

Appendix 11.7

WATER FRAMEWORK DIRECTIVE ASSESSMENT

The People's Project
Water Framework Directive Assessment

0040026

10 September 2020

Revision P06

Revision	Description	Issued by	Date	Checked
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2020 Environmental Statement Update

This ES technical appendix relating to the Water Framework Directive, has been reviewed against the following aspects and for each it has been confirmed that there are no amendments required to the content of the appendix:

- Proposed development design changes: have been considered and do not affect the findings of this assessment;
- Baseline data validity: there have been no relevant changes to the baseline data, and it remains valid;
- Legislation/policy revisions: there have been no related updates to legislation/policy that have affected either the methodology or findings of this assessment;

The Environment Agency provided some limited comments in relation to the WFD assessment, as detailed in EC Chapter 2, ES Volume II, however there were no statutory consultee comments received in relation to the information presented in this appendix that required a response.

Consequently, the findings presented in this report do not vary from that submitted as part of the original application submission (December 2019, Liverpool City Council planning application reference 20F/0001).

Non-Technical Executive Summary

Under the EU (European Union) Water Framework Directive (WFD) (Directive 2000/60/EC), all schemes with the potential to impact upon Water Framework Directive (WFD) designated waterbodies must be assessed to ensure:

- No deterioration of the current status or potential status of any WFD quality elements; and
- No prevention of future attainment of the 'good' status or potential objectives of any WFD quality elements.

This WFD assessment has been prepared for the proposed new stadium at Bramley Moore Dock (BMD) in Liverpool to demonstrate that all planned or future works proposed within the project boundary have been and will be undertaken with full consideration of the objectives set out in the WFD.

The proposed development is situated within the North West River Basin District. The specific water body that is being considered in this assessment is the 'Mersey'. The overall water body of the Mersey Estuary is classified as 'moderate', whilst the ecological status classified as 'moderate' and the chemical status is classified as 'fail'. The Mersey Estuary was expected to maintain this status at the end of the previous WFD planning cycle 2015. The objective is to achieve 'Good Status' by 2027.

This WFD assessment was carried out in the following stages:

1. Screening to identify the key activities that need to be scoped and identifying the water bodies that the proposed development could potentially impact on.
2. Scoping to identify the receptors within the water body that are potentially at risk (Refer to Appendix A for the scoping report). The identified receptors are:
 - Hydromorphology
 - Biology-habitats
 - Biology-fish
 - Water quality
 - Protected Areas
 - Invasive non-native species
3. Examine the effects from the construction and operational activities on each of the WFD elements (Biological elements, Hydromorphological elements, Chemical and Physio Chemicals, and Protected Areas) using a matrix tool.
4. Compare the effects for each key activity against the WFD quality elements.
5. Identify the potential impact on the WFD element for each of the proposed development construction and operation activities.
6. Reassess identified impacts considering the proposed mitigation measures.
7. Reassess impacts higher than negligible post mitigation, in relation to the ability to impact the water body at the scale of the water body.

The assessment has finally determined whether:

- No further assessment (beyond the EIA) is required
- High level assessment is required
- Detailed assessment is required

Through the 'Future Status Assessment' the proposed development and associated impacts are considered in the context of the River Basin Management Plan for the future aims of the Mersey Estuary.

This assessment excludes the following items, as agreed with the Environment Agency (EA);

1. Dredging activities and transport of the dredged material to the proposed development; and
2. Groundwater, as the potential to impact its condition is considered to be negligible.

This assessment demonstrates that the proposed scheme has the potential to impact upon Mersey Estuary water body area if no mitigation measures are adopted.

The primary mitigation measures are:

- Fish rescue and translocation prior to infilling BMD
- Allow for period of settlement of suspended solids, the raked bed shall be allowed to settle over time.
- Temporary isolation structure prior to dock infilling works
- BMD will be isolated from the rest of the WFD water body to prevent migration of pollution and material
- Baseline monitoring during dock infilling and isolation
- At the displacement location, a settlement (silting) pond will be created to slow down the water flow, to allow any fines to settle out before the water is displaced.
- Downstream Defenders will be implemented where possible to enable water quality control of surface water run-off

Using the EA guidance, whilst referring to the relevant chapters of the Environmental Statement and the associated technical reports, this WFD Assessment demonstrates that the effects on WFD parameters resulting from construction and operation activities involved with the proposed development are not significant and, with mitigation, are negligible at the water body level.

A summary of the assessment results are presented in the Table 1-1.

Table 1-1 Summary of the assessment for the potential impact of the proposed development on various WFD elements

Element	Pre-mitigation Impact	Mitigation required	Post-mitigation Impact	Overall Water Body Impact	Further Assessment
Biology	Moderate to High	Yes	Mostly Minor Moderate impact for dock infilling activity	Negligible	Not Required
Invasive Non-Native Species	High (Not be possible to fully quantify)	Yes	Minor	Negligible	Not Required
Hydromorphology	Minor to High	Yes	Mostly Negligible to Minor Moderate impact for dock infilling activity	Negligible	Not Required
Chemical and Physio-Chemical Elements	Minor to High	Yes	Mostly Negligible to Minor Moderate for dock boundary closure activity	Negligible	Not Required
Protected Areas	likely significant effects for both Liverpool Bay SPA and the Mersey Narrows and North Wirral Foreshore SPA/Ramsar	Yes	Negligible	Negligible	Not Required

Glossary

Term	Definition
BMD	Bramley-Moore Dock
BWL	Boskalis Westminster Ltd
CMP	Construction Management Plan
CO ₂	Carbon Dioxide
EA	Environment Agency
EIA	Environmental Impact Assessment
EU	European Union
Ha	hectares
HGV	Heavy goods vehicle
INNS	Invasive non-native species
Km	kilometres
km ²	Square kilometres
M	Metres
N/A	Not applicable
OBC	Outside Broadcasting Compound
RBD	River Basin Districts
RCW	Roadside Concrete Washout
SAC	Special Area of Conservation
SHTD	Sandon Half Tide Dock
SPA	Special Protection Areas
TSHD	Trailing Suction Hopper Dredger
UEFA	Union of European Football Associations
WFD	Water Framework Directive

1 Introduction

1.1 Background and Site Location

Buro Happold Engineering (Buro Happold) has prepared this Water Framework Directive (WFD) assessment on behalf of Everton Stadium Development Limited, hereafter as The Applicant, for the proposed new stadium at Bramley-Moore Dock (BMD) in Liverpool, hereafter referred to as 'the proposed development'.

The proposed development consists of the construction of the 52,888-seat stadium to UEFA Category 4 and associated external works on the BMD site. The request for a WFD Assessment was submitted by the Environment Agency as part of the EIA scoping process. The planning application was submitted to Liverpool City Council ('LCC') in December 2019 (LCC application reference 20F/0001) and has been subject to statutory consultation. The application documents were also submitted to the MMO in March 2020 (MMO reference: MLA/2020/00109) as part of the MMO licence application for various marine elements of the works, which was subject to further statutory consultation.

The site is 8.67 hectares and is bounded to the north by the United Utilities waste water plant and the Sandon Half Tide Dock (SHTD), to the east by Regent Road, to the south by Nelson Dock and to the west by the River Mersey (beyond sea wall outside of club's prospective site ownership).

BMD is part of the Liverpool dock system. The retained water level within the dock system is isolated from the tidal River Mersey via a system of lock gates at Canada Dock, approximately 1.4km to the north.

It was historically home to the Liverpool docks coal export, and was previously used for aggregate storage and distribution, operated by Mersey Sands. It is currently occupied by Svitzer, which operates their tug boat services, and Cataclean. The respective parties leases were due to expire in 2020 but have been renewed up to June 2021 with the option for the leases to be terminated at two months' notice (but not before January 2021).

1.2 Legislative Context

The WFD was adopted and came into force in 2000 and represents a culmination in European Union (EU) water resource protection. It establishes a legislative framework for the protection of surface waters (including rivers, lakes, transitional waters and coastal waters) and groundwater throughout the EU. The WFD is transposed into law in England and Wales by The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (the 2017 Regulations).

The overall aims and objectives of the WFD are to:

- enhance the status and prevent further deterioration of surface water bodies, groundwater bodies and their ecosystems;
- ensure progressive reduction of groundwater pollution;
- reduce pollution of water, especially by Priority Substances and Certain Other Pollutants;
- contribute to mitigating the effects of floods and droughts;
- achieve at least good surface water status for all surface water bodies and good chemical status in groundwater bodies by 2015 (or good ecological potential in the case of artificial or heavily modified water bodies); and
- promote sustainable water use

The WFD requires all EU member states to classify the current condition or 'status or potential' of surface and groundwater bodies and to set a series of objectives for maintaining or improving conditions so that water bodies maintain or reach 'good status or potential' during the next river basin management planning cycle. The assessment must consider whether proposals for new developments have the potential to:

- Cause a deterioration of a water body from its current status or potential; and/ or
- Prevent future attainment of good status or potential where not already achieved.

As a result, new developments that have the potential to impact on current or predicted WFD status are required to assess their compliance against the WFD objectives of the potentially affected water bodies.

Using the Environment Agency (EA) guidance and referring to the relevant chapters of the Environmental Statement and the associated technical reports, a WFD Assessment of the potential to have a non-temporary effects on WFD parameters that is significant at water body level has been carried out.

1.3 Structure of this report

Section 2 and 3 of this report, provides a summary of the study area including the current function and an overview of the current water body status. While Section 4 provides information on the proposed development identifying the activities that could influence the water body.

Section 5 provides a summary of the findings from the screening and scoping. With Section 6 detailing the approach taken for this WFD Assessment.

The findings of the WFD Assessment are presented in Section 7 for the no deterioration assessment and the protected areas assessment.

The future status assessment is summarised in Section 8 following the results of the no deterioration and protected areas assessment.

Section 9 describes the key conclusions of the assessment.

Sections 6.5, 7.2, 7.3, 7.6.1, 7.6.2, 7.6.5, 8.1, 8.2, 8.5, 9.1, 9.2 and 9.3 were completed by Carcinus and White Young Green (WYG).

2 Study Area

2.1 Study Area Description

The site is located at BMD in Liverpool, which is hydraulically connected to the River Mersey via Langton Lock approximately 3.2km north of BMD. The outlet to the Leeds and Liverpool canal is approximately 0.5km south of BMD into Stanley Dock via Collingwood Dock.

The majority of the construction activities will take place within BMD. The exception being the sourcing of the material and subsequent unloading of the material for the dock infilling. The material is to be dredged via a Trailing Suction Hopper Dredger (TSHD) from BWL Licenced Winning Area 457, approximately 23 nautical miles from BMD. The dredged material will be transported to site within the TSHD.

A shoreline connection will be installed using a pipeline to hydraulically pump the dredged material from the TSHD into BMD. The connection point where the TSHD will couple with the pipeline is to be located in sufficient water depth some 300-400m from the crown wall within the River Mersey. The connection will be outside of the navigation channel.

As such, the study area considered in this assessment is BMD and the associated Liverpool dock network up to Langton Lock and to the outlet at the Leeds to Liverpool canal. In addition, the assessment will cover the potential impacts associated with the dock infilling activities including when the TSHD is coupled to the shoreline connection pipeline and sitting within the River Mersey.

The dredging within the Licenced Area 457 and subsequent sailing to and from the connection point is excluded from this study. As the Mersey is already subject to large industrial vessel movements and the dredging is occurring offshore in a designated location.



Figure 2-1 Overview of the study area considered to be the body of water within Liverpool docks between Langton Lock and the entrance to the Leeds and Liverpool Canal and when the trailing suction hopper dredger is connected to the shoreline connection pipe. (Background: Map data ©2018 Google)

2.2 Bramley-Moore Dock Operations

Historically the dock was used almost exclusively for coal export, with coal being loaded onto barges for transport up to 1966. More recently the site has been used by Mersey Sands to store and distribute aggregate material with stock piles of aggregate typically being placed on the wharfs. The lease for this expired in August 2019.

Currently the site is occupied by Svitzer, which operates tug boat services, and Cataclean. The respective leases were due to expire in 202 but have been renewed up to June 2021 with the option for the leases to be terminated at two months notice (but not before January 2021).

2.3 WFD Water Bodies

The catchment hierarchy is defined from the largest area to the smallest with the largest being the River Basin Districts (RBD) and the smallest being the Water Body.

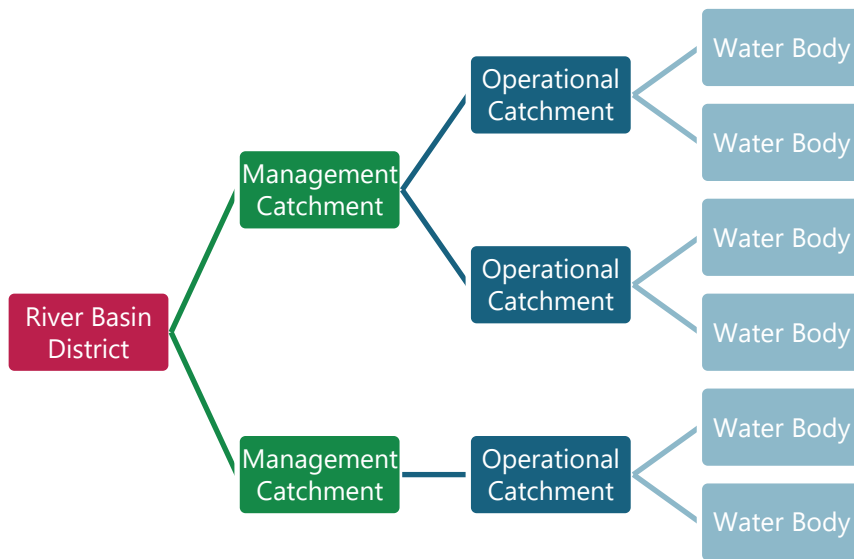


Figure 2-2 Diagram showing the Catchment Hierarchy

The proposed development is situated within the North West RBD which is approximately 13,200km² and is built up of 15 Management Catchments and 80 Operational Catchments. The Management Catchment for this assessment is the North West TraC with the Mersey Estuary being the relevant Operational Catchments. The specific water body that is being considered in this assessment is the 'Mersey'.



Figure 2-3 North West river basin district (figure extracted from EA North West river basin management plan. Part 1 December 2015)

2.4 Mersey Estuary

2.4.1 Description

The Mersey water body is a transitional water body which covers both the estuary and the water contained within the Liverpool Docks.

The water body spans a total distance of approximately 30 miles from the mouth of the Estuary to Howley Weir in Warrington on the sea. The area of the water body is approximately 8,000 hectares.

BMD falls within the Mersey water body which is the only water body within the Mersey Estuary Operational Catchment. Figure 2-4 shows the entire Mersey water body and the location of BMD. The water body within BMD is approx. 4ha, which makes up roughly 0.05% of the overall Mersey water body.



Figure 2-4 – Mersey Water Body (Source: <https://environment.data.gov.uk/catchment-planning/>)

2.5 WFD Groundwater Bodies

The ground water bodies follow the same catchment hierarchy as the surface water bodies. BMD is within the Operational Catchment / Water body called the Mersey Basin Lower and Merseyside North Permo-Triassic Sandstone Aquifers, which is part of the North West GW Management Catchment.

The Lower Mersey Basin and North Merseyside Permo-Triassic Sandstone aquifers are principal aquifers and Drinking Water Protected Areas that extends across a groundwater area of approx. 62,750ha covering a surface area of approx. 630km². Figure 2-5 shows the extent of the water body and the relative location of BMD. The existing ground surface area within BMD that is within the groundwater body based on the Figures below is approx. 3.6ha. This represents 0.006% of the overall ground water body.

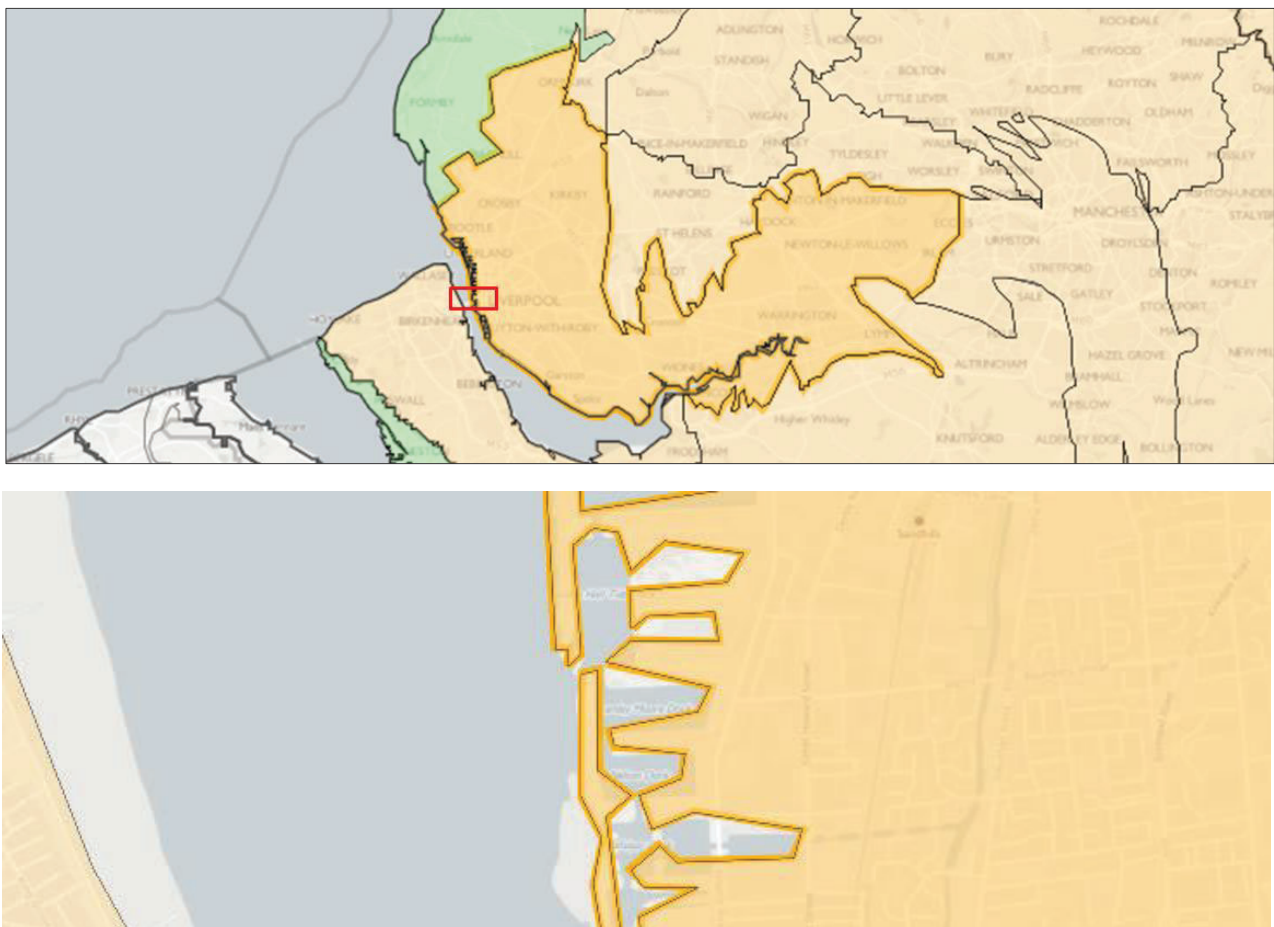


Figure 2-5 Lower Mersey Basin and North Merseyside Permo-Triassic Sandstone aquifers water body (Source: <https://environment.data.gov.uk/catchment-planning/>)

It is noted that the general classification of the groundwater body is poor with the main water quality issue associated with the groundwater body relate to agricultural pollution.

BMD is located on the boundary of the groundwater body at its interface with the Mersey water body. Pollution associated with the construction and operational phases of the water body is considered to have a far greater potential of impacting the Mersey Water Body than the ground water body. The potential for the development to impact the condition of the ground water body is considered to be negligible. On this basis assessment of the ground water body is excluded from this WFD assessment. This principle was discussed and agreed with the EA during the scoping meeting.

3 Water Body Status

3.1 Mersey Estuary Water Body

The status of the overall water body for the Mersey is classified as 'moderate' with a target of achieving 'good' by 2027. The ecological status classified as 'moderate' and the chemical status is classified as 'fail'. 'Good Chemical Status' has been identified to be achieved by 2027.

The below table provides an overview of the status of the Mersey Estuary.

Table 3-1 – Overview of the Mersey Water Body

Water body	Description, notes or more information
WFD water body name	<i>Mersey</i>
Water body ID	<i>GB531206908100</i>
River basin district name	<i>Mersey</i>
Water body type (estuarine or coastal)	<i>Estuarine</i>
Water body total area (ha)	<i>7963.65</i>
Overall water body status (2015)	<i>Moderate</i>
Ecological status	<i>Moderate</i>
Chemical status	<i>Fail</i>
Target water body status and deadline	<i>Good by 2027</i>
Hydromorphology status of water body	<i>Heavily modified</i>
Heavily modified water body and for what use	<i>Supports Good – Use for navigation, ports and harbours</i>
Higher sensitivity habitats present	<i>Yes</i>
Lower sensitivity habitats present	<i>Yes</i>
Phytoplankton status	<i>Moderate</i>
History of harmful algae	<i>Not Monitored</i>
WFD protected areas within 2km	<i>Yes - The following statutory designated sites have been assessed in relation to this project:</i> • Mersey Narrows & North Wirral Foreshore SPA & Ramsar • Mersey Estuary SPA • Liverpool Bay SPA • Ribble & Alt Estuaries SPA & Ramsar • Mersey Narrows SSSI • North Wirral Foreshore SSSI

The baseline characteristics for the Mersey water body are taken from the available information from the EA's Catchment Data Explorer (<https://environment.data.gov.uk/catchment-planning/>).

The overall water body is assessed based on the classification of both:

- Chemical Status
- Ecological Status

The lowest classification of the ecological status and chemical status is used to determine overall status of the water body. The following information on the current status is taken from the second cycle of river basin planning under the Water Framework Directive, running from the publication of river basin plans in 2015 until 2021.

For both the Chemical and Ecological Status there are several components that are assessed based numerous elements.

The Chemical Status is classified as either Good or Fail. Whereas, the Ecological Status is broken down further as shown in Table 3-2.

The classifications are based on the following status descriptions for Surface Waters:

Table 3-2 Status description

Status	Definition
High	Near natural conditions. No restriction on the beneficial uses of the water body. No impacts on amenity, wildlife or fisheries.
Good	Slight change from natural conditions as a result of human activity. No restrictions on the beneficial uses of the water body. No impact on amenity or fisheries. Protects all but the most sensitive wildlife.
Moderate	Moderate change from natural conditions as a result of human activity. Some restrictions on the beneficial uses of the water body. No impact on amenity. Some impact on wildlife and fisheries.
Poor	Major change from natural conditions as a result of human activity. Some restrictions on the beneficial uses of water body. Some impact on amenity. Moderate impact on wildlife and fisheries.
Bad	Severe change from natural conditions as a result of human activity. Significant restrictions on the beneficial uses of the water body. Major impact on amenity. Major impact on wildlife and fisheries with many species not present.

3.2 Chemical Status

The overall status is determined on the lowest classification of the priority substances and other EU level substances. The overall chemical status is derived from three sub-elements relating to the Priority Substances, Other Pollutants and Priority Hazardous Substances and associated elements for the Mersey are presented in the tables below from findings between 2013 to 2016:

Table 3-3 Overall Chemical Status for the Mersey

Classification Item	2013	2014	2015	2016
Chemical	Fail	Fail	Fail	Fail
Priority Substances	Good	Good	Good	Fail
Other Pollutants	Good	Good	Good	Good
Priority Hazardous substances	Fail	Fail	Fail	Good

Table 3-4 Summary of the Priority Substances for the Mersey

Classification Item	2013	2014	2015	2016
1,2-dichloroethane	Good	Good	Good	Good
Atrazine	Good	Good	Good	Good
Benzene	Good	Good	Good	-
Chlorpyrifos	-	-	-	Good
Chlorfenvinphos	-	-	-	Good
Diuron	-	-	-	Good
Fluoranthene	Good	Good	-	Good
Isoproturon	-	-	-	Good
Lead and Its Compounds	Good	Good	Good	Fail
Napthalene	-	-	-	Good
Nickel and Its Compounds	Good	Good	Good	Good
Pentachlorophenol	Good	Good	Good	Good
Simazine	Good	Good	Good	Good
Trichloromethane	Good	Good	Good	Good

Table 3-5 Summary of the Other Pollutants for the Mersey

Classification Item	2013	2014	2015	2016
Aldrin, Dieldrin, Endrin & Isodrin	Good	Good	Good	-
Carbon Tetrachloride	Good	Good	Good	-
DDT Total	Good	Good	Good	Good
Para-para DDT	Good	Good	Good	Good
Tetrachloroethylene	Good	Good	Good	Good
Trichloroethylene	Good	Good	Good	-

Table 3-6 Summary of the Priority hazardous substance for the Mersey

Classification Item	2013	2014	2015	2016
Anthracene	-	-	-	Good
Brominated diphenylether (BDPE) Calc	Fail	Fail	-	-
Benzo (b) and (k) fluoranthene	-	-	-	Good
Benzo (ghi) perylene and indeno (123-cd) pyrene	-	-	-	Good
Benzo(a)pyrene	Fail	Fail	-	Good
Cadmium and Its Compounds	Good	Good	Good	Good
Di(2-ethylhexyl)phthalate (Priority hazardous)	-	-	-	Good
Endosulfan	Good	Good	Good	-
Hexachlorobenzene	Good	Good	Good	Good
Hexachlorobutadiene	Good	Good	Good	Good
Hexachlorocyclohexane	Good	Good	Good	-
Mercury and Its Compounds	Fail	Fail	Good	Good

Nonylphenol	-	-	-	Good
Tributyltin Compounds	Fail	Fail	Fail	-
Trifluralin (Priority hazardous)	-	-	-	Good

3.3 Ecological Status

The ecological status criteria are based on the biological quality is determined by consideration of phytoplankton, macroalgae, fish and invertebrates with the lowest classification principle applies equally. The hydromorphological quality is only deemed as a 'supporting element' in determining the ecological status and is not considered in the overall status classification.

The overall ecological status is presented in the tables below:

Table 3-7 Overall Ecological Status for the Mersey

Classification Item	2013	2014	2015	2016
Ecological	Bad	Poor	Moderate	Moderate
Supporting Elements (Surface Water)	Moderate	Moderate	Good	Good
Biological quality elements	Bad	Poor	Moderate	Moderate
Hydromorphological Supporting Elements	Supports Good	Supports Good	Supports Good	Supports Good
Physico-chemical quality elements	Moderate	Moderate	Moderate	Moderate
Specific Pollutants	Moderate	Moderate	Moderate	Moderate

Table 3-8 Summary of the Supporting Elements for the Mersey

Classification Item	2013	2014	2015	2016
Mitigation Measures Assessment	Moderate or less	Moderate or less	Good	Good

Table 3-9 Summary of the Biological quality elements for the Mersey

Classification Item	2013	2014	2015	2016
Invertebrates	Good	Good	Good	Good
Macroalgae	High	High	High	High
Phytoplankton	Bad	Poor	Moderate	Moderate

Table 3-10 Summary of the Hydromorphological Supporting Elements for the Mersey

Classification Item	2013	2014	2015	2016
Hydrological Regime	Supports Good	Supports Good	Supports Good	Supports Good

Table 3-11 Summary of the Physico-chemical quality elements for the Mersey

Classification Item	2013	2014	2015	2016
Dissolved Inorganic Nitrogen	Moderate	Moderate	Moderate	Moderate
Dissolved Oxygen	Good	Good	Good	Good

Table 3-12 Summary of the Specific Pollutants for the Mersey

Classification Item	2013	2014	2015	2016
Triclosan	-	-	-	High

2,4-dichlorophenol	-	-	-	High
2,4-dichlorophenoxyacetic acid	-	-	-	High
Arsenic	High	High	High	High
Copper	High	High	High	High
Diazinon	-	-	-	High
Dimethoate	-	-	-	High
Iron	High	High	High	High
Linuron	-	-	-	High
Mecoprop	High	High	High	-
Phenol	-	-	-	High
Un-ionised ammonia	High	High	-	-
Zinc	Moderate	Moderate	Moderate	Moderate

3.4 Summary of Existing Pressures

The main causes that are determining existing status of the water body relate the following key elements:

Chemical Status – FAIL

- Fail for the level of Lead and Its Compounds

Ecological Status – MODERATE

- Moderate levels of Phytoplankton
- Moderate levels of Dissolved Inorganic Nitrogen
- Moderate levels of Zinc

Based on the EA's findings the key issue preventing the water body reaching a good status is Industry and the Pollution from towns, cities and transport.

The below table details the key reasons for not achieving good status.

Table 3-13 Summary of reasons for not achieving 'Good' status

Classification Year	Classification Element	Activity	Activity Certainty	Category
2015	Tributyltin Compounds	Other (not in list, must add details in comments)	Probable	No Sector responsible
2015	Zinc	Contaminated water body bed sediments	Suspected	Industry
2014	Brominated diphenylether (BDPE) Calc	Other (not in list, must add details in comments)	Probable	No Sector responsible
2015	Phytoplankton	Unknown (pending investigation)	N/A	Sector under investigation
2015	Dissolved Inorganic Nitrogen	Unknown (pending investigation)	N/A	Sector under investigation

Classification Year	Classification Element	Activity	Activity Certainty	Category
2015	Tributyltin Compounds	Contaminated water body bed sediments	Suspected	Industry
2015	Tributyltin Compounds	Contaminated water body bed sediments	Suspected	Water industry
2015	Zinc	Contaminated land	Probable	Industry

4 Proposed Development

The purpose of this WFD Assessment is to demonstrate that all planned or future works proposed within the proposed development boundary have been and will be undertaken with full consideration of the objectives set out in the WFD.

4.1 Site Location

The site is located at BMD in Liverpool, National Grid Reference SJ3345292491. BMD forms a small part of a larger dock and canal network along the River Mersey. The outlet to the Leeds and Liverpool canal is approximately 0.5km south of the site into Stanley Dock via Collingwood Dock.

The site is 8.67 hectares and is bounded to the north by the United Utilities waste water treatment plant and SHTD, to the east by Regent Road, to the south by Nelson Dock and to the west by the River Mersey wall. The western boundary of the site is limited to the foot of the concrete crown wall, built on top of the River Mersey wall. Figure 4-1 shows the location and red line boundary of the application site.

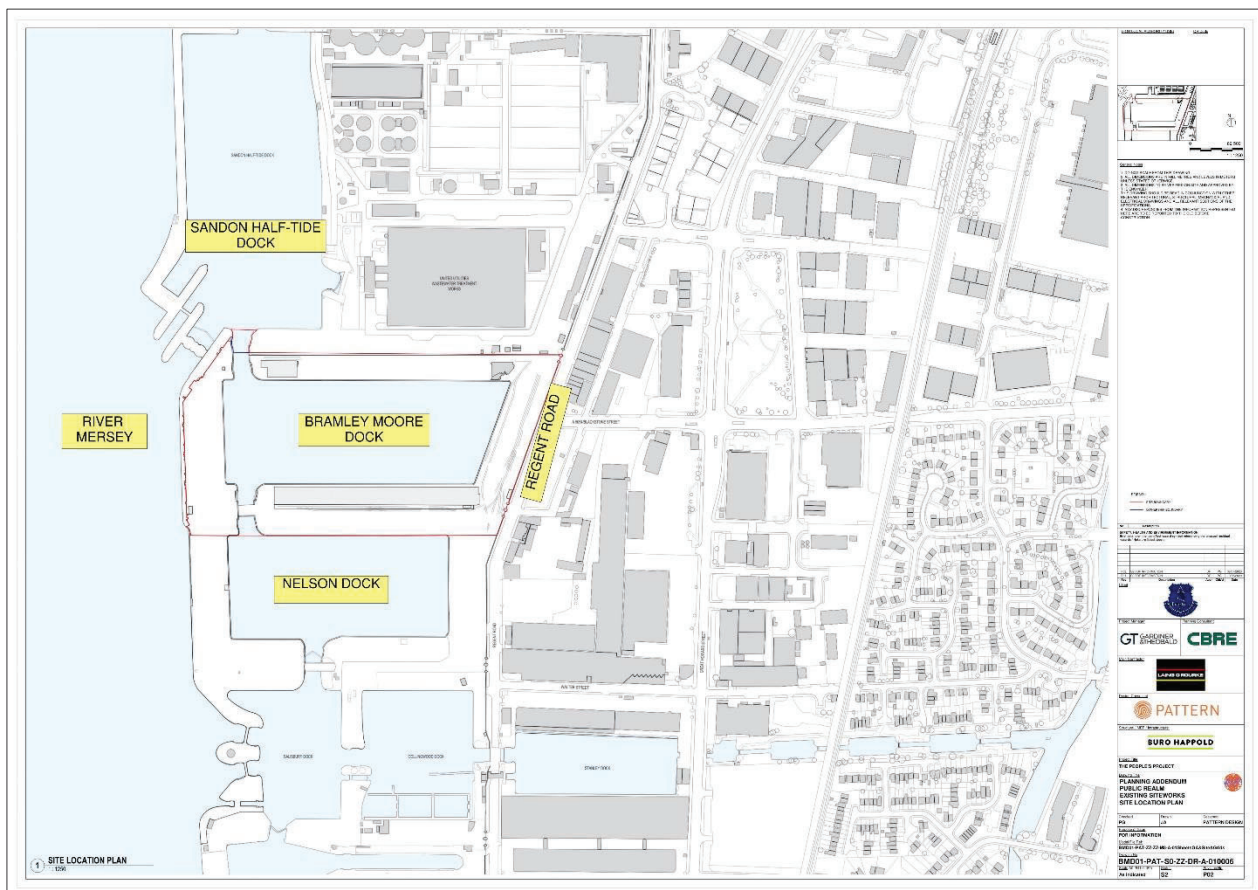


Figure 4-1 Site location plan with the red line boundary (Background: Pattern Architects)

4.2 Proposed Development

Application for Full Planning Permission for the demolition of non-listed structures; part-demolition of listed structures (Regent Road wall); remediation; infill of the BMD; engineering works; and alterations to the dock walls to accommodate the development of a 52,888 seated capacity stadium (Use Class D2) predominantly for football use with the ability to host other events, including up to 4 non-football events at full capacity per year; with ancillary offices (Use Class B1a); Club Shop and retail concessions (Use Class A1); exhibition/cultural centre and conference facilities (Use Class D1); food and drink concessions (internal and external to the stadium) (Use Classes A3 / A4 / A5); betting shop concessions (Sui Generis); and associated infrastructure including: electric substation, creation of a water channel, bridge links, outside broadcast compound, photo-voltaic canopy, storage areas/compound, security booth, external concourse / fan zone including performance stage, vehicular and pedestrian access and circulation areas, hard and soft landscaping (including lighting, public art and boundary treatments) and vehicle parking (external at grade).

4.3 Potential Construction Methodology

The following main activities as stated in the Construction Management Plan – The People's Project (CMP) are as follows:

1. Protection of the listed structures and assets where retained on site, removal of heritage assets for repair and reuse in public realm works and making safe of the Hydraulic tower.
2. Construction of 3 new openings into the Grade II listed Regent Road wall (1 new opening required at start of construction programme)
3. Removal of non-listed buildings and in-ground obstructions
4. Repairs to Grade II Listed dock walls
5. Dock filling
6. Service diversions / disconnections, New primary sub station, new gas, water main and telecoms services
7. Substructure works, including piling
8. Substructure pile cap foundations and lift pits
9. Underground drainage and other services
10. Precast concrete work to columns, walls, slabs and stairs, as well as lower-tier rakers and terrace units
11. Structural steelwork including upper rakers
12. Precast terracing units, vomitories and step blocks
13. Steelwork roof trusses and purlins
14. Aluminium standing seam roof coverings and polycarbonate
15. Aluminium mesh cladding to roof barrel
16. Brickwork piers
17. Glazing, mesh and brickwork infills

18. Lifts and escalators
19. Handrails, balustrades and bowl barrier rails
20. Mechanical, electrical and public health installations
21. Fit-out activities, including bowl, concessions and concourses
22. Pitch works
23. Testing and commissioning
24. External hard and soft landscape works including western water channel, DNO compound, external stepped promenade and wind mitigation measures.

The below construction methodology has combined several of these main activities and summarises the relevant activities that are considered to influence the Mersey Water Body.

4.3.1 Demolition and Site Clearance

The construction works will commence with site clearance, including demolition of all existing buildings, with the exception of the listed Hydraulic Engine House, which is to be retained. The dock wall abutting Regent Road would be subject to works including the creation of new entrances, as required. The demolition will include grubbing out foundations and the removal of obstructions.

Figure 4-2 shows the buildings that will be demolished and the sections of Regent Road wall that will have new openings, the locations are identified within the clouded areas.

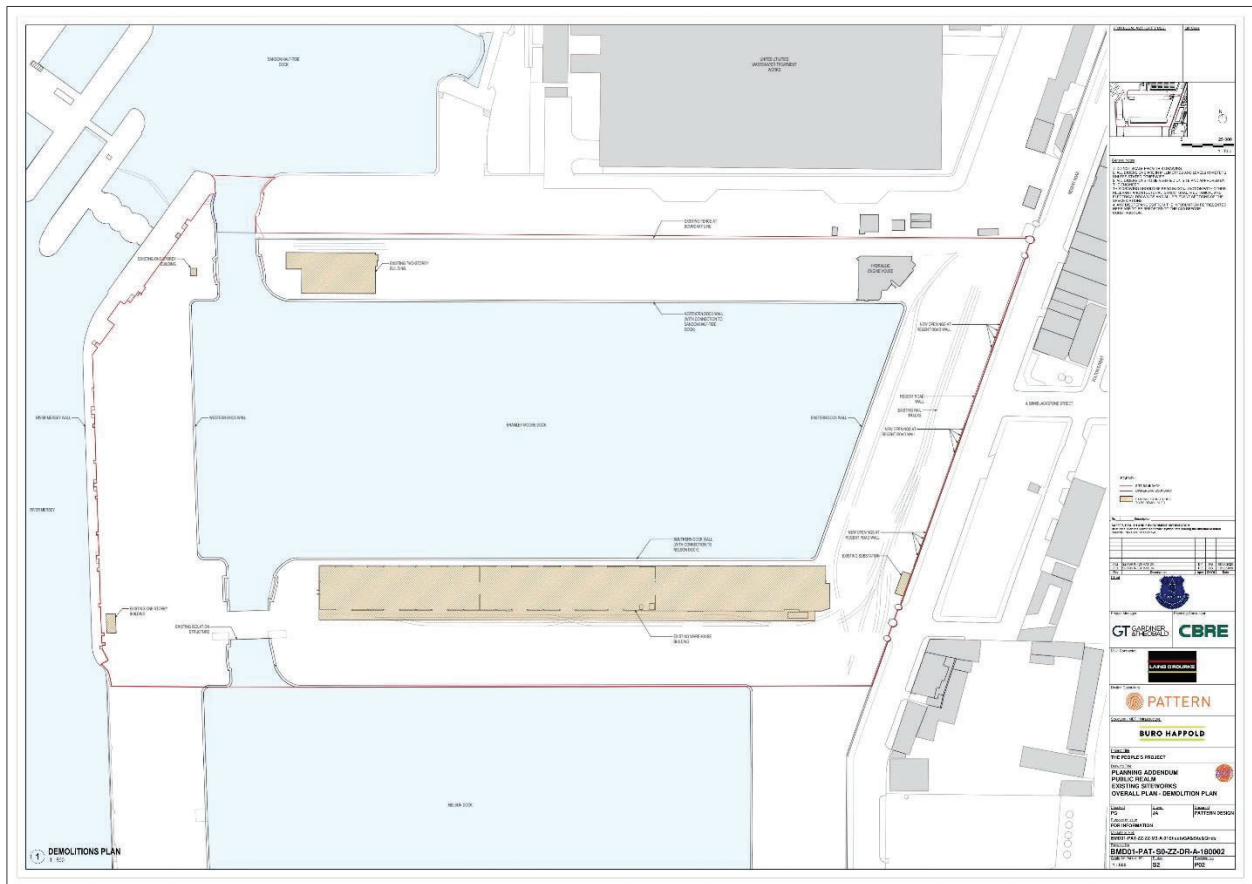


Figure 4-2 Mark up of the demolition plan (Background: Pattern Architects)

4.3.2 Dock Basin Clearance

The BMD basin will be raked as necessary allowing any metallic objects or obstructions that would otherwise disrupt piling operations to be recovered and appropriately disposed of. Following disturbance from the raking procedure, the silt deposits will be allowed to settle out. Following this, the sensitive removal and relocation of marine life within the dock will be undertaken, in accordance with a methodology agreed with all respective parties (Natural England, Marine Management Organisation, Merseyside Environmental Advisory Service).



Figure 4-3 Photo of a rake (left); schematic of the raking vessel (right) (both images extracted from the CMP)

4.3.3 Boundary Closure

An isolation structure will then be installed between BMD and the adjacent SHTD to disconnect it from the northern part of the dock network. Works to strengthen the existing closure structure at the southern entrance to BMD will be undertaken if required.

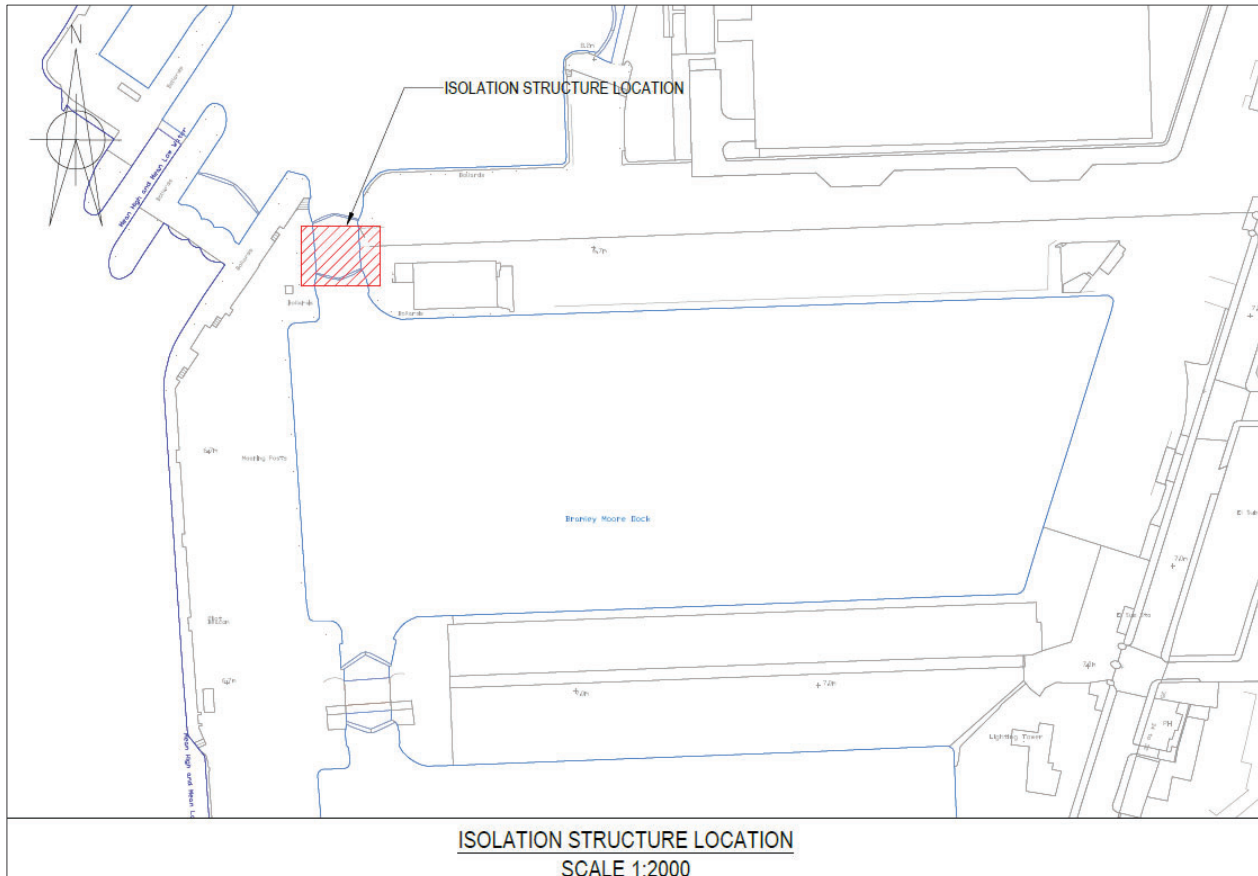


Figure 4-4 Location of the northern isolation structure

4.3.4 Dock Infill

The dock will be infilled using marine-won material (primarily sand, but potentially with a small gravel and silt component), transported to the site by dredger. Due to vessel draft constraints, it is anticipated that the dredger will be moored within deeper water and the material pumped to BMD by pipeline (as for the adjacent Wellington Dock UU WwTW scheme). As the basin is progressively filled, the dock water will be displaced back to the dock network. The sand will be placed in accordance with an engineering specification, which will include in situ testing of the placed material. Filling operations will continue until the new infill level reaches near to the top of the existing dock wall. Ground improvement measures will be undertaken, followed by further land-raising.

The below schematic shows an indicative location for the Trailing Suction Hopper Dredger (TSHD), the shoreline connecting pipeline and the approximate area being infilling. The displaced water is planned through the northern isolation structure.

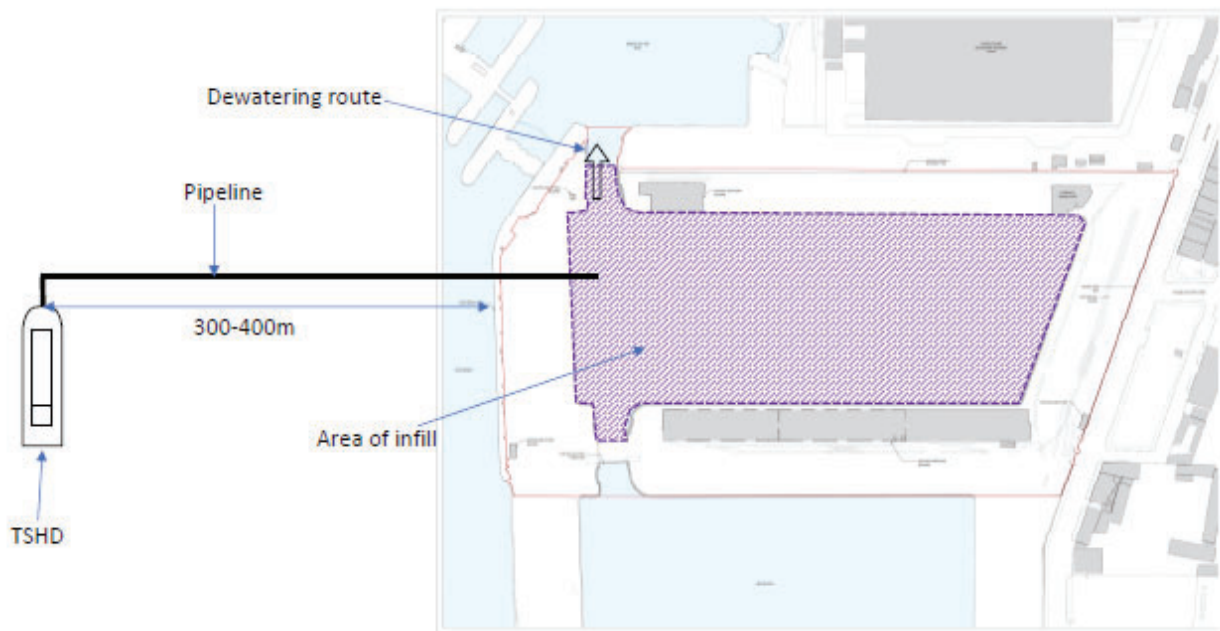


Figure 4-5 Schematic of the infilling operations and area of infill (Background: Pattern Architects)

4.3.5 Compaction

Upon completion of the dock infilling the fill material will be subjected to compaction. The planned method is based on a heavy excavator equipped with a specially designed arm that has a hammer attached. The hammer is then hydraulically lifted and dropped using hydraulic acceleration to compact the material.

The compaction will cover the same area that has been infilled, see

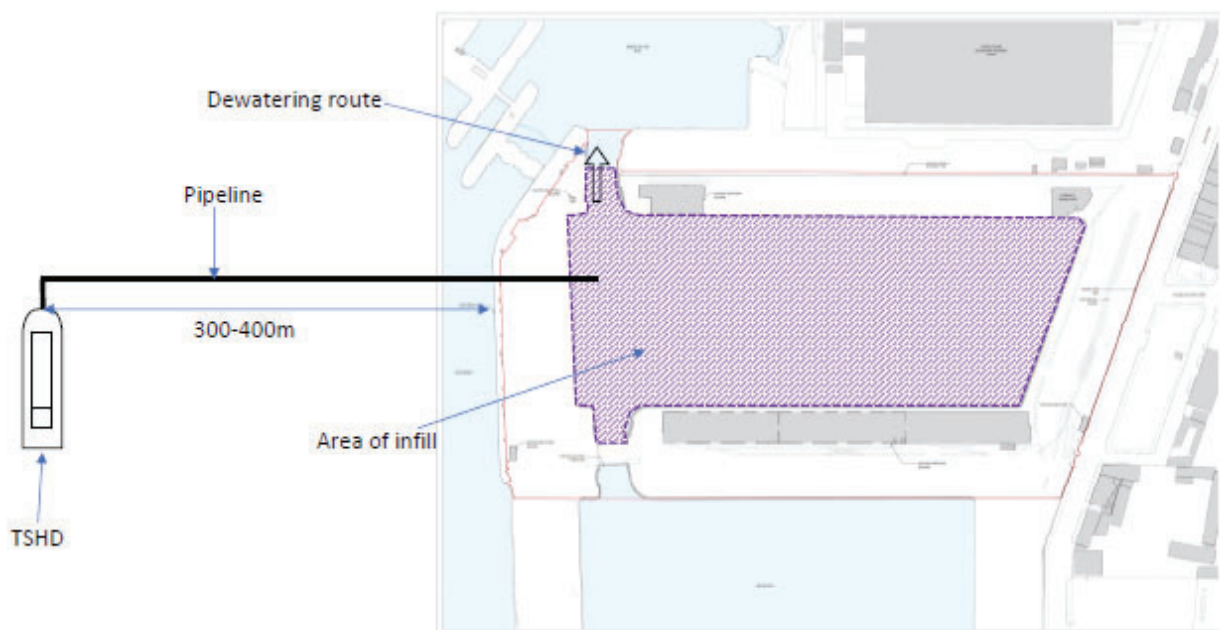


Figure 4-5.

4.3.6 Stadium Substructure

The stadium foundations will then be constructed by piling within the footprint of the infilled basin and surrounding dockside areas. Locations along the wharves have been probed to determine the buried extent of the dock walls. From this, exclusion zones have been defined, within which no piling will be permitted.

Within the areas that are currently occupied by wharves, foundations will be rotary bored piles or continuous flight auger piles, constructed from a piling platform.

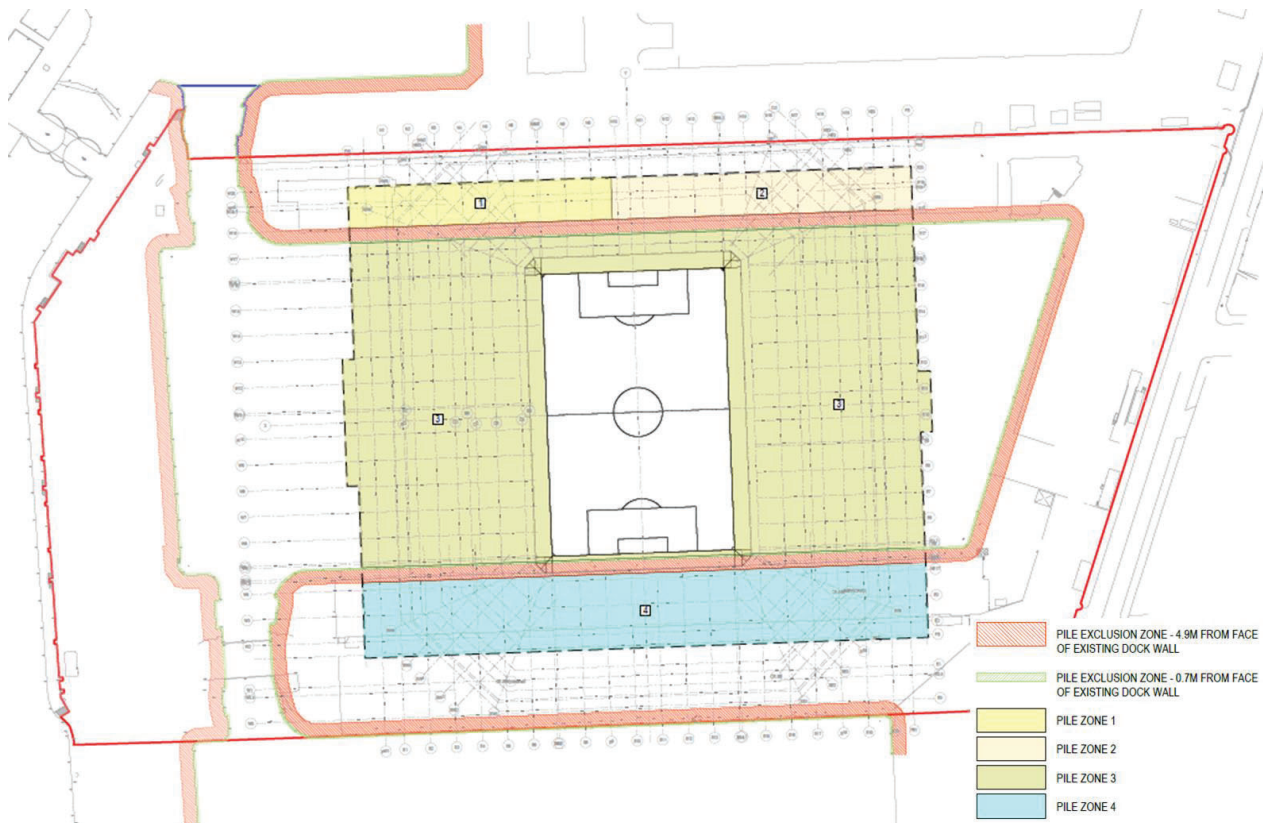


Figure 4-6 Piling plan showing the areas of the development where piling is anticipated

4.3.7 Stadium Superstructure

It is anticipated that the stadium superstructure will be formed generally of conventional structural materials of steel, reinforced concrete and pre-cast concrete for the terrace units. The roof structure will be formed of steel. Components will be fabricated or manufactured to maximum transportable lengths to minimise numbers of components and numbers of assemblies on site. Façade materials are again anticipated to be reasonably conventional and to be installed and constructed in conventional ways. Installation of many construction elements will be facilitated through a number of tower cranes in a conventional manner. It is anticipated that the construction materials, site waste and spoil/arising will be transported to and from site by road. Geoenvironmental testing of spoil/arising will be undertaken to confirm the level of contamination for disposal, classification to be determined.

4.3.8 Western Water Channel

The western channel will be excavated in the dry to form a new channel. The east side of the channel will be formed by a new sheet piled wall with a terraced public realm area above the water level. The west side of the channel will be formed by the existing dock wall. The channel will only be created when the area is not required for construction logistics. The fill material will be excavated to a level of approximately +3mAOD, providing a bed level 0.5m below the invert level of the culverts within the existing isolation structure.

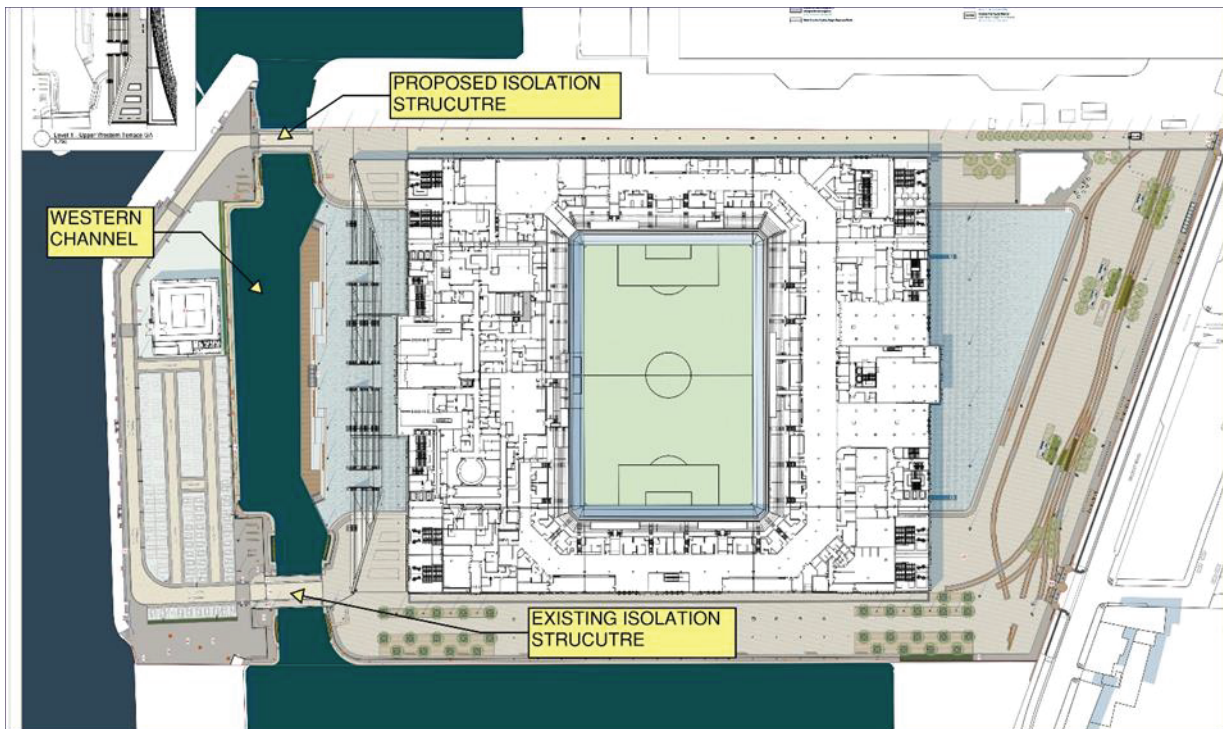


Figure 4-7 Location and extent of western channel and isolation structures

4.4 Operational Conditions

Once commissioned and operational there will be aspects of the proposed development that have the potential to influence the Mersey water body. A summary of these operational conditions are as follows:

4.4.1 Surface water drainage

Surface water run-off from areas of hardstanding will be discharged directly over the dock wall edges (as per the existing situation), into the surrounding dock, or via piped networks into the Western Channel and Nelson Dock as shown in Figure 4-9.

Run-off from the car park and Outside Broadcasting Compound (OBC) will pass through suitable cleansing systems (Downstream Defender) prior to discharge to the western water channel.

The run off from the field of play, due to the presence of fertilisers, will discharge to the foul water network as it unsuitable for discharge to the adjacent docks. All entirely covered/enclosed areas of the site will drain to the foul water network, such as the service area.

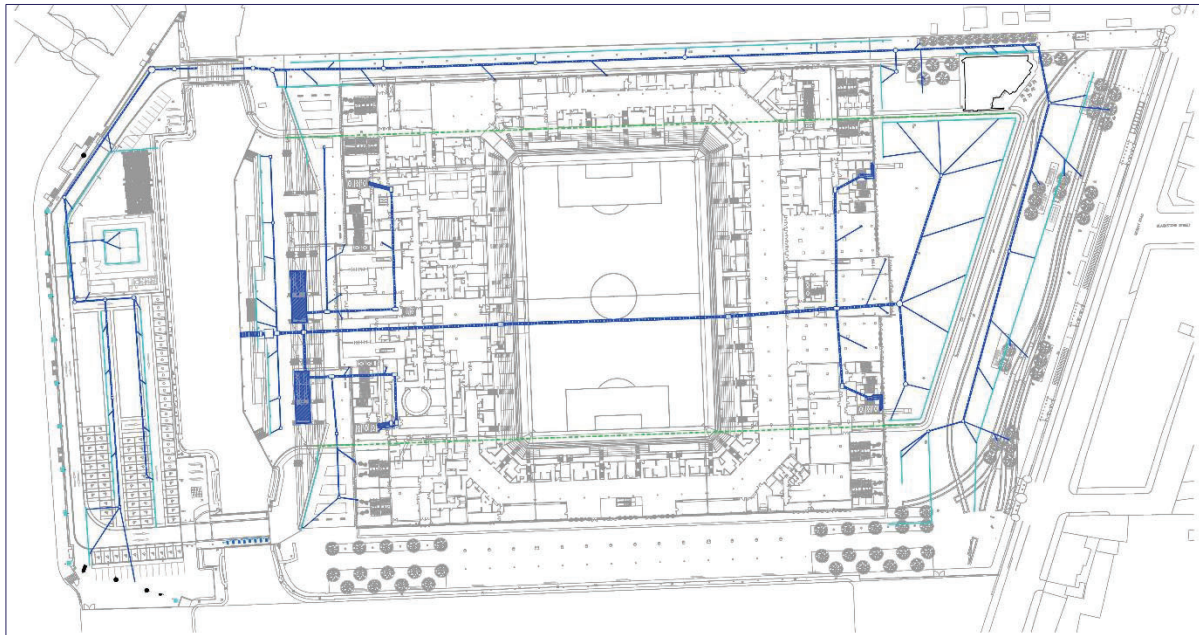


Figure 4-8 Proposed surface water drainage system

4.4.2 Wave overtopping

Wave overtopping can occur due to a combination of a high still water level and waves meeting a structure such as the river wall or lock entrance isolation structures. The application site is exposed to swell waves penetrating from the Irish Sea and locally generated wind waves within the River Mersey estuary. The areas that have the potential to be affected during a storm event are the at-grade car park, and the OBC located immediately behind the River Mersey wall. Waves overtopping the River Mersey wall have the potential to exceed the piped drainage network provided within the Western Wharf. The Western Wharf will be graded to allow flows exceeding the piped network to discharge over-edge into the Western Channel.

4.4.3 Western Channel Connectivity

Hydraulic connectivity between the northern and southern part of the dock networks will be achieved in the operational phase by:

- Proposed isolation structure with culverts (at north)
- Western channel
- Existing isolation structure with culverts and sluice gates (at south)

Under normal conditions the sluice gates within the southern isolation structure will be open, enabling hydraulic connectivity between the south and north parts of the dock network via the Western Channel. The proposed culverts in the northern isolation structure will be sized to match the existing culverts in the southern isolation structure. The flow regime between north and south is therefore anticipated to match the existing condition.

For operational reasons there may be a requirement to close the sluice gates within the southern isolation structure. For example, the southern part of the dock network, which includes navigation canals, may be isolated from a planned lowering of water level within the northern dock. Decisions relating to the opening and closure of the sluice gates are considered to be unaffected by the proposed development.

5 Screening and Scoping

5.1 Introduction

A WFD Assessment is typically considered in terms of the following three stages:

1. Screening – identifies the key activities that need to be scoped.
2. Scoping – identifies the receptors within the water body that are potentially at risk.
3. Assessment – considers the potential impacts of the activities and identifies if the activity may cause any deterioration or risks the water body's future objectives of achieving good status.

5.2 WFD Screening Assessment

The screening assessment considered the activities identified in the Construction Management Plan along with the future operational conditions / activities that could potentially occur at the proposed development.

The findings of the screening assessment highlighted that the main activities that could potential impact on the water body related to the construction stage. With the main impacts relating to the enabling works i.e. site clearance, dock, raking, dock infilling and compaction. The installation of the substructure (i.e. piling) is also considered to have potential impacts to the water body.

In addition, several operational conditions were considered to have potential to impact the water body. The main operational conditions were focused around surface water run-off, wave overtopping, and culverts located in the isolation structures.

The screening assessment included the identification of the water bodies that the proposed development could potentially impact on.

5.3 WFD Scoping Assessment

The scoping stage has been undertaken to identify the receptors that are potentially at risk from the activities and need further impact assessments within the WFD assessment. The scoping report covered the following receptors:

- Hydromorphology
- Biology – Habitat and Fish
- Water quality
- Protect Areas
- Invasive non-native species (INNS)

The results of the scoping highlighted that each of the receptors are potential at risk and require further impact assessments. Please refer to Appendix A for the WFD scoping report.

Table 5-1 Summary of the WFD Scoping Report

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Hydromorphology	Yes	Impact of dock infilling (permanent) Potential risk of suspended sediment carried within water displaced from BMD during infilling
Biology: habitats	Yes	Subtidal Kelp beds located approximately 200m south of the southern corner of BMD
Biology: fish	Yes	Trapping of fish within BMD following installation of northern isolation structure and entrainment of fish into the TSHD during infill operations
Water quality	Yes	Water quality risks due to the temporary disconnection of hydraulic link between north and south dock network
Protected areas	Yes	The following statutory designated sites have been assessed in relation to this project: - Mersey Narrows & North Wirral Foreshore SPA & Ramsar - Mersey Estuary SPA - Liverpool Bay SPA - Ribble & Alt Estuaries SPA & Ramsar - Mersey Narrows SSSI - North Wirral Foreshore SSSI Nitrate Directive
Invasive non-native species	Yes	Multiple, risk of INNS being spread due to works to be assessed

5.4 Environment Agency Consultation

A consultation meeting was carried out with the EA on 06 November 2019 in order to agree in principle of the WFD Assessment Scoping and general approach to the assessment (see Appendix B for a copy of the meeting minutes). Further comments received from the EA on 22 November 2019.

The key points discussed and agreed with the agency are summaries below:

- Scoping should be simplified to only cover the consideration of potential impact.
- The information relating to timing of activities to be completed within the Scoping.
- The assessment to cover: No deterioration; protected areas, and Future status.
- The assessment to cover both construction and operation phase.
- Stadium super-structure construction will not be covered in detail due to limited likely impact.
- Biology fish risk issues should be 'Yes' to all screening criteria, with mitigation included in full assessment report rather than scoping document.
- Water quality issues should not be covered within Hydro-morphology section.
- Biology-Habitats was agreed to be scoped out. For further information and mitigation measures please refer to the Project EIA Ecology Chapter.
- Biology-Fish to be scoped in and the potential impacts upon fish movement due to the temporary and permanent condition of the waster channel should be considered within the assessment.
- Water Quality to be scoped in and the impact of disconnection between north and south dock to be assessed.
- Nitrates Directive (Conservation of Wild Birds Directive covered by including of SPA) to be included in WFD protected areas.
- A Bio Security plan as part of INNS will be a condition for planning permission.

- Habitat Regulations Assessment result to be presented within the WFD Assessment.

Therefore, as highlighted above the following items have been excluded from the WFD Assessment, prior agreement with the EA:

- Dredging activities and transport of the dredged material to the proposed development
- Assessment of the impacts on the groundwater body, as previously mentioned in Section 2.5.

5.4.1 Post Submission Consultation Response

Following the application submission for full planning permission (LPA ref. 20F/0001), a consultation response was received from EA on 04 May 2020 indicating that there is no objection in principal to the proposed development. For detailed comments, and a list of conditions from Natural England and the Merseyside Environmental Advisory Service, refer to Appendix C.

6 Assessment Methodology

6.1 Introduction

Projects that have the potential to impact on current or predicted WFD status are required to assess their compliance against the objectives defined for potentially affected water bodies. The assessment considers whether proposals for new developments have the potential to:

1. Cause a deterioration of a water body from its current status or potential; and/ or
2. Prevent future attainment of Good status (or potential where not already achieved)

6.2 Methodology

Upon completion of the screening and scoping stages a WFD Assessment has been undertaken by following the methodology listed below:

1. Examine the effects from construction activities and operational conditions, including risks identified in the scoping as having the potential to conflict with the WFD objectives.
2. Compare the effects for each key activity against the WFD quality elements identified in the European Commission Guidance Document No. 5¹ relevant to transitional water bodies detailed in Table 6-1 and Table 6-2 for the Protected Areas quality elements.
3. Identify the potential impact on the WFD element for each of the activities and assess them on the following criteria.

Direct or Indirect Impact:

- Direct – it will happen at the same time and place as the activity
- Indirect – it will happen later or further away, including in other linked water bodies

Adverse or Beneficial Impact.

Duration of the impact based on the following timeframes (consistent with those in the EIA):

- Short Term (0-5 years)
- Medium term (5-10 years)
- Or Long term (10+ years).

Overall impact rating based upon engineering judgement in combination with the following definitions:

- **High** – permanent adverse impacts on the WFD quality elements
- **Moderate** – prolonged adverse impacts on the WFD quality elements
- **Minor** – short term adverse impacts on the WFD quality elements
- **Negligible** – less than short term adverse impacts are considered reversible

¹ Common Implementation Strategy for the Water Framework Directive (2000/60/EC), Guidance Document No. 5, Transitional and Coastal Waters – Typology, Reference Conditions and Classification Systems. European Commission. 2003

4. The identified impacts will then be re-assessed considering the mitigation measures that are proposed within the Construction Management Plan.
5. If any identified impacts remain higher than negligible, they will then be re-assessed in relation to the ability to impact the water body at the scale of the water body
6. The assessment will finally determine whether:
 - No further assessment (beyond the EIA) is required
 - High level assessment is required
 - Detailed assessment is required

6.3 WFD Quality Elements

The WFD compliance assessment uses a matrix tool to assess the effects of the proposed development on each of the WFD elements (biological, physico-chemical and hydromorphological surface water elements). Each item is considered against the construction activities and operational conditions described in the Section 4. The matrix is used to support identification of whether or not there is a potential deterioration impact upon the WFD elements across the full range of construction and operational conditions.

Table 6-1 WFD Quality Elements associated with Transitional Water Bodies as identified by the European Commission

Key Element	Areas of interest for Transitional Water Bodies
Biological Elements	Composition, abundance and biomass of phytoplankton Composition and abundance of other aquatic flora Composition and abundance of benthic invertebrate fauna (including motile and sessile shellfish species) Composition and abundance of fish fauna
Hydromorphological Elements Supporting the Biological Elements	<u>Morphological Conditions:</u> Depth Variation Quantity, structure and substrate of the bed Structure of the inter-tidal zone
	<u>Tidal Regime:</u> Freshwater Flow Wave Exposure
Chemical and Physio-chemical elements Supporting the Biological Elements	Transparency Thermal Conditions Salinity Oxygenation Conditions Nutrient Conditions Specific pollutants

The following areas of interest have been identified for the Protected Areas.

Table 6-2 Quality Elements associated with Protected Areas

Key Element	Areas of interest for Transitional Water Bodies
Protected Areas	Areas designated for the protection of economically significant aquatic species Bodies of water designated as recreational waters Nutrient sensitive areas SACs and SPAs

6.4 No Deterioration Assessment

'No deterioration' was defined by the EA in its Position Paper (EA, 2013).

Steps are required to prevent deterioration of the ecological status, ecological potential and chemical status of surface water. 'Deterioration of the status' of the relevant water body includes a fall by one class of any element of the 'quality elements', even if the fall does not result in the fall of the classification of the water body as a whole.

6.5 Protected Areas Assessment

A desk study was carried out incorporating the application site and 10km search area around the application site for Natura 2000 and Ramsar sites. This was completed based on pre-application consultation advice received from Natural England (NE) on 29th June 2017 and 2nd September 2019 and Merseyside Environmental Advisory Service (MEAS) 23rd June 2017, 21st August 2019. Within the NE 2017 consultation response, it was agreed that the following sites should be included within any assessments:

- Liverpool Bay Special Protection Area (SPA)
- Mersey Narrows & North Wirral Foreshore SPA
- Ribble & Alt Estuaries SPA
- Mersey Estuary SPA
- Mersey Narrows & North Wirral Foreshore Ramsar
- Ribble & Alt Estuaries Ramsar
- Mersey Estuary Ramsar
- Mersey Narrows Site of Special Scientific Interest (SSSI)
- North Wirral Foreshore SSSI

Information regarding the Protected Areas Assessment and impacts to terrestrial ecological receptors can be found in the Environmental Statement chapter and Report to Inform a Habitats Regulations Assessment (WYG, 2019).

No subtidal benthic habitats or species are included within the local and regional designated sites. Nearby and adjacent designated sites are predominantly focussed on resident and migratory birds in conjunction with intertidal and coastal habitats such as embryonic sand dunes and salt marsh areas. Benthic communities form an important component of the diet of wading birds, therefore, influences from construction activities at BMD (such as relocation of benthos or inadvertent release of invasive non-native species and contaminants) may affect the availability of prey to support these populations for example from increased competition and community shifts.

6.6 Future Status Assessment

The River Basin Management Plan highlights the future aims of the Mersey Estuary. The aims have been split depending on the level of funding received. The basic aims (less funding) are:

- Development and implementation of catchment wide strategies to improve the water environment through a framework for individual operational catchments and water bodies.
- Sustainable urban drainage systems project(s) with the potential to deliver benefits for the water environment and flood risk whilst addressing issues such as mine water contamination and highways run-off.

The more detailed aims (greater funding) are:

- Implement a strategic programme of urban forestry across the catchment, with maximum flood alleviation, water quality and wider benefits such as growth agenda, jobs training, employment, health and wellbeing.
- Cross-catchment action for enhancement and restoration where appropriate, addressing physical modifications such as toe boarding, revetment, redundant weirs and tidal flaps to enable the passage of fish, including eel.
- Habitat restoration that will contribute to improved water quality, including moss lands and reedbeds.

In addition to these aims the future mitigation measures being proposed predominantly concern:

- Sediment management
- Dredging, avoidance and reduce impact
- Disposal of dredged material

Through the 'Future Status Assessment', the proposed development and associated impacts are considered against the above listed aims to assess whether the development may inhibit the accomplishment of these aims.

7 No Deterioration Assessment

7.1 Construction and Operational Effects

The following tables summarise the key potential effects associated with the relevant construction activities and operational conditions.

Table 7-1 Construction activities with their potential effects

Activity	Potential effect
Demolition and Site Clearance	- Accidental release of hydrocarbons and oils into the on-site drainage system or directly to the Mersey Estuary, Docks, and Surface Water Features - Accidental leaks and spillages of significant amounts of hazardous materials migrating into the on-site drainage system or directly to the Mersey Estuary, Docks and Surface Water Features - Leak or breakage of temporary sewerage system causing crude sewage to migrate to water - Dust and debris blowing into the Mersey Estuary, Docks and Surface Water Features
Dock Raking	- Dock deposit and sediment disturbance resulting in potential mobilisation of contamination and water displacement. - Dock deposits will be disturbed with potential for mobilisation of contamination with impact to water quality and consequently marine flora and fauna - Dock deposit and sediment disturbance has the potential to cause the spread of Invasive Non-Native Species (INNS)
Dock boundary closure	- Dock deposit mobilisation and water displacement - Disconnection of north/south hydraulic connection during construction phase - Increased biological stress to benthic communities (including motile and sessile shellfish species) and fish assemblages due to deterioration of water quality
Dock infill (Dredger pipeline installation and; spreader pontoon; And water displacement)	- Elevated sediment loads in dock system during water displacement from BMD - Displacement and loss of marine species (including motile and sessile shellfish species) - Loss of marine habitat - Dredger moored adjacent to the river wall approx. 300-400m in sufficient water depth - Potential disturbance to fish and marine mammals from underwater noise and vibration originating from TSHD during pumping of aggregate - Risk of entrainment to fish from TSHD during sediment fluidisation for infill - Potential spread and release of INNS within displaced water from BMD - Risk of accidental spill or release of environmentally harmful substance from TSHD or other plant used during construction
Material compaction	- Dust and debris blowing into the Mersey Estuary, Docks and Surface Water Features - Vibration - Noise pollution
Substructure (Pilling)	- Accidental release of hydrocarbons release in shallow made ground and oils into the on-site drainage system or directly to the Mersey Estuary, Docks, and Surface Water Features. - Accidental leaks and spillages of significant amounts of hazardous materials, migrating into the on-site drainage system or directly to the Mersey Estuary, Docks and Surface Water Features - Contamination of paint - The water used to clean concrete wagon discharge chutes carry two issues: high pH and high suspended solids content. - Noise pollution
Superstructure	- Accidental leaks and spillages of significant amounts of hazardous materials migrating into the on-site drainage system or directly to the Mersey Estuary, Docks and Surface Water Features - Dust and debris blowing into the Mersey Estuary, Docks and Surface Water Features

Table 7-2 Operational Conditions with their potential effects

Condition	Potential effect
Surface water run-off	• Pollutants contained within surface water run-off contaminating water bodies through overflows/leaks to the sewer system • Changes in the surface water drainage network on site and subsequent implications upon the drainage regime to surface water bodies including the River Mersey and Nelson Dock (e.g potential for changes in sediment load) • Pollutants, such as silts and hydrocarbons resulting from activities on-site such as vehicle storage, vehicle washing, fertilisers from pitch, and oil/fuels leaks would be discharged to the surface water network through surface water run-off. This can increase water turbidity, deplete oxygen levels and be toxic to the aquatic environment. • Migration of contamination vertically along newly created preferential pathways (such as piled foundations, drainage trenches etc.) and laterally following permeable strata to the Port of Liverpool Dock System, River Mersey, the Principal Aquifer.
Wave overtopping	• Wave overtopping washing contaminants into the western channel from the at-grade car park and OBC located on the western wharf
Dock network hydraulic connectivity via culverts	• Impeded movement of fish between the docks via the northern isolation structure culverts (in combination with the existing southern isolation structure culverts) • Suspended sediment in the Mersey Estuary, Dock and Surface Water Features
Infilled Dock	• As result of infilled dock there will be no risk of discharges, emissions, and noise pollution from cargo operations inside the dock compared to the existing baseline condition. • There won't be any risk of invasive species being transferred into the dock water body as a result of ship movements. • The effect on existing species losing the habitat as a result of infilled dock • The effect to local fish communities from overshadowing and artificial lighting

7.2 Biological Elements

The following tables present the potential impacts of each activity and the overall impact for pre and post mitigation specifically focusing on the biological elements.

Biological Conditions:

Composition, abundance and biomass of phytoplankton
 Composition and abundance of other aquatic fauna
 Composition and abundance of benthic invertebrate fauna (including motile and sessile shellfish species)
 Composition and abundance of fish fauna

Table 7-3 Potential Impacts on Biology elements pre-mitigation for Construction Activities

Construction Activity	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Site Impact
Dock Raking	Raking activities will be restricted to within BMD occurring over a discrete period. Surface sediments will be significantly disturbed as a result of the process causing benthic habitat loss, resuspension of sediment bound contaminants and reduced levels of dissolved oxygen. This will impact the Composition and abundance of fish fauna and the Composition and abundance of benthic invertebrate fauna (including motile and sessile shellfish species) .	Direct in BMD	Adverse	ST	Overall potential impact assessed as Moderate
	Increased suspended sediment concentrations may also occur during the raking process within the wider dock network / Mersey Estuary for a short period due to water exchange. This has the potential to impact the Composition and abundance of fish fauna within the wider vicinity of the works.	Indirect within wider dock network and Mersey Estuary.	Adverse	ST	

Construction Activity	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Site Impact
Dock Boundary Closure	By closing the western channel and disconnecting the southern dock from BMD and the wider dock network, water chemistry parameters such as salinity and dissolved oxygen levels are likely to alter. Reduced dissolved oxygen is likely to coincide with periods of hot weather and algal bloom die-off in spring / summer. This may impact the Composition and abundance of fish fauna and the Composition and abundance of benthic invertebrate fauna (including motile and sessile shellfish species) within the southern dock. Baseline monitoring has established that there is an existing natural variation in salinity and dissolved oxygen levels to this water body, which is impacted to a large degree by activity in the southern dock system. Whilst monitoring will continue through the construction period, any effects on ecology associated with the suspension of the hydrological connection during the construction phase are anticipated to be minimal, given that Nelson Dock receives significant flow input from southern water bodies (including the Leeds/Liverpool Canal), and receives minimal input from BMD. Although there is likely to be a gradual trend toward freshwater conditions within Nelson Dock during construction, the existing species assemblage is likely to comprise a more freshwater dominated community given the current flow conditions and existing isolation structure.	Indirect to the southern dock	Adverse	ST	Overall potential impact assessed as Minor
Dock Infill	Infilling will cause a highly localised but permanent loss of aquatic habitat within BMD. This will include soft sediment benthic habitats as well as hard vertical surfaces associated with the dock walls. A total, permanent and irreversible loss of all benthic invertebrates and fish species inhabiting BMD will occur. This will impact the Composition and abundance of fish fauna and the Composition and abundance of benthic invertebrate fauna (including motile and sessile shellfish species) within the southern dock.	Direct in BMD	Adverse	MT	Overall potential impact assessed as High

Construction Activity	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Site Impact
	Displacement into the wider dock network and Mersey Estuary by mobile fish and benthic invertebrate species will not be possible at this stage of construction due to BMD being hydrologically isolated in advance.				
Dock infill (Water abstraction)	Aggregate will be fluidised using water abstracted directly from the Mersey before being pumped ashore during the infilling process. Water abstraction has the potential to entrain passing fish resulting in increased mortality. The area of influence from which fish may be entrained will be dependent on the rate and volume to be abstracted. However, it is likely that the entrainment area will be highly localised and only present during pumping. Water abstraction therefore has the potential to impact the Composition and abundance of fish fauna particularly juvenile European eel (known as elvers). The physical presence of the dredger within the Mersey presents a highly localised temporary collision risk to marine mammals. As such, this has the potential to impact the Composition and abundance of other aquatic fauna. Underwater noise and vibration associated with the pumping process also has the potential to temporarily disturb fish and other fauna such as marine mammals known to occur within the lower Mersey. However, the impact will be negligible as noise associated with aggregate pumping has been shown to align with that of ordinary vessel traffic. For more information please refer to the Aquatic Ecology Environmental Statement.	Direct to the Mersey Direct to the Mersey Direct to the Mersey	Adverse	ST	Overall potential impact assessed as Moderate
Construction pollution events	Unplanned accidental spill or release of an environmentally harmful substance has the potential to adversely affect the Composition and abundance of fish fauna, benthic fauna and other aquatic fauna . The severity of this effect will depend upon the quantities and nature of the spillage / release, the dilution and dispersal properties of the receiving waters and the bioavailability of the contaminant to identified species.	May be direct or indirect to species within BMD, wider dock network and / or Mersey.	Adverse	ST to LT (depending on nature of incident)	Overall potential impact assessed as Minor to High (depending on nature of incident)

Table 7-4 Potential Impacts on Biology elements pre-mitigation for Operational Conditions

Operational Condition	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Site Impact
Dock network hydraulic connectivity via culverts	The western channel will be re-established during operation to provide hydrological connectivity between the north and south docks. Continuous daily water exchange will help to prevent stagnation and improve water quality. This will reduce environmental stress to fish and shellfish and allow recolonisation by species displaced during the construction process. In response to the EAs consultation comments on the MMO application, new aquatic habitat creation is being proposed as part of the new water channel design. Movement between the north and south dock network will be governed by a series of culverts. Culverts have the potential to act as permanent barrier to migration for fish species. As such, the Composition and abundance of fish fauna may be impacted.	Direct to wider dock network	Adverse	LT	Overall potential impact assessed as Moderate
Superstructure	Recolonisation of BMD will not be possible as the environment will have permanently transitioned from that of an aquatic habitat to a terrestrial habitat, with the minor exception of the new western channel. This will impact the Composition and abundance of fish fauna and the Composition and abundance of benthic fauna (including motile and sessile shellfish species) .	Direct to BMD Indirect to wider dock network and Mersey	Adverse	LT	Overall potential impact assessed as Moderate
Operational pollution events	Unplanned accidental spill or release of an environmentally harmful substance has the potential to adversely affect the Composition and abundance of fish fauna, benthic fauna (including motile and sessile shellfish species) and other aquatic fauna . The severity of this effect will depend upon the quantities and nature of the spillage / release, the dilution and dispersal properties of the receiving waters and the bioavailability of the contaminant to identified species.	May be direct or indirect to species within BMD, wider dock network and / or Mersey.	Adverse	ST to LT (depending on nature of incident)	Overall potential impact assessed as Minor to High (depending on nature of incident)

This table considers the impact of activities following the proposed mitigation. If the identified impact post mitigation was above negligible the assessment will be carried to the water body scale (highlighted in the table below).

Table 7-5 Biology elements post-mitigation for Construction Activities

Construction Activity	Overall Site Impact Pre-Mitigation Study area	Proposed mitigation	Overall Site Impact Post-Mitigation Study area	Overall impact WFD water body
Dock Raking	Overall potential impact assessed as Moderate	- Fish (and mobile benthic fauna such as crab that may be captured using static netting techniques) rescue and translocation will take place prior to works commencing. Methods will be agreed in advance with the relevant Statutory Nature Conservation Bodies (SNCBs) to target all known fish species inhabiting BMD; and - Installation of fabric curtains - The raked bed shall be allowed to settle over time allowing suspended sediment concentrations to fall reducing the risk to fish and neighbouring benthic communities from smothering and exposure to sediment bound contaminants.	Overall potential impact assessed as Minor	The overall impact on the water body is considered Negligible based on the following: - Potential impact relates to a very small proportion of the water body that has been assessed as having moderate biological status; and - The duration and frequency of the works will be made over a short-term intermittent basis.
Dock Boundary Closure	Overall potential impact assessed as Minor	Fish and mobile benthic fauna communities will have been translocated prior to closing BMD boundaries;	Overall potential impact assessed as Minor	The overall impact on the water body is considered Negligible based on the following: - Potential impact relates to a very small proportion of the water body in section that is already considered heavily modified and as having a moderate biological status; - The presence of multiple inflow/outflows and external factors impacting water quality; - The duration of the works is relatively short; and - The results of the potential adverse impacts are considered reversible.

Dock Infill	Overall potential impact assessed as High	- Fish and mobile benthic fauna communities will have been translocated prior to infilling BMD; - The TSHD will moor in a designated location in the River Mersey approximately 300-400m from the Dock in enough water depth to safeguard the hull of the vessel from impacting the riverbed thus eliminating any risk to benthic fauna communities; - The dredged material will be fluidised with water from the River Mersey, which should be subject to an abstraction licence with consideration given to the seasonal occurrence of migratory species such as European eel; - Intake screening should be utilised, and the rate and volume of abstraction considered to mitigate risk of entrainment on fish communities, particularly elvers; - Timing of the TSHD will be managed to reduce time on site. This will reduce the risks associated with underwater noise and vibration as well as any collision risk from marine mammals; - At the displacement location (within BMD), a settlement (silting) pond will be created to slow down the water flow, which will in turn allow any fines to settle out before the water is displaced. This will reduce resulting suspended sediment concentrations mitigating the risk of fining to benthic fauna communities; - Monitoring of Total Suspended Solids within the displaced water to be carried out during infilling operations will further reduce the risk of increased suspended sediment concentrations therefore mitigating risk to fish communities within the wider dock network and the Mersey; - Sediment should be removed from pumped water during any extractions required. Sediment levels will be reduced through mitigation measures such as stilling pond or equivalent prior to discharges to the surface water network further reducing risk to benthic and fish communities; and - BMD will be isolated from the rest of the WFD water body to prevent the migration of the dredged material.	Overall potential impact assessed as Moderate	The overall impact on water body is considered Negligible based on the following: - Potential impact relates to a very small proportion of the water body in section that is already considered heavily modified and as having a moderate biological status; - Due to the isolation of BMD the potential for biological impacts to the overall water body will be significantly reduced; - Normal activity in the Mersey includes working vessels; - Location of the TSHD will be in enough depth as not to cause any impact on riverbed; - The use of floating pipeline will mitigate any impact to the riverbed; and - Timing of the pumping operation will be managed so the TSHD will not be abstracting during key migratory periods and will not remain in place longer than strictly necessary.
Construction pollution events	Overall potential impact assessed as Minor to High (depending on nature of incident)	- Method statements and plans will be in place by the appointed contractor to prevent a pollution incident from occurring; The method statement will need to contain full details of all environmental pollution control measures and will be required in order to obtain the necessary consents and licences from the relevant stakeholders; and - Operation of the TSHD and associated pipeline should be governed by a Marine Pollution Contingency Plan (MPCP) to resolve any incidents quickly.	Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following: - Potential impact relates to a water body that is assessed as having a moderate biological status; - Normal activity in the Mersey includes working vessels;

				• Use of mitigation will significantly reduce the risk from environmentally harmful substances; and • The duration of the works is relatively short.
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Table 7-6 Biology elements post-mitigation for Operational Conditions

Operational Condition	Overall Impact Pre-Mitigation Study area	Proposed mitigation	Overall Impact Post-Mitigation Study area	Overall impact WFD water body
Dock network hydraulic connectivity via culverts	Overall potential impact assessed as Moderate	• Allow for period of settlement of suspended solids prior to opening sluice gates (within southern isolation structure) and removal of culvert capping (within northern isolation structure). This promotes connectivity and reduces perceived risk from increased suspended sediment concentrations on fish and benthic fauna communities; and • Culvert design should be made in consideration of regulatory guidance material (refer to Aquatic Ecology Environmental Statement) to maintain connectivity and allow fish passage. • Due to the reduction in volume relative to present day BMD, current speeds through the channel should be higher than at present (although still small) to assist with maintaining water quality and stabilising salinity levels.	Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following: • Potential impact relates to a very small proportion of the water body in section that is already considered heavily modified and as having a moderate biological status.
Superstructure	Overall potential impact assessed as Moderate	• Artificial lighting should be directed away from nearby waterbodies to reduce illumination during night-time hours.	Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following: • Potential impact relates to a very small proportion of the water body in section that is already considered heavily modified and as having a moderate biological status.
Operational pollution events	Overall potential impact assessed as Minor to High (depending on nature of incident)	• Plans will need to be in place to govern the risk of a pollution incident from occurring; The plan will need to contain full details of all environmental pollution control measures; and • The pitch has its own pumped drainage system and contain fertilisers in the run-off. As such this will be discharged to the foul water network to mitigate the risk from entering nearby waterbodies.	Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following:

				Potential impact relates to a very small proportion of the water body in section that is already considered heavily modified and as having a moderate biological status.
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7.3 Invasive Non-Native Species (INNS) Elements

The following tables present the potential impacts of each activity and the overall impact for pre and post mitigation specifically focusing on the INNS elements.

Note that there are no perceived impacts arising from INNS during operation.

Table 7-7 Potential Impacts arising from INNS pre-mitigation for Construction Activities

Construction Activity	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Site Impact
Dock Raking	During raking of BMD it will not be possible to completely isolate the area from the surrounding dock network. As such, INNS which may have become entrained within the water column during the raking process may, therefore, enter adjacent water bodies in viable form, increasing the potential distributional range of such species. Risk from potential release and spread of INNS will take place over a discrete period during the raking process but the effects to neighbouring benthic fauna communities may be permanent.	Indirect to wider dock network and River Mersey.	Adverse	ST	Overall potential impact assessed as High
Dock Infill	During infilling, BMD will be hydrologically isolated from the wider dock network. However, water will be naturally displaced overtime with the progressive infilling of the dock. Water contained within BMD has the potential to support viable INNS that may be allowed to pass from BMD into the wider dock network and beyond. Risk from potential release and spread of INNS will take place over a discrete period during the infilling process but the effects to neighbouring benthic fauna communities may be permanent.	Indirect to wider dock network and River Mersey.	Adverse	ST	Overall potential impact assessed as High

The following table considers the impact of activities following proposed mitigation. If the identified impact post mitigation was above negligible an assessment will be carried out at the water body scale (highlighted in the table below).

Table 7-8 Potential Impacts arising from INNS post-mitigation for Construction Activities

Construction Activity	Overall Site Impact Pre-Mitigation Study area	Proposed mitigation	Overall Site Impact Post-Mitigation Study area	Overall impact WFD water body
Dock Raking	Overall potential impact assessed as High	- There will be a period of settlement post raking to allow suspended solids to fall out of suspension before isolating the dock. This will reduce the risk of further release and spread of INNS into the wider dock network; and - Following the settlement period, BMD will be temporary isolated from the remainder of the dock network and the Mersey Estuary; this will further prevent the inadvertent release of mobilised INNS into adjacent areas and habitats through water transfer.	Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following: - Potential impact relates to a water body that is assessed as having a moderate biological status; - Lay period and hydrological isolation will help limit the potential release and spread of INNS; - INNS are likely to be ubiquitous to the wider dock network due to the existing interconnectivity; and - INNS known to be present within Mersey.
Dock Infill	Overall potential impact assessed as High	BMD will be hydrologically isolated from the remainder of the dock network and the Mersey Estuary during infilling; this will help prevent the inadvertent release of mobilised INNS into adjacent areas and habitats through water transfer	Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following: - Potential impact relates to a water body that is assessed as having a moderate biological status; - INNS are likely to be ubiquitous to the wider dock network due to the existing interconnectivity; and - INNS known to be present within Mersey.

7.4 Hydromorphological Elements

The following tables present the potential impacts of each activity and the overall impact for pre and post mitigation specifically focusing on the Hydromorphological elements.

<u>Morphological Conditions:</u>
Depth Variation
Quantity, structure and substrate of the bed
Structure of the inter-tidal zone
<u>Tidal Regime:</u>
Freshwater Flow
Wave Exposure

Table 7-9 Potential Impacts on Hydromorphological elements pre-mitigation for Construction Activities

Construction Activity	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Site Impact
Demolition and Site Clearance	Potential for demolition waste to enter the dock basins resulting in localised Depth Variation . Demolition and site clearance are all undertaken as land-side activities; given the scale of demolition and short term duration the potential to impact other morphological conditions is deemed minor.	Direct in BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse	ST	Overall potential impact assessed as Minor
Dock Raking	Raking may reduce the stability of the bed, increasing the rates of erosion. However, removing the existing contamination debris from the dock bed will improve the overall condition. Potential impact on Depth Variation and Quantity, structure and substrate of the bed and impact on downstream docks. Raking activity might also impact freshwater flow during process.as the disturbed bed and debris might block the existing culvert and block the flow passing.	Direct in BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse Beneficial: removal of debris	ST	Overall potential impact assessed as Minor

Construction Activity	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Site Impact
Dock Boundary Closure	Construction works for the new isolation structure may create the potential for silt mobilisation from existing contaminated ground and water displacement. Localised sediment delivery may impact on Depth Variation and Quantity, structure and substrate of the bed and water quality. Disconnection between northern and southern docks impact is expected to reduce the Freshwater flow within the dock network and increase the risk of sediment settlement. Although impacts associated with construction will be short term, the hydraulic disconnection will continue into the medium term, hence the moderate impact rating. Reduced flow also impacts on the dock system hydromorphology including Depth Variation and Quantity, structure and substrate of the bed, due to reduced flow.	Direct in BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse	ST to MT	Overall potential impact assessed as Minor
Dock Infill	Due to the risk of elevated sediment loads during dock infilling significant impact on Depth Variation and structure of the bed will occur. Increased sediment delivery during water displacement may affect the water body at the discharged location (e.g. SHTD as proposed discharge location) and affect the depth variation. Potential impact on the Structure of the inter-tidal zone has also been identified while the dredger is moored within the river during pumpout. However, due to the short duration / frequency of the mooring, the location, and river being subjected to working vessels, this specific impact is identified as Negligible.	Direct in BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse	ST	Overall potential impact assessed as High

Table 7-10 Potential Impacts on Hydromorphological elements pre-mitigation for Operational Conditions

Operational Condition	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Impact
Surface water run-off and wave overtopping	Pollutants, such as rubbish, debris, and silts resulting from activities on-site may be discharged to the surface water network through surface water run-off and block fresh water flow or change in depth variation over time if not controlled. The magnitude of change will depend on the activities present and their occurrence.	Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse	ST to LT	Overall potential impact assessed as Moderate
Dock network hydraulic connectivity via culverts	The western water channel and new outfalls may lead to an increased volume of sediment directly entering the water bodies, particularly immediately after opening the channel. This may have an impact on Depth Variation; Quantity, Structure and Substrate of the downstream dock bed due to the movement of bed material from the Western Water Channel bed into the adjoining docks. Due to the decreased size of pipe outlets as compared to the existing culvert, and as a result of possible siltation, marine growth or debris within the culverts may reduce flow between the north and south dock networks compared with the baseline situation. This may result in a reduction of Freshwater flow between the south and north dock networks and a minor increased risk of sediment settlement. This in turn may have a minor impact on depth variation over time. Flows through the culverts are driven by water level variations between the north and dock networks. Due to the large scale of the water bodies, variations in water level occur gradually and therefore flow rates are low. It is predicted that variations in flow rates through the culverts would only occur following severe blockage which is considered unlikely.	Direct in Docks Indirect to the Mersey Estuary, and Surface Water Features	Adverse	ST to LT	Overall potential impact assessed as Minor

The following table considers the impact of activities following the list proposed mitigation. If the identified impact post mitigation was above negligible the assessment will be carried to the water body scale (highlighted in the table below).

Table 7-11 Hydromorphological elements post-mitigation for Construction Activities

Construction Activity	Overall Site Impact Pre-Mitigation Study area	Proposed mitigation	Overall Site Impact Post-Mitigation Study area	Overall impact WFD water body
Demolition and Site Clearance	Overall potential impact assessed as Minor	- Keep gradients of the soil as shallow as possible to prevent large amounts of earth being washed away during periods of heavy rainfall. Areas which are exposed should be re-surfaced as soon as practicable. - Enforce tight control of site boundaries including minimal land clearance and restrictions on the use of machinery adjacent to water bodies. - Capture runoff from site in perimeter cut off ditches, settlement lagoons and/or settlement tanks where possible. - Any dewatering required from site excavations should be pumped into a settlement tank or lagoon and not discharge direct to a water body or the on-site surface water sewerage network. - Mixing of construction materials, such as cement, will be conducted in designated areas located away from water bodies and drainage lines. - Apply dust management procedures, such as: damping down to suppress the creation of dust, implement good site practice, perimeter fences and tight control of materials and waste to minimise the risk of debris entering water bodies. - Carrying out wheel washing activities in dedicated bunded areas - Live draining will have silt traps or "witches hats" installed to prevent silt deposits - Capture runoff from site in perimeter where possible.	Overall potential impact assessed as Negligible	No further assessment required
Dock Raking	Overall potential impact assessed as Minor	- The raked bed shall be allowed to settle over time - Temporary isolation structure - The installation of the northern isolation structure shall be in place prior to the dock infilling works, which will aid in prevent the migration of material	Overall potential impact assessed as Negligible	No further assessment required
Dock Boundary Closure	Overall potential impact assessed as Minor		Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following:

				- Potential impact relates to a very small proportion of the water body in section of the water body that is already considered heavily modified; - The duration of the works is relatively short; - The results of the potential adverse impacts are considered reversible.
Dock Infill	On a purely site scale, the potential impact, pre-mitigation, is assessed as High	- Method statements and plans will be in place by the appointed contractor to prevent a pollution incident from occurring; The method statement will need to contain full details of all pollution control measures and will be required in order to obtain the necessary consents and licences from the relevant stakeholders. - The pipeline will be secure to ensure there are no spillages/leakages during pumping; - The dredged material will be fluidised with water from the River Mersey, rather than water from the dredge location; - The TSHD will moor in a designated location in the River Mersey. The mooring location will be approximately 300-400m from the Dock in sufficient water depth that allows the operation of discharging sand not to be affected by tide, nor for the hull of the vessel to impact the river bed. - At the displacement location, a settlement (silting) pond will be created to slow down the water flow, which will in turn allow any fines to settle out before the water is displaced. - Monitoring of Total Suspended Solids within the displaced water to be carried out during infilling operations. - Sediment should be removed from pumped water during any extractions required. Sediment levels will be reduced through mitigation measures such as stilling pond or equivalent prior to discharges to the surface water network - BMD will be isolated from the rest of the WFD water body to prevent the migration of the dredged material.	Overall potential impact assessed as Moderate	The overall impact on water body is considered Negligible based on the following: - Potential impact relates to a small proportion of the water body in section of the water body that is already considered heavily modified; - Due to the isolation of BMD the potential for the hydromorphological impacts to the overall water body are considered almost non-existent; - Normal activity in the Mersey includes working vessels; - Location of the TSHD will be in sufficient depth so no impact on river bed anticipated - The use of floating pipeline will reduce any impacts to the river bed; - The timing of the operation will be managed so the TSHD will not be sitting in the Mersey for long periods of time.

Table 7-12 Hydromorphological elements post-mitigation for Operational Conditions

Operational Condition	Overall Impact Pre-Mitigation Study area	Proposed mitigation	Overall Impact Post-Mitigation Study area	Overall impact WFD water body
Surface water run-off and wave overtopping	Overall potential impact assessed as Moderate	Downstream Defenders will be implemented where possible to enable water quality control of the surface water runoff. It is envisaged that operational effects will be negligible due to the commitments made in the drainage strategy for water quality treatment prior to discharge.	Overall potential impact assessed as Negligible	No further assessment required
Dock network hydraulic connectivity via culverts	Overall potential impact assessed as Minor	- Plan excavations and the placement of materials such that surface flow paths will not be blocked or new routes created. - The use of traps, bunds can be used to safely direct flows within the site. - Allow for period of settlement of suspended solids prior to opening sluice gates (within southern isolation structure) and removal of culvert capping (within northern isolation structure) - Due to the reduction in volume relative to present day BMD, current speeds through the channel should be higher than at present (although still small) to assist with maintaining water quality and stabilising salinity levels.	Overall potential impact assessed as Negligible	No further assessment required

7.5 Chemical and Physio-Chemical Elements

The following tables present the potential impacts of each activity and the overall impact for pre and post mitigation specifically focusing on the Chemical and Physio-Chemical elements.

Chemical and Physio Chemical Conditions:
Transparency
Thermal Conditions
Salinity
Oxygenation Conditions
Nutrient Conditions
Specific Pollutants

Table 7-13 Potential Impacts on Chemical and Physio-Chemical elements pre-mitigation for Construction Activities

Construction Activity	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Impact
Demolition and Site Clearance	Dust and debris blowing into the Mersey Estuary, Docks and Surface Water Features. This will impact the transparency of water and consequently the oxygenation conditions . However the scale of the demolition is very small and therefore the impact considered to be localised and site specific. As a result of this activity potential effect of accidental release of hydrocarbons and leak and spillages of hazardous materials were identified that has a potential impact on specific pollutants release in water.	Direct in BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse	ST	Overall potential impact assessed as Moderate
Dock Raking	As a result of raking activity inside the BMD there is a risk of silts and sediments mobilisation within the BMD and docks downstream. Disturbing dock deposits imposes a potential impact on water quality within the BMD and downstream docks while the connection is still open. This will impact on transparency and oxygenation conditions of water.	Direct in docks Indirect to the Mersey Estuary, and Surface Water Features	Adverse Beneficial: by removing contaminants from the BMD body and improving the conditions	ST	Overall potential impact assessed as Minor

Construction Activity	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Impact
	An accidental release of hydrocarbons during raking has been identified as reducing the impact of specific pollutions into the water body.				
Dock Boundary Closure	The main impact of this activity identified to be on the salinity level of water within southern part of the dock network as a result of disconnection of north/south docks. Baseline monitoring has established that there is an existing natural variation in salinity to this water body, which is impacted to a large degree by activity in the southern dock system. There is likely to be a gradual trend toward freshwater conditions within Nelson Dock during construction. This, in itself, is considered to be of minor significance. Impacts upon biology elements are considered separately above. Due to the effect of silt mobilisation of ground contamination and water displacement as a result of this activity the impact on transparency and consequently oxygenation has been identified. However, these were considered to be very minor.	Direct in docks Indirect to the Mersey Estuary, and Surface Water Features	Adverse	ST	Overall potential impact assessed as Minor
Dock Infill	During water displacement process sediments from the BMD will be transfer via weir into the SHTD and consequently increase the transparency and oxygenation of water. Dredger moored alongside river wall has a potential risk of accidental release of hazardous materials from the dredger or due the leak from the dredger pipeline which will impact on specific pollutant in water. However this risk considered to be very low and less likely to happen.	Direct on BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse	ST	Overall potential impact assessed as High
Material Compaction	Dust and debris blowing into the Mersey Estuary, Docks and Surface Water Features as a result of compaction inside the BMD can impact on water transparency . However the impact considered to be minor and very specific to the site area and short term.	Direct in BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse	ST	Overall potential impact assessed as Minor

Construction Activity	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Impact
Substructure (piling)	The major impact as a result of this activity identified as a result of accidental release of hydrocarbon, contamination, and any chemical, paint, and concrete used on site during the piling process. Without mitigation measures in place the impact on specific pollution .	Direct in BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse	ST	Overall potential impact assessed as Moderate
Superstructure	Dust and debris blowing into the Mersey Estuary, Docks and Surface Water Features as a result of superstructure construction activities can impact on water transparency . The impact is considered to be minor and very specific to the site area and short term. The impact as a result of this activity identified as a result of accidental release of contamination, and any chemical, paint, and concrete used on site during the piling process. Without mitigation measures in place the impact on specific pollution .	Direct in BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse	ST	Overall potential impact assessed as Minor

Table 7-14 Potential Impacts on Chemical and Physio-Chemical elements pre-mitigation for Operational Conditions

Operational Condition	Potential to Impact WFD Elements	Direct/Indirect	Beneficial/Adverse	Short /Medium /Long Term	Study Area; Overall Impact
Surface water run and wave overtopping	The specific impact is as a result of pollution contamination from run-off surfaces (e.g. car park), risk of fertilisers release into the network of the water body and cross contamination between foul and surface water. These have impact on nutrient condition and specific pollution element of water body.	Direct in BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse	MT	Overall potential impact assessed as High
Dock network hydraulic connectivity via culverts	Once the channel opens between north and south it is envisaged and for a short time there will higher loads of suspended sediment discharging into downstream dock network which will have an impact on transparency and oxygenation conditions . Due to the large distance between BMD and River Mersey connections, the potential impact is limited to Moderate or lower. Possible risk of specific pollution to be released into the docks system as a result of any contamination remaining on site or as a result of significant number of people on site during match events.	Direct in BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Adverse	ST	Overall potential impact assessed as Moderate
Infilled Dock	The existing condition and industrial activities within the BMD exposes levels of risks to the water body. By infilling the dock these risks are eliminated and can even improve the overall quality of water within the dock system.	Direct in BMD Indirect to the Mersey Estuary, Docks, and Surface Water Features	Beneficial	LT	Overall Impact assessed as Moderate

This table considers the impact of activities following the list proposed mitigation. If the identified impact post mitigation was above negligible the assessment will be carried to the water body scale (highlighted in the table below).

Table 7-15 Chemical and Physio-Chemical elements post-mitigation for Construction Activities

Construction Activity	Overall Site Impact Pre-Mitigation Study area	Proposed mitigation	Overall Site Impact Post-Mitigation Study area	Overall impact WFD water body
Demolition and Site Clearance	Overall potential impact assessed as Moderate	- Provision and maintenance of temporary septic tank, cesspit and/or sewerage connection for disposal of sewage from the toilet facilities to reduce the likelihood of crude sewage infiltrating groundwater or migrating towards water bodies. - Any temporary toilet facilities will be positioned at least 10m away from the banks of the Mersey Estuary. - Apply dust management procedures. - Damping down to suppress the creation of dust. - Implement good site practice, perimeter fences and tight control of materials and waste to minimise the risk of debris entering water bodies. - Incorporation of interceptors where appropriate into the site drainage system at high risk areas, such as parking, unloading and refuelling areas, to remove hydrocarbons and oils from surface water prior to discharge. - Other measures including drip trays under equipment such as generators, and wheel washing facilities should also be implemented to minimise the risk of pollutants infiltrating groundwater or the surface water drainage network. - Provision of chemical and hazardous material storage facilities and tanks and conduct refuelling of machinery within bunded areas, which should not be located within 10m of water bodies or drainage lines.	Overall potential impact assessed as Negligible	No further assessment required
Dock Raking	Overall potential impact assessed as Minor	- The raked bed shall be allowed to settle over time - Install Temporary isolation structure - The installation of the northern isolation structure shall be in place prior to the dock infilling works, which will aid in prevent the migration of material - Please refer to Bramley-Moore Dock Raking – Dock Deposit Disturbance Design Note (BMD01-BHE-ZA-LXX-DN-CG-0014)	Overall potential impact assessed as Negligible	No further assessment required
Dock Boundary Closure	On a purely site scale, the potential impact, pre-mitigation, is assessed as Minor		Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following:

				- Potential impact relates to a very small proportion of the water body in section of the water body that is already failing chemical status; - The duration of the works is relatively short.
Dock Infill	On a purely site scale, the potential impact, pre-mitigation, is assessed as High	- Method statements and plans for dredging will be in place by the appointed contractor to prevent a pollution incident from occurring; The method statement will need to contain full details of all pollution control measures and will be required in order to obtain the necessary consents and licences from the relevant stakeholders. - The pipeline will be secure to ensure there are no spillages/leakages during pumping; - The dredged material will be fluidised with water from the River Mersey, rather than water from the dredge location; - The TSHD will moor in a designated location in the River Mersey. The mooring location will be approximately 300-400m from the Dock in sufficient water depth that allows the operation of discharging sand not to be affected by tide, nor for the hull of the vessel to impact the river bed. - At the displacement location, a settlement (silting) pond will be created to slow down the water flow, which will in turn allow any fines to settle out before the water is displaced. - Sediment should be removed from pumped water during any extractions required. Sediment levels will be reduced through mitigation measures such as stilling pond or equivalent prior to discharges to the surface water network - BMD will be isolated from the rest of the water body to prevent the migration of the dredged material.	Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following: - Potential impact relates to a small proportion of the water body in section of the water body that is already failing chemical statuses; - Due to the isolation of BMD the potential for the Chemical and physio-Chemical elements to in the overall water body are considered negligible; - The vessels used will be sea certified with negligible risk of pollution release or pipe leakage.
Material Compaction	Overall potential impact assessed as Minor	Apply dust management procedures, such as: damping down to suppress the creation of dust, implement good site practice, perimeter fences and tight control of materials and waste to minimise the risk of debris entering water bodies.	Overall potential impact assessed as Negligible	No further assessment required
Substructure (pilling)	Overall potential impact assessed as Moderate	- Provision of storage facilities and tanks and conduct refuelling of machinery within bunded areas, which should not be located within 10m of water bodies or drainage lines. - Storage and bunded areas to be constructed of impervious floors and walls with the capacity for the contents of the storage tank and an additional ten per cent safety margin.	Overall potential impact assessed as Negligible	No further assessment required

		- As a remedial measure, spill containment equipment such as absorbent materials should be stored on site. - Mixing of construction materials, such as cement, will be conducted in designated areas located away from water bodies and drainage lines.		
Western Water Channel	Overall potential impact assessed as Moderate	- Plan excavations and the placement of materials such that surface flow paths will not be blocked or new routes created. - The use of cut-off ditches, traps, bunds can be used to safely direct any flows within the site.	Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following: - Potential impact relates to a very small proportion of the water body in section of the water body that is already failing chemical status; - The duration of the works is relatively short; The installation of the channel will enable future hydraulic connection between north and south.
Superstructure	Overall potential impact assessed as Minor	Apply dust management procedures, such as: damping down to suppress the creation of dust, implement good site practice, perimeter fences and tight control of materials and waste to minimise the risk of debris entering water bodies.	Overall potential impact assessed as Negligible	No further assessment required

Table 7-16 Chemical and Physio-Chemical elements post-mitigation for Operational Conditions

Operational Condition	Overall Site Impact Pre-Mitigation Study area	Proposed mitigation	Overall Site Impact Post-Mitigation Study area	Overall impact WFD water body
Surface water run-off and wave overtopping	On a purely site scale, the potential impact, pre-mitigation, is assessed as High	- Downstream Defenders will be implemented where possible to enable water quality control of the surface water runoff. It is envisaged that operational effects will be negligible due to the commitments made in the drainage strategy for water quality treatment prior to discharge. - The pitch – This has its own pumped drainage system and contain fertilisers in the run-off. As such this will be discharged to the foul water network - Service/Delivery area – This zone will have HGV's parked up and manoeuvring. The area is covered and therefore run-off will be limited to wash-down and small volumes of wind driven rain. This increases the possibility of run-off becoming contaminated and therefore it is intended this zone is drained to the foul water network. Run-off from the surface level car park and OB compound to go through a downstream defender	Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following: Potential impact relates to a very small proportion of the water body in section of the water body that is already failing chemical status; The duration of the works is relatively short.
Dock network hydraulic connectivity via culverts	Overall potential impact assessed as Moderate	- Plan excavations and the placement of materials such that surface flow paths will not be blocked or new routes created. - Allow for period of settlement of suspended solids prior to opening sluice gates (within southern isolation structure) and removal of culvert capping (within northern isolation structure) - Due to the reduction in volume relative to present day BMD, current speeds through the channel should be higher than at present (although still small) to assist with maintaining water quality and stabilising salinity levels.	Overall potential impact assessed as Minor	The overall impact on water body is considered Negligible based on the following: Potential impact relates to a very small proportion of the water body in section of the water body that is already failing chemical status;

7.6 Impact of the scheme on WFD compliance

The above assessment demonstrate that the proposed scheme has the potential to impact upon Mersey Estuary water body area.

The main impacts of the development proposal are therefore described below:

7.6.1 Biology

All the potential impacts are considered to be negligible at the overall water body scale with the mitigations listed in place, demonstrating WFD compliance. As such, no further assessment is required relating to Biological quality elements.

7.6.2 Invasive Non-Native Species

All the potential impacts are considered to be negligible at the overall water body scale with the mitigations listed in place, demonstrating WFD compliance. As such, no further assessment is required relating to INNS quality elements.

7.6.3 Hydromorphology

All the potential impacts are considered to be negligible at the overall water body scale with the mitigations listed in place, demonstrating WFD compliance. As such, no further assessment is required relating to hydromorphology quality elements.

7.6.4 Chemical and Physio-Chemical Elements

All the potential impacts are considered to be negligible at the overall water body scale with the mitigations listed in place, demonstrating WFD compliance. As such, no further assessment is required relating to Chemical and Physio-Chemical Elements quality elements.

7.6.5 Protected Areas

Potential impacts are considered negligible to the following Protected Areas:

- Ribble & Alt Estuaries SPA
- Mersey Estuary SPA
- Ribble & Alt Estuaries Ramsar
- Mersey Estuary Ramsar

However, the HRA (WYG, 2019) identified likely significant effects for both Liverpool Bay SPA and the Mersey Narrows and North Wirral Foreshore SPA/Ramsar. The latter includes the Mersey Narrows SSSI and North Wirral Foreshore SSSI. The qualifying feature and likely significant effects are given in Table 7-17.

Table 7-17 Identified likely significant effects on Protected Areas

Designated site	Qualifying feature	Construction Phase Impact pathway	Operational Phase Impact pathway
Liverpool Bay SPA	Cormorant	- Habitat loss within functional habitat beyond the boundary of the designated sites - Habitat degradation - water quality impacts as a result of pollution events. - Habitat degradation - deposition of waste/litter	- Loss of qualifying features - Potential bird strike - Habitat degradation - deposition of waste/litter
Mersey Narrows and North Wirral Foreshore Ramsar	Cormorant		
Mersey Narrows and North Wirral Foreshore SPA	Cormorant		

At Stage 2 Appropriate assessment stage the detailed methods prescribed within the Construction Environmental Management Plan (CEMP), the waste management strategy and the ES Chapters 11 and 12, ES Volume II (WYG, 2020) are sufficient to reduce the impacts from both the construction and operational phases to negligible.

8 Future Status Assessment

The future assessment has been based on the baseline operational conditions and the aspirations of the Mersey River Management Basin against the proposed development

8.1 Biology

Overall, the waterbody is currently assessed as having 'Moderate' ecological status. Impacts arising from the construction and operation process have the potential to cause both direct and indirect effects over varying timeframes to the waterbody. Short term intermittent effects will arise in the form of fish entrainment within the Mersey and underwater noise and vibration. Neither has the potential to alter the overall future status of the waterbody.

Permanent irreversible effects include a net loss of aquatic habitat due to the infilling of BMD resulting in a reduction in size to the Mersey waterbody of 0.05%. This will be associated with a highly localised increase in mortality of the benthic invertebrate and fish communities along with an increase for resource competition within neighbouring environs.

When considered in the context of the wider waterbody, neither the short-term intermittent effects nor the long-term permanent effects could alter the future biological status of the waterbody. As such, the impact of the proposed development in relation to the overall biological status of the Mersey is considered to be negligible.

8.2 Invasive Non-Native Species

During construction there is the potential for release and spread of INNS that currently inhabit BMD. Inherent design mitigation will limit spread, but it is not possible to quantify by how much. At present, BMD is hydrologically connected to the rest of the Liverpool dock network, which in turn connects to the Mersey. Both environments (dock and estuary) are known to contain INNS, however, the biodiversity, abundance and distribution of these species in comparison to those inhabiting BMD are unknown. At present there is a degree of interconnectivity between BMD, the wider dock network and the Mersey. This increases the probability for INNS inhabiting BMD to be inhabiting another area outside the dock, but this remains unquantified. As such, it is not possible to fully quantify the effect INNS might have on the future status of the Mersey waterbody but given the context of the existing connectivity and presence of INNS within the waterbody, the overall significance is likely to be negligible.

8.3 Hydromorphological

The proposed development will permanently infill the majority of BMD creating new land that will no longer be part of the Mersey Water Body. Due to the mitigation measures in place during the construction and operation stage the actual impact to the wider Mersey Water Body is considered negligible.

The operational condition for the dock infilling is identified as having negligible impact on the wider Mersey Water Body from a hydromorphological perspective. The proposed development will change the function of the docks, so there will no longer be aggregates being loaded or working vessels operating the remaining water body in the western channel. This change in function of BMD reduces any potential impacts previously associated with those operations as they will no longer occur.

Based on the above the future impact of the proposed development in relation to potential impacts on the hydromorphology of the Mersey is considered to be negligible and will not impact on the future status of the water body.

8.4 Chemical and Physio-Chemical

The current chemical status of the Mersey is 'Fail' with the aim to achieve 'Good' status at the next assessment cycle.

As the proposed development will permanently infill the majority of BMD that will no longer be part of the Mersey Water Body. Due to the mitigation measures in place during the construction stage the actual impact to the wider Mersey Water Body is considered negligible.

The overall operational condition for the dock infilling is identified as having negligible impact on the wider Mersey Water Body from a Chemical and Physio-Chemical perspective. The proposed development will change the function of the docks, so there will no longer be any industrial cargo activities and therefore less risk of discharge and emission into water. This change in function of BMD reduces any potential impacts previously associated with those operations as they will no longer occur.

Based on the above the future impact of the proposed development in relation to potential impacts on the Chemical and Physio-Chemical of the Mersey is considered to be negligible and will not impact on the future status of the water body.

8.5 Protected Areas

Due to the mitigation in place during the construction and operational stage the impacts to functionally linked habitats and qualifying species that form part of the Liverpool Bay SPA and Mersey Narrows and North Wirral Foreshore SPA/Ramsar (and the relevant underlying SSSI's) are considered negligible.

9 Conclusions

This report has considered WFD assessment for the potential implications of the proposed development on overall WFD quality elements on Mersey water body. The conclusion of this assessment is that, subject to the adoption of appropriate mitigation, there will be adverse impact on the overall water body and its future status.

Following receipt of the consultation responses post submission of the planning application no objections to the WFD assessment has been received and agreed with the general principal of the assessment. The document has been updated based on the changes to the layout of the proposed scheme.

This conclusion is based on the following points:

9.1 Biology

Potential effects originating from the proposed development have been assessed within the associated Aquatic Ecology chapter. These findings have been used to inform this assessment in relation to the perceived risks posed to the status of the Mersey waterbody. Overall, the aquatic habitats and fauna communities of BMD are considered typical of the Liverpool Dock. Ultimately there will be a net loss of habitat representing just 0.05% of the Mersey waterbody and some displacement / mortality of individuals inhabiting BMD. The significance of these effects will be further reduced by using appropriate design and active mitigation measures. When viewed in the context of the wider waterbody, these effects are not considered to represent any risk to the existing or future status of the Mersey waterbody.

9.2 Invasive Non-Native Species

There is potential for INNS currently inhabiting BMD to be disturbed during construction causing them to enter the water column whereby they might spread to neighbouring environs. Design mitigation, such as the lay period after raking, dock isolation, will reduce the perceived risk. Further, the Mersey waterbody is a busy commercial waterway, with vessels arriving from all over the world and is known to already contain several INNS species. In addition, Liverpool docks (including BMD) and the Mersey, share a degree of connectivity whereby species may freely move and settle to exploit new habitats. This makes it impossible to quantify the effect any release of INNS originating from BMD might have on the Mersey waterway. Given the existing status, it is considered unlikely for any potential release to have an effect on the future status of the Mersey waterbody.

9.3 Hydromorphological

The proposed development will permanently infill the majority of BMD, creating new land that will no longer be part of the Mersey Water Body.

Due to the mitigation measures in place during the construction stage, the impact on the wider Mersey Water Body is considered to be negligible. The operational condition for the dock infilling is identified as having negligible impact on the wider Mersey Water Body from a hydromorphological perspective.

The proposed development in relation to potential impacts on the hydromorphology of the Mersey is considered to be negligible and will not impact on the future status of the water body.

9.4 Chemical and Physio-Chemical

As the proposed development will permanently infill the majority of BMD, the dock will no longer be part of the Mersey Water Body. Due to the mitigation measures in place during the construction stage the actual impact to the wider Mersey Water Body is considered negligible.

The overall operational condition for the dock infilling is identified as having negligible impact on the wider Mersey Water Body from a Chemical and Physio-Chemical perspective. The proposed development in relation to potential impacts on the Chemical and Physio-Chemical of the Mersey is considered to be negligible and will not impact on the future status of the water body.

9.5 Protected Areas

There is potential for impacts on the following designated sites:

- Liverpool Bay Special Protection Area (SPA)
- Mersey Narrows & North Wirral Foreshore SPA
- Ribble & Alt Estuaries SPA
- Mersey Estuary SPA
- Mersey Narrows & North Wirral Foreshore Ramsar
- Ribble & Alt Estuaries Ramsar
- Mersey Estuary Ramsar
- Mersey Narrows Site of Special Scientific Interest (SSSI)
- North Wirral Foreshore SSSI

Following an HRA and Ecological Assessment (ES Appendix 12.1, ES Volume III) (WYG, 2020), likely significant effects were identified for both Liverpool Bay SPA and the Mersey Narrows and North Wirral Foreshore SPA/Ramsar. In all instances significant effects were anticipated for cormorants, a qualifying feature for relevant international and national designated sites. Construction phase impacts included habitat loss within functional habitat within and outside the boundary of the designated sites and degradation of habitats including water quality and deposition of waste and litter. Operational impacts include loss of qualifying features through bird strike and further habitat degradation through deposition of waste and litter.

However, following a Stage 2 Appropriate Assessment, the mitigation measures and methods within the CEMP, waste management strategy and ES Chapters 11 and 12, ES Volume II (WYG, 2020) were deemed sufficient to reduce the impacts for both the construction and operational phases to negligible.

Appendix A WFD Scoping Report

Water Framework Directive assessment: scoping template for activities in estuarine and coastal waters

Use this template to record the findings of the scoping stage of your Water Framework Directive (WFD) assessment for an activity in an estuary or coastal water.

If your activity will:

- take place in or affect more than one water body, complete a template for each water body
- include several different activities or stages as part of a larger project, complete a template for each activity as part of your overall WFD assessment

The [WFD assessment guidance for estuarine and coastal waters](#) will help you complete the table.

Your activity	Description, notes or more information
Applicant name	ESDL
Application reference number (where applicable)	
Name of activity	<i>The People's Project</i>
Brief description of activity	<i>The construction and operation of a new 52,000-seat stadium to UEFA Category 4 and associated external works on the Bramley-Moore Dock site. The key activities are outlined below:</i> <u>Enabling Works:</u> <i>Stage 1 – Site preparation including dock infilling:</i> • <i>Site establishment</i> • <i>Protection of Listed Structures, including the Hydraulic Tower</i> • <i>Pre-demolition, demolition (excluding Hydraulic Tower) and grub up foundations remove obstructions and form piling mat</i>

- *Dock infilling works including:*
 - *Dock bed raking and debris removal that could disrupt piling operations.*
 - *Dock closure, isolation structure will be installed between Bramley-Moore Dock (BMD) and the adjacent Sandon Half-Tide Dock.*
 - *Fish removal and transfer exercise from BMD*
 - *Placement of geotextile over the existing dock bed and vertically on the dock walls*
 - *Infilling of BMD with marine won material transported to site by trailing suction hopper dredger (TSHD). The initial fill layers will be placed using a spreader pontoon*
 - *Water from BMD basin will be discharged into Sandon Half-Tide Dock (to the north of BMD) by a weiring system at the new isolation structure.*
 - *Once the infilled levels exceeds the water table the filled material will be subject to ground improvement via compaction.*
- *Piling platforms and crane working platforms*

Main Construction Works

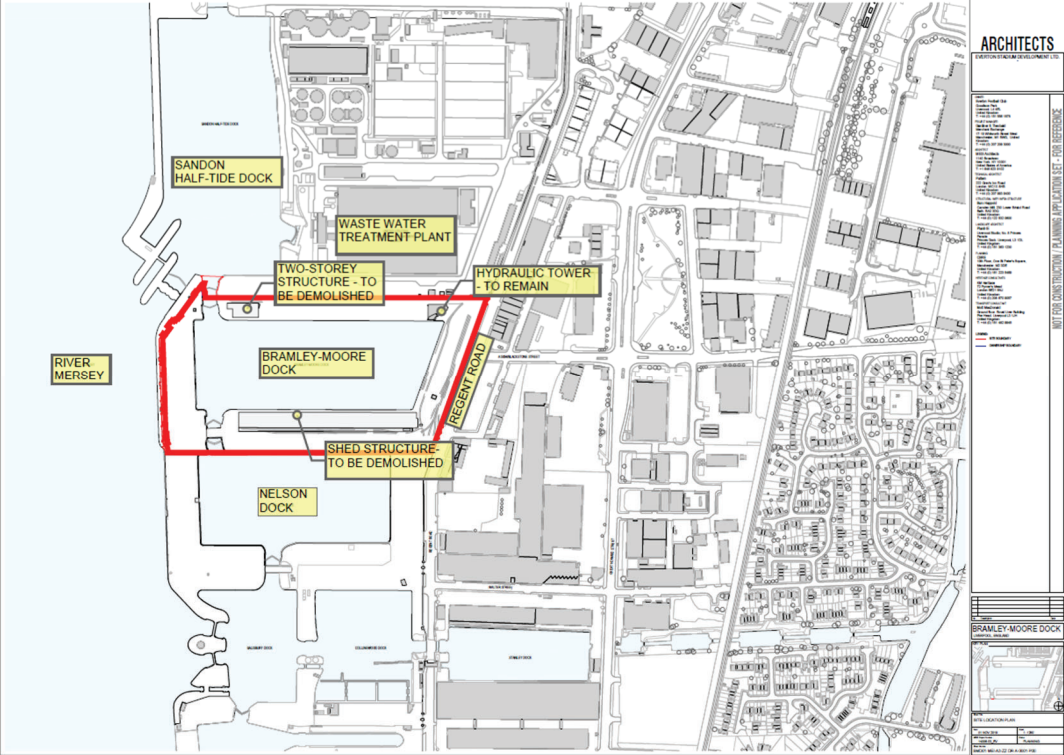
Stage 2 – Substructure including piling:

- *Stadium substructure – constructed by piling within the footprint of the infilled basin and surrounding dockside areas.*

Stage 3 – Superstructure concrete works for East and West Stands includes:

- *Vertical elements – precast columns and twinwall section*
- *Horizontal elements – lattice slabs*
- *Stairs landings and lift shafts*
- *Lower tier east and west*

	Stage 4 – Steelwork and precast terracing Stage 5 – Roof steelworks Stage 6 – Roofing including mesh to roof barrel Stage 7 – Façade Stage 8 – MEP and fit-out Stage 9 – Pitch works Stage 10 – Western water channel • Form western water channel in the 'dry' Stage 11 – Car park • Internal and external car park works Stage 12 – External works Stage 13 – Testing, commissioning and move to fully operational
Location of activity (central point XY coordinates or national grid reference)	Bramley-Moore Docks - SJ 33455 92491
Footprint of activity (ha)	8.21ha (not including River Mersey area for dredging anchoring during infilling operations)

	 <i>Site location plan with indicative red line boundary (Background: MEIS Architects)</i>
Timings of activity (including start and finish dates)	Enabling works (Stage 1) – May 2020 to March 2021 Main Construction Works (Stage 2 to 13) – November 2020 to July 2023 <i>The dates are preliminary and subject to change as the project develops further.</i>
Extent of activity (for example size, scale frequency, expected volumes of output or discharge)	Enabling works (Stage 1): • Dock raking – operational time 12 hours a day, 7 days a week • Placement of approx. 40,000m² of geotextile

	• Dock infilling with approx. 370,000m³ of dredged material, based on a 24/7 non-tidal working with each load being delivered every 7 hours, with a weekly production in the order of 46,500m³ per week • Compaction works to work a 12 hour day for 6 days a week Sub-Structure (Stage 2): • Total number of piles approx. 2,643 x 16m ranging from 450mm to 750mm diameter depending on their location
Use or release of chemicals (state which ones)	Possible release of hydrocarbons from the ground during piling Chemicals are likely to be used during the build but the exact list of chemicals is unknown at this stage

Water body ¹	Description, notes or more information
WFD water body name	<i>Mersey</i>
Water body ID	<i>GB531206908100</i>
River basin district name	<i>Mersey</i>
Water body type (estuarine or coastal)	<i>Estuarine</i>
Water body total area (ha)	<i>7963.65</i>
Overall water body status (2015)	<i>Moderate</i>
Ecological status	<i>Moderate</i>
Chemical status	<i>Fail</i>
Target water body status and deadline	<i>Good by 2027</i>
Hydromorphology status of water body	<i>Heavily modified</i>
Heavily modified water body and for what use	<i>Supports Good – Use for navigation, ports and harbours</i>
Higher sensitivity habitats present	<i>Yes</i>
Lower sensitivity habitats present	<i>Yes</i>
Phytoplankton status	<i>Moderate</i>
History of harmful algae	<i>Not Monitored</i>
WFD protected areas within 2km	<i>Yes - Special Protection Areas</i>

¹ Water body information can be found in the Environment Agency's catchment data explorer and the water body summary table. Magic maps provide additional information on habitats and protected areas. Links to these information sources can be found in the WFD assessment guidance for estuarine and coastal waters.

Specific risk information

Consider the potential risks of your activity to each of these receptors: hydromorphology, biology (habitats and fish), water quality and protected areas. Also consider invasive non-native species (INNS).

Section 1: Hydromorphology

Consider if hydromorphology is at risk from your activity.

Use the water body summary table to find out the hydromorphology status of the water body, if it is classed as heavily modified and for what use.

Consider if your activity:	Yes	No	Hydromorphology risk issue(s)
Could impact on the hydromorphology (for example morphology or tidal patterns) of a water body at high status	Requires impact assessment	Impact assessment not required	No The water body is not at high status
Could significantly impact the hydromorphology of any water body	Requires impact assessment	Impact assessment not required	Yes Localised impacts on hydromorphology within the dock network during and subsequent to the infilling of Bramley Moore Dock (BMD). During construction the existing flow between north and south will be disconnected.
Is in a water body that is heavily modified for the same use as your activity	Requires impact assessment	Impact assessment not required	No The proposed activity, in general, differs from the surrounding modifications. It is however noted that Wellington Dock to the north of BMD has been infilled in a similar manner to the proposed activity.

Record the findings for hydromorphology and go to section 2: biology.

Section 2: Biology

Habitats

Consider if habitats are at risk from your activity.

Use the water body summary table and Magic maps, or other sources of information if available, to find the location and size of these habitats.

Higher sensitivity habitats ²	Lower sensitivity habitats ³
chalk reef	cobbles, gravel and shingle
clam, cockle and oyster beds	intertidal soft sediments like sand and mud
intertidal seagrass	rocky shore
maerl	subtidal boulder fields
mussel beds, including blue and horse mussel	subtidal rocky reef
polychaete reef	subtidal soft sediments like sand and mud
saltmarsh	
subtidal kelp beds	
subtidal seagrass	

² Higher sensitivity habitats have a low resistance to, and recovery rate, from human pressures.

³ Lower sensitivity habitats have a medium to high resistance to, and recovery rate from, human pressures.

Consider if the footprint ⁴ of your activity is:	Yes	No	Biology habitats risk issue(s)
0.5km ² or larger	Yes to one or more – requires impact assessment	No to all – impact assessment not required	No Assumes no widespread sediment plume from BMD during infilling
1% or more of the water body's area			No Site area is approximately 0.1% of the water body's area
Within 500m of any higher sensitivity habitat			Yes

			Subtidal Kelp beds located approximately 200m south of the southern corner of Bramley-Moore Dock
1% or more of any lower sensitivity habitat			No

⁴ Note that a footprint may also be a temperature or sediment plume. For dredging activity, a footprint is 1.5 times the dredge area.

Fish

Consider if fish are at risk from your activity, but only if your activity is in an estuary or could affect fish in or entering an estuary.

Consider if your activity:	Yes	No	Biology fish risk issue(s)
Is in an estuary and could affect fish in the estuary, outside the estuary but could delay or prevent fish entering it or could affect fish migrating through the estuary	Continue with questions	Go to next section	Yes It is noted that any impact upon resident fish within the estuary or to diadromous (migratory) fish transiting up / down stream of the location is considered to negligible.
Could impact on normal fish behaviour like movement, migration or spawning (for example creating a physical barrier, noise, chemical change or a change in depth or flow)	Requires impact assessment	Impact assessment not required	Yes It is noted that this not anticipated to affect fish within the estuary or wider dock area.
Could cause entrainment or impingement of fish	Requires impact assessment	Impact assessment not required	Yes Fish may become trapped within the dock following installation of the isolation structure.

Record the findings for biology habitats and fish and go to section 3: water quality.

Section 3: Water quality

Consider if water quality is at risk from your activity.

Use the water body summary table to find information on phytoplankton status and harmful algae.

Consider if your activity:	Yes	No	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	Requires impact assessment	Impact assessment not required	Yes For example, disconnection of hydraulic connectivity between north and south dock network during construction phase has potential to impact water quality.
Is in a water body with a phytoplankton status of moderate, poor or bad	Requires impact assessment	Impact assessment not required	Yes Mersey water body has poor phytoplankton status
Is in a water body with a history of harmful algae	Requires impact assessment	Impact assessment not required	No Not monitored

Consider if water quality is at risk from your activity through the use, release or disturbance of chemicals.

If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Yes	No	Water quality risk issue(s)
The chemicals are on the Environmental Quality Standards Directive (EQSD) list	Requires impact assessment	Impact assessment not required	Yes Possible release of hydrocarbons from shallow made ground during piling works Risk of other chemical usage to be assessed
It disturbs sediment with contaminants above Cefas Action Level 1	Requires impact assessment	Impact assessment not required	Yes Based upon samples taken in Bramley-Moore Dock during the ground investigation 2018
The chemicals released are on the Environmental Quality Standards Directive (EQSD) list	Requires impact assessment ⁵	Impact assessment not required	Yes Possible release of hydrocarbons from shallow made ground during piling works Risk of other chemical release to be assessed

⁵ Carry out your impact assessment using the Environment Agency's surface water pollution risk assessment guidance, part of Environmental Permitting Regulations guidance.

Record the findings for water quality go on to section 4: WFD protected areas.

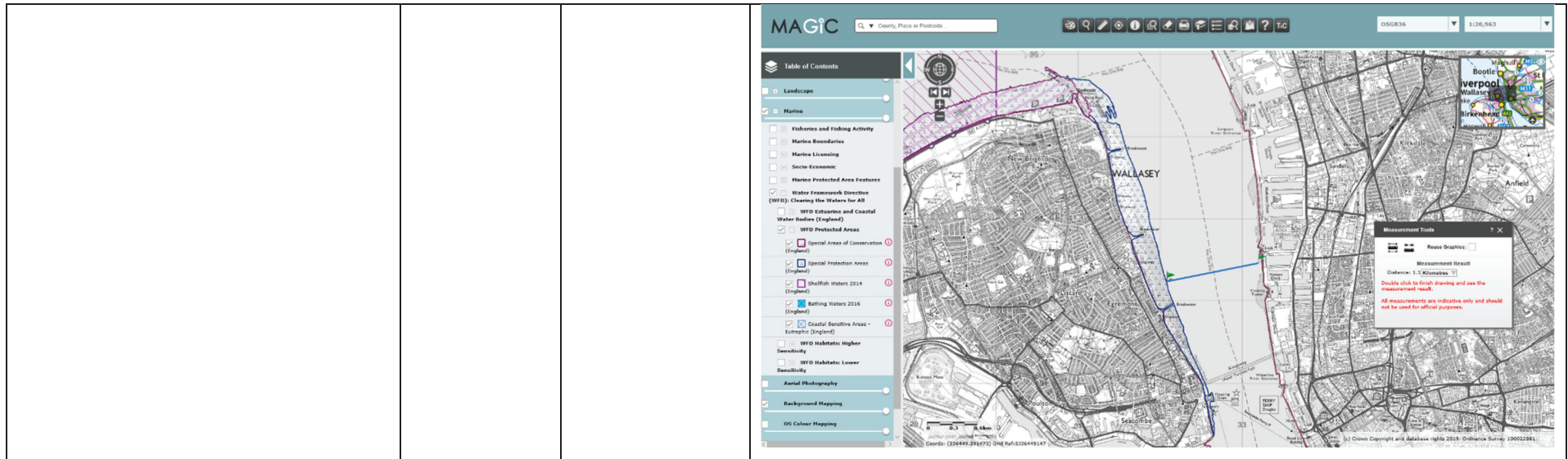
Section 4: WFD protected areas

Consider if WFD protected areas are at risk from your activity. These include:

- special areas of conservation (SAC)
- special protection areas (SPA)
- shellfish waters
- bathing waters
- nutrient sensitive areas

Use Magic maps to find information on the location of protected areas in your water body (and adjacent water bodies) within 2km of your activity.

Consider if your activity is:	Yes	No	Protected areas risk issue(s)
Within 2km of any WFD protected area ⁶	Requires impact assessment	Impact assessment not required	Yes Mersey Estuary SPA approximately 1.1km Nitrates Directive (Conservation of Wild Birds Directive) Other protected areas, as identified within the EIA, are outside of the 2km radius.



⁶ Note that a regulator can extend the 2km boundary if your activity has an especially high environmental risk.

Record the findings for WFD protected areas and go to section 5: invasive non-native species.

Section 5: Invasive non-native species (INNS)

Consider if there is a risk your activity could introduce or spread INNS.

Risks of introducing or spreading INNS include:

- materials or equipment that have come from, had use in or travelled through other water bodies
- activities that help spread existing INNS, either within the immediate water body or other water bodies

Consider if your activity could:	Yes	No	INNS risk issue(s)
Introduce or spread INNS	Requires impact assessment	Impact assessment not required	Yes Based on a precursory review of the 2017 site-specific technical report – five confirmed marine INNS were recorded within BMD. • Spionid Polychaete <i>Pseudopolydora paucibranchiata</i>; • Sea spider <i>Ammothea hilgendorfi</i>; • Barnacle <i>Austrominius modestus</i>; • Skeleton shrimp <i>Caprella mutica</i>; and • Sea-squirt <i>Styela clava</i>. Of these, the barnacle <i>Austrominius modestus</i> was the most abundant with most of the remaining species being recorded only in low numbers. The need for a biosecurity plan will be assessed and included within the WFD assessment if deemed necessary.

Record the findings for INNS and go to the summary section.

Summary

Summarise the results of scoping here.

Receptor	Potential risk to receptor?	Note the risk issue(s) for impact assessment
Hydromorphology	Yes	Impact of dock infilling (permanent) Potential risk of suspended sediment carried within water displaced from BMD during infilling
Biology: habitats	Yes	Subtidal Kelp beds located approximately 200m south of the southern corner of Bramley-Moore Dock
Biology: fish	Yes	Trapping of fish within Bramley Moore Dock following installation of northern isolation structure
Water quality	Yes	Water quality risks due to the temporary disconnection of hydraulic link between north and south dock network
Protected areas	Yes	The Mersey Estuary SPA is located within 2km of the site Nitrate Directive
Invasive non-native species	Yes	Multiple, risk of INNS being spread due to works to be assessed

If you haven't identified any receptors at risk during scoping, you don't need to continue to the impact assessment stage and your WFD assessment is complete.

If you've identified one or more receptors at risk during scoping, you should continue to the impact assessment stage.

Include your scoping results in the WFD assessment document you send to your activity's regulator as part of your application for permission to carry out the activity.

Appendix B EA Meeting Minutes 6 November 2019

Minutes

Subject	The People's Project EA Consultation - Flooding & WFD	Job no	0040026
Place	EA Office Warrington	Date	06 November 2019
Present	Graham Bate (EA) Bonnie Boulton (EA) Dominic Flynn (CBRE) Matthew Vaughan-Shaw (BuroHappold) Matthew Davison (Carcinus) Phil Preston (WYG)	Apologies	Stephen Sayce (EA)
Distribution	Above + Steve Macey (BuroHappold) Lloyd Baker (BuroHappold) Georgina Dowling (CBRE)		

Objectives of meeting:

- 1 – Agree in principle the response to new flood zone mapping within the FRA**
- 2 – Agree in principle the approach to wave overtopping assessment within the FRA**
- 3 – Agree the WFD Assessment Scoping and general approach to the assessment**

Item	Action
1.0 Flood Zone Mapping	
1.1 Graham Bate (GB) noted that flood zone maps have been updated but the flood levels that inform the mapping remain unchanged. The changes in flood extents are therefore expected to be due to updates to the ground surface model.	
1.2 It was agreed that the project team hold more accurate topographic data than the ground surface model that the EA flood mapping is based upon. It is therefore appropriate for the project team to undertake its own assessment of flood zones using the topographic survey and the flood levels provided by the EA.	
1.3 Matthew Vaughan-Shaw (MVS) noted that updated flood level data was provided to BHE in January 2019 for use within the FRA. The document includes the note 'Model data taken from DRAFT Mersey Estuary 2016 Study'. The EA are requested to confirm that the levels remain valid for the	

purpose of the FRA. *(post-meeting note – the final flood report, Mersey Estuary, Ditton Brook and River Gowy, is dated December 2018; it is therefore expected that the levels supplied in January 2019 remain valid).*

2.0 Wave Overtopping Assessment

- 2.1 MVS noted that BuroHappold have submitted a request for access to the EA's wave modelling predictions. The model is summarised within the Mersey Flood Model Report, Appendix C, but does not contain model outputs at the development site.
- 2.2 GB confirmed that an enquiry has been submitted and he will follow up.
- 2.3 In the absence of model outputs BHE have developed an estimate of the wave conditions, for different return periods, at the development site. MVS described the methodology as follows:
 - Wave data for variable return periods obtained for the nearest wave buoy within the Irish Sea
 - Research multiple academic papers and modelling reports to estimate the relationship between the wave buoy location and the development site, i.e. identification of wave height reduction for different return periods from an offshore location to a location within the estuary
 - Wave overtopping calculations using EuroTop methodology, and comparison with recommended safe limits for pedestrians and vehicles
 - Identification of mitigation measures to protect pedestrians and vehicles during storm event and limit damage to structures. This will include closure of the river wall access road to pedestrians and vehicles. Access to the Outside Broadcasting Compound may be achieved via the southern access road, avoiding the need to drive alongside the river wall.
- 2.4 Dominic Flynn (DF) noted that the river wall is outside of the planning application boundary. Access along the crest of the wall is not part of the scheme and there will be a fence in place to prevent this.
- 2.5 The main uncertainty relates to the wave conditions. BHE will include a sensitivity assessment of the estimated wave conditions if the EA are unable to supply modelled wave data.
- 2.6 GB noted that the wave overtopping risks shall be considered as a residual risk within the FRA. The methodology and results should therefore be of sufficient reliability to inform the level of residual risk and mitigation measures needed. It was agreed in principle that the methodology described above would be sufficient for the FRA but would be improved if modelled wave data is available.
- 2.7 MVS noted that the FRA will outline the operational procedures that will need to be developed in relation to closure of the riverside road to pedestrians and vehicles. GB noted that Wirral Council now provide flood warnings linked to high winds and waves since wave overtopping contributed to flooding of New Brighton 2013. This information or similar may be available for the proposed development.

3.0 Water Framework Directive – Background Information

- 3.1 MVS provided background information relating to the proposed development and construction methodology. Key points of relevance to the WFD were noted:
- Bramley Moore Dock (BMD) is currently an operational dock, providing mooring for the port's tug boats.
 - An isolation structure was constructed in 2005 to allow separation of the north and south dock water. The structure includes a series of culverts with sluice gates. MVS noted that there is anecdotal evidence that the sluice gates were closed for an extended period of time following construction which resulted in a noticeable change to the water quality conditions within the southern dock network. There is however no documented evidence of this.
 - The dock will be infilled completely during the construction phase; towards completion of the construction phase a channel will be constructed to the west of the stadium to provide hydraulic connectivity between the north and south dock network;
 - Material for dock infilling will be dredged from the Irish Sea from a licenced dredge site
 - A new isolation structure will be installed within the northern entrance of BMD, this will include a series of culverts to match the existing isolation structure to the south; during construction phase the culverts will be blocked to prevent loss of sand during infilling
 - The bed of BMD will be raked to remove objects that could result in voids occurring within the infill
 - A geotextile membrane will be placed across the bed of BMD to separate the existing silt from the infill material to meet geotechnical requirements
 - Infilling will be undertaken by the supply of a water-sand mix from a dredger moored in the River Mersey. The water-sand mix will be pumped via a floating pipeline and discharged into the dock basin. As the material is deposited, the water from the basin will be displaced. It is currently anticipated that this will be displaced to the north into the northern dock network.
 - As noted above, the hydraulic connectivity between the north and south will be temporarily removed during the construction phase (approximately 2 years). It is proposed that monitoring (pre and during construction) will inform the requirement for pumping between the north and south dock networks to mitigate water quality risks.
- 3.2 MVS noted that the EIA and WFD assessment are not considering impacts of the dredging operations as they will be undertaken within a licenced site in the Irish Sea. The

4.0 Water Framework Directive – Scoping Overview

- 4.1 Bonnie Boulton (BB) noted that she had reviewed the draft scoping document issued by BHE together with inputs from specialists.
- 4.2 BB noted that the information in the scoping note can be simplified by only covering the consideration of potential impact. Information relating to

proposed mitigation should not be included within this stage of the process. 4.3 BB noted that information relating to timing of activities needs to be completed. 4.4 MVS noted that there are two potential water bodies that may require assessment: Mersey <i>Surface Water Body</i> and Lower Mersey Basin and North Merseyside Permo-Triassic Sandstone Aquifers <i>Ground Water Body</i>. 4.5 MVS noted BHE's opinion that the development's ability to impact the Ground Water Body is negligible. Also noted that the main water quality issues associated with the Ground Water Body are defined as relating to agricultural pollution. Given the development site's location on the boundary of the Ground Water Body BHE propose that this may be scoped out. BB agreed with this approach and requested that this is documented and justified within the WFD Assessment Report. 4.6 MVS noted that the assessment will cover construction phase and operational phase. The construction phase will focus on the infilling and early works through to stadium sub structure. Stadium super-structure construction is likely to have limited impact and will not be covered in detail. During operational phase the focus of the assessment will be on surface water drainage impacts.	
5.0 Water Framework Directive – Hydro-morphology 5.1 BB agreed that this should be scoped in 5.2 BB advised that water quality issues should not be covered within this section 5.3 BB advised that the mitigation measures should include monitoring of the TSS within the displaced water during infilling operations.	
6.0 Water Framework Directive – Biology – Habitats 6.1 BB agreed that this should be scoped out based upon the scoping questions in the EA template. Reference may be made to the EIA chapter to highlight that wider assessment has been completed and mitigation measures proposed. 6.2 Benthic habitats within BMD have been characterised during 2017 site specific survey. This also included consideration of the fauna / flora growing on the dock walls.	
7.0 Water Framework Directive – Biology – Fish 7.1 BB agreed that this should be scoped in. 7.2 Matthew Davison (MD) noted the baseline survey methodology and key findings: - Site specific survey undertaken in 2017 to characterise fish assemblages within BMD; - Survey used a multi-method approach consisting of hydroacoustic (vertical and horizontal) analysis for biomass and density as well as static fyke netting. - Overall, fish densities within Bradley-Moore dock were reported to be relatively high at >3,000 fish per hectare observed throughout.	

- Most common fish species recorded within the fyke nets was pouting <i>Trisopterus luscus</i> followed by coal fish <i>Pollachius virens</i>, European (silver) eel <i>Anguilla anguilla</i>, sole <i>Solea solea</i> and plaice <i>Pleuronectes platessa</i>. - Report concluded that at the time of sampling, BMD was not considered a fish nursery and that the presence of European eel does not warrant special status. 7.3 MD noted that the key impact is considered to be associated with the dock infilling operation, with the requirement for fish capture in advance. 7.4 It was discussed and agreed that potential impacts upon fish movement due to the temporary and permanent condition of the western channel should be considered. 7.5 Aquatic ecology chapter baseline will draw from site specific survey and other available data to characterise likely fish populations within BMD and lower Mersey. This will include consideration of migratory species such as Atlantic salmon and European eel. 7.6 Guidance in relation to the construction and modification of culverts in respect to fish passage will be undertaken in view of the 'Culvert Design and Operation Guidance' (CIRIA, 2010) and Armstrong G.S et al., (2004). In addition to the Environment Agency Fish Pass Manual: Guidance notes on the Legislation, Selection and Approval of Fish Passes in England and Wales.	
8.0 Water Framework Directive – Water Quality 8.1 BB agreed that this should be scoped in. 8.2 The potential to disturb contaminated sediment during the works was discussed. It was agreed that the risk is heavily reduced by the proposal 8.3 MVS noted that the disconnection of hydraulic connectivity between north and south dock network may result in water quality impacts. This will be covered within the WFD Assessment with the current proposed mitigation to undertake monitoring and pump if changes beyond trigger levels are observed. 8.4 Potential impacts from sediment bound contaminants will be considered within the ES. This will draw from the results of the 2017 site specific survey sediment chemistry analysis.	
9.0 Water Framework Directive – WFD Protected Areas 9.1 MVS noted that the list of protected areas added to the scoping note may not all be within the 2km radius. 9.2 Philip Preston (PP) confirmed that a HRA is being undertaken for the project and that the conclusions will be presented within the WFD Assessment. 9.3 BB advised that the WFD Assessment should include reference to Natural England consultation. 9.4 BB advised that areas defined under the Nitrates Directive and Conservation of Wild Birds Directive should be checked.	
10.0 Water Framework Directive – Invasive Species	

- | | | |
|------|--|--|
| 10.1 | MD confirmed that the list of invasive species provided in the scoping note were identified through survey of BMD in 2017. | |
| 10.2 | BB queried whether Chinese Mitten Crab were identified. MD will check the survey report. | |
| 10.3 | BB queried what are the proposed mitigation measures for dealing with invasive species? | |
| 10.4 | MD noted that a Bio-Security Plan may be required to define mitigation measures. DF to check requirement for Bio-Security Plan as part of planning submission. | |

11.0 Water Framework Directive – Assessment Approach

- | | | |
|------|--|--|
| 11.1 | MVS noted that the assessment will cover three broad areas: <ul style="list-style-type: none"> - No deterioration assessment - Protected areas assessment - Future status assessment | |
| 11.2 | MVS noted that the assessment will be predominantly qualitative, providing judgement of whether the impact will be negligible through to large. | |
| 11.3 | Depending upon the findings of the qualitative assessment the project team will consider whether any further assessment is needed beyond the level of the ESIA to adequate cover the WFD assessment. Based upon the current understanding of the receptors, scales, activities and potential impacts the likelihood of any more detailed assessment is considered low. BB noted that this sounded reasonable based upon the information discussed. | |
| 11.4 | MVS presented a spreadsheet tool that is proposed to be used for recording the assessment of potential impacts across the full range of WFD elements and proposed activities (construction and operational). | |
| 11.5 | BB warned that the spreadsheet approach may lead to a lot of duplication of information where similar impacts apply. BB suggested that cells may be merged to create a simpler record of potential impacts. BB advised that the provision of a narrative against each section would be adequate in place of the spreadsheet. Agreed that project team would review best way of presenting the information within the assessment report. | |

The minutes detailed herein reflect the author's recollection of the discussions held during the meeting detailed above. If you feel that these minutes are inaccurate; proposed additions, corrections and/or comments must be submitted to the author in writing within five working days of the date of these minutes. If no written responses are received within this period, these minutes will be deemed the official record of the meeting.

Appendix C Planning Consultation Responses

relating to production of a pollution prevention plan and a legal agreement to secure 200m of new towpath adjacent to the offside of the Stanley Lock flight on the Leeds & Liverpool Canal and a package of signage/wayfinding to promote sustainable transport routes to the site are necessary to address these matters. Our advice and comments follow:

Heritage Considerations and Potential Impact on Trust Owned Heritage Assets.

The Trust owns and manages the Leeds & Liverpool Canal and associated Stanley Lock Flight which are located approximately 0.5km to the southeast of the application site. The canal enters into the dock system via Stanley Dock and the Trust has a right of navigation through Stanley Dock, Collingwood Dock and Salisbury Dock; before continuing through Trafalgar Dock via the Liverpool Link to the wider dock network to the south.

Along with the application site, the stretch of the Leeds & Liverpool Canal through the Stanley Lock Flight is located within the Liverpool Maritime Mercantile City World Heritage Site (WHS) and Stanley Dock Conservation Area. The Stanley Lock Flight is also Grade II listed.

The potential impact of the proposed development on designated heritage assets is required to be assessed in accordance with NPPF, with any harm weighed against the public benefits of the proposal. The applicant has submitted a Heritage Assessment which concludes (as summarised in para 17.8 of the submitted Planning Statement) that “.....*the proposed development will result in **substantial harm** upon the Grade II listed Bramley Moore Dock retaining walls and the Stanley Dock Conservation Area*” and, that “*It is anticipated that the proposed development will result in **less than substantial harm** to the UNESCO World Heritage Site, the Grade II listed Regent Road Dock Wall and the setting of the Grade II listed Hydraulic Engine House*”.

The infilling of a dock within an exemplary complex of basins at the heart of the World Heritage Site (WHS) is regrettable. Bramley Moore Dock is not however in the ownership of the Trust and the impact of the proposed development on the outstanding universal value (OUV) of the WHS and on the character and appearance of the conservation area are matters for the Local Planning Authority to consider. The Trust recognises that change can be a necessary component of the historic environment but considered that when change does occur it should be undertaken with sensitivity to safeguard the heritage value and significance of an area for future generations. We would therefore ask the Local Planning Authority, in considering the proposal, to satisfy itself in terms of the level of harm to be attributed to the wider historic environment and the extent to which the public benefits arising from the proposed development outweigh this harm, as required by the NPPF.

Impact on Trust Heritage Assets

The importance of the canal and listed Stanley Lock Flight is acknowledged within the applicants Heritage Statement which concludes at paragraph 7.95 that their contribution to the OUV of the WHS is considered to be Very High. In particular it highlights that

“7.92 The rise of four locks that step down from the Leeds-Liverpool Canal into Stanley Dock and subsequently link to wider Dock network were an important example of the integration of the docks into the wider national transport infrastructure at that time.....”

Before continuing:

“7.94 The lock structures and the canal link are an important element of the overall port management system as conceived and built by Jesse Hartley, providing a vital connection for the exchange of raw and completed goods between the rest of the country and the rest of the world.”

Paragraph 8.72 of the submitted Heritage Statement goes on to state that “*the significance of the listed lock structures and the connection between the Leeds-Liverpool Canal and Stanley Dock lies primarily in the operational and strategic importance of linking the dock complex and one of the key transport networks in Britain during the early 19th century.*” It concludes in Paragraph 8.73 that “*The proposals will not have any impact*

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on the ability to appreciate this interest, or its contribution to the OUV of the WHS. The proposals will sit in the far distance behind buildings which are not significant either in their own right or with regards the OUV of the WHS and will not affect the setting of the canal and its listed structures.”

The roof of the proposed stadium, at 48m in height, would be clearly visible from, and within the setting of, the listed Stanley Lock flight. Views would however diminish as users of the canal corridor travel down the lock flight. It is also considered that the proposed stadium would compete with the listed Tobacco Warehouse (38m high) by virtue of its proposed height, scale and form. The history of big structures in this area is however acknowledged and on balance, the Trust generally agrees with the overall conclusions of the Heritage Assessment in terms of the impact on the Trust owned heritage assets.

If the Council is minded to approve this application we would however ask it to ensure that those public benefits and design interventions referenced in the application (specifically the external cladding of the stadium; the landscaping; retention of the dock wall; retention of the channel of water to aid legibility of the former interlinked complex of basins; retention of historic features and markers) which seek to mitigate the harm, are all secured and delivered as part of the development.

Sustainable Access utilising the Leeds & Liverpool Canal

As set out in the section above, it is a matter for the Council to satisfy itself in terms of the level of harm to be attributed to the wider historic environment and whether the public benefits and other material planning considerations put forward outweigh this harm.

In terms of the public benefits put forward by the applicant, the Trust welcomes the principle of the public benefit titled, *“Access to the WHS: Increasing the Value and Use of BMD”* and as expanded upon at paragraph 9.6 of the heritage statement to *“Provide public access to BMD and open up the Northern Docks to the people of the City, increasing the use of the WHS and unlocking this important element of Liverpool’s heritage for wider public use and enjoyment,”* and *“Facilitate access to revitalised heritage assets within and surrounding the site.”*

We consider that this includes opening up access to the Leeds & Liverpool Canal and Stanley Lock Flight which are acknowledged as being part of the WHS and playing an important role in providing connectivity and historic access to the Northern docks. Therefore, if the Council is minded to approve the application we consider that appropriate measures to improve access between the Northern docks and the Leeds & Liverpool Canal via the Stanley Lock Flight should also be secured as part of the package of public benefits as detailed below.

Existing walking and cycling routes are noted within the Transport Assessment and specific reference made to the off-road route via the Leeds & Liverpool Canal, (as shown at figure 16 (pg62) of the Transport Assessment). Utilising the canal corridor as part of the package of sustainable routes to the site would also accord with the aims of the development and overall strategy. Indeed paragraph 14.46 of the Planning Statement sets out that *“a fundamental aspect of the strategy is to encourage visitors to consider travelling by sustainable modes. To make the stadium accessible and successful, appropriate facilities for travel by train, bus, walking and cycling (as well as surrounding parking zone restrictions) will be promoted so that visitors have an alternative choice to travelling by car.”*

We note that in paragraph 10.2.34 of the Transport Assessment reference is made to Manchester and travel to the Etihad from Piccadilly Station. In Manchester, the Ashton Canal is successfully used on match days as part of the sustainable access route to/from the Etihad. We consider that the Leeds & Liverpool Canal has the potential to provide a similar role for access to the proposed stadium at Bramley Moore Dock.

Within the application documents there are numerous references to the sustainable transport strategy and opening up access to the Northern docks and that this forms a key component, not only in terms of the public benefits of the development but also in terms of the presumption in favour of sustainable development, as set out in the NPPF. Both the Framework Day Transport Strategy (figure 7) and Framework Event Transport

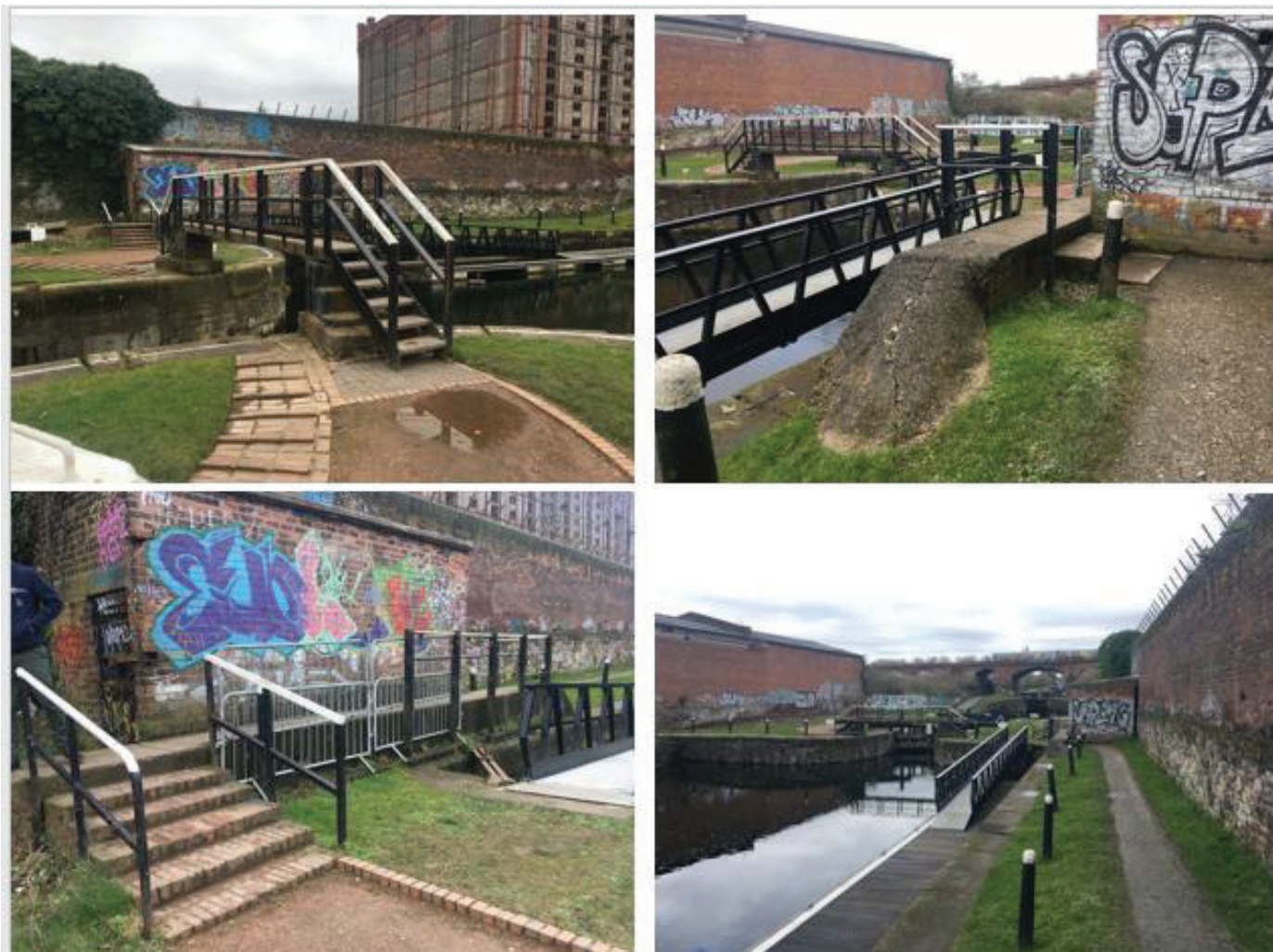
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Strategy Summary (figure 6), indicate that the access and connectivity routes to the stadium includes the Leeds & Liverpool Canal towpath as an *'off road cycle/pedestrian route to site'*.

Whilst we welcome the recognition given to the role the canal corridor can play in providing a sustainable traffic-free route to the site, at present the access arrangements adjacent to the bottom of the Stanley Lock flight are not ideal to accommodate any significant increase in usage. As shown in the images below, this is due to a narrow up and over metal footbridge crossing the canal from the towpath, to a stepped access up onto a



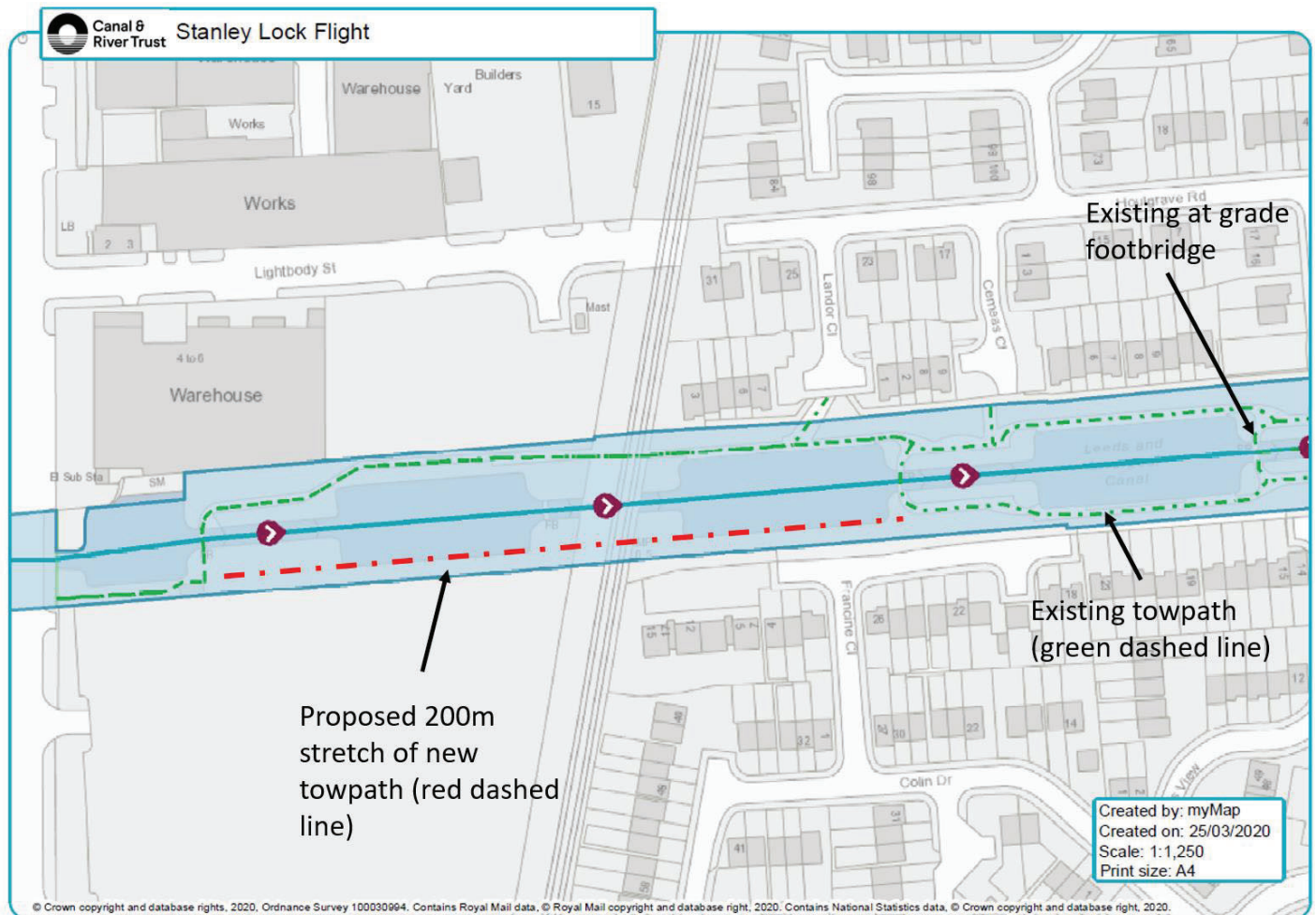
concrete gas pipe which runs adjacent to a brick-built store to allow access to Great Haywood Street for onward travel. As shown in the images above all of these act to hinder access. At present this is acceptable for current usage, although far from ideal. With the very likely significant uplift in usage of this route associated with the proposed development for match days, events and general access to the Northern docks, as acknowledged in the application documents, these existing access arrangements would not be fit for purpose and would increase health and safety risks, as well as the potential liability upon the Trust.

A possible solution to address this awkward access arrangement would be to continue the existing towpath along the offside (non-towpath side) from the second lock on the flight to the bottom lock. As shown on the map below there is an existing towpath (green dotted line) along a stretch of the offside and a footbridge over the canal at top lock which is at grade.

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To make this connection would require the creation of a stretch of approximately 200m of new surfaced towpath, as indicated by the red dashed line on the map above. This would be accessible for all users with an at grade crossing. At the narrowest point along the offside of the canal there is 6m width between the boundary wall and canal edge which would be more than sufficient space to create a towpath. This would also necessitate the removal of the existing brick-built building and alterations to the concrete gas pipe as shown in the images above. The brick-built building previously housed the pump which back-pumped water from the dock into the canal. This building is now redundant. The works would also require some minor vegetation clearance/management. This 'public benefit' would be 'public' in the true sense of the word in that the Trust, as custodian, maintains the historic canal network for the benefit of the public and the towpath is free to all at the point of access.

The Trust generally seeks to maintain its assets in a "steady state", this is based on existing usage. Where new development has the likelihood to increase usage, the Trust's maintenance liabilities will also increase, and we consider that it is reasonable to request a financial contribution from developers to either cover increased maintenance costs, and/or to upgrade towpath surface to a standard which is more durable and thus able to better accommodate increased usage without adding to our future maintenance costs and liability. We therefore consider that if the Council is minded to approve this application, that the proposed development should provide for the creation of the 200m stretch of new towpath as described above and associated works, as well as the removal of the brick-built building/vegetation to facilitate the creation of the new towpath. An initial estimate of the likely cost of providing this is in the region of £250,000.

We consider that this request for a financial contribution is justified and meets the statutory tests as set in the Community Infrastructure Levy Regulations 2010. The works are necessary to support this sustainable transport route and to provide public access to the development and Northern docks as part of the transport strategy for **Canal & River Trust**

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the development. The uplift in towpath usage here would be as a direct consequence of the proposed development. The scale of the development would be significant and would have a large catchment, as does the canal corridor. The creation of 200m of new towpath would therefore be commensurate to this scale and fairly and reasonably related in kind to the development. The agreement should set out that the design and specification of the towpath would need to be agreed with the Trust. The towpath works would need to be delivered before the development comes into use.

Finally, paragraph 14.45 of planning statement outlines that *“Improving access to the stadium by providing multi-modal access to the ground, accessible parking adjacent to the stadium and providing fully accessible wayfinding and signage”*. To ensure that the sustainable transport routes are fully utilised a package of wayfinding and signage measures would need to be considered and secured as part of the application via the s106 agreement as the signage would be sited outside of the application site. The signage should include wayfinding to/from the Leeds & Liverpool Canal. Similarly, any interpretation to be provided should include and acknowledge the role the Leeds & Liverpool Canal has played and its integral connection with the Docks.

If the Council is minded to approve this application and agrees that the above public benefits meet the necessary tests we would be happy to work with the Council in terms of the works to be secured as part of the s106 agreement. Whilst there is no obligation on the Local Planning Authority to make the Trust a party to such an agreement where it has no legal interest within the application site boundary, the Trust would wish to be a signatory to any legal agreement where works are to be undertaken on our land.

Securing future access along the Waterfront

Paragraph 16.31 of the Planning Statement sets out that in terms of public access to the site this includes the River Walk along the Waterfront to connect Bramley Moore Dock to the wider Liverpool Waters scheme. The documents set out that the River Walk is anticipated to attract visitors on non-match days and is an important aspect of the proposed development as it will encourage activity throughout the year and allow the public to visit and interact with the heritage features at the site and the northern part of the WHS. This part of Liverpool Waters is however currently inaccessible and unlikely to be delivered until 2036 (in accordance with the approved phasing plan). This connection along the Waterfront would therefore unfortunately not be delivered for some considerable time. As set out on the Access & Circulation - Pedestrian Plan this link along the waterfront is shown as *‘Potential future pedestrian links to Liverpool Water and City Centre’* and as such dependant on the Liverpool Waters scheme coming forward in the future. It is noted that the Boundary Treatment Plan shows a perimeter security fence where this link would be provided. It is unclear what mechanism would be used to ensure this crucial link is delivered in the future and we would ask the Council to ensure that this key linkage along the waterfront is provided.

Water management and pollution prevention

The proposed infilling of the dock should not impact the water levels with the dock or navigation via the Liverpool Link. Although the docks adjacent to the site are not owned by the Trust, they are hydrologically connected to other docks and the canal which therefore would be susceptible to pollution from the site. Due to the scale and complexity of the proposed development there is potential for the dock network to become polluted during construction works. As such the Trust would ask to be included within the proposed Pollution Response Plan in case changes are needed to our water management and in terms of assisting with any containment. It is noted that section 8.7 of the Construction Management Plan states that such plans are not yet finalised. If the Council is minded to approve the application these should be secured by means of suitably worded condition. The Trust would wish to be consulted further in respect of this matter.

Canal & River Trust

Fradley Junction, Alrewas, Burton-upon-Trent, Staffordshire DE13 7DN

T 0303 040 4040 **E** canalrivertrust.org.uk/contact-us **W** canalrivertrust.org.uk

Please do not hesitate to contact me about matters raised in this response.

Yours sincerely,

Tim Bettany-Simmons MRTPI
Area Planner

Tim.Bettany-Simmons@canalrivertrust.org.uk
07342 057926

<https://canalrivertrust.org.uk/specialist-teams/planning-and-design>

Canal & River Trust

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Liverpool City Council
Development Plans Team
Municipal Buildings
Dale Street
Liverpool
Merseyside
L2 2DH

Our ref: SO/2020/120070/01-L01
Your ref: 20F/0001
Date: 04 May 2020

Dear Sir/Madam

**APPLICATION FOR FULL PLANNING PERMISSION IN ACCORDANCE WITH SUBMITTED DRAWINGS FOR THE DEMOLITION OF EXISTING BUILDINGS/STRUCTURES ON SITE (LISTED IN THE SCHEDULE); REMEDIATION WORKS; FOUNDATION/PILING WORKS; INFILL OF THE BRAMLEY-MOORE DOCK, ALTERATION TO DOCK WALLS AND DOCK ISOLATION WORKS WITH VEHICULAR AND PEDESTRIAN LINKS ABOVE; AND OTHER ASSOCIATED ENGINEERING WORKS TO ACCOMMODATE THE DEVELOPMENT OF A STADIUM (USE CLASS D2) PREDOMINANTLY FOR FOOTBALL USE WITH THE ABILITY TO HOST OTHER EVENTS WITH ANCILLARY OFFICES (USE CLASS B1A); CLUB SHOP AND RETAIL CONCESSIONS (INTERNAL AND EXTERNAL TO THE STADIUM) (USE CLASS A1); EXHIBITION AND CONFERENCE FACILITIES (USE CLASS D1); FOOD AND DRINK CONCESSIONS (INTERNAL AND EXTERNAL TO THE STADIUM) (USE CLASSES A3 / A4 / A5); BETTING SHOP CONCESSIONS (SUI GENERIS); AND ASSOCIATED INFRASTRUCTURE INCLUDING: ELECTRIC SUBSTATION, CREATION OF A WATER CHANNEL, OUTSIDE BROADCAST COMPOUND, PHOTO-VOLTAIC CANOPY, STORAGE AREAS/COMPOUND, SECURITY BOOTH, EXTERNAL CONCOURSE / FAN ZONE INCLUDING PERFORMANCE STAGE, VEHICULAR AND PEDESTRIAN ACCESS AND CIRCULATION AREAS, HARD AND SOFT LANDSCAPING (INCLUDING CANOPIES, LIGHTING, WIND MITIGATION STRUCTURES, PUBLIC ART AND BOUNDARY TREATMENTS), CYCLE PARKING STRUCTURES AND VEHICLE PARKING (EXTERNAL AT GRADE AND MULTI-STOREY PARKING) AND CHANGE OF USE OF THE HYDRAULIC TOWER STRUCTURE TO AN EXHIBITION / CULTURAL CENTRE (USE CLASS D1) WITH ANCILLARY FOOD AND DRINK CONCESSION (USE CLASS A3).
BRAMLEY-MOORE DOCK, REGENT ROAD, LIVERPOOL**

Thank you for referring the above application to the Environment Agency.

Environment Agency position

We have no objection in principle to the proposed development, but would wish to make the following comments.

Biodiversity

Biosecurity plan

Invasive non-native species have a negative impact on native species and habitats and they cost the British economy approximately £1.7 billion per year. The spread of certain invasive non-native species is prohibited under Schedule 9 of the Wildlife & Countryside Act 1981.

It is important invasive non-native species are not spread around the proposed development site or to other locations. It is important they are not brought on to the site or transported off site, for example on equipment or Personal Protective Equipment.

Reason

To prevent the spread of invasive non-native species. Without it, avoidable damage could be caused to the nature conservation value of the site contrary to national planning policy as set out in the National Planning Policy Framework paragraph 109, which requires the planning system to aim to conserve and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible.

Fisheries

The infill Methodology states (S2.2), "*It is necessary to rake the dock deposits in advance of the dock infilling (but after the first fish removal has been undertaken)*".

Removal of the fish without dewatering will be difficult and so, as noted in the Water Framework Directive (WFD) final document, it is inevitable some fish will be present during infill. As such a route for fish to leave the dock and relocate to a neighbouring dock should be made available.

Condition

Prior to the development no raking and infilling of Bramley Moore Dock should commence until a fish rescue plan that details how fish will be protected, has been submitted to and approved in writing by the Local Authority. The works shall be carried out in accordance with the approved fish rescue plan.

Reason

To ensure the safety of the fish and protect the environment

The WFD final document notes on page 54 that:

“The dredged material will be fluidised with water from the River Mersey, which should be subject to an abstraction licence with consideration given to the seasonal occurrence of migratory species such as European eel”

This is correct and the abstraction will require physical screening to 2mm aperture size in the spring and summer, and 8mm in the autumn and winter. It is likely this will be conditioned on the abstraction licence.

Floating islands would improve the biodiversity and fish friendliness of the canal. This is something the developer needs to consider.

Flood Risk

The proposed development will only meet the National Planning Policy Framework’s requirements in relation to flood risk if the following planning condition is included.

Condition

The development shall be carried out in accordance with the submitted flood risk assessment (ref: 040026 Revision 06 dated 20th December 2019).

Reason

To reduce the risk of flooding to the proposed development.

Contaminated Land

We have reviewed the following reports in the context of the wider Environmental Statement report by CBRE:

- Phase 1 Desk Study by Burohappold Engineering Ltd (dated Dec. 2019)
- GeoEnvironmental Interpretative Report by Burohappold Engineering Ltd (dated Nov. 2019)
- Dock Infill Methodology for Planning Documentation by Burohappold Engineering Ltd (dated Dec. 2019), and a
- Construction Methodology report by Lang O’Rourke Ltd dated Dec. 2019.

We are aware the proposed development site is located in an Environmentally Sensitive location being above a Principal Aquifer and immediately adjacent to the River Mersey Estuary. The historic land use as dock facilities dating back over 150 years have introduced elevated concentrations of contamination to the ground and local shallow groundwater that could pose a risk to the aquatic environment if left unaddressed.

Whilst we recognise the importance of this proposed development, we also recognise the local importance of the aquatic environment at this place and the contribution it makes to the local community heritage.

As such where elevated concentrations of contamination have been identified, these should be delineated properly and suitably remediated to lessen or remove the risk of subsequent future contamination of the aquatic environment.

We also have concerns regarding the contamination concentrations of the dock deposits within the current Bramley-Moor dock and the proposed scheme to keep them in situ may not be adequate as the Principal Aquifer is at or about the same level of these deposits and therefore in likely continuity.

Whilst we do not have any concerns to these sediments remaining in situ we feel more assessment work is required to ensure their continued location is assessed as being suitable.

The National Planning Policy Framework (NPPF) paragraph 170 states the planning system should contribute to and enhance the natural and local environment by preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels water pollution. Government policy also states that planning policies and decisions should also ensure that adequate site investigation information, prepared by a competent person, is presented (NPPF, paragraph 178(c)).

We consider planning permission could be granted to the proposed development as submitted if the following planning condition is included as set out below. Without this condition, the proposed development on this site poses an unacceptable risk to the environment and we may object to the application.

Condition

No development approved by this planning permission shall take place until a remediation strategy that includes the following components to deal with the risks associated with contamination of the site shall each be submitted to and approved, in writing, by the local planning authority:

1. Where necessary additional site investigation, based on the information already submitted, to provide further information for a detailed assessment of the risk to all receptors that may be affected, including those off site.
2. The results of the site investigation and the detailed risk assessment referred to in (1) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.

3. A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in (2) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

Any changes to these components require the express written consent of the local planning authority. The scheme shall be implemented as approved.

Reason

For the ongoing protection of the Water Environment from risks arising from land contamination.

Condition

No infiltration of surface water drainage into the ground where land contamination is known or suspected to be present is permitted other than with the express written consent of the local planning authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to controlled waters. The development shall be carried out in accordance with the approval details.

Reason

For the ongoing protection of the Water Environment from risks arising from land contamination.

Condition

Piling or any other foundation designs using penetrative methods shall not be permitted other than with the express written consent of the local planning authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to groundwater. The development shall be carried out in accordance with the approved details.

Reason

For the future protection of the Water Environment from risks arising from land contamination.

Condition

Prior to the commencement of works associated with the deposits at the base of the Bramley-Moore Dock, the following shall be submitted to the local planning authority:

1. A suitable and detailed assessment of risks associated with these deposits;
2. Where necessary a suitable remediation strategy to deal with unacceptable risks;
3. A verification plan to show the success of the remediation strategy as implemented.

Reason

To ensure that any dock deposits that are left in place at the base of the current dock feature do not pose an unacceptable risk to the water environment now or in the future.

Condition

Prior to any part of the permitted development/each phase of development being occupied/brought into use, a verification report demonstrating the completion of works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to, and approved in writing, by the local planning authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met.

Reasons

For the future protection of the Water Environment from risks arising from land contamination.

Advice to applicant

Model Procedures and good practice

Due to the former land use(s), soil and /or groundwater contamination may exist at the site and the associated risks to controlled waters should be addressed by:

We recommend developers should:

- Follow the risk management framework provided in CLR11, Model Procedures for the Management of Land Contamination, when dealing with land affected by contamination
- Refer to our Guiding principles for land contamination for the type of information that we require in order to assess risks to controlled waters from the site - the local authority can advise on risk to other receptors, such as human health
- Consider using the National Quality Mark Scheme for Land Contamination Management which involves the use of competent persons to ensure that land contamination risks are appropriately managed
- Refer to the contaminated land pages on gov.uk for more information

All investigations of land potentially affected by contamination should be carried out by or under the direction of a suitably qualified competent person and in accordance with BS 10175 (2001) Code of practice for the investigation of potentially contaminated sites. The competent person would normally be expected to be chartered member of an appropriate body (such as the Institution of Civil Engineers, Geological Society of London, Royal Institution of Chartered Surveyors, Institution of Environmental Management) and also have relevant experience of investigating contaminated sites. The Specialist in Land Condition (SilC) qualification administered by the Institution of Environmental Management provides an accredited status for those responsible for signing off LCR's. For further information see - www.silc.org.uk

Where the remediation / redevelopment of the site will involve waste management issues we offer the following advice:

Waste on-site

The CL:AIRE Definition of Waste: Development Industry Code of Practice (version 2) provides operators with a framework for determining whether or not excavated material arising from site during remediation and/or land development works is waste or has ceased to be waste. Under the Code of Practice:

- excavated materials that are recovered via a treatment operation can be reused on-site providing they are treated to a standard such that they are fit for purpose and unlikely to cause pollution
- treated materials can be transferred between sites as part of a hub and cluster project
- some naturally occurring clean material can be transferred directly between sites

Developers should ensure that all contaminated materials are adequately characterised both chemically and physically, and that the permitting status of any proposed on-site operations are clear. If in doubt, the Environment Agency should be contacted for advice at an early stage to avoid any delays.

We recommend developers should refer to:

- The position statement on the Definition of Waste: Development Industry Code of Practice
- The waste management page on GOV.UK

Waste to be taken off-site

Contaminated soil that is (or must be) disposed of is waste. Therefore, its handling, transport, treatment and disposal are subject to waste management legislation, which includes:

- Duty of Care Regulations 1991
- Hazardous Waste (England and Wales) Regulations 2005
- Environmental Permitting (England and Wales) Regulations 2016
- The Waste (England and Wales) Regulations 2011

Developers should ensure that all contaminated materials are adequately characterised both chemically and physically in line with British Standard BS EN 14899:2005 'Characterization of Waste - Sampling of Waste Materials - Framework for the Preparation and Application of a Sampling Plan' and that the permitting status of any proposed treatment or disposal activity is clear. If in doubt, the Environment Agency should be contacted for advice at an early stage to avoid any delays.

If the total quantity of hazardous waste material produced or taken off-site is 500kg or greater in any 12 month period, the developer will need to register with us as a hazardous waste producer. Refer to the hazardous waste pages on GOV.UK for more information.

Piling and Penetrative ground improvement methods

Piling or any other foundation designs using penetrative methods can result in risks to potable supplies from, for example, pollution / turbidity, risk of mobilising contamination, drilling through different aquifers and creating preferential pathways. Thus it should be demonstrated that any proposed piling will not result in contamination of groundwater.

Advice to the Applicant

The applicant has assessed the risks to water quality during construction and must implement the controls they have highlighted. These should be secured in a CEMP and their effectiveness reviewed regularly when construction is underway.

The dewatering and discharge activities associated with this development will require an Environmental Permit under the Environmental Permitting (England & Wales) Regulations 2016, from the Environment Agency, unless an exemption applies.

The applicant is advised to contact the Environment Agency on 03708 506 506 for further advice and to discuss the issues likely to be raised. You should be aware that there is no guarantee that a permit will be granted. Additional 'Environmental Permitting Guidance' can be found at: <https://www.gov.uk/environmental-permit-check-if-you-need-one>.

If waste is to be used on site, the applicant will need to ensure they can comply with the exclusion from the Waste Framework Directive (WFD) (article 2(1) (c)) for the use of, 'uncontaminated soil and other naturally occurring material excavated in the course of construction activities. Meeting these criteria means the material is not waste and permitting requirements do not apply.

Where the applicant cannot meet the criteria, they will be required to obtain the appropriate waste permit or exemption from us. A deposit of waste to land will either be a disposal or a recovery activity. The legal test for recovery is set out in Article 3(15) of WFD as:

- Any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy.
- We have produced guidance on the recovery test which can be viewed as (insert <https://www.gov.uk/guidance/waste-recovery-plans-and-permits#waste-recovery-activities>)
- You can find more information on the Waste Framework Directive here: <https://www.gov.uk/government/publications/environmental-permitting-guidance-the-waste-framework-directive>

More information on the definition of waste can be found here:
<https://www.gov.uk/government/publications/legal-definition-of-waste-guidance>

More information on the use of waste in exempt activities can be found here:
<https://www.gov.uk/government/collections/waste-exemptions-using-waste>

Non-waste activities are not regulated by us (i.e. activities carried out under the CL:ARE Code of Practice), however you will need to decide if materials meet End of Waste or By-products criteria (as defined by the Waste Framework Directive). The 'Is it waste' tool, allows you to make an assessment and can be found here:

<https://www.gov.uk/government/publications/isitwaste-tool-for-advice-on-the-by-products-and-end-of-waste-tests>

We are keen to work with you in resolving any of the above issues, should you wish us to undertake a detailed review of your reports or want further advice to address the above issues, and we can do this as part of our charged service.

Further engagement at the pre-application stage can speed up the formal planning application process and provide you with certainty as to what our response to your planning application will be. It should also result in a better quality and more environmentally sensitive development. As part of our charged for service we will provide a dedicated project manager to act as a single point of contact to help resolve any problems.

We currently charge £100 per hour (VAT). We will provide you with an estimated cost for any further discussions or review of documents.

The terms and conditions of our charged for service are available upon request and we recommend that you contact the area Sustainable Places team at the following email address SPPlanning.RFH@environment-agency.gov.uk

Please send me a copy of the decision notice and forward a copy of this letter to the applicant.

Yours faithfully

Mrs SYLVIA WHITTINGHAM
Planning Advisor

Direct dial 0203 0251059

Direct e-mail sylvia.whittingham@environment-agency.gov.uk

Merseyside Environmental Advisory Service
2nd Floor, Magdalen House
Trinity Road, Bootle, L20 3NJ
Director: Alan Jemmett, PhD, MBA

Enquiries: 0151 934 4951

Contact: Peter McKeon
Email: measdconsultations@eas.sefton.gov.uk

DEVELOPMENT MANAGEMENT ADVICE

To: Peter Jones
Organisation: Liverpool City Council

From: Peter McKeon
Principal Ecologist

Your Ref: 20F/0001
File Ref: LI20-014
Date: 20 April 2020

Development of stadium and associated works, including infilling of dock and demolition of existing structures Bramley Moore Dock, Regent Road, Liverpool

1. Thank you for consulting Merseyside Environmental Advisory Service in respect of this planning application. The proposals comprise the development of a new stadium and associated works, including the infilling of a dock and demolition of existing structures.
2. Having reviewed the application and supporting documentation, our ecological advice is set out below in two parts.
 - Part One deals with issues of regulatory compliance, action required **prior to determination** and matters to be dealt with through planning conditions. Advice is only included here where action is required or where a positive statement of compliance is necessary for statutory purposes.
 - Should the Council decide to adopt an alternative approach to MEAS Part 1 advice, I request that you let us know. MEAS may be able to provide further advice on options to manage risks in the determination of the application.
 - Part Two sets out guidance to facilitate the implementation of Part One advice and informative notes.

In this case Part One comprises paragraphs 3 to 25, while Part Two comprises paragraph 26.

Part One

Habitats Regulations Assessment

3. The application site lies directly adjacent to the Liverpool Bay SPA and is also near to the following European sites, UDP policy OE5 applies:
 - Mersey Narrows and North Wirral Foreshore SPA;

Merseyside Environmental Advisory Service – delivering high quality environmental advice and sustainable solutions to the Districts of Halton, Knowsley, Liverpool, St. Helens, Sefton and Wirral



- Mersey Narrows and North Wirral Foreshore Ramsar;
 - Mersey Estuary SPA;
 - Mersey Estuary Ramsar;
 - Ribble and Alt Estuaries SPA; and
 - Ribble and Alt Estuaries Ramsar.
4. Due to the proximity of the proposed development to the above sites and the potential impact pathways, the applicant has submitted a shadow Habitats Regulations Assessment (HRA) (*ES Appendix 12, Technical Appendix 4 – Report to Inform Habitats Regulations Assessment Stage 1 and Stage 2, WYG, December 2019, A100795*).
5. The shadow HRA concludes that the proposed development will not lead to an adverse effect on the integrity of European sites. However, before that conclusion can be accepted I advise that the following matters require further discussion and clarification:
- High fish densities were recorded within Bramley Moore Dock (BMD) during the fish surveys. Cormorant are a piscivorous bird species and the number of birds recorded within the site was significant in terms of the Liverpool Bay SPA and Mersey Narrows and North Wirral Foreshore SPA and Ramsar site populations (peak count 11). Despite this, the shadow HRA concludes that BMD does not form a valuable foraging resource for cormorant as the numbers recorded foraging within the dock during survey equated to less than 1% of the European site populations. However, using a precautionary approach, I advise that BMD should be considered as foraging habitat considering that a significant number of cormorant were recorded within the site and that the dock provides them with a good food source. The shadow HRA considers that fish stocking levels are consistent throughout the dock system. However, this is not necessarily the case, as studies completed in relation to proposed and on-going developments at Princes Dock and West Waterloo Dock have shown;
 - According to submission documents, the fish rescue methodology is to be agreed at a later date. However, to assist in determining effects on fish populations and potential prey availability for fish eating birds for HRA purposes, I advise that an outline of the fish rescue and translocation methodology will be required;
 - Fish captured during the rescue exercise are to be transferred to other (as yet unspecified) docks. I advise that clarification should be provided as to how the docks will be chosen and whether any sampling will take place to determine their suitability to support the translocated fish. Transfer of fish into hydraulically unconnected docks should be avoided;
 - The proposals could lead to a fundamental change in the ecology and water quality of Nelson Dock. Potential effects on functionally linked habitat at Nelson Dock (and effects on fish prey species for qualifying birds) during the construction and operational phases therefore requires further discussion. For example, hydrological connectivity between Nelson and BMD will be severed during the construction phase and the potential for a decline in water quality within the dock as a result of this needs to be



considered in the shadow HRA along with how it will be monitored and overcome, if necessary;

- Further discussion of the water quality management measures that will be undertaken during the operational phase at Nelson Dock (including for salinity, water levels and algae) is also required. This should include clarification as to when the sluice gates on the new water channel will be opened / closed and whether salinity is to be maintained in the dock and, if so, how;
- The shadow HRA considers lighting effects on Nelson Dock during the operation phase, although the effects of over-shading on the dock should also be considered;
- Great crested grebe, lesser black-backed gull and herring gull are part of the named waterbird assemblage of the Liverpool Bay SPA and the numbers of those species recorded during the surveys exceeded 1% of the Liverpool Bay SPA population. Despite this, they have been screened out of assessment in the shadow HRA as the numbers recorded fall under 1% of their respective GB populations. However, ultimately HRA must assess potential harm on the integrity of the European site, not the GB or international populations. Further assessment of the effects of the proposals on those assemblage features is therefore required;
- Noise and auditory disturbance effects, during both construction and operation, have been screened out in the shadow HRA and not taken forward into Appropriate Assessment. However, to be accepted this will need to be further evidenced and justified;
- The submitted Construction Method Statement (ES Appendix 4.1) describes some of the mitigation measures that will be embedded within the proposed development. These include the installation of acoustic fencing along the western site boundary during construction works. For completeness, this needs to be referenced in the shadow HRA;
- The proposed mitigation for waterbirds comprises the placement of two floating pontoons in the adjacent Nelson Dock and the shadow HRA states that they will be managed and maintained by the applicant (or their appointed management company) in perpetuity. However, to give sufficient re-assurance that long-term mitigation will be provided, I advise that outline details of the post-development monitoring that will take place to ensure the success of mitigation should be included. An adaptive management approach should be taken and monitoring used to inform any changes to the specification or location of the mitigation. A framework for reporting the outcomes of monitoring will also need to be in place; and
- With regard to the in-combination assessment, there are other schemes which require the provision of mitigation for non-breeding birds that should be considered within the assessment including the District Heating Network at Central Docks (LPA ref: 19F/1745), Isle of Man Ferry development (LPA ref: 17F/2628) and the Northern Link Road scheme (LPA ref: 18L/3232).



Ecology

6. The submitted ecological survey information is presented in Appendix 12.1 of the Environmental Statement. The survey reports meet BS42020:2013 and comprise the following:
- Ecological Appraisal (WYG, November 2019 (updated 13 March 2020), version 1);
 - Bird Survey Report (WYG, November 2019 (updated 13 March 2020), rev 1); and
 - Bat Survey Report (WYG, November 2019 (updated 13 March 2020), rev 1).

Bats

7. The bat surveys confirmed the presence of low numbers of common pipistrelle roosting bats within the pump house (B1) in the north-eastern corner of the site. The building is due to be refurbished as part of the proposed development.
8. As the presence of roosting bats has been confirmed, the Council is required to undertake the three test assessment **prior to determination** of the application and refurbishment works to the building will have to be undertaken under a Natural England EPS licence or the bat mitigation class licence CL21.
9. Section 12.7 and Appendix 12.1 of the Environmental Statement provides brief outline of what the proposed bat mitigation will entail, i.e. provision of an alternative roost, supervision of works to roosting areas and provision of five additional roosts. However, to enable the Council to complete the three test assessment further details of the proposed bat mitigation are required **prior to determination** (e.g. methodology, timings, locations and specifications of alternative roosting provision).

Non-breeding birds

10. The main findings of the surveys for wintering and passage bird species are mentioned in relation to the shadow HRA above and are not discussed further here.

Breeding birds

11. The presence of breeding birds on the site was confirmed during the surveys. However, qualifying bird species were not recorded breeding in significant numbers.
12. Built features or vegetation on site may provide nesting opportunities for breeding birds, which are protected and UDP policy OE5 applies. The following planning condition is required:

CONDITION

No scrub removal, ground clearance and/or building works is to take place during the period 1 March to 31 August inclusive. If it is necessary to undertake works during the bird breeding season then all buildings, scrub and affected areas are to be checked first by an appropriately experienced ecologist to ensure no breeding birds are present. If present, details of how they will be protected are required to be submitted for approval.

Landscaping and habitat creation

13. The application site lies adjacent to the Mersey Estuary Nature Improvement Area (NIA), although the site provides few opportunities for the creation of additional habitats. The proposed landscaping of the site should therefore ensure that opportunities for biodiversity enhancements are maximised.
14. The submitted Landscape Softworks Plan (*MEIS Architects, 4 September 2019, BMD001-PLA-L1-00-DR-L-2000*) shows the limited landscape planting which will occur in the eastern part of the site. However, this is to be undertaken entirely with either exotic species or those which are not locally native.
15. I advise that the planting of tall growing trees like Scot's pine (*Pinus sylvestris*) is avoided as, when mature, they may provide opportunity for roosting and nesting corvids which could predate the ground-nesting birds known to be present in the adjacent docklands. Suitable alternatives in that location include rowan (*Sorbus aucuparia*), native alder (*Alnus glutinosa*), wild cherry (*Prunus avium*).
16. I advise that a revised landscaping scheme is secured by a suitably worded planning condition.

Aquatic Ecology

17. Chapter 13 of the ES, the aquatic ecology impact assessment, was informed by the Aquatic Ecology Technical Report (Appendix 13.1) (*Carcinus Ltd, 3 January 2020, J0581_012020_02, Final Rev 1.3*). The Aquatic Ecology Technical Report assesses the potential impact of the proposed development on aquatic receptors including:
 - Fish / Shellfish Ecology & Fisheries;
 - Benthic Ecology surveys;
 - Marine Mammal Ecology; and
 - Sediment Chemistry.
18. I advise that the level of aquatic survey and sample undertaken is acceptable.
19. I have referred to fish in relation to HRA matters above and do not have any further comments to make on them here.
20. The nature conservation value of the benthic communities and habitats within BMD is considered negligible given the disturbed environment (industrial dock), the presence of invasive non-native species and the absence of species of conservation importance. I will defer to the Environment Agency on this matter, although I note that starlet sea anemone (*Nematostella vectensis*) were not recorded during sampling and will not, therefore, place any constraints on the proposed development. Starlet sea anemone, listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), was previously recorded in the vicinity of Princes Dock to the south.
21. The analysis of the sediment chemistry recorded a range of contaminants which are largely typical of the docklands location. Due to the proposed dock infill methodology, which involves leaving the existing dock sediment in situ and covering with membrane,

I do not have any significant concerns regarding the spread of contaminated sediments into neighbouring docks or into the adjacent SPA.

22. I will defer to colleagues in the Environment Agency with regard to the acceptability of the Water Framework Directive assessment which has been submitted in support of the application (ES Appendix 11.7).

Ecological Impact Assessment (EclA)

23. The EclA is summarised in Chapter 12 of the ES and is given in full in ES Appendix 12. The EclA follows best practice (e.g. CIEEM, 2018) and, subject to further discussion and clarification of the matters listed above regarding the shadow HRA, the conclusions of the EclA can be accepted.

Construction Environmental Management Plan (CEMP)

24. I advise that the applicant prepares a Construction Environmental Management Plan (CEMP) document to manage and mitigate the main environmental effects during the construction phases of the proposed development. The CEMP should address and propose measures to minimise the main construction effects of the development and, amongst other things, should include details of ecological mitigation, construction and demolition waste management, pollution prevention and soil resource management. The CEMP would normally be expected to include the agreed method statements to mitigate or avoid adverse environmental impacts. The CEMP should expand upon the measures outlined in the submitted Construction Method Statement for avoiding and minimising effects of noise and construction related pollutants during the works. The CEMP should also include, but not be limited to, the following:

- Detailed fish capture and translocation methodology;
- Details of the water quality monitoring of Nelson Dock, including the parameters which will be monitored and the frequency of monitoring. The water quality triggers / thresholds that will stop infilling works should be specified; and
- Measures that will be undertaken to avoid harm to roosting bats and breeding birds.

25. The CEMP should be compiled in a coherent and integrated document and should be accessible to site managers, all contractors and sub-contractors working on site as a simple point of reference for site environmental management systems and procedures. I advise that the CEMP can be secured through a suitably worded planning condition.

Part Two

26. Hemlock (*Conium maculatum*) was recorded during the 2019 extended phase 1 habitat survey within scattered scrub in the south western part of the site (TN2). As the plant can be harmful to human health, it should be disposed of from the site prior to the commencement of works.

I would be pleased to discuss these issues further and to provide additional information in respect of any of the matters raised.

Peter McKeon MCIEEM
Principal Ecologist

Merseyside Environmental Advisory Service – delivering high quality environmental advice and sustainable solutions to the Districts of Halton, Knowsley, Liverpool, St.Helens, Sefton and Wirral



Date: 20 April 2020
Our ref: 309854
Your ref: 20F/0001



Peter Jones
Liverpool City Council
peter.jones2@liverpool.gov.uk

cc. Jamie Johnson
Marine Management Organisation
Jamie.Johnson@marinemanagement.org.uk
In reference to MLA/2020/0109

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

BY EMAIL ONLY

Dear Peter,

Planning consultation: Application for Full Planning Permission in accordance with submitted drawings for the demolition of existing buildings/structures on site (listed in the schedule); remediation works; foundation/piling works; infill of the Bramley-Moore Dock, alteration to dock walls and dock isolation works with vehicular and pedestrian links above; and other associated engineering works to accommodate the development of a stadium (Use Class D2) predominantly for football use with the ability to host other events with ancillary offices (Use Class B1a); Club Shop and retail concessions (internal and external to the stadium) (Use Class A1); exhibition and conference facilities (Use Class D1); food and drink concessions (internal and external to the stadium) (Use Classes A3 / A4 / A5); betting shop concessions (Sui Generis); and associated infrastructure including: electric substation, creation of a water channel, outside broadcast compound, photo-voltaic canopy, storage areas/compound, security booth, external concourse / fan zone including performance stage, vehicular and pedestrian access and circulation areas, hard and soft landscaping (including canopies, lighting, wind mitigation structures, public art and boundary treatments), cycle parking structures and vehicle parking (external at grade and multi-storey parking) and change of use of the Hydraulic Tower structure to an exhibition / cultural centre (Use Class D1) with ancillary food and drink concession (Use Class A3).

Location: Bramley Moore Dock, Regent Road, Liverpool

Thank you for your consultation on the above dated and received by Natural England on 20 February 2020.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Further information required to determine impacts on designated sites

In summary, Natural England advises that further information is required to provide appropriate detail and justification particularly regarding the proposed mitigation measures. We advise that uncertainty remains regarding the impacts of the proposed scheme on designated sites, both alone and in-combination.

Our advice follows below and we have provided detailed comments on the HRA in Annex A. The advice within this letter focuses on the following document:

- Report to Inform Habitats Regulations Assessment Stage 1 and Stage 2 v4 by WTG, dated March 2020

Natural England has utilised some of the additional documents available to inform our comments however, we will provide further detailed comments in respect to the Environmental Statement and other documents in due course.

We provide this letter to both Liverpool City Council (LCC) and to the Marine Management Organisation (MMO) to aid consistency and we are keen to work closely with both regulators (and also the Environment Agency) to adopt a coastal concordat approach with this development to ensure a single, robust Habitats Regulations Assessment is provided covering all aspects of the development.

Internationally and nationally designated sites

This application is adjacent to Liverpool Bay Special Protection Area (SPA) and within 1.2km of the Mersey Narrows and North Wirral Foreshore SPA and Ramsar, and the Mersey Narrows Site of Special Scientific Interest (SSSI).

In considering the European site interest, Natural England advises that you, as a competent authority under the provisions of the Habitats Regulations, should have regard for any potential impacts that a plan or project may have¹. The [Conservation objectives](#) for each European site explain how the site should be restored and/or maintained and may be helpful in assessing what, if any, potential impacts a plan or project may have.

Please see the subsequent sections of this letter for our advice relating to SSSI features.

Habitats Regulations Assessment (HRA)

The applicants have provided the document "Report to Inform Habitats Regulations Assessment Stage 1 and Stage 2" which assesses the impacts of the development. We provide the advice enclosed on the assumption that your authority intends to adopt this document as a shadow HRA to fulfil your duty as competent authority. We remind you that as competent authority, it is your responsibility to produce the HRA.

Natural England notes that an appropriate assessment of the proposal has been undertaken in accordance with Regulation 63 of the Conservation of Species and Habitats Regulations 2017 (as amended). Natural England is a statutory consultee on the appropriate assessment stage of the Habitats Regulations Assessment process, and a competent authority should have regard to Natural England's advice.

The appropriate assessment concludes that your authority is able to ascertain that the proposal will not result in adverse effects on the integrity of any of the sites in question. Having considered the assessment, and the measures proposed to mitigate for any adverse effects, it is the advice of Natural England that the assessment does not currently provide enough information and/or certainty to justify the assessment conclusion and that your authority should not grant planning permission at this stage.

Further assessment and consideration of mitigation options is required, and Natural England provides detailed advice on the additional assessment work required within Annex A.

Should the applicant wish to discuss the further information required and scope for mitigation with Natural England, we would be happy to provide advice through our [Discretionary Advice Service](#).

¹ Requirements are set out within Regulations 63 and 64 of the Habitats Regulations, where a series of steps and tests are followed for plans or projects that could potentially affect a European site. The steps and tests set out within Regulations 63 and 64 are commonly referred to as the 'Habitats Regulations Assessment' process.

The Government has produced core guidance for competent authorities and developers to assist with the Habitats Regulations Assessment process. This can be found on the Defra website. <http://www.defra.gov.uk/habitats-review/implementation/process-guidance/guidance/sites/>

In-combination assessment

When your authority undertakes the necessary HRA, consideration also needs to be given to the in-combination effects with other plans and projects, if it can be determined that the other plans or projects, themselves, would not result in likely significant effect. The assessment needs to consider those other plans and projects that could have the same effect such as displacement, disturbance, habitat loss.

Plans or projects comprise the following;

- a) The incomplete or non-implemented parts of plans or projects that have already commenced;
- b) Plans or projects given consent or given effect but not yet started.
- c) Plans or projects currently subject to an application for consent or proposed to be given effect;
- d) Projects that are the subject of an outstanding appeal;
- e) Ongoing plans or projects that are the subject of regular review.
- f) Any draft plans being prepared by any public body;
- g) Any proposed plans or projects published for consultation prior to the application

This could include plans or projects from neighbouring Local Planning Authorities and those in the marine environment.

Liverpool Waters (strategic approach)

We are aware that this development site falls within the wider Liverpool Waters scheme. The development proposed is a major change from that which was identified within the Outline Permission (planning reference 10O/2424) which originally proposed a water sports activity centre within Bramley Moore Dock. From our understanding the original development did not involve any works to infill the dock and therefore no loss of the water, however this application requires the infilling of the entire dock, which we note is the largest dock within the Liverpool Waters site accounting for ~4ha (20%) of all the open water available in the Liverpool Waters docks. As highlighted with evidence from the original permission and other reports (e.g. [TEP report 2015](#)) these docks provide functionally linked supporting habitat for SPA birds.

We acknowledge impacts on supporting habitat has been identified within the HRA, however we would like to highlight our concerns regarding increasing development pressure within all of the Liverpool (and Birkenhead) docks which is likely to cause a reduction in the availability of this supporting habitat available. We advise that a holistic approach to considering the implications of developments is necessary and a strategic approach to delivery of mitigation measures, ultimately ensuring that supporting habitat remains available for SPA birds.

We understand that this current application is a standalone application and must be considered on an individual case basis, however we advise that LCC should ensure that this development does not undermine the proposals as set out within the outline permission for Liverpool Waters. This further includes considering the impacts of the development on the proposed mitigation at Nelson Dock as set out within the Outline Permission HRA. There is a need to ensure that sufficient mitigation is provided across the wider site. Further consideration may be needed towards a review of the outline permission (review of consents) due to change in designated sites and the changing proposals coming forwards and to ensure that mitigation proposed remains sufficient for future developments. We highlight that it is LCC's duty to review existing consents and permissions (Regulations 65 & 66) to ensure that they remain compliant with the Habitats Regulations (2017) and that this applies to the principal consent.

We strongly advise that in order future developments in Liverpool Waters come forwards as Reserved Matters applications, therefore ensuring that the applications meet the requirements as agreed within the Outline Permission. We acknowledge that Peel have been working on a strategic mitigation package and we have provided advice to support such an approach. In line with comments above this development should ensure that a joined up approach with those measures are considered therefore ensuring resilience and wider enhancement opportunities across the site are maximised.

Environmental Statement (ES)

We note that within the Biodiversity Report (Appendix 12.1 of the ES) that tables 10.10, 10.11 and 10.13 within section 12.8 (Likely significant environmental effects of the scheme) include similar information to that presented within the HRA relating to impacts on designated sites, we refer you to our below detailed advice on the HRA and advise that our comments apply equally to the information provided within the above listed tables. It should be ensured that the tables and assessment within the ES are updated.

SSSI

Our concerns regarding the potential impacts upon the Mersey Narrows SSSI coincide with our concerns regarding the potential impacts upon the international designated sites.

Please note that if your authority is minded to grant planning permission contrary to the advice in this letter, you are required under Section 281 (6) of the Wildlife and Countryside Act 1981 (as amended) to notify Natural England of the permission, the terms on which it is proposed to grant it and how, if at all, your authority has taken account of Natural England's advice. You must also allow a further period of 21 days before the operation can commence.

Discretionary Advice Service

Natural England can provide quality tailored advice at pre-application, pre-determination and post-consent stages through the Discretionary Advice Service (DAS). Natural England can ensure that appropriate environmental considerations are made at an early stage of a proposal minimising the risk of delays later in the consultation process. More information regarding the Discretionary Advice Service can be found at: <https://www.gov.uk/guidance/developers-get-environmental-advice-on-your-planning-proposals> .

Other advice

Further general advice on the protected species and other natural environment issues is provided at Annex B.

If you have any queries relating to the advice in this letter please contact me at the details below. Please consult us again once the information requested above, has been provided.

Yours sincerely,

Amanda Yeomans

Senior Adviser
Cheshire to Lancashire – Coast and Marine Team
Amanda.yeomans@naturalengland.org.uk

Annex A: Detailed comments on shadow HRA

No.	Section No.	Document Page No.	Comment	Comment for LCC/MMO
1	1.3 Development Proposals	Starting pg. 4 to pg. 9	The construction methodology here provides highly detailed information on all the activities to be undertaken to infill the dock. There is limited further information on the specific construction activities for the stadium development following dock infill with a simple bullet list of activities on page 9. We appreciate a further Appendix provides detail however it seems inconsistent with the detail provided on the initial methods. Should LCC/MMO wish to rely upon this document to provide the HRA for the development then consistent detail is required throughout. We advise that the HRA should cover all aspects of the development through enabling, demolition, construction and operation, therefore the relevant detail should be summarised for all of the construction phase together with bringing in the programme/phasing of works and associated timeline. This should sit within the body of the HRA and detailed information in the Appendix documents provided for further reference.	LCC & MMO
2	1.3- Fish transfer	Page 4	We note that there is quite a lot of detail provided around impacts to fish within this HRA- these fish species are not a designated feature of the designated sites therefore context should be provided to explain why the fish are considered within this assessment i.e. do they form part of a feeding resource for the bird species of the designated sites? NE defer to the EA for detailed advice on impacts to fish species within the dock system.	LCC & MMO
3	1.3 Dock closure	Page 7	Comments on baseline monitoring- NE advises that further detail on any pre-construction baseline monitoring is presented alongside the application documentation. We question what monitoring will be undertaken to establish the level of contaminants if any within the docks and whether there is any risk of transfer of these through the dock system by activities undertaken.	LCC & MMO
4	1.3 Dock reclamation	Pages 7- 8	Comments on source of material and impacts- We note that material for dock infill is to be sourced from licenced area 457, we question whether the existing permission covers this volume of extraction and that this licence is fit for purpose. Please note that any licence granted for extraction prior to 2016 may not have considered impacts on additional features of Liverpool Bay SPA, therefore we advise that a review of consents may be required to ensure that the activity is covered by a	MMO

			licence supported by a robust and up to date HRA. We question how many vessel transfer visits are required to the development site- vessel transfer should be considered as an additional impact pathway for disturbance to birds within the designated sites (mainly Liverpool Bay SPA). Note the in-combination assessment will need to consider any additional marine licence activities within the area, including ongoing dredging and further related activities in the marine environment and those associated with the docks e.g. Isle of Man Ferry Terminal.	
5	1.3. Installation of permanent northern isolation structure	Starting page 8	We note that there is proposed hydrological connectivity between Sandon Dock and Nelson Dock as outlined within Appendix 12.1 Biodiversity (section 12.1.5 (also see page 24 ASLE) but it is unclear how this will be achieved and whether there is further need to consider additional marine licence implications on any further activities. We defer to the MMO to consider implications of the remaining hydrological connectivity and request clarity is provided on the extent of marine licensing requirements throughout the northern docks.	MMO (LCC)
6	1.6 Site selection	Page 10	We acknowledge Mersey Estuary Ramsar has been identified here and welcome the inclusion of this site within the assessment.	LCC & MMO
7	Table for ALSE		NE Overarching comments on ALSE We advise that the impact pathways identified are appropriate, however further consideration of the potential receptors for each pathway is needed. For example it is not clear which designated sites/features are considered with each impact and whether some sites/features can be screened out at this stage and which must be considered further under AA. There is reference to the conservation objectives of the designated sites in some sections of the table, we remind you that consideration at ALSE stage is broad assessment of potential impacts that are likely to have a significant impact, in the absence of any mitigation measures, and therefore require further detailed consideration at AA. At AA the assessment must consider the impact on the conservation objectives and therefore whether there is an adverse effect on the integrity of the designated site.	LCC & MMO
	Table for ALSE- Construction			
8	Table for ALSE-	Page 24	Mobilisation of contaminated sediments- As per comments above we question	MMO (LCC)

	Mobilisation of contaminated sediments		whether further contaminant testing will be undertaken. We note the reference to the Construction Management Plan (CMP) stating “..does not consider there to be any contaminated soils of sediment on site”- however section 5.2 of the CMP states that there “were typical contaminants on site and 2 results were hazardous”. We defer to the EA and CEFAS for further advice, however we advise that clear evidence of thorough consideration of impacts of any contaminants within the dock system is considered. Whilst direct impacts to the designated sites may not be likely there may be additional impacts within the docks which provide functionally linked supporting habitat and furthermore have been identified as mitigation sites for cormorants.	
9	Table for ALSE- Habitat loss within functional habitat	Page 24	NE concurs with the assessment here and further consideration of impacts on FLL is required in an AA. However, referring to our overarching comments above there is no indication as to which features are considered, we note that some species may be excluded from further assessment due to the docks not providing functional habitat based on evidence available (e.g. little gull and red throated diver)	LCC & MMO
10	Table for ALSE- Habitat degradation – air quality & dust deposition	Page 24-25	Potential impacts on Liverpool Bay SPA have been identified, should any mitigation measures be employed to reduce the impact of dust deposition within the site (referring to any measures set out within the CEMP) then we advise that further consideration is required at AA, in line with the People over Wind judgement. With the impact identified we therefore disagree that this is ruled out at this stage.	LCC & MMO
11	Table for ALSE- Habitat degradation – effects on water quality during dock infill preparation – raking of dock prior to infill	Page 25	We recognise here that there is further reference to fish species providing prey species for SPA birds, however there is no further detail recognising which SPA birds are most likely to be impacted. With reference to the potential impact and measures being employed we highlight that further assessment should be undertaken at AA. We question whether additional measures to reduce impact of contaminants within the water column and their transfer between docks is to be applied and if so then we advise that further consideration is required at AA, in line with the People over Wind judgement.	LCC & MMO
12	Table for ALSE- Habitat degradation – effects on water quality during dock infill	Page 26	We note that this section may include potential measures to reduce and mitigate impacts, therefore we advise that further consideration is required at AA, in line with the People over Wind judgement. We note that no consideration here is given towards direct run off to designated sites.	LCC & MMO
13	Table for ALSE- Disturbance of qualifying features during transfer of aggregate to site	Page 26	We advise further justification is provided here, i.e. how many additional vessel visits are anticipated. There is limited detail and evidence provided to support the conclusions made. We highlight that where there is uncertainty of an impact then further consideration at AA is required, therefore caution to using the term “highly unlikely” should be made as this does not provide the certainty as required by the Habitats Regulations- therefore we advise that a precautionary approach is made.	LCC & MMO

14	Table for ALSE- Disturbance of qualifying features – visual and auditory disturbance during transport and transfer of dredged materials	Page 26	We question what the difference is between this impact with that above “Disturbance of qualifying features during transfer of aggregate to site?” This impact could be considered jointly with that above (13). Note comments above also apply here.	LCC & MMO
15	Table for ALSE- Disturbance of qualifying features – visual and auditory disturbance.	Page 27	NE disagrees that LSE is ruled out for this impact pathway. Further evidence and justification is required to demonstrate why noise and visual disturbance will not significantly impact on SPA birds present in area. Visual: We do not agree with the ruling out of visual impacts here with the justification provided that on the basis that qualifying features of designated sites will become accustomed to the works taking place. All of the works represent a significant change to the type of operations currently taking place in and around BMD, coupled with the scale of the development we advise that visual impact pathways require further consideration in the AA. Auditory: The baseline noise levels are stated to be between 47 and 52dB, with average construction noise levels expected range upwards from 67.4dB. We advise further consideration of noise impacts is required where there is more than a 3dB increase from baseline noise levels. Therefore, we consider there is potential for impacts as a result of noise and that further consideration within the AA is required. This should include further detail on the maximum average expected noise levels as well as the minimum of the range, and consideration of the peak noise levels which may be more disturbing particularly as they can be more intermittent. Reference to qualifying features being tolerant of noise levels in excess of 105dB is referenced- however there is no context or reference to what species are being considered here. Noise levels from construction activities are higher than baseline levels and measures such as acoustic hoarding have been identified within the CMP with the statement “Acoustic hoarding will be installed on the western site boundary to mitigate potential noise impacts on wintering birds associated with the surrounding European designated sites as far as practicable” (see section 6.2 pg.44) therefore in line with the People over Wind judgement further consideration is required at AA. Again as per our overarching comment disturbance may be ruled out for certain designated sites and features but note that we do not agree that all features/sites can be ruled out.	LCC & MMO
16	Table for ALSE - Displacement of prey	Page 27	See comments above in relation to fish species which may further apply here. No clear link is provided to which SPA birds are impacted through this pathway within	LCC & MMO

	species for bird species forming qualifying features – noise and vibration		the HRA. NE defers to the EA for further advice on the fish species in question and expects there to be full consideration of impacts on fish within the EIA.	
17	Table for ALSE- Disturbance of qualifying features – lighting effects	Page 28	As mentioned above there may be potential measures that are being relied upon to avoid significant impact for SPA birds therefore if measures to reduce, minimise and avoid impact are being applied then further consideration of impacts is required at AA.	LCC & MMO
	Table for ALSE- Operation			
18	Table for ALSE- Habitat degradation within designated sites - as a result of increased visitor numbers causing trampling effects and disturbance to bird species	Page 28	As per our overarching comments it is not clear what sites are being considered here. Not all sites are likely to have this as an impact pathway, for example with distance to Mersey Estuary SPA/Ramsar. The impact pathway considers “habitat degradation within designated sites” however there is reference to FLL therefore the pathway is broader than that within the title.	LCC & MMO
19	Table for ALSE- Disturbance of qualifying features – visual and auditory disturbance.	Page 28	We note that noise levels are stated to be just 1.2 dB above baseline levels, however as mentioned above the baseline level is 47-52dB and the noise figures stated from activities, match days and events is greater than this. Therefore further evidence and justification is required to support the conclusions here. For visual disturbance there is no consideration of the impacts of the presence of the stadium building on shading impacts onto adjacent docks which may impact upon availability of supporting habitat.	LCC & MMO
20	Table for ALSE- Disturbance of qualifying features – lighting effects.	Page 29	Air quality: Limited evidence and justification is provided here to support the conclusions made, however we note that information is available within the Air Quality report and therefore we advise that the relevant detail from this document is incorporated into the HRA to support conclusions. Lighting: We disagree that impacts associated with lighting are ruled out at this stage based on the limited evidence and justification provided here to support the conclusions made. Further consideration to measures to limit light spill to surrounding habitats is required. The visual disturbance of lighting at this site is likely to be considerable more than the baseline lighting on the site, we question how this will impact upon supporting habitat and SPA bird behaviours such as roosting and	LCC & MMO

			foraging.	
21	5.0 In combination – 5.1. projects	Page 32	We note that reference is made to the EIA chapter for cumulative assessment, we would like to highlight that HRA is a separate environmental assessment required and therefore detailed references and lists should be provided within the HRA. We advise that there are additional schemes that are missing from the in combination list, we advise that you ensure all relevant planning and marine licence applications are considered. We note that other Liverpool Waters developments have not been included such as Northern Link Road, Southern Link Road, Isle of Man Ferry Terminal and Plot A03. There is the potential for marine works to impact in combination for example ongoing maintenance dredging and marine licences associated with Liverpool Cruise Terminal and Isle of Man Ferry terminal.	LCC & MMO
22	Liverpool Waters-	Page 36	Please note that the Liverpool Waters HRA does not include an assessment for Liverpool Bay SPA and NE regards the HRA for Liverpool Waters to be outdated and therefore should not be relied upon to draw the conclusions here. All Liverpool Waters developments are required to provide updated HRAs. Mitigation was identified for Liverpool Waters in the form of roosting pontoons to be provided within Nelson Dock, this is a requirement of the HRA. There is no further consideration or mention of this and how potential impacts from the development may impact and undermine the mitigation proposed. We are aware that a strategic mitigation package is being developed for Liverpool Waters and therefore there is the potential that this development can impact upon those plans. We disagree that Liverpool Waters outline permission is screened out here.	LCC (& MMO)
23	Liverpool Cruise Terminal	Page 36	We advise you ensure that the most up to date HRA is used to consider in combination impacts. We are aware that MMO have produced their own HRA which provides different conclusion to that mentioned within the text. Mitigation has been required for Liverpool Cruise Terminal and consideration of impacts at AA was carried out.	LCC & MMO
24	Wirral Waters	Page 39	Please note that since the EIA and HRA was produced for Wirral Waters there have been a number of changes, including new designated sites and the use of the docks by breeding common terns, therefore it is not appropriate to rely on conclusions made at the time. Further evidence can be seen in standalone applications that have come forwards. Further evidence of impacts is through the need for strategic mitigation. Standalone developments should be considered within the in combination assessment.	LCC & MMO
25	5.2 Plans	Page 41	We advise the North West Marine Plan is considered within this section. We note that the plan is now out for formal consultation so therefore is material consideration within the assessment process. See here for more information:	MMO (& LCC)

			https://www.gov.uk/government/collections/north-west-marine-plan	
26	5.2.2 Wirral Core Strategy	Page 43	We advise that further consideration to updated information associated with the emerging Wirral Local Plan is needed. Information is available from the recent issues and options consultation and initial HRA. See here for more information: https://www.wirral.gov.uk/planning-and-building/local-plans-and-planning-policy/wirral-new-local-plan/new-local-plan	LCC (& MMO)
27	6.0 Appropriate Assessment		<u>Overarching Comments</u> As per above with the ALSE it is not clear which designated sites and features are being considered further at AA. We advise that it is unlikely based on the evidence provided that all species need to be considered at AA. There is an overall lack of evidence and justification for some of the conclusions made, some examples are provided below but this is not considered to be an exhaustive list of outstanding queries. In- combination projects are not clearly presented within the AA- focus seems to be on the Plans. Inconsistent use of CEMP as a mitigation measure or best practice – refer to comments below under 31. Consideration of impacts under AA requires consideration of the conservation objectives of the designated sites- there is reference to the favourable conservation status however this is a broad term that implies all species of all sites are in favourable condition- no evidence is referenced to support this. Conservation Objectives consider: •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 populations of each of the qualifying features •the distribution of qualifying features within the site	LCC & MMO
28	6.1 Breeding birds	Page 45-46	The evidence provided here demonstrates that no breeding birds were recorded at the site in numbers greater than 1% of their population- therefore these birds can be screened out at ALSE as there is no impact pathway for a significant effect. No further consideration of breeding birds is required within the HRA process, however, consideration of impacts to breeding birds is required within the EIA (Ecology chapter) to ensure that measures to avoid impacts to breeding birds such as	LCC & MMO

			disturbing/ destroying any nests are avoided, noting that all breeding birds are protected under the Wildlife and Countryside Act 1981.	
29	6.2. Wintering birds	Page 46- 52	We note that the majority of species are identified in figures >1% of the qualifying feature either on site or within 400m. Many of these species are not features in their own right nor do they form a named component of the assemblage with figures greater than 2,000 or the GB population. However, these species contribute towards the overall assemblage therefore consideration of an impact on these birds with respect to the diversity of the assemblage is required to support any reasoning for not considering the species further in the assessment. We draw your attention to the conservation advice package for Mersey Narrows and North Wirral Foreshore SPA which explains further detail about considering the diversity of the assemblage, please see here: https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9020287&SiteName=mersey+narrows&SiteNameDisplay=Mersey+Narrows+and+North+Wirral+Foreshore+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=5 We are aware of recent additional survey work that has been undertaken to support the Liverpool Waters developments and the identification of the northern docks of being a key area for cormorants. We advise that all available evidence is utilised to support the HRA, therefore we encourage join up with the other schemes and outline permission for Liverpool Waters.	LCC & MMO
30	6.3 Passage birds	Page 52	The evidence provided here demonstrates that no passage birds were recorded at the site in numbers greater than 1% - therefore these birds can be screened out at ALSE as there is no impact pathway for a significant effect.	LCC & MMO
31	6.5. Assessment of effects	Page 53	We note the reference towards the inbuilt measures presented within the CMP and additional mitigation measures and suggest it would be useful to present a clear list of what these measures are. We appreciate there is a grey area between the need of consideration of further assessment for inbuilt measures, but where these measures are relied upon to reduce, minimise and mitigate impacts they must be assessed within the AA. For example relying on the CEMP is considered within this AA- therefore returning to comments above under ALSE there may be the need to consider further impact pathways at AA. We advise MMO and LCC to consider their position with respect to this to ensure	LCC & MMO

			they are compliant with HRA and take a consistent approach.	
32	6.5.1 Habitat loss within functional habitat beyond boundary of designated sites	Page 53	We advise further evidence and justification is provided for foraging habitat for cormorant. There appears to be inconsistency within the HRA with respect to the need to consider fish species as prey. Further evidence to the area the site provides as functional habitat should be provided to give context of the area of supporting habitat being lost. The importance of the resting resource is considered but again there is no indication to whether there are key hotspots identified from survey work and the importance of the northern docks which has been picked up in other survey work – referring to original work looked at by Liverpool Waters identified the Northern docks as a key area for cormorant. Further information, evidence and certainty is required for the mitigation. For example limited information is provided to explain why 2 platforms are deemed to be suitable, what is the carrying capacity of these platforms, how will they be installed and the timing of the installation? How will success of the mitigation rafts be determined? There is no reference to any monitoring or management plans and we advise that an adaptive management plan will be required to. Justification to the location of the mitigation is required, we note that it is stated that undisturbed areas of Nelson dock will be utilised, but further detail on the location and reasoning behind this location is required and how it will not be impacted by operational activities. The strategic approach to mitigation is identified, and as stated NE supports such an approach however, it is not clear how this mitigation fits into the wider strategic approach and monitoring programme that is being proposed across the wider site. Any implications of this development on the mitigation already set out for Liverpool Waters needs to be considered to ensure that this development does not undermine that which has been already agreed. Noting the potential hydrological connectivity between Sandon Dock and Nelson Dock we advise the MMO to consider any additional marine licence requirements for the pontoons. It would be useful if MMO can provide further clarity on marine licensing across the rest of these docks as there may be wider implications for Liverpool Waters. No consideration of the impacts on adjacent docks such as Nelson dock are	LCC & MMO

			included, for example additional impacts from shading from the presence of the stadium are not picked up and this may impact on additional FLL available in the docks. What proportion of the docks will be impacted?	
33	6.5.2 Habitat degradation - water quality impacts as a result of pollution events	Page 55	Further evidence of potential risk of the impact should be described here, also making reference to direct impact to Liverpool Bay SPA. If additional consideration is looking at oil spill impacts to prey items within Liverpool Bay then there are wider implications than just cormorants- foraging common terns feed within the river Mersey- no consideration is made to wider impacts here.	LCC & MMO
34	6.5.3. Loss of qualifying features- potential bird strike	Page 56	Limited evidence is provided to support the mitigation measures proposed here. For example, what are the flight lines for cormorants across this dock and wider area? What is an appropriate distance from the stadium for the pontoons to reduce likelihood of approaching the structure in flight?	LCC & MMO
35	6.6. Conclusion	Page 57	We advise you ensure correct terminology and a succinct conclusion is present, again reference to negligible (bold text) does not follow the precautionary principle of HRA.	LCC & MMO
36	6.8 Discussion	Page 58	Our overarching advice to LCC and MMO is that NE are unable to concur with the assessment conclusions at the present time based on the need for further evidence and information required. We advise that a review of the ALSE is required to ensure that impacts are assessed at the correct stage of HRA, a number of pathways we advise need further consideration at AA. We therefore advise that LCC and MMO do not adopt the document in its current form to provide the HRA for the development.	LCC & MMO

Annex B: Additional advice

Natural England offers the following additional advice:

Landscape

Paragraph 170 of the National Planning Policy Framework (NPPF) highlights the need to protect and enhance valued landscapes through the planning system. This application may present opportunities to protect and enhance locally valued landscapes, including any local landscape designations. You may want to consider whether any local landscape features or characteristics (such as ponds, woodland or dry stone walls) could be incorporated into the development in order to respect and enhance local landscape character and distinctiveness, in line with any local landscape character assessments. Where the impacts of development are likely to be significant, a Landscape & Visual Impact Assessment should be provided with the proposal to inform decision making. We refer you to the [Landscape Institute](#) Guidelines for Landscape and Visual Impact Assessment for further guidance.

Protected Species

Natural England has produced [standing advice](#)² to help planning authorities understand the impact of particular developments on protected species. We advise you to refer to this advice. Natural England will only provide bespoke advice on protected species where they form part of a SSSI or in exceptional circumstances.

Local sites and priority habitats and species

You should consider the impacts of the proposed development on any local wildlife or geodiversity sites, in line with paragraphs 171 and 174 of the NPPF and any relevant development plan policy. There may also be opportunities to enhance local sites and improve their connectivity. Natural England does not hold locally specific information on local sites and recommends further information is obtained from appropriate bodies such as the local records centre, wildlife trust, geoconservation groups or recording societies.

Priority habitats and Species are of particular importance for nature conservation and included in the England Biodiversity List published under section 41 of the Natural Environment and Rural Communities Act 2006. Most priority habitats will be mapped either as Sites of Special Scientific Interest, on the Magic website or as Local Wildlife Sites. List of priority habitats and species can be found [here](#)³. Natural England does not routinely hold species data, such data should be collected when impacts on priority habitats or species are considered likely. Consideration should also be given to the potential environmental value of brownfield sites, often found in urban areas and former industrial land, further information including links to the open mosaic habitats inventory can be found [here](#).

Environmental enhancement

Development provides opportunities to secure net gains for biodiversity and wider environmental gains, as outlined in the NPPF (paragraphs 8, 72, 102, 118, 170, 171, 174 and 175). We advise you to follow the mitigation hierarchy as set out in paragraph 175 of the NPPF and firstly consider what existing environmental features on and around the site can be retained or enhanced or what new features could be incorporated into the development proposal. Where onsite measures are not possible, you should consider off site measures. Opportunities for enhancement might include:

- Providing a new footpath through the new development to link into existing rights of way.
- Restoring a neglected hedgerow.
- Creating a new pond as an attractive feature on the site.
- Planting trees characteristic to the local area to make a positive contribution to the local landscape.

² <https://www.gov.uk/protected-species-and-sites-how-to-review-planning-proposals>

³ <http://webarchive.nationalarchives.gov.uk/20140711133551/http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

- Using native plants in landscaping schemes for better nectar and seed sources for bees and birds.
- Incorporating swift boxes or bat boxes into the design of new buildings.
- Designing lighting to encourage wildlife.
- Adding a green roof to new buildings.

You could also consider how the proposed development can contribute to the wider environment and help implement elements of any Landscape, Green Infrastructure or Biodiversity Strategy in place in your area. For example:

- Links to existing greenspace and/or opportunities to enhance and improve access.
- Identifying opportunities for new greenspace and managing existing (and new) public spaces to be more wildlife friendly (e.g. by sowing wild flower strips)
- Planting additional street trees.
- Identifying any improvements to the existing public right of way network or using the opportunity of new development to extend the network to create missing links.
- Restoring neglected environmental features (e.g. coppicing a prominent hedge that is in poor condition or clearing away an eyesore).

Access and Recreation

Natural England encourages any proposal to incorporate measures to help improve people's access to the natural environment. Measures such as reinstating existing footpaths together with the creation of new footpaths and bridleways should be considered. Links to other green networks and, where appropriate, urban fringe areas should also be explored to help promote the creation of wider green infrastructure. Relevant aspects of local authority green infrastructure strategies should be delivered where appropriate.

Rights of Way, Access land and Coastal access

Paragraphs 98 and 170 of the NPPF highlights the important of public rights of way and access. Development should consider potential impacts on access land, common land, rights of way and coastal access routes in the vicinity of the development. Appropriate mitigation measures should be incorporated for any adverse impacts.

England Coast Path

Natural England has a duty to provide coastal access on foot around the whole of the English coast and is aiming to complete this by 2020. This is a new National Trail with an associated margin of land predominantly seawards of this, for the public to access and enjoy. Natural England takes great care in considering the interests of both land owners/occupiers and users of the England Coast Path, aiming to strike a fair balance when working to open a new stretch. We follow an approach set out in the approved Coastal Access Scheme and all proposals have to be approved by the Secretary of State.

We encourage any future proposals / projects to include appropriate provision for the England Coast Path to maximise the benefits this can bring to the area. This should not be to the detriment of nature conservation, historic environment, landscape character or affect natural coastal change. Natural England would be happy to provide suggestions as to the most appropriate areas for coastal access on site. You will find additional information at our website at:

<https://www.gov.uk/government/collections/england-coast-path-improving-public-access-to-the-coast>.

With the proposed alignment of the England Coast Path to be along Regent Road itself, the development site would fall within part of the default coastal margin (all the land between the line of the trail and the mean low water mark). When coastal access rights have been approved and are available for the public to use, people will then have a statutory rights of access to walk within the coastal margin unless those access rights are excepted (the coastal access rights would not apply to buildings and other land types) or have been excluded by direction for a specific reason. In view of the fact that this area is covered by the Liverpool Waters redevelopment scheme, we have

already decided to propose a direction to exclude coastal access rights covering this site whilst any preparatory work / construction work is taking place.

Once the building work is completed, that 'direction' would then need to be reviewed to see if it is still relevant and consideration would then be given to what, if any, further access management measures might be needed. At the same time, it may be that we would also wish to take that opportunity to consider whether the actual alignment of the England Coast Path should change too, perhaps following any new pedestrian routes closer to the river that might be created as part of the development.

Biodiversity duty

Your authority has a [duty](#) to have regard to conserving biodiversity as part of your decision making. Conserving biodiversity can also include restoration or enhancement to a population or habitat. Further information is available [here](#).



**United Utilities Water Limited
Developer Services & Metering**
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Liverpool City Council
2nd Floor, Millennium House Victoria Street
Liverpool
L1 6JF

Your ref: 20F/0001
Our ref: DC/20/784
Date: 15-MAY-20

Dear Sir/Madam

Location: Bramley Moore Dock, Regent Road, Liverpool

Proposal: Application for Full Planning Permission in accordance with submitted drawings for the demolition of existing buildings/structures on site (listed in the schedule); remediation works; foundation/piling works; infill of the Bramley-Moore Dock, alteration to dock walls and dock isolation works with vehicular and pedestrian links above; and other associated engineering works to accommodate the development of a stadium (Use Class D2) predominantly for football use with the ability to host other events with ancillary offices (Use Class B1a); Club Shop and retail concessions (internal and external to the stadium) (Use Class A1); exhibition and conference facilities (Use Class D1); food and drink concessions (internal and external to the stadium) (Use Classes A3 / A4 / A5); betting shop concessions (Sui Generis); and associated infrastructure including: electric substation, creation of a water channel, outside broadcast compound, photo-voltaic canopy, storage areas/compound, security booth, external concourse / fan zone including performance stage, vehicular and pedestrian access and circulation areas, hard and soft landscaping (including canopies, lighting, wind mitigation structures, public art and boundary treatments), cycle parking structures and vehicle parking (external at grade and multi-storey parking) and change of use of the Hydraulic Tower structure to an exhibition / cultural centre (Use Class D1) with ancillary food and drink concession (Use Class A3).

With regard to the above development proposal, United Utilities Water Limited ('United Utilities') wishes to provide the following comments. Please note we have requested additional information.

Request for Additional Information Prior to Determination – Access to Assets During Events

United Utilities notes the site is adjacent to our wastewater treatment works at Sandon Dock and in proximity to a range of water and wastewater assets including the Mersey Estuary Pollution Alleviation Scheme. We would be grateful if the applicant can confirm what plan exists to ensure that 24 hour access can be maintained to all our assets especially during event days. This should include consideration of appropriate provision within event day traffic management plans in order to ensure that access to our assets can be maintained.

Flood Risk

We note the submitted Flood Risk Assessment. You should ensure you consult with the Environment Agency and Lead Local Flood Authority to ensure that this is considered and any necessary mitigation and appropriate conditions are included within any permission you may grant. This is particularly important with respect to tidal flood risk.

Non-Mains Sewerage

We note that the applicant is proposing the use of non-mains sewerage for a small part of the site. We recommend you discuss this with the Environment Agency to determine if they consider this approach acceptable.

Drainage

In accordance with the National Planning Policy Framework (NPPF) and the National Planning Practice Guidance (NPPG), the site should be drained on a separate system with foul water draining to the public sewer and surface water draining in the most sustainable way. Following our review of the submitted Drainage Strategy, we can confirm we have no in principle objection to the proposed approach and therefore should planning permission be granted we request the following condition is attached to any subsequent Decision Notice.

Recommended Drainage Condition

Prior to the commencement of development, details of a sustainable surface water drainage scheme and a foul water drainage scheme shall be submitted to and approved in writing by the Local Planning Authority. The details of the drainage schemes shall be in accordance with the principles set out in the submitted Drainage Strategy of Appendix 11.4 of the Environmental Statement (Ref: BMD01-BHE-ZX-XX-RP-C-0300 - Drainage Strategy 0040026 Dated 18 November 2019 Revision P04). The drainage schemes must include:

- (i) Levels of the proposed drainage systems including proposed ground and finished floor levels in AOD;*
- (ii) Foul and surface water shall drain on separate systems; and*
- (iii) A timetable for its implementation.*

The approved schemes shall also be in accordance with the Non-Statutory Technical Standards for Sustainable Drainage Systems (March 2015) or any subsequent replacement national standards and no surface water shall discharge to the public sewer either directly or indirectly.

The development hereby permitted shall be carried out only in accordance with the approved drainage schemes and retained thereafter for the lifetime of the development.

Reason: To promote sustainable development, secure proper drainage and to manage the risk of flooding and pollution.

Please note, United Utilities are not responsible for determining an acceptable rate of discharge to the dock. This is a matter for discussion with the Lead Local Flood Authority, the Environment Agency and Peel.

Our understanding is that the applicant is not proposing to adopt the on-site drainage system. If the applicant intends to offer wastewater assets forward for adoption by United Utilities, the proposed detailed design will be subject to a technical appraisal by an Adoptions Engineer as we need to be sure that the proposal meets the requirements of Sewers for Adoption and United Utilities' Asset Standards. The detailed layout should be prepared with consideration of what is necessary to secure a development to an adoptable standard. This is important as drainage design can be a key determining factor of site levels and layout. The proposed design should give consideration to long term operability and give United Utilities a cost effective proposal for the life of the assets. Therefore, should this application be approved and the applicant wishes to progress a Section 104 agreement, we strongly recommend that no construction commences until the detailed drainage design, submitted as part of the Section 104 agreement, has been assessed and accepted in writing by United Utilities. Any work carried out prior to the technical assessment being approved is done entirely at the developer's own risk and could be subject to change.

Management and Maintenance of Sustainable Drainage Systems

Without effective management and maintenance, sustainable drainage systems can fail or become ineffective. As a provider of wastewater services, we believe we have a duty to advise the Local Planning Authority of this potential risk to ensure the longevity of the surface water drainage system and the service it provides to people. We also wish to minimise the risk of a sustainable drainage system having a detrimental impact on the public sewer network should the two systems interact. We therefore recommend the Local Planning Authority include a condition in their Decision Notice regarding a management and maintenance regime for any sustainable drainage system that is included as part of the proposed development.

We recommend the Local Planning Authority consults with the Lead Local Flood Authority regarding the exact wording of any condition. You may find the below a useful example:

Recommended Management and Maintenance Condition

Prior to occupation of the development a sustainable drainage management and maintenance plan for the lifetime of the development shall be submitted to the local planning authority and agreed in writing. The sustainable drainage management and maintenance plan shall include as a minimum:

- a. Arrangements for adoption by an appropriate public body or statutory undertaker, or, management and maintenance by a management company; and*
- b. Arrangements for inspection and ongoing maintenance of all elements of the sustainable drainage system to secure the operation of the surface water drainage scheme throughout its lifetime.*

The development shall subsequently be completed, maintained and managed in accordance with the approved plan.

Reason: To ensure that management arrangements are in place for the drainage system in order to manage the risk of flooding and pollution during the lifetime of the development.

Please note United Utilities cannot provide comment on the management and maintenance of an asset that is owned by a third party management and maintenance company. We would not be involved in the discharge of the management and maintenance condition in these circumstances.

The applicant can discuss any of the above with Developer Engineer, **Andy Jack**, by email at wastewaterdeveloperservices@uuplc.co.uk.

Water Supply

The applicant should be instructed to lay their own private pipe, to United Utilities standards, back to the existing main. If this should involve passing through third party land United Utilities must receive a solicitor's letter confirming an easement, prior to connection.

If the applicant intends to obtain a water supply from United Utilities for the proposed development, we strongly recommend they engage with us at the earliest opportunity. If reinforcement of the water network is required to meet the demand, this could be a significant project and the design and construction period should be accounted for. Discussions have commenced with the developer over the network re-inforcement required for meeting the demands for this new development and we recommend that this dialogue continues.

As this development requires a large demand, the developer should be advised to incorporate the facility for on-site storage and boosting pressures e.g. break tanks and pumps.

Please note, all internal pipework must comply with current Water Supply (water fittings) Regulations 1999.

To discuss a potential water supply or any of the water comments detailed above, the applicant can contact the team at DeveloperServicesWater@uuplc.co.uk

United Utilities' Property, Assets and Infrastructure

The applicant should note that there are water mains and assets identified as no longer in use within the application site. There are also sewers in proximity to the application site including large strategic assets. **We request that the developer contacts United Utilities for advice on identifying the exact location of the water mains / sewers and to confirm the status of the no longer in use assets prior to commencing development. We also recommend the following condition regarding the protection of our assets.**

Recommended Condition

No construction shall commence (including any earthworks) until details of the means of ensuring the water and wastewater infrastructure laid within and adjacent to the site are protected from damage as a result of the development have been submitted to and approved

by the Local Planning Authority in writing. The details shall include a survey which identifies the location of the infrastructure, the status of any not in use assets and outline the potential impacts and any mitigating measures (including a timetable for implication) to protect and prevent damage to the water and wastewater infrastructure during construction and during the operational life of the development. Any mitigation measures shall be implemented in full in accordance with the approved details and retained thereafter for the lifetime of the development.

Reason: In the interest of public health and to ensure protection of the public water supply and wastewater services.

It is the applicant's responsibility to demonstrate the exact relationship between any United Utilities' assets and the proposed development. Where United Utilities' assets exist, the level of cover to the water mains and public sewers must not be compromised either during or after construction.

For advice regarding protection of United Utilities assets, the applicant should contact the teams as follows:

Water assets – DeveloperServicesWater@uuplc.co.uk

Wastewater assets – WastewaterDeveloperServices@uuplc.co.uk

It is the applicant's responsibility to investigate the possibility of any United Utilities' assets potentially impacted by their proposals and to demonstrate the exact relationship between any United Utilities' assets and the proposed development.

A number of providers offer a paid for mapping service including United Utilities. To find out how to purchase a sewer and water plan from United Utilities, please visit the Property Searches website; <https://www.unitedutilities.com/property-searches/>

You can also view the plans for free. To make an appointment to view our sewer records at your local authority please contact them direct, alternatively if you wish to view the water and the sewer records at our Lingley Mere offices based in Warrington please ring [0370 751 0101](tel:03707510101) to book an appointment.

Due to the public sewer transfer in 2011, not all sewers are currently shown on the statutory sewer records and we do not always show private pipes on our plans. If a sewer is discovered during construction; please contact a Building Control Body to discuss the matter further.

Should this planning application be approved the applicant should contact United Utilities regarding a potential water supply or connection to public sewers. Additional information is available on our website <http://www.unitedutilities.com/builders-developers.aspx>

Yours faithfully

Adam Brennan
United Utilities
Developer Services and Metering

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