



Central Rhyl Coastal Defences - SeaQuarium Pipeline Removal

Habitats Regulations Assessment - Report to
Inform Appropriate Assessment

July 2024

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1 Introduction

This Habitats Regulations Assessment (HRA), Report to Inform Appropriate Assessment has been prepared by Mott MacDonald Ltd for Balfour Beatty Civil Engineering Ltd (BB) on behalf of Denbighshire County Council (DCC) for ancillary works to remove a redundant seawater supply pipeline located within Rhyl beach. The pipeline was used to supply the Rhyl SeaQuarium with seawater and is no longer used following the closure of the facility. Denbighshire County Council, as the landowner, has made the decision to remove the redundant pipeline from the beach entirely.

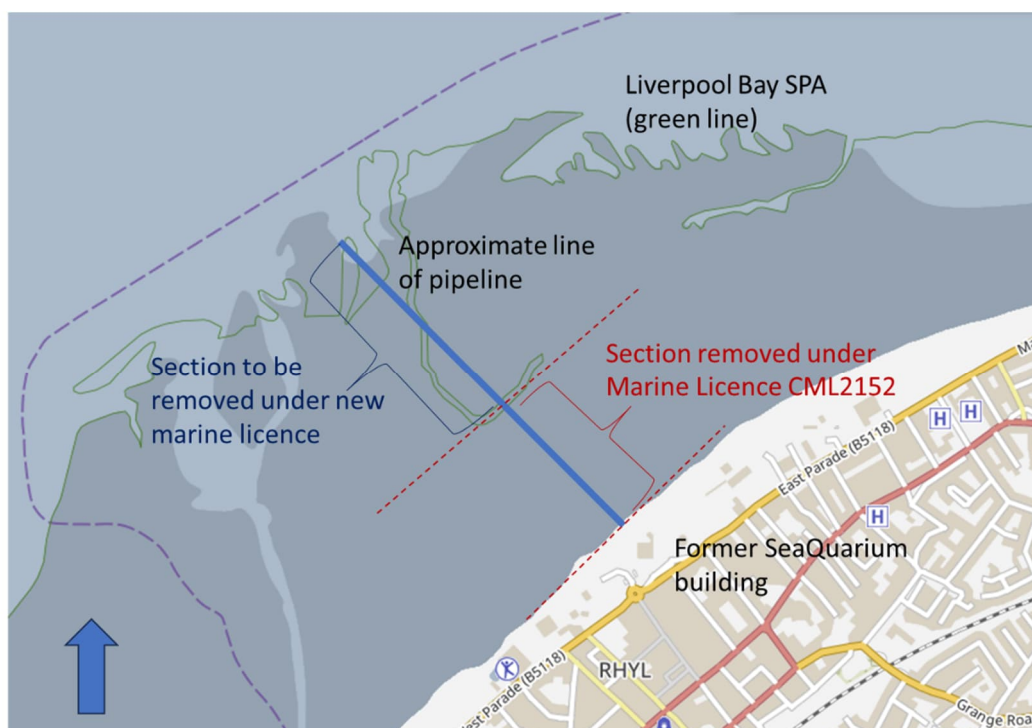
BB are currently constructing flood defences at Rhyl as part of the Central Rhyl Coastal Defences Scheme (herein referred to as “the Scheme”) for DCC. The Scheme is subject to a Band 3 Marine License (Reference: CML2152).

Part of the seawater supply pipeline (nearshore extent) is within the area of the Scheme’s red line boundary, and as confirmed by Natural Resources Wales (NRW) its removal is covered by Scheme’s Band 3 Marine Licence (CML2152). This section of the pipeline has been removed under the provisions of that licence. An application for a Band 2 Marine Licence to NRW to remove the remainder of the pipeline has been made.

1.1 Location

The seawater supply pipeline runs across the Rhyl beach from the existing promenade to the mean low water mark (approximate Ordnance Survey Grid Reference 300700,381790 to 299950,382570). **Figure 1.1** shows the location of the pipeline running down the beach. The pipeline and Scheme are located within close proximity to the Liverpool Bay Special Protection Area (SPA).

Figure 1.1: Pipeline Location



Source: Mott MacDonald

1.2 Structure and Purpose of this Report

This report has been prepared with the aim of providing the competent authority with sufficient information to inform their decision with regard to an HRA. It has been provided in the form of an HRA itself to enable the applicant to be confident they have provided sufficient information by assessing the project following the same process.

This report therefore documents the assessment of the potential for effects of the pipeline removal on Habitat Sites, as required by Regulation 63(1) of the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations). The process followed is described in Section 3 and in Appendix **Error! Reference source not found..**

A summary of the qualifications of the persons responsible for the production of this report is provided in **Table 1.1**.

Table 1.1: Ecologist Qualifications

| Name and Role | Qualifications | Experience |
|------------------|--------------------|--|
| AJ Originator | MSc, AMIMarEST | Marine Ecologist with extensive local knowledge of the area. |
| CW Originator | MSc, CGeol SiLC | 32 years' experience in development projects, preparing EIAs and HRAs for a variety of projects. |
| KG Checker | BSc MCIEEM | Senior Ecologist with extensive experience producing and reviewing HRAs for a variety of projects and local plans. |
| NMP Approver | CEng, CEnv | 31 years' experience in civil engineering. Project Director for the Rhyl Flood Defence Scheme |

2 Project Description

The proposed works for which this assessment is based consist of the removal a redundant seawater supply pipeline (see Figure 1.2). Leaving the pipeline in place carries a risk of the pipe being damaged and breaking up, presenting a hazard to beach users and adding to marine litter.

Figure 2.1: Pipeline running across beach surface



Source: Mott MacDonald

The pipeline will be removed by lifting the pipe where it is above the level of the beach and cutting it into short 3m sections to aid removal. Where the pipe is buried, it will be excavated using a 21t 360° excavator and brought to the surface to be cut into lengths for removal. Once a section has been completed, the beach surface will be restored by replacing the excavated sand.

BB has advised that these works will be undertaken over a period of one week with work undertaken during low tide. All materials and equipment will be removed from the beach at the end of each work shift.

It is anticipated that these works will be undertaken during **XX** 2024, dependent on the granting of the marine licence and favourable weather and tide conditions.

3 HRA Framework

3.1 Habitats Regulations Assessment Process

There is a requirement under the Habitats Regulations 2017 to determine if a plan or project may have an adverse impact on a site designated under the same (or preceding) regulations prior to any consent or permission being determined. The process of undertaking this assessment is known as a Habitats Regulations Assessment (HRA).

The 2017 Regulations include measures to establish and maintain a network of sites protecting habitats which in themselves are valuable and the species they support. These sites form a network that cross the UK as the National Site Network. This network consists of Special Protection Areas (SPAs) and Special Areas of Conservation (SACs), together with proposed and candidate SPAs and SACs (pSPAs and cSACs). This network also extends to marine environments, with wetland sites of international importance (Ramsar sites) also treated equally within this assessment framework. These sites are collectively referred to in this document as 'Habitats Sites'.

The 2017 regulations are set out in Parts, with Part 2 including provisions for the selection and designation of sites and Part 6 providing provisions to ensure that assessment of plans and projects are fully considered before being granted consent or permission. They also define the nature of and roles of statutory bodies, competent authorities and the appropriate nature conservation body and the requirements for information to be submitted to these bodies to enable them to undertake the required assessments.

Although the 2017 Regulations have been amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, due to the UK's exit from the EU, the effect of these amendments is largely related to terminology/wording. Requirements and processes remain the same, as protection levels remain unchanged. As such existing EU guidance¹ and preceding case law from the European Court of Justice (ECJ)^{2 3 4} remain valid as a source of direction and interpretation of the requirements of the legislation, although it should be noted that much case law has now been incorporated into guidance and/or best practice.

The HRA process consists of three stages, each stage being informed by the one preceding, to ensure an iterative and objective assessment. If the conclusion of Stage 1 is that there will be no likely significant effects (LSE) on any features of a Habitats Site, there is no requirement to undertake further stages. Similarly, if the Stage 2 Appropriate Assessment (AA) concludes there will be no adverse effect on integrity of the Habitats Site, then the assessment is concluded. The HRA stages are summarised within **Table 3.1**.

¹ Managing Natura 2000 Sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/CEE (European Communities 2020)

² Landelijke Vereniging tot Behoud van de Waddenzee/ Nederlandse Vereniging tot Bescherming van Vogels, European Court of Justice, Case C-127/02 'Waddenzee 2002'

³ Sweetman et al v An Bord Pleanala, European Court of Justice, Case C-258/11 'Sweetman 2011'

⁴ People over Wind/Sweetman v Coillte Teorante, European Court of Justice Case C-323/17 'People over Wind 2017'

Table 3.1: HRA Stages

| Stage | Description |
|------------------------------------|---|
| Screening (Stage One) | <p>This is the process which identifies the potential effects upon the Habitats Sites and considers if these are likely to be significant (see definitions below).</p> <p>Screening is an iterative process and before moving to Stage Two it can be repeated if required. Proposals to mitigate any likely significant effects cannot be considered at the screening stage. If the Screening (Stage 1) identifies that the project or plan, alone or in combination, may have likely significant effects on a Habitats Site and/or its qualifying features, or if there is uncertainty, the competent authority must undertake an Appropriate Assessment (Stage 2) of the implications for that site in view of that site's conservation objectives.</p> |
| Appropriate Assessment (Stage Two) | <p>This stage involves the consideration of the predicted adverse effects of the project or plan either alone, or in combination with other projects or plans, on the integrity of the Habitats Site with respect to the site's structure, function, and conservation objectives. Additionally, where mitigation has been proposed to avoid or minimise likely significant effects, this stage includes assessment of the likely effectiveness of any mitigation applied. A key outcome of the Appropriate Assessment is to identify whether the integrity of the Habitats Site is likely to be adversely affected by the plan/project.</p> |
| Derogations (Stage Three) | <p>If the mitigation measures applied and assessed during Appropriate Assessment cannot avoid adverse effects on the integrity of a Habitats Site, this stage examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Habitats Site.</p> <p>If no suitable alternative solutions are available, an assessment is made of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest ("IROPI"), it is considered that the project or plan should proceed. In making this assessment, it is important to recognise that it will be appropriate to the likely scale, importance, and impact of the proposed project. If it is impossible to avoid or mitigate the adverse impact, it must be demonstrated that there is IROPI.</p> |

This assessment has been undertaken in an iterative and objective manner following the above stages, with reference to best practice guidance and relevant case law, notably that provided by the Waddenzee case (ECJ 2002) and Sweetman (ECJ 2011) to inform the interpretation and therefore correct application of the terms 'likelihood', 'significance' and 'in combination'.

3.2 Study Area

The proposed project has the potential to impact ecological features such as habitats and/or species beyond the confines of the working area itself.

Potential impacts considered are:

- Areas where there will be land take and habitat removal for the works;
- Areas where there is a risk of altering the hydrodynamic regime or a reduction in water quality;
- Areas where there is a risk of an increase in air, noise, vibration and light pollution; and
- Areas where there is physical disturbance to international Habitats sites and/or their designated interest features.

Taking the above into consideration, for the proposed pipeline removal, a zone of influence (Zol) of 2km (10km for marine mammals) has been used to define the study area for this assessment. The above has been taken into consideration in identifying Habitats Sites within the Zol which could be affected by the works, following which more detailed consideration of potential disturbance impact pathways has been undertaken.

3.3 Screening Assessment Methodology

The initial list of sites for the HRA screening was derived by determining which Habitats sites are located within the Zol. In undertaking this HRA, a number of 'pre-screening' steps were undertaken to identify the relevant information to inform the assessment. Information gathered to inform the screening included the identification of:

- Any SPA/SAC/pSPA/cSAC/Ramsar sites, including any marine or marine elements of these sites within the Zol, and any known areas of land outside the site boundary itself, which plays an important role in supporting the site and its features of interest (functionally linked land);
- Potential effects resulting from the plan or project or in combination with other projects or plans;
- The Zol of these effects, noting this may extend some distance from the site itself, it is not confined to activities on or adjacent to the site;
- The features of interest of the Habitats Site(s) in question; and
- The conservation objectives of the Habitats Site, including any site sensitivities given within any supplementary advice, site improvement plan, or equivalent document published by the relevant nature conservation body.

The above information was then reviewed in respect of each feature of interest and potential development effect / impact pathway to inform an assessment of any LSE or adverse effects on integrity. Key aspects and terms used in this assessment are defined below:

- **Likelihood:** Where an effect was considered to be potentially significant, then the assessment of its of occurrence was based on the likelihood of it occurring and not certainty that it would occur. Potential effects were scoped in unless there was evidence to the contrary demonstrating that they would not occur, e.g. there being no valid pathway, or the absence of the species in that area, at that time.
- **Significance:** The significance of any effect was considered objectively, against the scale and nature of the impact in relation to those of that particular feature or condition and in relation to the extent of that feature or condition over the entire Habitats Site. A significant effect, within this assessment is one which, if it occurred, would lead to a decline in the quality or status of the habitats or distribution, abundance, etc. of feature(s) of interest.
- **In-combination:** The assessment of in combination effects considers those projects or plans which:
 - Are currently in operation; and
 - Those which are actually proposed – defined by being a valid live planning application, or any referenced with a local plan where there is a strong likelihood of them being undertaken within a reasonable time period, specified within that plan.

In line with relevant case law, this assessment is undertaken in the absence of mitigation (including measures embedded into the project where these are intended for the avoidance of effects).

Where likely significant effects could not be ruled out at the screening stage, the HRA must be progressed to Stage 2 Appropriate Assessment.

3.4 Appropriate Assessment Approach and Methodology

Where a plan or project is likely to, or has the potential to, give rise to LSE upon a Habitats Site, an assessment must be made of the implications on the integrity of that site in view of the site's structure, function and conservation objectives and taking into account any site-specific supplementary advice or site improvement plan.

Where mitigation measures are to be applied to eliminate or reduce any effects identified in screening, these may be considered within the Appropriate Assessment. Potential effects on site integrity may be direct or indirect and are dependent on the relationship between the source (proposed options' actions) and the receptor (the qualifying features of the Habitats Site(s)). The significance of an impact is relative to the sensitivity, existing condition and conservation status of the qualifying features of the site and the scale of the impact in space and time.

Potential effects on the integrity of the Habitats Site(s) are evaluated with respect to the scale, extent and nature of the impact, for example the area of habitat affected, changes in hydrodynamics, potential changes in species distribution, and the duration of the impact.

This HRA Stage 2 AA has been formulated using the following approach:

- Review the sites identified at Stage 1 and confirm any additions or exclusions;
- Assessment of the decommissioning effects of the option;
- Assessment of the Habitats Sites' characteristics and identification of their conservation objectives⁵; and
- Identification of the aspects of the proposed options that may significantly impact the conservation objectives of the Habitats Sites.

This assessment has been undertaken in accordance with the following guidance:

- GOV.UK (2019) Appropriate Assessment - Guidance on the use of Habitats Regulations Assessment. Published 22 July 2019⁶; and
- European Commission (EU, 2018) Managing Natura 2000 sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC⁷.

⁵ Habitats Sites descriptions, qualifying features and conservation objectives are given in Appendix A.

⁶ UK Government (2019). Guidance on the use of Habitats Regulations Assessment [online] available at: [Appropriate assessment - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/appropriate-assessment-guidance) (last accessed April 2022).

⁷ European Commission (2018). Managing Natura 2000 Sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/CEE [online] available at: [EN_art_6_guide_jun_2019.pdf \(europa.eu\)](https://ec.europa.eu/euipo/nature/management/natura2000/sites/natura2000_en.pdf) (last accessed April 2022).

4 Screening Assessment

4.1 Identification of Sites

The only internationally designated site within 2km is Liverpool Bay SPA, located immediately north of the pipeline area. No additional site designated for bats or marine mammals have been identified within 10km.

It is worth noting however, that the River Dee SAC, SPA and Ramsar is located approximately 5km east of the site boundary along with a known little tern colony located on Gronant Beach, Prestatyn, approximately 10km distant.

As set out in Section **Error! Reference source not found.** and based on the project scope and a ssessment of potential impact pathways, no designations outside of this distance are considered likely to be affected therefore, on this basis, the River Dee SPA and SAC is not included within this assessment.

4.2 Assessment of Impact Pathways

Potential impact pathways and sources of disturbance from removing the pipeline include:

- Pollution event – resulting from an oil spill or other pollution sources from machinery which could damage habitats (reducing prey availability) as well as cause harm to birds directly;
- Noise and vibration disturbance – resulting from the machinery, vehicle movements and personnel. Any such sources of disturbance close to the shoreline could disturb or displace species using these areas to forage or roost; and
- Visual disturbance – from increased human activity and machinery within the intertidal area, which could disturb and displace birds foraging and roosting.

Disturbance impacts can affect birds directly, by displacing them away from key foraging grounds and causing swimming or flight flee responses. Fleeing from a disturbance event can also indirectly reduce food availability by displacing birds, directing them to less favourable habitats which can subsequently affect energy budgets and survival rates, thus impacting the overall population numbers.

Displacement from preferred feeding areas may have an adverse effect by being energetically expensive to individuals, particularly diving birds, where the feeding activity is physically depleting. Birds displaced from preferred feeding areas may need to swim against currents in order to stay in an area where prey species are present⁸.

The Waterbird Disturbance Mitigation Toolkit⁹ has been utilised to assess the impact of the proposed GI works on the birds present within the Scheme area with regards to noise and visual disturbance.

4.3 Site Citation Details and Conservation Status

Table 4.1 documents the key features, management and vision of Liverpool Bay SPA.

⁸ Hawkins, P.A.J., Butler, P.J., Woakes, A.J. & Speakman, J.R. 2000. Estimation of the rate of oxygen consumption of the common eider duck (*Somateria mollissima*) with some measurements of heart rate during voluntary dives. J. Exp Biol. 203: 2819–2832.

⁹ Waterbird Disturbance Mitigation Toolkit, University of Hull, 2013 [Online] Available at: https://tide-toolbox.eu/tidetools/waterbird_disturbance_mitigation_toolkit/ [Accessed October 2020]

Table 4.1: Liverpool Bay SPA – Citation Details and Conservation Status

| | | |
|--|---|--|
| <u>National Site Network Site(s)</u> | Bae Lerpwl/ Liverpool Bay SPA | |
| <u>Distance from the closest part of the project</u> | Immediately adjacent and within the SPA boundary | |
| Description of the site(s) | | |
| Key Qualifying features | | |
| <u>Annex I habitats or species</u> | Annex I habitats present as a primary reason for selection of this site | Not Applicable |
| | Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site | Not Applicable |
| | Annex 1 species present as a primary reason for selection of this site | <ul style="list-style-type: none">● Red throated diver (<i>Gavia stellata</i>)● Little gull (<i>Larus minutus</i>)● Little tern (<i>Sterna albifrons</i>)● Common tern (<i>Sterna hirundo</i>) |
| <u>Annex II habitats or species</u> | Annex II species that are a primary reason for selection of this site | <ul style="list-style-type: none">● Common Scoter (<i>Melanitta nigra</i>) |
| | Annex II species present as a qualifying feature, but not a primary reason for site selection | Not Applicable |
| <u>Assemblage qualification</u> | An internationally important assemblage of birds present as a qualifying feature | In the non-breeding season, the site regularly supports at least 69,687 (2004/05 -2010/11) individual waterbirds. Based on more recent digital aerial surveys, the four-year peak mean population estimate has now increased to 157,952 individuals. |

National Site Network
Site(s)

Bae Lerpwl/ Liverpool Bay SPA

| | | |
|--|--|---|
| The main components of the assemblage include all of the non-breeding qualifying features listed above and red breasted merganser (<i>Mergus serrator</i>) and great cormorant (<i>Phalacrocorax carbo</i>). | | |
| Management of the site | | |
| Vision of the site | The stated objectives are to 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; <ul style="list-style-type: none">• 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. | |
| Current status of species or habitats and vulnerabilities | | |
| Site | Species | Status and vulnerabilities |
| Bae Lerpwl/ Liverpool Bay | Red-throated diver (wintering) | At designation, 922 individuals were reported comprising 5.4% of the GB population, the most recent four-year peak mean based on digital aerial surveys is 1800 individuals. Known vulnerabilities including physical loss or damage of supporting habitat, disturbance (from certain sources noise or movement), toxic and non-toxic (turbidity) contamination and biological disturbance. Disturbance was noted to be the highest vulnerability for this species. |
| | Common scoter (wintering) | The distribution of common scoter throughout Liverpool Bay is clustered, with Colwyn Bay and Conwy Bay forming the most important over wintering areas. In 2010, at the SPA designation, 54,675 individuals were reported. More recently, it is estimated there are 141,801 individuals, based on digital aerial surveys. Known vulnerabilities including physical loss or damage of supporting habitat, disturbance (from certain sources noise or movement), toxic and non-toxic (turbidity) contamination and biological disturbance. Disturbance was noted to be the highest vulnerability for this species. |
| | Little gull | The SPA provides between 3% and 7% of the estimated European non-breeding population of Little gull and represents the only proposed SPA for the species on the west of Britain, and as the UK itself forms the likely north-west edge of the species non-breeding range provides an important link in the species' range requirements. Little gull roost at sea and are known to travel |

National Site Network
Site(s)

Bae Lerpwl/ Liverpool Bay SPA

| | |
|----------------------|---|
| | to nearshore areas to feed and shelter during storms. Maintaining connectivity between roosting and feeding areas may be affected by marine industries. |
| Little tern | The population of Little tern is sensitive to breeding success which is vulnerable to human interference (disturbance). Population decline has been attributed to disturbance of nesting sites and predation. |
| Common tern | Common terns use intertidal habitats when inundated, as well as the deeper water column for foraging. Key foraging areas within the SPA include shallow subtidal waters, generally within 18km of breeding colonies. Maintaining connectivity between roosting and feeding areas may be affected by marine industries which may impact the Common tern population. Physical loss by removal or by smothering of any of the habitats on which common tern depend may result in the loss of foraging sites and therefore the reduction of the food resource for the breeding population |
| Waterbird assemblage | Species named in the assemblage qualification (exceeding 1% of the GB total or 2,000 individuals) comprise common scoter, red-throated diver, little gull, red-breasted merganser and cormorant. Common scoter are noted to be the dominant species in this feature and so the current status and vulnerabilities has been taken from this species. |

Source: Natural England (October 2012) Liverpool Bay / Bae Lerpwl Special Protection Area – Advice under Regulation 35(3) of The Conservation of Habitats and Species Regulations 2010 (as amended). Version 6.5.

4.4 Ecology Baseline

In order to determine the potential species and features of the SPA that could be impacted by the works, consideration was given to the area potentially affected, including the habitats present and any baseline information on species distribution and likely use of the area.

4.5 Work Area

The work area extends for approximately 750m along the pipeline route comprising intertidal habitats including sandy beach, areas of gravel and mud.

4.6 Assessment of Bird Assemblage

Given the proximity of the Scheme to the Liverpool Bay SPA and in order to understand the local water bird assemblage present, wintering bird surveys of the area have been undertaken previously to inform the design and environmental assessment of the Scheme¹⁰. Bird surveys were conducted between September 2020 and April 2021 for the Scheme. These built on surveys completed between 2016 and 2017 for the adjacent East Rhyl Coastal Defence Scheme¹¹. Additional observations of the birds present in the area were made during a site visit in April 2024 of the pipeline area. A summary of these surveys is presented herein.

4.6.1 Central Rhyl (September 2020 and April 2021)

Liverpool Bay SPA regularly supports more than 1% of the British populations of red-throated diver (*Gavia stellata*), 1% of the biogeographical population of common scoter (*Melanitta nigra*) and more than 60,000 waterfowl during the non-breeding season. Within the entire SPA, peaks of common scoter can reach up to 29,000 birds (60% of total population) and up to 1000 (5%) of the UK red-throated diver population during October to March. The SPA is also designated for non-breeding little gull (*Hydrocoloeus minutus*) and breeding common tern (*Sterna hirundo*) and little tern (*Sternula albifrons*).

The survey results where relevant to this proposal are summarised below.

Intertidal Area

Generally, wader numbers and species diversity were lower than typical for an intertidal area. This is likely to reflect the nature of the coast at this location and reduced density and availability of feed in sediments compared to other locations. Areas of mud within the intertidal area of Rhyl beach (predominantly in the western end, lining the harbour wall and at low tide) appeared important to foraging and roosting gull, goose, duck and wader species, particularly oystercatcher and common redshank, where numbers of up to 120 individuals of the latter species were observed.

The large sandbanks present also provided roosting and loafing areas for gull species including black-headed, common, herring, great and lesser black-backed gulls. The low tide and channels between sandbanks were favoured by wader species for foraging, particularly sanderling, oystercatcher and curlew.

Sea

The offshore sea area was identified as important for SPA species, particularly for large numbers of common scoter. A single red throated diver was recorded during the autumn

¹⁰ Mott MacDonald 2021 Central Rhyl Coastal Defences Over Wintering Bird Survey Report

¹¹ JBA. East Rhyl Coastal Defence Scheme – Wintering Bird Survey, ER-JBA-02-00-RP-BD-0001-S8-P01Wintering_Bird_Survey [July 2017]

passage period but not through the winter period, suggesting that the area is less important for this species.

The relatively low numbers of each species recorded during the surveys is thought to relate to the reduced availability of food in the survey area (littoral molluscs for common scoter and fish for red throated diver).

The sea area also supports large numbers of herring, black-headed, common, lesser and great black-backed gull, wigeon, shelduck, great-crested grebe and cormorant. Most individuals appeared to be feeding or loafing at sea.

Baseline Levels of Human Activity

During the falling tide, numerous people with dogs could be observed walking along the mudflats causing continuous disturbance to bird species in all months. The beach is accessible from all areas of the promenade, however most people that accessed the beach left prior to reaching the seawall coming from the River Clwyd into the sea which may explain why most bird species can be identified there and (or) favoured that area most.

In addition, during high tide, the SPA designated species common scoter were more likely to come towards land during poor weather and (or) due to the volume of vessels out at sea on a particular day. It appeared that smaller rafts that were disturbed by vessels created a ripple effect and caused other medium and (or) larger rafts to flee in the same direction. It is important to note that the majority of disturbances caused only small numbers of 1-10 individuals to flee within 500m of the seawall, however on another occasion, one vessel pushed a larger number of 300 within the same distance.

4.6.2 East Rhyl Scheme (Between 2016 and 2017)

Between October 2016 and April 2017 JBA carried out wintering bird surveys of the east Rhyl foreshore to inform the east Rhyl coastal defence scheme. This scheme is located directly adjacent to the eastern boundary of the central Rhyl coastal defence project, and therefore provides additional species information.

Results of the JBA surveys are summarised in **Table 4.2**.

Table 4.2: JBA Wintering Bird Survey Results, East Rhyl

| Species | Distance | Count | Notes |
|---|----------|-------|---|
| Common Scoter | <200m | >1000 | Flocks of 5-6 recorded within 200m of the scheme at high tide. Larger flocks of up to, and over 1000 recorded >1000m offshore. Generally seen to forage in open water and were largely observed in flight and in low numbers. |
| Red-throated Diver | 500m | n/a | Small numbers mostly recorded commuting and occasionally foraging out to sea. Generally seen to forage in open water and were largely observed in flight and in low numbers. |
| Waterbird Assemblage | | | |
| 34 Species of wading, wildfowl and gull recorded in total. Highest counts were recorded on the 9 th December 2016 and comprised: | | | |
| <ul style="list-style-type: none"> c.500 Oystercatcher; 20 Sanderling; 70 Dunlin; | | | |

| Species | Distance | Count | Notes |
|---|----------|-------|-------|
| <ul style="list-style-type: none"> 5 Curlew; 120 Redshank; and 10 Turnstone. | | | |

Source: JBA Wintering Bird Survey - ER-JBA-02-00-RP-BD-0001-S8-P01-Wintering_Bird_Survey v1.1

JBA noted that the bird numbers varied significantly throughout the survey period, with the largest number of birds encountered in the period immediately following the high tide. Additionally, JBA found that the birds were already frequently disturbed by large numbers of people walking dogs or undertaking other leisure activities on the beach.

4.6.3 April 2024 Site Visit

In April 2024 walkover was undertaken to support previous survey works and aid the development of this assessment. The walkover was undertaken during a spring low tide and incidental sightings of birds were recorded during the two-hour survey. As for the winter bird surveys, bird species and diversity on the upper and mid shore were lower than typical for an intertidal area.

Given the large tidal range at Rhyl (the sea goes out to approximately 1km from the seawall), disturbance by people and dogs at the lower shore were limited given the distance. As a result, large flocks of roosting birds were observed, comprising gulls, oystercatcher, cormorant and tern¹². Cormorant are a designated feature of the Liverpool Bay SPA under the waterbird assemblage (non-breeding) along with little and common tern (breeding) and approximately 40 cormorant and 30 tern were noted at the low tide. Based on the population of little tern designated under the SPA (130 pairs at Gronant Beach), the numbers recorded roosting during the walkover survey represent 15% of this.

These were sensitive to the presence of the two surveyors walking towards the tideline at a distance of 50m and took flight.

4.7 Conclusions

4.7.1 Common scoter

Common scoter were present in reasonable numbers rafting during the 2020-21 survey and were noted in large numbers from the East Rhyl surveys and generally seen to forage in open water, generally at least 1km from the shoreline but sometimes closer inshore. On this basis, it is assumed that common scoter could use Rhyl in large numbers over winter. The key period for this species is over winter, from October to March (Kaiser *et al.*, 2002). It is considered that the proposed works may affect this species but it should be noted that this species is already subject to a high degree of disturbance during the low tide period by beach users.

4.7.2 Red-throated diver

A single red-throated diver was recorded during the autumn passage period of the 2020-21 survey visit and only small numbers were recorded by the East Rhyl surveys, with these mostly commuting and occasionally foraging out to sea. Due to the low numbers observed, it is unlikely that Rhyl Central is a key area of importance for this species. This is consistent with distribution maps shown in Lawson *et al.* (2016).

¹² Note: as this was a habitat survey, the surveyors did not have binoculars and the specific species could not be identified from a distance

4.7.3 Common and little tern

Little tern was not noted to be present in the East Rhyl survey results. However, two common terns were identified during the 2020-21 survey one common tern was recorded commuting during the East Rhyl surveys in August. Both common and little tern are known to be summer breeding species within the SPA and as the first survey occurred in September it is unlikely that they will be recorded in further winter surveys.

It is worth noting that a known little tern breeding colony is located at Gronant Dunes, approximately 5km east of Rhyl. Common terns are known to breed on shingle beaches and gravelly areas, of which there is none within the work area which is entirely within the intertidal.

Following the April habitat walkover, tern were identified roosting on the low shore. Although they are a summer visiting species and there is no suitable breeding habitat on site, they may be utilising the undisturbed low shore area to roost during the passage period. It is considered that the proposed works may affect this species.

4.7.4 Little gull

No little gull were recorded during the 2020-21 survey. However, this species was recorded on one occasion, in April, flying through during one of the survey visits for the East Rhyl Scheme. The JNCC report (Lawson *et al.*, 2016) which assessed numbers and distribution of wintering waterbirds and seabirds to inform the SPA citation indicates that this species is largely associated with the areas further offshore from the Dee and Ribble Estuaries. For the purposes of this assessment, this species is considered likely to be a passage species migrating through in autumn.

4.7.5 Waterbird Assemblage

The waterbird assemblage is specifically noted to include common scoter, red-throated diver and little gull, discussed above, as well as red-breasted merganser and great cormorant as being present in greater numbers.

4.7.5.1 Red-breasted merganser

Red-breasted merganser was not recorded during the September 2020 survey visit, and this species was recorded commuting on one occasion during the survey visits for the East Rhyl Scheme in August. This indicates that Rhyl is unlikely to be of key importance for red-breasted merganser.

4.7.5.2 Cormorant

Cormorant were present during the September 2020 survey visit with the closest found approximately 150m from the seawall. Additionally, there were 10 records from the East Rhyl surveys recording their presence with a peak count of 10 records of loafing in the intertidal area with two individuals recorded within 50m of the proposed works for East Rhyl. Additionally, 40 birds observed roosting on the beach itself during the April 2024 walkover were noted to be sensitive to visual disturbance, taking flight at a distance of 50m as the surveyors approached.

This indicates that Rhyl appears to be relatively well used by the cormorant, albeit still in relatively low numbers in the context of the SPA population. Considering the distances and behaviour observed during surveys cormorant generally appear to have a considerable degree of habituation to any existing disturbance from the shore.

4.8 Assessment of potential impacts

The following tables document the screening exercise (Table 4.3) to assess if the project, alone or in combination with other projects (Table 4.4), will have an impact on the designated site [Error! Bookmark not defined.](#). As this project involves the removal of an existing pipeline only effects during the construction phase are considered. There are no operational or decommissioning phases.

Table 4.3: Liverpool Bay SPA – Screening Assessment

| Assessment of Significance | Likely Significant Effect |
|---|---------------------------|
| Effects are considered in respect of the impact pathways above | |
| Oil Spills | |
| In the absence of mitigation, a pollution event from oil spills from machinery cannot be ruled out. Such a pollution event would degrade habitat quality, foraging availability and could injure birds; On the basis of the above, a LIKELY SIGNIFICANT EFFECT cannot be ruled out as a result of the risk of pollution (oil spills). | Yes |
| Bird species designated under the SPA can be sensitive to disturbance and the activity subject to this assessment may result in two types of effect which are known to impact water birds – visual and acoustic disturbance. These are considered separately below. | |
| Visual disturbance | |
| Activities will result in human presence on the beach in close proximity to the SPA and be visible to birds, which may result in varying degrees of response (e.g. alerting, dispersing or fleeing). Such responses may reduce feeding time for birds in the area and displace those roosting. | Yes |
| Acoustic (noise) disturbance | |
| Noise disturbance data ⁹ states “for auditory disturbance to qualify as high level, it must constitute a sudden noise event over 60dB (at the bird, not at source) or a more prolonged noise of over 72dB”. Noise levels below 55dB (at the bird) are classified as low level and “unlikely to cause response in birds using a fronting intertidal area”. | |
| Noise emissions from a 21t 360° excavator would be expected to be in the order of 76dB(A) at 10m distance from the source ¹³ and this would comprise prolonged noise (engine idling) rather than a short duration noise from impact. Using this noise level as a baseline and the noise decay rates Error! Bookmark not defined. , a likely receptor dose of 70dB(A) would be received at a approximately 20m distance with noise levels dropping below 55dB(A) at approximately 100m. | |
| Common scoter | Yes |
| The winter bird surveys identified common scoter generally some distance offshore and already subject to disturbance from human visitors to the beach at low tide (dog walking). Wintering bird surveys recorded common scoter present during September and given vehicles and personnel will be present on the low shore, there is the potential for greater levels of disturbance above the current baseline levels. | |
| Red-throated diver | None |
| Winter bird surveys recorded low numbers of red-throated diver and it is unlikely that Rhyl Central is a key area of importance for this species. Although there is the potential for disturbance from construction in the intertidal area, observational data suggest that this area is unlikely to be of key importance for wintering red-throated diver and this is considered unlikely to significant impact population integrity. | |
| Little gull | Yes |
| The SPA is designated for non-breeding use by little gull, generally present during the winter and passage period. Given works are proposed to be undertaken during the passage period, | |
| Common and little tern | Yes |
| The SPA is designated for summer use by little tern. The works will be undertaken during late August to September and although the beach does not offer any breeding opportunities for these species, | |

¹³ BSI BS 5228-1 2014 Code of practice for noise and vibration control on construction and open sites

Assessment of Significance

Effects are considered in respect of the impact pathways above

**Likely
Significant
Effect**

and the site is approximately 10km from the known breeding colony (Gronant Dunes). At this distance, no direct or indirect effects on breeding sites are anticipated as a result of the works. However, given the presence of cormorant and tern observed roosting on the low shore area of the beach in moderate numbers during the April visit; noise emissions from plant and machinery present on the low shore may disturb roosting species, resulting in varying degrees of response (e.g. alerting, dispersing or fleeing). Such responses may reduce feeding and roosting time for birds in the area and displacement may have an adverse effect by being energetically expensive to individuals.

Waterbird assemblage

Yes

Natural England advice (2002) on the vulnerability of this feature specifically cites that the most sensitive species, upon which the feature vulnerability is based, is common scoter. Disturbance effects on common scoter are set out above, which conclude that likely significant effects cannot be ruled out for these species, so a likely significant effect is also concluded for the Waterbird assemblage.

Other species listed as part of the Waterbird assemblage include cormorant, which were recorded during the winter surveys using manmade features close to shore and appeared to be well acclimatised to disturbance. It is therefore anticipated that this species would either readily habituate to increase shoreline disturbance or would be displaced to similar features in the wider surrounds. During the April walkover however, moderate numbers roosting on the low shore were observed to be sensitive to visual disturbance.

Red-breasted merganser, also listed under the waterbird assemblage were recorded in extremely low numbers (and not observed during surveys). Given the numbers and activity recorded, no significant effects on the integrity of the SPA population would be anticipated.

As set out above, no impact pathways during operation or decommissioning have been identified.

Source: Mott MacDonald Limited

Table 4.4: Liverpool Bay SPA – Screening (In-combination Assessment)

| Qualifying Feature | Assessment of Significance | Likely Significant Effect |
|--------------------------------|--|---------------------------|
| Red-throated diver (wintering) | Potential impact pathways from this project have only been identified from the construction stage, where waterbirds could be disturbed by works and displaced away from key foraging and roosting grounds or expend energy to flee. It is therefore considered appropriate to consider only projects nearby (therefore likely affecting the same population / group / rafts of birds) during the same or consecutive construction periods as likely to result in in-combination effects. These are as follows: | None |
| Common scoter (wintering) | The Central Rhyl coastal defence project is being constructed along the same stretch of coast. It is also worth noting that the birds are already subject to disturbance resulting from use of the beach by members of the public for dog walking and other recreational use. | Yes |
| Waterbird assemblage | On this basis, a LIKELY SIGNIFICANT EFFECT from the projects cannot be ruled out. | Yes |
| Little Gull | No other projects have been identified, on the basis of the above criteria, that are considered likely to have an in-combination effect. | Yes |
| Little tern | | Yes |
| Common tern | | Yes |

5 Mitigation

5.1 Embedded Mitigation Measures

The following mitigation measures have been embedded into the Scheme design for the pipeline removal in order to avoid impacts on designated features and as part of best practice:

- Throughout the construction, best practice guidance in reference to pollution prevention and CIRIA best practice guidance on working near water will be followed, implemented under a Construction Environmental Management Plan (CEMP); and
- Works will be restricted to low tide periods as this is the only time the pipeline can be accessed.

5.2 Secondary (additional) Mitigation

Given the nature of the works, which are highly constrained by tidal patterns and cannot be flexible in programme or location, mitigation options are limited and include the following:

- Works will avoid the core wintering bird period (October to March inclusive) and will be undertaken during daylight hours;
- Toolbox talks will be given to staff prior to works commencing to highlight the importance of the SPA habitat and wintering birds, particularly their sensitivity to disturbance and what types of activities can disturb the birds, in order to minimise the disturbance as much as possible from construction as well as further reduce the risk of pollution (reinforcing the importance of the best practice measures);
- Soft starting/ sequential starting of equipment to minimise noise disturbance; and
- An ecological watching brief will be implemented for the works, with set procedures to pause/restart and stop or reschedule works should adverse effects be observed.

6 Appropriate Assessment

6.1 Appropriate Assessment

6.1.1 Assessment of the Project Alone

The Stage 1 assessment screened in the following designated interest features:

- Common scoter;
- Common tern;
- Little tern;
- Little gull; and
- Waterbird assemblage (of notable importance for the above species as well as red-breasted merganser and cormorant).

Likely significant effects were anticipated from the proposed works. Impact pathways were identified as follows:

- Damage to habitat and birds from oil spills / pollution;
- Acoustic disturbance to birds; and
- Visual disturbance to birds.

Following implementation of the mitigation set out in Section 5, the following table documents the assessment of significant effects on Liverpool Bay SPA, in respect of the above impact pathways, in line with Stage 2 of the HRA process.

Table 4.5: Liverpool Bay SPA – Appropriate Assessment

| Designated Interest Feature | Assessment of Effects Including the Application of Mitigation | Resulting Significance of Effect |
|--|---|----------------------------------|
| Common Scoter Little tern Common tern Little gull Waterbird Assemblage | Oil Spills The best practice pollution safeguards are proposed to reasonably avoid or significantly minimise the risk of pollution events (oil spills) and potential degradation of foraging grounds. These include bunding for storage of fuel and other polluting substances, spill kits and the use of a plant nappy or drip trays. Following these measures, the likelihood of such an event occurring is considered extremely low. | Negligible |

| Designated Interest Feature | Assessment of Effects Including the Application of Mitigation | Resulting Significance of Effect |
|-----------------------------|---|----------------------------------|
| | <p>Noise and Visual Disturbance</p> <p>In line with guidance⁹, visual disturbance is considered likely to result in a minimal effect for distances of 300m and above. A 100% response to visual stimuli is expected from 0m – 50m. During low tide it is possible that birds may use areas of the beach in proximity to the works and could be affected. The works are avoiding the core winter period (October to March inclusive), proposed to be undertaken in September or the following spring. Wintering birds would be present in lower numbers (if at all) as a result. Disturbance effects should therefore be limited to those on passage.</p> <p>The beach area is known to be frequently used by humans with dogs and so a high degree of visual disturbance is already present. The additional disturbance from the machinery and workers undertaking the pipeline removal over a short time period will be undertaken under an ecological watching brief; with works to be paused should adverse effects be observed.</p> <p>Based on the implementation of the mitigation outlined in Section 5.2, the proposed works are unlikely to significantly increase visual disturbance effects.</p> | Negligible |

Source: Mott MacDonald Ltd, 2020

6.1.2 In-Combination Assessment

As set out in the Stage 1 screening assessment, cumulative effects from the proposed GI and construction periods of in-combination projects overlap or are consecutive are considered. The only such project identified is:

Central Rhyl Flood Defence Scheme

The Central Rhyl Scheme involves the construction of new revetment along the sea front and changes to the promenade.

Cumulative impacts from this project with the proposed pipeline removal are considered in **Table 4.6** in respect of the designated interest features identified in the screening assessment.

Table 4.6: Assessment of In-combination Effects with Central Rhyl Flood Defence Scheme

| Impact Pathway | Assessment of In-combination Effects |
|---|--|
| Oil/ fuel Spills | Construction best practice pollution safeguards are proposed to reasonably avoid or significantly minimise the risk of pollution events (oil spills). Following these measures, the likelihood of such an event occurring is considered extremely low. |
| Disturbance <ul style="list-style-type: none"> Noise and vibration Visual | <p>The construction periods of both schemes overlap. Disturbance could result from construction activities however, are limited to within 50m of the seawall. On this basis, disturbance would be anticipated to be of a similar nature to that described above and would only affect small numbers of birds visually.</p> <p>Mitigation includes the implementation of an ecological watching brief. This, combined with other best practice measures to reduce disturbance levels and given the numbers of and distribution of birds recorded and the abundant</p> |

| Impact Pathway | Assessment of In-combination Effects |
|--------------------------------|--|
| | alternative opportunities elsewhere in the SPA, such effects are considered unlikely to significantly affect the SPA population integrity of these features. |
| Source: Mott MacDonald Limited | |

7 Conclusions

In summary, no significant adverse effects are anticipated on the designated interest features of Liverpool Bay SPA as a result of this project in combination with any other plans or projects with implementation of the mitigation measures set out in Section 5.

This report to inform an Appropriate Assessment provides evidence that, for the proposed pipeline removal, following the implementation of mitigation, any adverse effects on Liverpool Bay SPA and its designated interest features alone or in combination with other projects are considered to be *de-minimis* such that no adverse effect on the integrity of the Liverpool Bay Special Protection Area is anticipated.

No impact pathways to any other internationally designated sites have been identified.

This report is provided to inform the competent authority in completing their Appropriate Assessment of the project.

