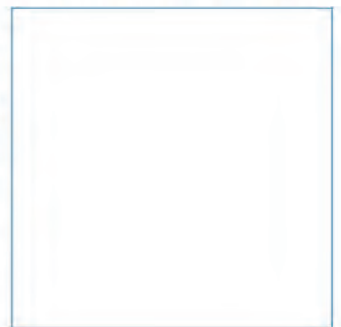
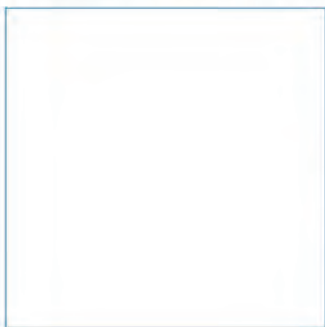


Associated British Ports

Immingham Eastern Ro-Ro Terminal

Preliminary Environmental Information Volume 2 Figures

January 2022



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Immingham Eastern Ro-Ro Terminal

Preliminary Environmental Information
Volume 2 Figures

January 2022



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Summary

This document (Volume 2) includes all the figures in support of the Preliminary Environmental Information Report (PEIR) for the proposed Immingham Eastern Ro-Ro Terminal (IERRT). The main report is included in Volume 1 of the PEIR and all of the appendices supporting the main report are included in Volume 3 of the PEIR.

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 - 1.2 Illustrative layout of proposed marine works
 - 1.3 Illustrative layout of proposed landside works
- 2 Proposed Development**
 - 2.1 Indicative area of capital dredge
- 3 Details of Project Construction and Operation**

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- 4 Need and Alternatives**

No figures for this chapter.
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No figures for this chapter.
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No figures for this chapter.

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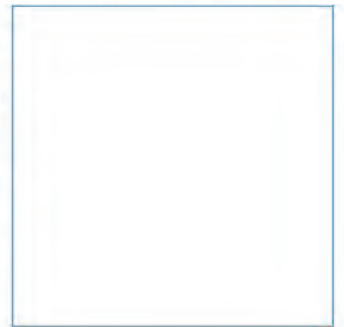
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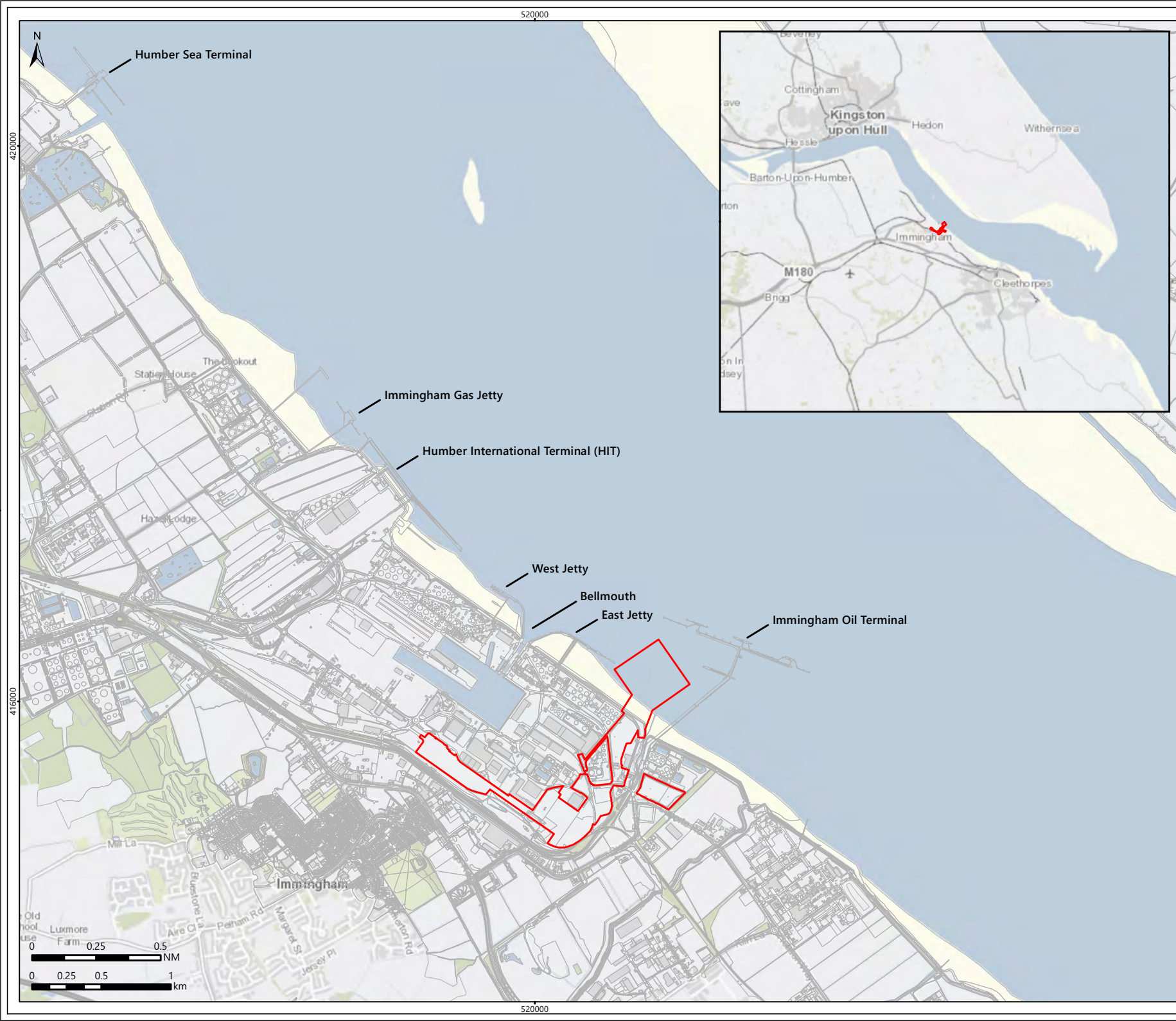
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1 Introduction

- 1.1 Location of the proposed development
- 1.2 Illustrative layout of proposed marine works
- 1.3 Illustrative layout of proposed landside works



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Legend
 Proposed Application Site

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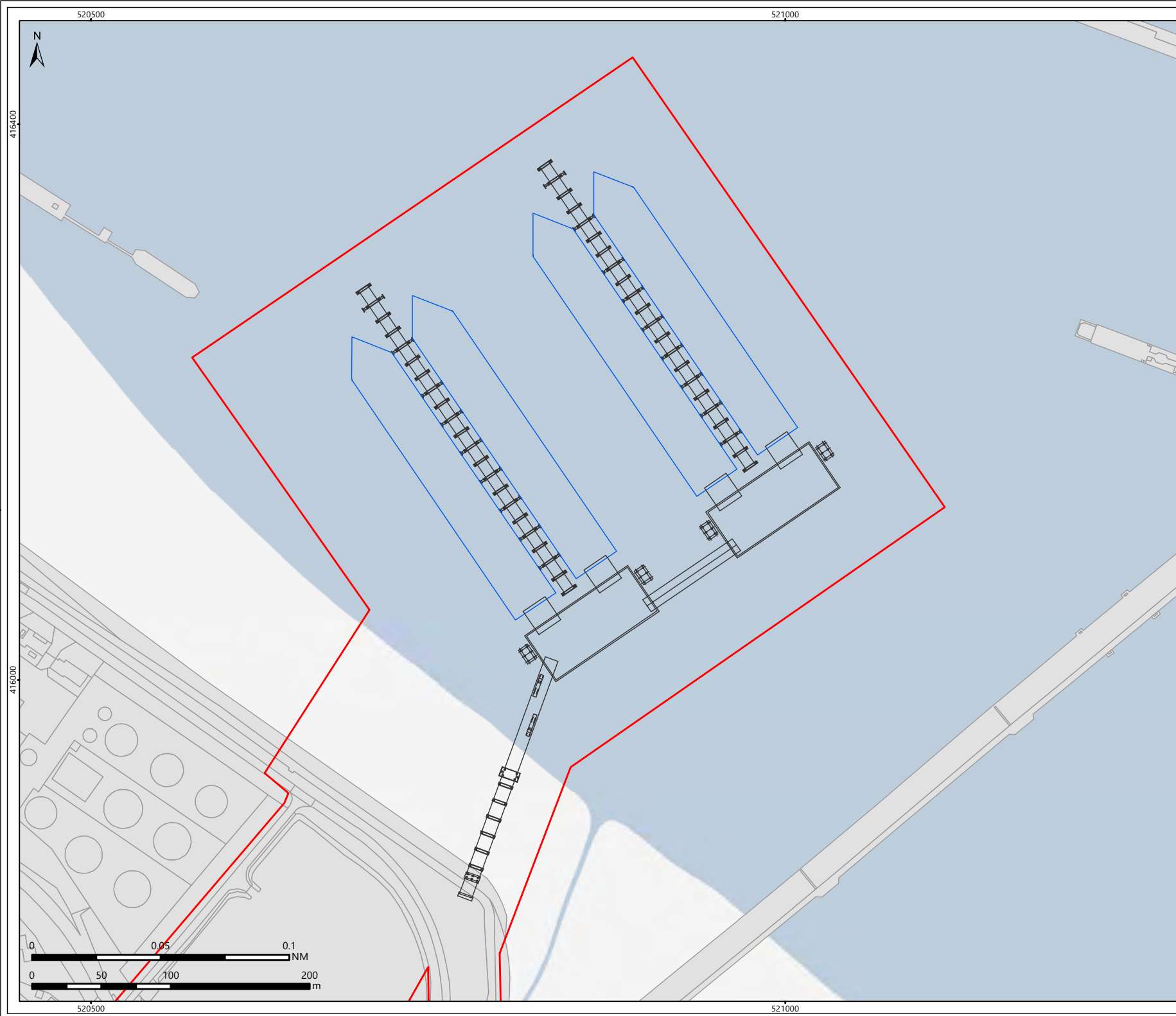


Fig1.1_Location_Plan_A4.mxd



**IMMINGHAM EASTERN
 RO-RO TERMINAL
 LOCATION OF THE
 PROPOSED DEVELOPMENT**

Figure 1.1



Legend
 Proposed Application Site

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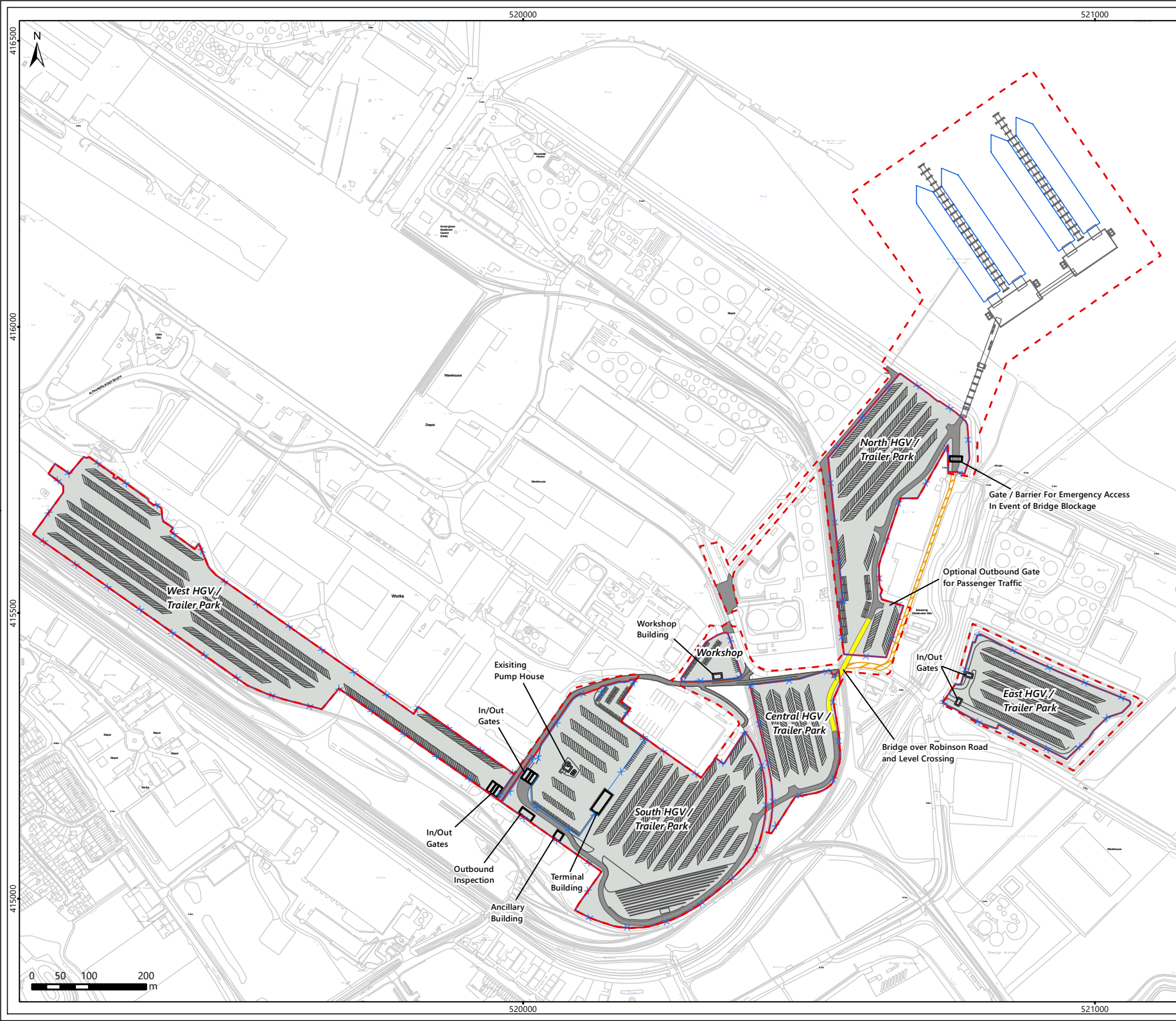


Fig1.2_Layout_Marine_A4.mxd



**IMMINGHAM EASTERN
 RO-RO TERMINAL
 ILLUSTRATIVE LAYOUT OF
 PROPOSED MARINE WORKS**

Figure 1.2



- Legend**
- Proposed Application Site
 - Terminal Boundary
 - x Terminal Fence

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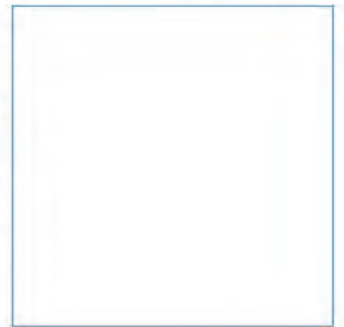
**IMMINGHAM EASTERN
RO-RO TERMINAL**

**ILLUSTRATIVE LAYOUT OF
PROPOSED LANDSIDE WORKS**

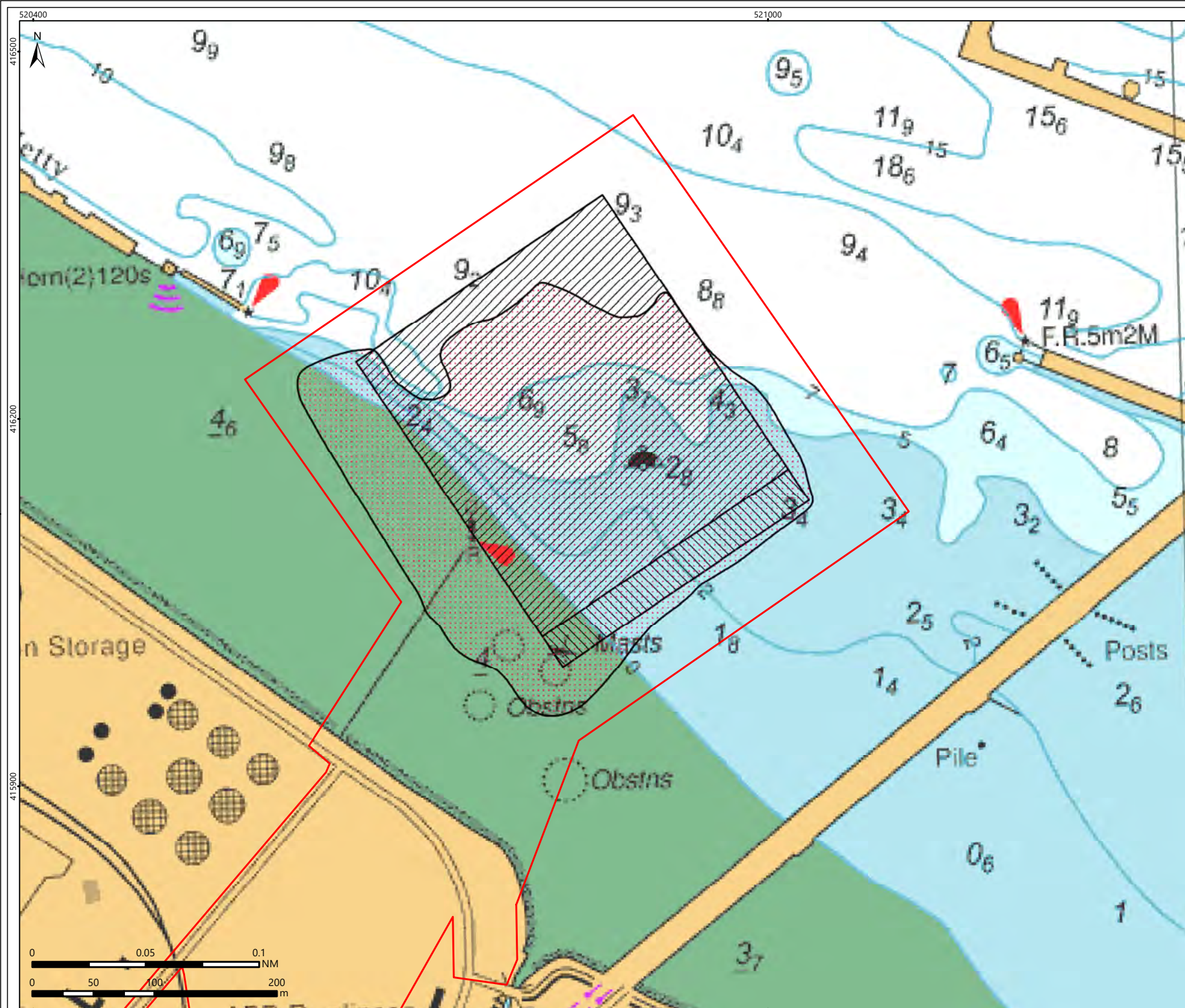
Figure 1.3

2 Proposed Development

2.1 Indicative area of capital dredge



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- Legend**
- Proposed Application Site
 - Indicative Dredge Area
 - Berth Pocket
 - Pontoon Area (5mCD)
 - Including 1:5 side slope to 9mCD

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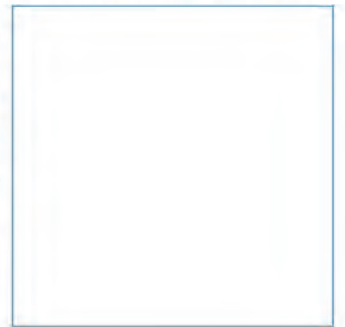


**IMMINGHAM EASTERN
RO-RO TERMINAL
INDICATIVE AREA
OF CAPITAL DREDGE**

Figure 2.1

3 Details of Project Construction and Operation

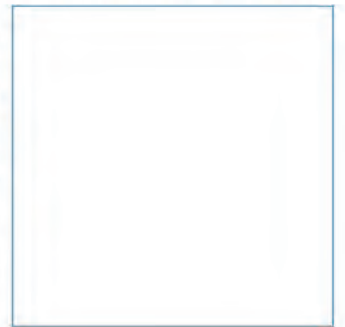
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4 Need and Alternatives

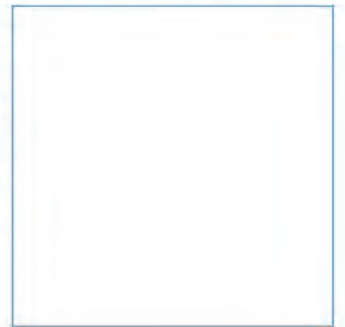
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5 Legislative and Consenting Framework

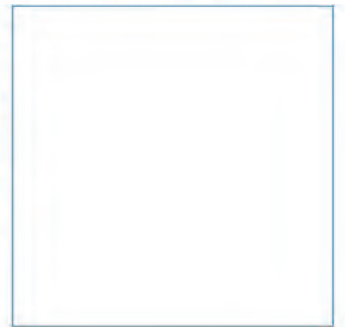
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6 Impact Assessment Approach

No figures for this chapter.



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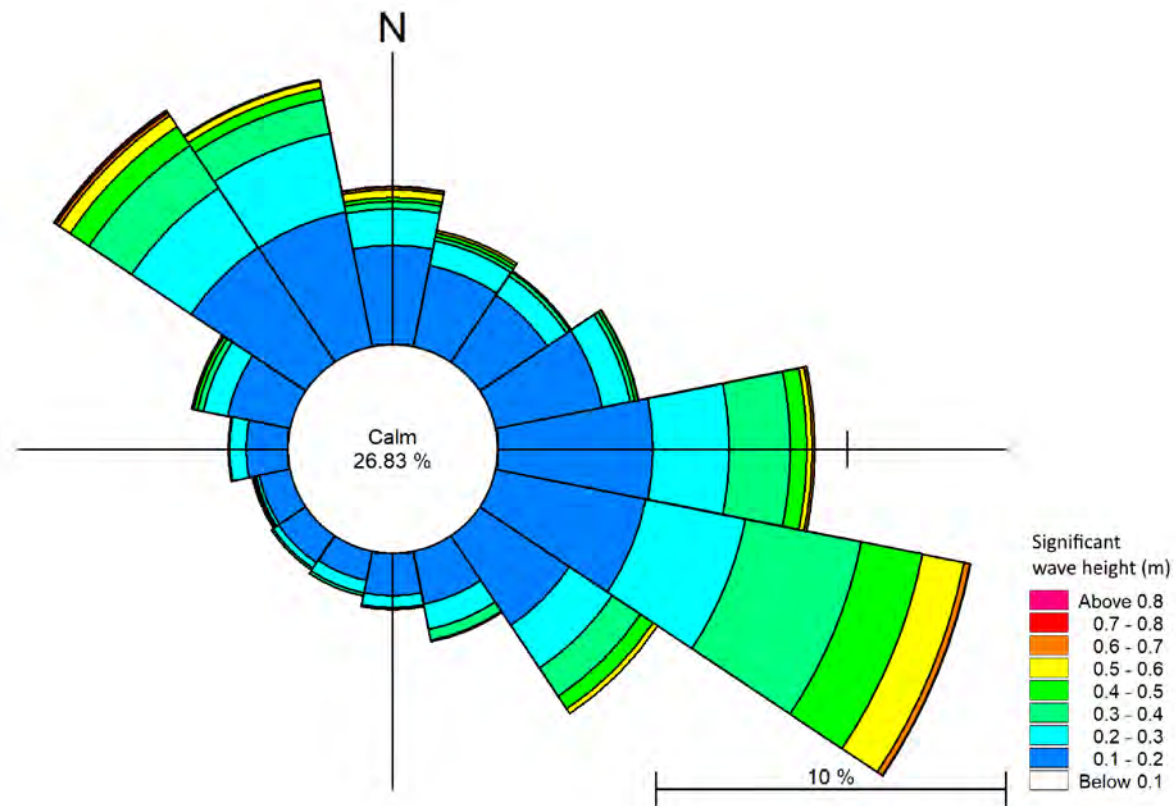
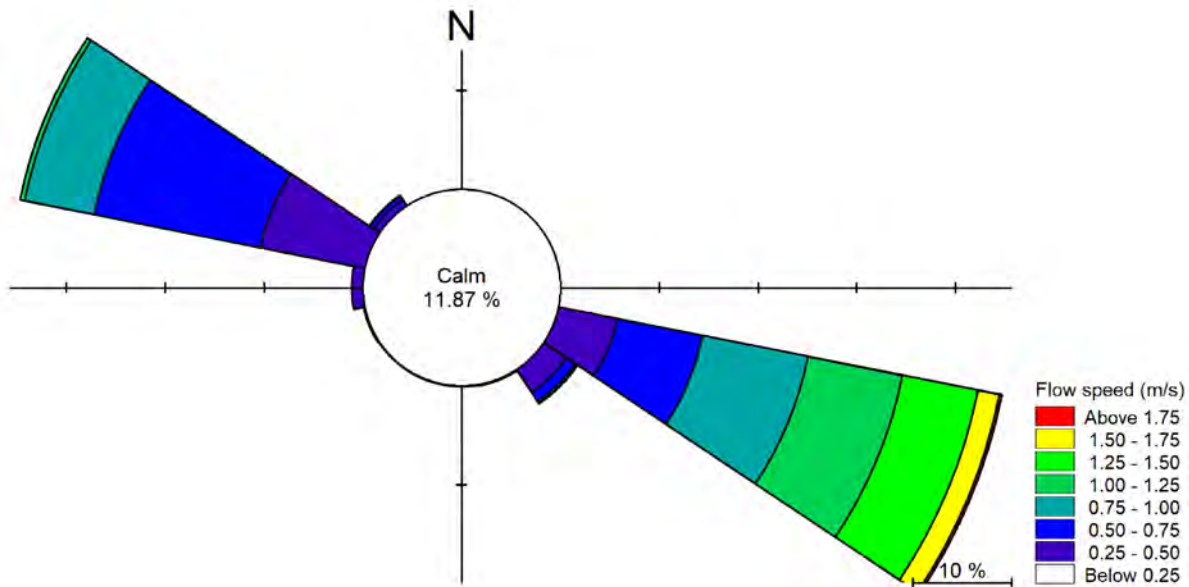


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Rose plots based on measured data collected between November 2019 and June 2020.

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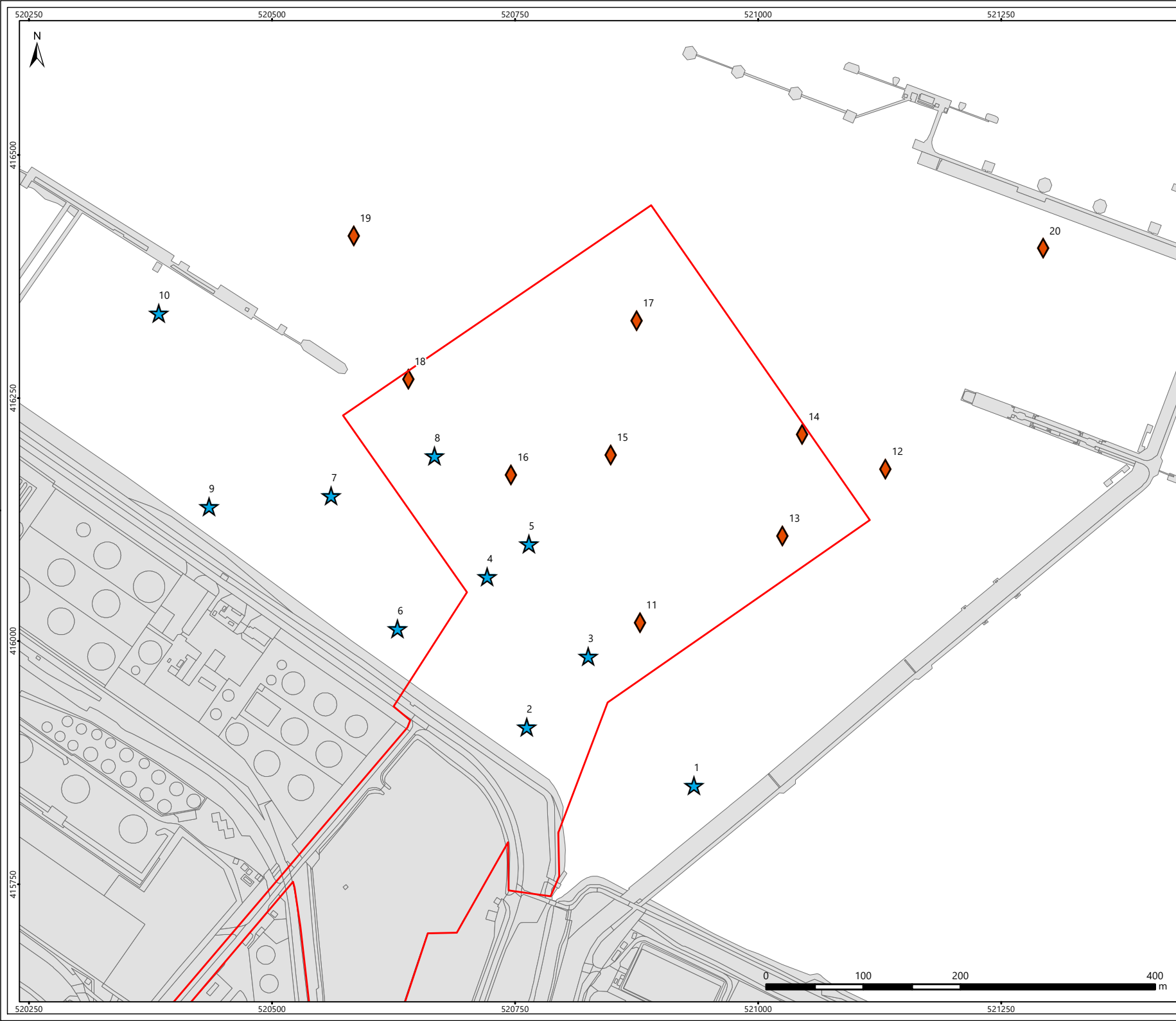


Fig7.1_PEIR_A4.mxd





**IMMINGHAM EASTERN
RO-RO TERMINAL
CURRENT AND WAVE ROSES
AT THE PROPOSED SITE**

FIGURE 7.1



 Proposed Application Site

Sediment sampling

-  Intertidal
-  Subtidal

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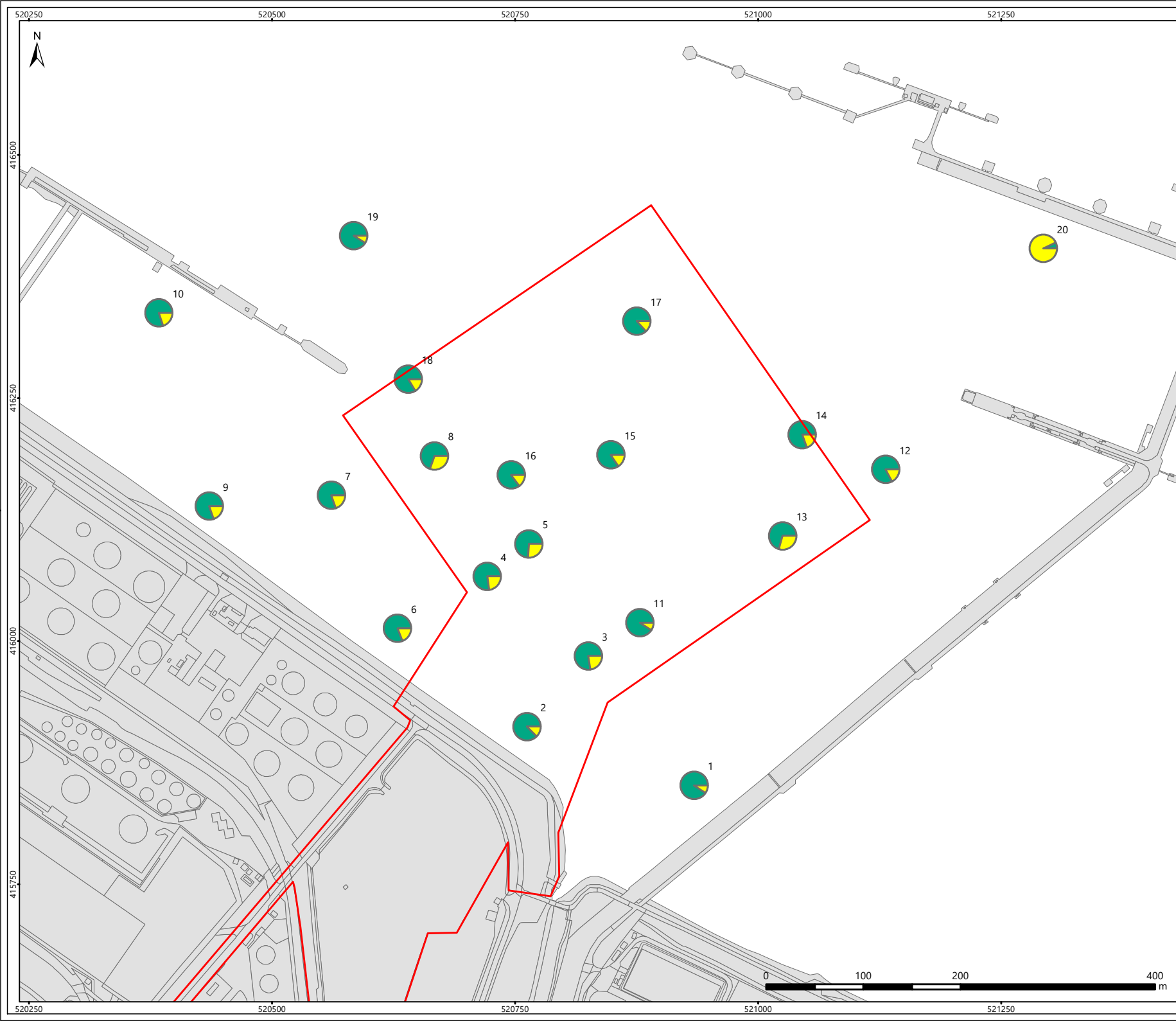


Fig7.2_PEIR_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
BENTHIC SAMPLING LOCATIONS**

FIGURE 7.2



Proposed Application Site

Grab sample PSD



mud

sand

gravel

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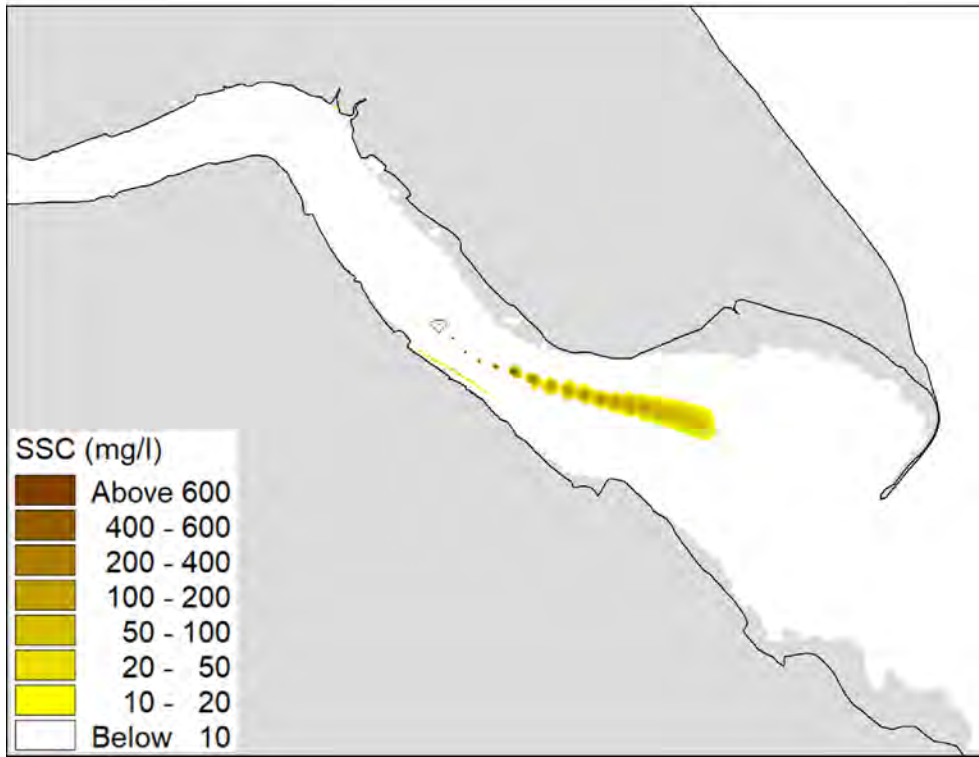
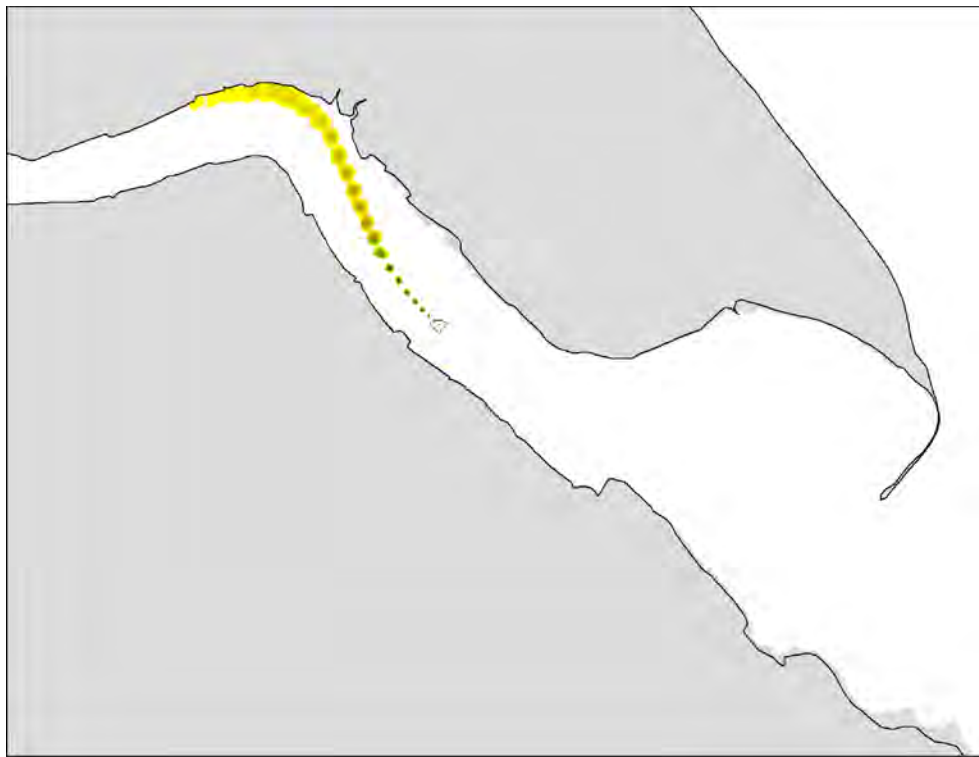


Fig7.3_PEIR_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
PARTICLE SIZE DISTRIBUTION
OF BED SAMPLES**

FIGURE 7.3



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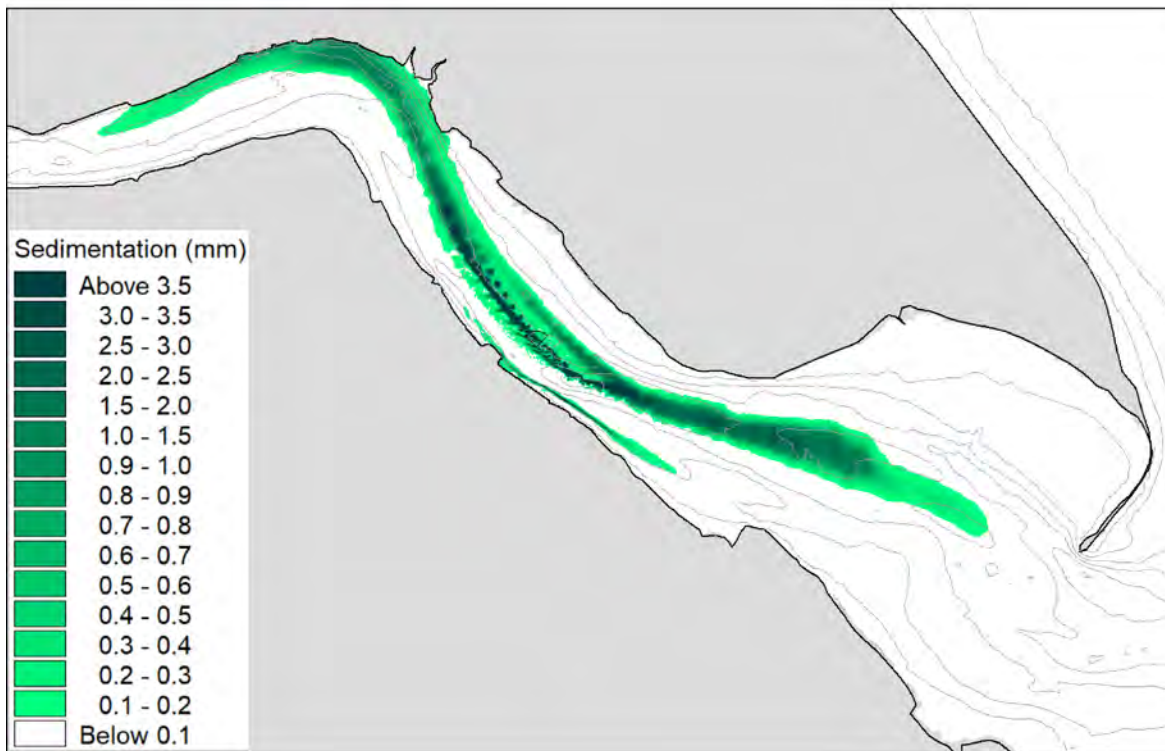
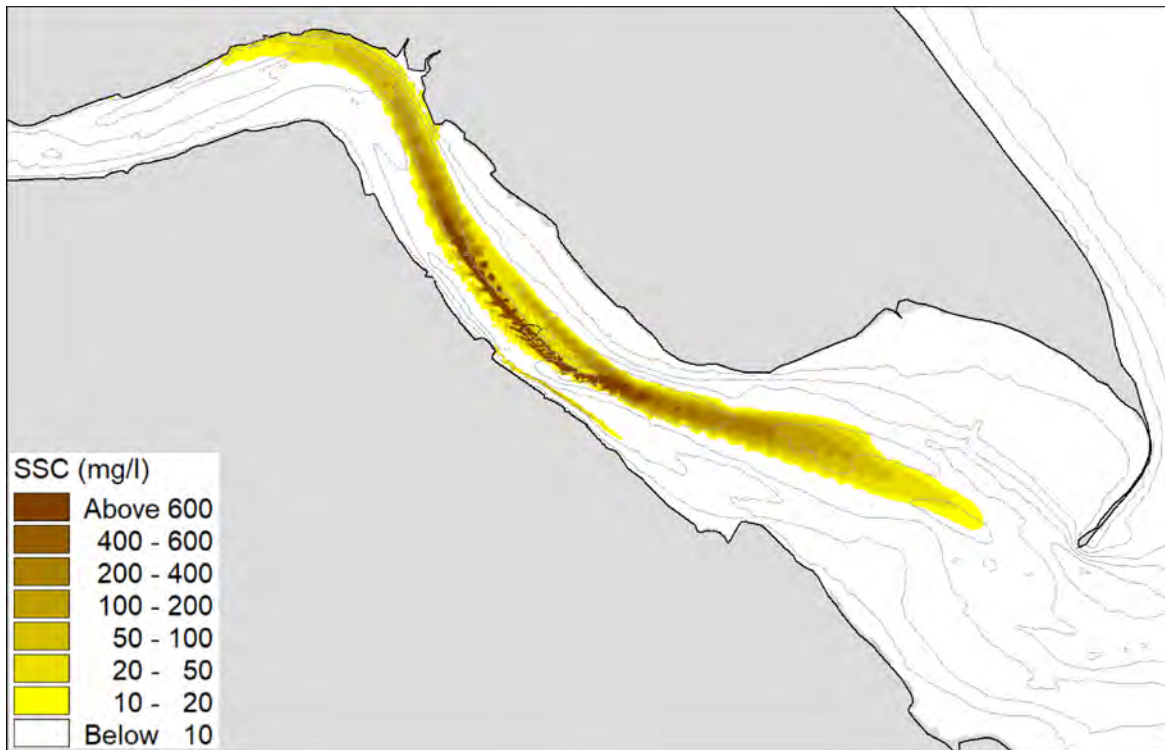


Fig7.4_PEIR_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
MAXIMUM EXCESS SSC FROM
PEAK FLOOD (TOP) AND PEAK
EBB (BOTTOM) DISPOSAL AT HU60**

FIGURE 7.4



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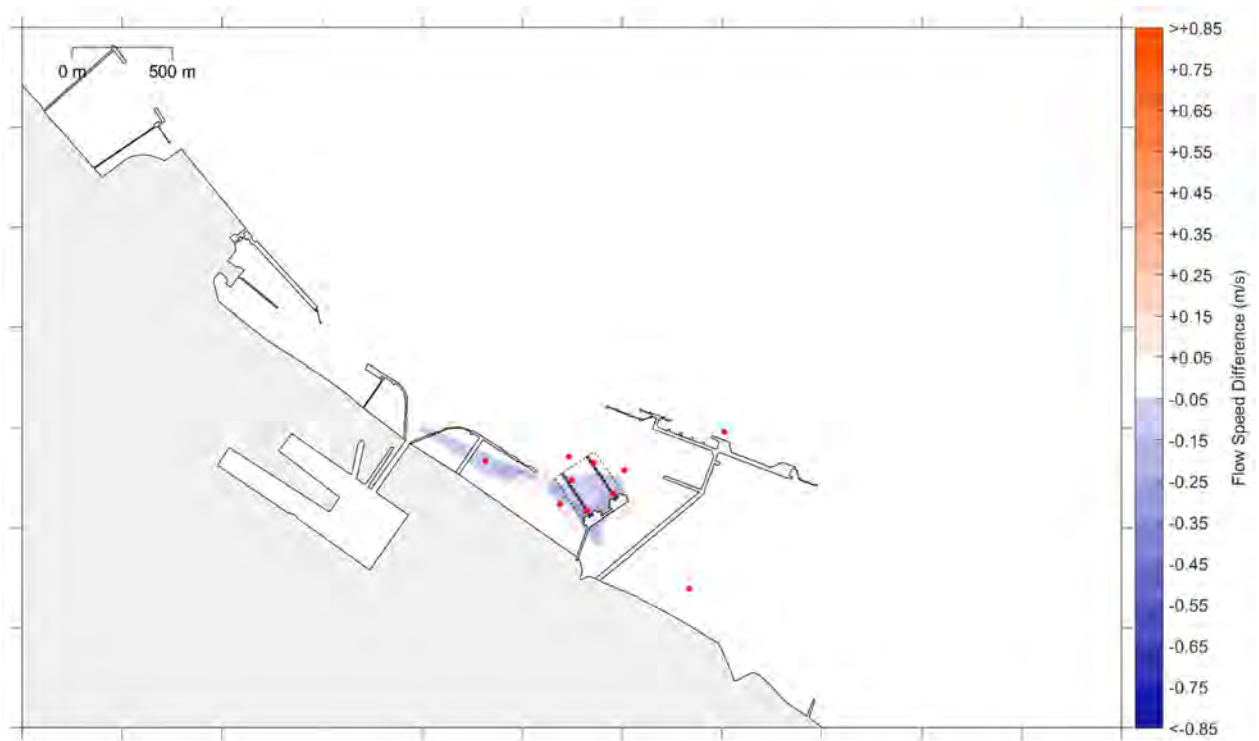
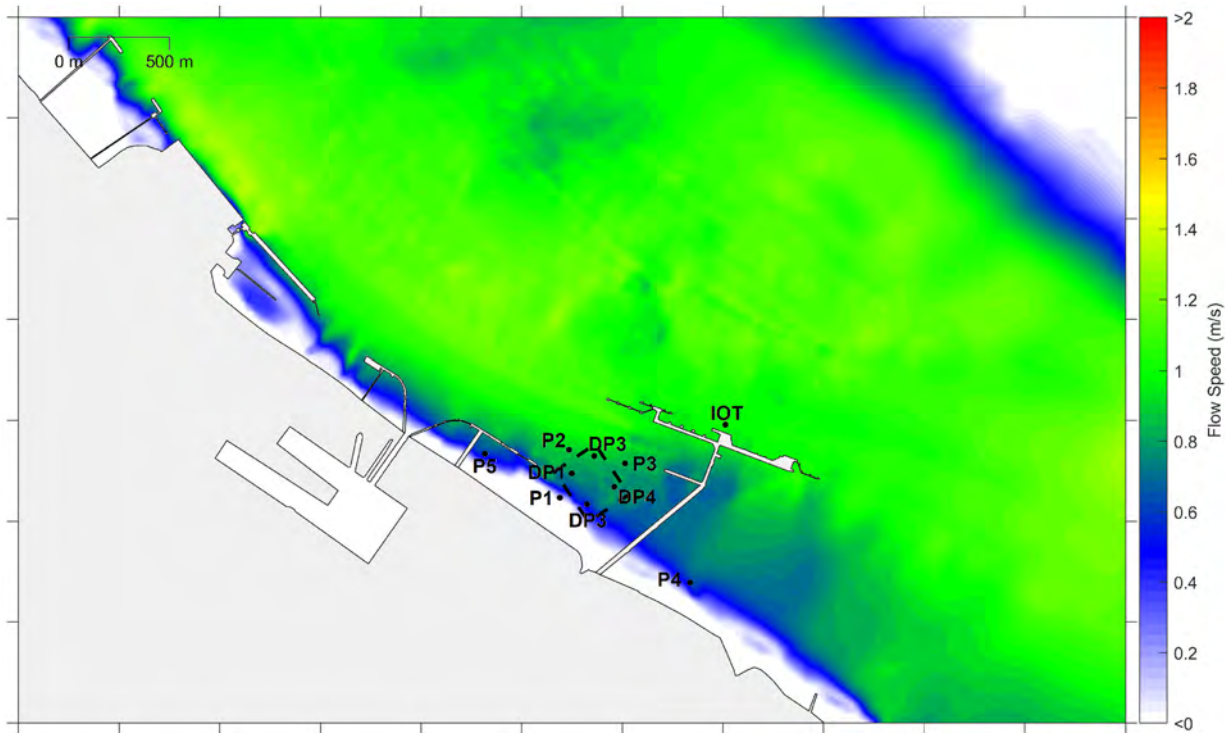


Fig7.5_PEIR_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
MAXIMUM SSC AND SEDIMENTATION
FROM DREDGE AND DISPOSAL
ACROSS FULL MODELLED PERIOD**

FIGURE 7.5



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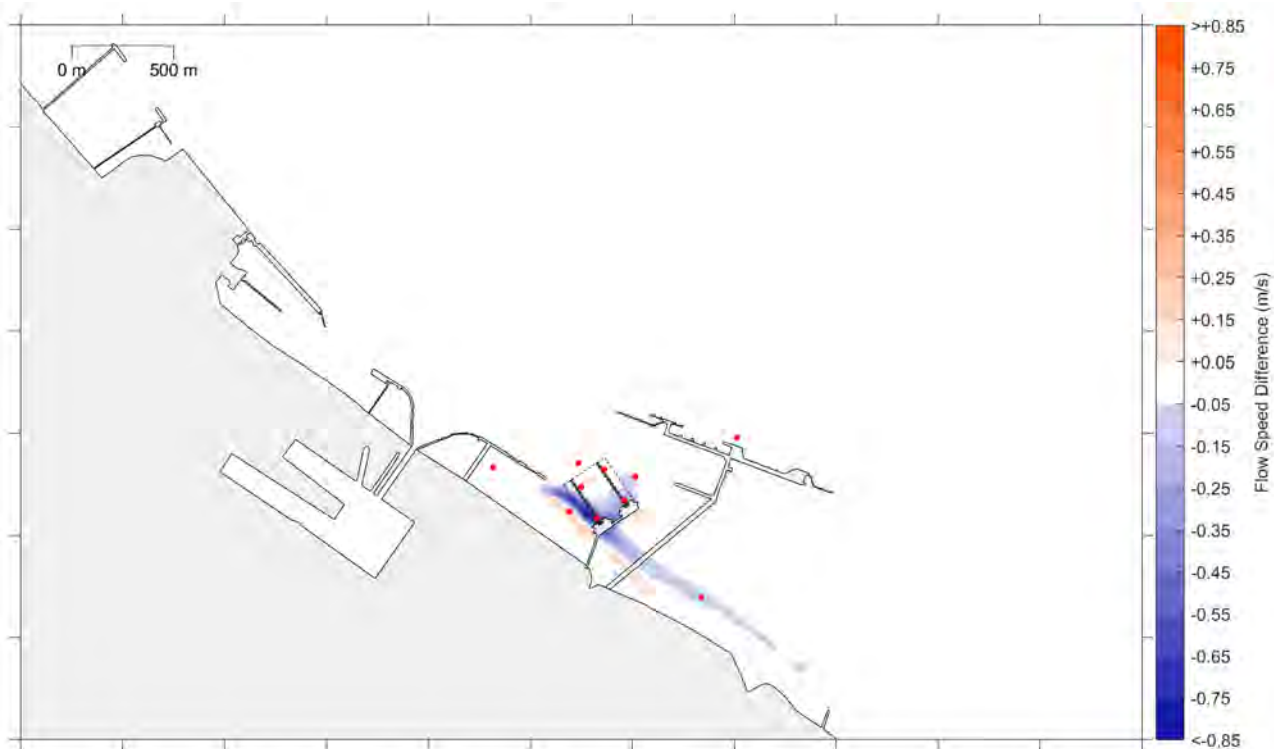
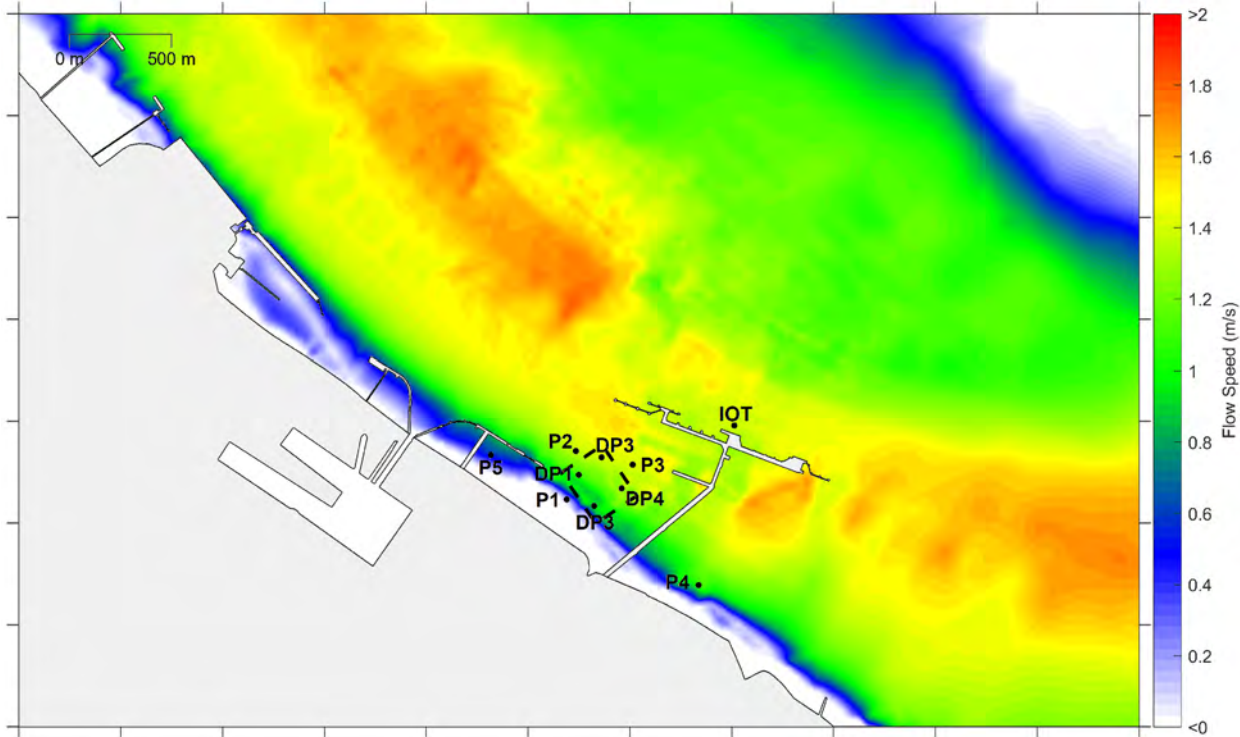


Fig7.6_PEIR_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
PEAK FLOOD BASELINE FLOWS (TOP)
AND IMPACT OF SCHEME (BOTTOM)**

FIGURE 7.6



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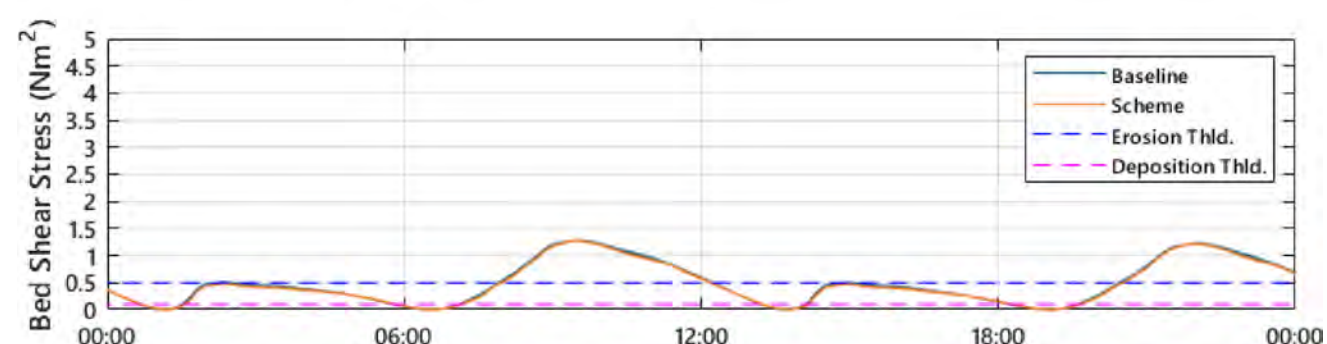
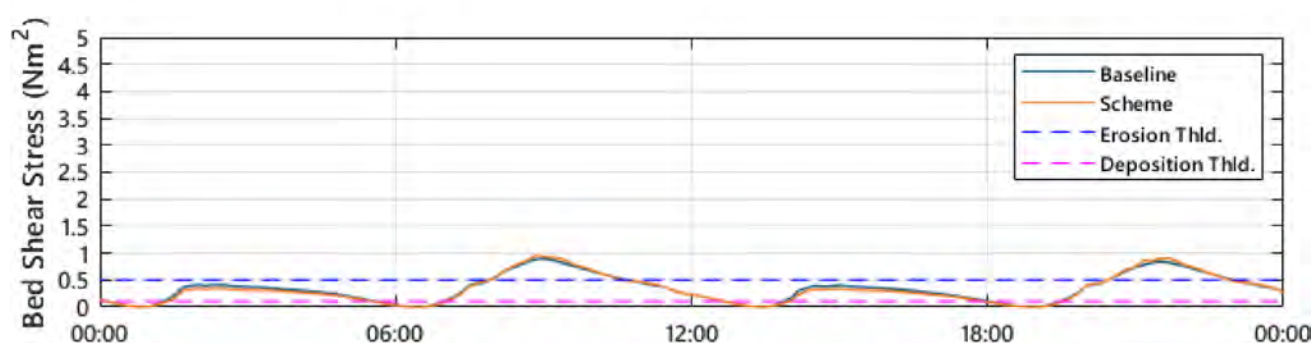
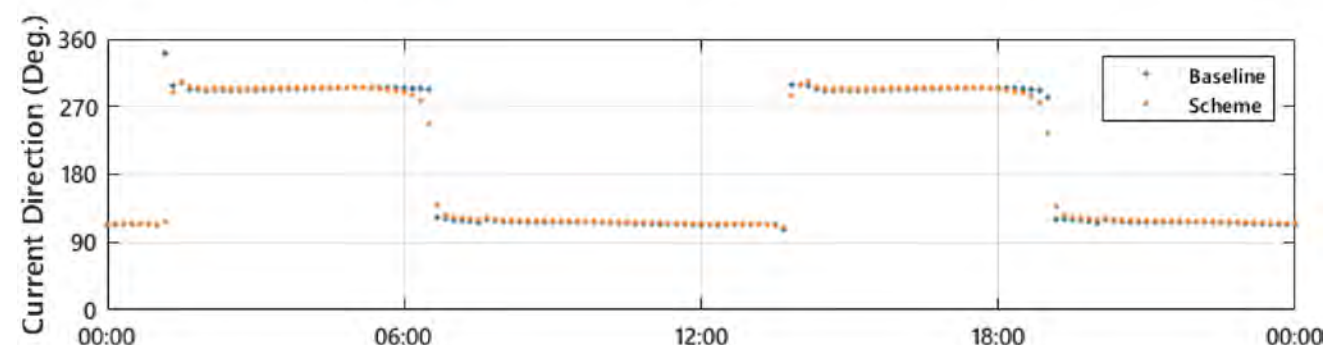
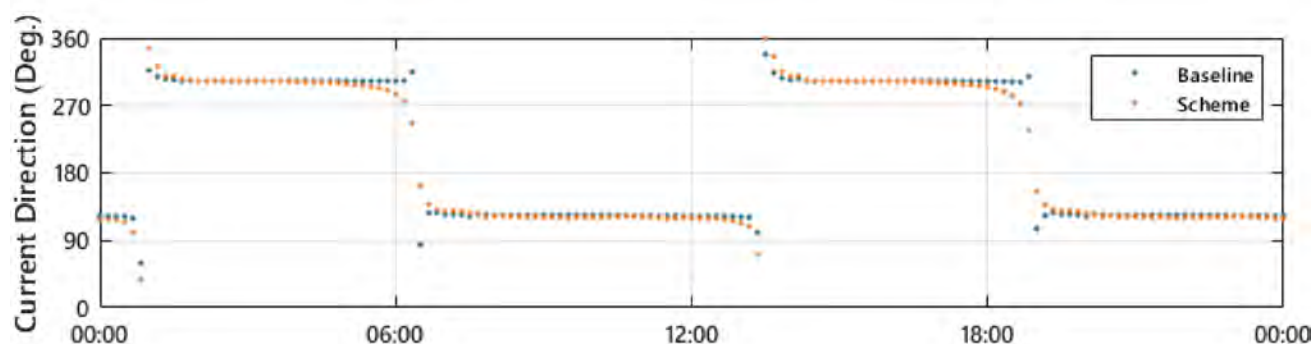
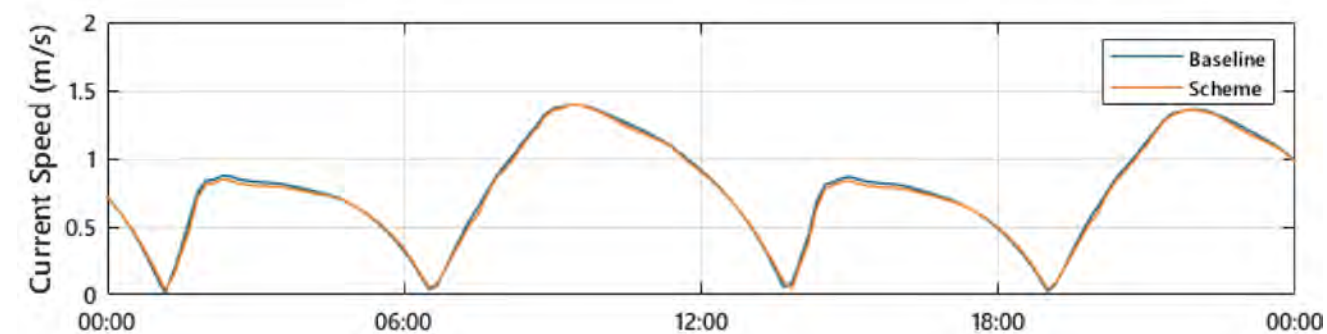
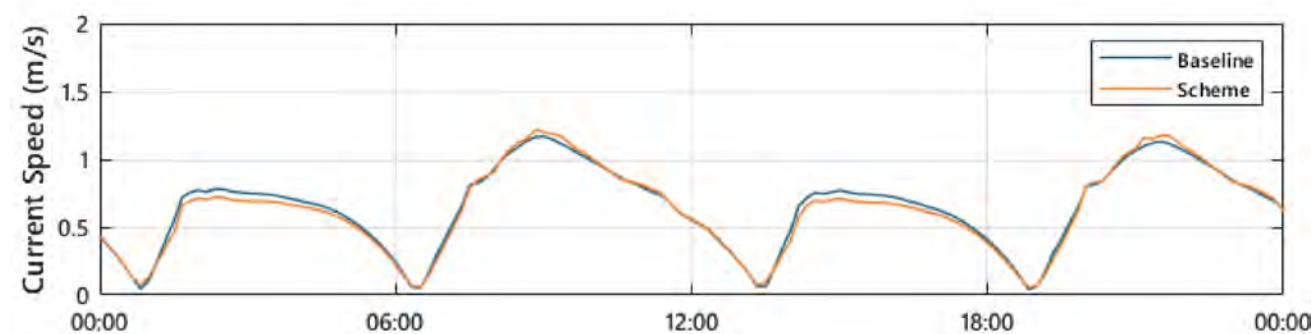
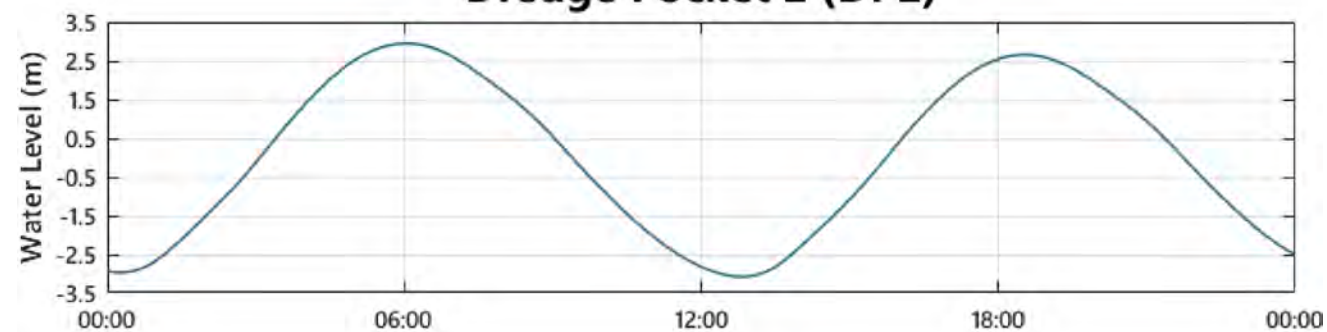
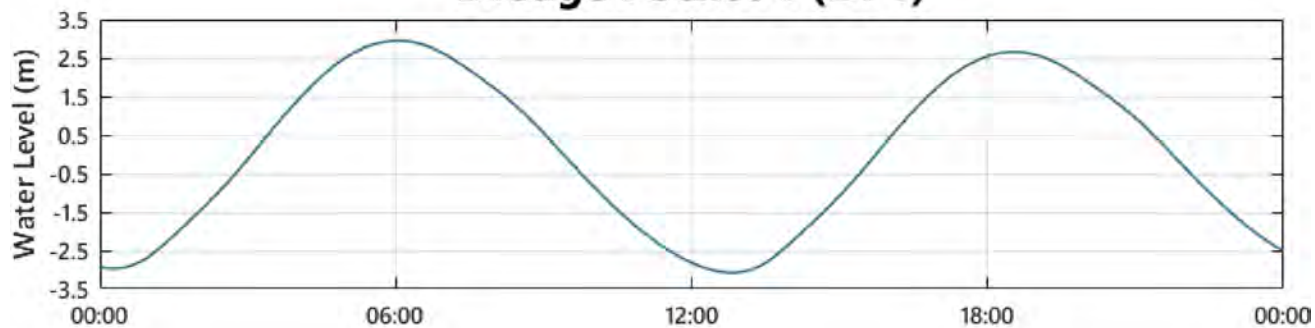


**IMMINGHAM EASTERN
RO-RO TERMINAL
PEAK EBB BASELINE FLOWS (TOP)
AND IMPACT OF SCHEME (BOTTOM)**

FIGURE 7.7

Dredge Pocket 1 (DP1)

Dredge Pocket 2 (DP2)



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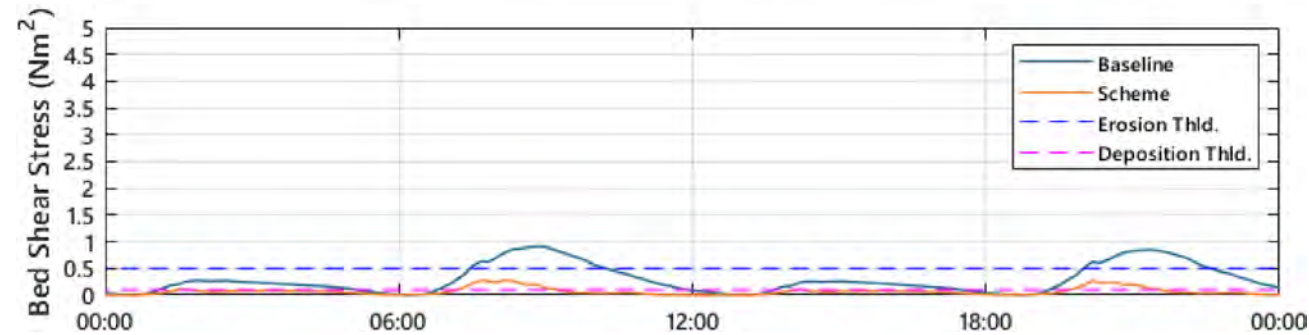
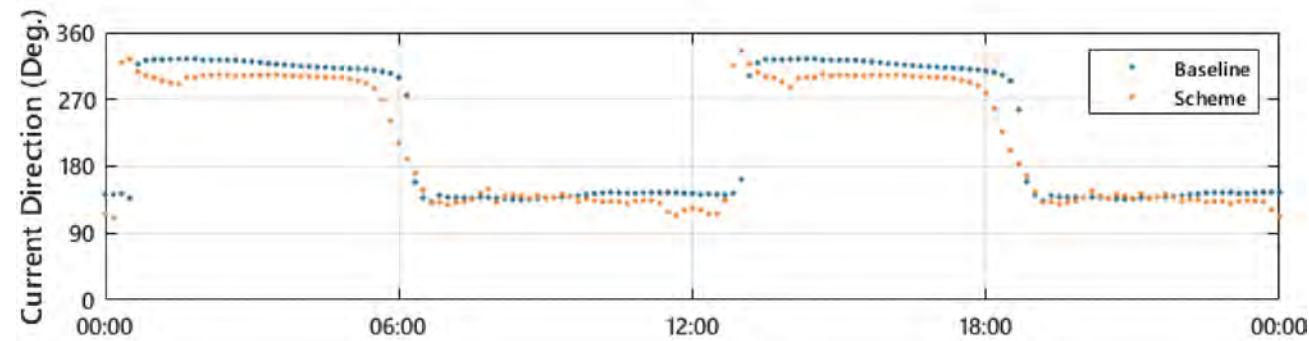
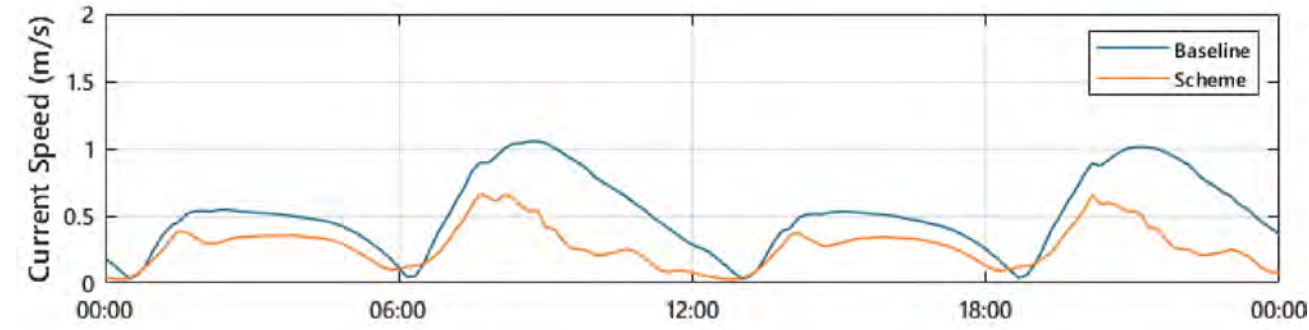
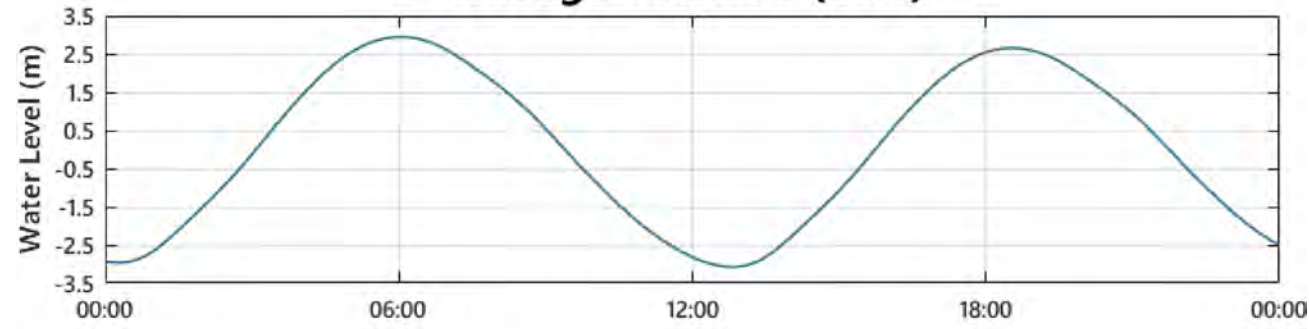
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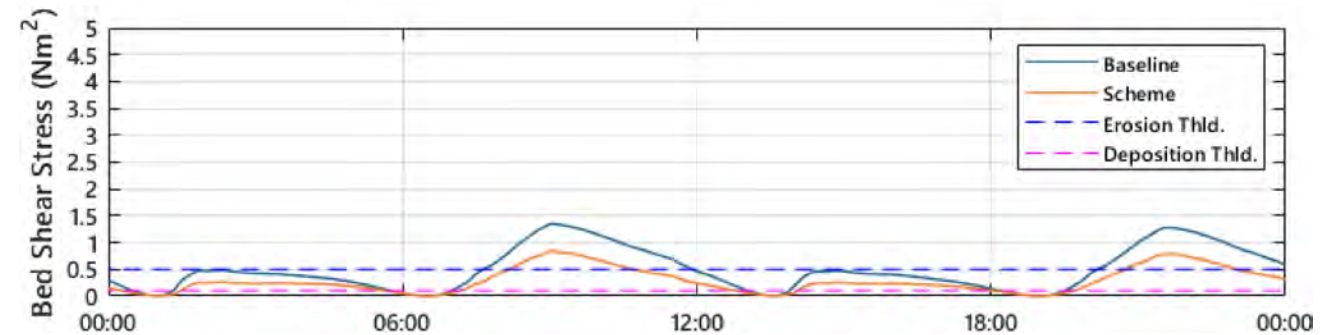
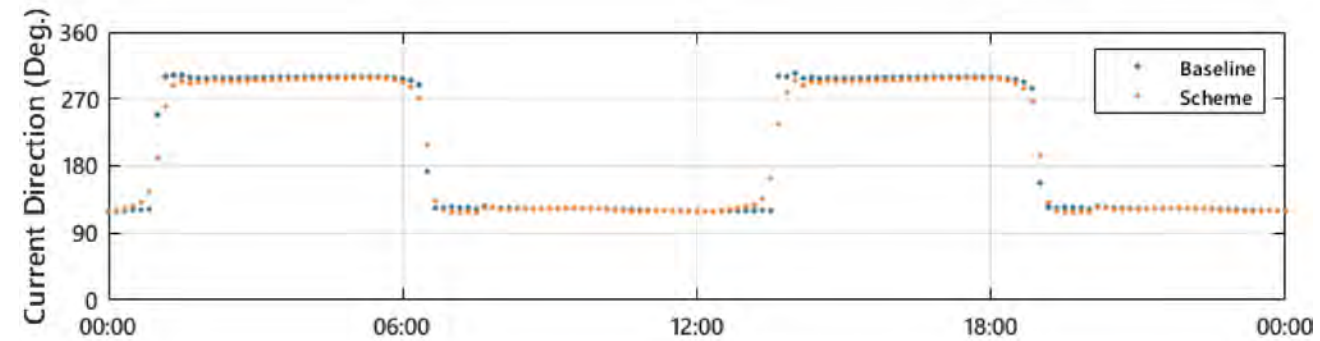
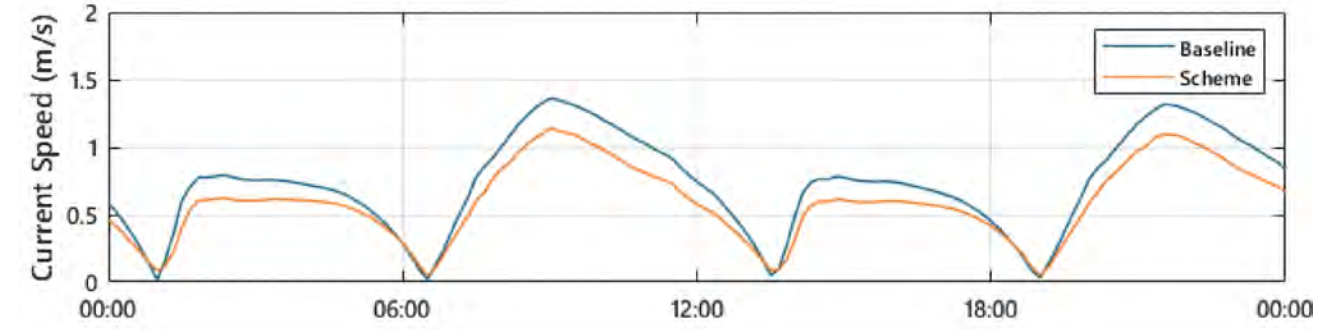
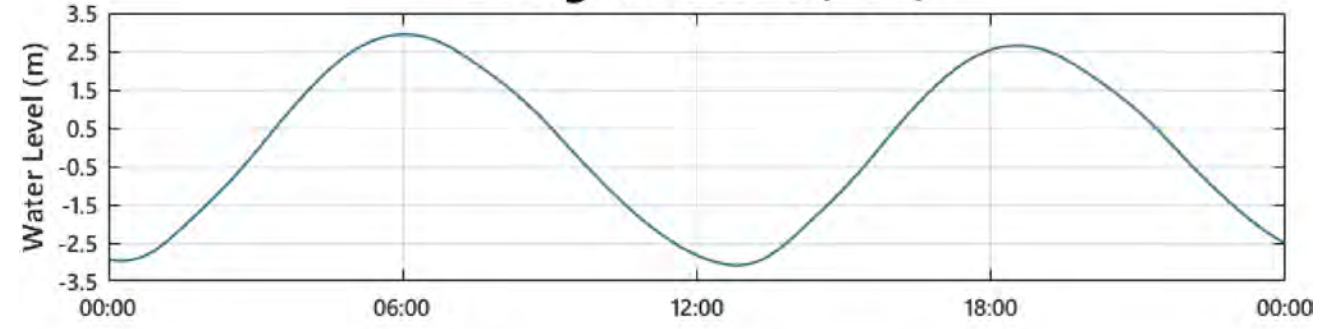
**IMMINGHAM EASTERN
RO-RO TERMINAL
TIMESERIES OF CHANGES TO FLOWS
AND BED SHEAR STRESS FOR SITES
DP1 (LEFT) AND DP2 (RIGHT)**

FIGURE 7.8

Dredge Pocket 3 (DP3)



Dredge Pocket 4 (DP4)



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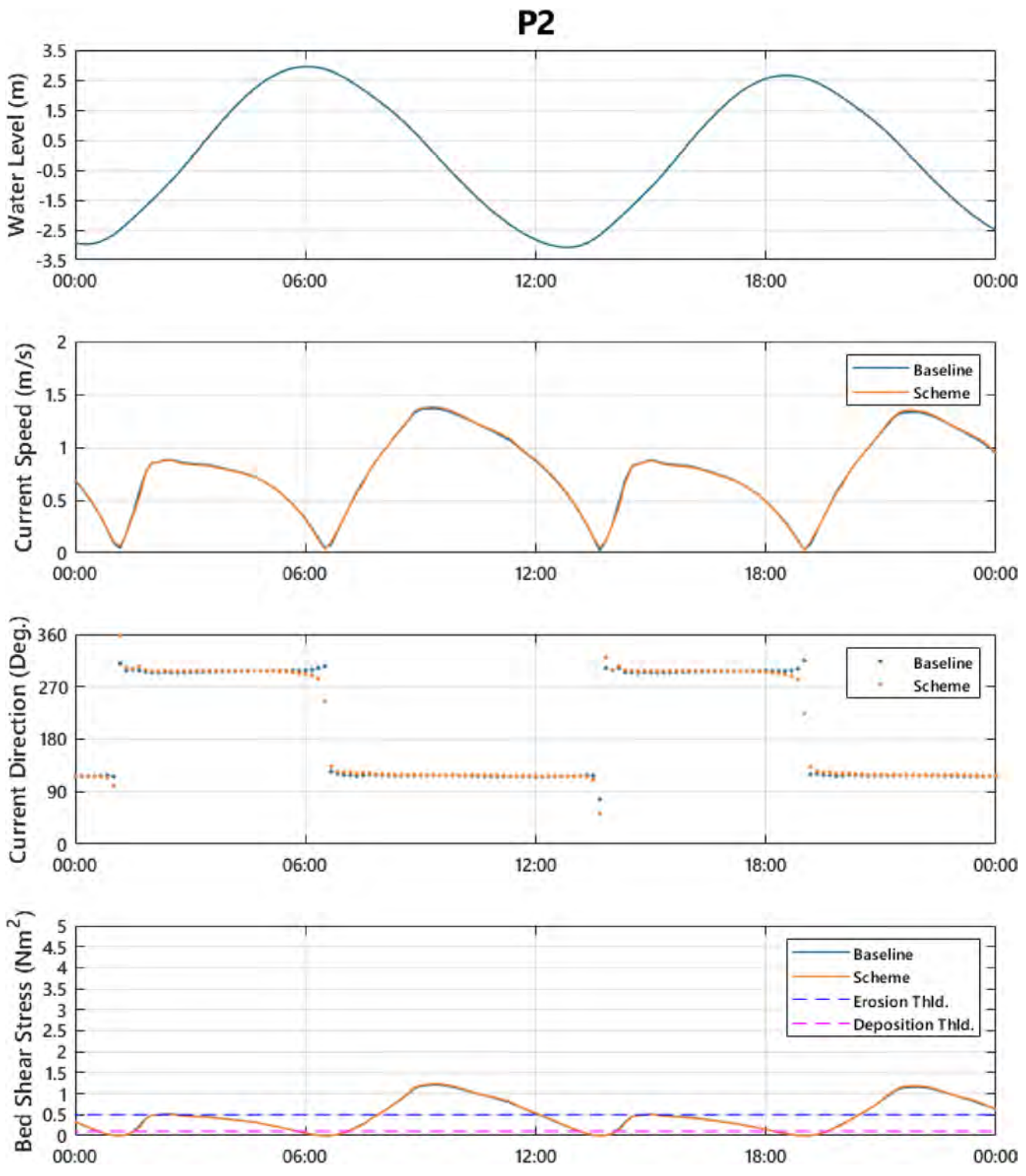
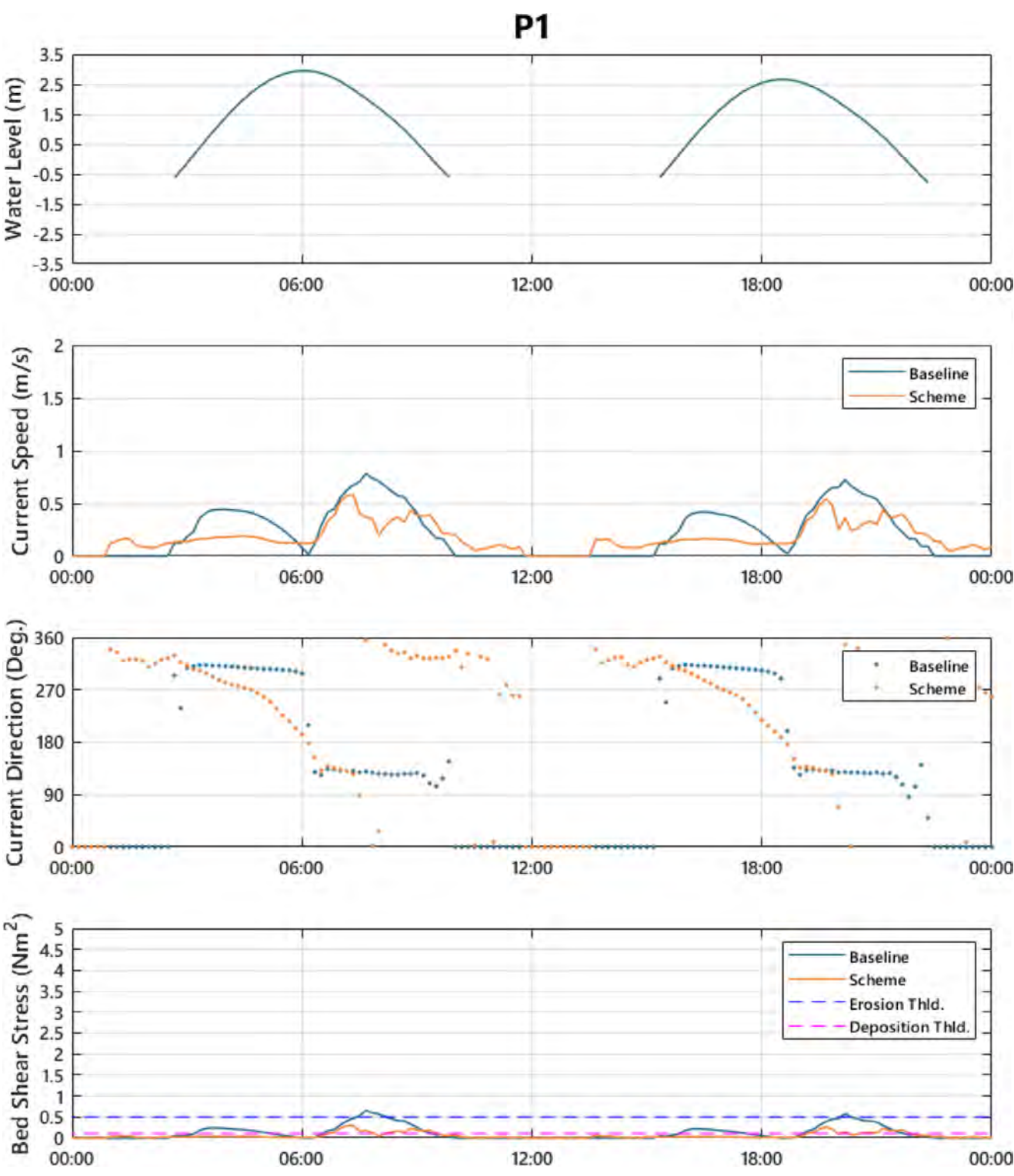


Fig7.9_PEIR_A3.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
TIMESERIES OF CHANGES TO FLOWS
AND BED SHEAR STRESS FOR SITES
DP3 (LEFT) AND DP4 (RIGHT)**

FIGURE 7.9



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Date	By	QA
10/01/2022	AMF	OJR
Projection	NA	
Scale (A3)	NA	
Project no.	5035	

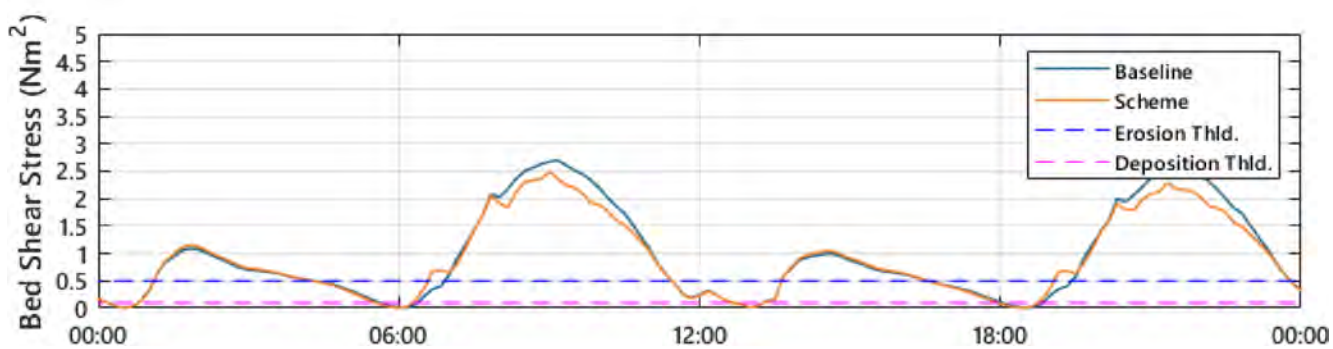
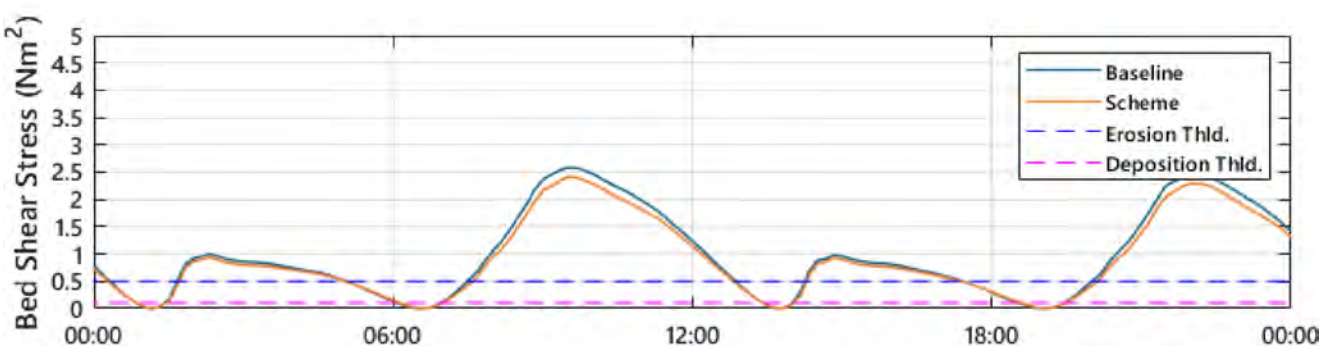
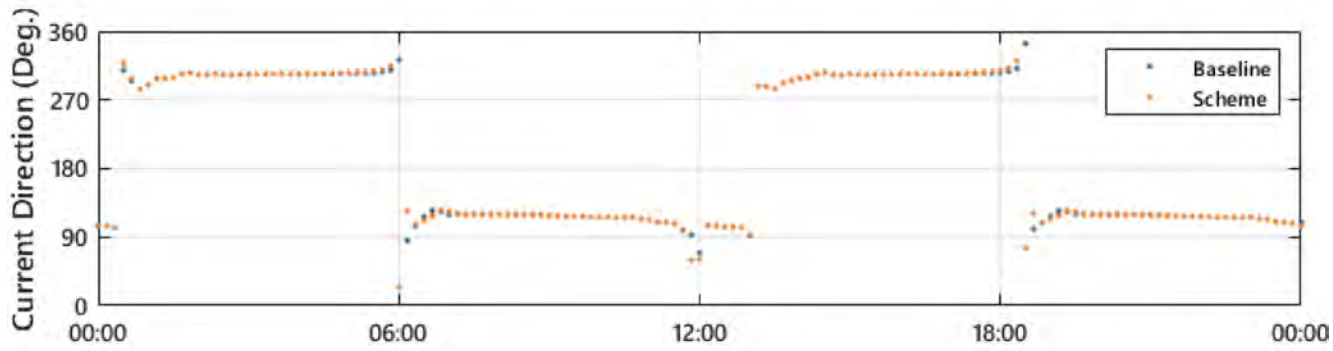
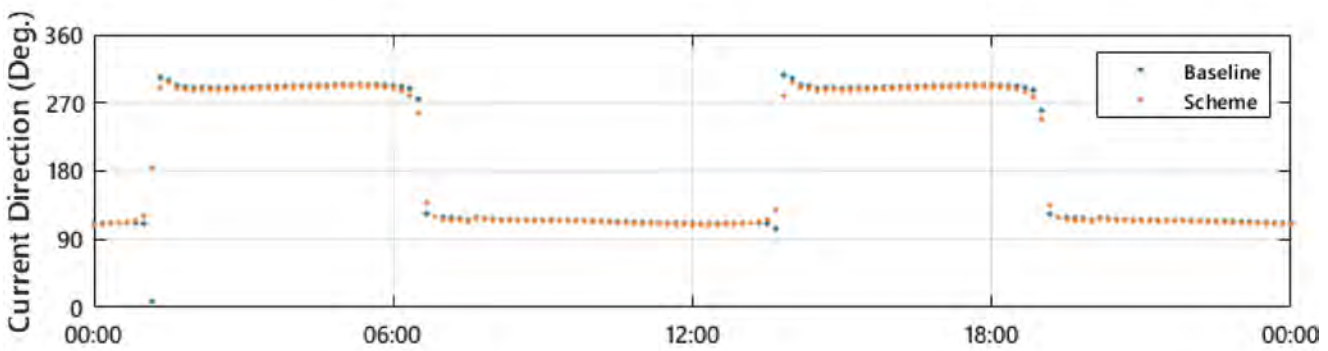
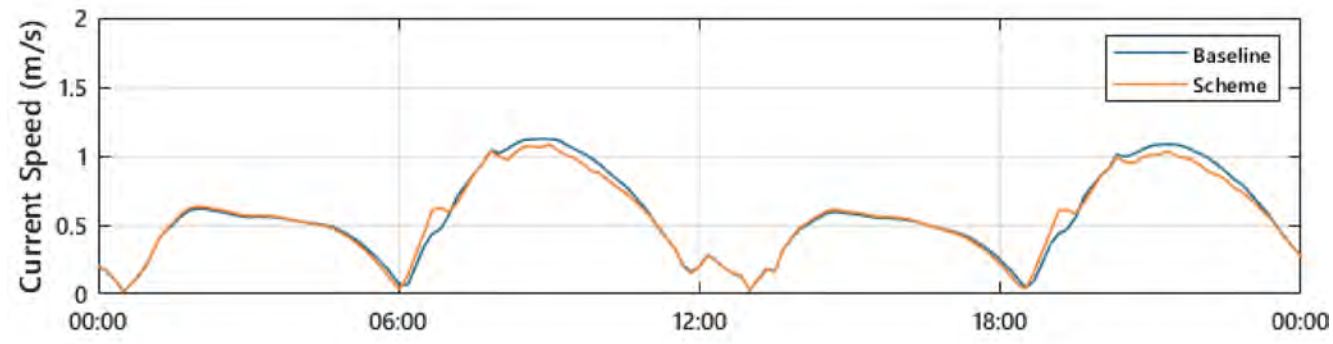
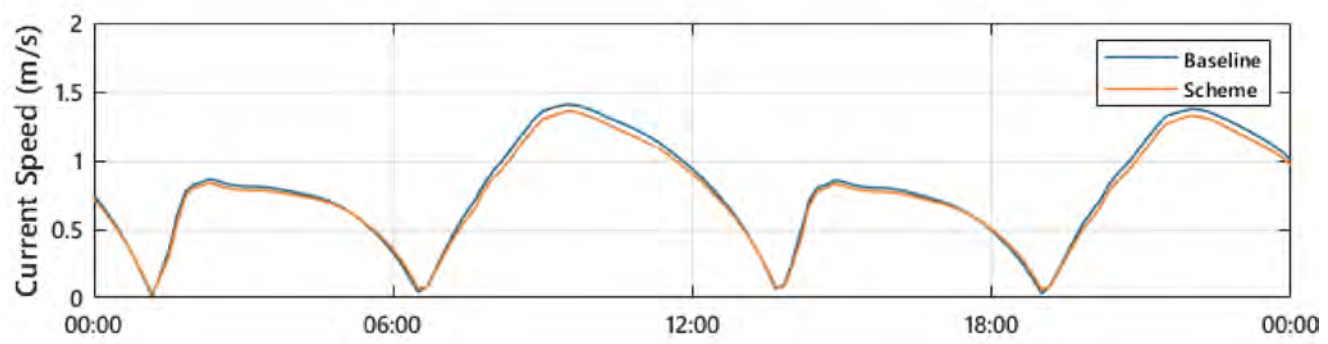
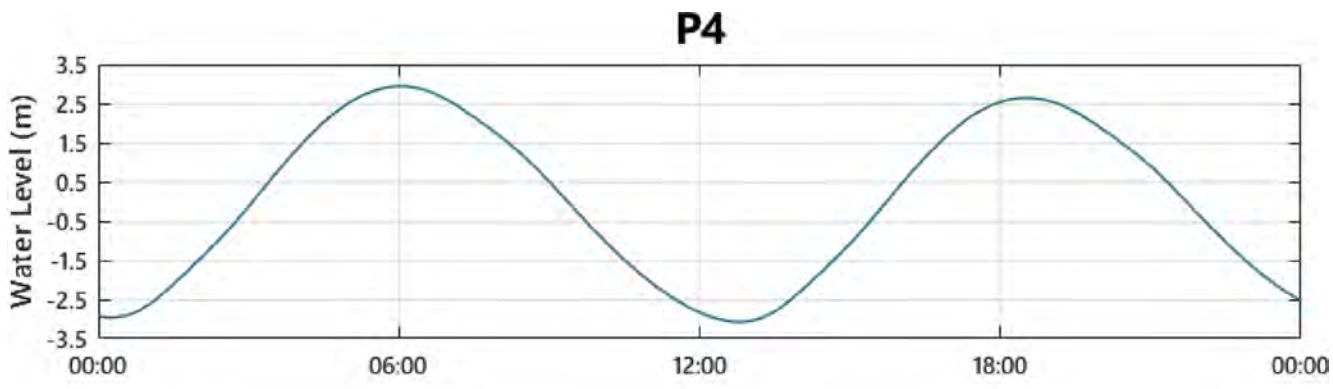
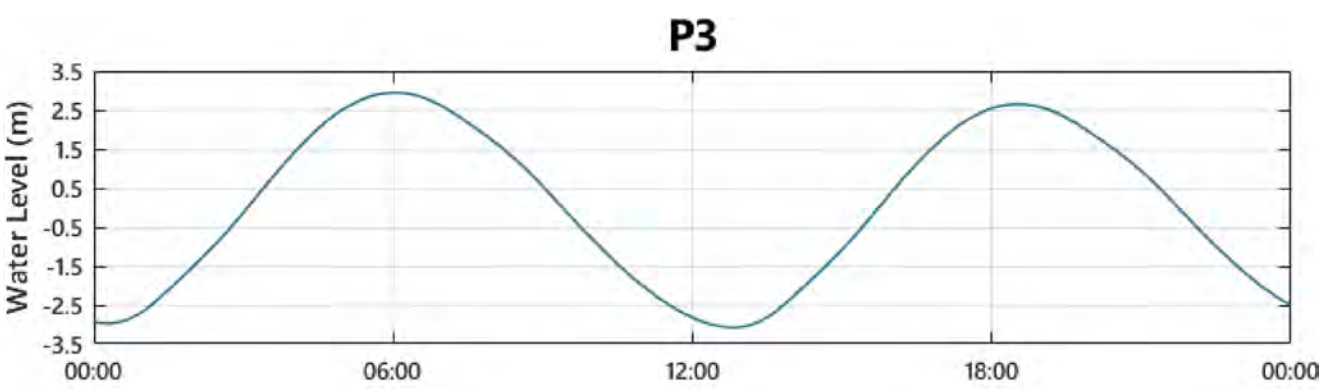


Fig7.10_PEIR_A3.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
TIMESERIES OF CHANGES TO FLOWS
AND BED SHEAR STRESS FOR SITES
P1 (LEFT) AND P2 (RIGHT)**

FIGURE 7.10



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Date	By	QA
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Projection	NA	
Scale (A3)	NA	
Project no.	5035	

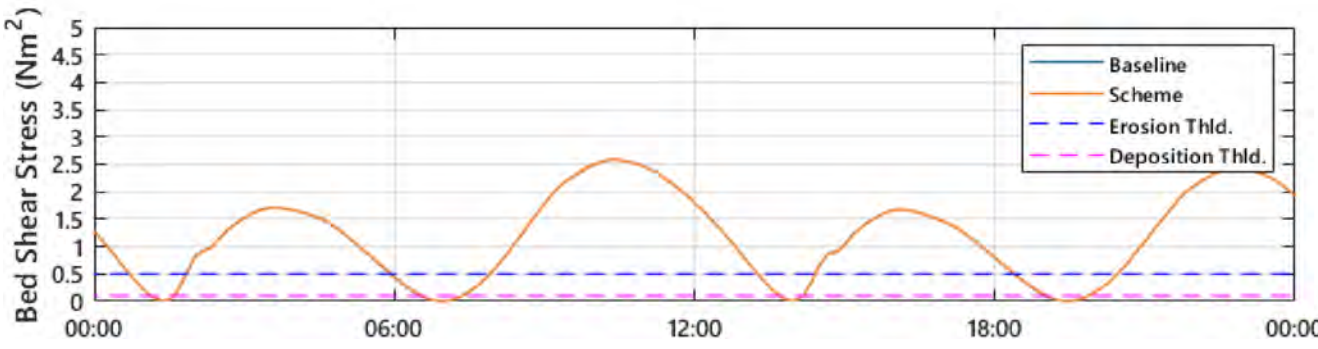
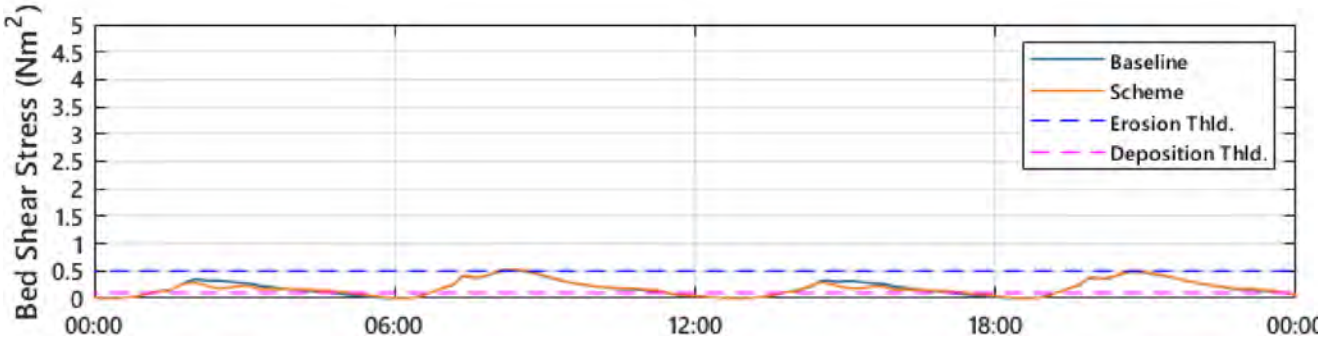
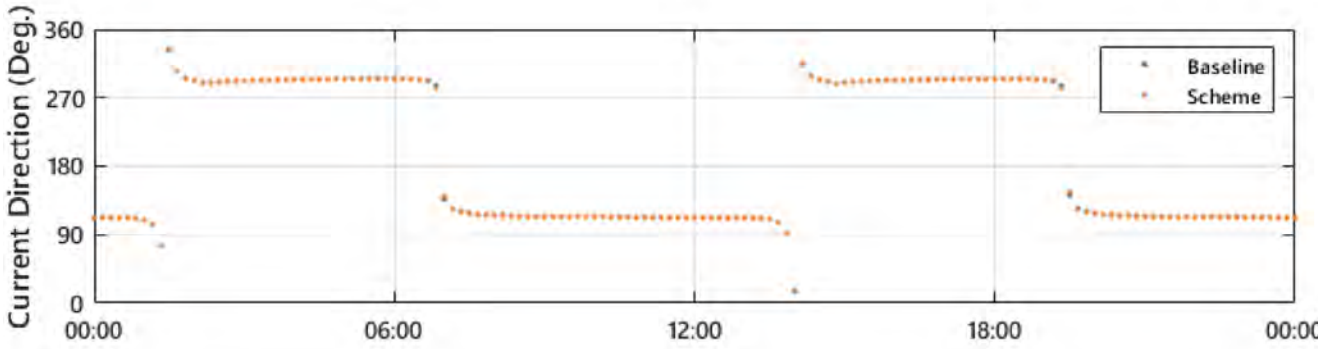
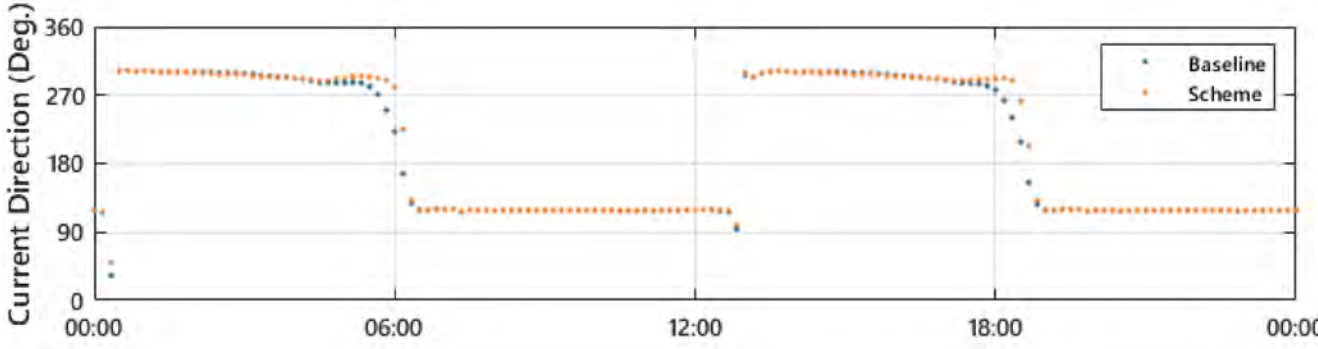
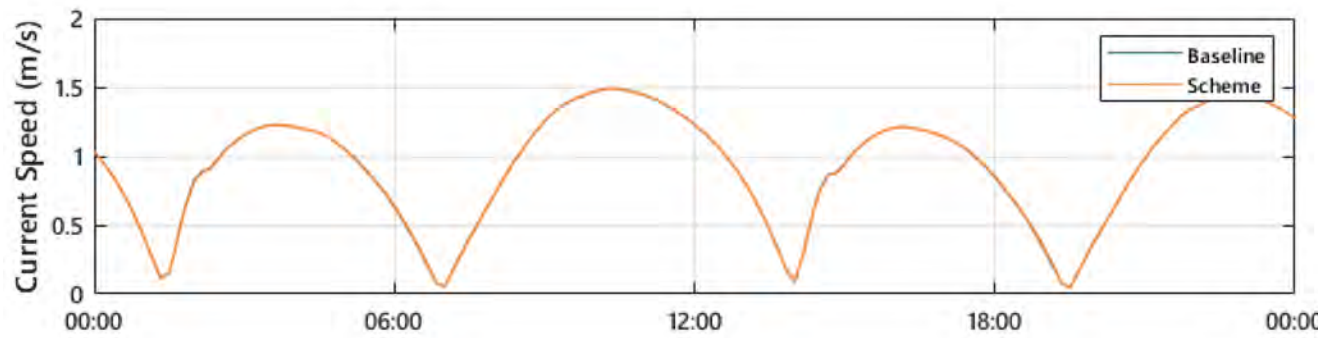
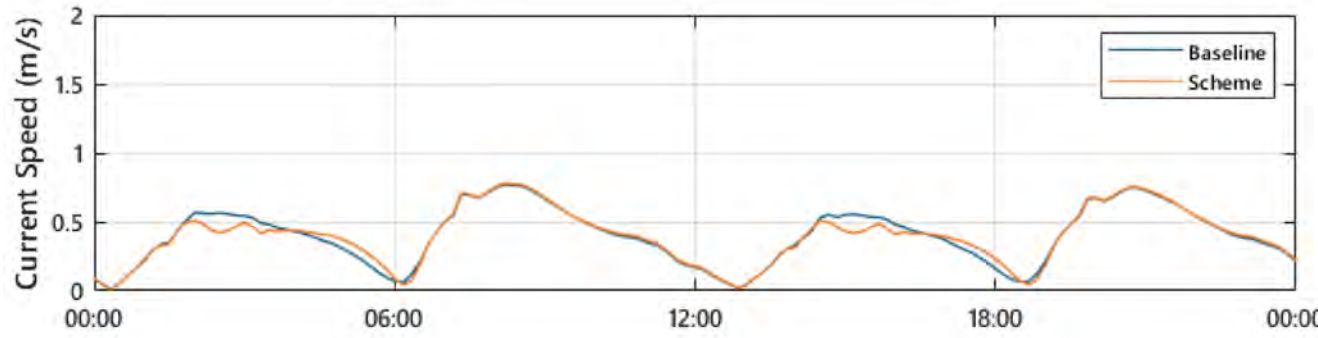
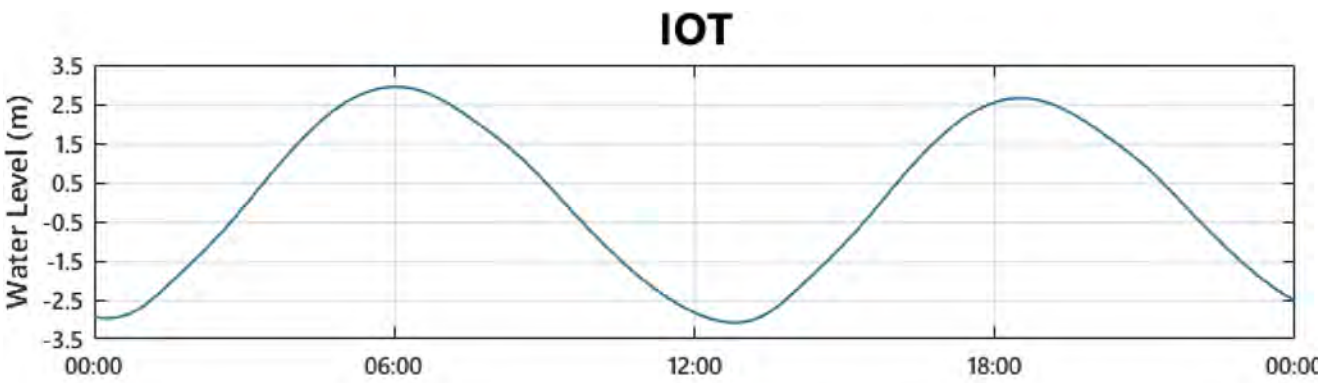
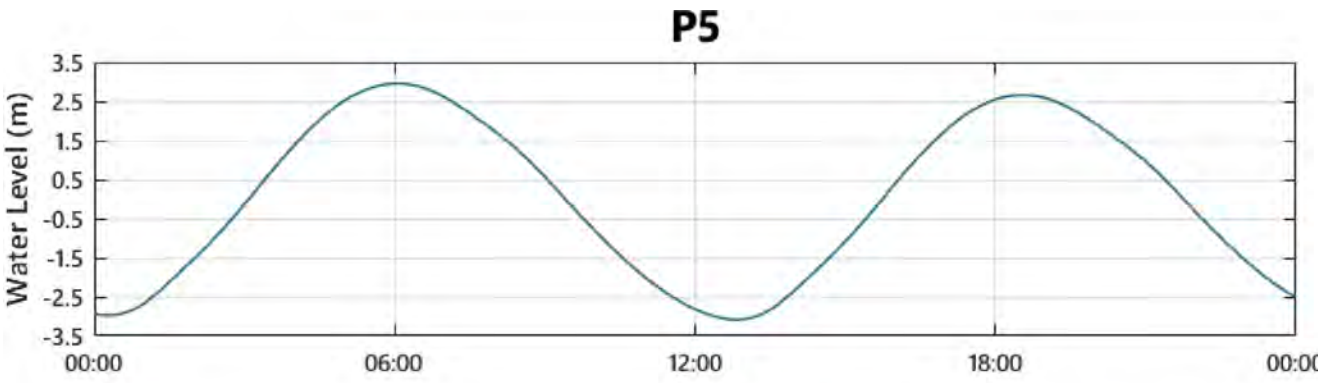


Fig7.11_PEIR_A3.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
TIMESERIES OF CHANGES TO FLOWS
AND BED SHEAR STRESS FOR SITES
P3 (LEFT) AND P4 (RIGHT)**

FIGURE 7.11



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Date	By	QA
10/01/2022	AMF	OJR
Projection		NA
Scale (A3)		NA
Project no.		5035



Fig7.12_PEIR_A3.mxd

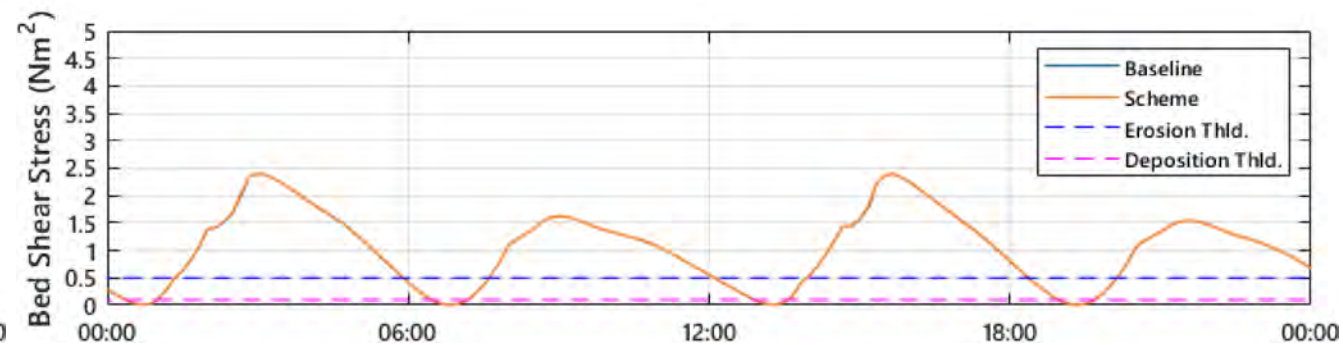
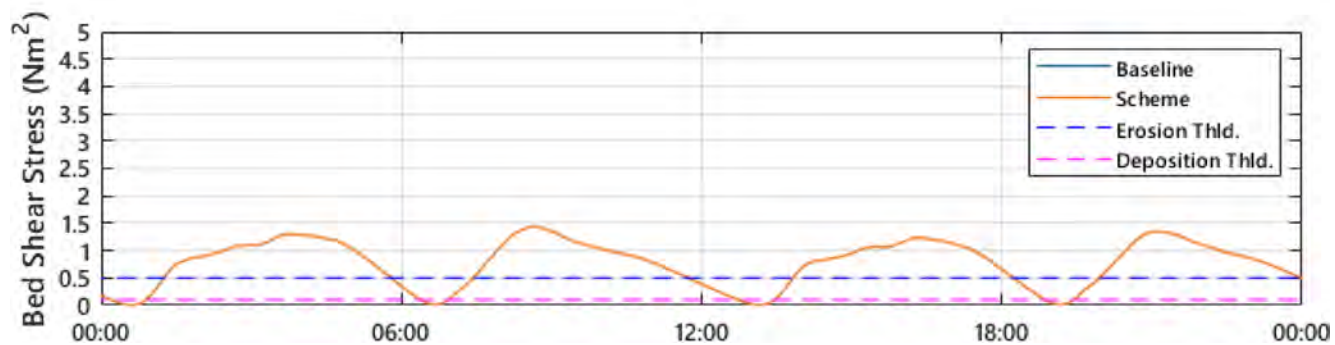
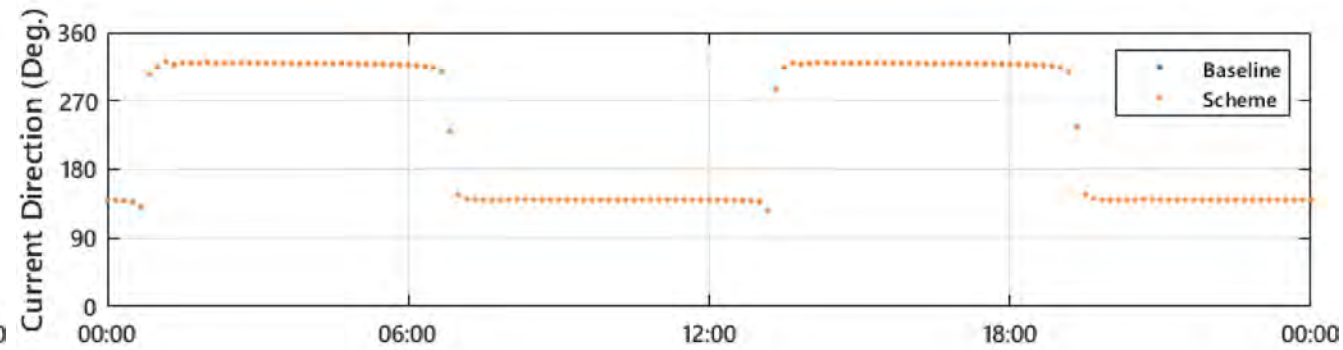
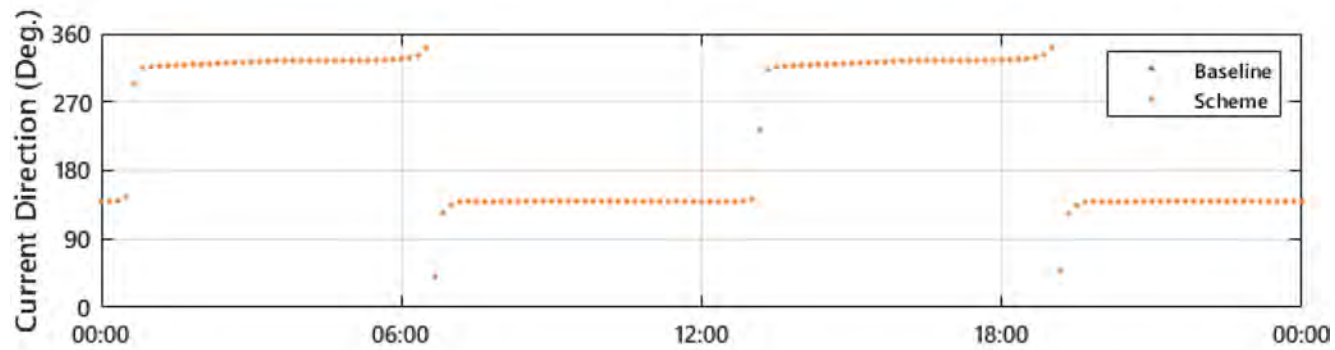
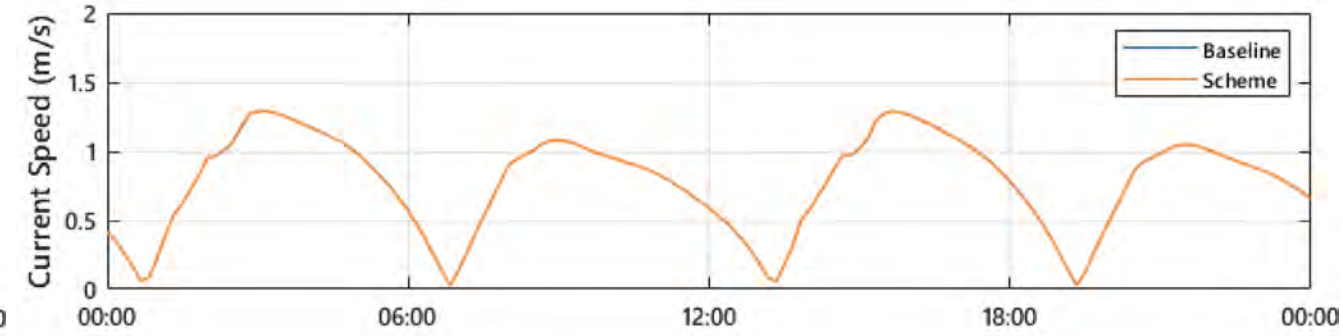
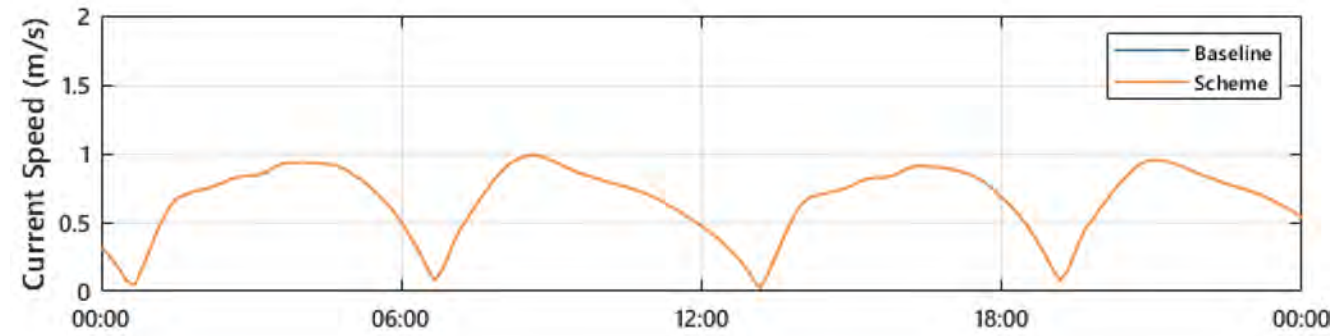
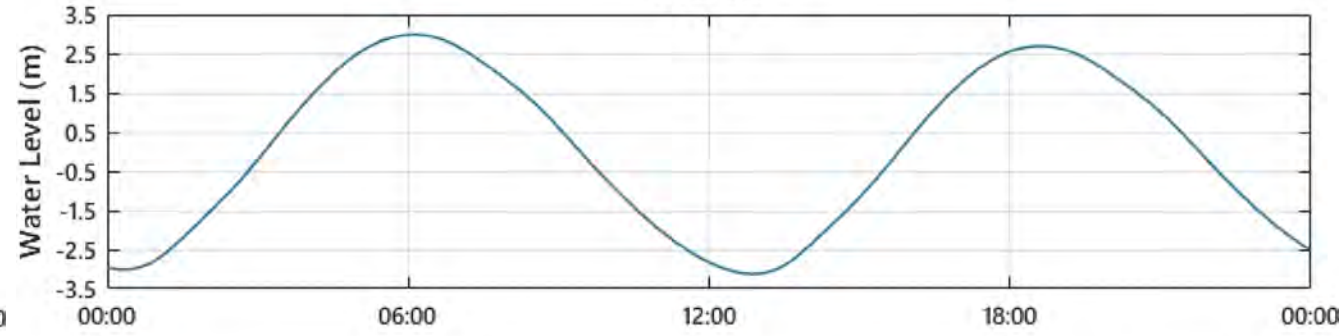
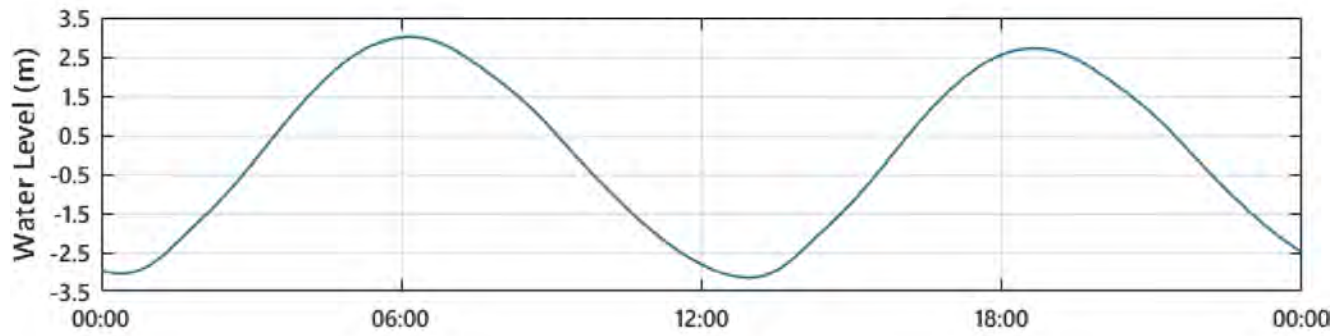


**IMMINGHAM EASTERN
RO-RO TERMINAL
TIMESERIES OF CHANGES TO FLOWS
AND BED SHEAR STRESS FOR SITES
P5 (LEFT) AND IOT (RIGHT)**

FIGURE 7.12

HST

ABLE



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Date	By	QA
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Projection	NA	
Scale (A3)	NA	
Project no.	5035	

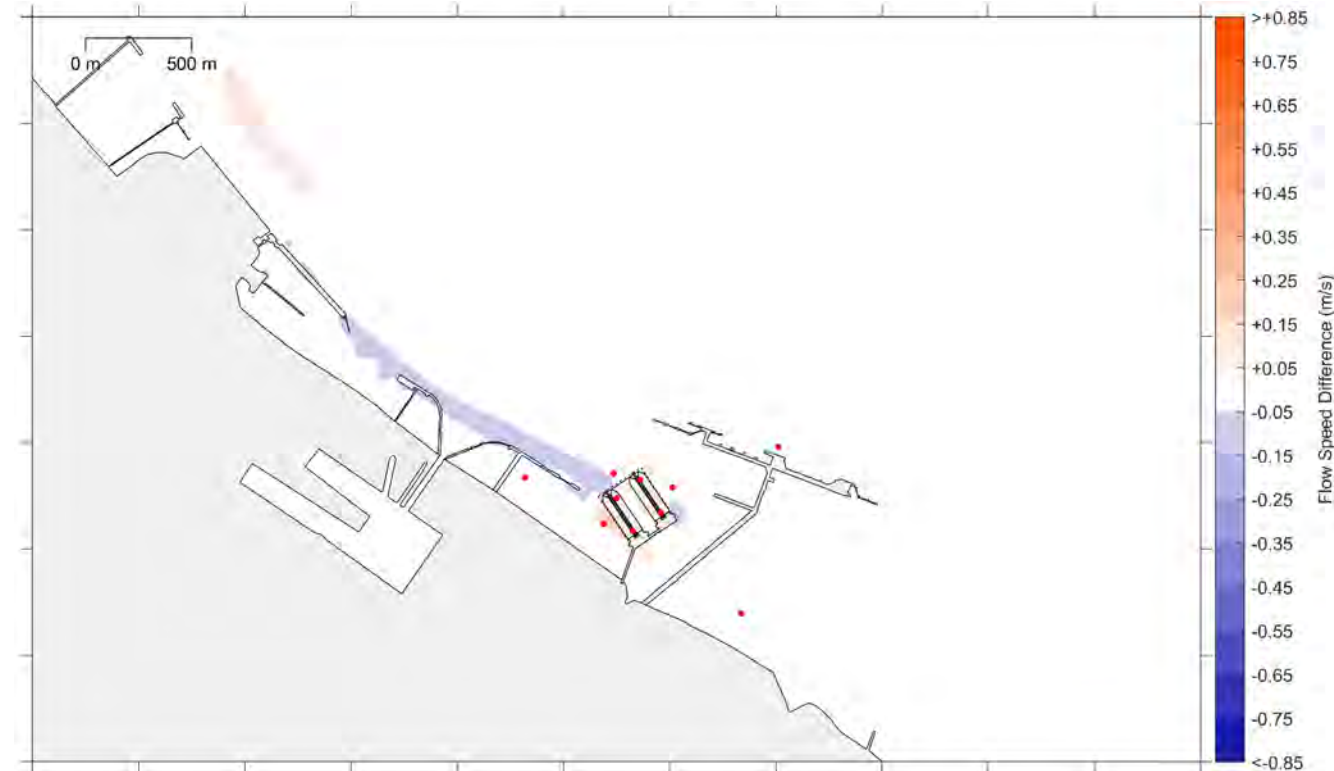
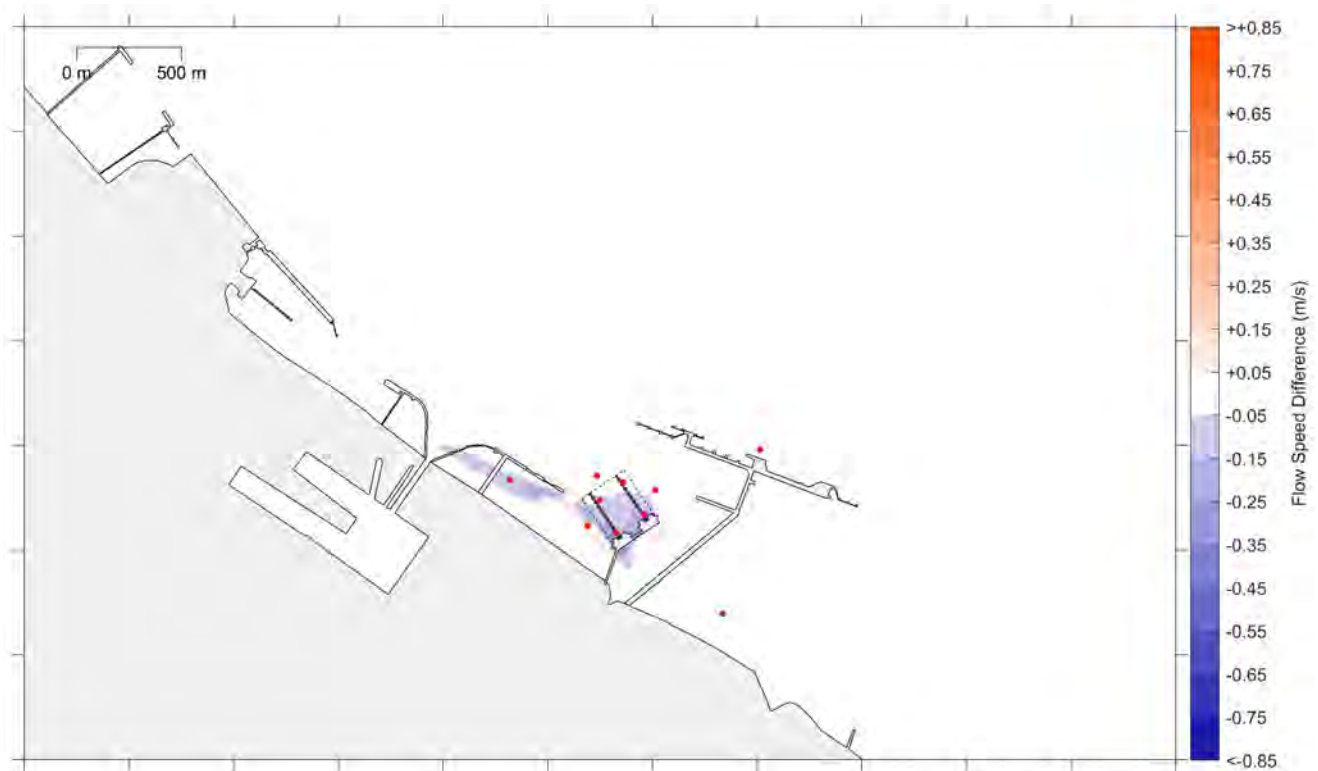
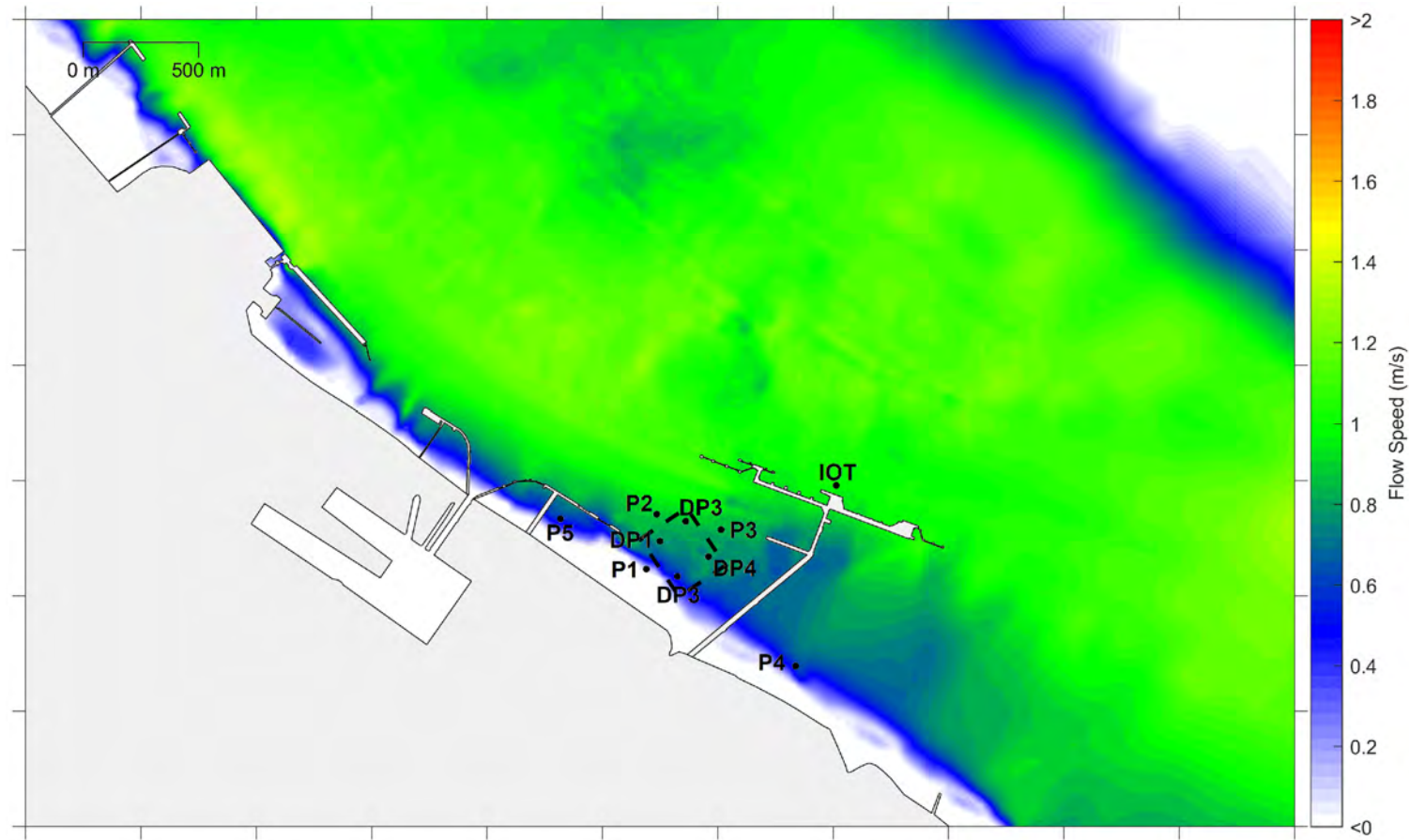


Fig7.13_PEIR_A3.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
TIMESERIES OF CHANGES TO FLOWS
AND BED SHEAR STRESS FOR SITES
HST (LEFT) AND ABLE (RIGHT)**

FIGURE 7.13



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Date	By	QA
10/01/2022	AMF	OJR
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Scale (A3)	NA	
Project no.	5035	

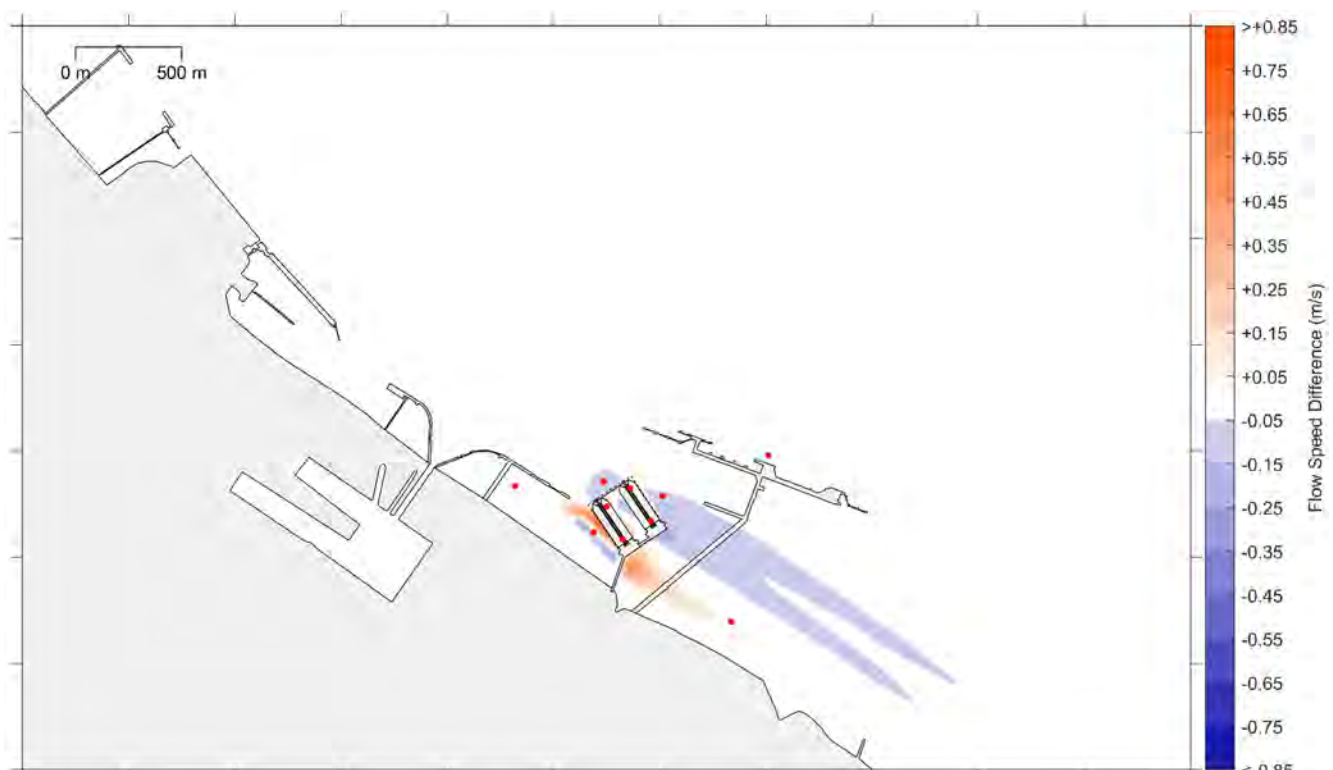
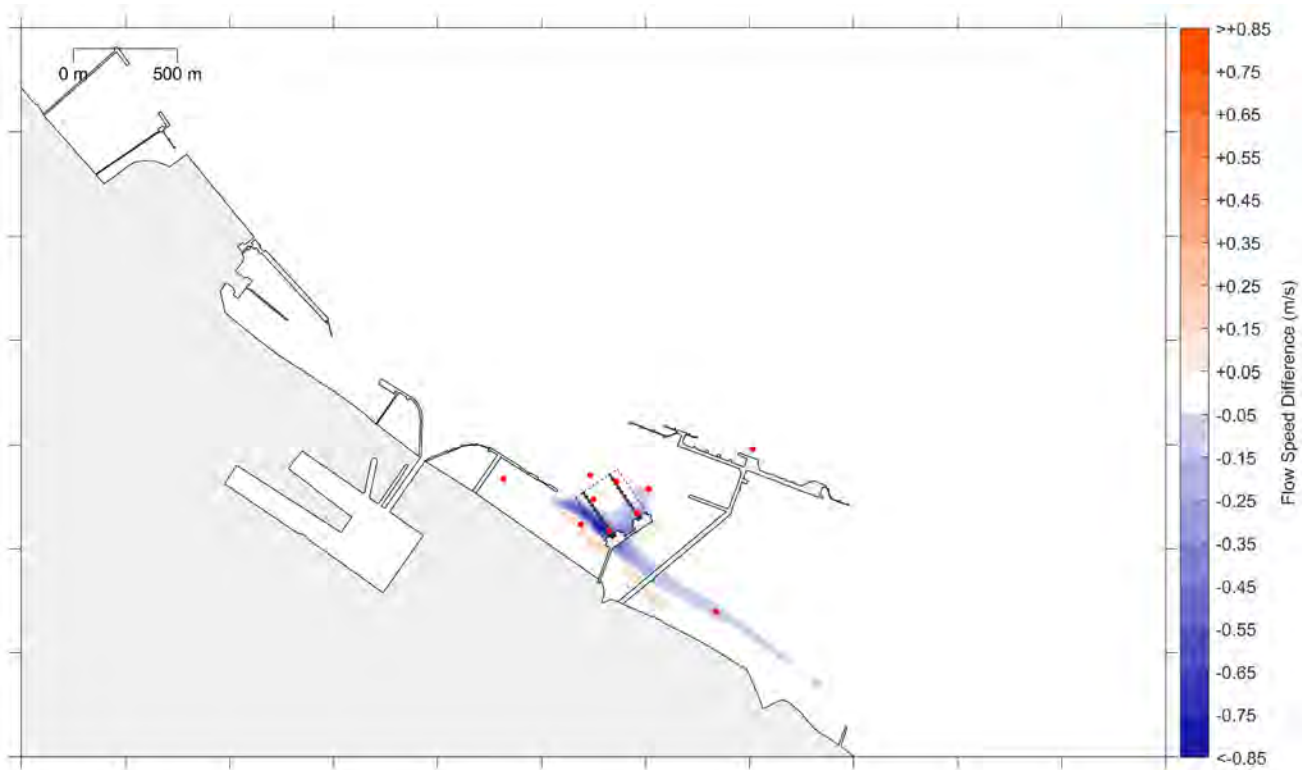
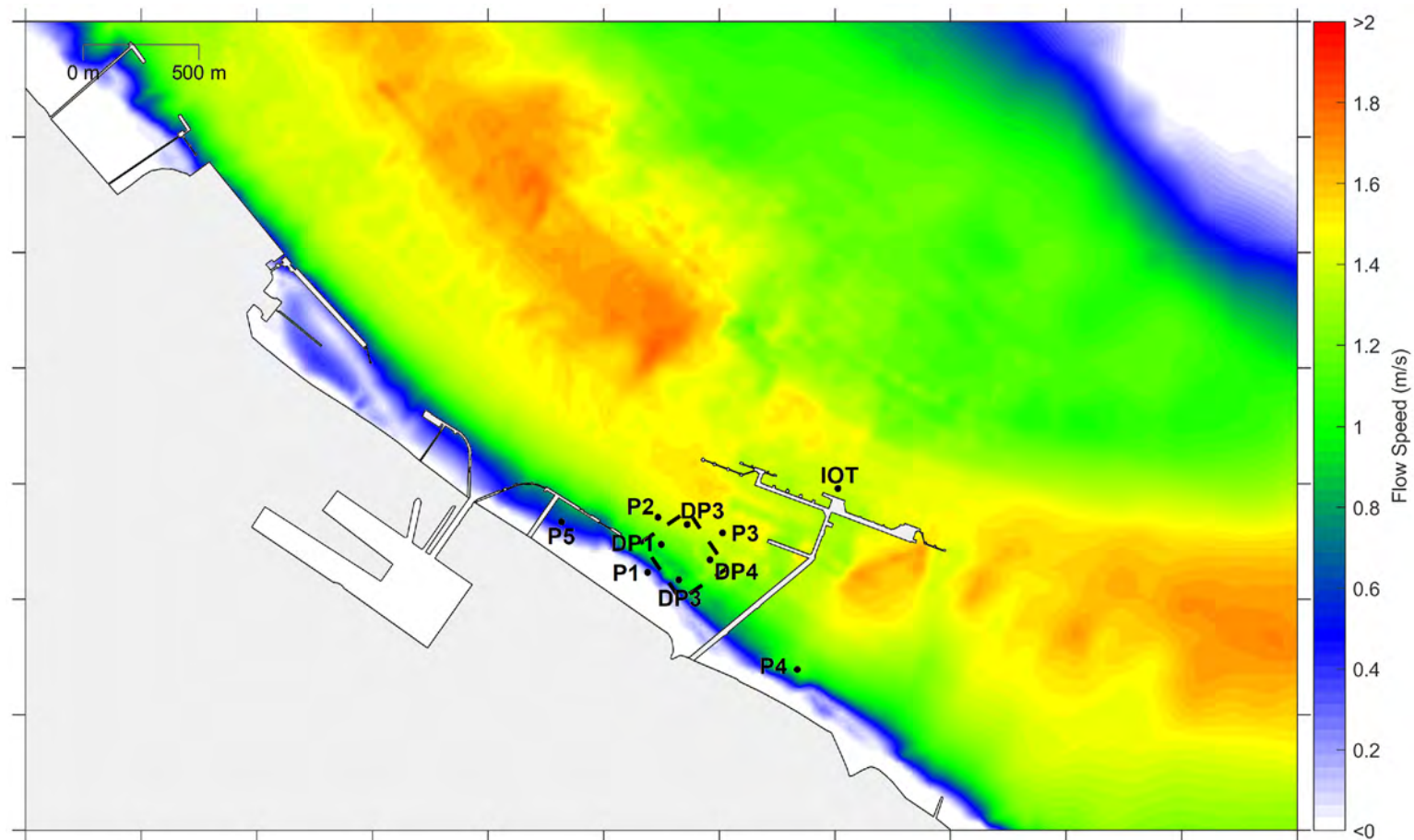


Fig7.14_PEIR_A3.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
BASELINE PEAK FLOOD FLOW SPEED (TOP),
CHANGE DUE TO SCHEME (LEFT) AND DUE
TO FOUR VESSELS ON-BERTH (RIGHT)**

FIGURE 7.14



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Date	By	QA
10/01/2022	AMF	OJR
Projection		NA
Scale (A3)		NA
Project no.		5035

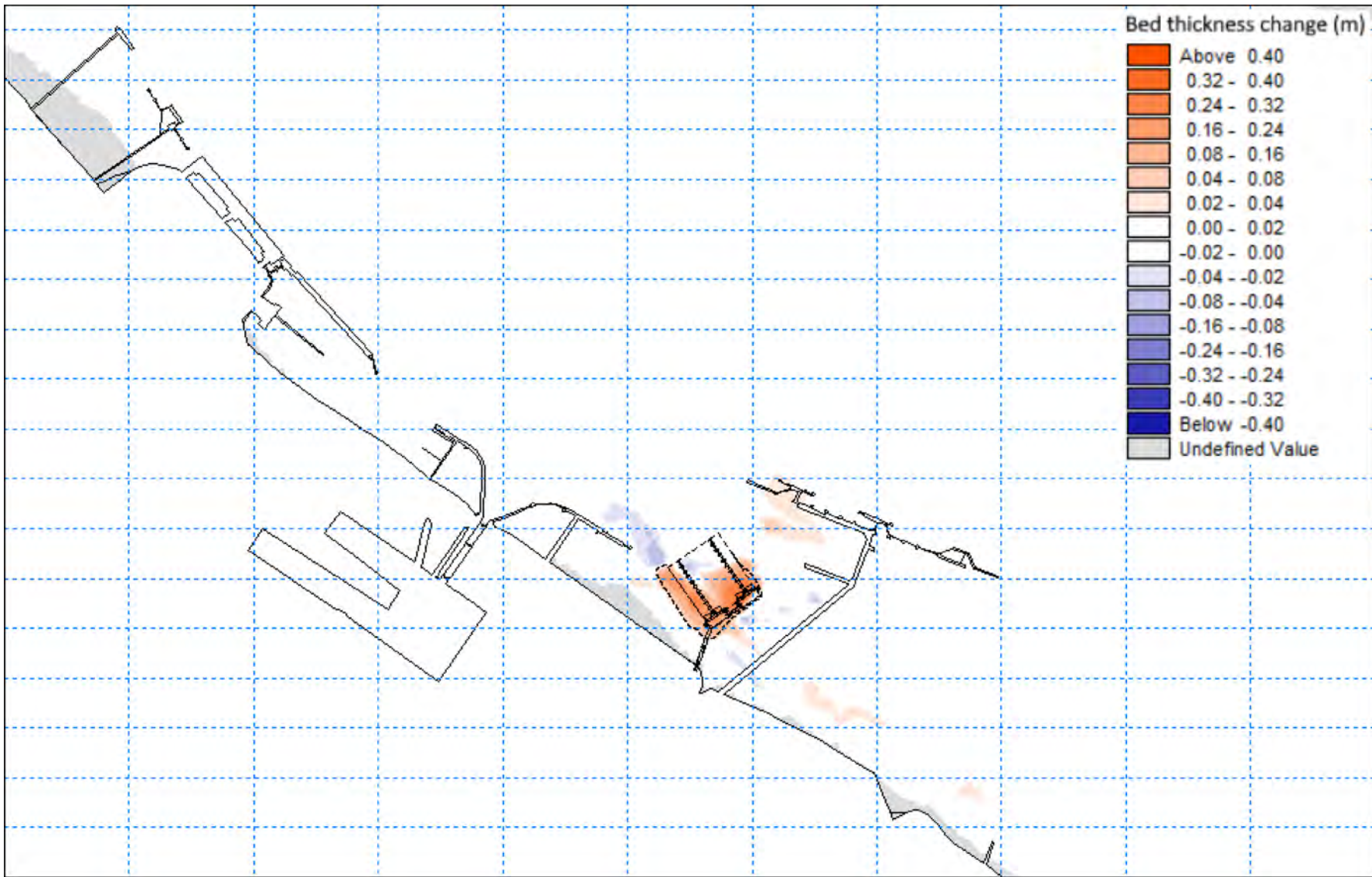


Fig7.15_PEIR_A3.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
BASELINE PEAK EBB FLOW SPEED (TOP),
CHANGE DUE TO SCHEME (LEFT) AND DUE
TO FOUR VESSELS ON-BERTH (RIGHT)**

FIGURE 7.15



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Date	By	QA
10/01/2022	AMF	OJR
Projection	NA	
Scale (A4)	NA	
Project no.	5035	



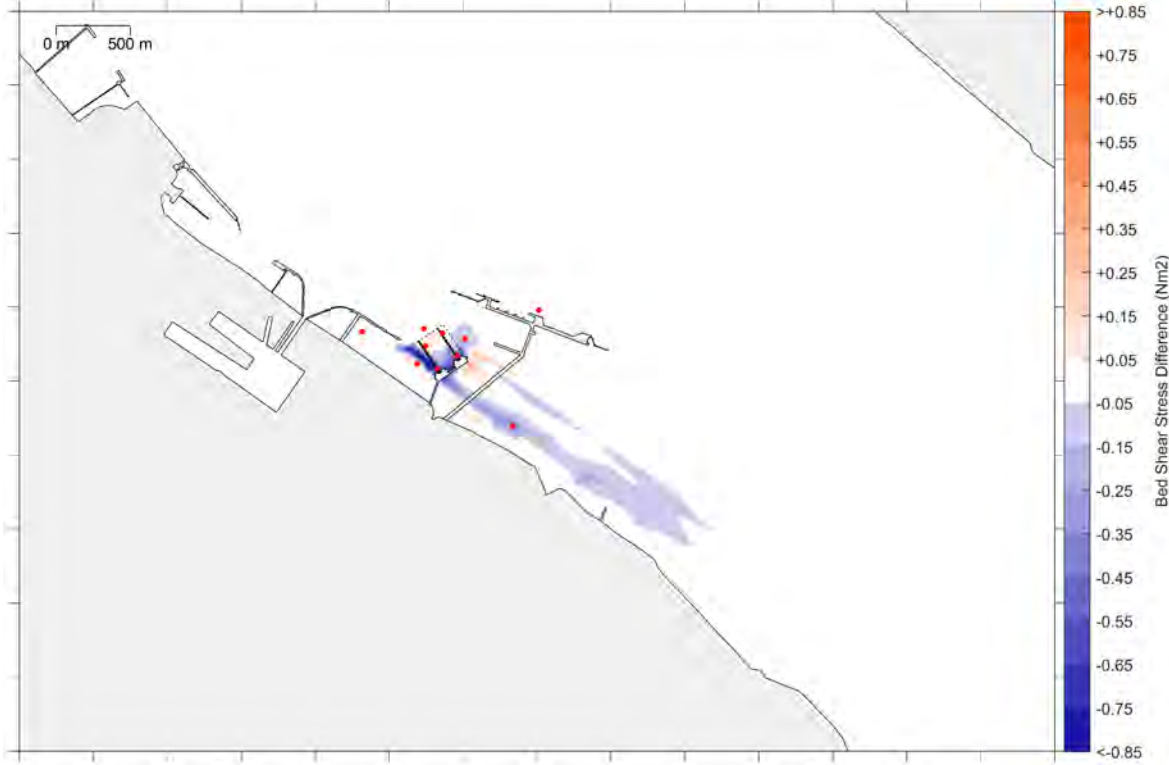
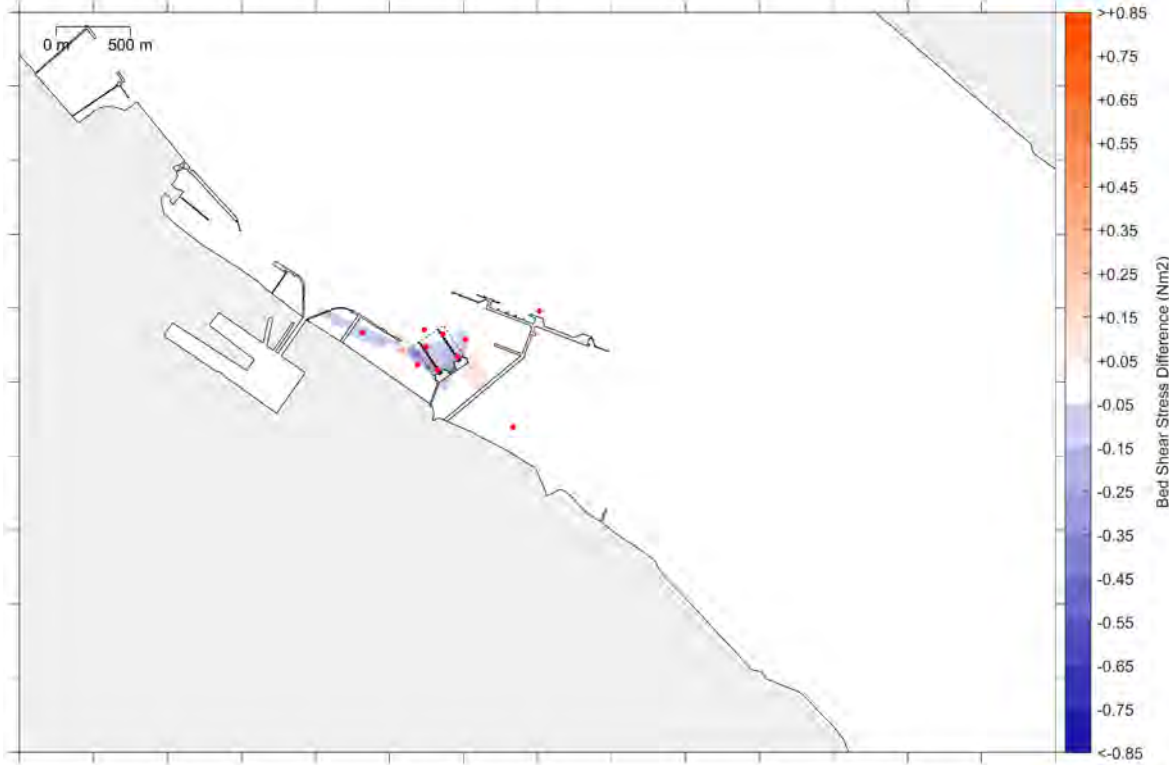
Fig7.16_PEIR_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL**

**MODELLLED BED LEVEL CHANGE
OVER A MEAN SPRING NEAP CYCLE**

FIGURE 7.16



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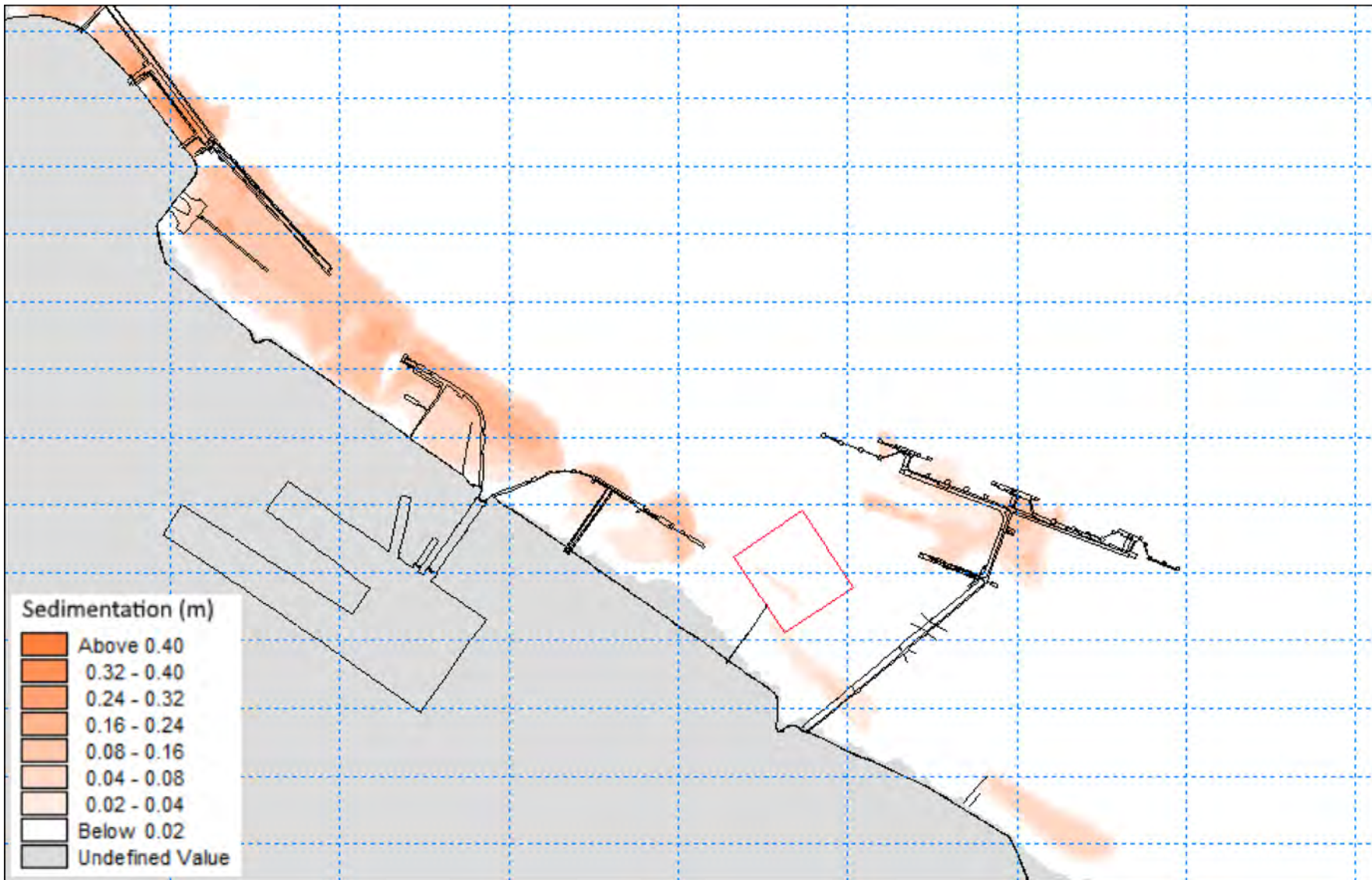
Date	By	QA
10/01/2022	AMF	OJR
Projection	NA	
Scale (A4)	NA	
Project no.	5035	



Fig7.17_PEIR_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
PREDICTED CHANGE TO BSS ON
FLOOD (TOP) AND EBB (BOTTOM)
FIGURE 7.17**



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Date	By	QA
10/01/2022	AMF	OJR
Projection	NA	
Scale (A4)	NA	
Project no.	5035	

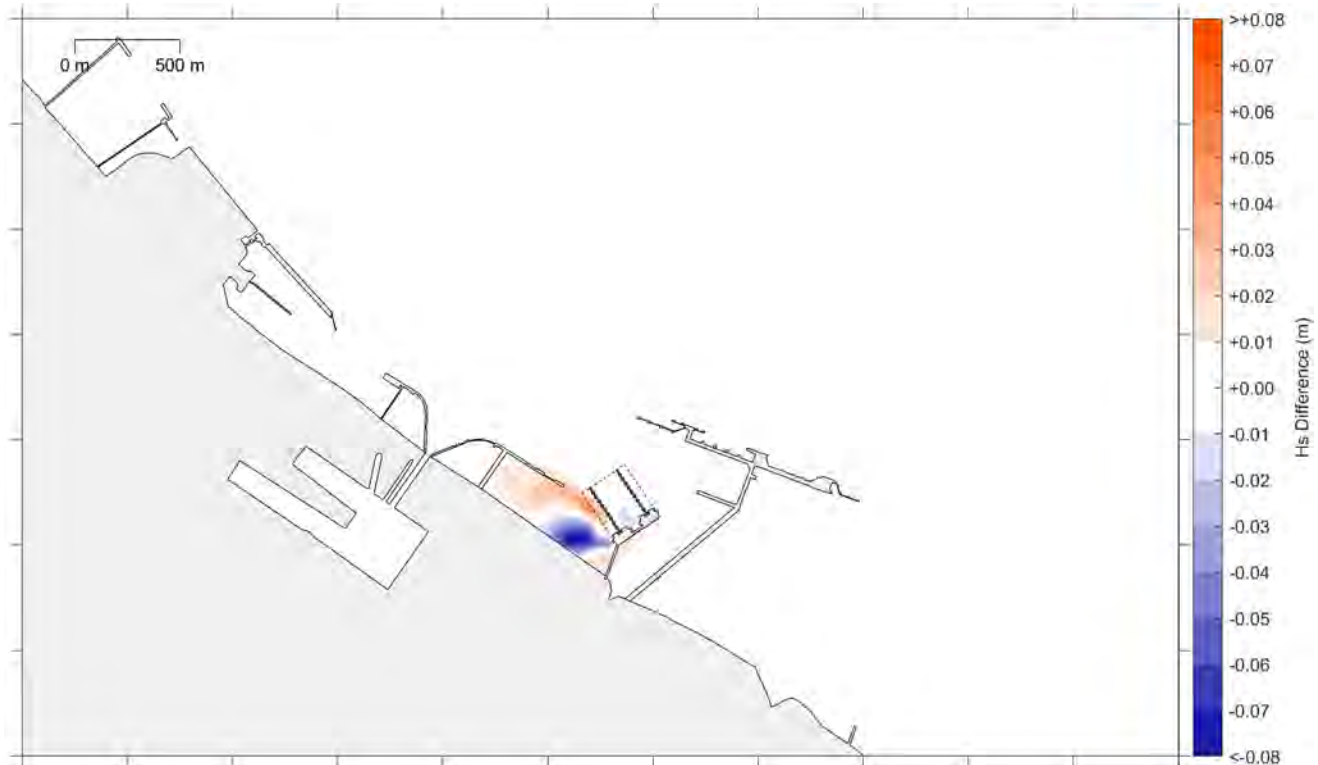
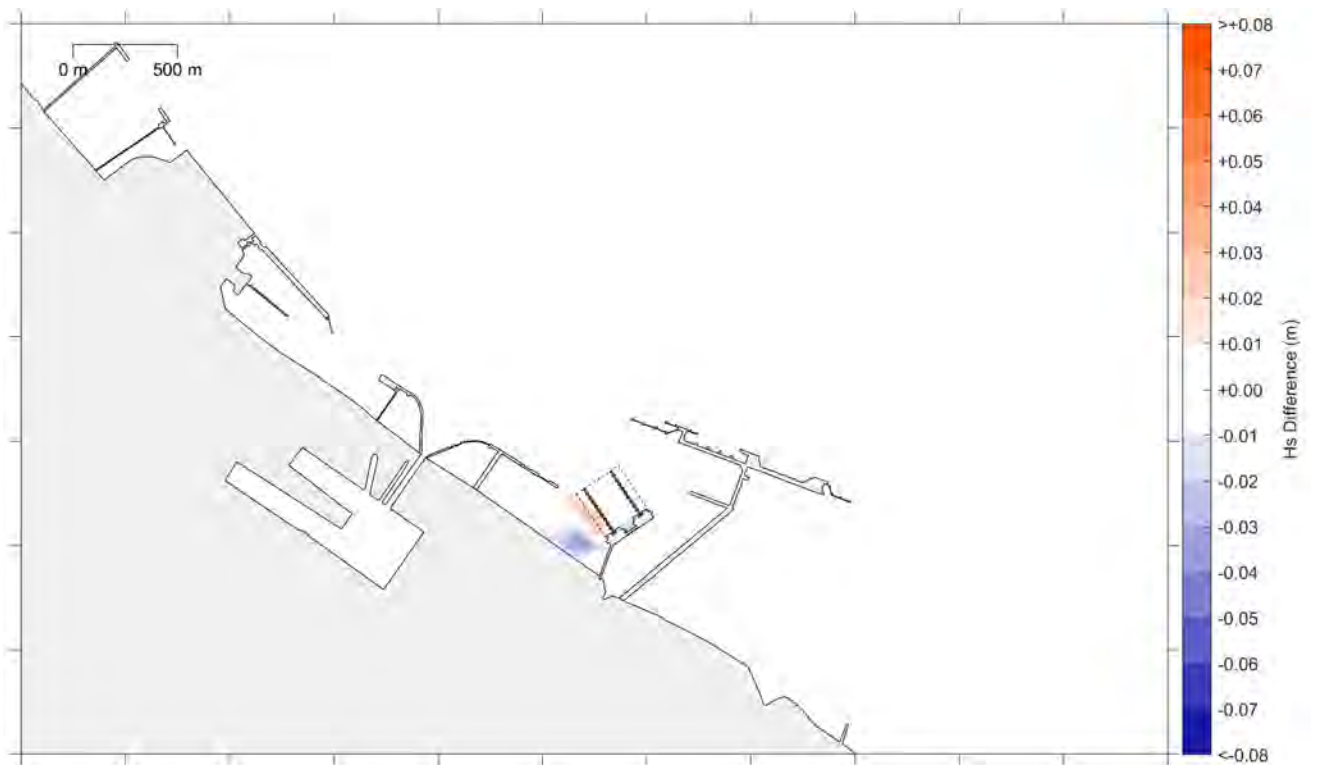
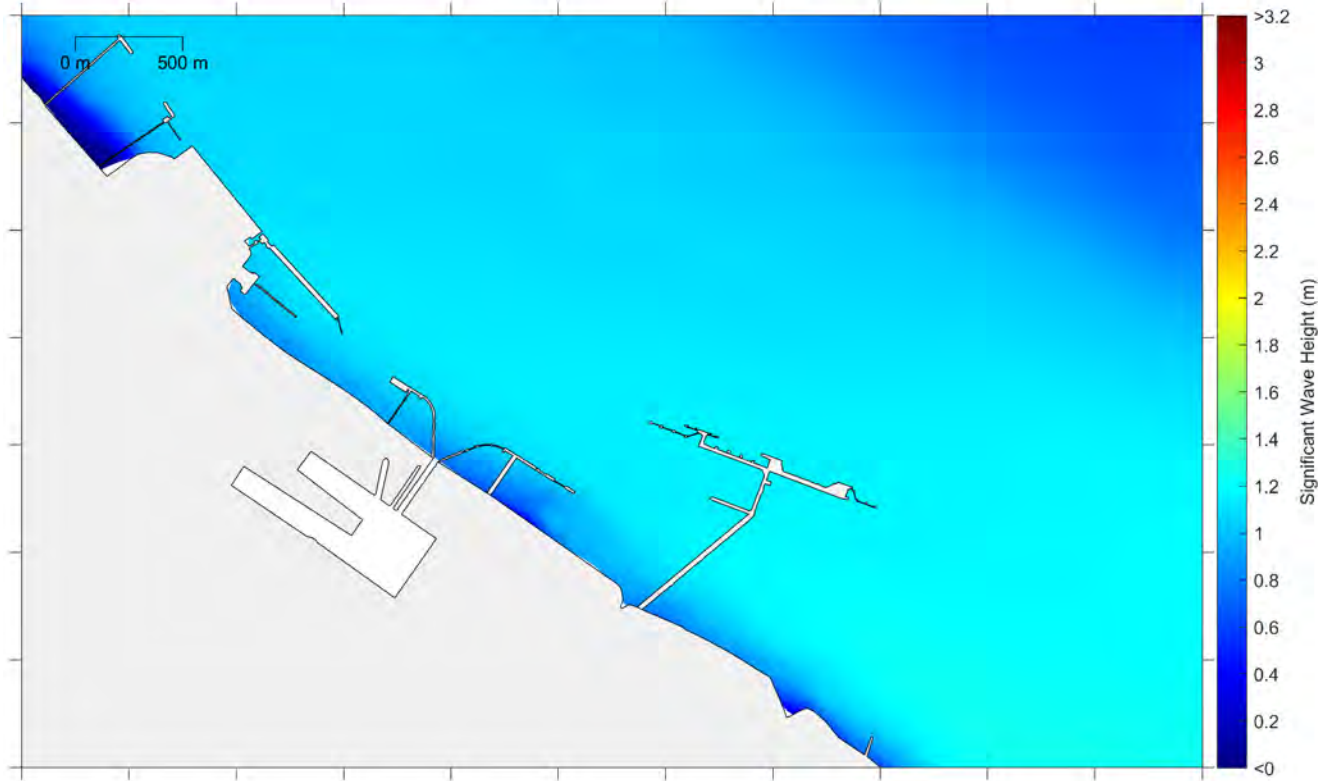
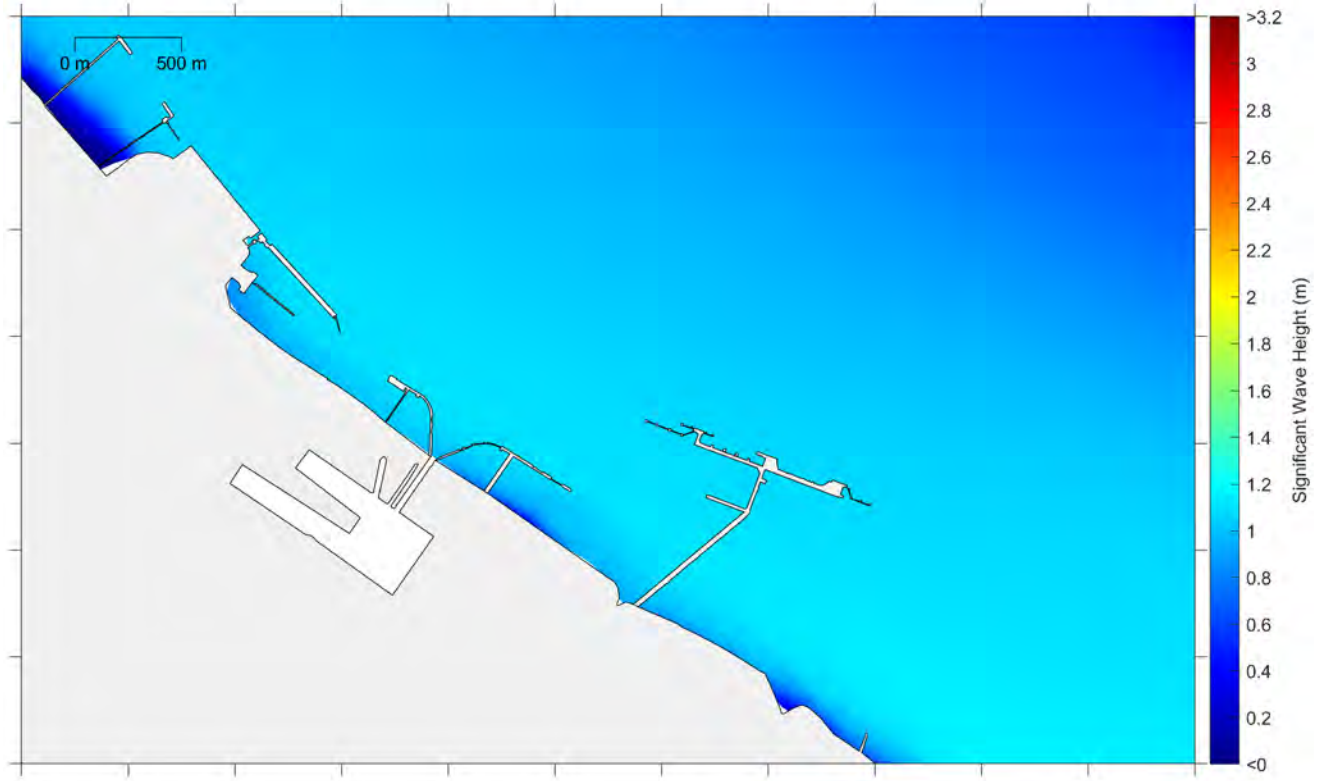


Fig7.18_PEIR_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
PREDICTED BASELINE SEDIMENTATION
OVER MEAN SPRING NEAP CYCLE**

FIGURE 7.18



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Date	By	QA
10/01/2022	AMF	OJR
Projection		NA
Scale (A3)		NA
Project no.		5035

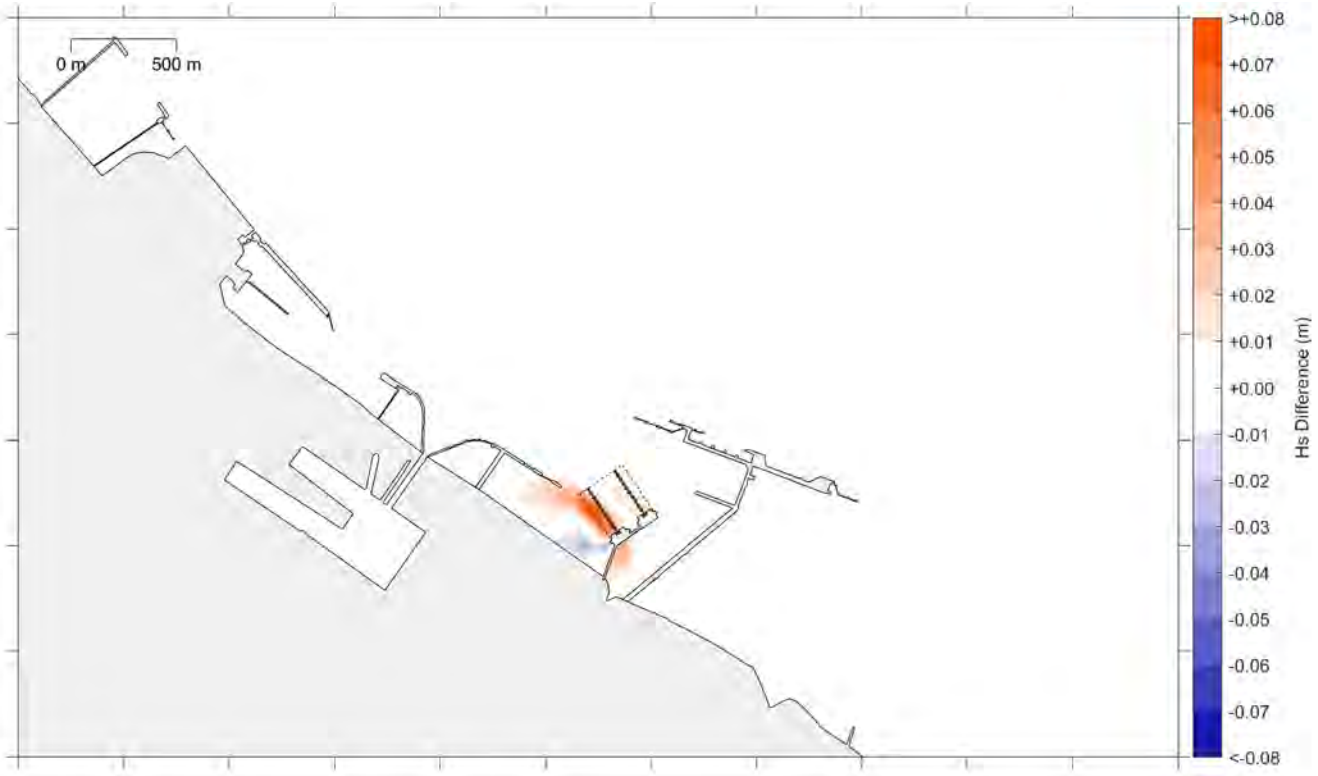
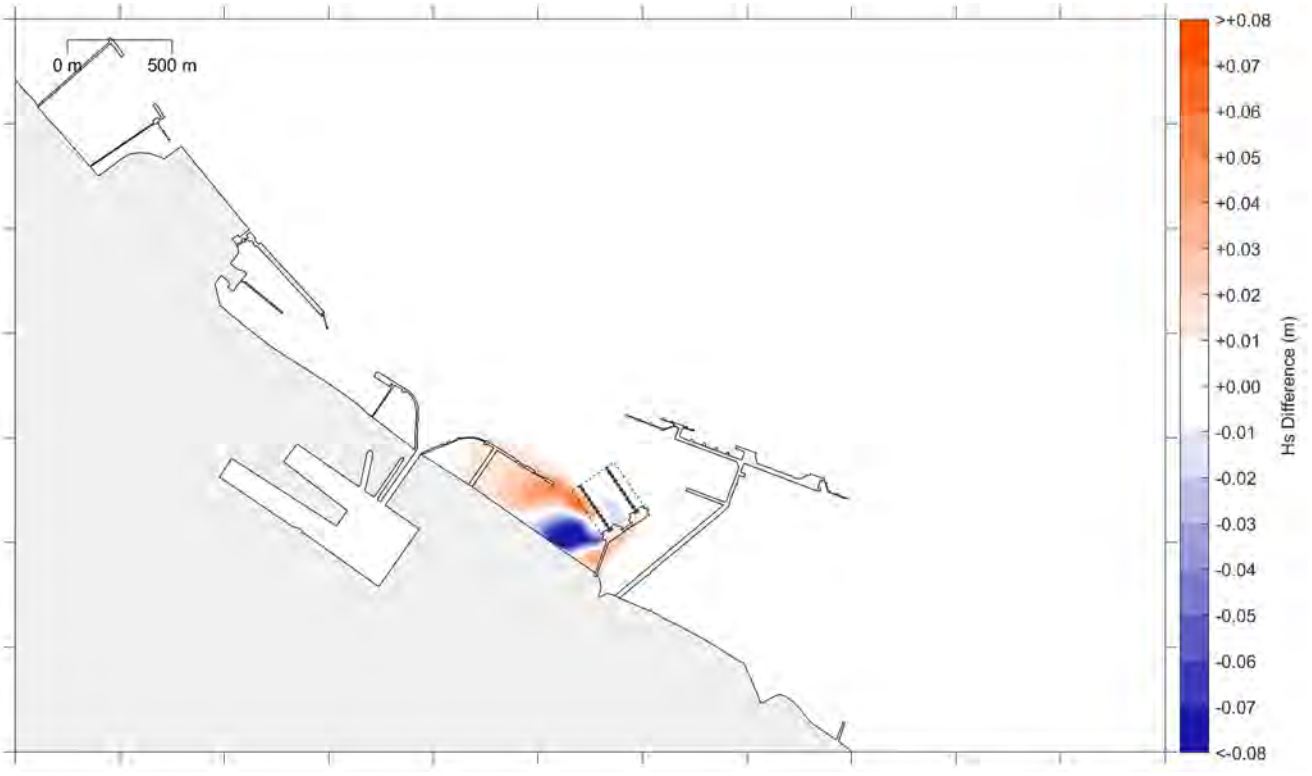
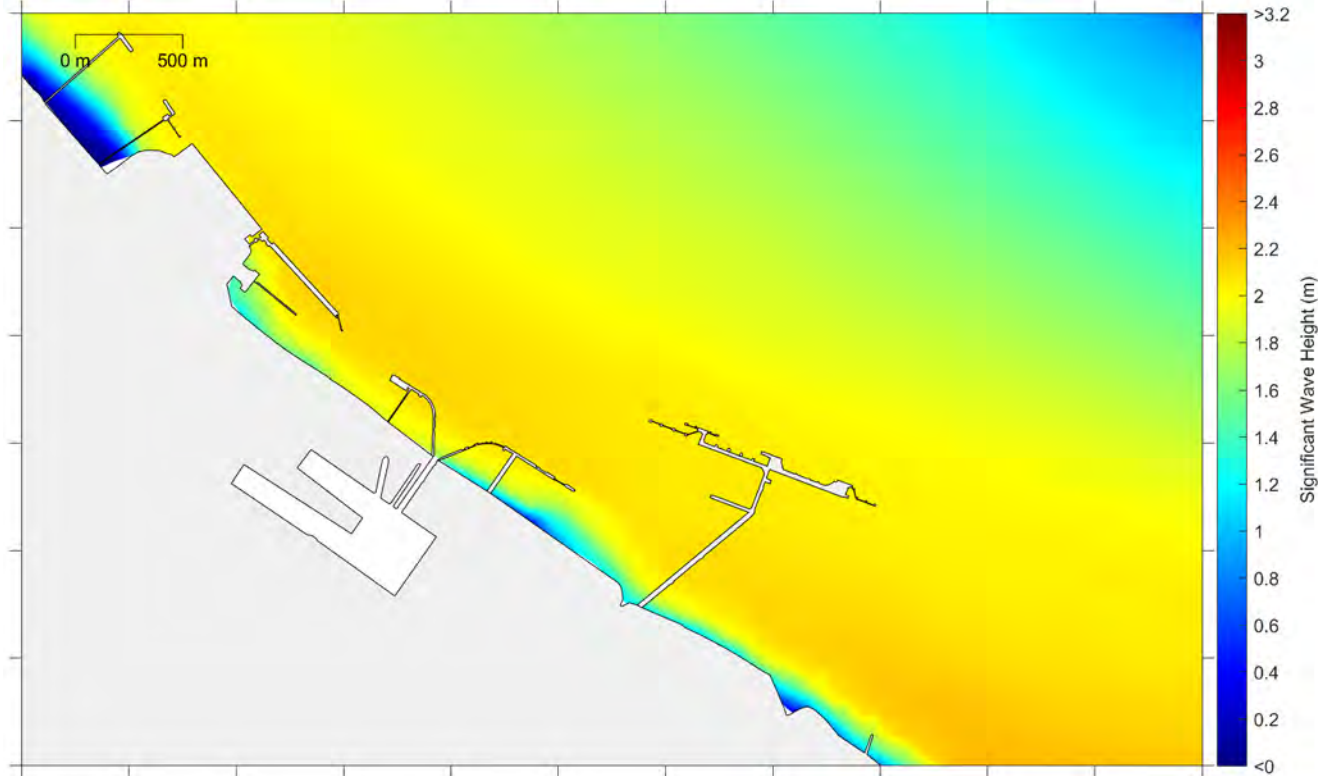
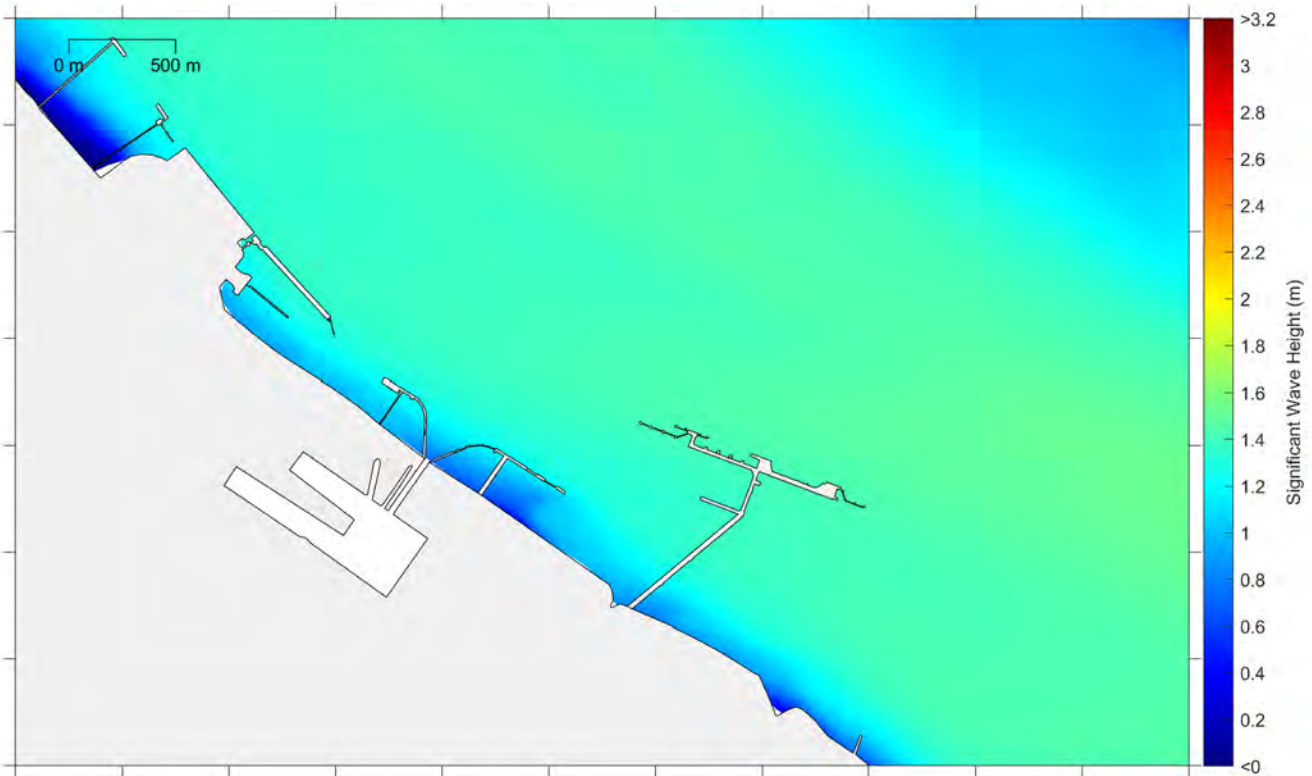


Fig7.19_PEIR_A3.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
BASELINE HS (TOP) AND EFFECT OF SCHEME
(BOTTOM) FOR 0.5-YR WAVE EVENT FROM
NE (LEFT) AND E (RIGHT)**

FIGURE 7.19



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Date	By	QA
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Projection		NA
Scale (A3)		NA
Project no.		5035

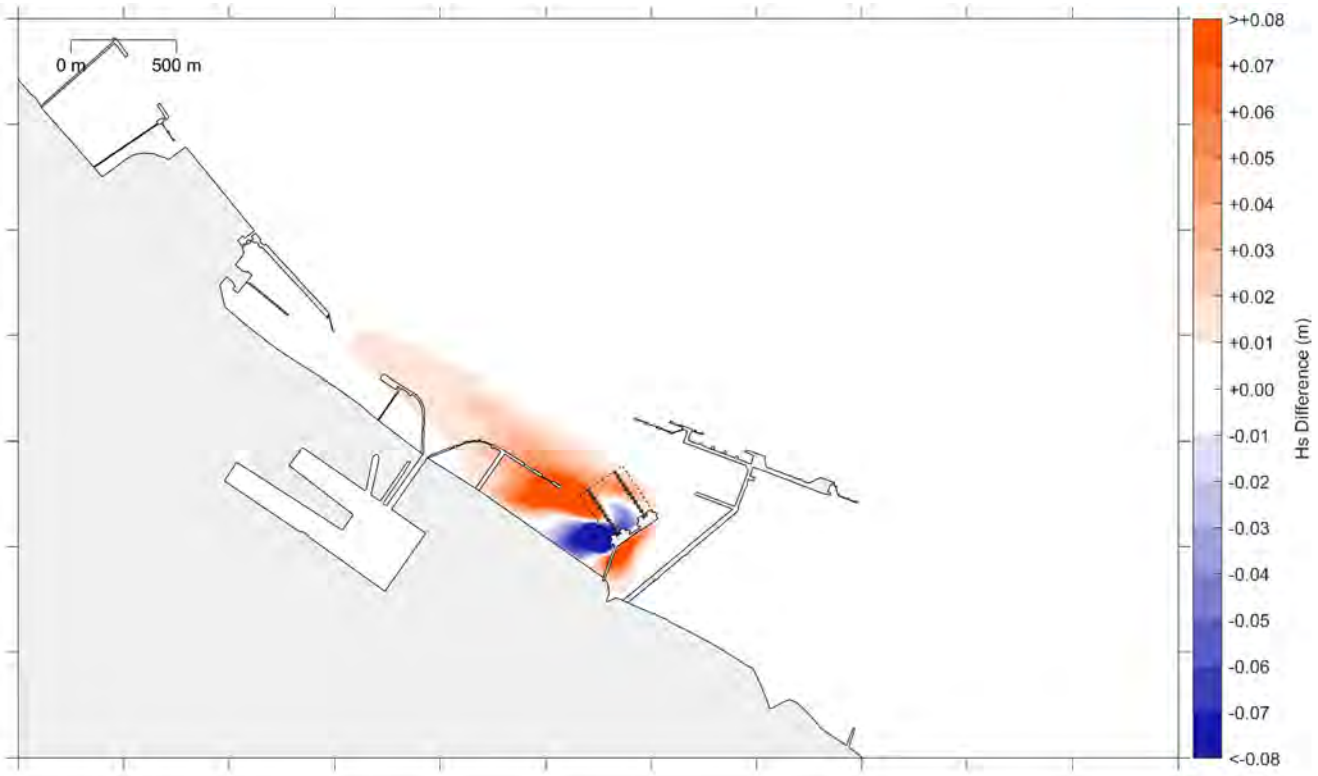
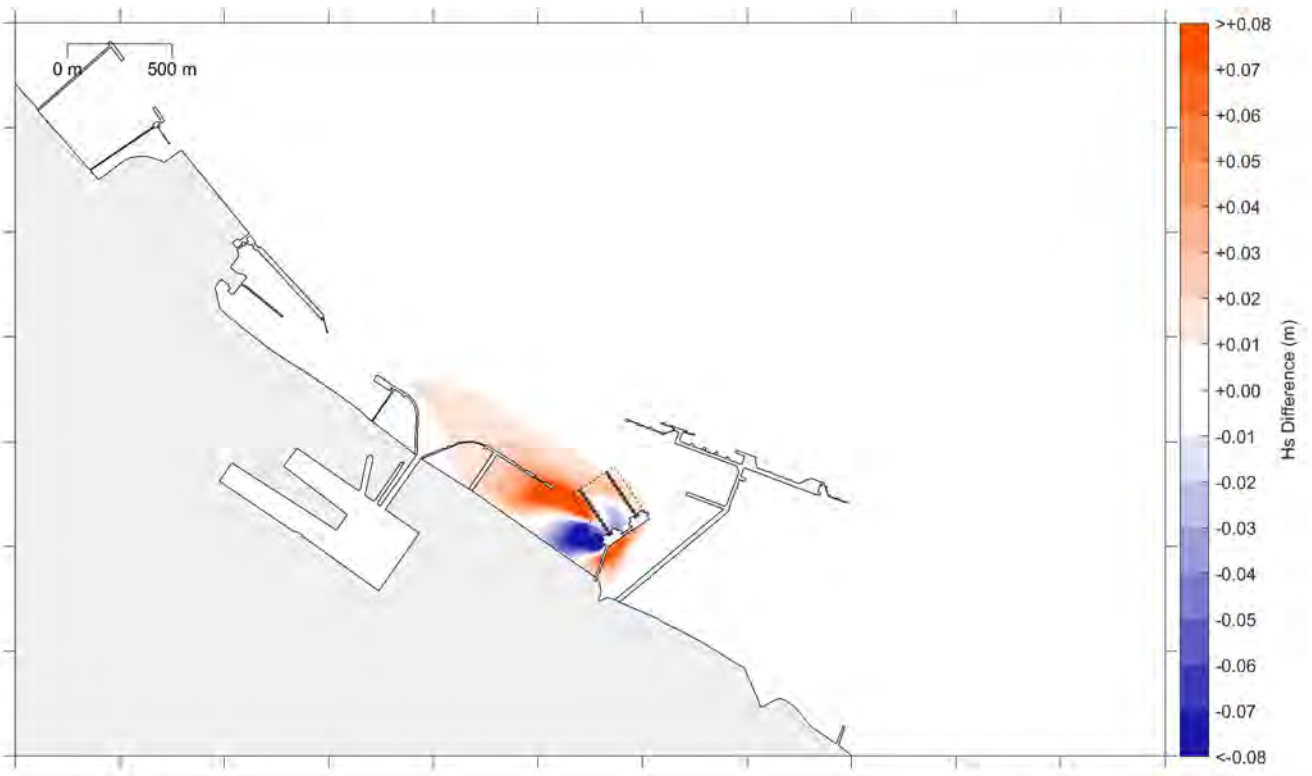
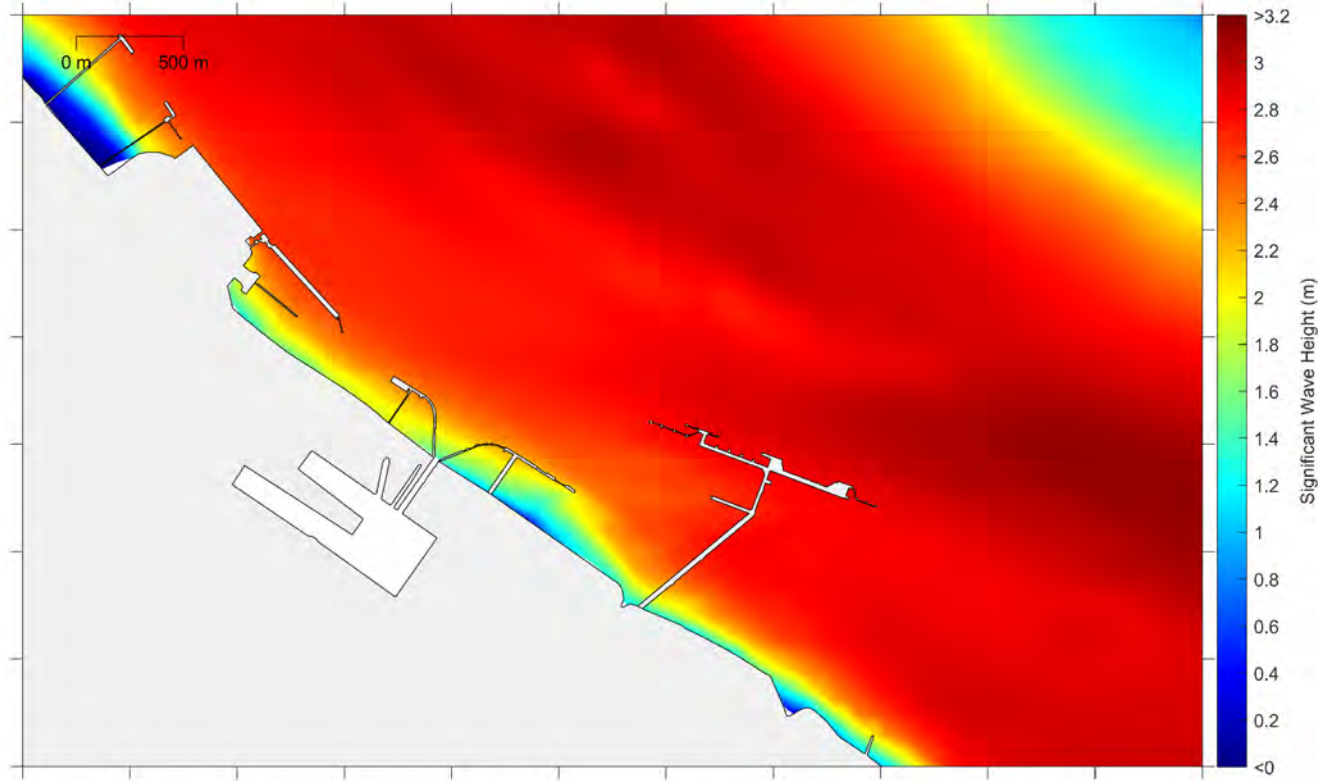
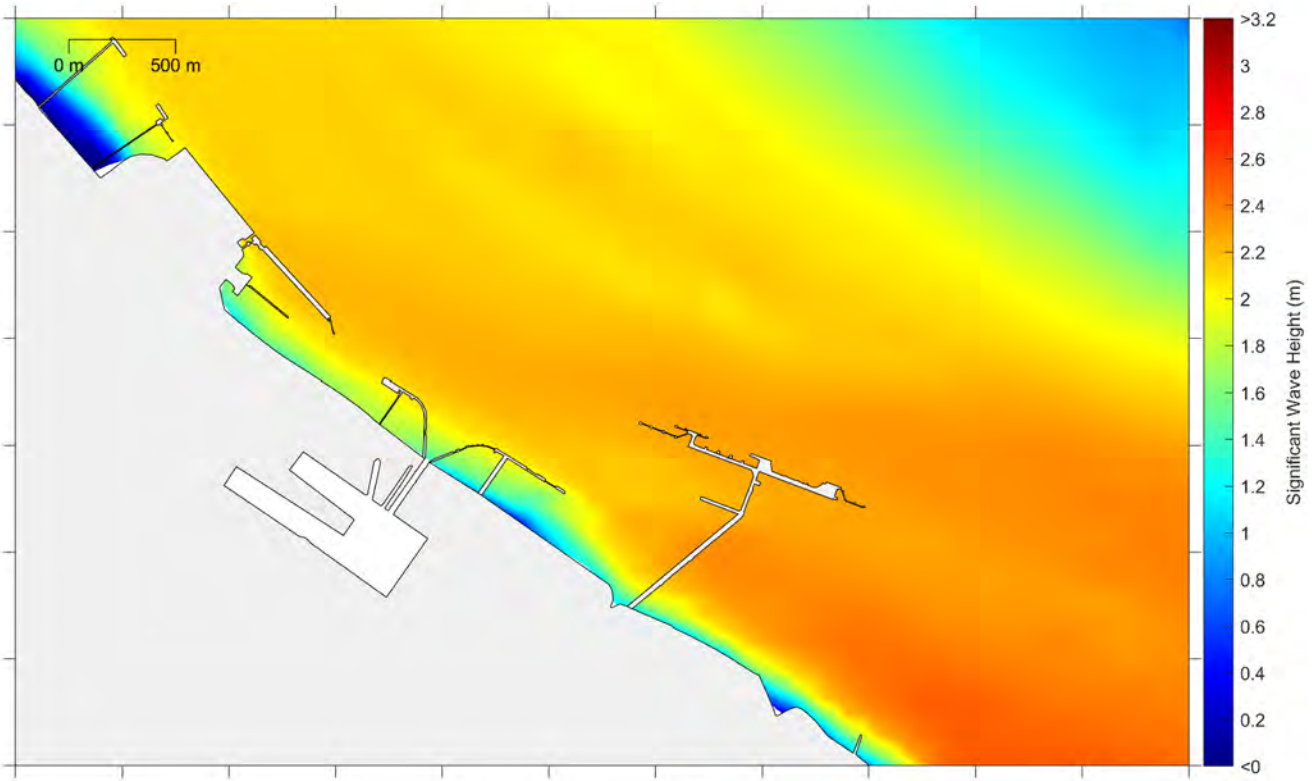


Fig7.20_PEIR_A3.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
BASELINE HS (TOP) AND EFFECT OF SCHEME
(BOTTOM) FOR 0.5-YR WAVE FROM SE
(LEFT) AND 50-YR WAVE FROM NE (RIGHT)**

FIGURE 7.20



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Projection		NA
Scale (A3)		NA
Project no.		5035



Fig7.21_PEIR_A3.mxd

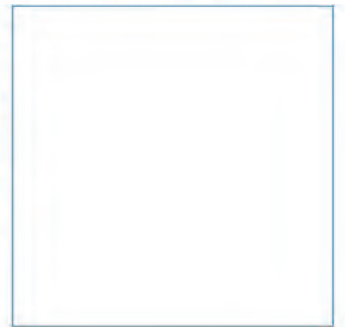


**IMMINGHAM EASTERN
RO-RO TERMINAL
BASELINE HS (TOP) AND EFFECT OF SCHEME
(BOTTOM) FOR 50-YR WAVE EVENT FROM
E (LEFT) AND FROM SE (RIGHT)**

FIGURE 7.21

8 Water and Sediment Quality

- 8.1 WFD water bodies
- 8.2 WFD protected areas
- 8.3 Sediment sampling locations



Innovative Thinking - Sustainable Solutions



- Legend**
- Proposed Application Site
 - WFD River Water Body Catchment
 - WFD Transitional and Coastal Water Bodies

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Scale (A4)	1:60,000	
Project no.	5035	

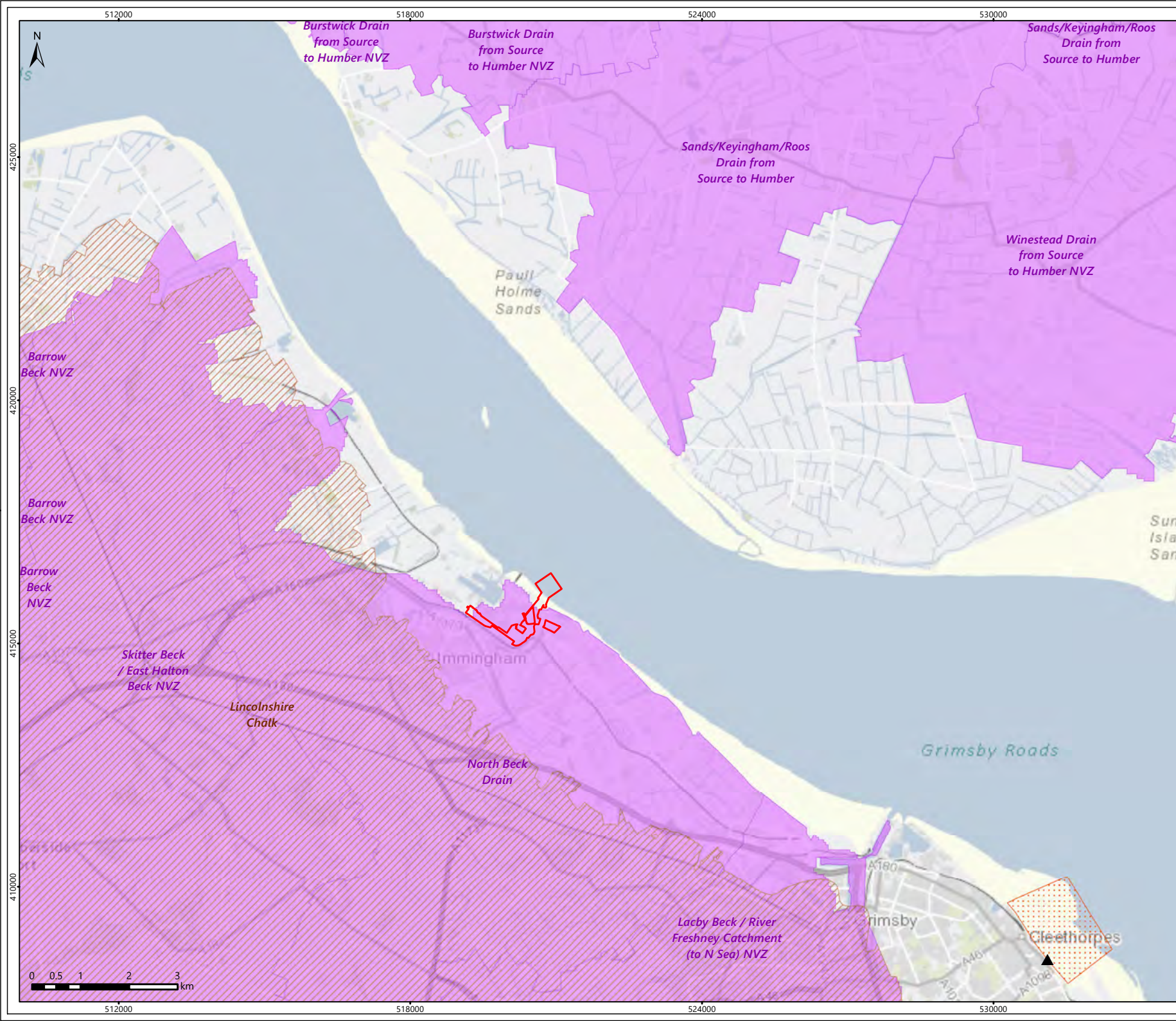


Fig8.1_WFD_Water_Bodies_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
WFD WATER BODIES**

FIGURE 8.1



- Legend**
- Proposed Application Site
 - Sensitive Areas - Bathing Waters
 - Bathing Waters Monitoring Locations
- Nitrate Vulnerable Zones (NVZ)
- Groundwater
 - Surface Water

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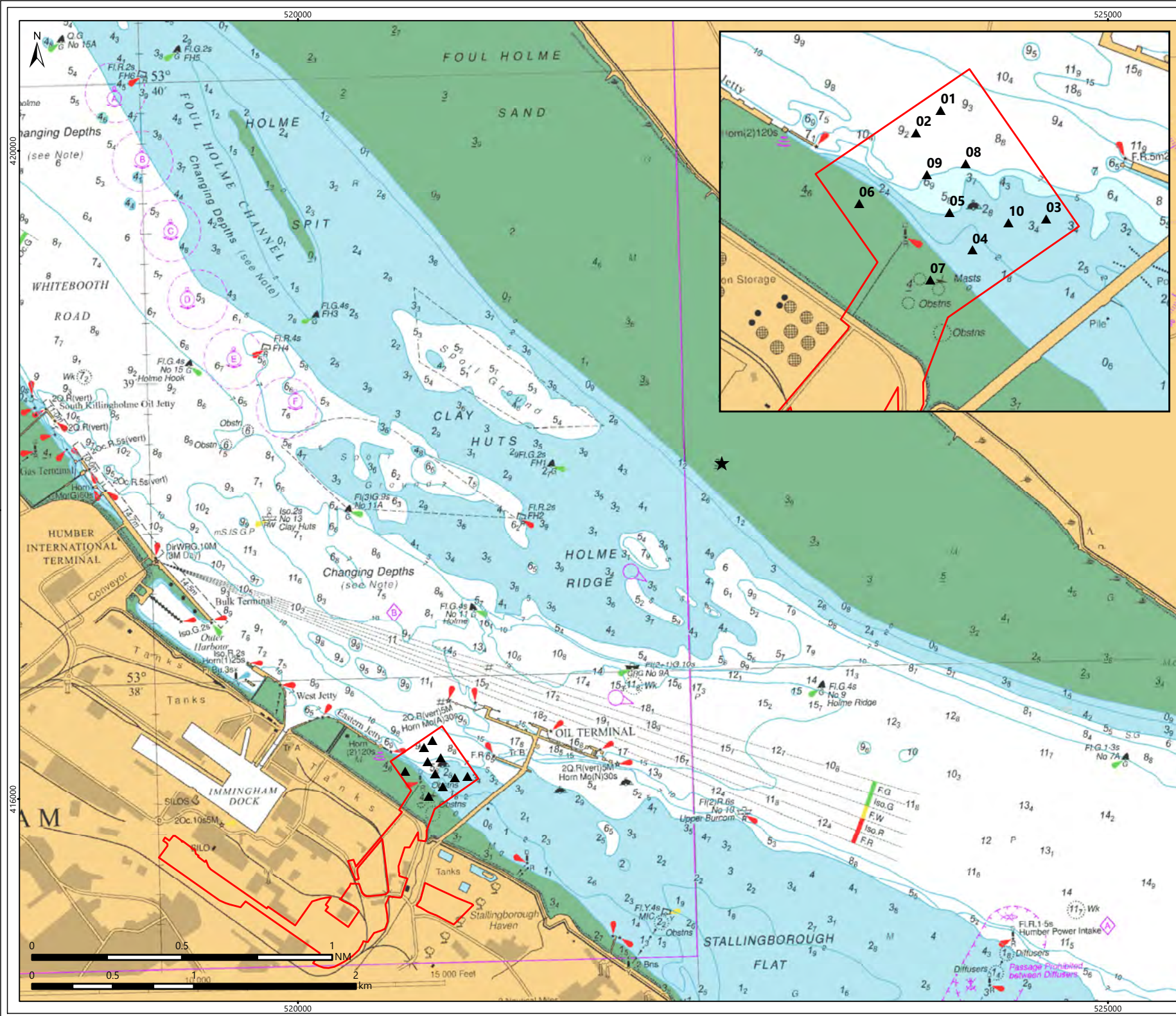
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10/01/2022	OJR	CRB
Projection	British National Grid	
Scale (A4)	1:100,000	
Project no.	5035	

Fig8.2_WFD_Protected_Areas_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
WFD PROTECTED AREAS**

FIGURE 8.2



- Legend**
- Proposed Application Site
 - ★ Saline monitoring point
 - ▲ Samples

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Project no.	5035	

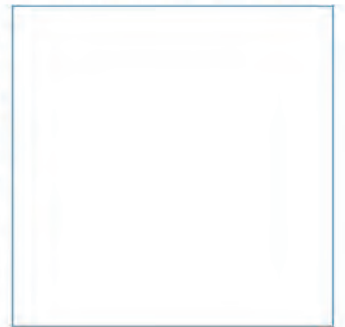


**IMMINGHAM EASTERN
 RO-RO TERMINAL
 SEDIMENT SAMPLING LOCATIONS**

Figure 8.3

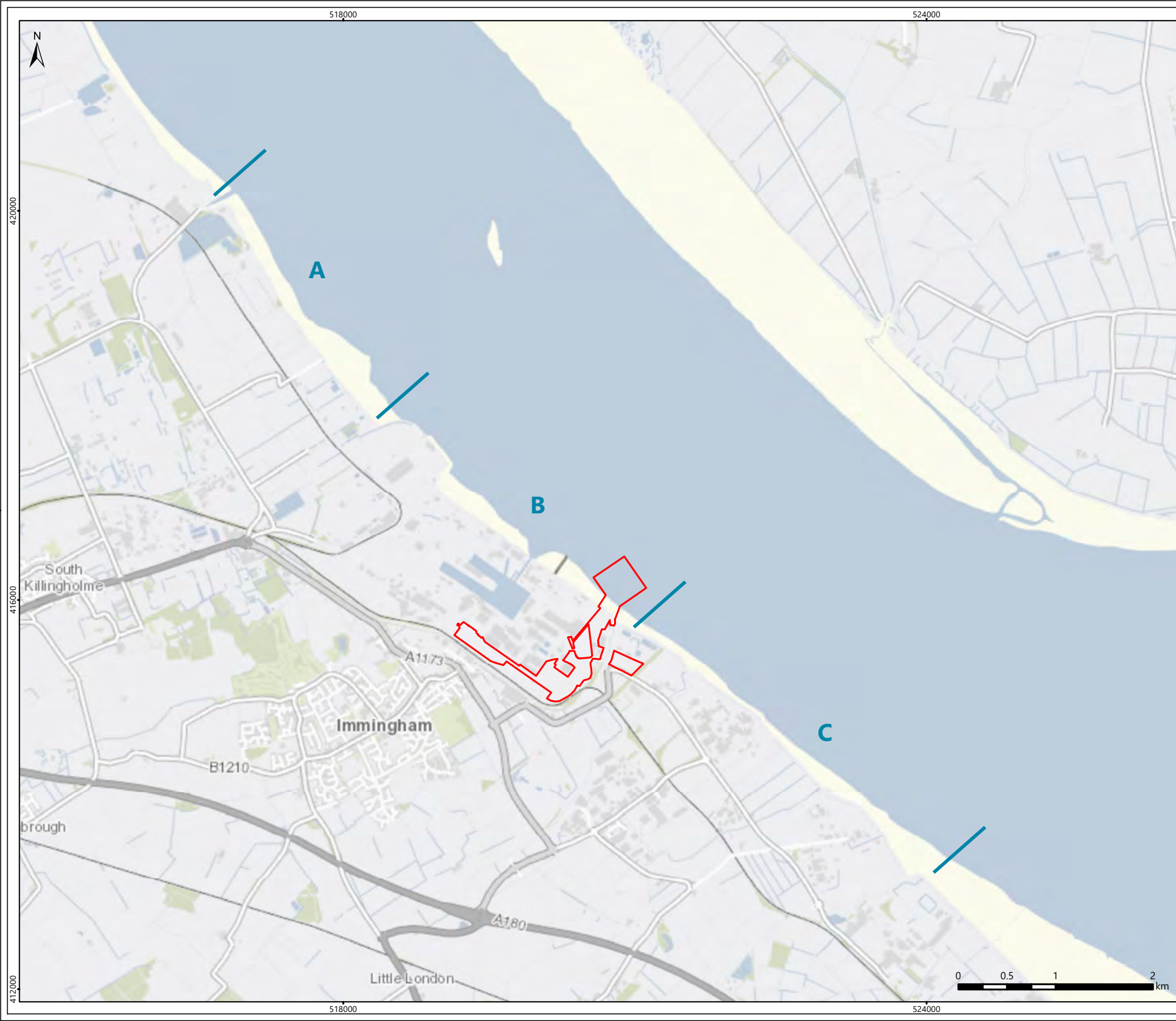
9 Nature Conservation and Marine Ecology

- 9.1 Pre and post consent monitoring locations of coastal waterbird surveys as part of the Immingham Outer Harbour Development
- 9.2 Benthic sampling stations
- 9.3 Designated conservation sites
- 9.4 Spawning and nursery grounds of commercial fish species
- 9.5 TraC fish monitoring stations
- 9.6 Annual grey seal pup counts at Donna Nook
- 9.7 Aerial counts of grey seals at Donna Nook
- 9.8 Harbour porpoise sightings in the Humber Estuary since 2000
- 9.9 The 5-year mean peak number of birds in Sector B during different months
- 9.10 The distribution of coastal waterbirds within Sector B



Innovative Thinking - Sustainable Solutions





- Legend**
- Proposed Application Site
 - ABP IOH Bird Survey Sectors

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Projection	British National Grid	
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Project no.	5035	

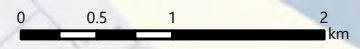


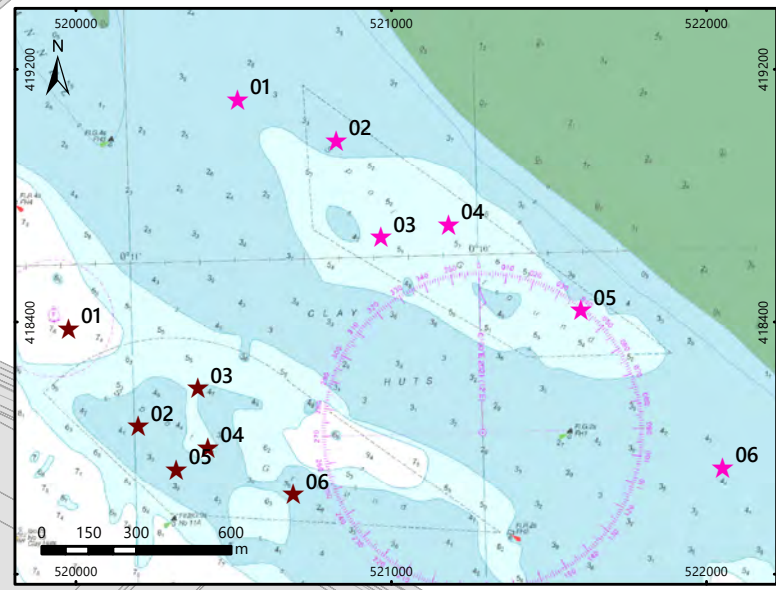
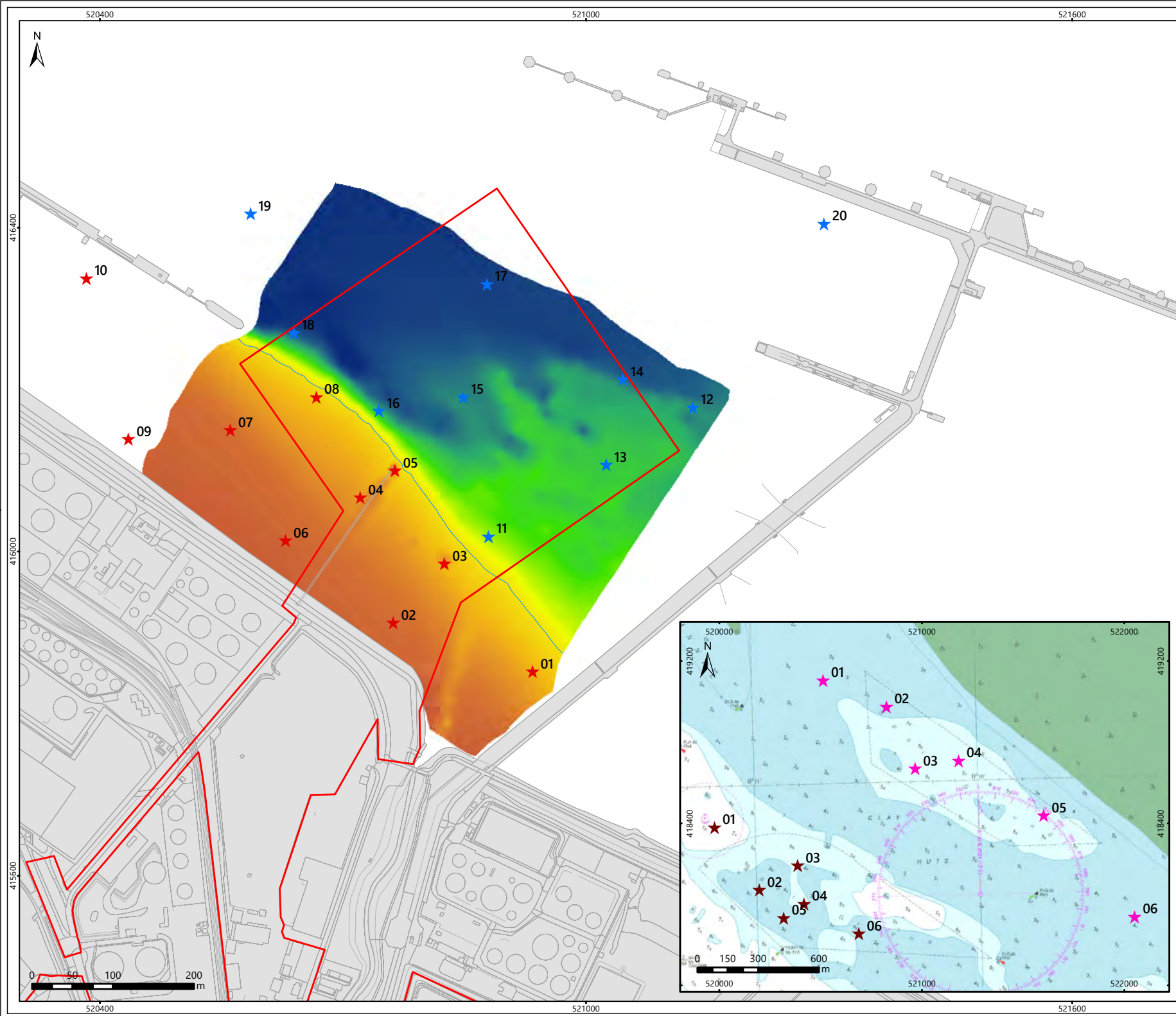
Fig9.1_Bird_Survey_Sectors_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
PRE AND POST CONSENT MONITORING
LOCATIONS OF COASTAL WATERBIRD SURVEYS
AS PART OF THE IMMINGHAM OUTER
HARBOUR DEVELOPMENT**

Figure 9.1





Legend

- Proposed Application Site
- Mean Low Water Springs

Benthic Sampling Stations

- HU056
- HU060
- Intertidal
- Subtidal

Elevation m(CD)

- 11.1
- 7.5
- 5
- 2.5
- 0
- 2.5
- 5
- 7.65

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Projection	British National Grid	
Scale (A4)	1:6,000	
Project no.	5035	

Fig9.2_Benthic_Sampling_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
BENTHIC SAMPLING STATIONS**

Figure 9.2

518000

524000

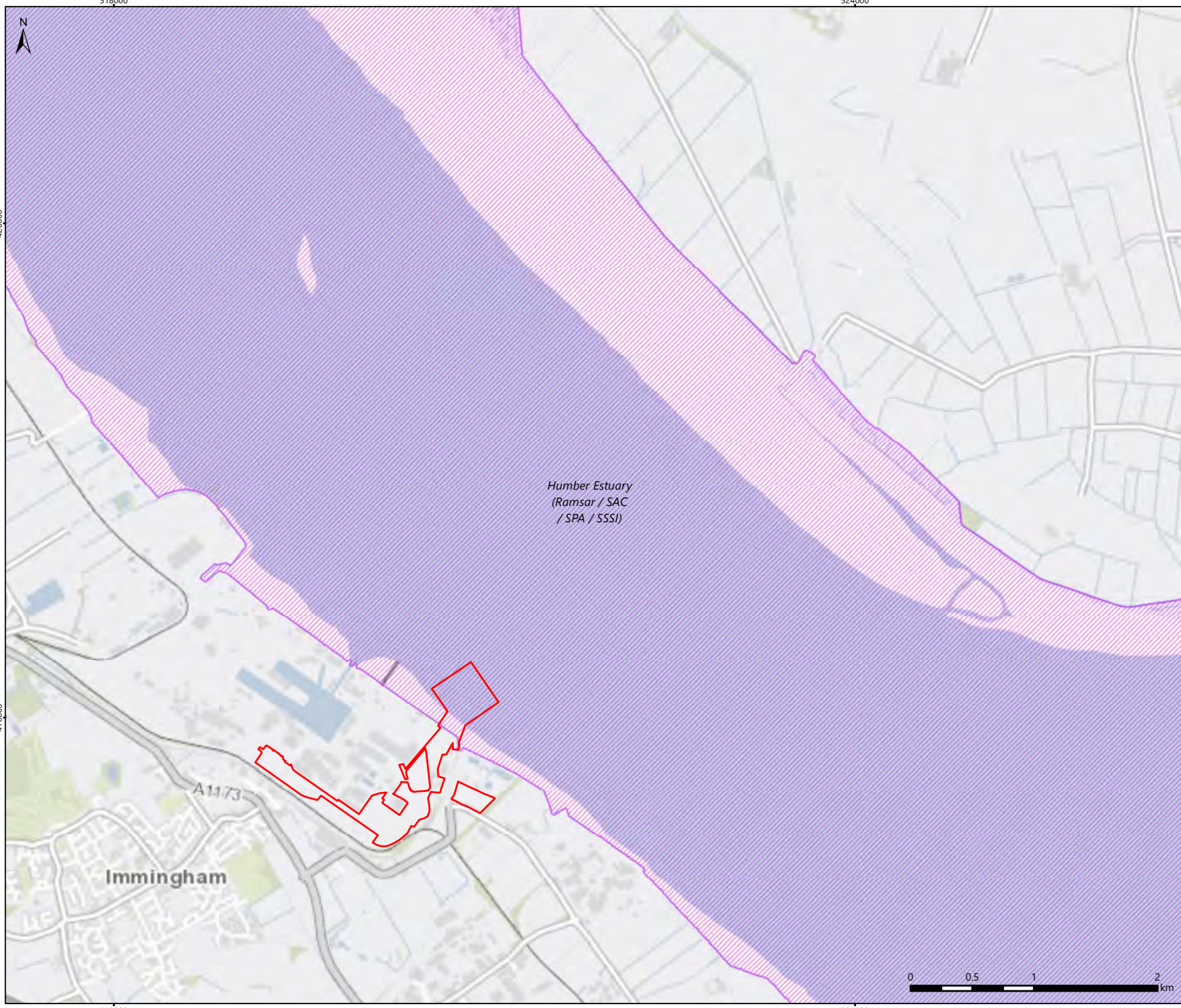


420000

420000

416000

416000








*Humber Estuary
(Ramsar / SAC
/ SPA / SSSI)*

Immingham

A1173

Legend

-  Proposed Application Site
-  Ramsar
-  Special Protection Area (SPA)
-  Special Area of Conservation (SAC)
-  Site of Special Scientific Interest (SSSI)

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Projection	British National Grid	
Scale (A4)	1:40,000	
Project no.	5035	



Fig9.3_Designations_A4.mxd



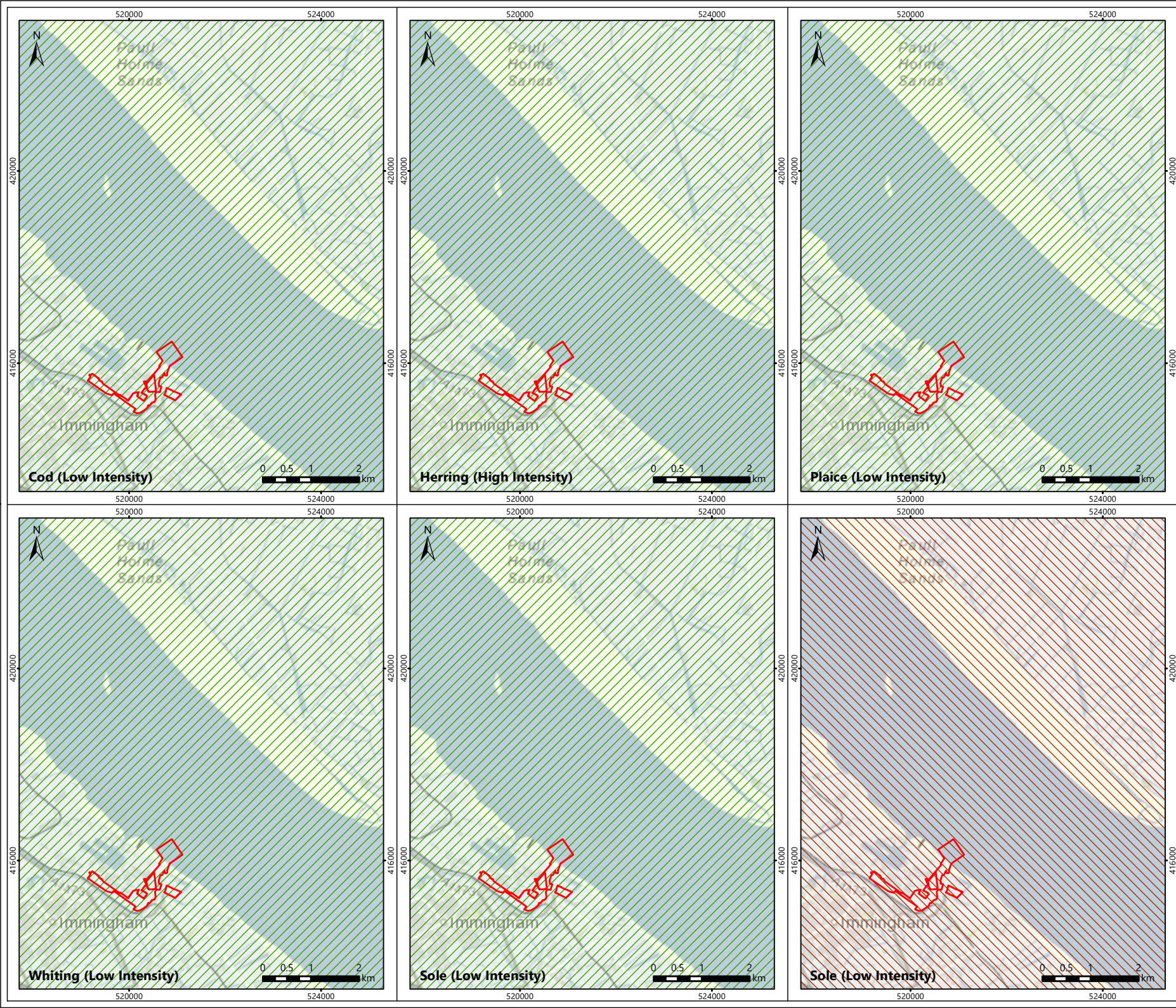
**IMMINGHAM EASTERN
RO-RO TERMINAL
DESIGNATED CONSERVATION SITES**



518000

524000

Figure 9.3



- Legend**
- Proposed Application Site
 - Nursery Grounds
 - Spawning Grounds

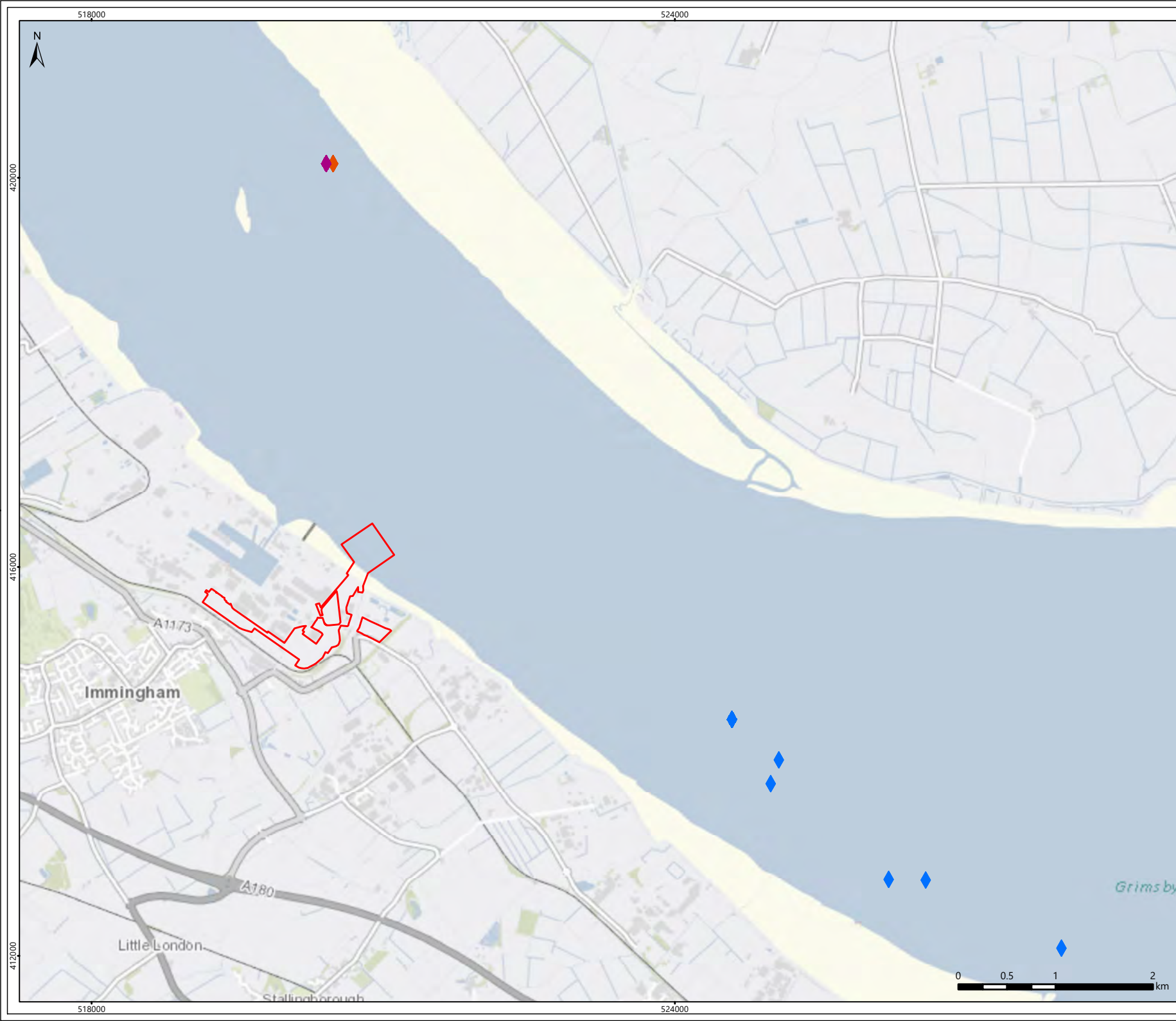
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**IMMINGHAM EASTERN
 RO-RO TERMINAL
 SPAWNING AND NURSERY GROUNDS
 OF COMMERCIAL FISH SPECIES**

Figure 9.4



- Legend**
- Proposed Application Site
 - ◆ Burcom Otter Trawl
 - ◆ Foulholme Sands Beam Trawl
 - ◆ Foulholme Sands Seine Net

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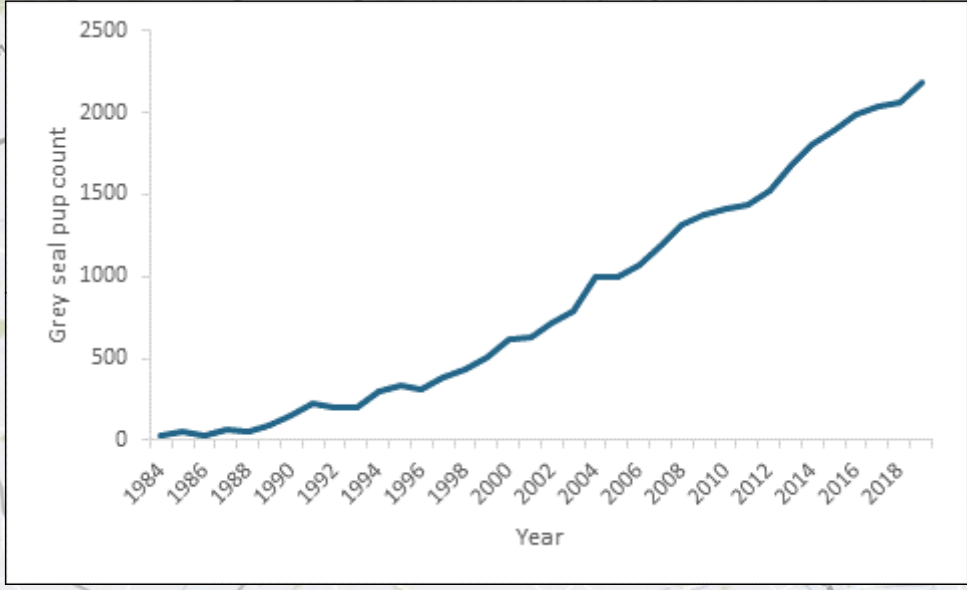
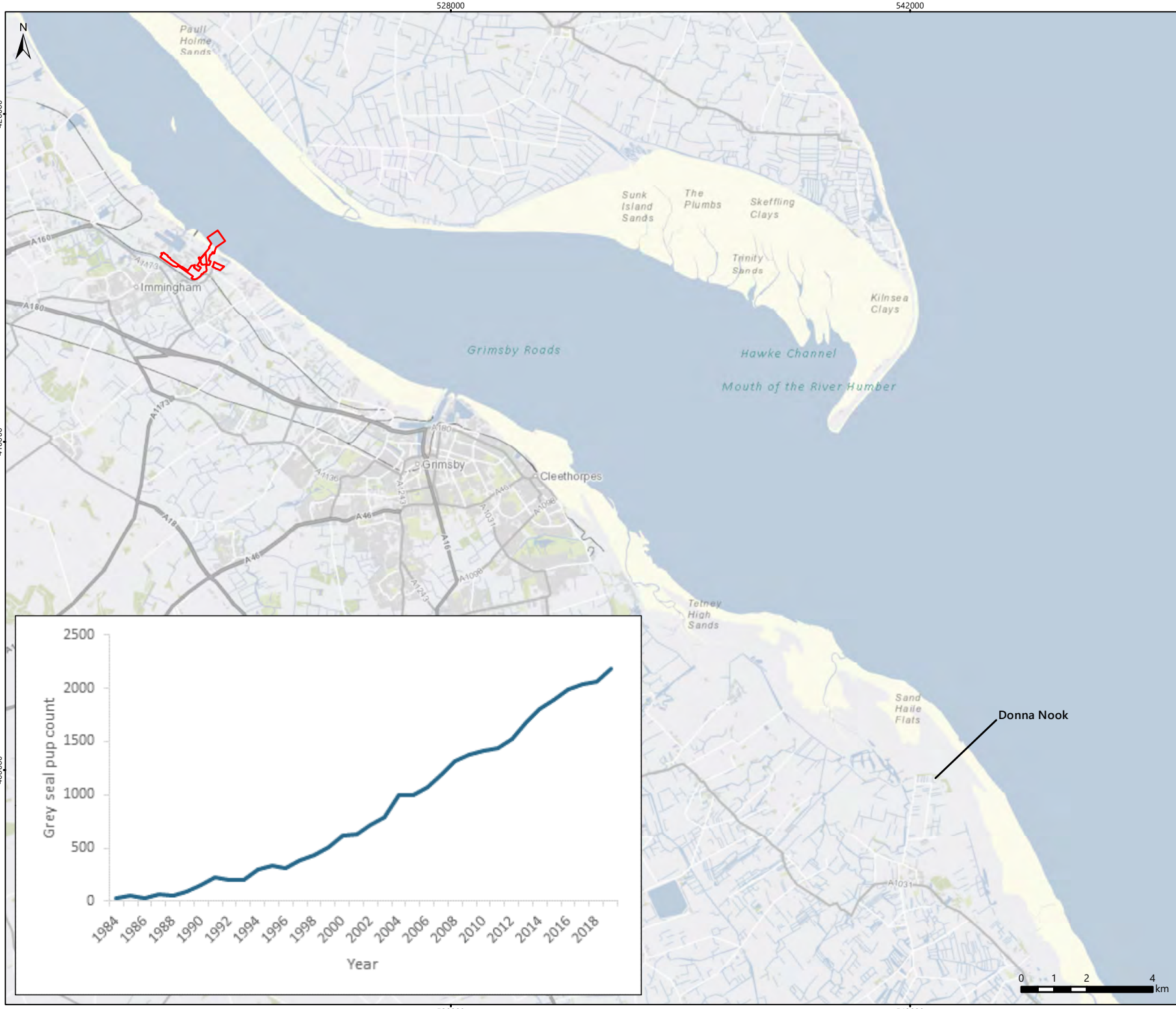


Fig9.5_TraC_fish_monitoring_A4.mxd



**IMMINGHAM EASTERN
RO-RO TERMINAL
TraC FISH MONITORING STATIONS**

Figure 9.5



Legend
 Proposed Application Site

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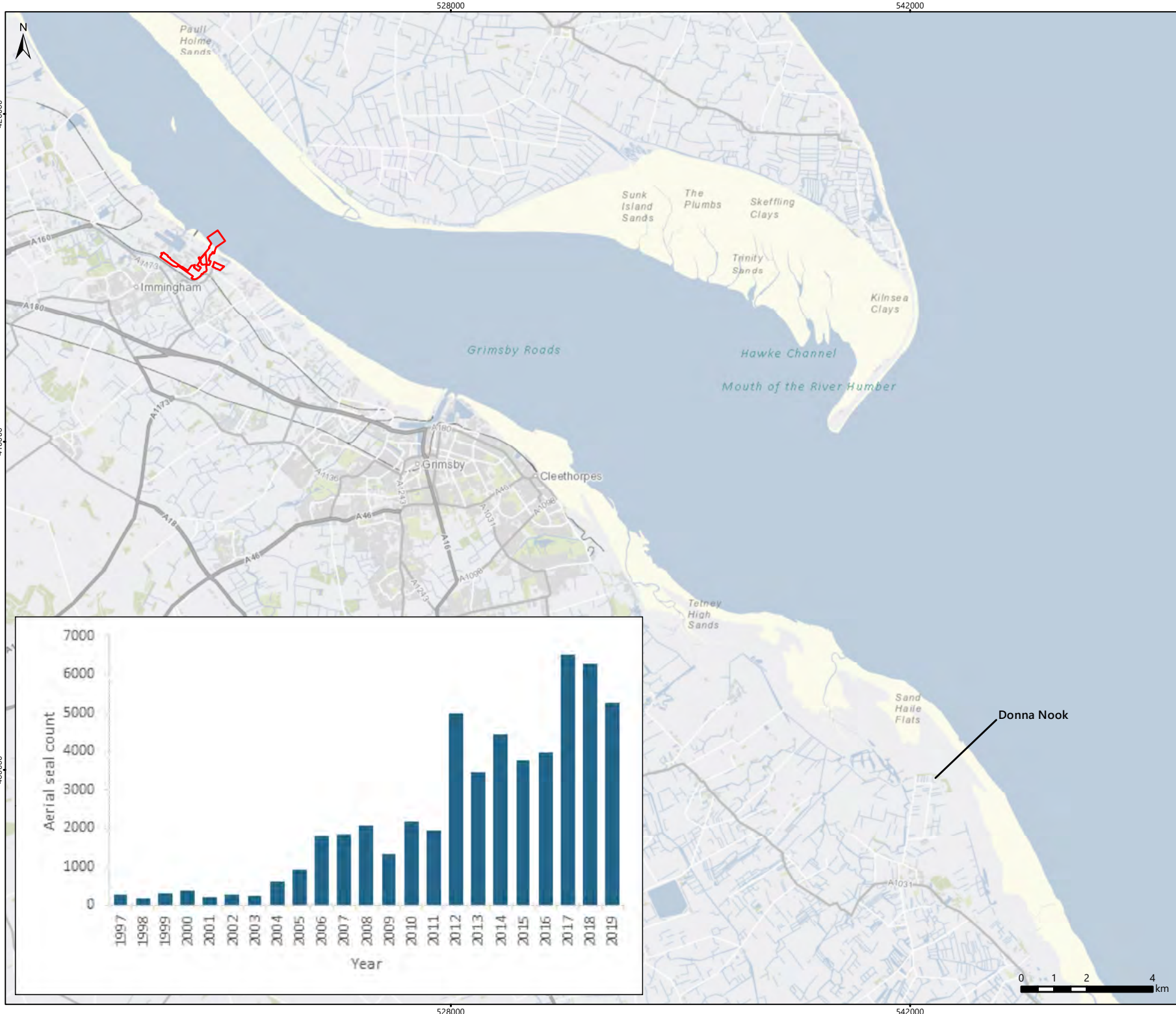


Fig9.6_Grey_Seal_Count_A4.mxd



**IMMINGHAM EASTERN
 RO-RO TERMINAL
 ANNUAL GREY SEAL PUP
 COUNTS AT DONNA NOOK**

Figure 9.6



Legend
 Proposed Application Site

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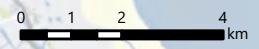
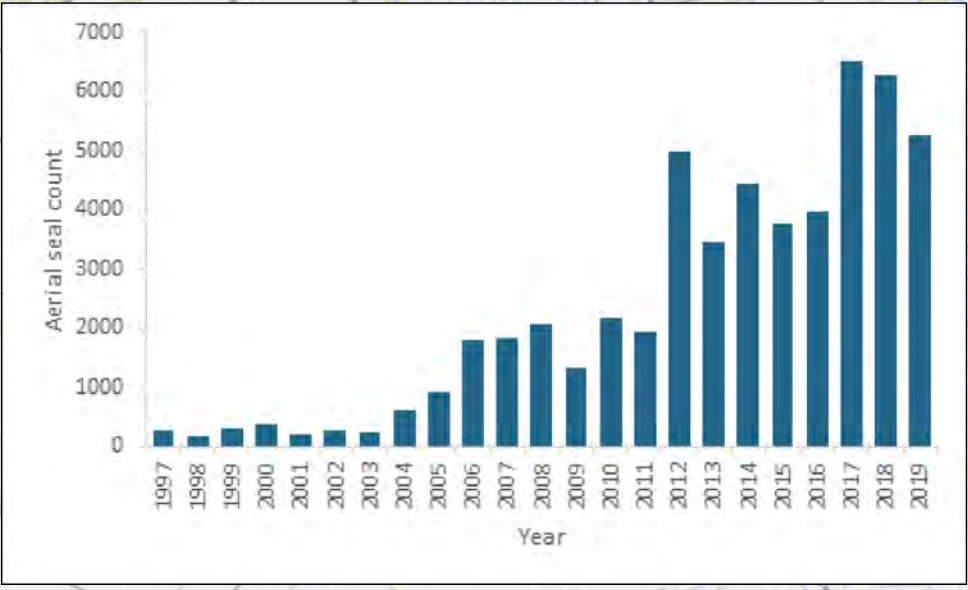


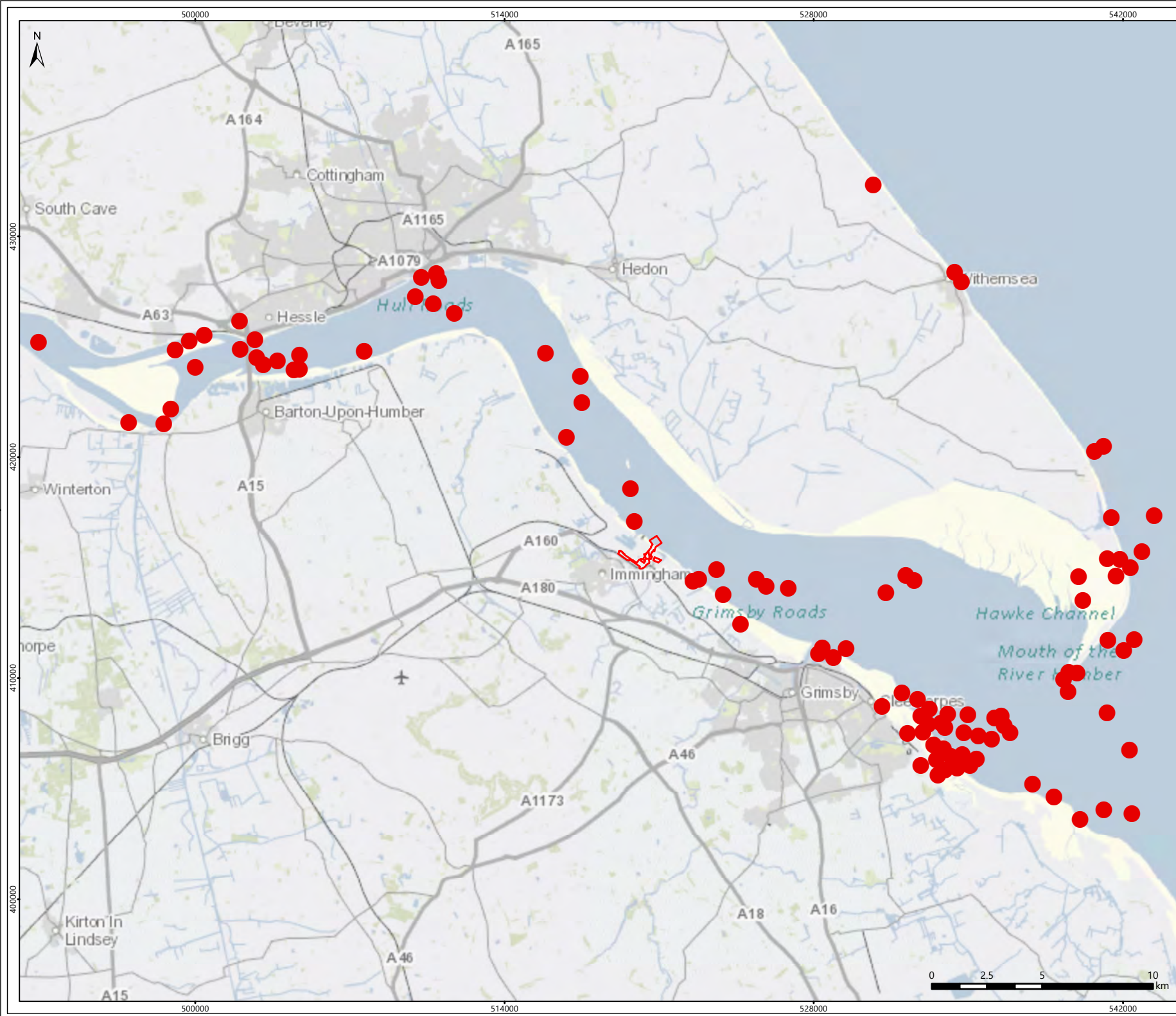
Fig9.7_Grey_Seal_Aerial_A4.mxd



**IMMINGHAM EASTERN
 RO-RO TERMINAL
 AERIAL COUNTS OF GREY
 SEALS AT DONNA NOOK**

Figure 9.7





- Legend**
- Proposed Application Site
 - Harbour porpoise sightings in the Humber Estuary since 2000

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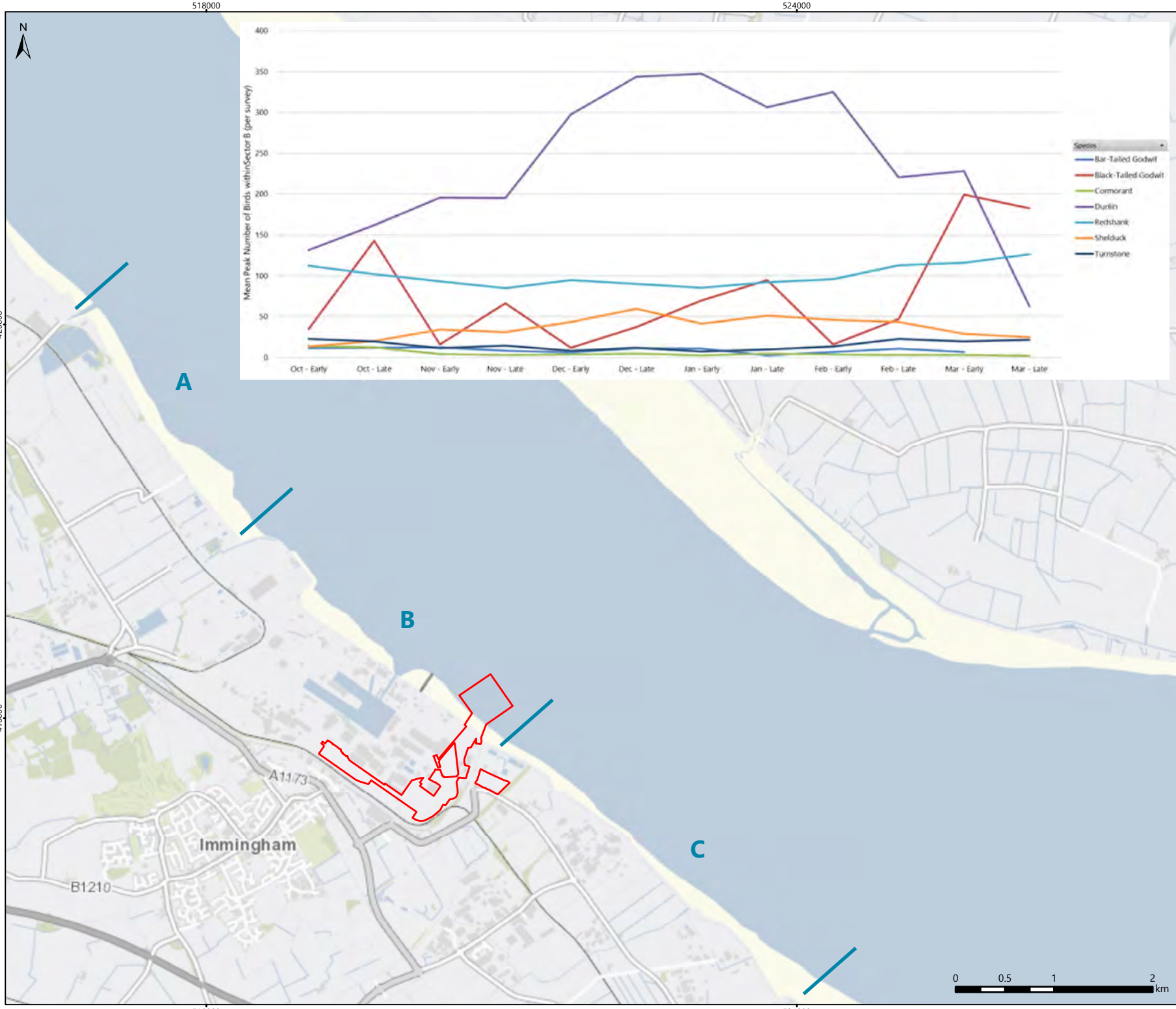
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**IMMINGHAM EASTERN
RO-RO TERMINAL**

**HARBOUR PORPOISE SIGHTINGS IN
THE HUMBER ESTUARY SINCE 2000**

Figure 9.8



Legend

- Proposed Application Site
- ABP IOH Bird Survey Sectors

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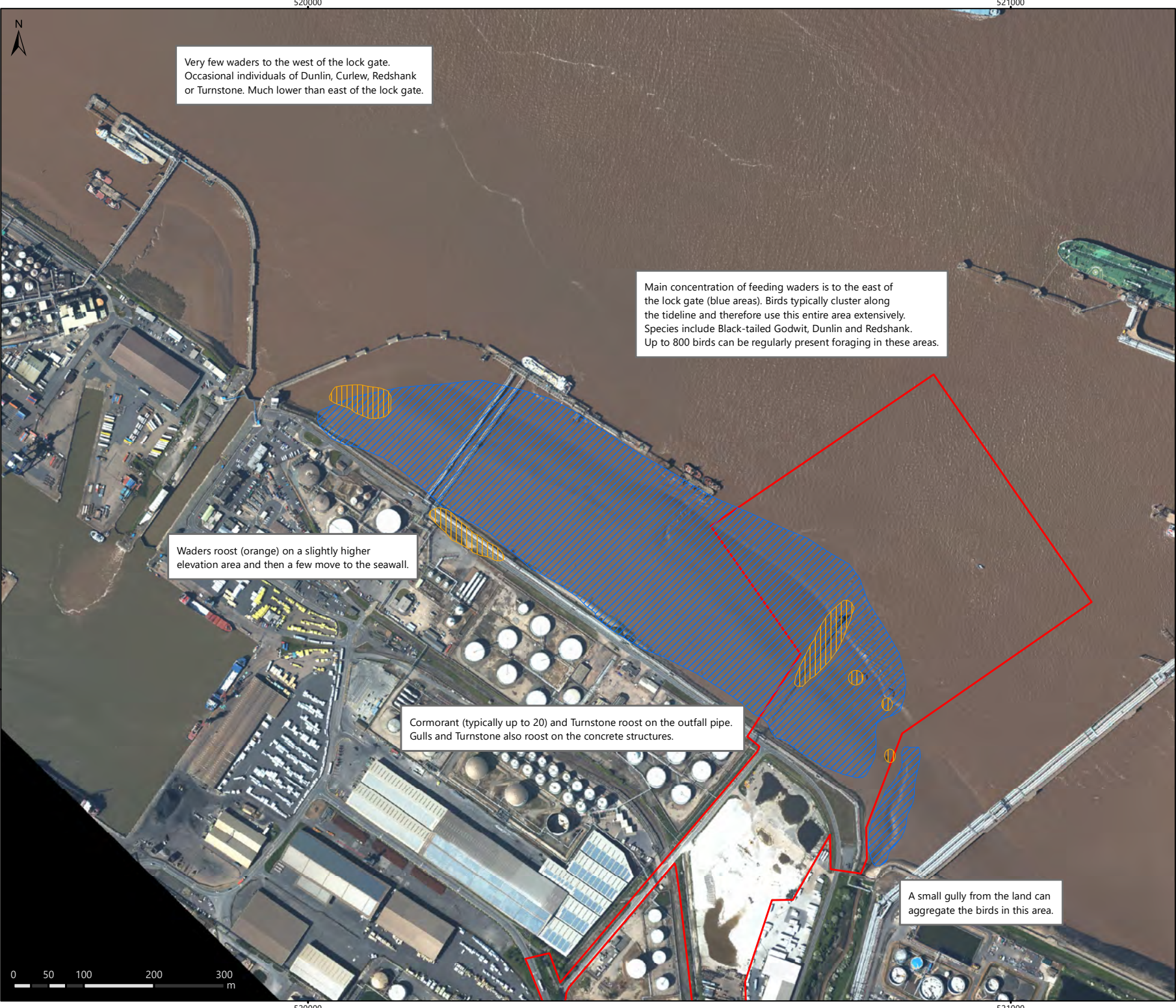
Fig9.9_Bird_Survey_Sector_B_A4.mxd



IMMINGHAM EASTERN RO-RO TERMINAL

THE 5-YEAR MEAN PEAK NUMBER OF BIRDS IN SECTOR B DURING DIFFERENT MONTHS

Figure 9.9



Very few waders to the west of the lock gate. Occasional individuals of Dunlin, Curlew, Redshank or Turnstone. Much lower than east of the lock gate.

Main concentration of feeding waders is to the east of the lock gate (blue areas). Birds typically cluster along the tideline and therefore use this entire area extensively. Species include Black-tailed Godwit, Dunlin and Redshank. Up to 800 birds can be regularly present foraging in these areas.

Waders roost (orange) on a slightly higher elevation area and then a few move to the seawall.

Cormorant (typically up to 20) and Turnstone roost on the outfall pipe. Gulls and Turnstone also roost on the concrete structures.

A small gully from the land can aggregate the birds in this area.

- Legend**
- Proposed Application Site
 - Roosting
 - Feeding

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**IMMINGHAM EASTERN
RO-RO TERMINAL
THE DISTRIBUTION OF COASTAL
WATERBIRDS WITHIN SECTOR B**

Figure 9.10



520000

521000

416500

416500

416000

416000

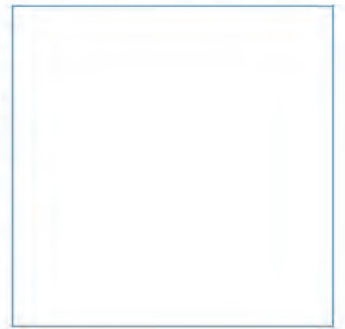
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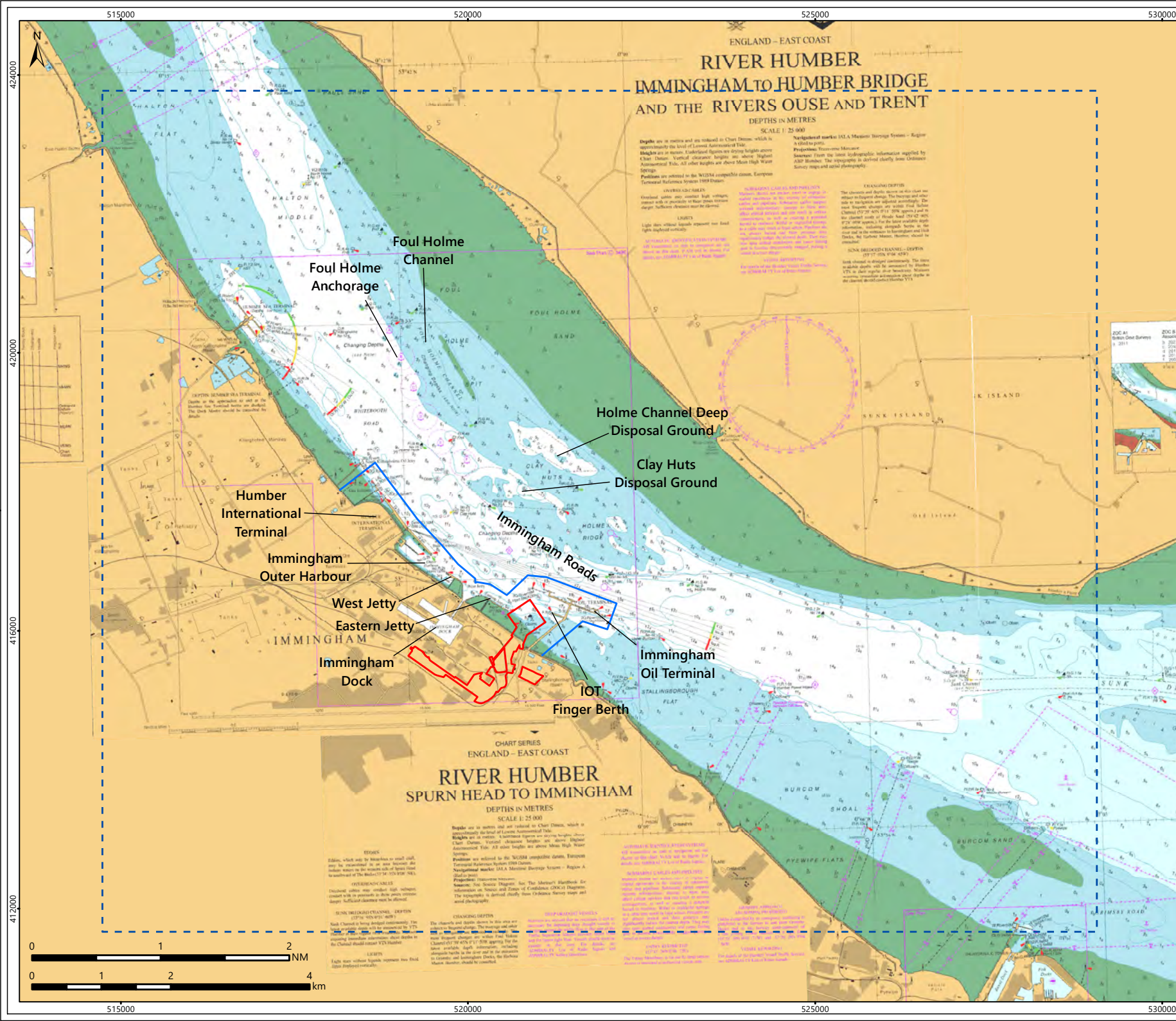
10 Commercial and Recreational Navigation

10.1 NRA study area

10.2 AIS transits density grid



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Legend

- Proposed Application Site
- NRA Study Area
- Immingham Statutory Harbour Authority

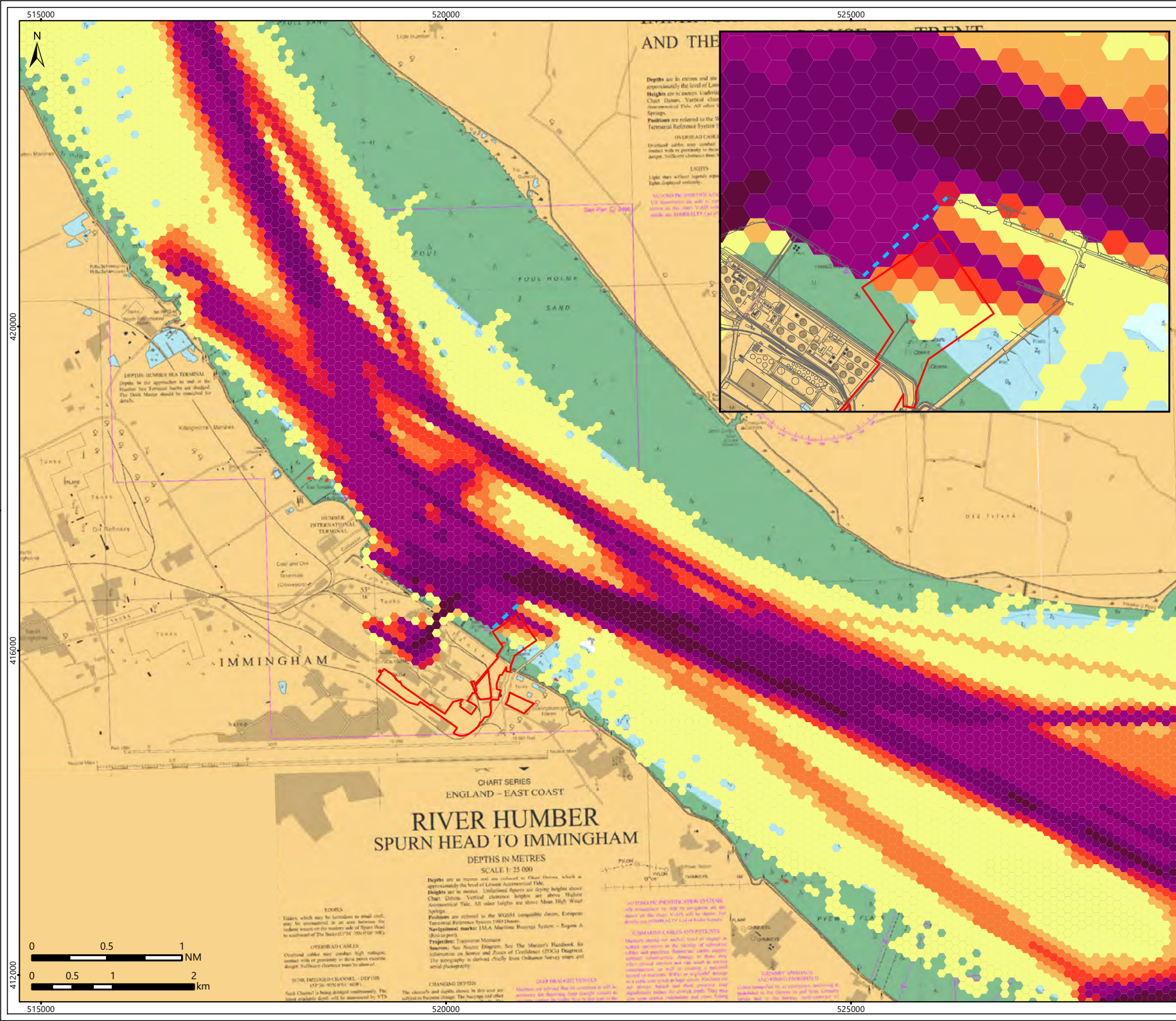
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IMMINGHAM EASTERN RO-RO TERMINAL NRA STUDY AREA

FIGURE 10.1



Legend

- Proposed Application Site
- AIS Transect

Average Weekly Density (2019)

- <= 1.0
- 1.1 to 2.0
- 2.1 to 5.0
- 5.1 to 10.0
- 10.1 to 15.0
- 15.1 to 50.0
- 50.1 to 100.0
- > 100

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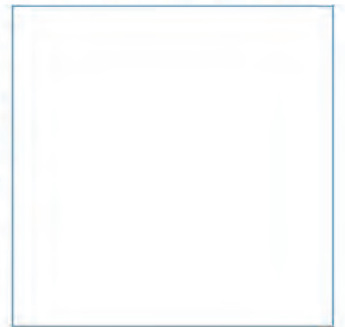


IMMINGHAM EASTERN RO-RO TERMINAL AIS TRANSITS (2019) DENSITY GRID

Figure 10.02

11 Coastal Protection, Flood Defence and Drainage

No figures for this chapter.



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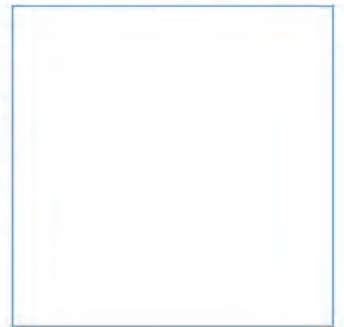
12 Ground Conditions, Including Land Quality

12.1 Study area

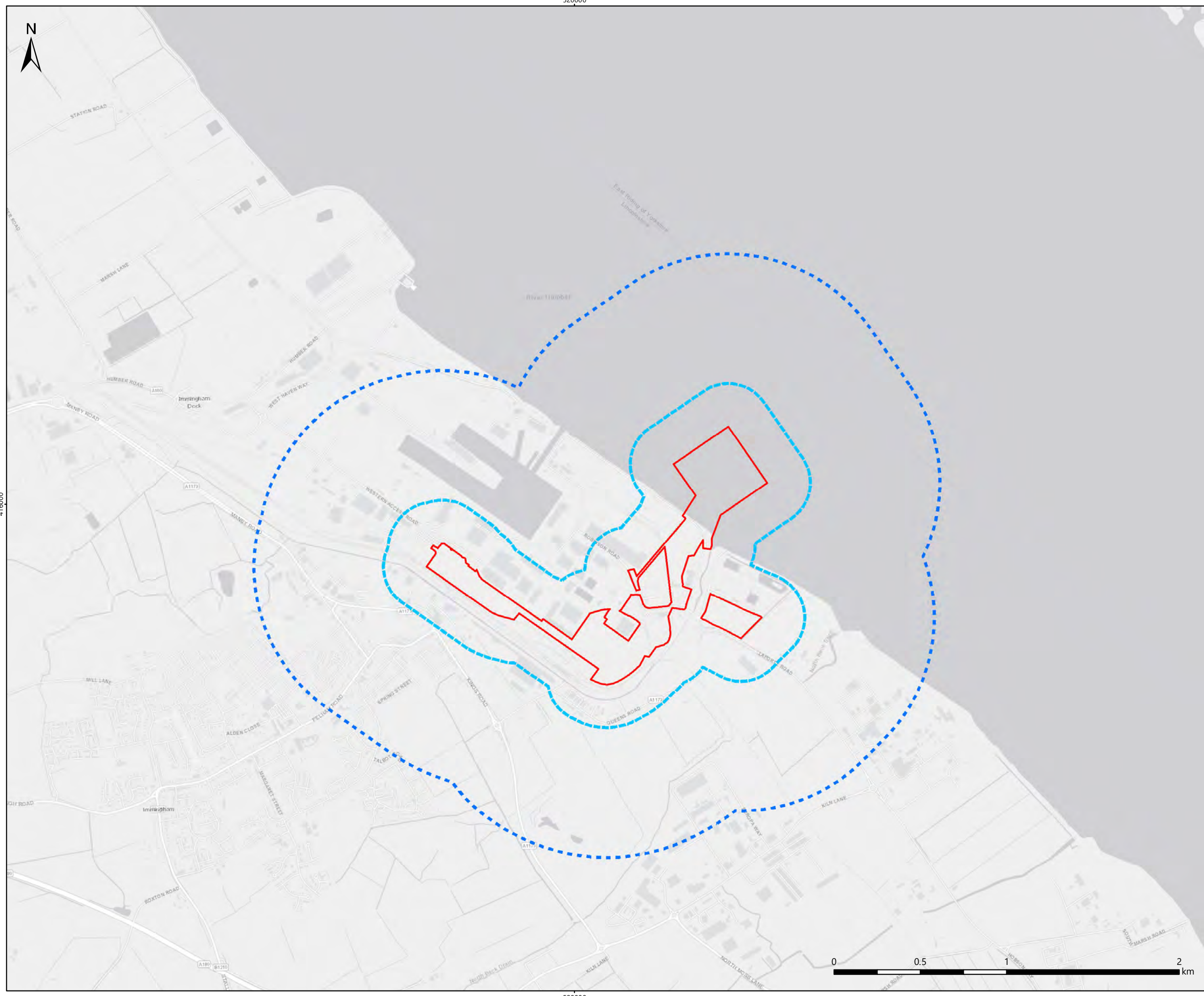
12.2a Geology (BGS 50k) bedrock and artificial ground

12.2b Geology (BGS 50k) superficial deposits and artificial ground

12.3 Groundwater abstraction



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Legend

- Proposed Application Site
- Study Area: 250m
- Study Area: 1km

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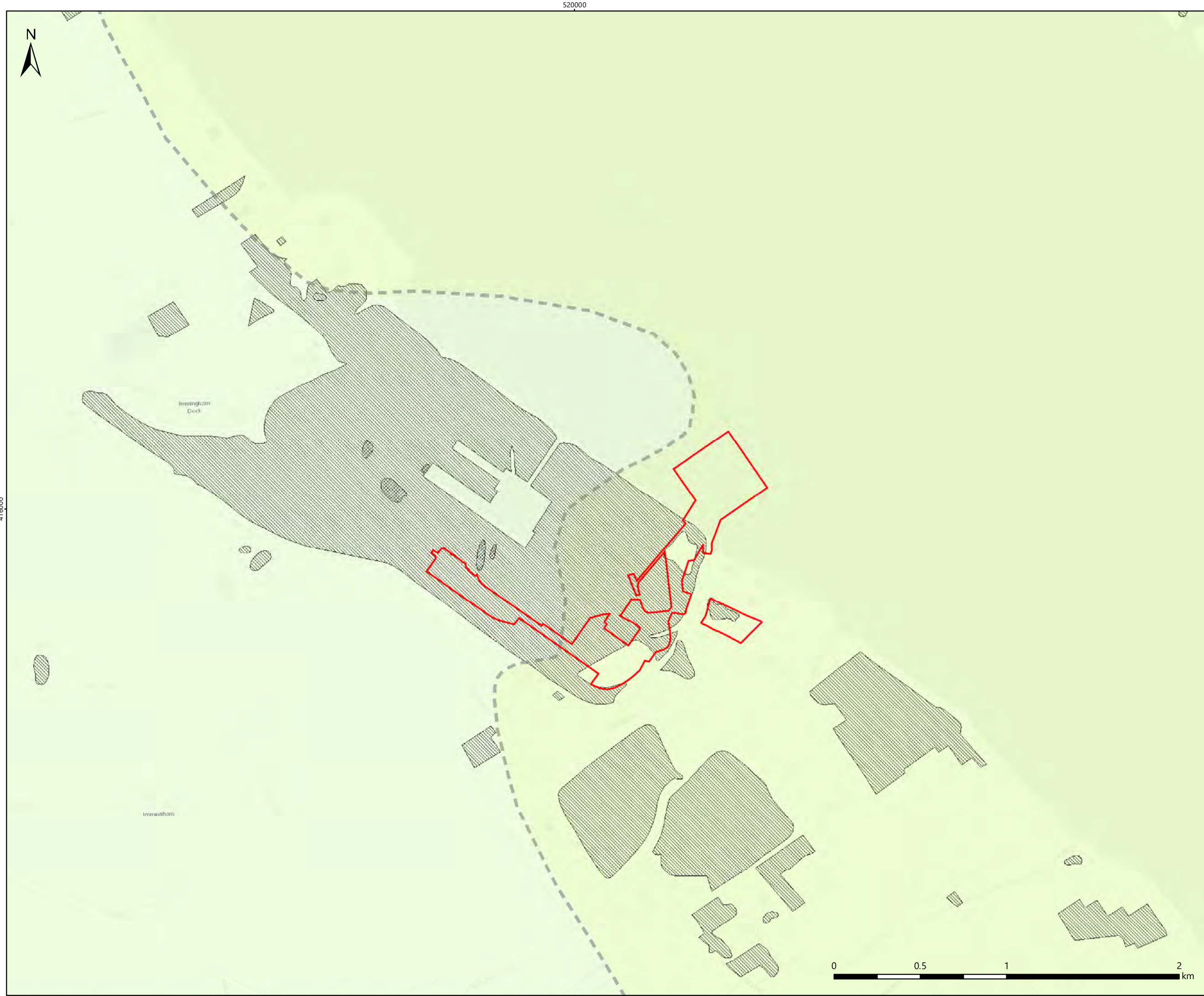
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Project no.	60664611	
Figure12-1_PIER_Study_Area.mxd		



**IMMINGHAM EASTERN
 RO-RO TERMINAL**

Study Area

FIGURE 12.1



- Legend**
- Proposed Application Site
- Bedrock**
- FLAMBOROUGH CHALK FORMATION - CHALK
 - BURNHAM CHALK FORMATION - CHALK
- Artificial ground**
- MADE GROUND (UNDIVIDED) - ARTIFICIAL DEPOSIT

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The dashed line between the two types of geology is not part of the BGS material and is for indicative purpose only.

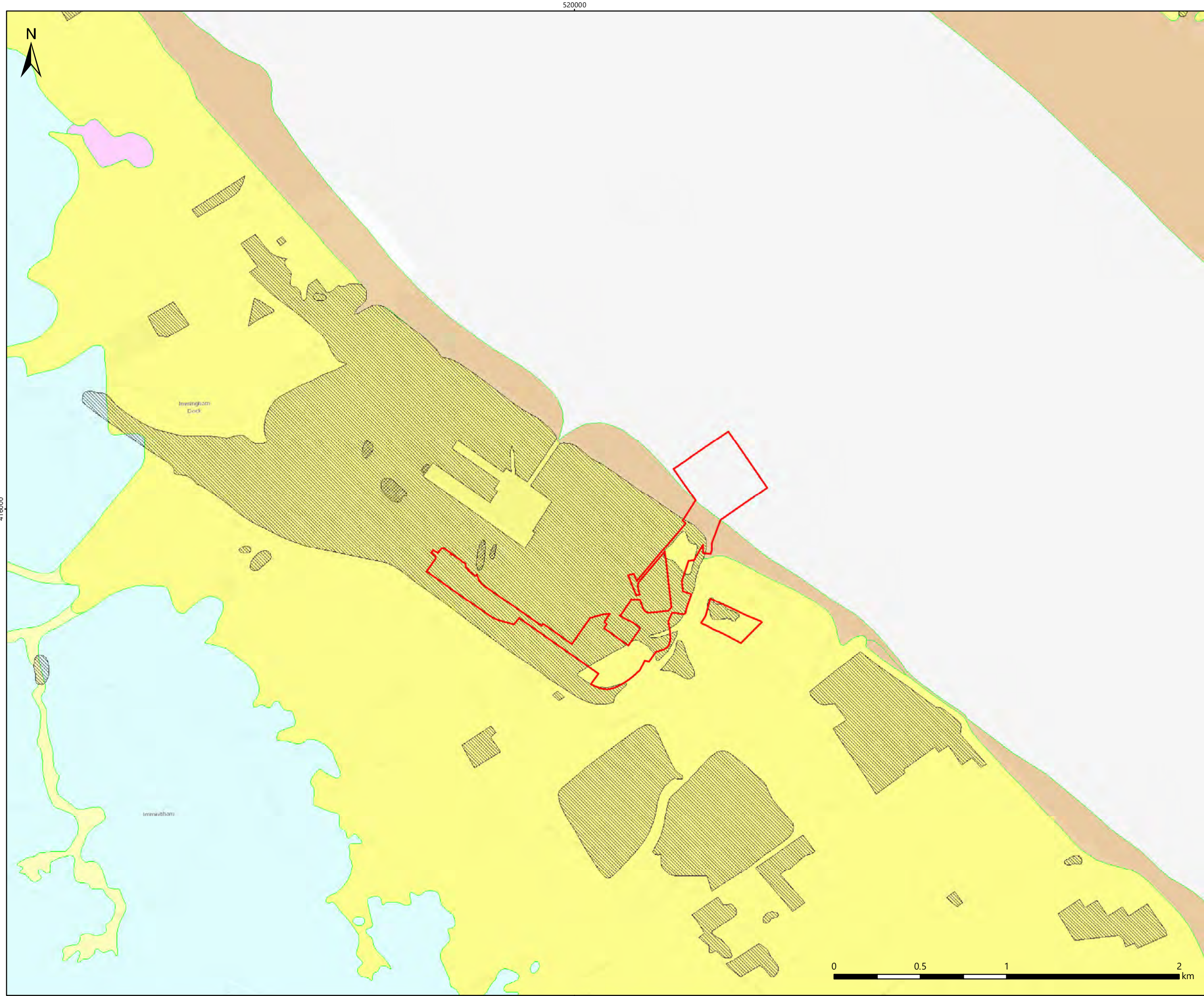
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**IMMINGHAM EASTERN
RO-RO TERMINAL**

**Geology (BGS 50k)
Bedrock and Artificial ground**

FIGURE 12.2a



- Legend**
- Proposed Application Site
 - Superficial deposits**
 - BEACH AND TIDAL FLAT DEPOSITS (UNDIFFERENTIATED) - CLAY, SILT AND SAND
 - TIDAL FLAT DEPOSITS - CLAY AND SILT
 - TILL, DEVENSIAN - DIAMICTON
 - GLACIOFLUVIAL DEPOSITS, DEVENSIAN - SAND AND GRAVEL
 - Artificial ground**
 - MADE GROUND (UNDIVIDED) - ARTIFICIAL DEPOSIT

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**IMMINGHAM EASTERN
 RO-RO TERMINAL**

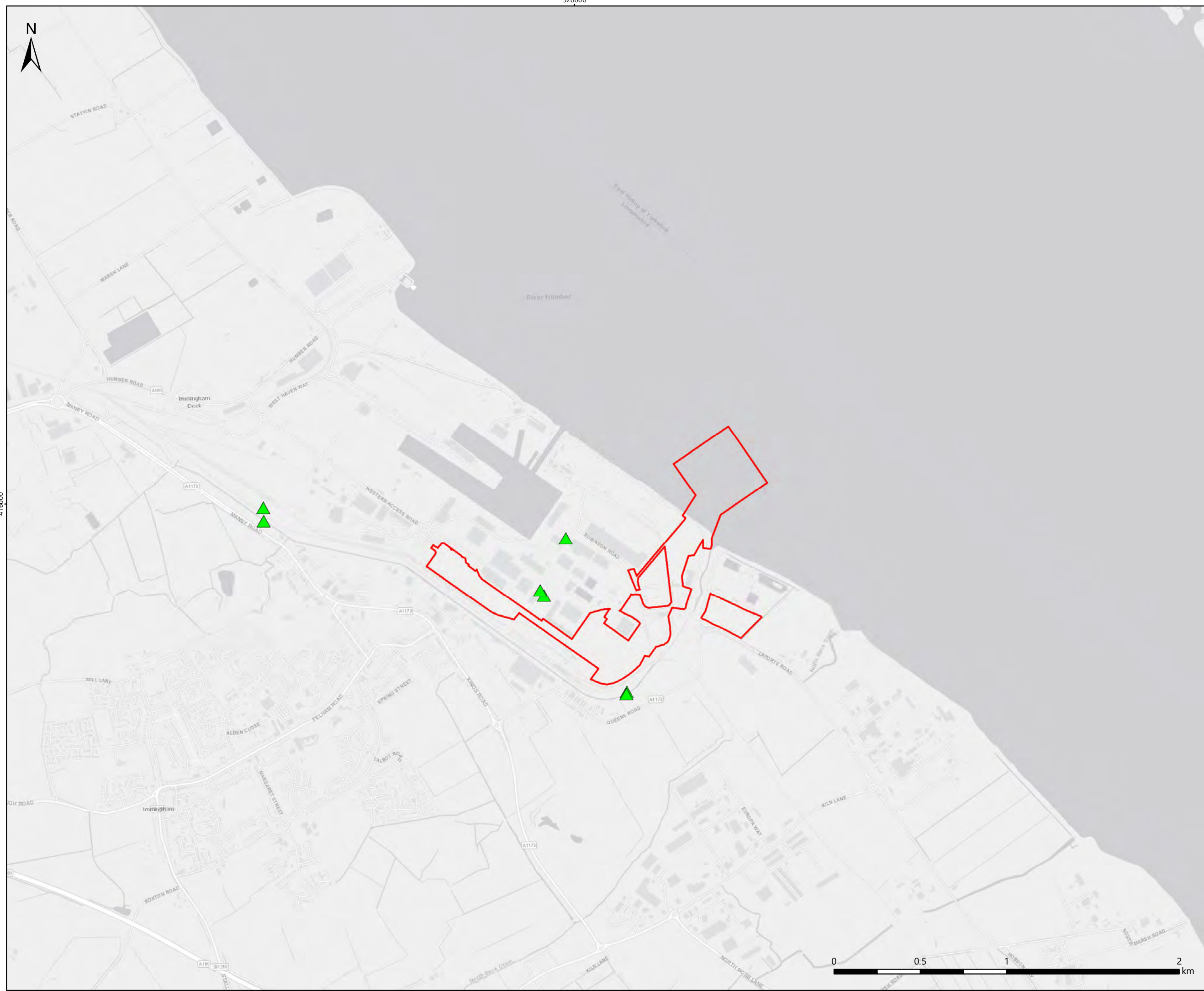
**Geology (BGS 50k)
 Superficial deposits and Artificial ground**

FIGURE 12.2b



Legend

- Proposed Application Site
- ▲ Groundwater abstraction



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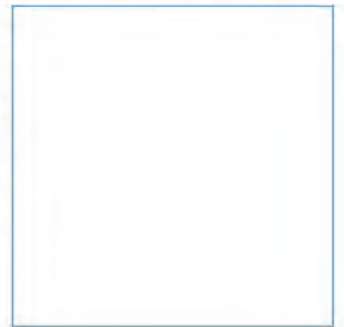
**IMMINGHAM EASTERN
 RO-RO TERMINAL**

Groundwater abstraction

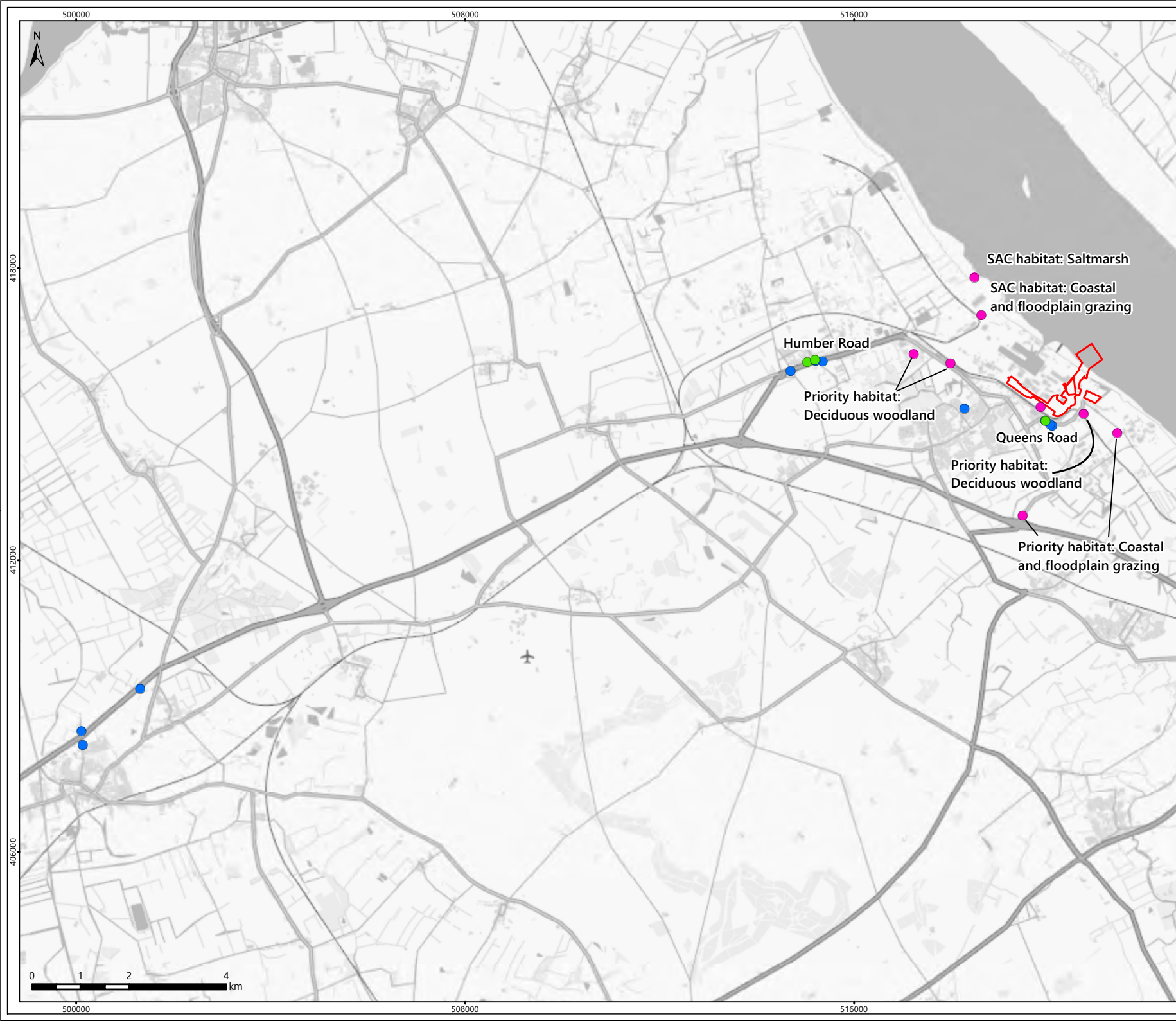
FIGURE 12.3

13 Air Quality

- 13.1 Local air quality study area
- 13.2 Potential construction phase impacts
- 13.3 Potential operational phase impacts



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- Legend**
- Proposed Application Site
 - Human health receptors
 - Baseline monitoring locations
 - Nature conservation receptors

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Fig13.1_Local_Air_Quality_Study_Area_A4



**IMMINGHAM EASTERN
RO-RO TERMINAL
LOCAL AIR QUALITY STUDY AREA**

Figure 13.1



- Legend**
- Proposed Application Site
 - <20m from site boundary
 - 20 – 50m from site boundary
 - 50 – 100m from site boundary
 - 100 – 200m from site boundary
 - 200 – 350m from site boundary
 - Human health receptors
 - Nature conservation receptors

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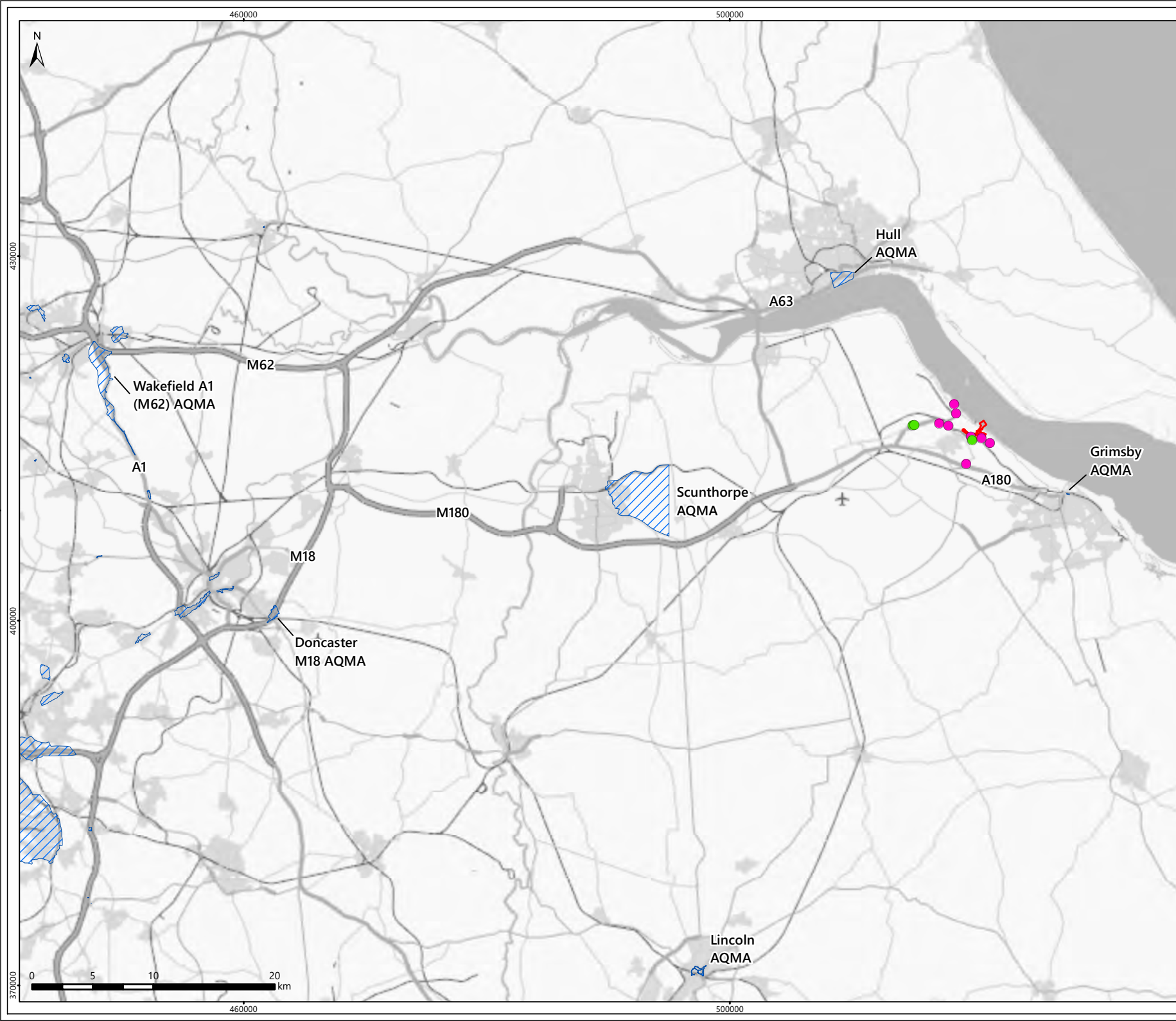


Fig13.2_Potential_construction_phase_impacts_A4



**IMMINGHAM EASTERN
RO-RO TERMINAL
POTENTIAL CONSTRUCTION
PHASE IMPACTS**

Figure 13.2



- Legend**
- Proposed Application Site
 - Air Quality Management Areas
 - Human health receptors
 - Nature conservation receptors

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Fig13.3_Potential_operational_phase_impacts_A4

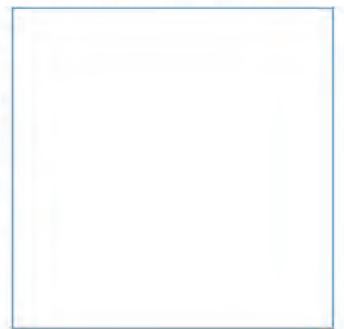


**IMMINGHAM EASTERN
RO-RO TERMINAL
POTENTIAL OPERATIONAL
PHASE IMPACTS**

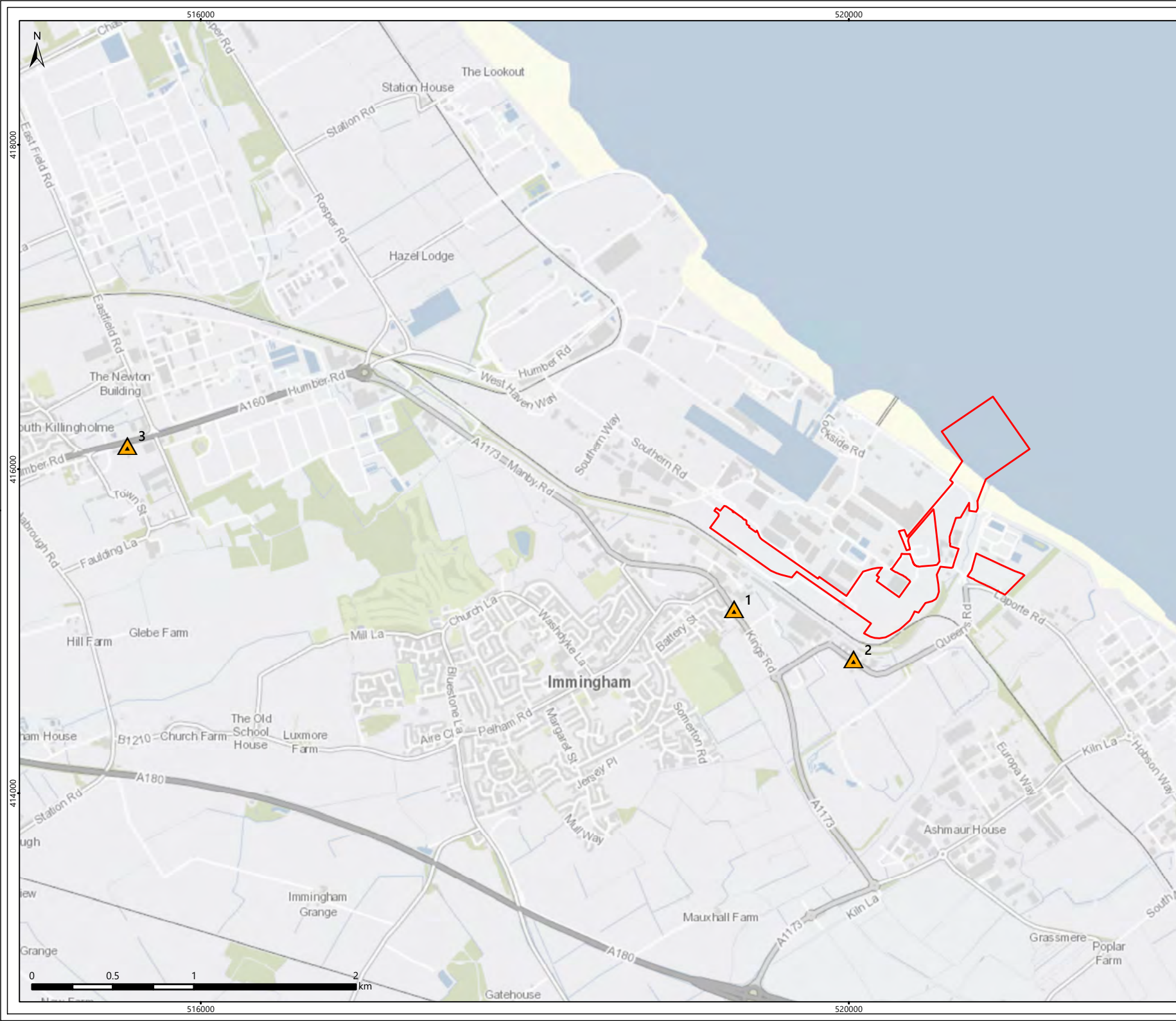
Figure 13.3

14 Airborne Noise and Vibration

14.1 Noise monitoring locations



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- Legend**
- Proposed Application Site
 - ▲ Noise Monitoring Locations

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Fig14.1_Noise_monitoring_A4.mxd



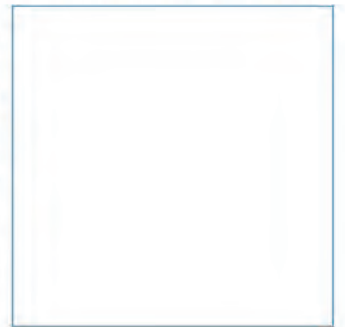
**IMMINGHAM EASTERN
RO-RO TERMINAL
NOISE MONITORING LOCATIONS**

Figure 14.1

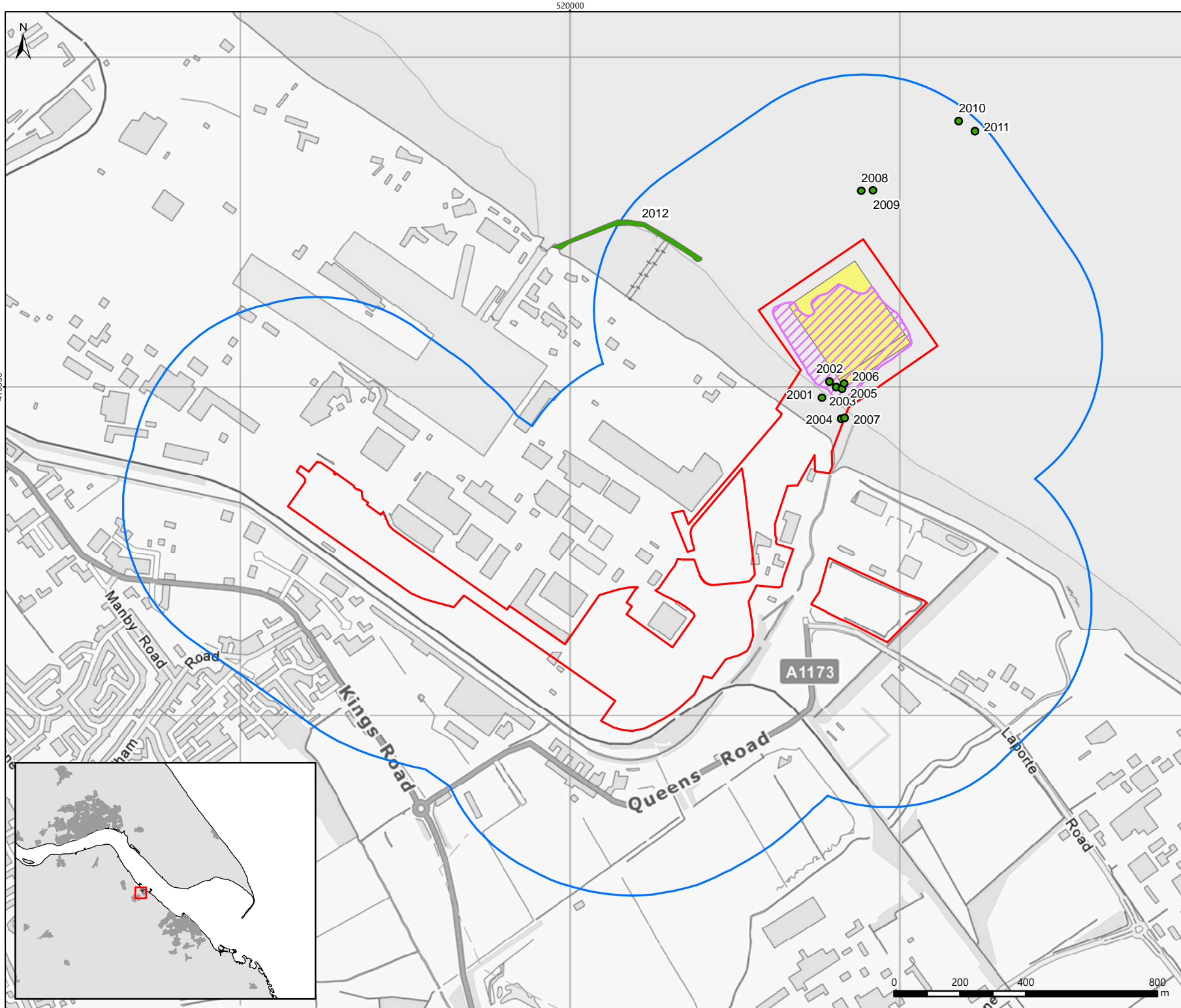
15 Cultural Heritage and Marine Archaeology

15.1 Marine heritage receptors in the study area

15.2 Designated sites within 5 km of study area



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- Legend**
- Proposed Application Site
 - Proposed Application Site 500m buffer
 - Berth Pocket Pontoon Area
 - Indicative dredge area
 - Marine heritage receptors

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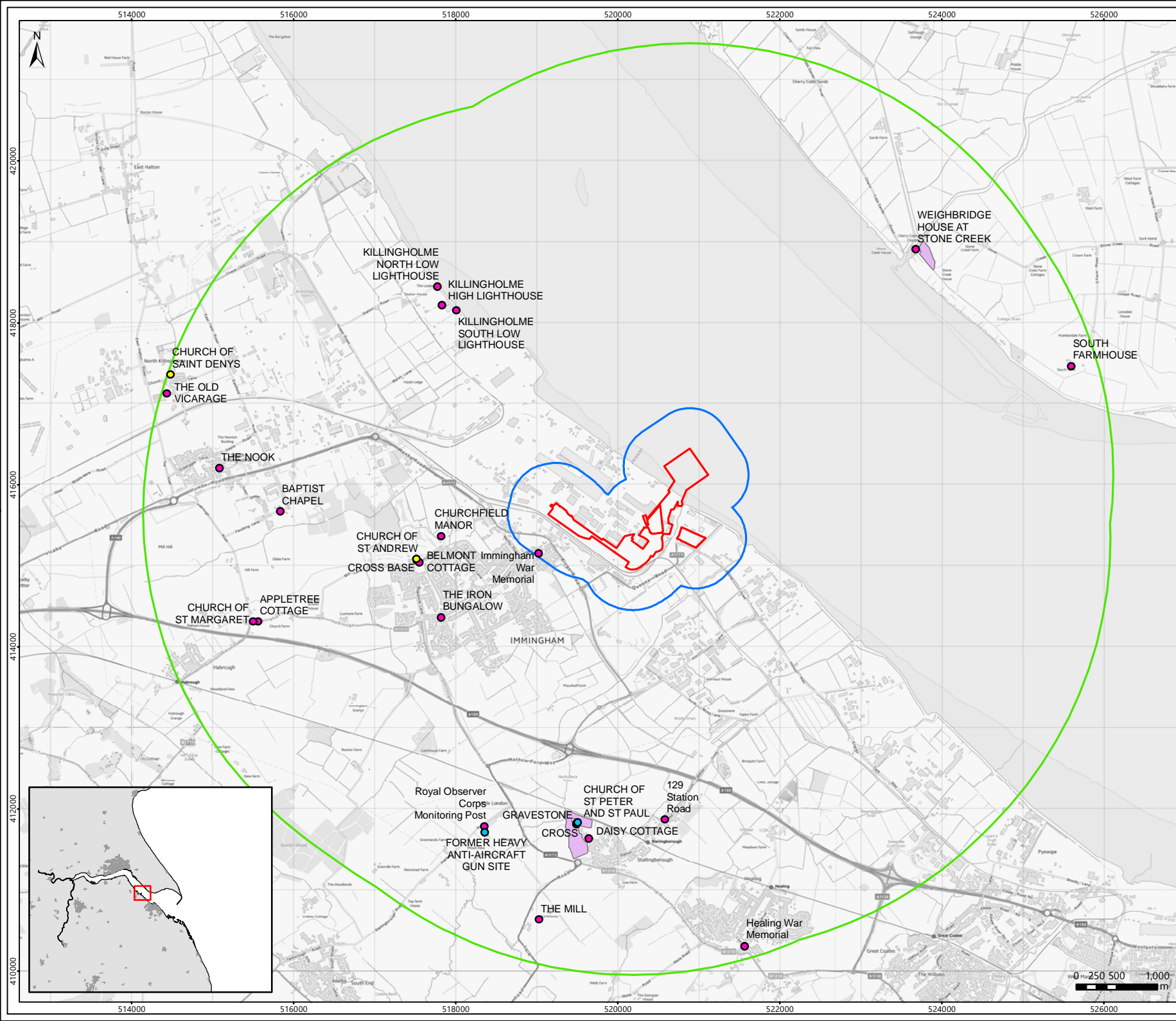
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**IMMINGHAM EASTERN
RO-RO TERMINAL
MARINE HERITAGE RECEPTORS
IN THE STUDY AREA**

FIGURE 15.1





- Legend**
- Listed Buildings**
- Grade**
- I
 - II
 - II*
- Scheduled Monuments
 - Proposed Application Site
 - Proposed Application Site 500m buffer
 - Proposed Application Site 5000m buffer

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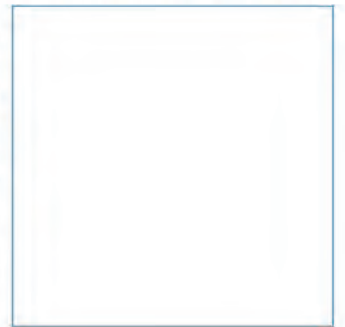
**IMMINGHAM EASTERN
RO-RO TERMINAL
DESIGNATED SITES WITHIN
5 KM OF STUDY AREA**

FIGURE 15.2



16 Socio-economic Receptors

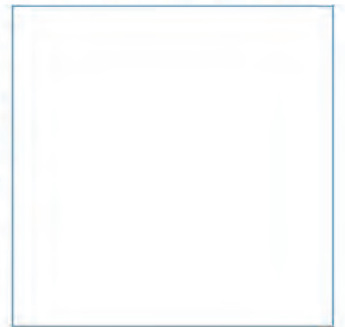
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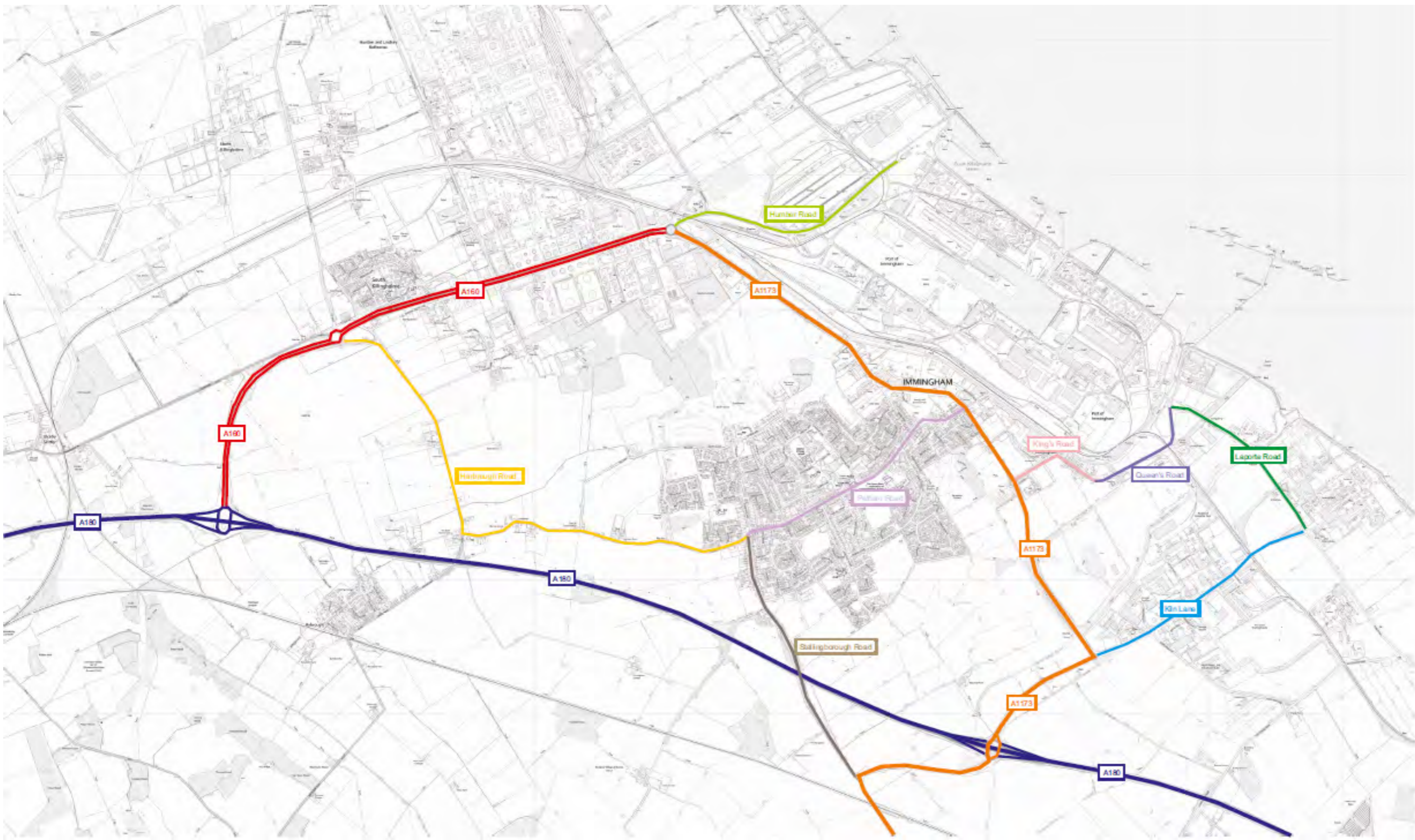
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17 Traffic and Transport

- 17.1 Road names plan
- 17.2 The wider transport network
- 17.3 Traffic survey locations
- 17.4 Rail infrastructure plan
- 17.5 Light vehicle distribution
- 17.6 Light vehicle assignment
- 17.7 Heavy vehicle distribution
- 17.8 Heavy vehicle assignment
- 17.9 PCU assignment



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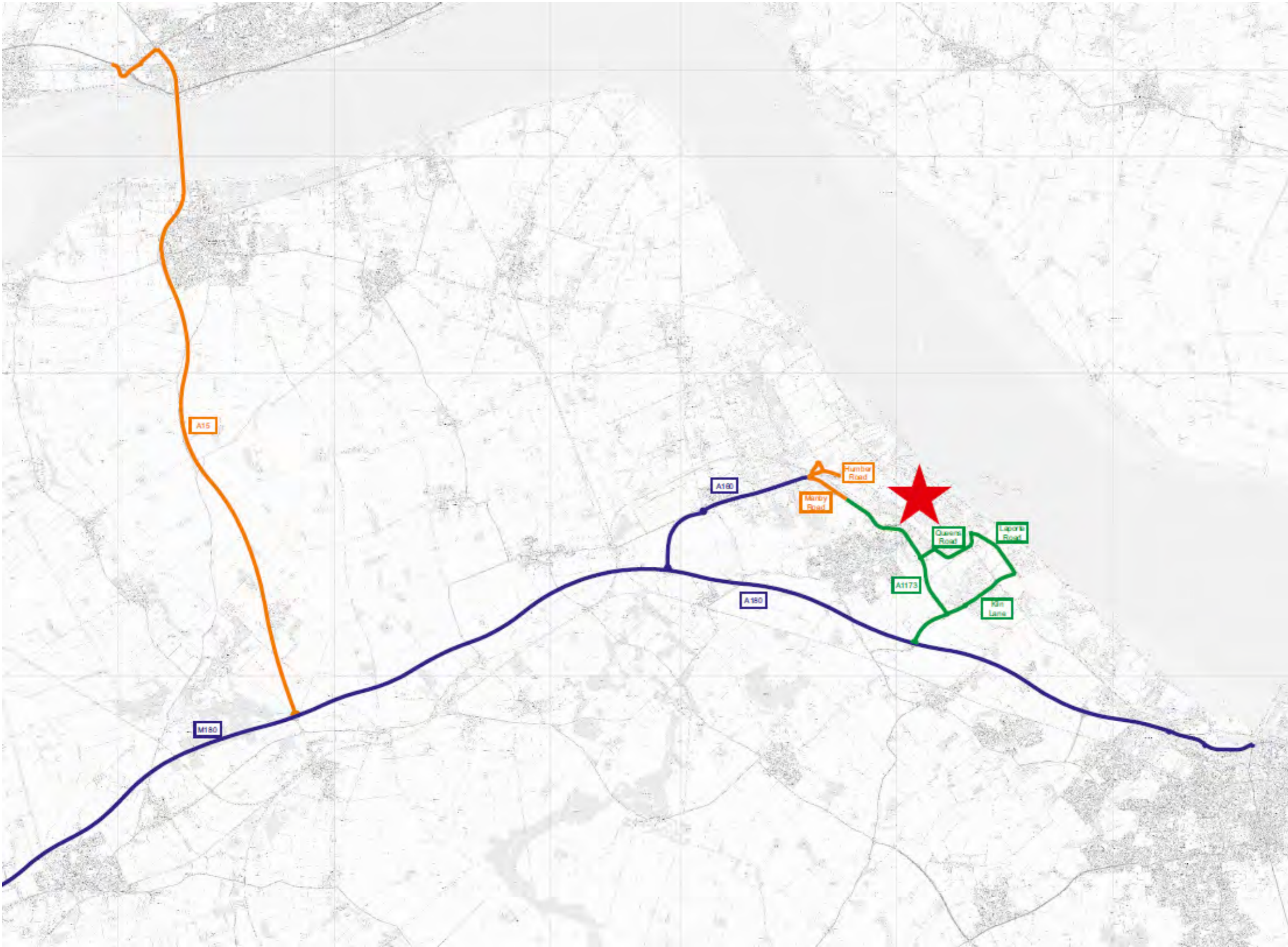


**IMMINGHAM EASTERN
RORO TERMINAL
ROAD NAMES PLAN**

FIGURE 17.1

Key

- Site Location
- National Highways
- North East Lincolnshire
- North Lincolnshire



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**IMMINGHAM EASTERN
RORO TERMINAL**

THE WIDER TRANSPORT NETWORK

FIGURE 17.2



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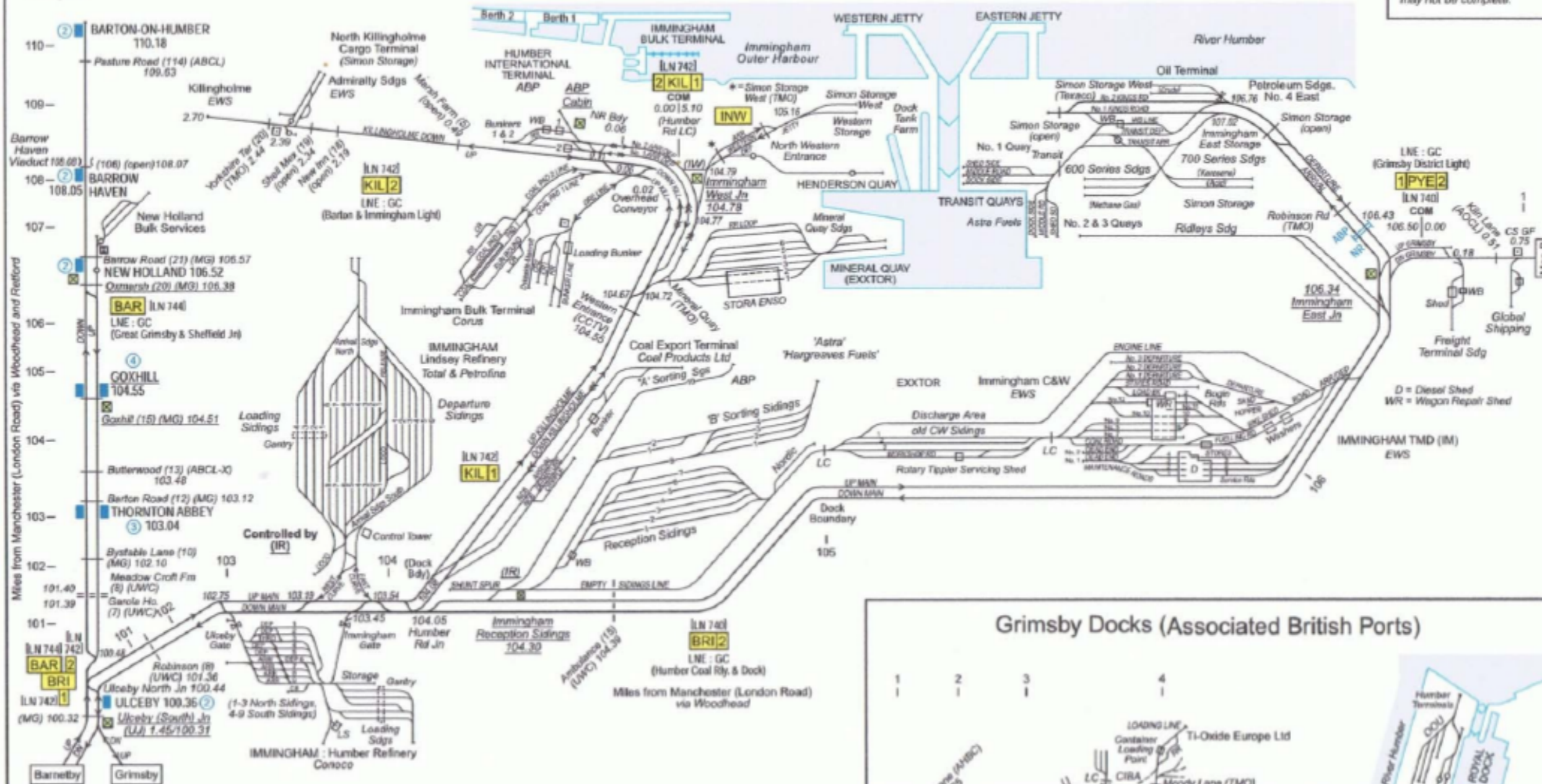


**IMMINGHAM EASTERN
RORO TERMINAL
TRAFFIC SURVEY LOCATIONS**

FIGURE 17.3

IMMINGHAM and GRIMSBY DOCKS

Map A

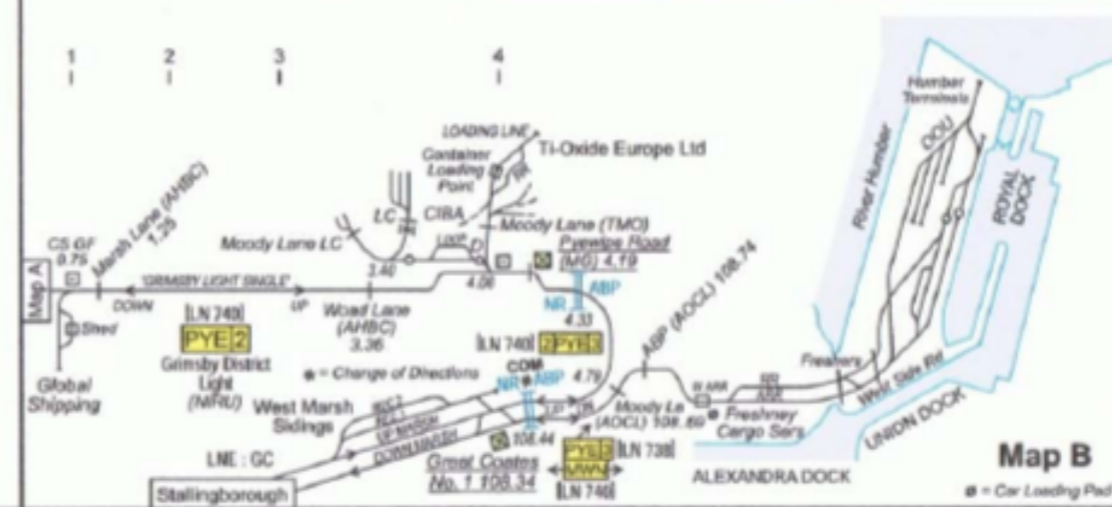


Siding groups have been expanded to include details. Locations of businesses may not be complete.

Immingham Docks (Associated British Ports)

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Grimsby Docks (Associated British Ports)



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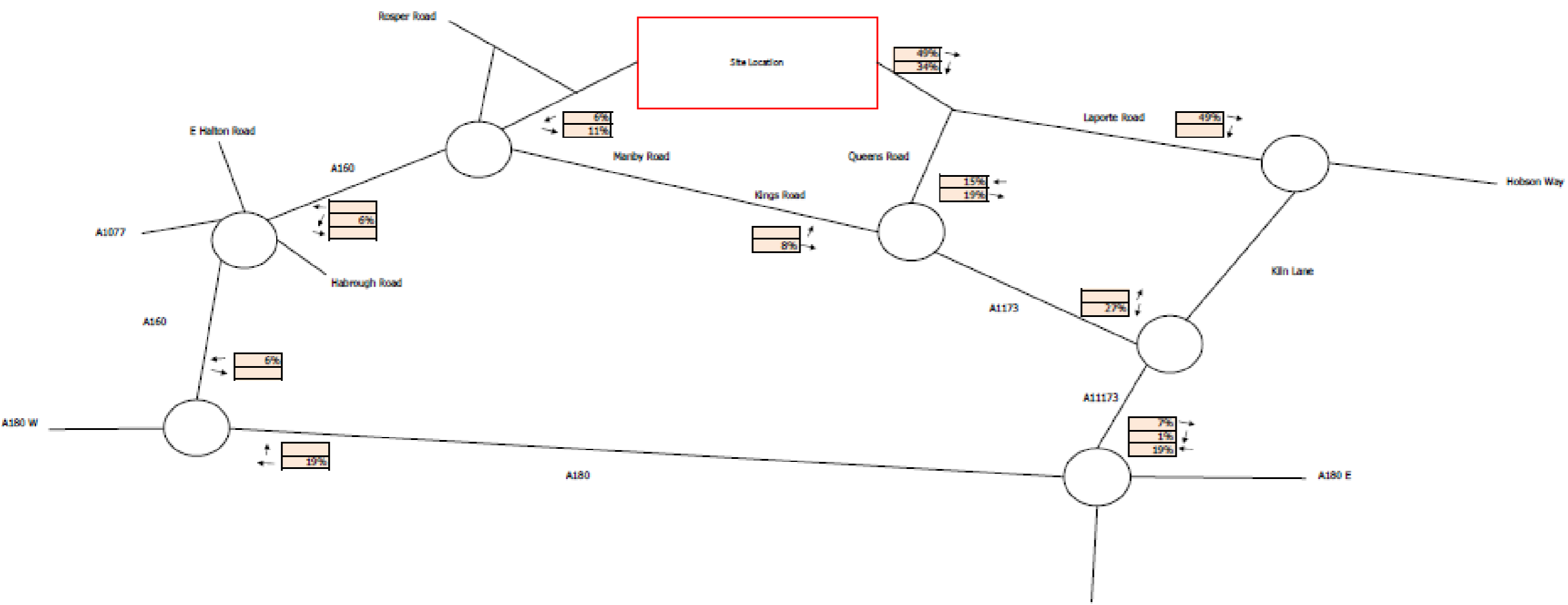
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IMMINGHAM EASTERN RORO TERMINAL RAIL INFRASTRUCTURE PLAN

FIGURE 17.4



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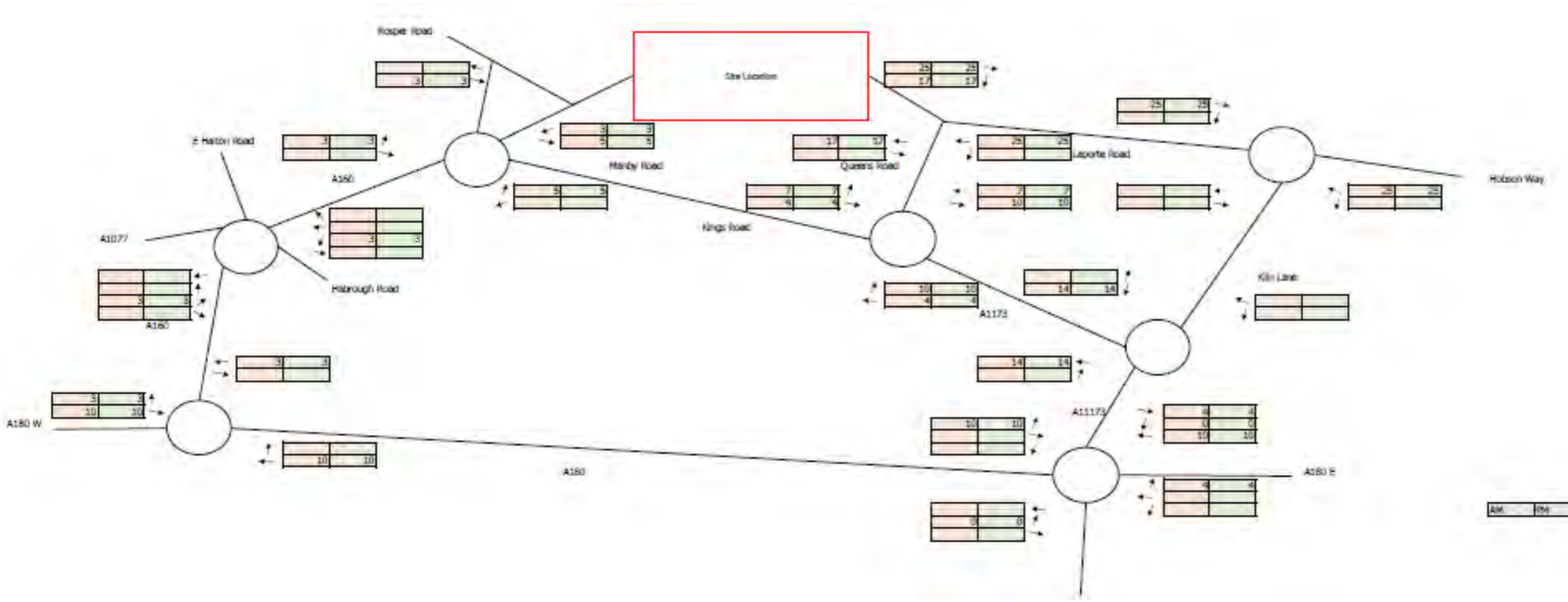
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**IMMINGHAM EASTERN RORO
TERMINAL
LIGHT VEHICLE DISTRIBUTION**

FIGURE 17.5



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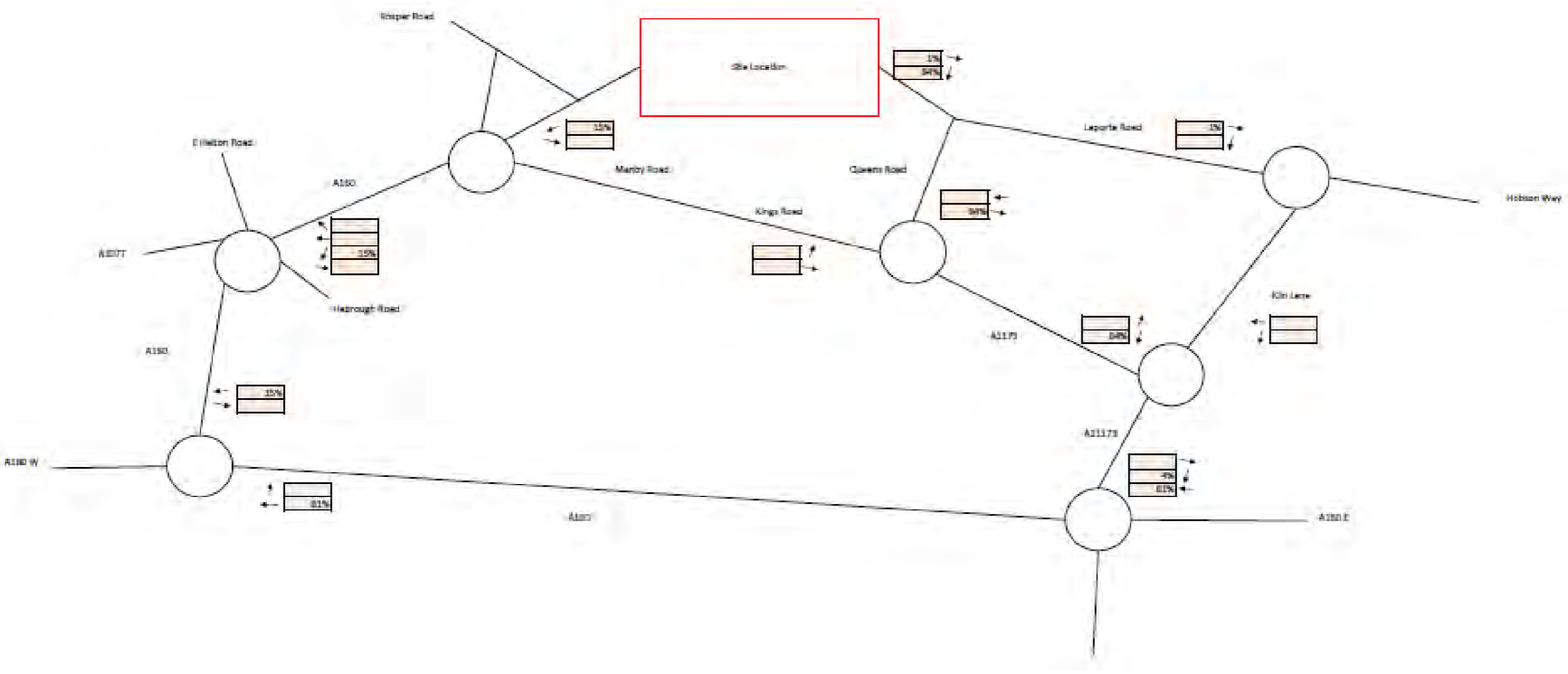
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**IMMINGHAM EASTERN
RORO TERMINAL
LIGHT VEHICLE ASSIGNMENT**

FIGURE 17.6



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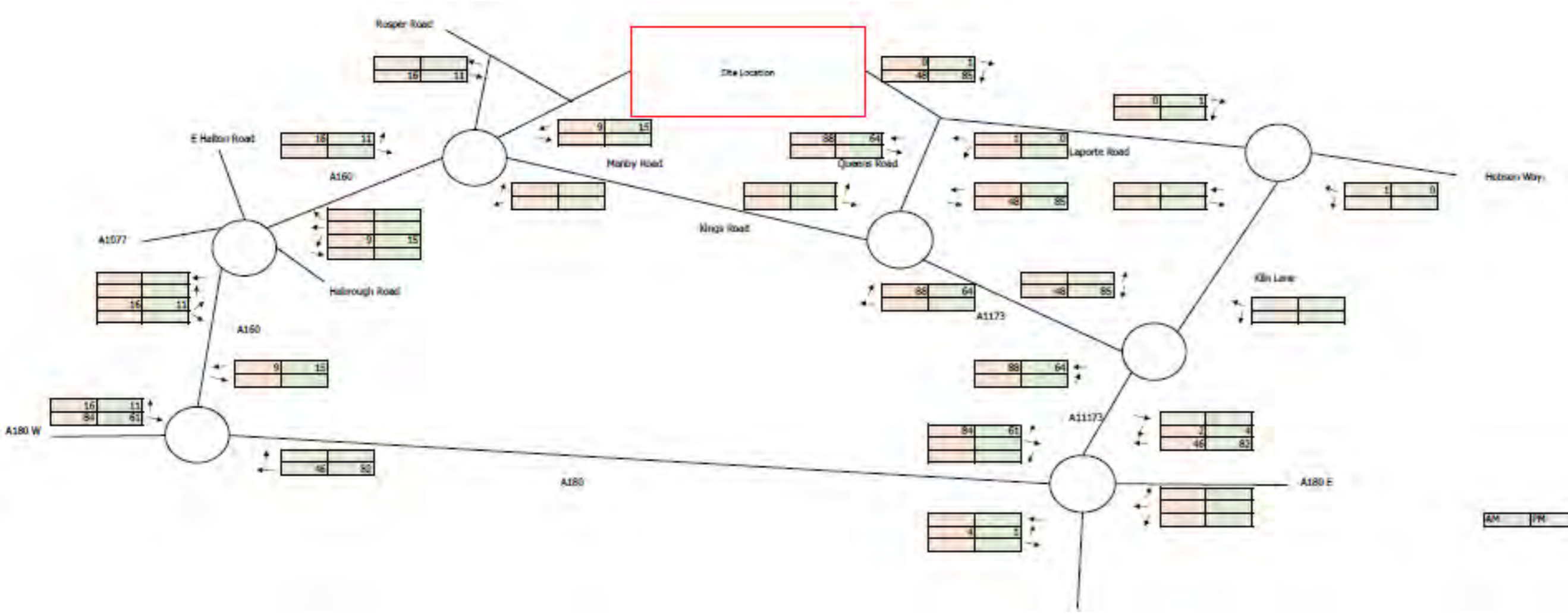
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Projection		
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**IMMINGHAM EASTERN
RORO TERMINAL
HEAVY VEHICLE DISTRIBUTION**

FIGURE 17.7



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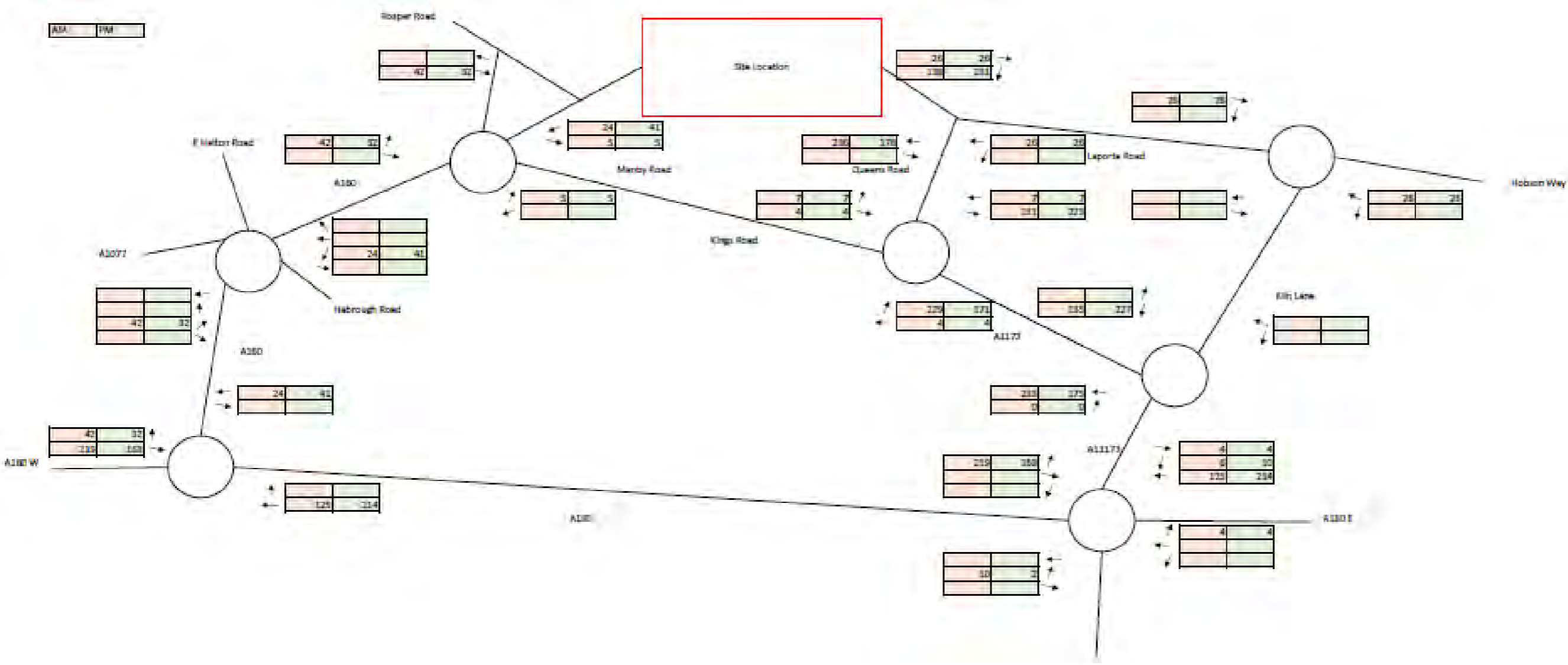
Insert attribution credits here.

Date	By	QA
14/12/2021		
Projection		
Scale (A3)	NTS	
Project no.		



**IMMINGHAM EASTERN
RORO TERMINAL
HEAVY VEHICLE ASSIGNMENT**

FIGURE 17.8



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Insert attribution credits here.

Date	By	QA
14/12/2021		
Projection		
Scale (A3)	NTS	
Project no.		

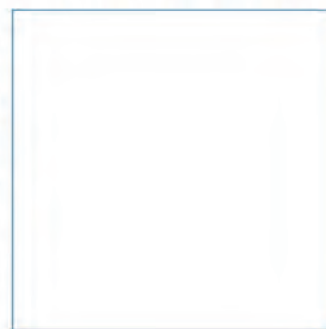
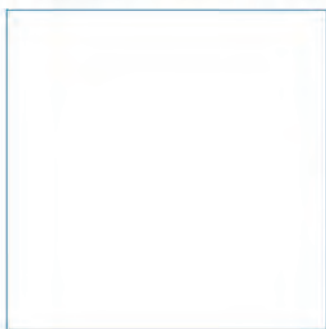


**IMMINGHAM EASTERN
RORO TERMINAL
PCU ASSIGNMENT**

FIGURE 17.9

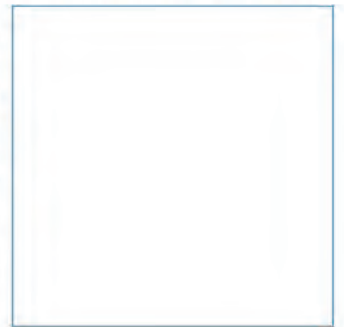
18 Land Use Planning

- 18.1 HSE Land Use Planning Zones for Phillips 66 Ltd – Immingham Pipeline Centre
- 18.2 HSE Land Use Planning Zones for Phillips 66 Ltd – Immingham Propylene Storage
- 18.3 HSE Land Use Planning Zones for Exolum (West) [Previously Inter Terminal (West)]
- 18.4 HSE Land Use Planning Zones for Exolum (East) [Previously Inter Terminal (East)]
- 18.5 HSE Land Use Planning Zones for ABP Immingham Bulk Park
- 18.6 HSE Land Use Planning Zones for Immingham Fertiliser Terminal
- 18.7 HSE Land Use Planning Zones for Associated British Ports Shed 2 and 3



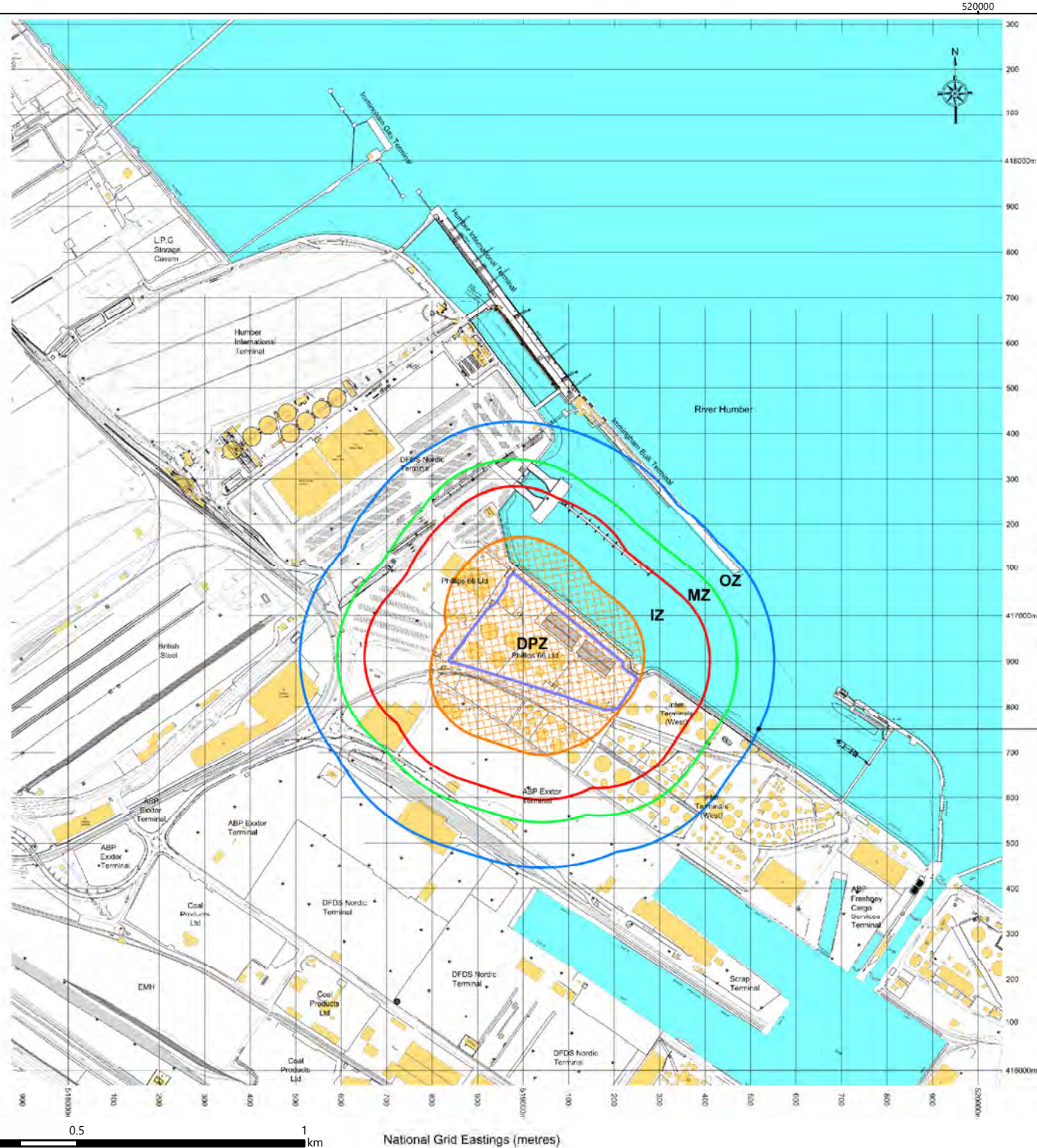
Innovative Thinking - Sustainable Solutions

- 18.8 HSE Land Use Planning Zones for Associated Petroleum Terminals (Immingham) Ltd**
- 18.9 HSE Land Use Planning Zones for Origin Fertilisers [Not Latest Version]**
- 18.10 HSE Land Use Planning Zones for Tronox Pigment UK Ltd and Other Sites in the Vicinity**
- 18.11 Safeguarding Zones for ABP Port of Immingham Explosives Licenced Site**
- 18.12 Combined HSE Land Use Planning Zones for All Major Hazard Sites and Pipelines**



Innovative Thinking - Sustainable Solutions





Legend

COMAH Site Boundary

REFER TO DWG NO 17/G/66 FOR SITE OVERVIEW PLAN

HSE Consultation Zones

Phillips 66 Ltd.
 Immingham Pipeline Centre
 West Riverside, Immingham
 North Lincolnshire
 DN40 2PB

HSE HID CI5 No: H0577
 Grid Ref: TA 190 169

Prepared - June 2008
 This map supersedes all previous or undated maps.

All development proposals within the DPZ are to be referred to HSE in accordance with guidance LSPSS_C

DPZ = Development Proximity Zone
 IZ = Inner Zone
 MZ = Middle Zone
 OZ = Outer Zone

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Date	By	QA
13/01/2022	MW	SH
Projection	British National Grid	
Scale (A4)	1:12,500	
Project no.	17/G/66-1	

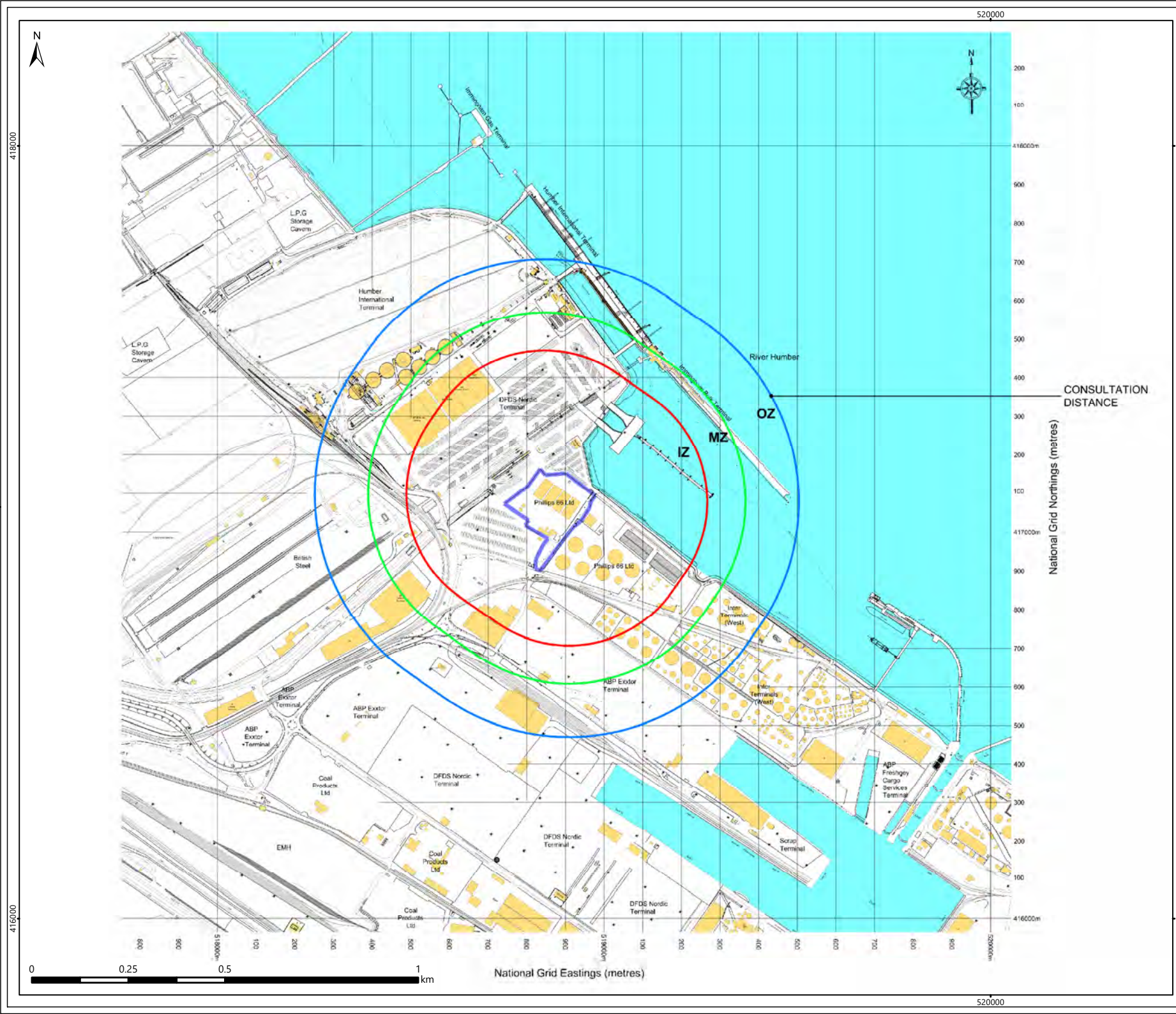
Fig18.1_17G66-1_HSE_Consultation_Zones_DPZ_A4



**IMMINGHAM EASTERN RO-RO TERMINAL
 HSE LAND USE PLANNING ZONES FOR PHILLIPS 66 LTD – IMMINGHAM PIPELINE CENTRE**

Figure 18.1





Legend

— COMAH Site Boundary

REFER TO DWG NO 17/G/66 FOR SITE OVERVIEW PLAN

HSE Consultation Zones
Phillips 66 Ltd.

Immingham Propylene Storage,
LPG Terminal, ABP/Western Dock,
Immingham, South Humber-side
DN40 2QU

HSE HID CI5 No: H1815
Grid Ref: TA 189 171

Prepared - November 2007
This map supersedes all
previous or undated maps.

IZ = Inner Zone
MZ = Middle Zone
OZ = Outer Zone

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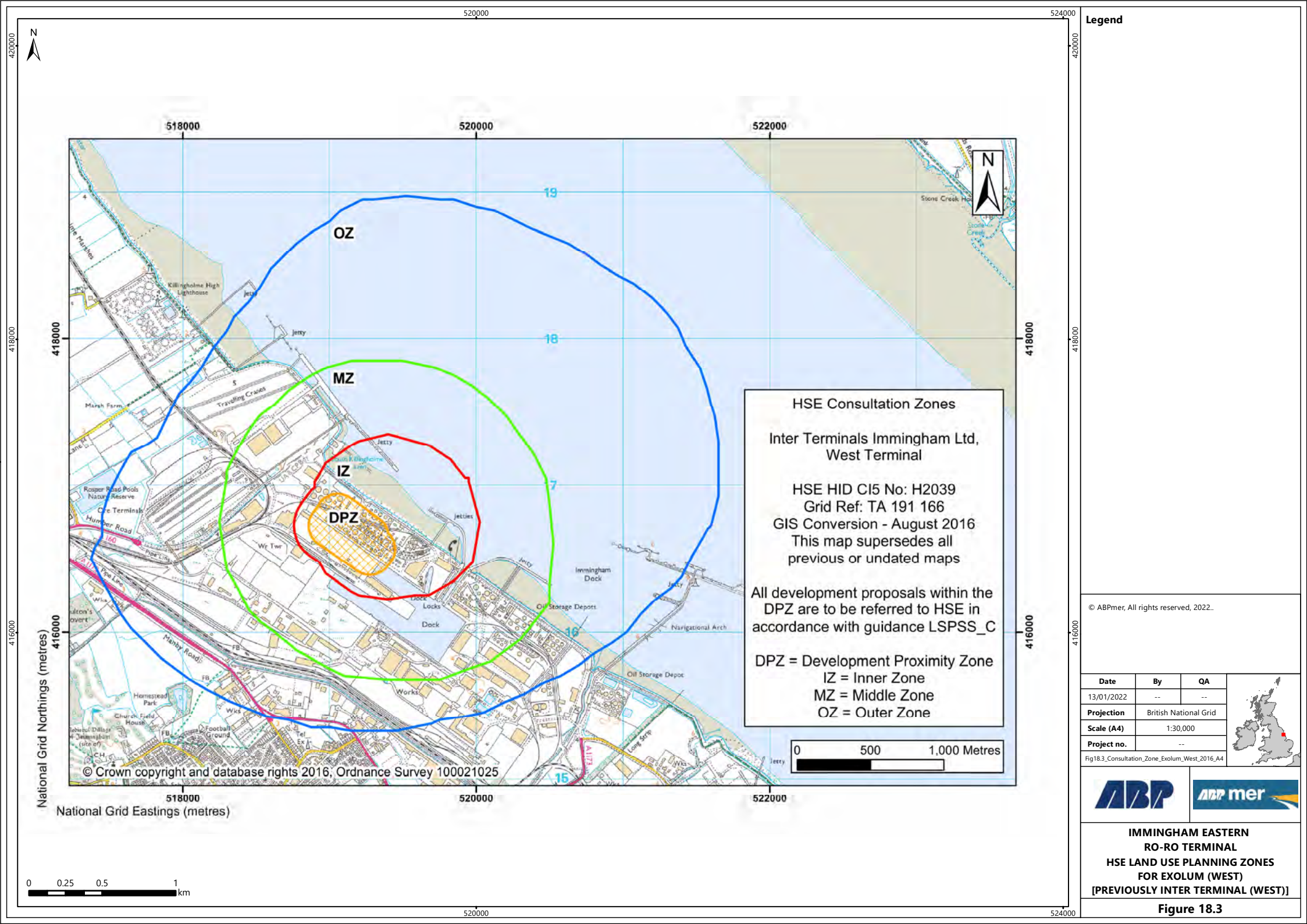
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13/01/2022	MW	SH
Projection	British National Grid	
Scale (A4)	1:12,500	
Project no.	17/G/66-2	

Fig18.2_17G66-2_HSE_Consultation_Zones_DPZ_A4

ABP **ABP mer**

**IMMINGHAM EASTERN
RO-RO TERMINAL
HSE LAND USE PLANNING ZONES
FOR PHILLIPS 66 LTD –
IMMINGHAM PROPYLENE STORAGE**

Figure 18.2



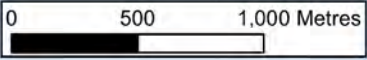
HSE Consultation Zones

Inter Terminals Immingham Ltd,
West Terminal

HSE HID CI5 No: H2039
Grid Ref: TA 191 166
GIS Conversion - August 2016
This map supersedes all
previous or undated maps

All development proposals within the
DPZ are to be referred to HSE in
accordance with guidance LSPSS_C

DPZ = Development Proximity Zone
IZ = Inner Zone
MZ = Middle Zone
OZ = Outer Zone



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Date	By	QA
13/01/2022	--	--
Projection	British National Grid	
Scale (A4)	1:30,000	
Project no.	--	

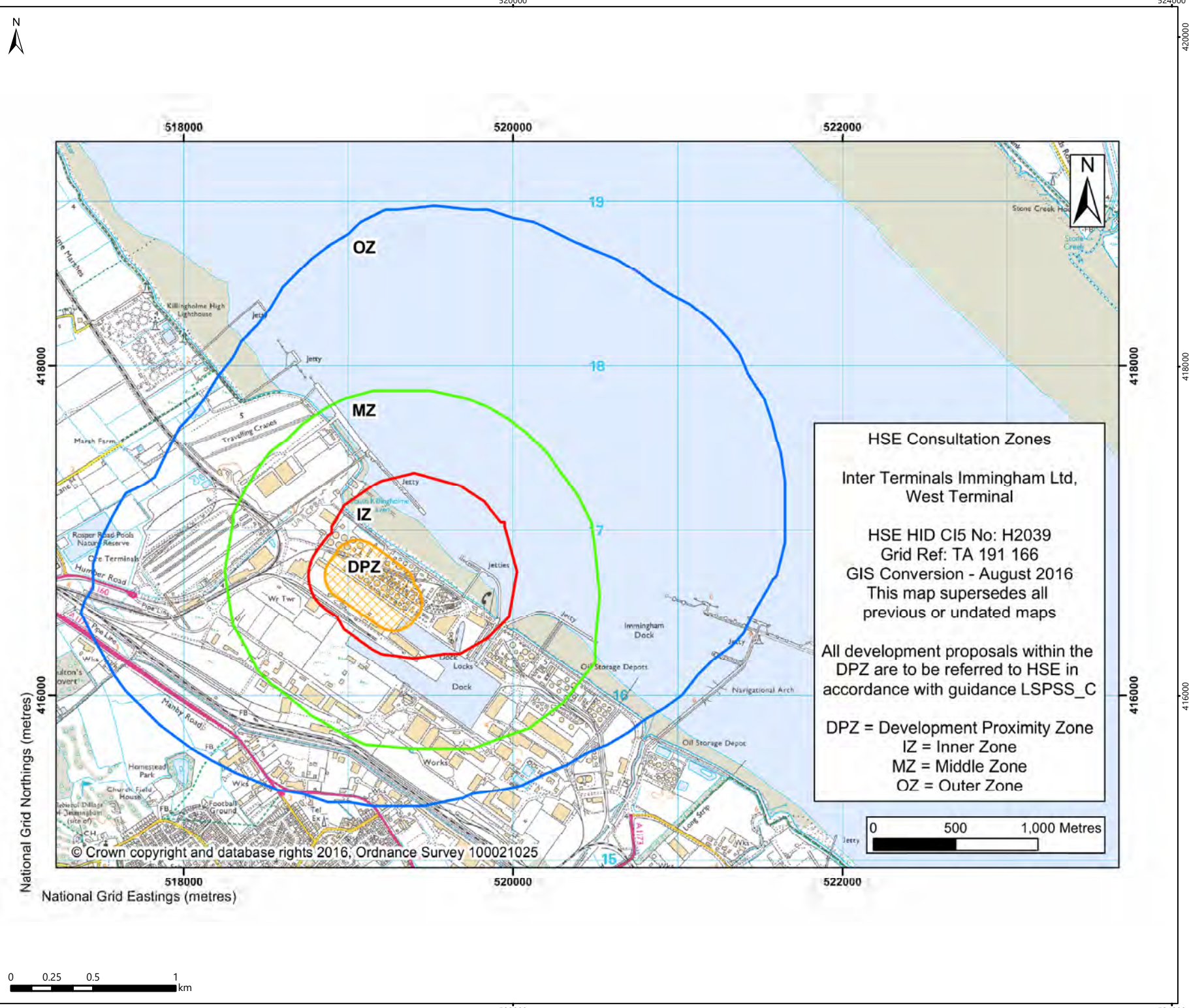
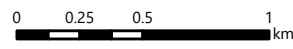


Fig18.3_Consultation_Zone_Exolum_West_2016_A4

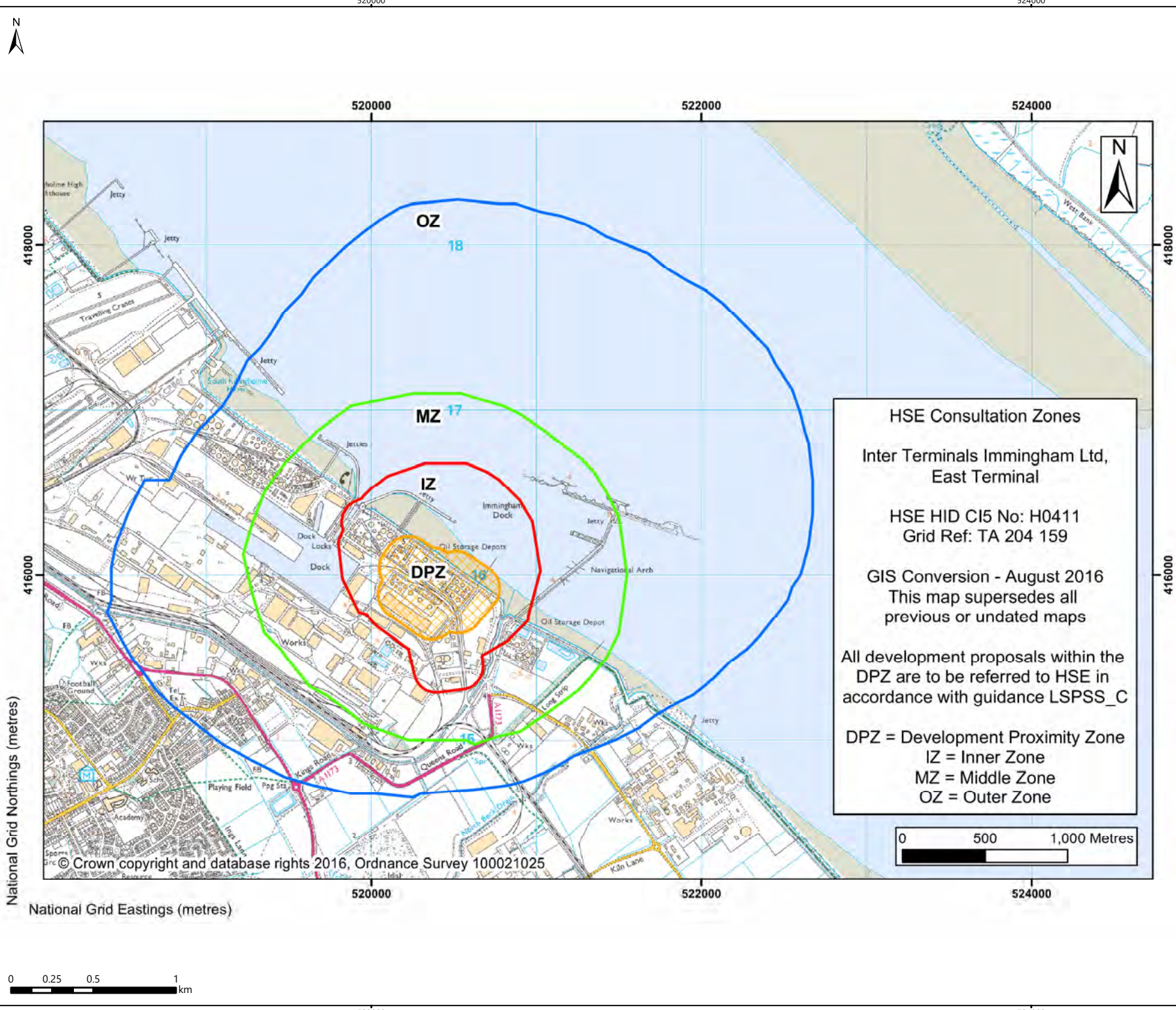


**IMMINGHAM EASTERN
RO-RO TERMINAL
HSE LAND USE PLANNING ZONES
FOR EXOLUM (WEST)
[PREVIOUSLY INTER TERMINAL (WEST)]**

Figure 18.3



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Legend

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Date	By	QA
13/01/2022	--	--
Projection	British National Grid	
Scale (A4)	1:30,000	
Project no.	--	



**IMMINGHAM EASTERN
 RO-RO TERMINAL
 HSE LAND USE PLANNING ZONES
 FOR EXOLUM (EAST)
 [PREVIOUSLY INTER TERMINAL (EAST)]**

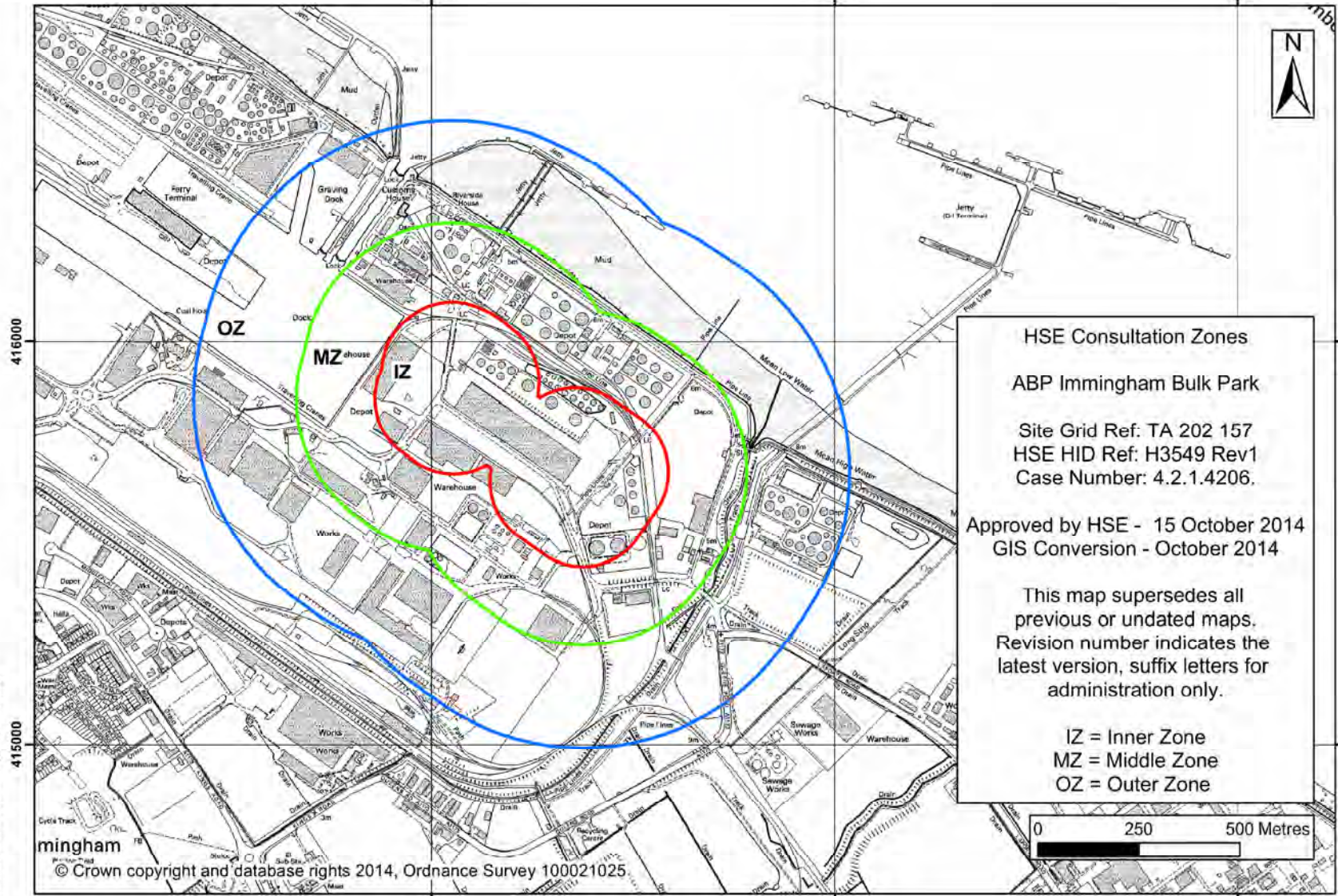
Figure 18.4



520000

521000

522000



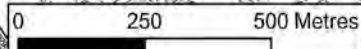
HSE Consultation Zones
ABP Immingham Bulk Park

Site Grid Ref: TA 202 157
 HSE HID Ref: H3549 Rev1
 Case Number: 4.2.1.4206.

Approved by HSE - 15 October 2014
 GIS Conversion - October 2014

This map supersedes all previous or undated maps. Revision number indicates the latest version, suffix letters for administration only.

IZ = Inner Zone
 MZ = Middle Zone
 OZ = Outer Zone



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National Grid Northings (metres)

National Grid Eastings (metres)

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Date	By	QA
13/01/2022	--	--
Projection	British National Grid	
Scale (A4)	1:15,000	
Project no.	--	



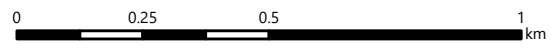
Fig18.5_Consultation_Zone_IBP_2014_A4

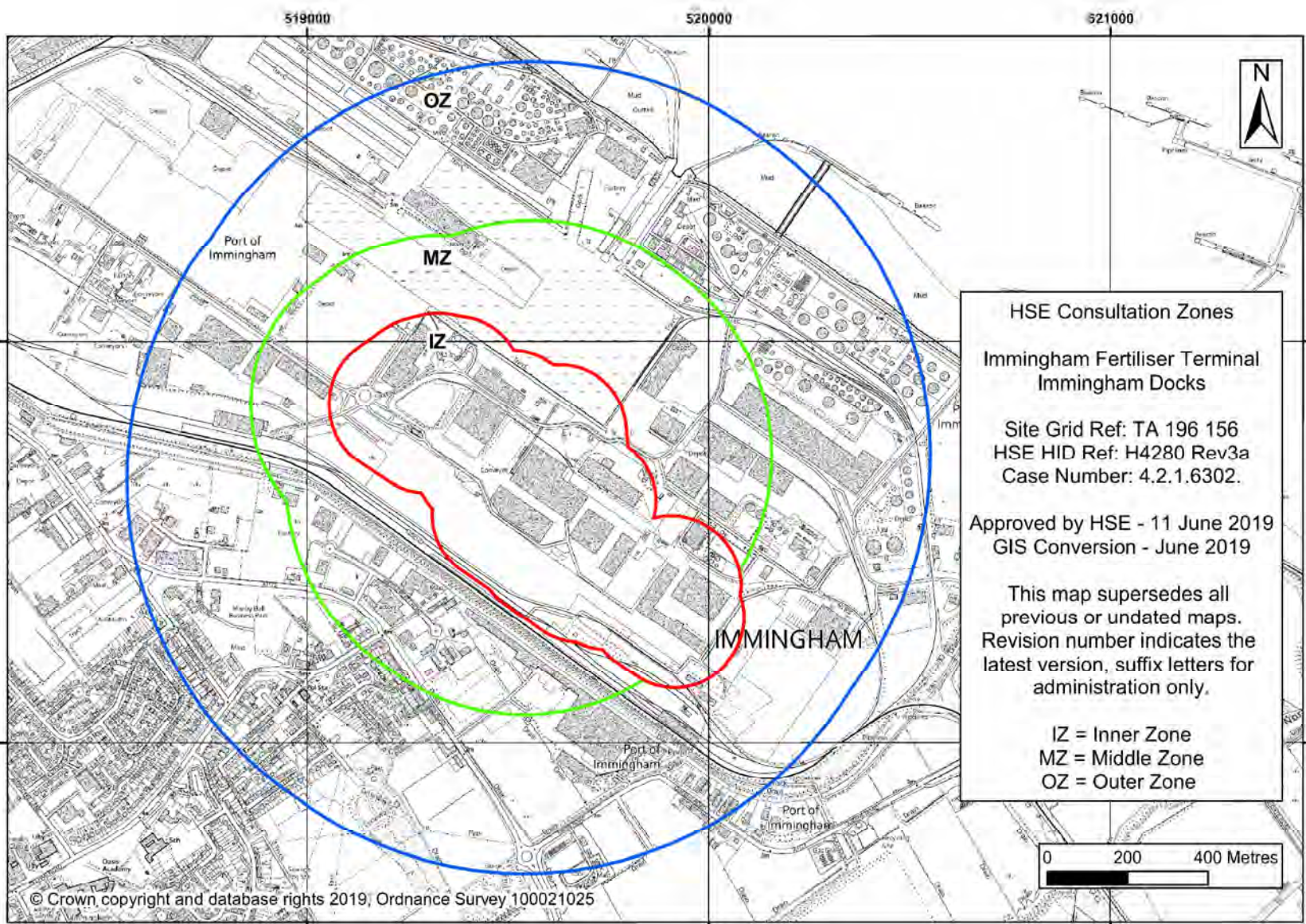


**IMMINGHAM EASTERN
 RO-RO TERMINAL**

**HSE LAND USE PLANNING ZONES
 FOR ABP IMMINGHAM BULK PARK**

Figure 18.5





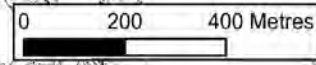
HSE Consultation Zones
 Immingham Fertiliser Terminal
 Immingham Docks

Site Grid Ref: TA 196 156
 HSE HID Ref: H4280 Rev3a
 Case Number: 4.2.1.6302.

Approved by HSE - 11 June 2019
 GIS Conversion - June 2019

This map supersedes all previous or undated maps. Revision number indicates the latest version, suffix letters for administration only.

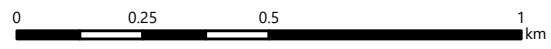
IZ = Inner Zone
 MZ = Middle Zone
 OZ = Outer Zone



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National Grid Northings (metres)

National Grid Eastings (metres)



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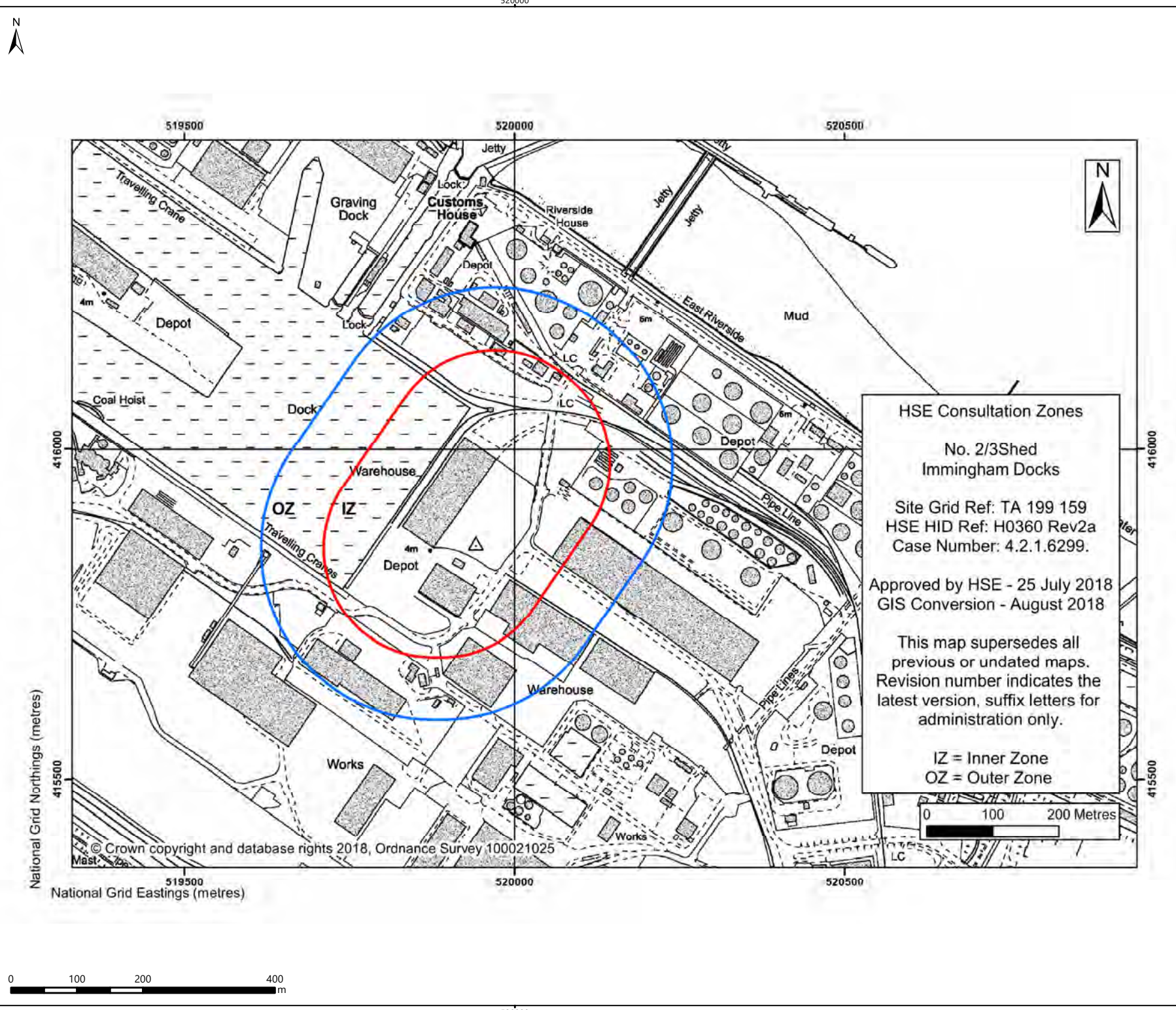
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13/01/2022	--	--
Projection	British National Grid	
Scale (A4)	1:15,000	
Project no.	--	



**IMMINGHAM EASTERN
 RO-RO TERMINAL**

**HSE LAND USE PLANNING ZONES
 FOR IMMINGHAM FERTILISER TERMINAL**

Figure 18.6



Legend

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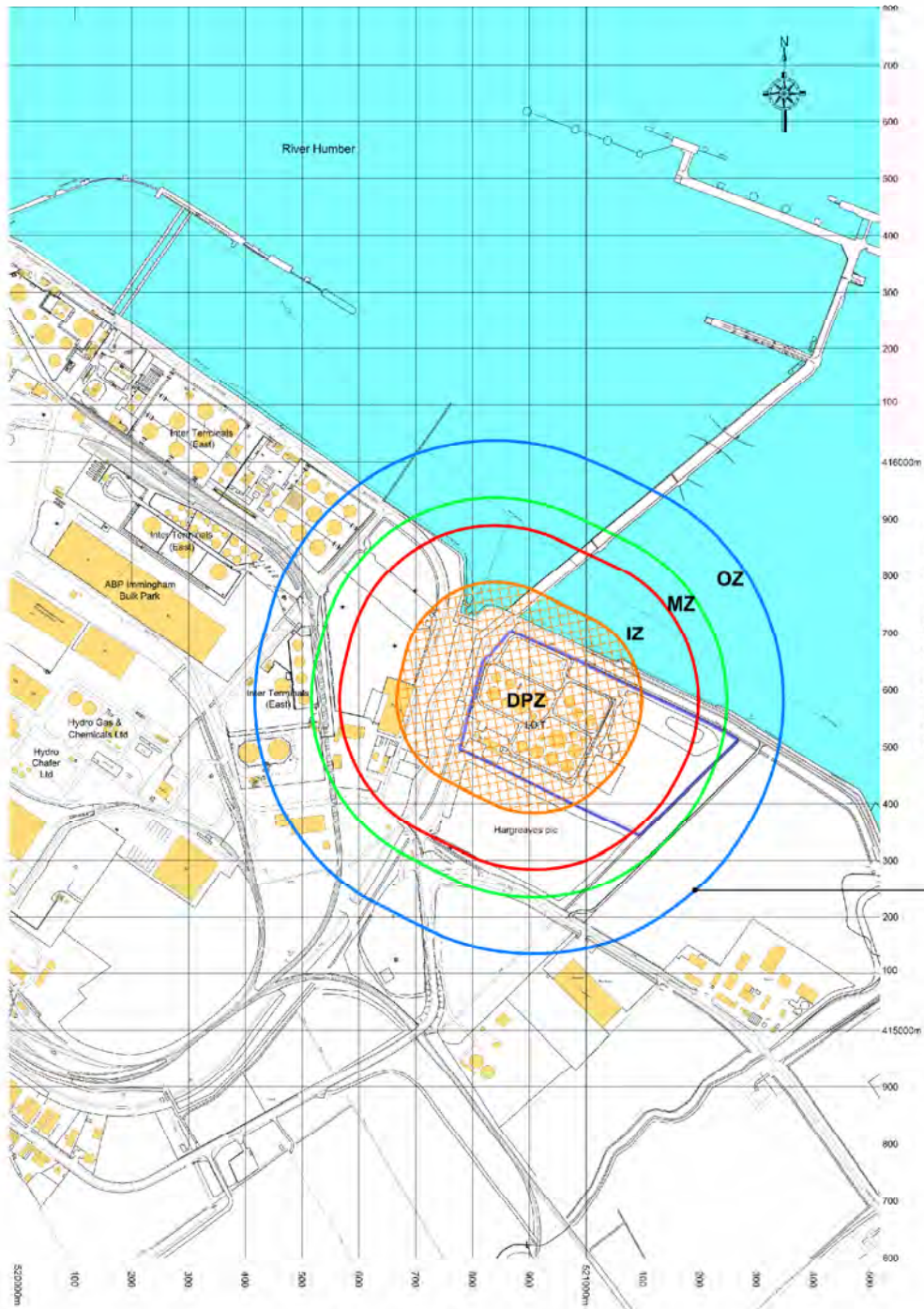
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13/01/2022	--	--
Projection	British National Grid	
Scale (A4)	1:7,500	
Project no.	--	

Fig18.7_Consultation_Zone_Shed_2-3_2018_A4



**IMMINGHAM EASTERN
 RO-RO TERMINAL
 HSE LAND USE PLANNING
 ZONES FOR ASSOCIATED BRITISH
 PORTS SHED 2 AND 3**

Figure 18.7



Legend

COMAH Site Boundary

REFER TO DWG NO 17/G/66 FOR SITE OVERVIEW PLAN

HSE Consultation Zones

Immingham Oil Terminals (Immingham) Ltd.
Immingham Oil Terminal, Queens Road
Immingham, North East Lincolnshire
DN40 2PN

HSE HID CIS No: H0974
Grid Ref: TA 209 156

GIS Conversion - July 2008
This map supersedes all
previous or undated maps.

All development proposals within the
DPZ are to be referred to HSE in
accordance with guidance LSPSS_C

DPZ = Development Proximity Zone
IZ = Inner Zone
MZ = Middle Zone
OZ = Outer Zone

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Date	By	QA
13/01/2022	MW	SH
Projection	British National Grid	
Scale (A4)	1:12,500	
Project no.	17/G/66-8	



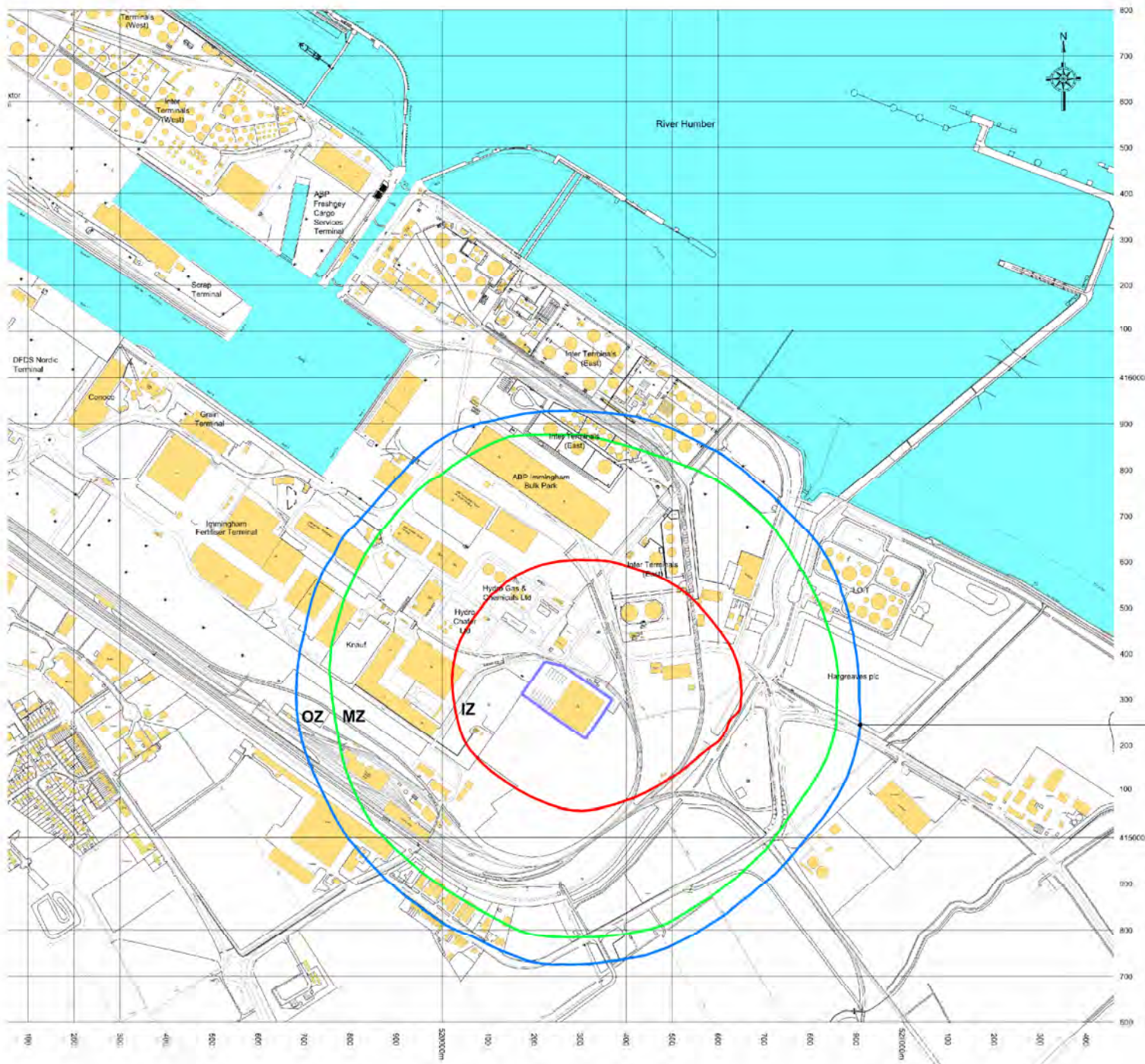
Fig18.8_17G66-8_HSE_Consultation_Zones_DPZ_A4



**IMMINGHAM EASTERN
RO-RO TERMINAL
HSE LAND USE PLANNING ZONES
FOR ASSOCIATED PETROLEUM
TERMINALS (IMMINGHAM) LTD**

Figure 18.8

520000



National Grid Northings (metres)

CONSULTATION DISTANCE

416000

Legend

COMAH Site Boundary

REFER TO DWG NO 17/G/66 FOR SITE OVERVIEW PLAN

HSE Consultation Zones

Origin Fertilisers
Gresley Way, Immingham Dock
Grimsby, NE Lincs

HSE Ref: 361/1068
Grid Ref: TA 202 154

Approved by HSE MSDU - 10/08/04
GIS Conversion - November 2006
This map supersedes all previous or undated maps.

IZ = 10.0 cpm
MZ = 1.0 cpm
OZ = 0.3 cpm

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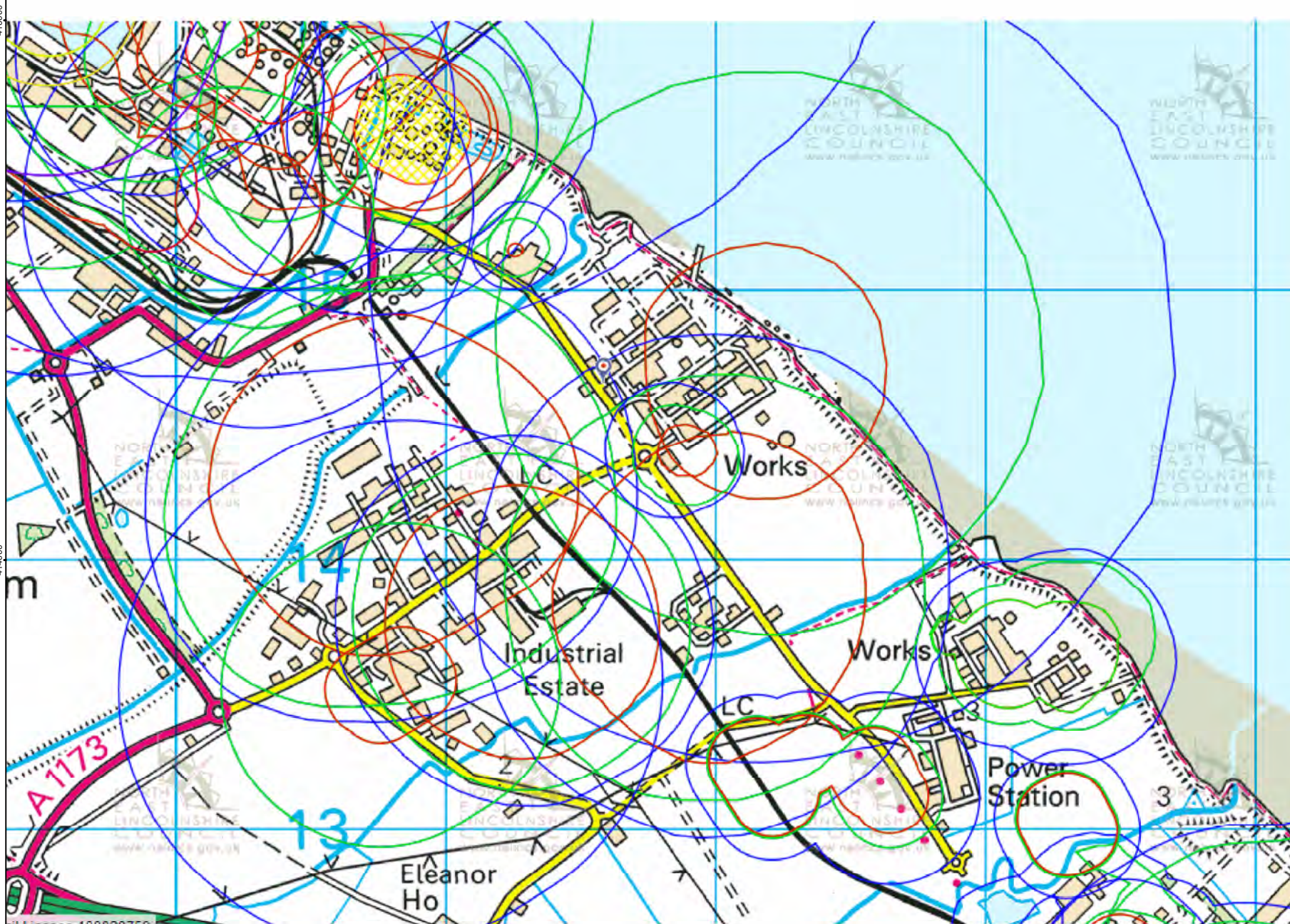
Date	By	QA
13/01/2022	MW	SH
Projection	British National Grid	
Scale (A4)	1:12,500	
Project no.	17/G/66-9	



**IMMINGHAM EASTERN
RO-RO TERMINAL
HSE LAND USE PLANNING ZONES
FOR ORIGIN FERTILISERS
[NOT LATEST VERSION]**

Figure 18.9

520000



Legend

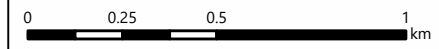
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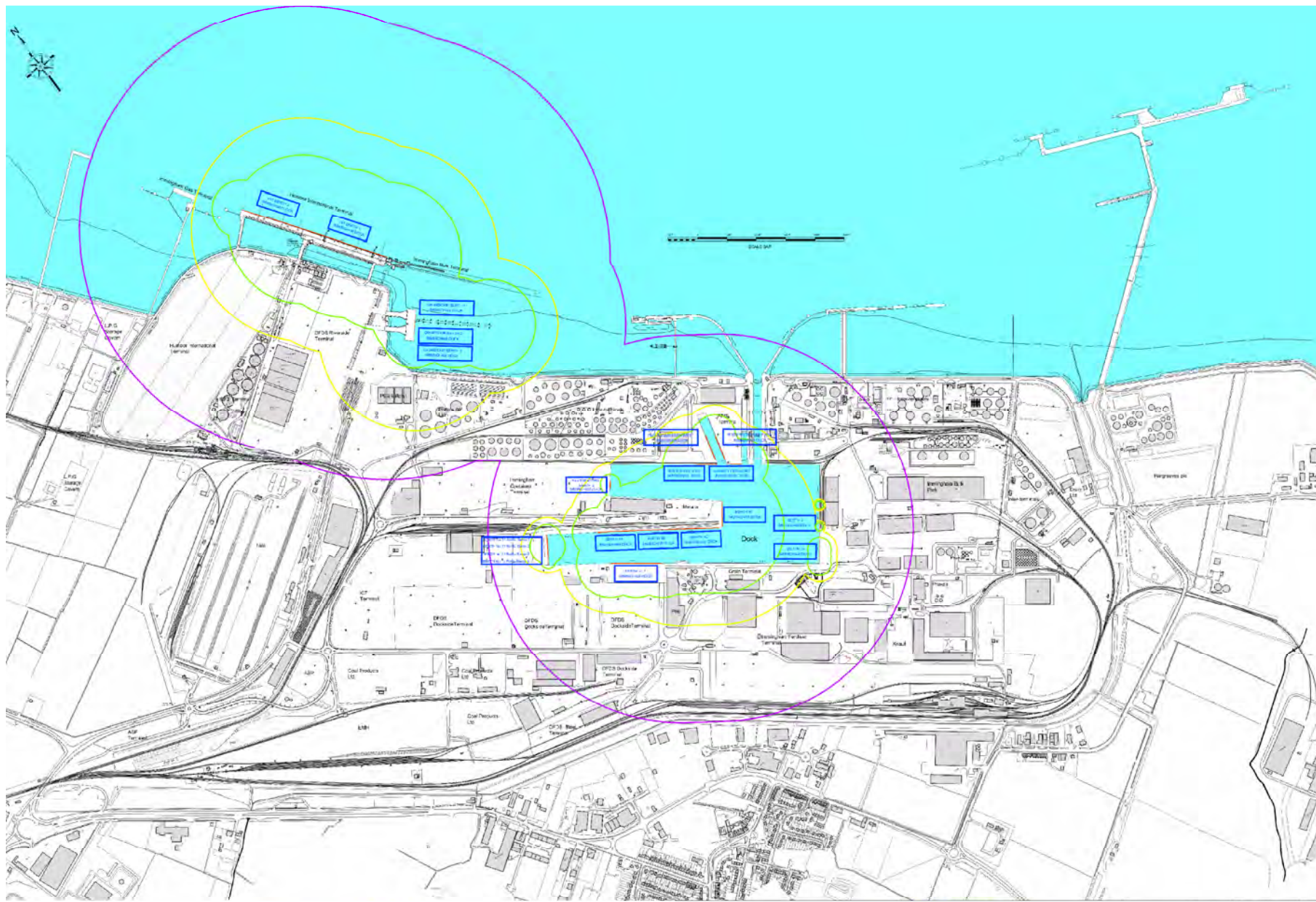
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Projection	British National Grid	
Scale (A4)	1:20,000	
Project no.	--	



**IMMINGHAM EASTERN
RO-RO TERMINAL
HSE LAND USE PLANNING
ZONES FOR TRONOX PIGMENT UK LTD
AND OTHER SITES IN THE VICINITY**

Figure 18.10





Legend

- Berth Length
- SD 1
- SD 2
- SD 3

This drawing is not to be scaled.

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Date	By	QA
13/01/2022	SJN	--
Projection	--	
Scale (A4)	--	
Project no.	17/G/23 - RevB	



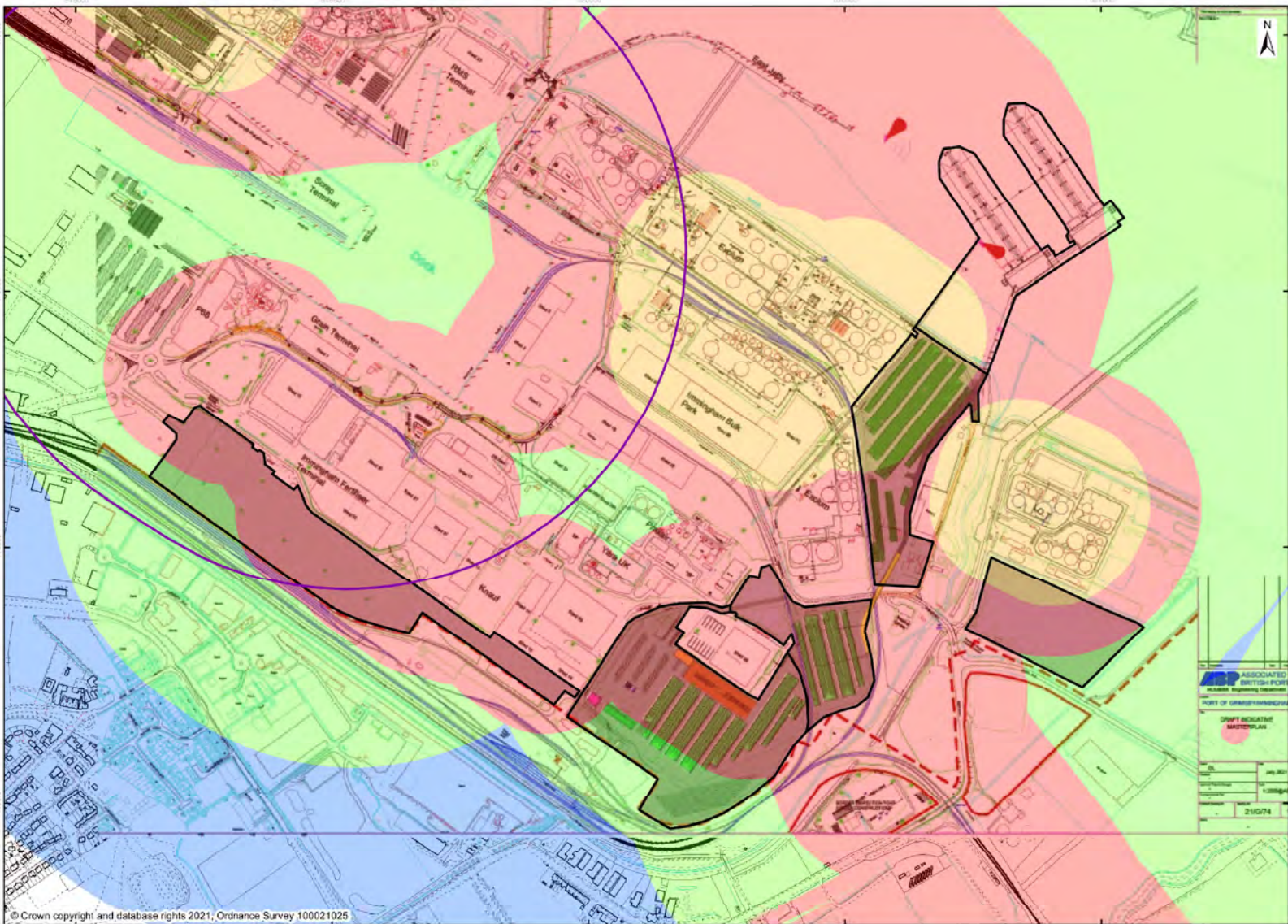
Fig18.11_Port_Safeguarding_Plan_Imm_2017_A4



**IMMINGHAM EASTERN
 RO-RO TERMINAL
 SAFEGUARDING ZONES
 FOR ABP PORT OF IMMINGHAM
 EXPLOSIVES LICENCED SITE**

Figure 18.11

SECURITY CLASSIFICATION: Official Sensitive
ABP Immingham: Georeferenced with consolidated HSE Consultation Zones



Legend

- Explosive Site: CD
- AOI
- Zone**
- DPZ
- Inner
- Middle
- Outer

1:7,000 Scale to A3
Metres
0 50 100
British National Grid

12/10/2021
HSE/CD_1
HSE

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Date	By	QA
13/01/2022	--	--
Projection	British National Grid	
Scale (A4)	--	
Project no.	--	

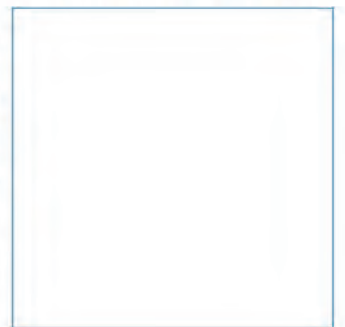


**IMMINGHAM EASTERN
RO-RO TERMINAL
COMBINED HSE LAND USE
PLANNING ZONES FOR ALL MAJOR
HAZARD SITES AND PIPELINES**

Figure 18.12

19 Climate Change

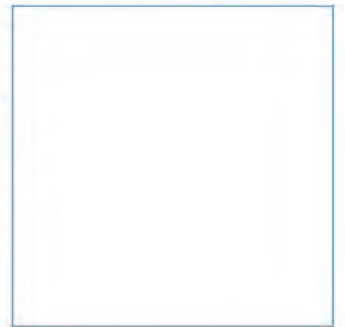
No figures for this chapter.



Innovative Thinking - Sustainable Solutions

20 Cumulative and In-combination

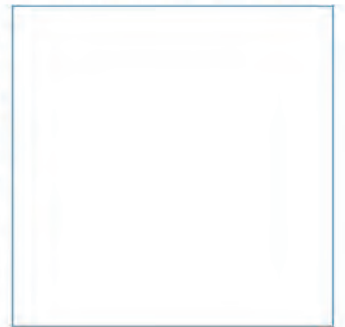
No figures for this chapter.



Innovative Thinking - Sustainable Solutions

21 Summary

No figures for this chapter.



Innovative Thinking - Sustainable Solutions

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