black-tailed godwit • bar-tailed godwit
Liverpool Bay SPA (EU Code - UK9020294)	0 km (adjacent to the Proposed Development RLB)	Liverpool Bay SPA covers 252,757 ha and spans across England and Wales. Qualifying species – Over the winter: • red-throated diver (*Gavia stellata*) • little gull (*Hydrocoloeus minutus*) • common scoter (*Melanitta nigra*)

Site Name	Distance from the Red Line Boundary	Summary of reasons for designation
		Breeding: • little tern • common tern The SPA also supports an Article 4.2 qualification (79/409/EEC): An internationally important assemblage of birds. Over the winter the area regularly supports 120726 waterfowl including red-throated diver, common scoter, little gull, red-breasted merganser (*Mergus serrator*), great cormorant, black-headed gull (*Chroicocephalus ridibundus*), common gull (*Larus canus*), common eider (*Somateria mollissima*), northern fulmar (*Fulmarus glacialis*), great black-backed gull (*Larus marinus*), great crested grebe, common guillemot (*Uria aalge*), northern gannet (*Morus bassanus*), atlantic puffin (*Fratercula arctica*), herring gull (*Larus argentatus*), black-legged kittiwake (*Rissa tridactyla*), lesser black-backed gull (*Larus fuscus*), great northern diver (*Gavia immer*), european shag (*Phalacrocorax aristotelis*), razorbill (*Alca torda*), velvet scoter (*Melanitta fusca*).
Mersey Narrows and North Wirral Foreshore Ramsar (EU Code - UK11042)	8 km north-east	Mersey Narrows and North Wirral Foreshore Ramsar covers 2,078.41 ha in England. The site qualifies under Ramsar Criterion 4 because it regularly supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions: • During 2004/05 - 2008/09 the Mersey Narrows and North Wirral Foreshore Ramsar site supported important numbers of non-breeding little gulls and common terns.

Site Name	Distance from the Red Line Boundary	Summary of reasons for designation
		The site qualifies under Ramsar Criterion 5 because it regularly supports 20,000 or more waterbirds: • During the winters 2004/05 - 2008/09, the Mersey Narrows and North Wirral Foreshore Ramsar site supported an average peak of 32,402 individual waterbirds The site qualifies under Ramsar Criterion 6 because it regularly supports 1% of the individuals in the populations of the following species or subspecies of waterbird in any season: • knot • bar-tailed godwit
Mersey Narrows and North Wirral Foreshore SPA (EU code - UK9020287)	8 km north-east	Mersey Narrows and North Wirral Foreshore SPA covers 2078.36 ha in England. Qualifying species – During the breeding season the area regularly supports: • common tern Qualifying species – Over the winter the area regularly supports: • bar-tailed godwit • red knot Qualifying species – On passage: • little gull The SPA also supports an Article 4.2 qualification (2009/147/EC): An internationally important assemblage of birds in the non-breeding season including great cormorant, eurasian oystercatcher, grey plover, sanderling, red knot, dunlin, bar-tailed godwit and common redshank.

Site Name	Distance from the Red Line Boundary	Summary of reasons for designation
Halkyn Mountain SAC (EU code - UK0030163)	10.5 km south-east	Halkyn Mountain SAC covers 610.36 ha in Wales. Annex I habitats that are a primary reason for the selection of this site: • calaminarian grasslands of the *Violetalia calaminariae* • European dry heaths • *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils *Molinion caeruleae* • Semi-natural dry grasslands and scrubland facies: on calcareous substrates *Festuco Brometalia* Annex II species present as a qualifying feature, but not a primary reason for site selection: • great crested newt (GCN) (*Triturus cristatus*)
River Dee and Bala Lake / Afin Dyfrdwy a Llyn Tegid SAC (EU code-UK0030252)	22 km	River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid SAC covers 1,308.93 ha and spans across England and Wales. Annex I habitats that are a primary reason for the selection of this site: • Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation Annex II species that are a primary reason for the selection of this site: • atlantic salmon (*Salmo salar*) • floating water-plantain (*Luronium natans*) Annex II species present as a qualifying feature, but not a primary reason for site selection: • sea lamprey (*Petromyzon marinus*)

Site Name	Distance from the Red Line Boundary	Summary of reasons for designation
		• brook lamprey (*Lampetra planeri*) • river lamprey (*Lampetra fluviatilis*) • bullhead (*Cottus gobio*) • otter (*Lutra lutra*)

Annex A2 – Known threats and pressures upon relevant designated sites

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
The Dee Estuary/Aber Dyfrdwy SAC (EU Code - UK0030131)	The following are listed as factors with the highest negative effects upon the SAC: • Changes in biotic conditions; • Invasive non-native species; • Changes in abiotic conditions; and • Outdoor sports and leisure activities, recreational activities. The following are listed as factors with positive effects upon the SAC: • Grazing; • Improved access to site; • Modification of cultivation practices; and • Interpretative centres.	A summary of threats relating to the Dee Estuary/Aber Dyfrdwy SAC is provided below. Full details can be found in The Dee Estuary advice document (Natural England, Welsh Assembly Government and CCW, January 2010): • Physical loss – Removal (e.g. land claim, dredging), smothering (e.g. depositing dredge soil, beach feeding). • Physical damage – Siltation (e.g. dredging, outfalls, coastal development), abrasion (e.g. recreational activity, vehicles), selective extraction (e.g. aggregate extraction). • Toxic contamination – Introduction of synthetic compounds (e.g. TBT, PCBs from	• Public access/disturbance • Changes in species distribution • Invasive species • Climate change • Coastal squeeze • Inappropriate scrub control • Water pollution • Fisheries • Inappropriate coastal management • Overgrazing • Direct impact from third party • Marine litter • Planning permission: general • Marine consents and permits • Wildfire/arson • Air Pollution - Impact of Pressure atmospheric nitrogen deposition • Physical modification

[Point of Ayr Cable Route Foreshore Works

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
		effluent outfalls), introduction of non-synthetic compounds (e.g. effluent outfalls, crude oil), introduction of radionuclides. • Non-toxic contamination – Changes in nutrient loading (e.g. agricultural run-off, effluent outfalls), changes in organic loading (e.g. effluent outfalls, aquaculture), changes in thermal regime (e.g. power station discharges), changes in turbidity (e.g. effluent outfalls, dredging, depositing dredged spoil), changes in salinity (e.g. water abstraction, effluent outfalls). • Biological disturbance – Introduction of	

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
		microbial pathogens (e.g. effluent outfalls), introduction of non-native species and translocation, selective extraction of species (e.g. samphire picking, bait collection).	
The Dee Estuary SPA (EU Code - UK9013011)	The following are listed as factors with the highest negative effects upon the SPA: • Invasive non-native species; • Changes in biotic conditions; • Outdoor sports and leisure activities, recreational activities; and • Changes in abiotic conditions. The following are listed as factors with positive effects upon the SPA: • Grazing; • Annual and perennial non-timber crops; • Improved access to site; • Interpretative centres;	A summary of threats relating to the Dee Estuary SPA is provided below. Full details can be found in The Dee Estuary advice document (Natural England, Welsh Assembly Government and CCW, January 2010): • Physical loss – Removal (e.g. land claim, dredging), smothering (e.g. depositing dredge soil, beach feeding). • Physical damage – Siltation (e.g. dredging, outfalls), abrasion (e.g. recreational activity, vehicles), selective	• Public access/disturbance • Changes in species distribution • Invasive species • Climate change • Coastal squeeze • Inappropriate scrub control • Water pollution • Fisheries: Commercial marine and estuarine • Inappropriate coastal management • Overgrazing • Direct impact from third party • Marine litter • Predation

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
	• Improved access to site; and • Modification of cultivation practices.	extraction (e.g. aggregate extraction). • Non-physical disturbance -Noise and visual presence (land/water-based recreation, marine traffic). • Toxic contamination – Introduction of synthetic compounds (e.g. TBT, PCBs), introduction of non-synthetic compounds (e.g. domestic effluent outfalls, crude oil), introduction of radionuclides. • Non-toxic contamination – Changes in nutrient loading (e.g. agricultural run-off, domestic effluent outfalls), changes in organic loading (e.g. domestic effluent	• Planning permission: general • Marine consents and permits • Wildfire/arson • Air Pollution: impact of atmospheric nitrogen deposition • Transportation and threat service corridors • Physical modification

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
		outfalls, aquaculture), changes in thermal regime (e.g. power station discharges), changes in turbidity (e.g. effluent outfalls, dredging, depositing dredged spoil), changes in salinity (e.g. water abstraction, effluent outfalls). • Biological disturbance – Introduction of microbial pathogens (e.g. domestic/industrial effluent outfalls), introduction of non-native species and translocation, selective extraction of species (e.g. samphire picking, bait collection).	
The Dee Estuary Ramsar (EU Code - UK11082)	• Introduction/invasion of exotic animal species • Introduction/invasion of non-native plant species • Overfishing	A summary of threats relating to the Dee Estuary Ramsar is provided below. Full details can be found in The Dee Estuary advice document	• Introduction/invasion of exotic animal species (including the chinese mitten crab (*Eriocheir sinensis)* and alien woody

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
	• Pollution – Industrial waste • General disturbance from human activities • Transport infrastructure development • Sand dune erosion and accretion along the north Wales open coast.	(Natural England, Welsh Assembly Government and CCW, January 2010): • Physical loss – Removal (e.g. land claim, dredging), smothering (e.g. depositing dredge soil, beach feeding). • Physical damage – Siltation (e.g. dredging, outfalls), abrasion (e.g. recreational activity, vehicles), selective extraction (e.g. aggregate extraction). • Non-physical disturbance -Noise and visual presence (land/water-based recreation, marine traffic). • Toxic contamination – Introduction of synthetic compounds (e.g. TBT, PCBs), introduction of non-synthetic compounds	species at Gronant Dunes) (Ref. 4.6) • Overfishing • Pollution – industrial waste • General disturbance from human activities • Transport infrastructure development • Sand dune erosion and accretion along the north Wales open coast.

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
		(e.g. domestic effluent outfalls, crude oil), introduction of radionuclides. • Non-toxic contamination – Changes in nutrient loading (e.g. agricultural run-off, domestic effluent outfalls), changes in organic loading (e.g. domestic effluent outfalls, aquaculture), changes in thermal regime (e.g. power station discharges), changes in turbidity (e.g. effluent outfalls, dredging, depositing dredged spoil), changes in salinity (e.g. water abstraction, effluent outfalls). • Biological disturbance – Introduction of microbial pathogens	

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
		(e.g. domestic/ industrial effluent outfalls), introduction of non-native species and translocation, selective extraction of species (e.g. samphire picking, bait collection).	
Liverpool Bay SPA (EU Code - UK9020294)	The following are listed as factors with the highest negative effects upon the SPA: • Pollution to surface waters (limnic & terrestrial, marine & brackish) • Outdoor sports and leisure activities, recreational activities • Invasive non-native species • Human induced changes in hydraulic conditions • Mining and quarrying • Exploration and extraction of oil or gas • Shipping lanes, ports, marine constructions • Airports, flightpaths	A summary of threats relating to the Liverpool Bay SPA is provided below. Full details can be found in the Liverpool Bay SPA advice document (Natural England, Welsh Assembly Government and CCW, October 2012) (Ref. 4.8): • Physical loss of supporting habitat – Removal of habitat feature (e.g. offshore development, capital dredging, "active dredging zones"), Smothering (e.g. by artificial structures, disposal of dredge spoil).	• Fisheries: Commercial marine and estuarine (Ref. 4.7) • Transportation and service corridors • Fisheries: Recreational marine and estuarine • Extraction: non-living resources • Siltation • Water pollution

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
	• Utility and service lines • Marine water pollution • Roads, paths and railroads • Fishing and harvesting aquatic resources • Renewable abiotic energy use The following are listed as factors with positive effects upon the SPA: • Improved access to site • Interpretative centres	• Physical damage to their habitats – Siltation (e.g. run-off, channel dredging, outfalls), abrasion (e.g. anchoring, cables), selective extraction (e.g. aggregate dredging) • Non-physical disturbance – Noise (e.g. boat activity), visual (e.g. recreational activity). • Toxic contamination – Introduction of synthetic compounds (e.g. pesticides, TBT, PCBs), introduction of non-synthetic compounds (e.g. heavy metals, hydrocarbons), introduction of radionuclides. • Non-toxic contamination – Changes in nutrient loading (e.g.	

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
		agricultural run-off, outfalls), changes in organic loading (e.g. mariculture, outfalls), changes in thermal regime (e.g. power stations), changes in turbidity (e.g. run-off, dredging), changes in salinity (e.g. water abstraction, outfalls). • Biological disturbance - Introduction of microbial pathogens, introduction of non-native species and translocation, human induced mortality of bird species (e.g. accidental turbine strike), human induced mortality of bird species (e.g. entanglement or by-catch), selective extraction and removal of prey species (e.g.	

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
		commercial and recreational fishing).	
Mersey Narrows and North Wirral Foreshore Ramsar (EU Code - UK11042)	• Unspecific development urban use • Recreation/tourism disturbance • Vegetation succession	N/A – This site is in England only.	• Unspecific development urban use (Ref. 4.6) • Recreation/tourism disturbance • Vegetation succession
Mersey Narrows and North Wirral Foreshore SPA (EU code - UK9020287)	The following are listed as factors with the highest negative effects upon the SPA: • Outdoor sports and leisure activities, recreational activities • Invasive non-native species • Changes in abiotic conditions • Changes in biotic conditions There are no factors listed with positive effects to the SPA.	N/A – This site is in England only.	• Public access/disturbance (Ref. 4.9) • Changes in species distribution • Invasive species • Climate change • Coastal squeeze • Inappropriate scrub control • Water pollution • Fisheries: Commercial marine and estuarine • Inappropriate coastal management • Overgrazing • Direct impact from third party • Marine litter • Predation

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
			• Planning permission: general • Marine consents and permits • Wildfire/arson • Air Pollution: impact of atmospheric nitrogen deposition • Transportation and threat service corridors • Physical modification
Halkyn Mountain SAC (EU code - UK0030163)	The following are listed as factors with the highest negative effects upon the SPA: • Soil pollution and solid waste (excluding discharges) • Grazing • Human induced changes in hydraulic conditions • Outdoor sports and leisure activities, recreational activities • Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and	A summary of threats relating to the Halkyn Mountain SAC is provided below. Full details can be found in the Halkyn Mountain Core Management Plan, CCW (2008) **(Ref. 4.10)** *Crassula helmsii* colonisation of GCN breeding ponds threatens the condition of the GCN feature across the site. • Overgrazing (currently year-round grazing by sheep) and related agricultural activities such as winter stock feeding threaten the condition of the	N/A – This site is in Wales only.

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
	taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.) • Mining and quarrying • Fire and fire suppression • Air pollution, air-borne pollutants • Problematic native species • Utility and service lines • Invasive non-native species • Biocenotic evolution, succession The following are listed as factors with positive effects upon the SPA: • Grazing	grassland and heathland features • Rhosesmore unit - Undergrazing. This is an outlier to the main bulk of the grazed common land. • Bryn Gwoig unit - There has been non-compliance (stock feeding and winter grazing) with current S15 Management Agreement which needs to be renewed and regularly monitored. • Pant Quarry unit - Stablow field boundary is poor, so unit is accessed by stock from adjacent common land, which maintain a short-cropped sward of less benefit to amphibian population. The other field within this unit is	

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
		cut for silage again diminishing the habitats benefit to amphibians. • Pen y Parc unit - Pond within shelterbelt silting up, needs dredging to deepen and removal of trees on southern margin to promote use by amphibian species. • Treetops unit - Poor boundary, sheep access unit all year round from adjacent common land, the unit is not currently grazed for conservation benefit for amphibian species. • Ael-y-Bryn unit - Currently horse grazed. Amphibian friendly grazing regime needs to be established over unit.	

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
		• Tyn-Mynudd unit - If the unit is left ungrazed / unmown for consecutive years, scrub establishment could threaten the condition of the calaminarian grassland feature. • Higher Gowdal unit - Unlawful access by motorised vehicles is threatening the condition of the calaminarian grassland in this unit. • Lower Gowdal unit - Unlawful access by motorised vehicles is threatening the condition of the calaminarian grassland in this unit. Siltation and vegetation of ponds, which are not currently managed to enhance usage by GCN.	

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
River Dee and Bala Lake/Afin Dyfrdwy a Llyn Tegid SAC (EU code – UK0030252)	The following are listed as factors with positive effects upon the SAC: • Other ecosystem modifications	In general, for this SAC there is currently insufficient data to identify management requirements specific to individual units. Full details can be found in the River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid SAC Core Management Plan (Ref 4.11). • Physical damage to floating plants and their habitat from motorised craft threaten floating water-plantain. • Invasive non-native species (such as impact of *Elodea canadensis* on floating water-plantain populations, and impact of non-native crayfish on bullhead densities). • Barriers to movement of fish species. • Disturbance of otters and their habitat.	The Site Improvement Plan refers to issues listed in the Prioritised Improvement Plan from NRW (Ref 12), which details the following: • Angling/fishing • Overgrazing • Herbicide use • Watercourse modifications (including weirs and other structures) • Invasive species • Water pollution (diffuse sources)

Site Name	Activities with greatest effect upon the site, as listed on Natura 2000 Standard Data Forms	Threats summarised from information within the Core Management Plan	Pressures and threats listed within the Site Improvement Plan/Information Sheet
		• Water quality and levels – potential sources of pollution, nutrient enrichment and/or suspended solids, such as (but not confined to) diffuse pollution or disturbance of sediment. • Dredging activities. • Spawning site availability for qualifying species.	

Annex A3 – Conservation Objectives

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
The Dee Estuary/Aber Dyfrdwy SAC (EU Code - UK0030131)	The conservation objective for the "estuaries" feature of the Dee Estuary/Aber Dyfrdwy SAC is to maintain the feature in favourable condition, as defined below: 1. The aggregate total extent of all estuarine communities within the site is maintained; 2. The spatial distribution of estuarine communities within the site is maintained; 3. The extent of individual estuarine habitat features within the site is maintained; 4. The variety and relative proportions of sediment and rocky substrates within the estuary is maintained; 5. The variety and extent of any notable subtidal sediment communities is maintained; 6. The variety and extent of notable intertidal hard substrata communities is maintained; and 7. The spatial and temporal patterns of salinity, suspended sediments and nutrients concentrations are maintained within limits sufficient to satisfy the requirements of statements 1 to 6 above. The conservation objective for the "mudflats and sandflats" feature of the Dee Estuary/Aber Dyfrdwy SAC is to maintain the feature in favourable condition, as defined below:	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the CS of its Qualifying Features, by maintaining or restoring: • The extent and distribution of qualifying natural habitats and habitats of qualifying species; • The structure and function (including typical species) of qualifying natural habitats; • The structure and function of the habitats of qualifying species; • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely; • The populations of qualifying species; and

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	1. The total extent of mudflat and sandflat communities within the site is maintained; 2. The proportions of individual mudflat and sandflat communities within the site are maintained; 3. The topography of the intertidal flats and the dynamic processes of channel migration and sinuosity across the flats are maintained; and 4. The abundance of typical species of the mudflat and sandflat feature within the site is maintained. The conservation objective for the "*Salicornia* and other annuals colonising mud and sand" feature of the Dee Estuary/Aber Dyfrdwy SAC is to maintain the feature in favourable condition, as defined below: 5. subject to natural processes, each of the following below conditions are met: a. The total extent of pioneer saltmarsh vegetation communities within the site is maintained; b. The presence of pioneer saltmarsh vegetation communities as part of transitions from intertidal sediment communities to higher saltmarsh are maintained;	• The distribution of qualifying species within the site.

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	c. The abundance of the typical species of the pioneer saltmarsh vegetation communities is maintained; d. The abundance of the notable species of the pioneer saltmarsh vegetation communities is maintained; and Regardless of natural processes, the condition below is also met: 1. The overall extent and abundance of common cord grass (Spartina *anglica*) is not increasing within the pioneer saltmarsh zone. The conservation objective for the "Atlantic salt meadow" feature of the Dee Estuary/Aber Dyfrdwy SAC is to maintain the feature in favourable condition, as defined below: 1. The total extent of Atlantic salt meadow vegetation communities within the site is maintained; 2. The proportions of individual Atlantic salt meadow vegetation communities within the site are maintained; 3. The zonation of Atlantic salt meadow vegetation communities and their transitions to fresh water and terrestrial vegetation are maintained; 4. The morphology of saltmarsh creeks and pans and the process of their evolution are maintained;	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	5. The extent of ungrazed areas of salt meadow within the estuary is maintained and there is no increase in grazing intensity over the rest of the salt meadow; 6. The relative abundance of the typical species of the Atlantic salt meadow vegetation communities is maintained; and 7. The abundance of the notable species of the Atlantic salt meadow vegetation communities is maintained. The conservation objective for the "annual vegetation of drift lines" feature of the Dee Estuary/Aber Dyfrdwy SAC is to maintain the feature in a favourable condition, as defined below: 1. The extent of coarse sediment/shingle formations capable of supporting drift line vegetation communities within the site is maintained; 2. The presence of annual drift line vegetation communities within the site is maintained; and 3. The presence of the typical species of the annual drift line vegetation communities is maintained. The conservation objective for River Lamprey feature of the Dee Estuary/Aber Dyfrdwy SAC is to maintain the feature in a favourable condition, as defined below:	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	1. The migratory passage of both adult and juvenile River Lamprey through the Dee Estuary between Liverpool Bay and the River Dee is unobstructed by physical barriers and/or poor water quality; 2. The five-year mean count of River Lampreys recorded by the Chester Weir fish trap is no less than 55 under the monitoring regime in use prior to notification; and 3. The abundance of prey species forming the River Lamprey's food resource within the estuary, is maintained. The conservation objective for sea Lamprey feature of the Dee Estuary/Aber Dyfrdwy SAC is to maintain the feature in a favourable condition, as defined below: 1. The migratory passage of both adult and juvenile Sea Lampreys through the Dee Estuary between Liverpool Bay and the River Dee is unobstructed by physical barriers and/or poor water quality; 2. The five-year mean count of Sea Lampreys recorded by the Chester Weir fish trap is no less than 18 under the monitoring regime in use prior to notification; and	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	3. The abundance of prey species forming the Sea Lamprey's food resource within the estuary, is maintained. (Natural England, Welsh Assembly Government, CCW, January 2010) **(Ref. 4.13)**	
The Dee Estuary SPA (EU Code - UK9013011)	The conservation objective for the "wintering Bar-tailed Godwit" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Bar-tailed Godwit population is no less than 1,150 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The extent and spatial distribution of vegetation less than 10cm in height across the saltmarsh is maintained. 4. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 5. Aggregations of Bar-tailed Godwit roosting or feeding or on the intertidal flats or saltmarsh are not subject to significant disturbance. The conservation objective for the "breeding Common Tern" feature of The Dee Estuary SPA is	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • The extent and distribution of the habitats of the qualifying features; • The structure and function of the habitats of the qualifying features; • The supporting processes on which the habitats of the qualifying features rely; • The population of each of the qualifying features; and • The distribution of the qualifying features within the site.

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	to maintain the feature in a favourable condition, as defined below: 1. The five-year mean population size for the breeding Common Tern population is no less than 392 breeding pairs [i.e. the five-year mean between 1995-1999]. 2. The five-year mean productivity of the breeding Common Tern population is no less than 1.34 chicks fledging per breeding pair per year [i.e. the five-year mean between 1995-1999]. 3. The abundance of Common Tern prey species within the estuary is maintained. 4. Common Terns are able to pass freely between the Dee Estuary and their breeding site at Shotton Lagoons and Reedbeds without obstruction. 5. Aggregations of Common Terns roosting on the upper shore over high tide are not subject to significant disturbance. The conservation objective for the "breeding Little Tern" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year mean population size for the breeding Little Tern population is no less than 69 breeding pairs [i.e. the five-year mean between 1995-1999].	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	2. The five-year mean productivity of the breeding Little Tern population is no less than 0.80 chicks fledging per breeding pair per year [i.e. the five-year mean between 1995- 1999]. 3. The breeding site is not subject to significant disturbance. 4. The extent of shingle habitat at Gronant, which is suitable for nesting Little Terns is maintained. 5. Aggregations of Little Terns roosting on the beach at Gronant or Point of Ayr over high tide are not subject to significant disturbance. The conservation objective for the "passage Sandwich Tern" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year mean peak population size for the autumn passage Sandwich Tern population is no less than 957 individuals [i.e. the five-year mean peak between 1995- 1999]. 2. Aggregations of Sandwich Terns roosting on the upper shore over high tide are not subject to significant disturbance. The conservation objective for the "passage Redshank" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the passage Redshank population is no less than	

[Point of Ayr Cable Route Foreshore Works

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	8,795 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Redshank prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Redshank are not subject to significant disturbance. The conservation objective for the "wintering Shelduck" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Shelduck population is no less than 7,725 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	3. The abundance and dispersion of Shelduck prey species are maintained at levels sufficient to support the population size in 1. 4. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 5. Aggregations of loafing or feeding Shelduck are not subject to significant disturbance. The conservation objective for the "wintering Teal" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Teal population is no less than 5,251 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The extent of saltmarsh and the spatial distribution of its constituent vegetation community types is maintained. 4. Greater than 25% cover of seed-bearing plants is maintained during winter across the saltmarsh. 5. The extent of standing water pools or 'flashes' in the saltmarsh is maintained.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	6. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas; vii. aggregations of loafing or feeding Teal are not subject to significant disturbance. The conservation objective for the "wintering Pintail" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Pintail population is no less than 5,407 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The extent of saltmarsh and the spatial distribution of its constituent vegetation community types is maintained. 4. The abundance and dispersion of Pintail prey species is maintained at levels required to support the population size in 1. 5. Greater than 25% cover of soft leaved herbs and grasses is maintained during winter across the saltmarsh.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	6. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around loafing areas and feeding areas. 7. Aggregations of loafing or feeding Pintail are not subject to significant disturbance. The conservation objective for the "wintering Oystercatcher" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Oystercatcher population is no less than 22,677 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Oystercatcher prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 5. The extent of rocky shore at Hilbre Island, Middle Eye, Little Eye and Tanskey Rocks is maintained.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	6. The extent and height of the shingle spit at Point of Ayr is maintained. 7. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 8. Aggregations of roosting or feeding Oystercatcher are not subject to significant disturbance. The conservation objective for the "wintering Grey Plover" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Grey Plover population is no less than 1,643 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Grey Plover prey species are maintained at levels sufficient to support the population size in 1 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Grey Plover are not subject to significant disturbance. The conservation objective for the "wintering Knot" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Knot population is no less than 12,394 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Knot prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Knot are not subject to significant disturbance.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	The conservation objective for the "wintering Dunlin" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Dunlin population is no less than 27,769 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Dunlin prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Dunlin are not subject to significant disturbance. The conservation objective for the "wintering Black-tailed Godwit" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Black-tailed Godwit population is no	

[Point of Ayr Cable Route Foreshore Works

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	less than 1,747 individuals [i.e. the five-year mean peak between 1994/95- 1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Black-tailed Godwit prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting and feeding Black-tailed Godwit are not subject to significant disturbance. The conservation objective for the "wintering Curlew" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Curlew population is no less than 3,899 individuals [i.e. the five-year mean peak between 1994/95-1998/99].	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Curlew prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Curlew are not subject to significant disturbance. The conservation objective for the "wintering Redshank" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Redshank population is no less than 5,293 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	3. The abundance and dispersion of Redshank prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Redshank are not subject to significant disturbance. The conservation objective for the "internationally important assemblage of regularly occurring waterbirds" feature of The Dee Estuary SPA is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering waterbird assemblage is no less than 120,726 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The relative proportions of waders and wildfowl comprising the wintering waterbird assemblage is maintained. 3. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	4. The extent of saltmarsh and the spatial distribution of its constituent vegetation community types is maintained. 5. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 6. The extent of rocky shore at Hilbre Island, Middle Eye, Little Eye and Tanskey Rocks is maintained. 7. The extent and height of the shingle spit at Point of Ayr is maintained. 8. The abundance of waterbird prey species are maintained at levels sufficient to support the population size in 1. 9. Greater than 25% cover of both seed-bearing plants and soft leaved herbs and grasses is maintained during winter across the saltmarsh. 10. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around roosting sites, loafing and feeding areas. 11. Aggregations of roosting, loafing or feeding waterbirds are not subject to significant disturbance.	
The Dee Estuary Ramsar (EU Code - UK11082)	The conservation objective for the "internationally important wetland regularly supporting 20,000 or more waterbirds" feature of The Dee Estuary	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	Ramsar Site is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering waterbird assemblage is no less than 120,726 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The relative proportions of waders and wildfowl comprising the wintering waterbird assemblage is maintained. 3. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained; saltmarsh and the spatial distribution of its constituent vegetation community types is maintained. 4. The extent and spatial distribution of saltmarsh vegetation less than 10 cm in height is maintained. 5. The extent of rocky shore at Hilbre Island, Middle Eye, Little Eye and Tanskey Rocks is maintained. 6. The extent and height of the shingle spit at Point of Ayr is maintained 7. The abundance of waterbird prey species10 are maintained at levels sufficient to support the population size in 1. 8. Greater than 25% cover of both seed-bearing plants and soft leaved herbs and grasses is	the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • The extent and distribution of the habitats of the qualifying features; • The structure and function of the habitats of the qualifying features; • The supporting processes on which the habitats of the qualifying features rely; • The population of each of the qualifying features; and • The distribution of the qualifying features within the site.

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	maintained during winter across the saltmarsh. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around roosting sites, loafing and feeding areas. 9. Aggregations of roosting, loafing or feeding waterbirds are not subject to significant disturbance. The conservation objective for the "passage Redshank" feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the passage Redshank population is no less than 8,795 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Redshank prey species are maintained at levels sufficient to support the population size in 1 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Redshank are not subject to significant disturbance. The conservation objective for the "wintering Shelduck" feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Shelduck population is no less than 7,725 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Shelduck prey species are maintained at levels sufficient to support the population size in 1. 4. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 5. Aggregations of loafing or feeding Shelduck are not subject to significant disturbance. The conservation objective for the "wintering Teal" feature of The Dee Estuary Ramsar site is to	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Teal population is no less than 5,251 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The extent of saltmarsh and the spatial distribution of its constituent vegetation community types is maintained. 4. Greater than 25% cover of seed-bearing plants is maintained during winter across the saltmarsh. 5. The extent of standing water pools or 'flashes' in the saltmarsh is maintained. 6. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites8 and feeding areas. 7. Aggregations of loafing or feeding Teal are not subject to significant disturbance. The conservation objective for the "Wintering Pintail" feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	1. The five-year peak mean population size for the wintering Pintail population is no less than 5,407 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The extent of saltmarsh and the spatial distribution of its constituent vegetation community types is maintained. 4. The abundance and dispersion of Pintail prey species is maintained at levels required to support the population size in 1. 5. Greater than 25% cover of soft leaved herbs and grasses is maintained during winter across the saltmarsh. 6. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around loafing areas, and feeding areas. 7. Aggregations of loafing or feeding Pintail are not subject to significant disturbance. The conservation objective for the "wintering Oystercatcher" feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Oystercatcher population is no less	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	than 22,677 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Oystercatcher prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 5. The extent of rocky shore at Hilbre Island, Middle Eye, Little Eye and Tanskey Rocks is maintained. 6. The extent and height of the shingle spit at Point of Ayr is maintained. 7. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 8. Aggregations of roosting or feeding Oystercatcher are not subject to significant disturbance. The conservation objective for the “wintering grey plover” feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below:	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	1. The five-year peak mean population size for the wintering Grey Plover population is no less than 1,643 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Grey Plover prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10 cm in height is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Grey Plover are not subject to significant disturbance. The conservation objective for the "wintering Knot" feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Knot population is no less than 12,394 individuals [i.e. the five-year mean peak between 1994/95-1998/99].	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained 3. The abundance and dispersion of Knot prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Knot are not subject to significant disturbance. The conservation objective for the "wintering Dunlin" feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Dunlin population is no less than 27,769 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	3. The abundance and dispersion5 of Dunlin prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Dunlin are not subject to significant disturbance. The conservation objective for the "wintering Black-tailed Godwit" feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Black-tailed Godwit population is no less than 1,747 individuals [i.e. the five-year mean peak between 1994/95- 1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Black-tailed Godwit prey species are maintained at levels sufficient to support the population size in 1.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting and feeding Black-tailed Godwit are not subject to significant disturbance. The conservation objective for the "wintering Bar-tailed Godwit" feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Bar-tailed Godwit population is no less than 1,150 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The extent and spatial distribution of vegetation less than 10cm in height across the saltmarsh is maintained. 4. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	5. Aggregations of Bar-tailed Godwit roosting or feeding or on the intertidal flats or saltmarsh are not subject to significant disturbance. The conservation objective for the "wintering Curlew" feature of The Dee Estuary Ramsar site is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Curlew population is no less than 3,899 individuals [i.e. the five year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Curlew prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm in height is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Curlew are not subject to significant disturbance. The conservation objective for the "wintering Redshank" feature of The Dee Estuary Ramsar site	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	is to maintain the feature in a favourable condition, as defined below: 1. The five-year peak mean population size for the wintering Redshank population is no less than 5,293 individuals [i.e. the five-year mean peak between 1994/95-1998/99]. 2. The extent of intertidal flats and the spatial distribution of their constituent sediment community types is maintained. 3. The abundance and dispersion of Redshank prey species are maintained at levels sufficient to support the population size in 1. 4. The extent and spatial distribution of saltmarsh vegetation less than 10cm is maintained. 5. Existing unrestricted bird sightlines of at least 200 m are maintained in every direction around both roosting sites and feeding areas. 6. Aggregations of roosting or feeding Redshank are not subject to significant disturbance.	
Liverpool Bay SPA (EU Code - UK9020294)	The conservation objective for Liverpool Bay/Bae Lerpwl SPA Interest feature 1: Internationally important non-breeding population of red-throated diver. The interest feature Red-throated Diver will be considered to be in favourable condition only when both of the following two conditions are met:	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • The extent and distribution of the

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	7. The size of the Red-throated Diver population is at, or shows only non-significant fluctuation around, the mean population at the time of designation of the SPA. to account for natural change; and 8. The extent of the supporting habitat within the site is maintained. The conservation objective for Liverpool Bay/Bae Lerpwl SPA Interest feature 2: Internationally important non-breeding population of common scoter. The interest feature common scoter will be considered to be in favourable condition only when each of the following two conditions is met: 9. The size of the common scoter population is at, or shows only non-significant fluctuation around the mean population at the time of designation of the SPA to account for natural change; and 10. The extent of the supporting habitat within the site is maintained. The conservation objective for Liverpool Bay/Bae Lerpwl SPA Interest feature 3: Non-breeding assemblage of over 20,000 waterbirds. The interest feature waterbird assemblage will be considered to be in favourable condition only when each of the following two conditions is met: 11. The size of the waterbird assemblage population shows only non-significant	habitats of the qualifying features; • The structure and function of the habitats of the qualifying features; • The supporting processes on which the habitats of the qualifying features rely; • The population of each of the qualifying features; and • The distribution of the qualifying features within the site.

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	fluctuation around the mean at the time of designation to allow for natural change; and 12. The extent of the waterbird assemblage supporting habitat within the site is maintained.	
Mersey Narrows and North Wirral Foreshore Ramsar (EU Code - UK11042)	N/A – This site is in England only.	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • The extent and distribution of the habitats of the qualifying features; • The structure and function of the habitats of the qualifying features; • The supporting processes on which the habitats of the qualifying features rely; • The population of each of the qualifying features; and • The distribution of the qualifying features within the site.

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
Mersey Narrows and North Wirral Foreshore SPA (EU code - UK9020287)	N/A – This site is in England only	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • The extent and distribution of the habitats of the qualifying features; • The structure and function of the habitats of the qualifying features; • The supporting processes on which the habitats of the qualifying features rely; • The population of each of the qualifying features; and • The distribution of the qualifying features within the site.
Halkyn Mountain SAC (EU code - UK0030163)	Conservation Objective for Feature 1: Calaminarian grassland of the *Violetalia calaminariae* type: • There will be no overall decline in the extent of this feature and where possible, opportunities will be sought to increase its extent, subject to the provision of suitable	N/A – This site is in Wales only.

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	substrate, delivered for example through quarry restoration schemes. • This habitat will support *Minuartia verna* and *Festuca ovina* along with common vascular plant such as *Plantago lanceolata*, *Rumex acetosa*, *Thymus praecox* and *Euphrasia spp*. • This habitat will support a prominent suite of bryophyte and lichen species: Lichen flora within this habitat will comprise a constant assemblage of generally common calcicole species. Ubiquitous elements will include the macro lichens *Cladonia rangiformis, C. pocillum, Peltigera rufescens* and the crustose lichen *Bacidia sabuletorum*. The small acrocarps *Bryum pallens, Dicranella varia* and *Weissia controversa* will also be very common bryophytes within the calaminarian grassland community forming low crusts with species of lichen and algae. • The nationally scarce bryophyte *Bryum pallescens* will also be a common plant in this habitat. • This habitat will support small areas of bare ground. • The sward height will be less than 5cm high. • Where possible, areas of this habitat will be fenced to allow the control of access and grazing levels otherwise uncontrolled on the urban common.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	• There will be an absence of taxa indicative of more mesotrophic, less toxic environmental conditions. • As far as is practically possible, factors affecting the achievement of the foregoing conditions are under control. Conservation Objective for Feature 2: European dry heath: • The heath communities are typified by a closed canopy dominated by a mixture of ericaceous shrubs such as bell heather and ling heather together with western gorse. Bilberry and Wavy hair grass will also prevail through the H12 and H18 communities. • European dry heath will cover c. 20% of the site and opportunities will be sought to increase its extent for example through quarry restoration schemes. • Opportunities will be sought where appropriate to improve the species diversity of existing stands. • As far as is practically possible, factors affecting the achievement of the foregoing conditions are under control. Conservation Objective for Feature 3: Semi-natural dry grassland and scrubland facies on calcareous substrates: • There will be no overall decline in the extent of this feature and opportunities will be sought to increase its extent for example	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	through quarry restoration schemes and bracken control programmes. • The calcareous grassland sward will support forbs such as *Carex spp.*, *Gallium verum, Helianthemum nummularium, Lotus corniculatus, Pilosella officinarum, Polygala vulgaris, Sanguisorba minor, Thymus praecox* along with characteristic grasses such as *Briza media, Festuca ovina* and *Koeleria macrantha*. • The CG1 community, owing to its open character, might also encompass frequent small areas of bare ground and exposed rock along with a moderate cover of terricolous lichens and acrocarpous mosses. • Uncommon vascular plants, including the locally scarce *Ophioglossum vulgatum, Botrychium lunaria, Gentianella marelle* and *Cirsium acaule*, will continue to prevail at favoured locations within this habitat. • There will be an absence of taxa indicative of more mesotrophic, environmental conditions within this habitat. • Agriculturally favoured species such as *Holcus lanatus, Lolium perenne* and *Trifolium repens* will be rare or absent within this habitat. • Bracken and tree/scrub species will be rare or absent within this habitat.	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	• The cover of rank grassland species such as *Arrhenatherum elatius* and *Dactylis glomerata* within this habitat will be nominal. • There will be an absence of introduced species (e.g. non-native cotoneaster). • As far as is practically possible, factors affecting the achievement of the foregoing conditions are under control. Conservation Objective for Feature 4: Molinia meadows on calcareous peaty or clayey-silt-laden soils *Molinion caeruleae* • Purple Moor Grass and short sedges such as Tawny Sedge, Flea Sedge, Carnation Sedge, Common Sedge and Glaucous Sedge will be frequent throughout the sward. Species such as devil's bit scabious, tormentil, marsh valerian and black knapweed will also prevail along with the bryophytes *Calliergon cuspidatum* and *Campylium stellatum*. • The habitat will continue to support marsh orchid and fragrant orchid. • Adequate hydrological conditions are maintained to sustain this habitat in terms of water quantity and quality (much of this habitat is fed by springs issuing from base rich rock). • There will be no overall decline in the extent of this feature and opportunities will be	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	sought to increase its extent where hydrological and edaphic factors permit. • Uncommon vascular plants, including the locally scarce *Valeriana diocia, Eriphorum latifolium, Carex diocica, Parnassia palustris, Eleocharis quinqueflora, Carex lepidocarpa* and *Gymnadenia conopsea* continue to prevail at favoured locations within this habitat. • As far as is practically possible, factors affecting the achievement of the foregoing conditions are under control. Conservation Objective for Feature 5: Great crested newt: • The site will continue to support at least 200 adult GCN as identified by torch surveys in the spring, in and around ponds within the pond clusters at Wern y Gaer, Pen yr Henblas, Rhes y Cae, Pant Quarry, Mount Villas, Mill Pond, Pant y Ffridd, Moel y gaer, Moel y crio, Plas Winta, Holywell Golf Course. • Terrestrial and aquatic habitats will be managed to ensure high variability and thus the availability of suitable breeding ponds, and of foraging, sheltering, dispersal and over-wintering areas. • The existing 99 ponds will be retained and restored where necessary and opportunities will be sought to deliver amphibian	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	conservation schemes as they arise in suitable locations across the site. • At least 50% of the 46 known GCN breeding ponds will have a water depth of 10cm of more during the summer months. • At least 50% of the 46 known GCN breeding ponds will support a good cover of native macrophytes, yet at least 25% of the water surface in these ponds will still remain open to encourage display areas. • Surrounding vegetation, particularly on the southern margins, will not heavily shade breeding ponds. • Fish will not be present in any GCN breeding ponds. • Water and wildfowl will not be encouraged on GCN breeding ponds. • Invasive aquatic species such as *Crassula helmsii* will not be present within any ponds. Where they are currently present, they will be subject to management. • No barriers to newt dispersal will be permitted, which might further fragment the site.	
River Dee and Bala Lake/Afin Dyfrdwy a Llyn Tegid SAC (EU code – UK0030252)	Conservation Objective for watercourse: 13. The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature. This will include elements of water quantity and quality,	Qualifying Features, by maintaining or restoring; • The extent and distribution of qualifying natural habitats and

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	physical habitat and community composition and structure. 14. Water quality standards for the river Dee follow those in the revised Common Standards Monitoring Guidance for Rivers (JNCC 2016). There will be no deterioration in water quality, as defined by these standards, other than that temporarily generated by natural variations in water flow or by man-made variations occurring as a result of operating the River Dee flow control regime within its normal operating parameters. 15. The Dee flow regime should remain within 10% of 'recent actual flow' as described by Bethune (2006). 16. The river planform and profile should be predominantly unmodified. Physical modifications having an adverse effect on the integrity of the SAC will be avoided. 17. Artificial factors impacting on the capability of each feature to occupy the full extent of its potential range should be modified where necessary to allow passage, e.g. weirs, bridge sills, or other forms of barrier. 18. Natural limiting factors such as waterfalls, which may limit the natural range of a feature	habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • The populations of qualifying species, and, • The distribution of qualifying species within the site.

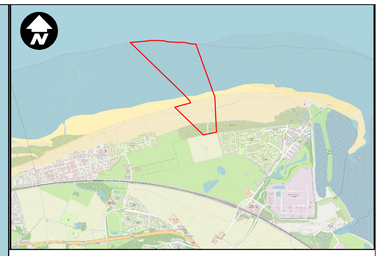
Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	or its dispersal between naturally isolated populations, should not be modified. 19. Levels for nutrients, in particular phosphate, will be agreed for cross-border water bodies between NRW and NE, and measures taken to maintain nutrients below these levels 20. Potential sources of pollution, nutrient enrichment and/or suspended solids that have not been addressed in the Review of Consents such as, but not confined to, diffuse pollution or disturbance to sediments, will be considered in assessing plans and projects. Conservation Objective for Feature 1: Watercourses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation: 21. The conservation objective for the watercourse as defined above must be met. 22. The extent of this feature within its potential range in this SAC should be stable or increasing. 23. The extent of the sub-communities that are represented within this feature should be stable or increasing. 24. The conservation status of the feature's typical species should be favourable. 25. All known, controllable factors, affecting the achievement of these conditions are under	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	control (many factors may be unknown or beyond human control). Conservation Objective For Feature 2: Atlantic salmon: 26. The parameters defined in the vision for the watercourse as defined above must be met. 27. The SAC feature populations will be stable or increasing over the long term. 28. The natural range of the features in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. 29. There will be no reduction in the area or quality of habitat for the feature populations in the SAC on a long-term basis. 30. All known, controllable factors, affecting the achievement of these conditions are under control (many factors may be unknown or beyond human control). Conservation Objective for Feature 3: Floating water-plantain: 31. There will be no contraction of the current *L. natans* extent and distribution, and the populations will be viable throughout their current distribution & will be able to maintain themselves on a long-term basis. Each *L. natans* population must be able to complete	

Site Name	Conservation objectives as defined by Natural Resources Wales	Conservation objectives as defined by Natural England
	sexual and/or vegetative reproduction successfully. 32. The lake will have sufficient habitat to support existing *L. natans* populations within their current distribution and for future expansion. 33. All factors affecting the achievement of these conditions are under control. Conservation Objective for Features 4,5, and 6: Sea lamprey, Brook lamprey, River lamprey: 34. The parameters defined in the vision for the watercourse as defined above must be met. 35. The SAC feature populations will be stable or increasing over the long term. 36. The natural range of the features in the SAC is neither being reduced nor is likely to be reduced for the foreseeable future. 37. There will be no reduction in the area or quality of habitat for the feature populations in the SAC on a long-term basis. 38. All factors affecting achievement of these conditions are under control.	

Annex B

FIGURES



Key :

- PROPOSED DEVELOPMENT RED LINE BOUNDARY
- CONSENTED DEVELOPMENT RED LINE BOUNDARY

SCALE

0 100m 200m 300m 400m 500m

SCALE 1:5000 (A1)

liverpool bay ccs

PROJECT TITLE

Point of Ayr (PoA) Cable Route Foreshore Works

DRAWING TITLE

Figure B.1: Site Location Plan - Proposed and Consented Development

DRAWING STATUS

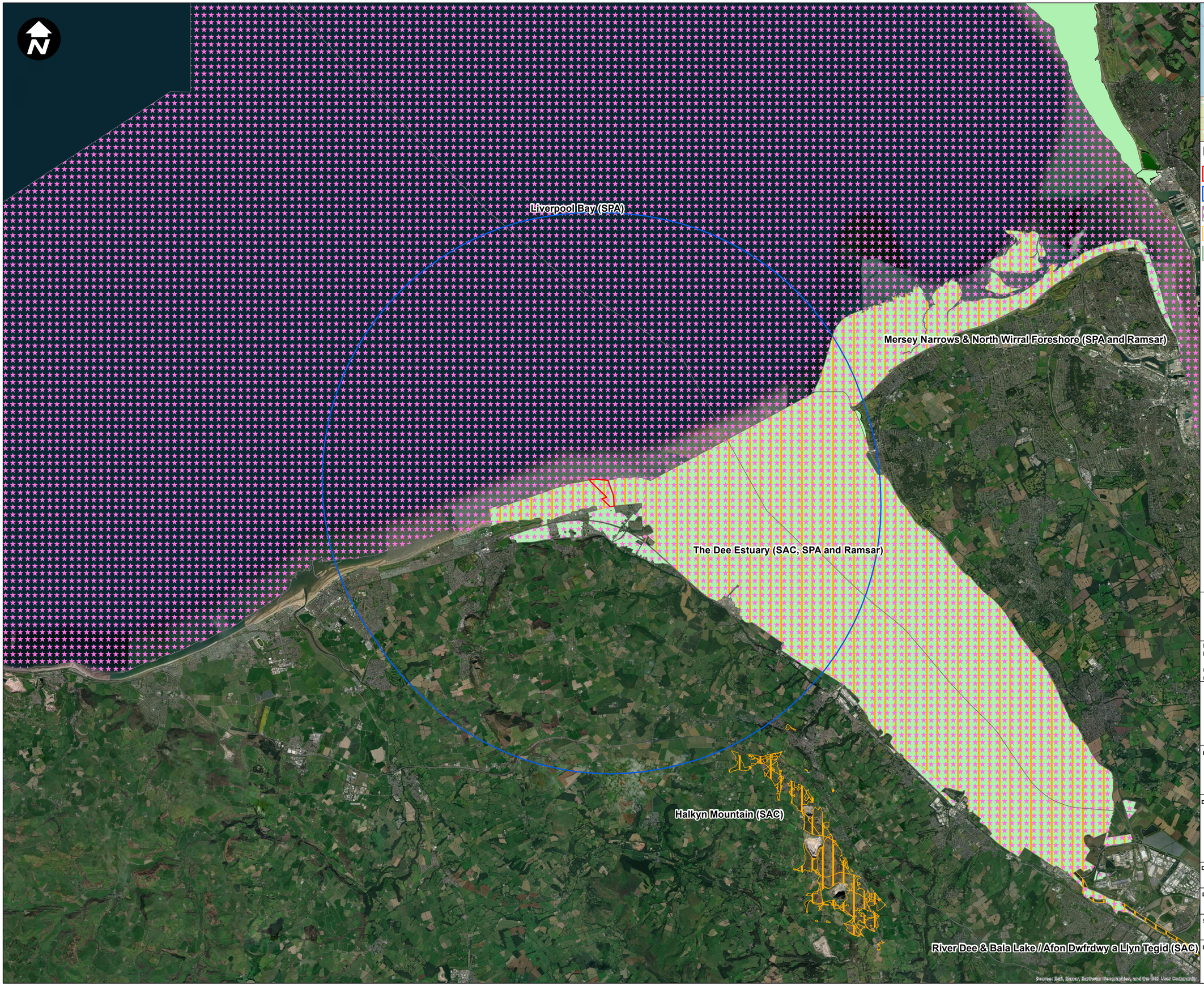
FOR INFORMATION ONLY

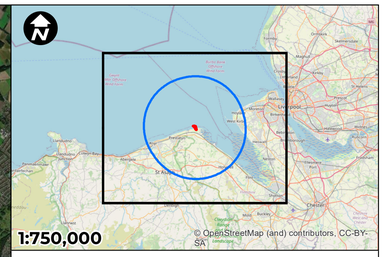
DRAWN	CHECKED	APPROVED	AUTHORISED
TDM	VA	RP	AV

SCALE @ A1 SIZE	DATE	REVISION
1:5000	21-05-2025	-

DRAWING NUMBER

UK0029984.4176-PF.2.11-SLP-Sheet1





Key:

- Proposed Development Boundary
- 10km Study Area
- Special Protection Area (SPA)
- Special Areas of Conservation (SAC)
- Ramsar Site

SCALE: 1:65,000

0 2.25 4.5 Kilometres

liverpool bay ccs

PROJECT TITLE

Point of Ayr Cable Route Foreshore Works

DRAWING TITLE

Figure B.2: Internationally Designated Sites

DRAWING STATUS

FOR REVIEW AND COMMENT

DRAWN	CHECKED	APPROVED	AUTHORISED
KS/NC	SS	TB	TB

SCALE @ A1 SIZE	DATE	REVISION
1:65,000	04/06/2025	A

DRAWING NUMBER

UK0029984.4176- PF.3.3.1-ES- Sheet1