

**CO2 CENTRAL DOCKS, LIVERPOOL  
DOCKS, LIVERPOOL**

**SHADOW HABITAT REGULATIONS  
ASSESSMENT: STAGE 2 APPROPRIATE  
ASSESSMENT**

A Report to: Romal Capital

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The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bon a fide opinions.

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## 1. INTRODUCTION

### 1.1 PROJECT BACKGROUND

In August 2018, Romal Capital commissioned Middlemarch Environmental Ltd to undertake a shadow Habitat Regulations Assessment associated with a proposed residential development, boat mooring and public walkways in Central Docks, Liverpool. This assessment was completed in support of a planning application. The project was subsequently delayed, during which time the overall development strategy for the wider Liverpool Waters area evolved. As such, this 'Rev B' version of the report has been completed to take into account these changes, which include the agreement of a Strategic Ecological Mitigation Plan (SEMP) for the entire Liverpool Waters area. This SEMP influences the impact assessment and mitigation previously designed.

The site forms part of the wider Liverpool Waters development area that was previously granted outline planning consent associated with the comprehensive regeneration of the Liverpool dockland area (Planning Ref: 10O/2424). The area covered by the Liverpool Waters outline planning consent was subject to a Habitat Regulations Assessment screening exercise in 2011, the results of which are described in Section 1.2. The site is allocated for residential development within the Statutory Development Plan.

The need to undertake a shadow Habitat Regulations Assessment: Stage 2 Appropriate Assessment was confirmed in pre-application consultation responses provided by Natural England on 21<sup>st</sup> September 2018 and Merseyside Environmental Advisory Service (MEAS) on 4<sup>th</sup> October 2018.

A desk study completed by Middlemarch Environmental Ltd as part of a Preliminary Ecological Appraisal revealed six Natura 2000 sites within the Zone of Influence of the proposed development site: the Liverpool Bay Special Protection Area (SPA), the Mersey Narrows and North Wirral Foreshore SPA and Ramsar site, the Dee Estuary Special Area of Conservation (SAC) and the Mersey Estuary SPA and Ramsar site.

A recent decision by the Court of Justice of the European Union (CJEU) in *People Over Wind and Sweetman v Coillte Teoranta* (C-323/17) means that measures intended to avoid or reduce the harmful effects of a proposed project on a European site may no longer be taken into account by competent authorities at the Habitat Regulations Assessment 'screening stage' when judging whether a proposed plan or project is likely to have a significant effect on the integrity of a European designated site (Freeths Environmental Bulletin, Spring 2018).

As such, this Stage 2 shadow Appropriate Assessment report has been produced by Middlemarch Environmental Ltd to provide information to allow Liverpool City Council to carry out an Appropriate Assessment in relation to the proposed development.

The need for projects with the potential to impact upon Natura 2000 sites to be assessed is stated in Article 6 of the European Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (hereafter 'the Habitats Directive'). Articles 6(3) and 6(4) of this Directive state that an Appropriate Assessment is required for any plan or project that is considered likely to have a significant effect on a Natura 2000 site, either individually or in combination with other plans or projects. Natura 2000 sites are those sites designated under the Habitats Directive to ensure the protection of European important habitats, plants or animals, and include Special Areas of Conservation (SAC) and Special Protection Areas (SPA). Ramsar sites are treated, for planning purposes, as Natura 2000 sites. The Habitats Directive is transposed into UK legislation through the Conservation of Habitats and Species Regulations 2017 (The Habitats Regulations 2017). Regulations 61, 62 and 66 of the Habitat Regulations incorporate the requirements of Articles 6(3) and 6(4) of the Habitats Directive.

Under the Habitats Regulations, the competent authority (Liverpool City Council) may only agree to a project or plan (which is likely to have a significant effect on a Natura 2000 site) after having ascertained that it will not adversely affect the integrity of any Natura 2000 site alone or in-combination with other plans and projects. Where adverse impacts are anticipated, projects or plans may only be consented where there are no alternative solutions and the project or plan is considered to be of overriding public interest. In such instances appropriate compensatory measures are required to ensure that the overall coherence of the Natura 2000 site network is protected.

In addition to this Habitat Regulations Assessment, Middlemarch Environmental Ltd has carried out a Preliminary Ecological Appraisal (Report RT-MME-128844-01) and has written the Terrestrial Ecology chapter of the Environmental Statement (Chapter 15).

## 1.2 LIVERPOOL WATERS HABITAT REGULATIONS ASSESSMENT 2012

The Habitat Regulations Assessment Final Report for Liverpool Waters (Liverpool City Council/MEAS, 2012)<sup>1</sup> concludes that, provided that a series of recommendations are taken forward and implemented, the Liverpool Waters project:

- a) *is not directly connected with or necessary to the management of the [Natura 2000] sites;*
- b) *does not intrude into the Natura 2000 sites listed below;*
- c) *is not considered to have a likely significant effect on each of the following sites:*
  - *Mersey Narrows and North Wirral Foreshore potential Special Protection Area (pSPA);*
  - *Mersey Narrows and North Wirral Foreshore proposed Ramsar site (pRamsar);*
  - *Mersey Estuary Special Protection Area (SPA);*
  - *Mersey Estuary Ramsar;*
  - *Dee Estuary Special Area of Conservation (SAC);*
  - *Dee Estuary SPA;*
  - *Dee Estuary Ramsar Site;*
  - *Ribble and Alt Estuaries SPA;*
  - *Ribble and Alt Estuaries Ramsar;*
  - *Sefton Coast SAC;*
  - *Martin Mere SPA;*
  - *Martin Mere Ramsar; and*
  - *Liverpool Bay SPA.*

*either alone or in-combination with other plans or projects.*

The recommendations provided in the HRA Screening report for the Liverpool Water scheme to ensure that there are no likely significant effects are:

- a. Aerial emissions will be subject to mitigation measures as set out in a detailed Construction Environment Management Plan (CEMP) and Ecological Conservation Management Plan (ECMP);
- b. Water emissions will be subject to mitigation measures as set out in a detailed CEMP and ECMP;
- c. Noise emissions will be subject to mitigation measures as set out in a detailed CEMP and ECMP;
- d. Light emissions will be subject to mitigation measures as set out in a detailed CEMP and ECMP;
- e. Cormorant disturbance will be minimised by mitigation measures and a monitoring protocol that will be set out and detailed in an ECMP.
- f. A Travel Plan will provide a mechanism to address issues relating to aerial emissions on Sefton Coast SAC.
- g. Fish populations within the dock waters will be monitored and mitigation measures will be applied as required to enable fish populations to remain at a level that continues to provide functional supporting habitat to qualifying Natura 2000 bird species. This will be set out in a detailed CEMP and ECMP;
- h. The Energy Centre will be subject to assessment against the Habitats Regulations once details are finalised at the Reserved Matters Stage; and
- i. Tall buildings will be designed in a way to limit the risk of bird strike. This will be set out in a detailed CEMP and ECMP.

These outline recommendations have been considered as part of the development of the C02 Central Docks scheme as it falls within the wider Liverpool Water's site. However, this assessment provides a project-specific assessment under the Habitats Regulations in relation to the proposed development.

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<sup>1</sup> Liverpool City Council / MEAS (2012). Habitat Regulations Assessment. Final Report for Liverpool Waters. Planning Application 100/2424.

### 1.3 LIVERPOOL LOCAL PLAN HRA 2017

Following amendments to the Liverpool Local Plan, Aecom (2017)<sup>2</sup> produced a revised version of the Liverpool Local Plan HRA for Liverpool City Council in December 2017, assessing the potential for Liverpool Local Plan policies to result in likely significant effects on Natura 2000 sites both alone and in combination. The assessment considers the following Natura 2000 sites:

- Mersey Estuary SPA and Ramsar site;
- Sefton Coast SAC;
- Ribble and Alt Estuaries SPA and Ramsar site;
- Liverpool Bay SPA;
- Mersey Narrows and North Wirral Foreshore SPA and Ramsar site;
- Manchester Mosses SAC;
- Dee Estuary SAC, SPA and Ramsar site;
- River Dee and Bala Lake SAC; and,
- River Eden SAC.

Potential impact pathways considered as part of the assessment comprise:

- Disturbance, particularly on qualifying breeding, wintering and passage bird species, arising from recreational sources, commercial development, road transport adjacent to sensitive sites or increases in shipping and aircraft movement;
- Mechanical / abrasive damage (as a result of trampling from people, animals and vehicles) and nutrient enrichment (via dog fouling), leading to soil compaction and erosion;
- Atmospheric pollution (emissions from power stations, combustion of coal and oil, shipping exhausts, agriculture and vehicles), leading to changes in vegetation composition;
- Abstraction of water from the River Dee and reduction of freshwater flows into the Dee Estuary;
- Reduction in water quality as a result of increased sewage and industrial effluent charges from housing or business developments;
- Port development, shipping and dredging, with the potential to lead to increased sediment disturbance and deposition and pollution;
- Coastal squeeze, leading to a reduction in intertidal habitats; and,
- Loss of functionally-linked land outside of European site boundaries.

The key conclusion of the assessment was that the Liverpool Local Plan includes an adequate policy framework to enable the delivery of measures to avoid or adequately mitigate any adverse effects on Natura 2000 sites (Mersey Estuary SPA and Ramsar site, Sefton Coast SAC, Ribble and Alt Estuaries SPA and Ramsar site, Liverpool Bay SPA and Dee Estuary SAC), and thus results in no likely significant effects, provided that:

*The strategic study and resulting measures to manage recreational access within the coastal European sites around Merseyside is taken forward in a timely manner early in the plan period, utilizing the cross-authority working commitment as its driver. Recommended text for inclusion in the Local Plan is as follows: 'Commencing early in the plan period Liverpool City Council will work with work with partners, including the other Merseyside authorities, to devise and implement a Visitor Management Strategy to protect all European sites in the Liverpool City Region from increased recreational pressure. The financing of this VMS may include a tariff to be applied to net new residential development.'*

In relation to the Dee Estuary SAC, SPA & Ramsar site, the River Dee & Bala Lake SAC and the River Eden SAC, the HRA also concludes that 'since no increased abstraction from European sites will be required in order to service new development in Liverpool (or elsewhere within the Integrated Supply Zone) that likely significant effects...will not occur. Risk of abstraction at inappropriate times of the year (such as periods of low flow) will be prevented by the Environment Agency's licensing regime and Review of Consents process.'

### 1.4 CONSULTATION

#### Natural England, 2018

Natural England provided advice regarding the proposals via their Discretionary Advice Service on 21<sup>st</sup> September 2018. Regarding designated sites, they stated the following:

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<sup>2</sup> Aecom (2017) Liverpool Local Plan Habitats Regulations Assessment (HRA). Prepared for: Liverpool City Council. December 2017.

*We can confirm that the proposal is adjacent to Liverpool Bay / Bae Lerpwl Special Protection Area (SPA) and approximately 1km from Mersey Narrows and North Wirral Foreshore SPA and Ramsar and Mersey Narrows Site of Special Scientific Interest (SSSI). These sites should be considered within any environmental assessments to come forward. Further consideration to other designated sites, including Sefton Coast Special Area of Conservation and Ribble and Alt Estuaries SPA/Ramsar if impact pathways (e.g. recreational pressure) are identified.*

Natural England continue:

*We recommend that you ensure you consider all the relevant bird features (and supporting habitats) within a Habitats Regulations Assessment (HRA) and provide clear explanation with supporting evidence on the features screened in and out of any assessment coming forward... Please note that breeding common tern is a feature of the Mersey Narrows and North Wirral Foreshore and foraging common terns are protected through Liverpool Bay SPA. Evidence of foraging common terns utilising the River Mersey is available and you should ensure that this feature is assessed within any assessment coming forward.*

They continue:

*Functionally Linked Land*

*Natural England advises that the docks and waterfront area are likely to provide supporting functional habitat (feeding and roosting) for birds from a number of internationally important sites including Liverpool Bay SPA and Mersey Narrows and North Wirral Foreshore SPA/Ramsar and therefore consideration of impact to the function of these areas is required within the HRA. Natural England would expect to see a thorough assessment of the potential impact of dock infilling on ecological receptors.*

*In combination assessment*

*We advise that as part of any in combination assessment you consider all schemes which may impact on the interest features of the designated sites. This could include plans or projects from neighbouring Local Planning Authorities (Liverpool City Council and Wirral Council) and the Marine Management Organisation.*

*Recreational pressure*

*Recreational disturbance to internationally protected coastal sites is an issue across the Liverpool City Region. This pressure is a particular issue through in-combination effects, for example additional housing may result in additional recreational visits, and therefore increase disturbance at the coastal designated sites. We advise that you consider the impact of recreational disturbance resulting from the additional residential dwellings proposed, within a HRA.*

*We are aware that the Local Planning Authorities (LPAs) around the Liverpool City Region are currently considering the scope for a city wide strategic mitigation measure for recreational disturbance. This will help LPAs and developers address the issues arising from additional housing, thus helping deliver compliance with the Habitat Regulations and contribute to sustainable development. However, we are currently unclear whether this measure will be adopted within the timescales of the proposed development.*

*In the event that a strategic mitigation scheme is not available, Natural England would continue to encourage consideration of recreational disturbance at a strategic level, however in the absence of this, individual projects will need to provide mitigation (if required) on a case by case basis.*

*Marine Environment and dock infill comments*

*Natural England would expect to see consideration of the impact of potential dock infill on the supporting function of the dock waters in relation to qualifying features of the SPAs as mentioned above within the HRA. Potential impacts on the wider marine environment should also be considered within the Environmental Statement.*

Merseyside Environmental Advice Service (MEAS), 2018

MEAS provided discretionary advice with respect to the proposals on 4<sup>th</sup> October 2018. Regarding the requirements for a HRA, MEAS stated the following:

14. The development is immediately adjacent to the Liverpool Bay SPA and is also near to the following European sites which are protected under the Habitats Regulations 2017:

- Mersey Narrows and North Wirral Foreshore SPA;
- Mersey Narrows and North Wirral Foreshore Ramsar;
- Ribble and Alt Estuaries SPA;
- Ribble and Alt Estuaries Ramsar;
- Sefton Coast SAC;
- Mersey Estuary SPA; and
- Mersey Estuary Ramsar.

15. The proposals will require the infilling of West Waterloo Dock which is functionally linked to the above SPA and Ramsar sites. The loss of this functionally linked habitat would likely require the provision of **significant** compensatory habitat to enable the Council to conclude, as part of the Habitats Regulations Assessment, that the proposals would not adversely affect the integrity of the European sites.

16. In addition to effects upon qualifying bird species, the development may potentially have direct or in combination effects on the features for which the sites have been designated due to increased recreational pressure. I advise the following:

- Recreational pressure is recognised in the formal statutory Conservation Advice Packages and / or the Site Improvement Plans as a Medium-High risk to qualifying features of the European sites. Recreational pressure is also highlighted in the Liverpool City Region Local Plans HRAs as a Likely Significant Effect in combination with the quantum of residential development identified within the Local Plan period in Policies H1 and H2; and
- Details of an assessment of, and mitigation for, the potential for damage to the European sites caused by increased recreational pressure (as set out in Part Two, paragraph 49) is required. Due to the number and scale of recently proposed housing developments with proximity to the European sites, this additional information is required to enable the Council to carry out an HRA prior to determination.

17. As part of the HRA an in-combination assessment will be required and the onus will be on the applicant to obtain and provide details of schemes to be considered during the completion of this. This will also require details of plans and projects to be obtained from neighbouring authorities including Wirral (e.g. Wirral Waters).

18. To enable the HRA to be completed the following information would also be required:

- Details of the site as it currently exists (the Ecological Appraisal should provide sufficient information on this (see below));
- Detailed plans including; the total area, areas of site compounds, transport routes and the precise location(s) of proposed work;
- Detailed construction method statement(s) setting out; what work will be done, when (an indication of the time of year and how long work will take), how the work will be undertaken, if there will be any emissions (such as to water, air, disposal to land) and any transport requirements to the site;
- Clarification as to whether piling will be required and, if so, the piling methodology (rotary piling will be preferable to limit noise disturbance effects);
- Details of the materials, machinery and equipment to be used; and
- An outline Construction Environmental Management Plan which outlines pollution prevention measures (this must consider noise, transfer of dust and run-off of contaminated surface waters into the adjacent dock and estuary).

19. To enable completion of the HRA, the air quality and noise assessments undertaken in support of any future development **must** include the Liverpool Bay SPA as a sensitive receptor. This also applies to any assessment of lighting.

The response from MEAS also notes that:

22. The proposed development would remove West Waterloo Dock as an option for strategic mitigation for Liverpool Waters (LPA ref: 100/2424). The applicant also needs to consider that the mitigation for...the Northern Link Road (LPA ref: 17F/2628)...application... is due to be situated at the dock and

*the proposed development would render it entirely unsuitable for this. West Waterloo Dock was identified as a suitable location for the provision of mitigation for qualifying bird species due to the fact that there is still tidal interchange and, as a result, the dock provides a good food source for water birds.*

Providing further detail regarding the HRA, MEAS state:

*46. When considering residential proposals the applicant will need to consider and include additional mitigation/preventative measures capable of being incorporated in the proposals and/or scheme design that will avoid and/or mitigate recreational pressure on the European sites and functionally linked habitat. The Liverpool City Region has commissioned a wider strategic approach to visitor and recreation pressure management. This work may help inform the delivery of visitor and recreation mitigation to protect European Sites within the City Region. This work is currently on-going and no firm proposals have been proposed or agreed - it is now scheduled for completion in late 2018.*

*47. Activities which may lead to an increase in recreation pressure include, but are not limited to, the following:*

- Active leisure pursuits e.g., cycling, geo-caching, running;*
- Car parking;*
- Dog walking;*
- Events;*
- Recreational activities that are shore-based and/or have an interaction with the intertidal zone e.g. horse-riding, kite surfing, sand yachting;*
- Walking and informal recreational access; and*
- Water based activities e.g. kayaking, motorised water sports, sailing.*

*48. The mitigation/preventative measures outlined below are not exhaustive and the applicant will need to consider an appropriate package that is informed by the location, scale and housing mix of the development proposed. I advise that a clear distinction is needed between those parts of the proposed development which are essential features and characteristics and those which are proposed as mitigation / protective measures designed to protect the European sites.*

*49. Examples of mitigation/preventative measures that could be included in an appropriate package:*

- Design and management of public open space outside the proposed development boundary to encourage use not on the European coastal sites;*
- Provision of information in sales packs, informing residents of the presence and importance of the European sites, and how residents can help protect them including an outline 'responsible user code';*
- Contributions to develop a visitor / householder 'responsible coast user code';*
- Contributions to improving and / or managing access to and/or within the internationally important nature sites including financial contributions; and*
- Contributions to increase recreation management, wardening including, location-specific interventions e.g. signage, path management, habitat management including financial contributions.*

*50. Incorporation of these measures into the development proposal and scheme design, based on survey information, may enable the Council to conclude under the Habitats Regulations that there is no adverse effect on the integrity of the SACs, SPAs and Ramsar sites.*

MEAS, Natural England, Arup, Ecospan and Middlemarch Environmental Ltd – Meeting, 23<sup>rd</sup> November 2018

A meeting was held on 23<sup>rd</sup> November 2018 between MEAS, Natural England, Arup, Ecospan and Middlemarch Environmental Ltd. With respect to Natura 2000 sites, the following was discussed:

- Discussions on cormorant mitigation concluded that the site does not provide a particularly rich feeding resource (based on the Ecospan data), although is used by low numbers of cormorant for roosting/preening. It was confirmed that the development would void the mitigation for other adjacent schemes, and it was therefore agreed that it was necessary to identify a new mitigation location that would not be lost to future development. Natural England and MEAS agreed with this approach, but required the provision of a reasoned argument for why the relocated mitigation is appropriate.*

- Regarding the potential for recreational impacts, MEAS confirmed that they were most concerned about visitors heading north to the sensitive Sefton coast area. Middlemarch Environmental Ltd stated that most visitors would only visit Sefton as a weekend attraction rather than an everyday walking/dog walking resource, and most visitors would likely use the Sefton Coastal Path that is managed for visitors. It was confirmed that a strategic mitigation approach has not yet been agreed with Liverpool City Council in relation to recreational pressure impacts, and mitigation packages have been agreed on a site-by-site basis for other schemes within the area.

#### MEAS, 2019

MEAS provided a consultation response on 15<sup>th</sup> February 2019, stating the following regarding the 'Rev A' version of this report:

*The proposed development will require the majority of West Waterloo Dock (which is functionally linked to the above European sites) to be infilled. The applicant has submitted a shadow Habitats Regulations Assessment (HRA) report in support of the application (Stage 2 Appropriate Assessment – CO2 Central Docks, Liverpool Docks, Liverpool, Middlemarch Environmental, December 2018, RT-MME-128844-02, Rev A). However, for reasons which are outlined below, the shadow HRA and its conclusions cannot be accepted.*

*The report correctly identifies that West Waterloo Dock has been chosen as the location for cormorant mitigation for the Northern Link Road development (LPA ref: 17F/2628; consented in April 2018), and has been proposed as the location for mitigation in relation to the Isle of Man Ferry Terminal proposals (LPA ref: 18F/3231; planning decision pending). The proposed infill of the dock, as envisaged by the plot CO2 proposals, will ensure that mitigation for those schemes at West Waterloo Dock is no longer feasible. This is due to the direct loss of functionally linked habitat and associated disturbance / development pressure from this proposed development.*

*The shadow HRA report therefore recommends that the mitigation measures previously agreed for West Waterloo Dock, along with the mitigation required for the proposed CO2 development, is re-located to North Salisbury Dock. However, this cannot be accepted for the following reasons:*

- *The current level of use of North Salisbury Dock by qualifying species has not been characterised. The potential effects of re-locating the mitigation upon qualifying species which may already use the dock has not, therefore, been assessed. It is also uncertain whether the dock would provide a sufficient food resource;*
- *Adjacent proposals (e.g. such as those for a concrete batching plant (LPA ref: 18F/2843; planning decision pending) may render North Salisbury Dock unsuitable for qualifying species; and*
- *Even, if following further assessment, North Salisbury Dock is currently considered as a suitable location for non-breeding bird mitigation, this may not remain the case in future following the completion of adjacent developments. Non-breeding birds which had become habituated to the mitigation provided at North Salisbury Dock may therefore need to be re-located again and this would likely lead to an adverse effect on the integrity of European sites. Clarification will therefore be required on the phasing of the Liverpool Waters scheme as certainty is needed that any mitigation secured is functional in perpetuity.*

*MEAS therefore advises that the proposed development is not legally compliant with the requirements of the Habitats Regulations. **I advise that until a strategic approach to mitigation for the Liverpool Waters area has been agreed and a legally compliant HRA undertaken, the application should not be determined.***

*With regard to recreational pressure effects arising as a result of the proposed CO2 development, the shadow HRA states that further consultation will be undertaken with MEAS, Natural England and the Council regarding a suitable mitigation strategy. However, mitigation for recreational pressure effects will need to be provided by the applicant **prior to determination** of the application to enable the HRA to be completed.*

## 2. METHODOLOGY

### 2.1 INTRODUCTION

The current shadow Appropriate Assessment is based on the best practice for Habitat Regulations Assessment as outlined in The Habitat Regulations Handbook (DTA Publications, 2013 and subsequent updates). This document expands upon previous guidance published by the Impacts Assessment Unit at Oxford Brookes University (2001) and the Department for Communities and Local Government (2006).

Best practice guidance identifies that the Habitat Regulations Assessment process is broadly divisible into four stages, with the need to complete each stage determined by the results of the previous stage. In summary, these stages are:

- **Stage 1: Evidence Gathering and Screening**  
This stage is associated with collecting evidence regarding those parts of the Natura 2000 network that have the potential to be impacted by the strategic land-use plan, either alone or in combination with other projects or plans. Where no significant effects are perceived, sites may be screened out of the need for further assessment during Stage 2.
- **Stage 2: Appropriate Assessment of Significant Impacts**  
Where it is considered a Natura 2000 site may experience significant effects from a project or strategic land-use plan, either alone or in combination, a detailed assessment of likelihood and severity of the perceived impact on the integrity of the Natura 2000 network is undertaken. This assessment is based on a detailed review of the project or plan in conjunction with the structure, function and conservation objectives of the Natura 2000 site. This stage may also include a preliminary assessment regarding the potential for the identified impacts to be mitigated.
- **Stage 3: Assessment of Alternative Solutions**  
Where impacts on the integrity of the Natura 2000 network are perceived, this stage examines alternative ways of achieving the objectives of the project or strategic land-use plan in order to avoid these impacts.
- **Stage 4: Imperative Reasons of Overriding Public Interest and Compensation Measures**  
Where the potential for adverse impacts remains, and where it is deemed that a project or land-use plan should proceed for Imperative Reasons of Overriding Public Interest (IROPI), an investigation of appropriate compensatory measures is undertaken.

This report focuses on Stage 2 of the Habitat Regulations Assessment process.

### 2.2 THE 'PRECAUTIONARY PRINCIPLE'

Oxford Brooks (2001) Methodological Guidance on Art 6(3) and 6(4) Habitats Directive states that "*Implicit in the habitats directive is the application of the **precautionary principle**, which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty*". The European Commission's Final Communication from the Commission on the Precautionary Principle (European Commission, 2000a) states that the use of the precautionary principle presupposes:

- Identification of potentially negative effects resulting from a phenomenon, product or procedure;
- A scientific evaluation of the risks which because of the insufficiency of the data, their inconclusive or imprecise nature, makes it impossible to determine with sufficient certainty the risk in question (CEC, 2000).

According to best practice guidance, this means that the emphasis for assessment should be on objectively demonstrating, with supporting evidence, that there will be no significant effects on a Natura 2000 site. The publication 'Managing Natura 2000 Sites: The Provision of Article 6 of the 'Habitats' Directive 92/43/EEC' (European Commission, 2000b) provides explanatory guidance regarding this point, which is paraphrased below.

*It is clear from the context and from the purpose of the directive that the 'integrity of the site' relates to the site's conservation objectives. For example, it is possible that a plan or project will adversely affect the integrity of a site only in a visual sense or only habitat types or species other than those listed in Annex I or*

*Annex II. In such cases, the effects do not amount to an adverse effect for the purposes of Article 6(3), provided that the coherence of the network is not affected.*

*The expression 'integrity of the site' shows that focus is here on the specific site. Thus, it is not allowed to destroy a site or part of it on the basis that the conservation status of the habitat types and species it hosts will anyway remain favourable within the European territory of the Member State.*

*As regards the connotation or meaning of 'integrity', this can be considered as a quality or condition of being whole or complete. In a dynamic ecological context, it can also be considered as having the sense of resilience and ability to evolve in ways that are favourable to conservation. The 'integrity of the site' has been usefully defined as 'the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or levels of populations of the species for which it was classified' (IEEM, 2006).*

*The integrity of the site involves its ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the site's conservation objectives.*

### **2.3 CONSERVATION OBJECTIVES**

Conservation objectives for the Natura 2000 sites considered in this assessment have been downloaded from the Natural England website, and are presented in Chapters 4, 5 and 6.

### 3. RELEVANT NATURA 2000 SITES

As requested in the discretionary advice responses provided by MEAS and Natural England, which are summarised in Section 1.2, this report presents evidence to allow potential impacts on relevant Natura 2000 sites to be assessed. The report focuses on the following sites:

- Liverpool Bay SPA;
- Mersey Narrows and North Wirral Foreshore SPA and Ramsar; and,
- Mersey Estuary SPA and Ramsar.

The qualifying criteria and relative distances of the sites from the application site boundary are summarised in Table 3.1.

NATURA 2000 SITE	QUALIFYING FEATURES	DISTANCE FROM APPLICATION SITE
Liverpool Bay SPA	Four Annex 1 species; population of European Importance of one migratory species (not listed in Annex 1); and, an internationally important waterbird assemblage.	Adjacent to western boundary
Mersey Narrows and North Wirral Foreshore SPA and Ramsar	Two Annex 1 species; one regularly occurring migratory species; and, an internationally important waterbird assemblage.  The site is also designated as a Ramsar site due to the important communities of wetland bird species it supports.	960 m west
Mersey Estuary SPA and Ramsar	One Annex 1 species; populations of European Importance of seven migratory species; and, an internationally important waterbird assemblage.  The site is also designated as a Ramsar site due to the important communities of wetland bird species it supports.	4,280 m south

**Table 3.1: Summary of Natura 2000 Qualifying Criteria and Distance from Application Site Boundary**

The location of these sites in relation to the proposed development site is shown on Drawing C128844-02-01 in Chapter 14. The designation criteria, conservation objectives and known areas of vulnerability for each of the Natura 2000 sites listed in Table 3.1 are detailed in Chapters 4, 5 and 6.

#### Dee Estuary SAC

The Dee Estuary SAC is located within a 5 km radius of the site, however based on the information presented in the overall HRA for the Liverpool Waters project no significant adverse effects are predicted for this site and it is therefore scoped out of further assessment.

#### Ribble and Alt Estuaries SPA and Ramsar and Sefton Coast SAC

The nearest part of these sites is located over 6 km distant from the proposed development area as the crow flies, and the majority of these vast areas are well in excess of 10 km away. This distance means that the site is unlikely to be used for everyday recreational activities generated by the proposed development (e.g. walking and dog walking), however weekend visits are more likely.

Most accessible areas within the Ribble and Alt Estuaries SPA are served by a well-maintained promenade to which qualifying bird species will be habituated. The likelihood of disturbance to areas of key habitat is restricted to water-based recreational activities, to which this small development is predicted to provide a negligible increase.

Visits to the Sefton Coast SAC are likely to focus on areas such as the Sefton Coastal Path that are managed for recreational use. Reference to the JNCC data sheet for the SAC does not highlight recreational pressure as a significant threat, and the proposed development will not contribute to the other areas of vulnerability (e.g. non-native species, pollution, changes in abiotic conditions, succession).

However, it is recognised that when the proposed development is considered *in combination* with other projects and plans, including those brought forward as part of the wider Liverpool Waters Project, there may be a significant effect on Natura 2000 sites as a result of increased recreational pressure. In-combination effects are considered in Chapter 11.

## 4. LIVERPOOL BAY / BAE LERPWL SPA

### 4.1 QUALIFYING CRITERIA

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description<sup>3</sup> and accompanying Natura 2000 data sheet<sup>4</sup>.

**Country:** England and Wales

**Counties / Unitary Authorities:** Lancashire, Blackpool, Merseyside, Sir y Fflint / Flintshire, Conwy, Gwynedd, Ynys Môn / Isle of Anglesey and a small portion sits within Sir Ddinbych / Denbighshire unitary authority.

**Latitude:** 53.61

**Longitude:** -3.422

**Site Code:** UK 9020294 (SPA)

**Status:** Designated Special Protection Area (SPA)

**Area (ha):** 252,757.73

Liverpool Bay / Bae Lerpwl SPA encompasses marine areas supporting large aggregations of wintering red-throated diver *Gavia stellata* and common scoter *Melanitta nigra* as well as important marine foraging areas of little terns *Sternula albifrons* breeding within The Dee Estuary SPA, and foraging areas of common terns *Sterna hirundo* breeding at the Mersey Narrows and North Wirral Foreshore SPA. The boundary of Liverpool Bay / Bae Lerpwl SPA extends beyond 12 nautical miles and therefore lies partly in Welsh and English territorial waters and partly in offshore waters; hence it is a site for which Natural England, Natural Resources Wales, and JNCC have responsibility to provide statutory advice.

#### 4.1.1 Qualifying Species

The site supports two qualifying bird species listed on Annex 1 of the Birds Directive (2009/147/EC) during the non-breeding season, and two qualifying bird species listed on Annex 1 during the breeding season. The site also supports significant concentrations of a regularly occurring migratory species, during the non-breeding season. These species are summarised in Table 4.1.

SPECIES	FEATURE TYPE	STATUS ON SITE	SOURCE OF DATA
Red-throated diver <i>Gavia stellata</i>	Annex 1 species	Wintering – 6.89% of the GB population, with a 5-year peak mean 2004/05 - 2010/11 of 1,171 individuals.	JNCC Site Description and Data Sheet
Little gull <i>Hydrocoloeus minutus</i>	Annex 1 species	Wintering – 5-year peak mean 2004/05 - 2010/11 of 319 individuals.	
Common scoter <i>Melanitta nigra</i>	Regularly occurring migratory species	Wintering - 10.31% of the NW European population, with 5-year mean peaks 2004/05 - 2010/11 of 56,679 individuals.	
Little tern <i>Sternula albifrons</i>	Annex 1 species	Breeding – 6.84% of the GB population, with a 5-year mean 2010 – 2014 of 130 pairs.	
Common tern <i>Sterna hirundo</i>	Annex 1 species	Breeding - 1.80% of the GB population, with a 5-year mean 2011 – 2015 of 180 pairs.	

**Table 4.1: Summary of Qualifying Species Listed for Liverpool Bay SPA**

The site also supports an internationally important assemblage of birds. Over winter the area regularly supports: 69,687 waterbirds (5-year peak mean 2004/05 - 2010/11). This includes over 1% of the GB population or over 2000 individuals of five species (red-throated diver, common scoter, little gull, red-breasted merganser *Mergus serrator* and cormorant *Phalacrocorax carbo*) and less than 1% of the GB population or less than 2000 Individuals of 16 species (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 *Podiceps cristatus*, common guillemot *Uria aalge*, northern gannet *Morus bassanus*, Atlantic puffin *Fratercula arctica*, herring gull *Larus argentatus*, black-legged kitiwake *Rissa tridactyla*, lesser black-backed gull *Larus fuscus*, great northern diver *Gavia immer*, common shag *Phalacrocorax aristotelis*, razorbill *Alca torda* and velvet scoter *Melanitta fusca*).

<sup>3</sup> Available at: <http://jncc.defra.gov.uk/page-7507>

<sup>4</sup> Available at: <http://jncc.defra.gov.uk/pdf/SPA/UK9020294.pdf>

## 4.2 CONSERVATION OBJECTIVES

The Conservation Objectives (version 4, 20<sup>th</sup> December 2017) for the Liverpool Bay / Bae Lerpwl SPA are available in the document entitled 'European Site Conservation Objectives for Liverpool Bay / Bae Lerpwl Special Protection Area Site Code: UK9020294', on the Natural England website<sup>5</sup>. They state:

*With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified... and subject to natural change;*

*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.*

## 4.3 VULNERABILITY OF THE SPA

The issues to which the SPA is vulnerable are highlighted in Table 4.2. This information has been extracted from the Natura 2000 Standard Data Forms produced by the JNCC in 2010 and 2017 and Version 6.5 of the 'Advice under Regulation 35(3) of The Conservation of Habitats and Species Regulations 2010 (as amended)', herein referred to as the 'Regulation 35 package', produced by Natural England and the Countryside Council for Wales (now Natural Resources Wales) in October 2012.

In their discretionary advice response, Natural England note that:

*We currently do not have an updated Conservation Advice package for Liverpool Bay SPA. You may find some useful background information available in the original Regulation 35 package. However, please note this does not cover the additional features protected through the recent extension of the site and only provides advice on red throated diver and common scoter.*

Issue	Detail	Source of Data
Mining and quarrying	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'mining and quarrying' as a threat / pressure both inside and outside of the SPA.</p> <p>The 2010 JNCC Natura 2000 Standard Data Form states that '<i>Aggregate extraction presents some risks of disturbance and also changes to sediment structures which may, in particular, impact on common scoter through changes to their benthic feeding grounds. However, aggregate extraction tends to be temporary and localised and so is not anticipated that moderate and targeted extraction will present a significant risk to either of the qualifying species.</i>'</p>	JNCC Natura 2000 Standard Data Form (2010); JNCC Natura 2000 Standard Data Form (2017).
Exploration and extraction of oil or gas	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'exploration and extraction of oil or gas' as a threat / pressure both inside and outside of the SPA.</p> <p>There are a range of gas fields within and in close proximity to the Liverpool Bay, which was one of the first near-shore areas of the UK identified for commercially exploitable oil and gas (Natural England, 2015)<sup>6</sup>. Oil and gas exploration and extraction activities have the potential to result in damage and / or disturbance to the sea bed, although the majority of oil and gas exploration activities occur a significant distance from the shore, away from valuable shallow foraging areas.</p> <p>The Regulation 35 package notes that '<i>Although the risk of a catastrophic event due to vessel traffic (oil tankers, ships with toxic contaminants etc) exists, the probability of such an event occurring as a result of "normal" vessel traffic is considered to be very low.</i>'</p>	JNCC Natura 2000 Standard Data Form (2017). Regulation 35 package.

**Table 4.2: Summary of Vulnerability of Liverpool Bay SPA (continues)**

<sup>5</sup> Available at: <http://publications.naturalengland.org.uk/publication/5089733892898816>

<sup>6</sup> Available at: <http://publications.naturalengland.org.uk/publication/5123676940795904>

Issue	Detail	Source of Data
Renewable abiotic energy use	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'renewable abiotic energy use' as a threat / pressure inside of the SPA. Renewable abiotic energy sources include wind, hydro, solar, tidal and thermal.</p> <p>The 2010 JNCC Natura 2000 Standard Data Form states that '<i>Liverpool Bay is an attractive location for the off-shore renewable energy industry and there is evidence that red-throated divers and common scoters are displaced by the presence of the turbines and the associated activities of construction and maintenance vessels. A number of wind farms in the site are currently in operation, under construction or consented.</i>'</p> <p>The Regulation 35 package states that, with respect to red-throated diver and common scoter '<i>Locally, significant disturbance and displacement effects are predicted to arise from noise and visual impacts from wind farm construction, maintenance traffic and visually from the turbines themselves</i>', although, citing surveys completed in Denmark (Petersen and Fox, 2007)<sup>7</sup>, conclude that '<i>common scoter may habituate to wind turbines and therefore any habitat loss due to displacement may diminish over time</i>'. For red-throated diver, it is noted that '<i>as yet, survey work has provided little or no evidence of habituation by divers (Petersen &amp; Fox 2007)</i>'. The Regulation 35 package also states that '<i>The sensitivities and exposure for the waterbird assemblage feature are the same as those for common scoter... This is due to the fact that common scoter are the dominant species in the feature, and because they have the highest vulnerability score</i>'.</p>	JNCC Natura 2000 Standard Data Form (2010); JNCC Natura 2000 Standard Data Form (2017); Regulation 35 package.
Shipping lanes, ports, marine constructions	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'shipping lanes, ports, marine constructions' as a threat / pressure both inside and outside of the SPA.</p> <p>Construction of new ports and other structures within the marine environment have the potential to result in the loss and disturbance of supporting habitats within and adjacent to the SPA, as well as noise and visual disturbance to qualifying bird species.</p> <p>Operational use of ports also has the potential to cause noise and visual disturbance to qualifying bird species.</p> <p>The 2010 JNCC Natura 2000 Standard Data Form states that '<i>Red throated divers and common scoters are sensitive to non-physical, (noise and visual) disturbance by both commercial and recreational activities, for example disturbance by moving vessels - the larger the vessel, the greater disturbance distance expected.</i>'</p>	JNCC Natura 2000 Standard Data Form (2010); JNCC Natura 2000 Standard Data Form (2017).
Roads, paths and railroads	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'roads, paths and railroads' as a threat / pressure both inside and outside of the SPA. The construction and completed use of roads, paths and railroads along the coastal areas within and adjacent to the Liverpool Bay SPA are likely to result in the loss and disturbance of habitat supporting qualifying bird species, as well as potential increases in recreational pressure and aerial emissions.</p>	JNCC Natura 2000 Standard Data Form (2017).
Utility and service lines	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'utility and service lines' as a threat / pressure both inside and outside of the SPA. The installation of utility and service lines, associated with development within the Liverpool area, has the potential to cause damage and / or disturbance to supporting habitats within and adjacent to the SPA, as well as noise and visual disturbance to qualifying bird species.</p>	JNCC Natura 2000 Standard Data Form (2017).
Airports, flightpaths	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'airports, flightpaths' as a threat / pressure outside of the SPA. The Liverpool John Lennon Airport, which is located over 5 km south-east of the Liverpool Bay SPA, is proposed to be expanded. There is the potential for increased emissions of atmospheric pollutants and noise disturbance, which could alter the distribution of qualifying bird species within the River Mersey.</p>	JNCC Natura 2000 Standard Data Form (2017); Liverpool Local Plan HRA (Aecom, 2017).

**Table 4.2 (continued): Summary of Vulnerability of Liverpool Bay SPA (continues)**

<sup>7</sup> Petersen, I.K., Christensen, T.J., Kahlert, J., Desholm, M. & Fox, A.D. (2006) *Final results of bird studies at the offshore windfarms at Nysted and Horns Rev, Denmark*. Report commissioned by DONG energy and Vattenfall A/S. NERI report, National Environmental Research Institute, Ministry of the Environment, Denmark. www.dmu.dk

Issue	Detail	Source of Data
Fishing and harvesting aquatic resources	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'fishing and harvesting aquatic resources' as a threat / pressure inside the SPA.</p> <p>The 2010 JNCC Natura 2000 Standard Data Form states that <i>'The site is subject to commercial fishing. The sandbanks of Liverpool Bay support the nursery and feeding grounds for many fish species. The distribution and concentrations of red-throated divers will at least partly be determined by the presence, abundance, and availability of their prey species. The site holds various fish of commercial importance, and extraction of the red-throated diver's main fish prey, as either target and/or bycatch species, or through recreational fishing could impact the population. Entanglement in static fishing nets is an important cause of death for red-throated divers in the UK waters however the extent of this impact in Liverpool Bay is not known.'</i></p> <p><i>Commercial and recreational fishing could directly affect both the food source and feeding grounds used by common scoters and in addition a number of ports undertake navigational dredging and disposal both in, and adjacent to, the site. Dredging for bivalves has been shown to have significant negative effects on their benthic habitat.'</i></p>	JNCC Natura 2000 Standard Data Form (2010); JNCC Natura 2000 Standard Data Form (2017); Regulation 35 package.
Outdoor sports and leisure activities, recreational activities	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'outdoor sports and leisure activities, recreational activities' as threats / pressures both inside and outside of the SPA. Increased leisure and recreational use of the application site and its immediate surrounds could result in a decline in the numbers of sensitive bird species using habitats within the application site, potentially resulting in a change in distribution within the SPA.</p> <p>The 2010 JNCC Natura 2000 Standard Data Form states that <i>'There are a number of areas along the coast where marine tourism and leisure activities are common, with existing marinas and partially completed and proposed marina developments. As a result of these leisure users of the area, in combination with the whole suite of commercial activities...the site is a very active boating and shipping site. However, most vessel activity is restricted to well-established areas which the birds already tend to avoid.'</i></p>	JNCC Natura 2000 Standard Data Form (2010); JNCC Natura 2000 Standard Data Form (2017).
Pollution to surface waters (limnic & terrestrial, marine & brackish) and marine water pollution	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'pollution to surface waters (limnic &amp; terrestrial, marine &amp; brackish)' and 'marine water pollution' as threats / pressures both inside and outside of the SPA. Pollution of surface and marine waters can occur via a number of pathways. The Regulation 35 package describes potential impacts on qualifying bird species from toxic contamination (e.g. large chemical and oil spills), which could result in a decline in prey populations and direct impacts on individual birds, and non-toxic contamination (e.g. through nutrient loading), which could impact on prey species and distribution. It is noted that the <i>'dilution effect for [non-toxic contamination] (which could also include increased turbidity and changes to the salinity) may reduce the exposure, which is considered low'</i>.</p>	JNCC Natura 2000 Standard Data Form (2017); Regulation 35 package.
Invasive non-native species	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'invasive non-native species' as a threat / pressure both inside and outside of the SPA. The potential spread of invasive non-native species throughout the SPA could be detrimental to existing vegetation and / or the marine faunal assemblage, which in turn could have an adverse effect on the use of the site by sensitive bird species.</p>	JNCC Natura 2000 Standard Data Form (2017).
Human induced changes in hydraulic conditions	<p>The 2017 JNCC Natura 2000 Standard Data Form lists 'human induced changes in hydraulic conditions' as a threat / pressure both inside and outside of the SPA. This category incorporates a range of impacts relating to modifying water levels (e.g. drying out, flooding, abstractions) and changes in structure and function, for example by modifying the bank / shore or removing or adding sediments. These activities have the potential to result in the loss and disturbance of supporting habitats within and adjacent to the SPA,</p>	JNCC Natura 2000 Standard Data Form (2017).

**Table 4.2 (continued): Summary of Vulnerability of Liverpool Bay SPA**

It is recognised that not all of these vulnerabilities could be impacted by the proposed development. This is considered in greater detail in Chapter 8.

In addition to the known threats listed in Table 4.2, the SPA data sheet also lists factors that are known to have a positive impact on the SPA. These are associated with improved access to the site and interpretive centres.

## 5. MERSEY NARROWS AND NORTH WIRRAL FORESHORE SPA AND RAMSAR SITE

### 5.1 QUALIFYING CRITERIA

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description<sup>8</sup> and accompanying Natura 2000 data sheet<sup>9</sup>.

**Country:** England

**Unitary Authority:** Sefton, Wirral.

**Latitude:** 53 25 09 N

**Longitude:** 03 07 43 W

**Site Code:** UK9020287

**Status:** Designated Special Protection Area (SPA)

**Area (ha):** 2,078.41

**Component SSSI/ASSIs:** Mersey Narrows SSSI, North Wirral Foreshore SSSI

Mersey Narrows and North Wirral Foreshore is located on the northwest coast of England at the mouths of the Mersey and Dee estuaries. The site comprises intertidal habitats at Egremont foreshore, man-made lagoons at Seaforth and the extensive intertidal flats at North Wirral Foreshore. Egremont is most important as a feeding habitat for waders at low tide whilst Seaforth is primarily a high tide roost site, as well as a nesting site for terns. North Wirral Foreshore supports large numbers of feeding waders at low tide and also includes important high tide roost sites.

#### 5.1.1 Qualifying Species

The site supports three qualifying bird species listed on Annex 1 of the Birds Directive (2009/147/EC) during the non-breeding season, and one qualifying bird species listed on Annex 1 during the breeding season. The site also supports significant concentrations of one Annex 2 species, during the non-breeding season. These species are summarised in Table 5.1.

SPECIES	FEATURE TYPE	STATUS ON SITE	SOURCE OF DATA
Bar-tailed godwit <i>Limosa lapponica</i>	Annex 1 species	When classified in 2013 the site supported nationally important numbers of this species (3,344 individuals) during the overwintering period, representing 6.6% of the GB population.	JNCC Site Description and Data Sheet
Common Tern <i>Sterna hirundo</i>	Annex 1 species	When classified in 2013 the site supported nationally important numbers of this species (1,475 non-breeding individuals) during passage periods, representing more than 1% of the GB population. The site also supports nationally important numbers of breeding birds (177 pairs) representing 1.8% of the GB population.	
Little Gull <i>Hydrocoloeus minutus</i>	Annex 1 species	When classified in 2013 the site supported nationally important numbers of this species (213 individuals) during the passage period. There is currently no national population estimate for little gull in Great Britain due to a lack of data.	
Knot <i>Calidris canutus islandica</i>	Annex 2 species	When classified in 2013, the site supported internationally important numbers of this species (10,655 individuals) during the overwintering period, representing 2.4% of the non-breeding European population	

**Table 5.1: Summary of Qualifying Species Listed for Mersey Narrows and North Wirral Foreshore SPA**

The area also qualifies under Article 4.2 of the Directive (79/409/EEC) as it is regularly supports over 20,000 waterbirds (as defined by the Ramsar Convention) in any season. This assemblage is of both European and international importance and includes all Annex I and migratory waterbird species present at the site (with the exception of non-native species).

At the time of classification, the site supported 32,366 individual waterbirds in the non-breeding season, (5-year peak mean 2004/5 – 2008/9) comprised of 2,414 wildfowl and 29,952 waders. Significant components of the assemblage are the wintering populations of bar-tailed godwit *Limosa lapponica* and knot *Calidris canutus* as well as nationally important numbers of cormorant *Phalacrocorax carbo*, grey plover *Pluvialis*

<sup>8</sup> Available at: <http://jncc.defra.gov.uk/page-2085>

<sup>9</sup> Available at: <http://publications.naturalengland.org.uk/publication/6521906232557568>

*squatarola*, sanderling *Calidris alba*, dunlin *Calidris alpina* and redshank *Tringa totanus* and over 2,000 oystercatcher *Haematopus ostralegus*.

The site is also designated as a Ramsar site due to the important communities of wetland bird species listed above.

## 5.2 CONSERVATION OBJECTIVES

The Conservation Objectives (version 1, 30<sup>th</sup> June 2014) for the Mersey Narrows and North Wirral Foreshore SPA are available in the document entitled 'European Site Conservation Objectives for Mersey Narrows and North Wirral Foreshore Special Protection Area Site Code: UK9020287', on the Natural England website<sup>10</sup>. They state:

*With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified... and subject to natural change;*

*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.*

## 5.3 VULNERABILITY OF THE SPA AND RAMSAR SITE

The known issues to which the Mersey Narrows and North Wirral Foreshore SPA and Ramsar site are vulnerable are highlighted in Table 5.2.

ISSUE	DETAIL	SOURCE OF DATA
Vegetation succession / invasive non-native species (Hoylake Beach area)	Sedimentation and associated vegetation succession could result in changes to species of bird using the site. Issues of sedimentation and vegetation succession at Hoylake Beach will be addressed through management plans and community engagement, supported by powers within Wildlife and Countryside Act 1981 as amended and the Conservation of Habitats & Species Regulations 2010.  The potential spread of invasive non-native species throughout the site could be detrimental to existing vegetation, which in turn could have an adverse effect on the use of the site by sensitive bird species.	JNCC Ramsar and SPA Data Sheets
Outdoor sports and leisure activities, recreational activities	Recreation and levels of activity on North Wirral Foreshore are thought to be contributing to declines in bird numbers and their usage of the site.  This threat is particularly relevant to the North Wirral Foreshore. The intensity and location of recreational activities is affecting the way birds use the foreshore and move between sites along the North West Coast. Natural England work with Wirral Borough Council to manage group recreational activities through voluntary agreements, licensing and permitting arrangements.	JNCC Ramsar and SPA Data Sheets
Changes in biotic and abiotic conditions	This threat is associated with changes in both the physical conditions at the site, and also the use of the site by living organisms.	JNCC SPA Data Sheet
Urban development (particularly Egremont Foreshore)	Egremont Foreshore is vulnerable to both social and economic pressures to return the foreshore back to sandy beaches. Egremont also is vulnerable to physical pressures through sedimentation of the foreshore by the coastal processes reducing the available low tide feeding habitat.  Sand sedimentation at Egremont foreshore is increasing, reducing the low tide feeding area (hard rocky substrates, boulder clay). Consequently the build of beaches will increase recreation pressure both summer and winter overtime. The artificial replenishment of sand is likely to enhance this pressure.	JNCC Ramsar Data Sheet

**Table 5.2: Vulnerability of the Mersey Narrows and North Wirral Foreshore SPA and Ramsar Site**

<sup>10</sup> Available at: <http://publications.naturalengland.org.uk/publication/6521906232557568>

## 6. MERSEY ESTUARY SPA AND RAMSAR SITE

### 6.1 QUALIFYING CRITERIA

The following information is taken from the Joint Nature Conservation Committee (JNCC) site description<sup>11</sup> and accompanying Natura 2000 data sheet<sup>12</sup>.

**Country:** England

**Unitary Authority:** Halton, Wirral, Cheshire, Liverpool.

**Latitude:** 53 19 39 N

**Longitude:** 02 53 42 W

**Site Code:** UK9005131

**Status:** Designated Special Protection Area (SPA)

**Area (ha):** 5033.14

**Component SSSI/ASSIs:** Mersey Estuary SSSI, New Ferry SSSI

The Mersey Estuary is located on the Irish Sea coast of north-west England. It is a large, sheltered estuary which comprises large areas of saltmarsh and extensive intertidal sand- and mud-flats, with limited areas of brackish marsh, rocky shoreline and boulder clay cliffs, within a rural and industrial environment. The intertidal flats and saltmarshes provide feeding and roosting sites for large populations of waterbirds. During the winter, the site is of major importance for ducks and waders. The site is also important during the spring and autumn migration periods, particularly for wader populations moving along the west coast of Britain.

#### 6.1.1 Qualifying Species

The site qualifies under Article 4.1 of the Birds Directive (79/409/EEC) by supporting populations of European importance of the one species listed on Annex I of the Directive. This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the two migratory species on passage, and five migratory species over winter. These species are summarised in Table 5.1.

SPECIES	FEATURE TYPE	STATUS ON SITE	SOURCE OF DATA
Golden plover <i>Pluvialis apricaria</i>	Annex 1 species	3,070 individuals, representing at least 1.2% of the wintering GB population (5-year peak mean 1991/2 - 1995/6).	JNCC Site Description and Data Sheet
Redshank <i>Tringa totanus</i>	Migratory species	On passage - 3,516 individuals representing at least 2.0% of the Eastern Atlantic - wintering population (5-year peak mean, 1987-1991).  Over winter, the site also supports 4,689 individuals representing at least 3.1% of the wintering Eastern Atlantic - wintering population (5-year peak mean 1991/2 - 1995/6).	
Ringed Plover <i>Charadrius hiaticula</i>	Migratory species	Over winter, the site supports 1,453 individuals representing at least 2.9% of the Europe/Northern Africa - wintering population (Count, as at 1989).	
Dunlin <i>Calidris alpina alpina</i>	Migratory species	Over winter, the site supports 44,300 individuals representing at least 3.2% of the wintering Northern Siberia/Europe/Western Africa population (5 year peak mean 1991/2 - 1995/6).	
Pintail <i>Anas acuta</i>	Migratory species	Over winter, the site supports 2,744 individuals representing at least 4.6% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6).	
Shelduck <i>Tadorna tadorna</i>	Migratory species	Over winter, the site supports 5,039 individuals representing at least 1.7% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6).	
Teal <i>Anas crecca</i>	Migratory species	Over winter, the site supports 11,667 individuals representing at least 2.9% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6).	

**Table 6.1: Summary of Qualifying Species Listed for Mersey Estuary SPA**

The area also qualifies under Article 4.2 of the Directive (79/409/EEC) as it regularly supports over 20,000 waterbirds. Over winter, the area regularly supports 99,467 individual waterfowl (5 year peak mean 1991/2 -

<sup>11</sup> Available at: <http://jncc.defra.gov.uk/page-1986>

<sup>12</sup> Available at: <http://publications.naturalengland.org.uk/publication/6521906232557568>

1995/6) including: curlew *Numenius arquata*, black-tailed godwit *Limosa limosa islandica*, lapwing *Vanellus vanellus*, grey plover *Pluvialis squatarola*, wigeon *Anas penelope*, great crested grebe *Podiceps cristatus*, redshank *Tringa totanus*, dunlin *Calidris alpina alpina*, pintail *Anas acuta*, teal *Anas crecca*, shelduck *Tadorna tadorna* and golden plover *Pluvialis apricaria*.

The site is also designated as a Ramsar site due to the important communities of wetland bird species listed above.

## 6.2 CONSERVATION OBJECTIVES

The Conservation Objectives (version 4, 30<sup>th</sup> June 2014) for the Mersey Estuary SPA are available in the document entitled 'European Site Conservation Objectives for Mersey Estuary Special Protection Area Site Code: UK9005131', on the Natural England website<sup>13</sup>. They state:

*With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified... and subject to natural change;*

*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.*

## 6.3 VULNERABILITY OF THE SPA AND RAMSAR SITE

The known issues to which the Mersey Estuary SPA and Ramsar site are vulnerable are highlighted in Table 6.2.

ISSUE	DETAIL	SOURCE OF DATA
Invasive non-native species	The potential spread of invasive non-native species throughout the site could be detrimental to existing vegetation, which in turn could have an adverse effect on the use of the site by sensitive bird species.	JNCC SPA Data Sheet
Outdoor sports and leisure activities, recreational activities	Increased leisure and recreational use of the site and its immediate surrounds could result in a decline in the numbers of sensitive bird species using the site.	JNCC SPA Data Sheet
Changes in abiotic conditions	This threat is associated with changes in the physical conditions at the site.	JNCC SPA Data Sheet

**Table 6.2: Vulnerability of the Mersey Estuary SPA and Ramsar Site**

In addition to the known threats listed in Table 6.2, the SPA data sheet also lists factors that are known to have a positive impact on the SPA. These are associated with grazing, modifications of cultivation practices, and improved access to the site.

<sup>13</sup> Available at: <http://publications.naturalengland.org.uk/publication/5790848037945344>

## 7. SITE DESCRIPTION AND PROPOSED DEVELOPMENT

### 7.1 CURRENT LAND USE

The survey area forms part of West Waterloo Dock, located within the Central Docks complex in Liverpool. It is centered at National Grid Reference SJ 33440 91329 and covers an area of 1.06 hectares.

The site is currently occupied by a mosaic of hardstanding, short perennial vegetation on recently disturbed ground and standing water forming part of the West Waterloo Dock. It is abutted to the west by the River Mersey, to the north by a combination of recently cleared land and an ongoing development, to the east by the East Waterloo Dock residential complex, and to the south by the remainder of the West Waterloo Dock and Princes Half Tide Dock.

The wider landscape comprises the Wirral promontory on the far side of the River Mersey c. 1 km to the west, further dock complexes in various states of redevelopment to the north and south, and the urban expanse of central Liverpool to the east.

A Phase 1 Habitat Survey was completed by Tom Docker (Ecological Impact Assessment Manager, Middlemarch Environmental Ltd) on 22<sup>nd</sup> August 2018 as part of the Preliminary Ecological Appraisal (Report RT-MME-128844-01). Plates 5.1 to 5.4 show site conditions at the time of this visit.



**Plate 7.1: Ephemeral / short perennial vegetation within and adjacent to site**



**Plate 7.2: Hardstanding within and adjacent to site**



**Plate 7.3: Standing water within West Waterloo Dock**



**Plate 7.4: Extensive algal bloom on surface of water within West Waterloo Dock**

### 7.2 SCOPE OF THE PROPOSED DEVELOPMENT

The proposals for the site comprise:

*Full planning consent for residential development consisting of 538 apartments with 298sqm of commercial floorspace, with associated partial dock infill of West Waterloo Dock, access, parking, servicing, soft and hard landscaping and public open space including a waterside walkway.*

## 8. POTENTIAL EFFECTS ON LIVERPOOL BAY SPA

### 8.1 INTRODUCTION

This chapter provides a discussion of the potential for significant effects on the Liverpool Bay SPA to occur as a result of the implementation of the proposed development. In accordance with best practice, this discussion is focused on the potential of the development to impact upon the conservation objectives of the SPA. The 'vulnerabilities' associated with the SPA identified in Chapter 4 have been used to further assess the likelihood of impacts arising from the proposed development in relation to each of the potential impact pathways. These pathways are discussed in Sections 8.2 to 8.14 and have been ordered in the same way as they are presented in Table 4.2.

Changes to the boundaries of the SPA in October 2017 included an extension further inshore along the River Mersey, to offer protection to foraging common tern and little tern. In addition, cormorant and red breasted merganser were included as additional named components of the water bird assemblage. The River Mersey extension of the SPA lies c. 10 m west of the application site. Of the qualifying individual and assemblage species of the SPA, cormorant is the only species that was recorded in proximity to the application site during the bird surveys for the adjacent proposed Northern Link Road development (Planning Application Reference: 17F/2628), completed by RSK<sup>14</sup> and Amey<sup>15</sup> between 2016 and 2018 and Arup<sup>16</sup> between 2018 and 2019. As such, the potential effects of the proposed development on cormorant populations are the focus of this assessment.

Reference to the Wetland Bird Survey (WeBS) data<sup>17</sup> confirms that cormorant numbers have steadily been increasing in Great Britain, and this trend is reflected within the Mersey Estuary, where the annual peak has increased from 90 in 2012/13 to 420 in 2016/17, although the 2017/18 annual peak dropped to 379. Reporting on an increase in cormorant numbers on the Dee and Ribble and Alt Estuaries between 2005/06 and 2009/10, the Habitat Regulations Assessment Final Report for Liverpool Waters<sup>18</sup> states that '*The mechanisms fuelling these trends are not fully understood. In order to safeguard the current cormorant population, and retain it in a favourable conservation status, the population on Liverpool Waters will need to remain viable*'. Therefore, a focus on maintaining suitable supporting habitat across the docks within the Liverpool Waters scheme is considered necessary.

Cormorants utilising coastal habitats '*generally feed on bottom-dwelling fish, but can also take fish from the surface and main water column as well as crustaceans*' (Natural England, 2012)<sup>19</sup>. Fish surveys have been completed by Ecospan Environmental (2018)<sup>20</sup> within the West Waterloo Dock, which recorded the following:

*...the number and diversity of fish species within the dock when sampled was low. No mullet or flounder were caught which species which might have been expected given the docks position and the brackish nature of the water. However, the dock obviously supports a good population of stickleback. Additionally a few sand smelt were caught and two gobies which indicate that these species are present but probably in relatively low numbers.*

Although these results indicate that the West Waterloo Dock is unlikely to provide a particularly valuable foraging resource for birds, the peak count of 12 cormorant recorded in this area during the 2018 winter bird surveys and the peak count of 33 cormorant recorded across the Liverpool Waters site during the 2018/19 winter bird surveys suggests that this waterbody and adjacent habitats provide at least a minor foraging resource for this species, and are likely to be of value for roosting and preening. It should be noted that the 2018/19 peak count of 33 cormorants covers the entire Liverpool Waters site, from Princes Dock in the south to Bramley-Moore Dock in the north. The highest concentration of cormorant was recorded to the west of

<sup>14</sup> RSK (2017). A565 Link Roads – Breeding Bird Survey Report

<sup>15</sup> Amey (2018) Wintering Bird Survey Report – LCCC P2 – Northern Link Road. CO00205341 /WBR Rev0. July 2018.

<sup>16</sup> Arup (2019) Liverpool Waters: Strategic Ecological Mitigation Plan. 0-15-08. September 2019

<sup>17</sup> Frost, T.M., Austin, G.E., Calbrade, N.A., Mellan, H.J., Hearn, R.D., Robinson, A. E., Stroud, D.A., Wotton, S.R. and Balmer, D.E. (2019) Waterbirds in the UK 2017/18: The Wetland Bird Survey. BTO/RSPB/JNCC. Theftford.

<sup>18</sup> Liverpool City Council and MEAS (2012) Habitat Regulations Assessment: Final Report for Liverpool Waters, Liverpool. Planning Application 10O/2424

<sup>19</sup> Natural England (2012). Great cormorant: species information for marine Special Protection Area consultations. Natural England Technical Information Note TIN140. November 2012

<sup>20</sup> Ecospan Environmental (2018). Marine ecological baseline surveys in support of the re-development of West Waterloo Dock: Liverpool. DRAFT. Report Number ER18-379

Nelson Dock (located to the north of the application site), although a reasonable concentration of cormorant was also recorded in proximity to West Waterloo Dock.

## 8.2 MINING AND QUARRYING

The works proposed under this planning application will not have any impacts via mining or quarrying activities. No impacts are predicted.

## 8.3 EXPLORATION AND EXTRACTION OF OIL OR GAS

As the proposed development does not involve the exploration and extraction of oil or gas, no significant effects are predicted.

## 8.4 RENEWABLE ABIOTIC ENERGY USE

The works proposed under this planning application will not have any impacts via renewable abiotic energy use. No impacts are predicted.

## 8.5 SHIPPING LANES, PORTS, MARINE CONSTRUCTIONS

The works proposed under this planning application will not have any impacts via the creation or use of shipping lanes and ports.

However, it is considered that the proposals for the infilling of West Waterloo Dock falls within this area of vulnerability, in the context of 'marine constructions'.

In their discretionary advice response (provided in Section 1.4), Natural England stated that they '*would expect to see consideration of the impact of potential dock infill on the supporting function of the dock waters in relation to qualifying features of the SPAs...within the HRA*'.

Details of the dock infill methodology have been prepared by Clancy Consulting and are included in the Environmental Statement at Chapter 11. In summary the dock infilling will include the following processes:

*'The development comprises initially of land reclamation from the dock by installing a new dock wall within West Waterloo Dock to provide a separation between the Leeds-Liverpool canal and the development.*

*Once the new dock wall has been installed, the area behind the wall will be infilled with imported materials to raise existing levels to proposed before piling operations can then commence for the foundations for the four new mixed-use blocks (A-D).'*

Full details of the infill methodology are included in Chapter 11 of the Environmental Statement and are not repeated here.

The partial infilling of West Waterloo Dock will not result in the direct loss of any habitats within the SPA. In the absence of appropriate control measures, the dock infilling works could potentially impact upon qualifying species through:

- Loss and disturbance of supporting habitat utilised by cormorant;
- Pollution of supporting habitat (West Waterloo Dock) through issues such as run-off of chemicals (e.g. oil and fuel from construction machinery); and,
- Spread of non-native invasive marine species.

### Loss and Disturbance of Supporting Habitat

The partial infilling of the West Waterloo Dock will result in a small reduction in the area of supporting habitat used by cormorant. As established in Section 8.1, the dock is only considered to provide a minor foraging resource for this species, although is of value for roosting and preening.

The West Waterloo Dock is connected to the Princes Half Tide Dock to the south. As such, although the infilling works would result in a reduction in size of the West Waterloo Dock, this waterbody is considered

likely to continue to support a similar assemblage of prey species for cormorant. The dock infilling works are not considered to have a significant effect on the available foraging resource for cormorants in the area. However, noise and visual disturbance during the dock infilling works has the potential to temporarily displace cormorant from using habitats within the application site. This has the potential to result in minor changes in the distribution of cormorant within the SPA, which could alter the designation status of the waterbird assemblage. In the absence of mitigation, this could result in a 'likely significant effect', particularly when considered 'in-combination' with the potential effects of the northern access road and the Isle of Mann ferry terminal.

However, in order to address the potential impacts from the dock infilling works combined with impacts as a result of the wider developments, it is proposed that, in accordance with the Liverpool Waters: Strategic Ecological Mitigation Plan (Arup, 2019)<sup>16</sup> four permanent floating pontoons are installed in Princes Half Tide Dock (refer to Drawing 3.1 in the Strategic Ecological Mitigation Plan for details of location) prior to the commencement of works.

This mitigation would continue to provide suitable habitat for cormorants throughout the construction phase of the development. The four rafts could be positioned a sufficient distance from the edges of the dock to ensure that birds using them are not disturbed by noise and movement arising from use of the surrounding areas by people and vehicles.

Subject to the installation of the proposed floating pontoons, it is considered that the loss of supporting habitat for cormorant within West Waterloo Dock can be mitigated for, and there will be no likely significant effect on the distribution of cormorant within the SPA.

As highlighted by MEAS in their discretionary advice response (see Section 1.4), the infilling of West Waterloo Dock would also result in the proposed mitigation for the Northern Link Road (LPA ref: 17F/2628) scheme no longer being feasible. The provision of the floating pontoons in Princes Half Tide Dock is also considered to address this effect. This is discussed further in Chapter 11.

#### Pollution

Surface and marine water pollution is discussed in Section 8.11.

#### Spread of Invasive Non-Native Species

Invasive non-native species are discussed in Section 8.12.

## **8.6 ROADS, PATHS AND RAILROADS**

The works proposed under this planning application will not have any impacts via the creation or use of railroads.

### **8.6.1 Potential Construction Phase Effects**

The construction of roads and paths as part of the proposed development will only be possible following the completion of the partial infilling of West Waterloo Dock. It is considered highly likely that the works associated with the partial infilling of West Waterloo Dock, which are required prior to any further construction works, will result in the displacement of cormorants from the site. The potential impacts arising from the dock infilling works are discussed in Section 8.7.

In the absence of appropriate control measures, road and path construction works could potentially impact upon cormorant through:

- Pollution of supporting habitat (West Waterloo Dock) through issues such as run-off of chemicals (e.g. oil and fuel from construction machinery); and,
- Disturbance of cormorants using habitats within and adjacent to the site.

#### Pollution

Surface and marine water pollution is discussed in Section 8.11.

#### Disturbance

Noise and visual disturbance associated with road and pathway construction works are likely to deter cormorants from returning to the site following the completion of the dock infilling works. This has the potential to result in changes in the distribution of cormorant within the SPA, which could alter the

designation status of the waterbird assemblage. In the absence of mitigation, this could result in a 'Likely Significant Effect'.

However, as detailed in Section 8.5, it is proposed that four permanent floating pontoons are installed in the Princes Half Tide Dock prior to the commencement of works, in order to address the potential impacts from the dock infilling works, and the wider development as a whole. This mitigation will continue to provide suitable habitat for cormorants throughout the construction phase.

Furthermore, provided that best practice control measures are implemented during the construction phase, disturbance from noise and movement can be minimised. These control measures will be detailed in a Construction Environmental Management Plan (CEMP). Further information regarding the CEMP is provided in Chapter 12.

Overall, subject to the implementation of the mitigation measures proposed, the creation of roads and pathways within the application site will not have any effect on the conservation objectives for the SPA and no likely significant effects are anticipated.

### 8.6.2 Potential Operational Phase Effects

Use of roads and pathways by vehicles and people during the operational life of the proposed development could potentially impact upon qualifying species through:

- Pollution of ecologically valuable habitat types linked to and within the SPA via aerial emissions; and,
- Disturbance of qualifying bird species of the Liverpool Bay SPA that utilise habitats within and adjacent to the site.

#### Pollution

Liverpool Bay SPA has been considered specifically as a sensitive ecological receptor in the air quality assessment associated with the proposed scheme, presented in Chapter 6 of the Environmental Statement. Chapter 6 identifies that during construction, the qualifying habitats of the Liverpool Bay SPA are not sensitive to eutrophication or acidification based on information presented by APIS, and as such the assessment concludes that the potential effects from nitrogen and acid deposition can be screened out and do not need further in-depth assessment.

During operation of the site, Chapter 6 has also considered air quality impacts to the Liverpool Bay SPA. Based on the assessment works completed, it has been concluded that impacts on 24-hour mean NO<sub>x</sub> concentrations during the operational phase are considered to be insignificant in accordance with the EA screening criteria. The chapter states that:

*"...impacts on annual mean NO<sub>x</sub> concentrations at 6 receptor location cannot be screened out as insignificant according to the EA guidance. It should be noted that the remaining 24 receptors are deemed insignificant, and potential impacts are therefore isolated to [a] small area directly adjacent to the proposed link road."*

With respect to dust pollution, Chapter 6 of the Environmental Statement identifies that there is a medium potential dust risk to ecological receptors (ie the Liverpool Bay SPA) during earthworks and construction, and a high risk during track out.

Table 6.7.1.1 in Chapter 6 of the Environmental Statement provides Fugitive Dust Mitigation Measures, based on guidance from IAQM, which will be put in place to ensure suitable control measures are in place to mitigate potential adverse effects from dust pollution on Liverpool Bay SPA. The air quality assessment concludes the following:

*"Assuming the relevant mitigation measures...are implemented, the residual effect from all dust generating activities is predicted to be not significant."*

Cumulative effects of future traffic growth, and dust pollution are also considered in the air quality assessment and it is concluded that there would be no adverse cumulative effects on the Liverpool Waters SPA as a result of the proposed development.

#### Disturbance

The current traffic and pedestrian conditions related to the site and the surrounding area are set out in Chapter 5, Transport and Access, of the Environmental Statement. Chapter 5 identifies that the development

is located within close proximity to Liverpool city centre and walking infrastructure is generally well developed and of a good standard between the city centre and the site. The site itself currently has minimal pedestrian or vehicle use given its currently un-used nature.

However, as part of the northern access road works, which have already been granted planning permission, new pedestrian and traffic routes to the site will be created as a result of this approved scheme. The scheme will potentially result in the disturbance of waterbirds using the dock area, which are not yet habituated to the level of disturbance which will be introduced by the northern access road, the Isle of Mann ferry terminal project, and the proposed C02 scheme. It should be reiterated however, that the wider Liverpool Waters scheme would always result in increased disturbance from traffic and human use of the Central Docks area in order to deliver the visit for the regeneration of the docks area.

As detailed in Section 8.5, it is proposed that four permanent floating pontoons are installed in the Princes Half Tide Dock prior to the commencement of works, in order to address the potential impacts from the dock infilling works, and the wider development as a whole. This mitigation will continue to provide suitable habitat for cormorants throughout the operational life of the proposed development.

Subject to the implementation of the mitigation measures proposed, the use of roads and pathways within the application site during the operational phase of the proposed development will not have any effect on the conservation objectives for the SPA and 'No Likely Significant Effects' are anticipated.

## **8.7 UTILITY AND SERVICE LINES**

It is anticipated that utility and service lines will run underground, linked to the northern-link road development which is currently being constructed. It is not therefore anticipated that there would be any pathways via which the proposed development could result in an adverse effect on the Liverpool Bay SPA as a result of utility or service lines.

## **8.8 AIRPORTS, FLIGHTPATHS**

As the proposed development is not associated with airport development or expansion, no significant effects are predicted.

## **8.9 FISHING AND HARVESTING AQUATIC RESOURCES**

The works proposed under this planning application will not have any impacts via fishing or harvesting of aquatic resources. No impacts are predicted.

## **8.10 OUTDOOR SPORTS AND LEISURE ACTIVITIES, RECREATIONAL ACTIVITIES**

### **8.10.1 Potential Construction Phase Effects**

The construction phase of the proposed development will have no influence on outdoor sports and leisure activities, and will not result in any increase in recreational pressure on the SPA.

### **8.10.2 Potential Operational Phase Effects**

Increased human presence within the site as a result of the proposed development has the potential to cause disturbance to cormorants. Although these bird species are likely to be habituated to a certain level of disturbance due to the urban nature of the surrounding area, it is possible that an increased human presence and associated visual disturbance during the operational phases of the development has the potential to result in the displacement of a small number of individual cormorants from potential supporting habitat within and adjacent to the application site, which could in turn alter their distribution within the Natura 2000 sites of which they are a qualifying assemblage species. In the absence of mitigation, this could result in a 'Likely Significant Effect'.

However, as detailed in Section 8.5, it is proposed that four permanent floating pontoons are installed in the Princes Half Tide Dock prior to the commencement of works, in order to address the potential impacts from the dock infilling works, and the wider development as a whole. This mitigation will continue to provide suitable habitat for cormorants throughout the operational life of the proposed development.

Subject to the implementation of the mitigation measures proposed, increased human presence within the application site during the operational phase of the proposed development will not have any effect on the conservation objectives for the SPA and 'No Likely Significant Effects' are anticipated.

## **8.11 POLLUTION TO SURFACE WATERS (LIMNIC & TERRESTRIAL, MARINE & BRACKISH) AND MARINE WATER POLLUTION**

Water emissions during the construction and operational phases of the proposed development, via surface water run-off, for example, have the potential to alter the chemical composition and quality of aquatic habitats surrounding the proposed development site. The HRA completed by MEAS (2012) states that '*The dock systems act as supporting habitat to birds that qualify as assemblage species of the Natura 2000 sites for roosting, feeding and loafing purposes and the River Mersey is linked to Natura 2000 sites.*' As such, changes to these supporting habitats resulting from pollution have the potential to reduce their suitability to support fish populations and / or the qualifying bird species (notably cormorant) that rely upon them.

### **8.11.1 Potential Construction Phase Effects**

The dock infilling works and other construction activities have the potential to result in oil and other petrochemicals arising from construction machinery to enter the West Waterloo Dock.

Due to the limited connection between the dock and the River Mersey, pollution is unlikely to travel beyond the dock system, and, in the event that it does, the significance of this type of pollution on the SPA habitats is considered to be low, mainly because any pollutants arising from the development are likely to be diluted by the time they reach the SPA. However, it is still possible that any pollutants arising from the development could result in a decline in the water quality in the West Waterloo Dock, a subsequent change or decline in fish stocks, potentially leading to a reduction in the prey resource for cormorants foraging within the dock.

Oil and petrochemical pollution is, however, easily avoided through the implementation of construction best practice to ensure good housekeeping, for example by ensuring that all machinery used is kept in good repair and subject to regular checks to identify any leaks, and by storing fuel and other potentially hazardous chemicals in safe areas well away from waterbodies and watercourses. Provided that best practice control measures are implemented during the construction phase, pollution incidents can be prevented, ensuring that there is no adverse effect on qualifying Natura 2000 species that are supported by habitats in proximity to the application site during the construction phase of the proposed development. These control measures will be detailed in a CEMP. Further information regarding the CEMP is provided in Chapter 12.

### **8.11.2 Potential Operational Phase Effects**

The creation of impermeable surfaces throughout much of the proposed development area may result in minor alterations to site drainage and subsequent contamination of the retained area of West Waterloo Dock from run-off. In the absence of mitigation, there is also the potential for retained standing water habitat within West Waterloo Dock to be subject to foul water contamination during the operational phase of the proposed development. Contamination via run-off or foul water could result in a decline in the water quality in the West Waterloo Dock, a subsequent change or decline in fish stocks, potentially leading to a reduction in the prey resource for cormorants foraging within the dock.

However, provided that a suitable drainage strategy is implemented during the operational life of the proposed development, pollution from run-off and foul water can be prevented, ensuring that there is no adverse effect on cormorants that are supported by habitats in proximity to the application site. Further information regarding the drainage strategy is provided in Chapter 12.

## **8.12 INVASIVE NON-NATIVE SPECIES**

### **8.12.1 Potential Construction Phase Effects**

No invasive plant species were recorded on site during the Phase 1 Habitat Survey completed by Middlemarch Environmental Ltd in August 2018. Ecospan Environmental (2018)<sup>21</sup> have stated the following regarding invasive non-native species recorded during marine surveys of West Waterloo Dock:

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<sup>21</sup> Ecospan Environmental (2018). Marine ecological baseline surveys in support of the re-development of West Waterloo Dock: Liverpool. DRAFT. Report Number ER18-379

*Several INNS were recorded during the survey. These included high abundances of the pollution New Zealand mud snail *Potamopyrgus antipodarum* on the weed and sediment within the dock, dense colonies of Australian tube worm *Ficopomatus enigmaticus* on the walls together with a few individuals of the orange striped anemone *Diadumene lineata*. It is likely that the INNS observed during this survey are present throughout much of the Central Dock system and the likelihood of the transmission of these species to other waterbodies is extremely low. It is also expected that the new dock wall installed will become colonised by a similar community that already exists.*

They continue:

*Any plant used on the water during construction will need to be craned in and out of the water at the dockside (due to access restrictions). Therefore, the likelihood of the transmission of these INNS to other waterbodies given standard precautionary techniques (washing and drying) is extremely low.*

Provided that best practice control measures are implemented during the construction phase, any potential spread of non-native invasive species can be avoided, ensuring that there is no adverse effect on qualifying Natura 2000 species that are supported by habitats in proximity to the application site. These control measures will be detailed in a CEMP. Further information regarding the CEMP is provided in Chapter 12.

#### **8.12.2 Potential Operational Phase Effects**

The risk of issues associated with the spread of non-native species during the operational phase of the proposed development is considered to be negligible. Precautionary recommendations regarding avoiding the use of invasive species within soft landscaping are made in Chapter 12.

### **8.13 HUMAN INDUCED CHANGES IN HYDRAULIC CONDITIONS**

As stated in Table 4.1, human induced changes in hydraulic conditions incorporates a range of impacts relating to modifying water levels (e.g. drying out, flooding, abstractions) and changes in structure and function, for example by modifying the bank or removing or adding sediments.

#### **8.13.1 Potential Construction Phase Effects**

During the dock infill works there is the potential for de-watering of the 'in-filled' area (but not the whole dock) to be required to ensure that the infill is suitably settled. These works will be temporary, and a detailed method statement will be provided as part of the detailed construction design phase, to ensure that these de-watering works, if required, do not have any adverse effect on the water levels within the remained of West Waterloo Dock.

Providing best practice construction phase measures are implemented (via a CEMP), there are no pathways through which the proposed works could influence hydraulic actions such as run-off or floodplain function, therefore the potential for changes in hydraulic conditions to occur is considered to be negligible. Further details regarding the CEMP are provided in Chapter 12.

#### **8.13.2 Potential Operational Phase Effects**

As detailed in Sections 8.11.2, provided that a suitable drainage strategy is implemented during the operational life of the proposed development, pollution from run-off and foul water can be prevented. There are no pathways through which the proposed development could influence hydraulic actions such as run-off or floodplain function, therefore the potential for changes in hydraulic conditions to occur is considered to be negligible. Further information regarding the drainage strategy is provided in Chapter 12.

## 9. POTENTIAL EFFECTS ON MERSEY NARROWS AND NORTH WIRRAL FORESHORE SPA AND RAMSAR SITE

### 9.1 INTRODUCTION

This chapter provides a discussion of the potential for significant effects on the Mersey Narrows and North Wirral Foreshore SPA and Ramsar to occur as a result of the implementation of the proposed development. In accordance with best practice, this discussion is focused on the potential of the development to impact upon the conservation objectives of the SPA / Ramsar. The 'vulnerabilities' associated with the SPA / Ramsar identified in Chapter 5 have been used to further assess the likelihood of impacts arising from the proposed development in relation to each of the potential impact pathways. These pathways are discussed in Sections 9.2 to 9.5 and have been ordered in the same way as they are presented in Table 5.2.

The Mersey Narrows and North Wirral Foreshore SPA and Ramsar is located c.960 m west of the application site.

As such, when considering the potential effects of the proposed development on qualifying bird species, cormorant and oystercatcher populations are the focus of this assessment.

### 9.2 VEGETATION SUCCESSION / INVASIVE NON-NATIVE SPECIES (HOYLAKE BEACH AREA)

Issues associated with sedimentation and succession of vegetation are noted as being of particular relevance to the Hoylake Beach region of the Mersey Narrows and North Wirral Foreshore SPA/Ramsar. This section is located c. 11 km to the west of the proposed application site, and is separated from it by the Wirral landmass. Given the large intervening distance between the source and receptor, and the small scale of the development works proposed, no likely significant effects as a result of vegetation succession are predicted.

The spread of non-native species is highlighted as a potential issue for the Mersey Narrows and North Wirral Foreshore SPA / Ramsar.

#### 9.2.1 Potential Construction Phase Effects

No invasive plant species were recorded on site during the Phase 1 Habitat Survey completed by Middlemarch Environmental Ltd in August 2018. Ecospan Environmental (2018)<sup>22</sup> have stated the following regarding invasive non-native species recorded during marine surveys of West Waterloo Dock:

*Several INNS were recorded during the survey. These included high abundances of the pollution New Zealand mud snail Potamopyrgus antipodarum on the weed and sediment within the dock, dense colonies of Australian tube worm Ficopomatus enigmaticus on the walls together with a few individuals of the orange striped anemone Diadumene lineata. It is likely that the INNS observed during this survey are present throughout much of the Central Dock system and the likelihood of the transmission of these species to other waterbodies is extremely low. It is also expected that the new dock wall installed will become colonised by a similar community that already exists.*

They continue:

*Any plant used on the water during construction will need to be craned in and out of the water at the dockside (due to access restrictions). Therefore, the likelihood of the transmission of these INNS to other waterbodies given standard precautionary techniques (washing and drying) is extremely low.*

Provided that best practice control measures are implemented during the construction phase, any potential spread of non-native invasive species can be avoided. These control measures will be detailed in a CEMP. Further information regarding the CEMP is provided in Chapter 12.

#### 9.2.2 Potential Operational Phase Effects

The risk of issues associated with the spread of non-native species during the operational phase of the proposed development is considered to be negligible. Precautionary recommendations regarding avoiding the use of invasive species within soft landscaping are made in Chapter 12.

<sup>22</sup> Ecospan Environmental (2018). Marine ecological baseline surveys in support of the re-development of West Waterloo Dock: Liverpool. DRAFT. Report Number ER18-379

### 9.3 OUTDOOR SPORTS AND LEISURE ACTIVITIES, RECREATIONAL ACTIVITIES

#### 9.3.1 Potential Construction Phase Effects

The construction phase of the proposed development will have no influence on outdoor sports and leisure activities, and will not result in any increase in recreational pressure on the Mersey Narrows and North Wirral Foreshore SPA/Ramsar.

#### 9.3.2 Potential Operational Phase Effects

The operational phase of any residential development has the potential to result in an increase in recreational pressure at a variety of local visitor attractions and amenity areas, however in this instance the risk of increased recreational pressure is considered to be low. For this area the key impact associated with an increase in recreational activity is the potential for increased levels of disturbance to important passage and wintering bird populations as a result of everyday activities such as exercise or dog walking, however a number of factors are considered to limit the likelihood of increased disturbance.

Firstly, the proposed development area and its immediate surrounds provide generally low value habitat to qualifying bird species. Of the qualifying individual and assemblage species of the SPA, oystercatcher and cormorant are the only species that were recorded in proximity to the application site during the bird surveys for the adjacent proposed Northern Link Road development (Planning Application Reference: 17F/2628), completed by RSK<sup>23</sup> and Amey<sup>24</sup> between 2016 and 2018. During the Winter Bird Surveys of the wider Liverpool Waters site completed by Arup<sup>25</sup> between October 2018 and March 2019, in addition to oystercatcher and cormorant, redshank (which forms part of the assemblage of qualifying species of the Mersey Narrows and North Wirral Foreshore SPA) was also recorded within the Central Docks area.

A peak count of 40 oystercatcher was recorded during one of the 2018 winter bird surveys (at high tide). All birds were recorded on land located between the West Waterloo Dock and the River Mersey. A peak count of 36 oystercatcher were recorded across the Liverpool Waters site during the 2018/19 surveys. The highest concentrations of oystercatcher were recorded to the west of Princes Half Tide Dock (located to the south of the application site) and to the south-west of Trafalgar Dock (located to the north of the application site). The Habitat Regulations Assessment Final Report for Liverpool Waters<sup>26</sup> states that the wider Liverpool Waters site *'provides no foraging habitat for oystercatcher'* and that oystercatchers recorded within Liverpool Waters during surveys completed in 2008/2009 *'were likely to be using the site as a high tide roost'*. The report also states that *'the number of oystercatcher on Liverpool Waters are a small proportion of the total population in the area relative to the variability of numbers year on year'*.

Reference to the Wetland Bird Survey (WeBS) data<sup>27</sup> confirms that annual peaks of oystercatcher have fluctuated significantly within the Merseyside Region. For example, annual peaks of oystercatcher in the Mersey Estuary increased from 65 to 1,339 between 2008/09 and 2015/15, before falling to 823 in 2015/16 and to 689 in 2016/17. Between 2015/16 and 2016/17 annual peaks increased from 14,206 to 20,857 in the Dee Estuary, and from 1,037 to 5,445 in the Alt Estuary, whilst in the same time period, annual peaks in the Ribble Estuary decreased from 16,496 to 13,898. These large fluctuations suggest that the importance of particular locations for oystercatcher within the estuarine habitats of the Merseyside region varies significantly year on year. Based on the results of the bird surveys completed in proximity to the application site between 2016 and 2019, the partial infilling of West Waterloo Dock would at most result in only a very minor loss of habitat utilised by oystercatcher. Nevertheless, it is considered likely that wider construction works associated with the proposed development will result in the loss of suitable high-tide roosting habitat for oystercatcher within and immediately adjacent to the application site. However, given the presence of suitable habitats in the wider area and the large variations in the distribution of this species across the estuarine habitats of the Merseyside region, this is not considered to have a noticeable effect on the favourable conservation status of oystercatcher populations, or the assemblage designation of the Mersey Narrows and North Wirral Foreshore SPA. Overall, 'No Likely Significant Effects' are anticipated on the SPA as a result of displacement of oystercatcher from the application site during the construction phase of the proposed development.

<sup>23</sup> RSK (2017). A565 Link Roads – Breeding Bird Survey Report

<sup>24</sup> Amey (2018) Wintering Bird Survey Report – LCCC P2 – Northern Link Road. CO00205341 /WBR Rev0. July 2018.

<sup>25</sup> Arup (2019) Liverpool Waters: Strategic Ecological Mitigation Plan. 0-15-08. September 2019

<sup>26</sup> Liverpool City Council and MEAS (2012) Habitat Regulations Assessment: Final Report for Liverpool Waters, Liverpool. Planning Application 10O/2424

<sup>27</sup> Frost, T.M., Austin, G.E., Calbrade, N.A., Mellan, H.J., Hearn, R.D., Robinson, A. E., Stroud, D.A., Wotton, S.R. and Balmer, D.E. (2019) Waterbirds in the UK 2017/18: The Wetland Bird Survey. BTO/RSPB/JNCC. Theford.

Cormorants are a feature of the qualifying waterbird assemblage for both the Mersey Narrows and North Wirral Foreshore SPA/Ramsar and the Liverpool Bay SPA. Although it is acknowledged that there will be movement of bird species between designated areas, the small number of cormorants recorded in proximity to the application site during the 2016-2018 bird surveys are likely to form part of the waterbird assemblage for the Liverpool Bay SPA. Potential effects on the Liverpool Bay SPA are discussed in detail in the preceding chapter.

Secondly, the closest part of the Mersey Narrows and North Wirral Foreshore SPA/Ramsar to the site is the Mersey Narrows SSSI section. This area, which runs along part of the north-eastern edge of the Wirral in proximity to the settlement of Egremont, is located 960 m to the west of the development site, and is separated from it by the expanse of the River Mersey. Furthermore, to access this area on foot requires a journey of at least 40 minutes, including a return trip on the Seacombe Ferry, and is therefore unlikely to be suitable for everyday exercise activities, dog walking etc. It may be used sporadically by a small proportion of residents of the new development, but not in sufficient numbers or at sufficient frequency to cause a significant increase in disturbance to passage and wintering birds.

Finally, the key area of risk identified in the SPA and Ramsar data sheets for the Mersey Narrows and North Wirral Foreshore SPA and Ramsar is the North Wirral Foreshore SSSI section, which extends for a distance of c. 12 km between Hoylake and New Brighton. This SSSI area is located 4 km as the crow flies between the application site and the nearest point, translating to a walking distance of 8 km (90 minutes) each way, including a trip on the Seacombe Ferry. The driving distance is 13.5 km (20 minutes). It is therefore highly unlikely that these areas would be used for daily exercise and dog walking. Given the distance between potential sources and receptors, and the fact that much of the SSSI area is offshore and inaccessible, the risk of increased recreational disturbance at this part of the SPA/Ramsar site is considered to be negligible.

A peak count of three redshank, which forms part of the assemblage of qualifying species of the Mersey Narrows and North Wirral Foreshore SPA, was recorded during the 2018/19 winter bird surveys. Annual peaks for shelduck in the Mersey Estuary have increased from 2,969 in 2012/13 to 10,867 in 2016/17, only dropping slightly to 10,558 in 2017/18 (Frost et al, 2019)<sup>27</sup>, whilst annual peaks for redshank in the Mersey Estuary have increased from 2,576 in 2012/13 to 4,158 in 2017/18. As such, it is considered that the development site (including West Waterloo Dock) does not provide an important foraging resource for this species.

Overall the risk of increased recreational disturbance to qualifying bird species during the operational phase of the development is considered to be very low, and no likely significant effects are predicted.

#### **9.4 CHANGES IN BIOTIC AND ABIOTIC CONDITIONS**

The construction and operational phases of the proposed development will have no direct impact on the biotic or abiotic conditions within Mersey Narrows and North Wirral Foreshore SPA/Ramsar.

In the absence of appropriate construction phase control measures it is possible that any pollution incident occurring during the construction phase of the proposed development could indirectly impact upon biotic or abiotic conditions at the Mersey Narrows and North Wirral Foreshore SPA/Ramsar, however the pathway for any pollution (the River Mersey) is so wide that any pollution is likely to be extremely dilute by the time that it reaches the SPA/Ramsar. Provided that best practice control measures are implemented during the construction phase, pollution incidents can be prevented, and therefore no likely significant effects are predicted. These control measures will be detailed in a CEMP. Further information regarding the CEMP is provided in Chapter 12.

#### **9.5 URBAN DEVELOPMENT (PARTICULARLY EGREMONT FORESHORE)**

Urban development is flagged as a potential threat to the Mersey Narrows and North Wirral Foreshore SPA/Ramsar.

The proposed development will not result in any construction works taking place within, or adjacent to, this Natura 2000 site. It is understood from the SPA and Ramsar data sheet for Mersey Narrows and North Wirral Foreshore that the seafront at Egremont is an area of particular concern, due to social and economic pressure to return this area to sandy beaches, and also as a result of coastal processes causing increased sedimentation and reducing the availability of bird roosting habitat. The proposed development is located

c. 1 km to the east of the Egremont seafront, and will make no contribution to either of these known areas of concern.

A potential impact associated with urban development is the prospect of disturbance to qualifying bird species as a result of noise and visual disturbance during the construction process. The potential for disturbance to birds within the footprint of the Mersey Narrows and North Wirral Foreshore SPA and Ramsar site is limited due to the distance between potential sources and receptors (c. 1 km) and the existing levels of ambient disturbance on and around the site to which the birds are likely to be habituated. It is possible that there may be a temporary increase in disturbance to bird species using intertidal habitats in proximity to the proposed development area, however the existing ambient levels of disturbance mean that these areas or not considered to provide core high tide roosting or feeding areas. Provided that construction works are undertaken in accordance with best practice and provisions are made to minimise potential issues such as noise and vibration, no likely significant effects to qualifying bird species are predicted. These control measures will be detailed in a CEMP. Further information regarding the CEMP is provided in Chapter 12.

## 10. POTENTIAL EFFECTS ON MERSEY ESTUARY SPA AND RAMSAR SITE

### 10.1 INTRODUCTION

This chapter provides a discussion of the potential for significant effects on the Mersey Estuary SPA and Ramsar to occur as a result of the implementation of the proposed development. In accordance with best practice, this discussion is focused on the potential of the development to impact upon the conservation objectives of the SPA / Ramsar. The 'vulnerabilities' associated with the SPA / Ramsar identified in Chapter 6 have been used to further assess the likelihood of impacts arising from the proposed development in relation to each of the potential impact pathways. These pathways are discussed in Sections 10.2 to 10.4 and have been ordered in the same way as they are presented in Table 6.2.

### 10.2 INVASIVE NON-NATIVE SPECIES

The spread of non-native species is highlighted as a potential issue for both the Mersey Estuary SPA and Ramsar.

#### 10.2.1 Potential Construction Phase Effects

No invasive plant species were recorded on site during the Phase 1 Habitat Survey completed by Middlemarch Environmental Ltd in August 2018. Ecospan Environmental (2018)<sup>28</sup> have stated the following regarding invasive non-native species recorded during marine surveys of West Waterloo Dock:

*Several INNS were recorded during the survey. These included high abundances of the pollution New Zealand mud snail Potamopyrgus antipodarum on the weed and sediment within the dock, dense colonies of Australian tube worm Ficopomatus enigmaticus on the walls together with a few individuals of the orange striped anemone Diadumene lineata. It is likely that the INNS observed during this survey are present throughout much of the Central Dock system and the likelihood of the transmission of these species to other waterbodies is extremely low. It is also expected that the new dock wall installed will become colonised by a similar community that already exists.*

They continue:

*Any plant used on the water during construction will need to be craned in and out of the water at the dockside (due to access restrictions). Therefore, the likelihood of the transmission of these INNS to other waterbodies given standard precautionary techniques (washing and drying) is extremely low.*

Provided that best practice control measures are implemented during the construction phase, any potential spread of non-native invasive species can be avoided. These control measures will be detailed in a CEMP. Further information regarding the CEMP is provided in Chapter 12.

#### 10.2.2 Potential Operational Phase Effects

The risk of issues associated with the spread of non-native species during the operational phase of the proposed development is considered to be negligible. Precautionary recommendations regarding avoiding the use of invasive species within soft landscaping are made in Chapter 12.

### 10.3 OUTDOOR SPORTS AND LEISURE ACTIVITIES, RECREATIONAL ACTIVITIES

#### 10.3.1 Potential Construction Phase Effects

The construction phase of the proposed development will have no influence on outdoor sports and leisure activities, and will not result in any increase in recreational pressure within the Mersey Estuary SPA and Ramsar.

#### 10.3.2 Potential Operational Phase Effects

The operational phase of any residential development has the potential to result in an increase in recreational pressure at a variety of local visitor attractions and amenity areas, however in this instance the risk of increased recreational pressure is considered to be low. For this area the key impact associated with an increase in recreational activity is the potential for increased levels of disturbance to important passage

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<sup>28</sup> Ecospan Environmental (2018). Marine ecological baseline surveys in support of the re-development of West Waterloo Dock: Liverpool. DRAFT. Report Number ER18-379

and wintering bird populations as a result of everyday activities such as exercise or dog walking, however the following factors are considered to limit the likelihood of increased disturbance:

- The proposed development area and its immediate surrounds provide low value habitat to qualifying bird species. Peak counts of two shelduck and three redshank, qualifying species of the Mersey Estuary SPA, were recorded during the 2018 and 2018/19 winter bird surveys, respectively. As such, it is considered that the application site (including West Waterloo Dock) does not provide an important foraging resource for these species. The key feeding and roosting areas for these species are understood to be located within the SPA boundary and do not include the highly disturbed habitats adjacent to the proposed development area.
- The Mersey Estuary SPA/Ramsar is located 4.5 km to the south of the proposed development area at its nearest point, which is located on the western side of the River Mersey. The nearest accessible area on the eastern side of the river is located 6 km to the south and involves walking along major A roads that are unlikely to be an attractive recreational resource. It is considered much more likely that exercise and dog walking activities will be undertaken around the attractive Albert Dock and King's Dock areas that are located in close proximity to the proposed development area and are designed to attract visitors. Recreational facilities will also be provided as part of the wider Liverpool Waters development and will be located within walking distance of the proposed development site. Furthermore, any visitors that do travel to the area adjacent to the Mersey Estuary SPA/Ramsar area are likely to use the existing promenade or adjacent Festival Gardens area. The existing promenade has a sea wall restricting visibility from the adjacent intertidal habitat, and there is no safe access to the area, therefore the risk of increased disturbance to birds is considered to be negligible.

Overall the risk of increased recreational disturbance to qualifying bird species during the operational phase of the development is considered to be very low, and no likely significant effects are predicted.

#### **10.4 CHANGES IN ABIOTIC CONDITIONS**

The Mersey Estuary SPA and Ramsar site is both distant from, and upstream of, the proposed development area, therefore the risk of changes in biotic and abiotic conditions as a result of pollution is considered to be negligible.

## 11. OTHER PLANS AND PROJECTS CONSIDERED IN COMBINATION

In accordance with the legal requirement in the Habitats Regulations and best practice methodology, the potential for a project or plan to impact upon a Natura 2000 site must be considered '*either alone, or in combination with other projects or plans*'.

The following cumulative schemes are considered in the accompanying Environmental Statement (ES, Arup, 2019):

- The entire Liverpool Waters scheme (10O/2424);
- Five developments associated with Princes Dock;
  - William Jessop House, A-03 (15F/0560)
  - The Lexington, A-04 (17F/2056)
  - Hive City Docks, A-06 (17F/0456)
  - Plaza 1821, A-05 (17F/0913)
  - Cruise Liner Terminal, A-07 (17O/3230)
- Three developments associated with the Central Docks;
  - Isle of Man Ferry Terminal, C-01 (18F/3231)
  - Park Central – C-04 and C-06 (17F/1628)
  - Northern Link Road, Central Dock (17F/2628)
- Five other nearby developments;
  - Site bounded by Waterloo Road / Paisley Street / Roberts Street / Greenock Street (19F/1290)
  - Ovatus, Leeds Street (17F/0042)
  - Infinity, Leeds Street (17F/0340)
  - 30-36 Pall Mall (16F/2634)
  - North Point, 70-90 Pall Mall (14F/2543)

The Liverpool Waters project is the overall regeneration project of which the Princes Dock schemes and the Central Dock schemes (including the current application site) form a part.

When the proposed development is considered in combination with the above schemes, potential effects on Natura 2000 sites are as follows:

- Cumulative loss of supporting habitat for cormorants, a species which forms part of the qualifying waterbird assemblage of the Liverpool Bay SPA (located adjacent to the site) and the Mersey Narrows and North Wirral Foreshore SPA/Ramsar; and,
- Cumulative recreational impacts on Natura 2000 sites.

### 11.1 CUMULATIVE LOSS OF SUPPORTING HABITAT FOR CORMORANTS

It is understood that the mitigation for the Northern Link Road (LPA ref: 17F/2628) scheme comprises the installation of three permanent floating pontoons within West Waterloo Dock, in order to provide suitable winter resting and roosting sites for cormorants. In the absence of alternative locations for the permanent pontoons being identified, the construction phase of the proposed development (and partial infilling of West Waterloo Dock) has the potential to result in a cumulative loss of habitat for cormorants within the West Waterloo Dock area.

However, as previously detailed in Section 8.5, in order to address the potential loss of habitat from the northern access road, wider developments within the Central Docks area (including the Isle of Man Ferry Terminal), and the C02 Central Docks, it is proposed that four permanent floating pontoons are installed within Princes Half Tide Dock, which is located to the south of West Waterloo Dock. This will provide suitable mitigation for all three projects. This approach has been approved by both Natural England and MEAS.

The four rafts could be positioned a sufficient distance from the edges of the dock to ensure that birds using them are not disturbed by noise and movement arising from use of the surrounding areas by people and vehicles.

Subject to the installation of the proposed floating pontoons, it is considered that the loss of supporting habitat for cormorant within West Waterloo Dock can be mitigated for, and, suitable supporting habitat will be provided for cormorants, away from sources of potential disturbance, throughout the operational life of the proposed development. No likely significant effects are anticipated.

## 11.2 CUMULATIVE RECREATIONAL IMPACTS ON NATURA 2000 SITES

In terms of off-site effects on Natura 2000 sites arising from recreational disturbance, the Habitat Regulations Assessment Final Report for Liverpool Waters<sup>29</sup> states that:

*The Sefton, Liverpool and Wirral coasts provide a recreational experience that cannot be gained within Liverpool Waters. These areas are easily accessible to Liverpool Waters residents, either by public transport or private car. However, some of the SSSI Units that make up these areas are in „unfavourable, declining“ conservation status for various reasons...Should visitors choose to access these areas they could add unnecessary disturbance pressures.*

*The movement of visitors from Liverpool Waters is difficult to predict and the precautionary approach must therefore be adopted. Likely significant effects upon the qualifying features of the Natura 2000 sites on-land could occur as a result of increases in recreational pressure. These recreational disturbance issues will need to be addressed via a commitment to a mechanism to reduce the effect of increases in recreational disturbance on the Natura 2000 sites considered within this screening.*

Due to the scale of the proposed development in the context of the surrounding area, the number of additional visitors accessing surrounding Natura 2000 sites as a percentage of all visitors from Liverpool is anticipated to be low. Any increases in recreational pressure from the development alone are not considered to have a likely significant effect on Natura 2000 sites. However, it is acknowledged that when considered in combination with future developments brought forward as part of the wider Liverpool Waters Project (and other schemes within Liverpool), there may be a significant effect on Natura 2000 sites as a result of increased recreational pressure.

The discretionary advice response from Natural England (Section 1.4) states that:

*Recreational disturbance to internationally protected coastal sites is an issue across the Liverpool City Region. This pressure is a particular issue through in-combination effects, for example additional housing may result in additional recreational visits, and therefore increase disturbance at the coastal designated sites. We advise that you consider the impact of recreational disturbance resulting from the additional residential dwellings proposed, within a HRA.*

*We are aware that the Local Planning Authorities (LPAs) around the Liverpool City Region are currently considering the scope for a city-wide strategic mitigation measure for recreational disturbance. This will help LPAs and developers address the issues arising from additional housing, thus helping deliver compliance with the Habitat Regulations and contribute to sustainable development. However, we are currently unclear whether this measure will be adopted within the timescales of the proposed development.*

*In the event that a strategic mitigation scheme is not available, Natural England would continue to encourage consideration of recreational disturbance at a strategic level, however in the absence of this, individual projects will need to provide mitigation (if required) on a case by case basis.*

Measures to address potential adverse effects arising from public access / disturbance to surrounding Natura 2000 sites will be included within an Ecological Conservation Management Plan (ECMP) for the proposed development, and will be written in accordance with the Liverpool Waters: Strategic Ecological Mitigation Plan (Arup, 2019)<sup>16</sup>. The contents of this document will be agreed with Natural England, MEAS and Liverpool City Council.

Subject to the production and implementation of the ECMP for the proposed development, and equivalent commitments by all other developments in the Liverpool Waters scheme, it may be possible to reduce the cumulative effect of increased recreational pressure on qualifying features of Natura 2000 sites to a level that is not significant.

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<sup>29</sup> Liverpool City Council and MEAS (2012) Habitat Regulations Assessment: Final Report for Liverpool Waters, Liverpool. Planning Application 10O/2424

## 12. MITIGATION

### 12.1 INTRODUCTION

The preceding chapters have identified the following potential impact pathways:

- Disturbance of cormorants, a species which forms part of the qualifying assemblage of the Liverpool Bay SPA, during both the construction phase and the operational phase of the proposed development (in isolation);
- Pollution of West Waterloo Dock, during both the construction phase and the operational phase of the proposed development, leading to a potential decline in the availability of prey resources for cormorant (in isolation);
- Loss of supporting habitat for cormorants (both in isolation and in combination with other plans and projects); and,
- Recreational impacts on Natura 2000 sites (in combination with other plans and projects).

As such, this section of the report presents the mitigation to be delivered to ensure that any adverse effect on the integrity of Natura 2000 sites from the proposed development can be controlled to an acceptable level to allow the development works to proceed.

### 12.2 OUTLINE MITIGATION PROPOSALS FOR POTENTIAL IMPACTS

#### Mitigation for Cormorants and other Bird Species

As detailed in preceding chapters, in order to address disturbance impacts on cormorants during both the construction phase and the operational phase of the proposed development, as well as loss of supporting habitat as a result of the proposed development alone and in combination with other plans and projects, it is proposed that four permanent floating pontoons are installed within Princes Half Tide Dock, in accordance with the Liverpool Waters: Strategic Ecological Mitigation Plan (Arup, 2019)<sup>16</sup>.

#### Construction Environmental Management Plan (CEMP)

Prior to the commencement of construction works, a CEMP will be produced. The CEMP will be informed by any required updated ecological survey work and will set out the necessary timings and safe working practices that will be implemented to minimise disturbance and impacts on habitats and species during the construction phase of the proposed development. As a minimum, the CEMP will include the following measures

- Details of materials and working methodology for the proposed dock infill works to ensure adverse impacts on habitats and species within the West Waterloo Dock (and connected waterbodies / watercourses) are avoided;
- Details of protective fencing installed prior to construction to demarcate works areas and to safeguard sensitive ecological features to be retained, such as the River Mersey to the west;
- Any pre-construction checks required before the commencement of the construction phases (i.e. for nesting birds);
- Relevant pollution prevention guidelines and working practices to be adopted to prevent silt and contamination entering watercourses or waterbodies;
- Adherence to best practice guidelines to minimise noise disturbance, suppress dust and limit disturbance to retained areas of habitat; and,
- Outline of construction phase lighting measures to minimise light spill on sensitive habitat areas.

The CEMP will also detail requirements for tool box talks to inform all contractors of the ecological importance of the area and all mitigation measures that will be required. The CEMP will state that all contractors will be given tool box talks prior to work commencing on site.

The contents of the CEMP will be agreed with Natural England, MEAS and Liverpool City Council, and all activities associated with the works proposed under this planning application will follow the precautionary working practices outlined in document. Should any issues be identified during the course of works (i.e. through monitoring surveys outlined in Section 10.3), work will cease temporarily and Natural England, MEAS and Liverpool City Council will be contacted for advice on how to proceed.

### Ecological Conservation Management Plan (ECMP)

Prior to the commencement of the development, an ECMP will be produced. This will outline measures to ensure that there are no significant effects on ecological features, particularly Natura 2000 sites, for the lifetime of the proposed development. Measures of relevance to the construction phase will include:

- Avoidance/mitigation measures for aerial and water emissions;
- Avoidance/mitigation measures for increased noise and light disturbance; and,
- Mitigation for, and monitoring of, bird species likely to be impacted by the development, particularly cormorant.

The contents of the ECMP will be agreed with Natural England, MEAS and Liverpool City Council. The ECMP will be implemented in full throughout the lifetime of the development.

### Drainage Strategy

A Drainage Strategy has been produced by Clancy Consulting to set out the drainage proposals for the site to ensure that the scheme does not result in adverse effects on local water bodies during construction and operation.

Providing the proposed drainage strategy is implemented in full and agreed with Liverpool City Council / MEAS and Natural England, no likely significant effects arising from water emissions during the operational phase of the development are anticipated.

### Landscaping

Middlemarch have liaised with the project's landscape architects Planit-IE. The soft landscaping proposals for the proposed development should use native or wildlife friendly species only. No use of any invasive species listed in Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) will be permitted.

### Mitigation Package for Recreational Impacts

As detailed in Chapter 11, measures to address potential adverse effects arising from public access / disturbance to surrounding Natura 2000 sites will be included within the ECMP for the proposed development, and will be written in accordance with the Liverpool Waters: Strategic Ecological Mitigation Plan (Arup, 2019)<sup>16</sup>. The contents of this document will be agreed with Natural England, MEAS and Liverpool City Council.

Subject to the production and implementation of the ECMP for the proposed development, and equivalent commitments by all other developments in the Liverpool Waters scheme, it may be possible to reduce the cumulative effect of increased recreational pressure on qualifying features of Natura 2000 sites to a level that is not significant.

## **12.3 MONITORING**

In order to ensure that the proposed mitigation outlined in Section 12.2 is successful and that the integrity of Natura 2000 sites are not impacted as a result of the development, a scheme of monitoring both during the construction and operational phase of the development is proposed.

### Construction phase monitoring

A programme of ecological monitoring will be implemented throughout the construction process, to allow the implementation of the CEMP and mitigation to be audited. These visits will be conducted at undisclosed times without any prior notice to the contractors on site. Should any non-compliance with the CEMP be observed, notices for the immediate implementation of remedial action will be implemented.

Monitoring will also be undertaken of the proposed floating pontoons within Princes Half Tide Dock, in accordance with the Liverpool Waters: Strategic Ecological Mitigation Plan (Arup, 2019)<sup>16</sup>, to assess how they are being utilised by cormorants (and other bird species) and to inform remedial action if required. Should any issues arise, consultation will be carried out between the project ecologist, developer and Natural England / MEAS / Liverpool City Council to identify an appropriate way forward, e.g. modification or relocation of pontoons.

### Operational phase monitoring

For two years post development, monitoring visits should be conducted based on a monitoring programme which should be agreed with Liverpool City Council / Natural England / MEAS and the project teams for the

northern access road and the Isle of Mann ferry terminal to ensure all mitigation measures continue to be successful. Should any adverse impacts on bird activity be noted immediate consultation will be carried out between the project ecologist, developer and Natural England / MEAS / Liverpool City Council to identify an appropriate way forward, e.g. modification of mitigation measures.

## 13. CONCLUSIONS

### 13.1 CONCLUSIONS

Evidence has been collected and an assessment has been undertaken to assist the competent authority, Liverpool City Council, in conducting its appropriate assessment to ascertain whether it can be certain that there will be no adverse effect as a result of the proposed development on the integrity of any Natura 2000 sites, either alone or in combination with other plans or projects.

The need for Liverpool City Council to conduct an appropriate assessment associated with the potential impacts of the proposed development on Natura 2000 sites was identified in discretionary advice responses from Natural England and MEAS, as detailed in Section 1.2.

A number of potential impact pathways on Natura 2000 sites were identified, arising as a result of the proposed development in isolation. These comprised: loss of supporting habitat for cormorants, a species which forms part of the qualifying assemblage of the Liverpool Bay SPA and Mersey Narrows and North Wirral Foreshore SPA/Ramsar, as a result of the partial infilling of West Waterloo Dock; disturbance of cormorants, during both the construction phase and the operational phase of the proposed development; and, pollution of West Waterloo Dock, during both the construction phase and the operational phase of the proposed development, leading to a potential decline in the availability of prey resources for cormorant.

Potential impact pathways on Natura 2000 sites arising as a result of the proposed development in combination with other plans and projects comprised: the loss of supporting habitat for cormorants as a result of the partial infilling of West Waterloo Dock and the subsequent prevention of proposed mitigation for the adjacent Northern Link Road development; and, cumulative recreational impacts on Natura 2000 sites.

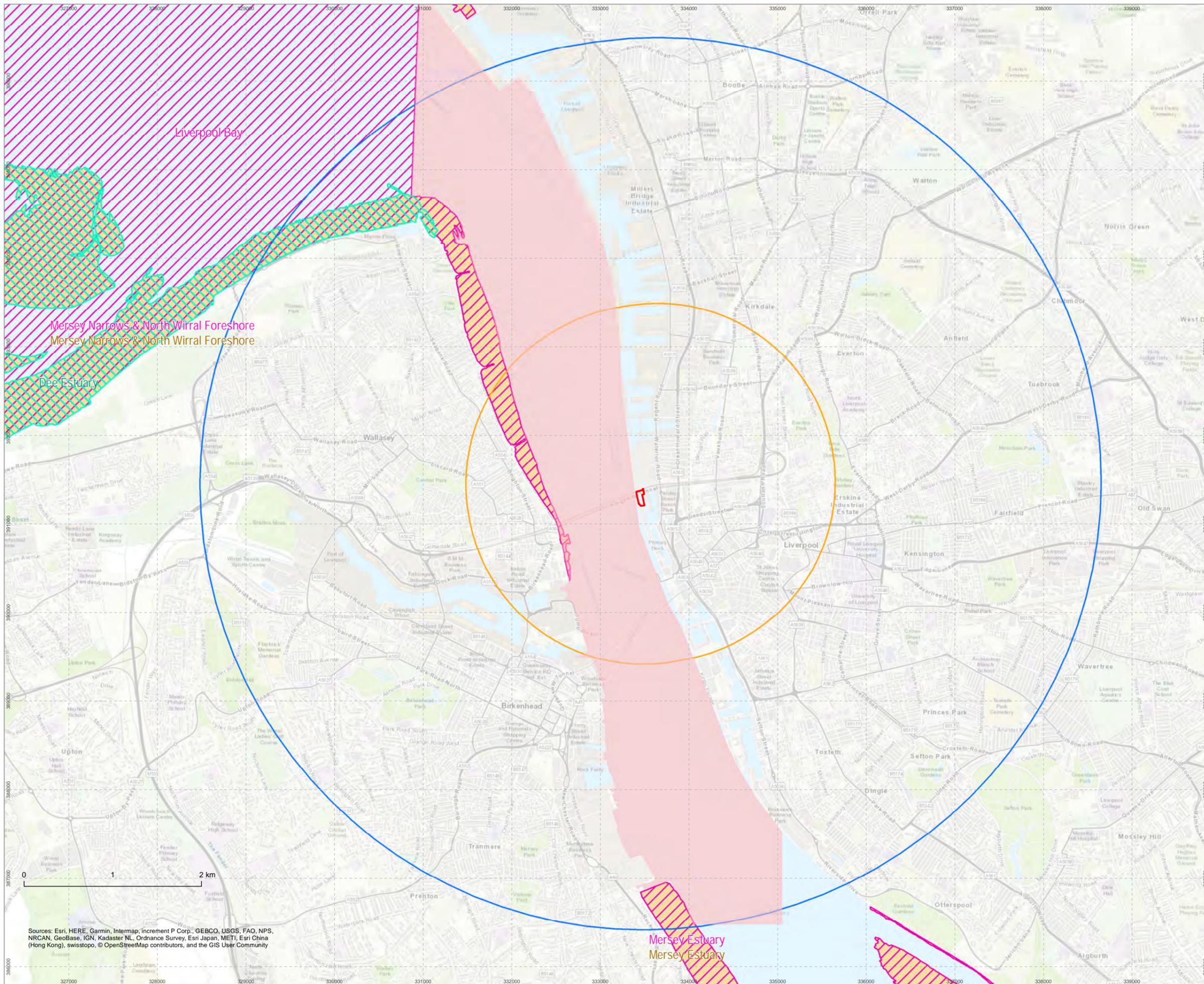
Provided the mitigation and monitoring measures outlined in Chapter 12 are adhered to, it can be concluded that these measures will be sufficient to ensure no likely significant effects on the conservation objectives of any Natura 2000 sites, when the development is considered alone or when considered in combination with other plans or projects.

## 14. DRAWINGS

Drawing C128844-02-01 – Natura 2000 Sites

**Legend**

-  Application boundary
-  2 km radius from application boundary
-  5 km radius from application boundary
-  Special Area of Conservation (SAC)
-  Special Protection Area (SPA)
-  Liverpool Bay SPA Extension (site re-classified 2017)
-  Ramsar



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community



Project		C02 Central Docks, Liverpool Waters	
Drawing		Natura 2000 Sites	
Client		Romal Capital Ltd	
Drawing Number	C128844-02-01	Revision	00
Scale @ A3	1:40,000	Date	November 2018
Approved By	HT	Drawn By	GT

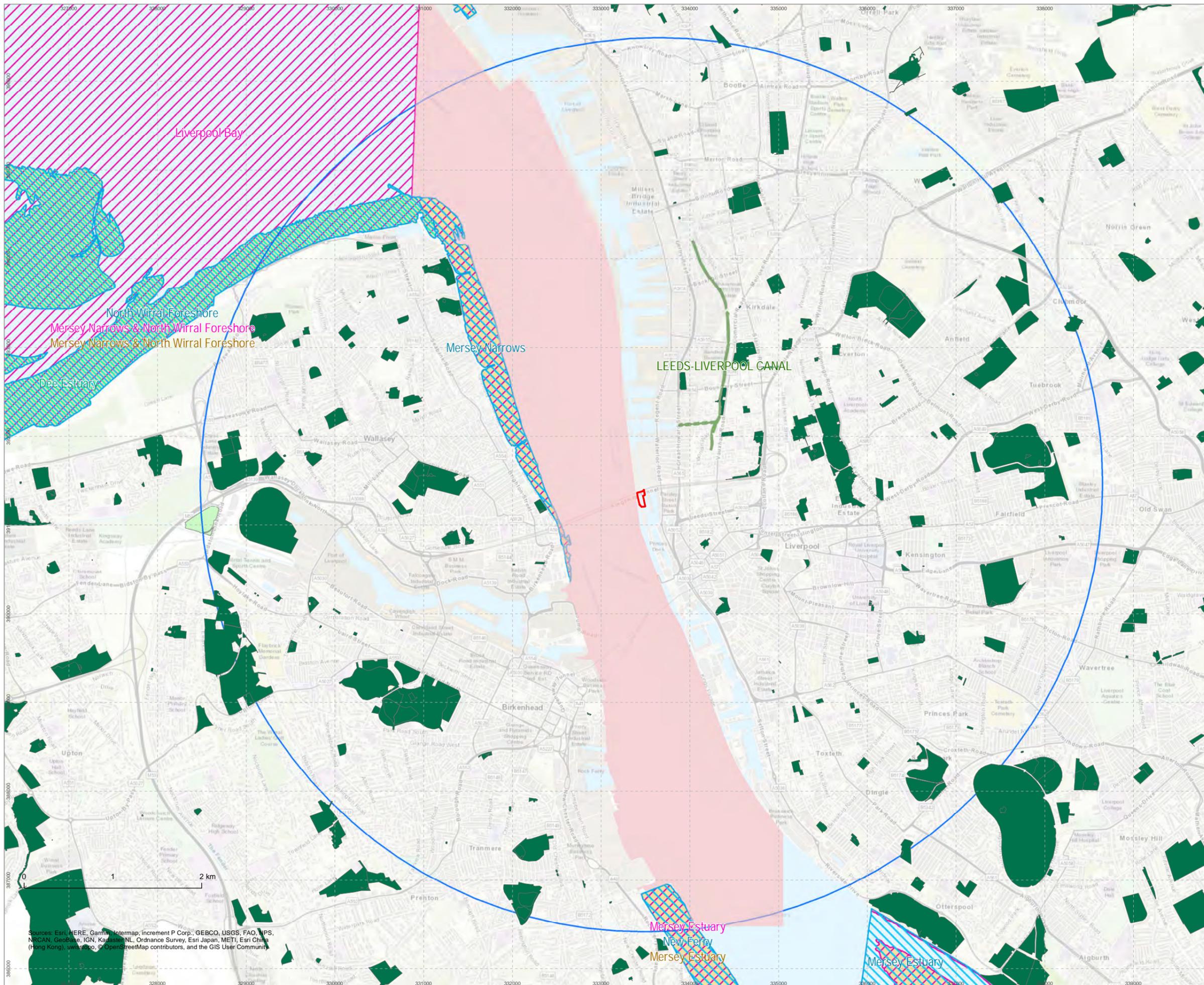


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**Legend**

- Public greenspaces
- Local Nature Reserve (LNR)
- Local Wildlife Site (approximate extent from OS Vectormap)
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- Special Protection Area (SPA)
- Liverpool Bay SPA Extension (site re-classified 2017)
- Ramsar
- Application boundary
- 5 km radius from application boundary



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, IPS, NRCAN, Geobase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, © OpenStreetMap contributors, and the GIS User Community

Project		C02 Central Docks, Liverpool Waters	
Drawing		Location of Parks and Recreational Areas	
Client		Romal Capital Ltd	
Drawing Number	C128844-02-02	Revision	00
Scale @ A3	1:40,000	Date	November 2018
Approved By	HT	Drawn By	GT

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