

Environmental Impact Assessment Report

Appendix 16.3

Volume 3 Part 8





Dublin Port Company 3FM EIAR
Marine Geophysical Survey
Archaeological interpretation
22R0287





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Archaeological interpretation
22R0287

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01/06/2024

RPS for DPC

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Abbreviations

ADCO -	Archaeological Diving Company Ltd
AIA -	Archaeological Impact Assessment
CR -	Cable Route
DEM -	Digital Elevation Model
DHLGH -	Department of Housing, Local Government and Heritage
E -	Easting
ECR -	Export Cable Route
EIS -	Environmental Impact Statement
GDG -	Gavin & Doherty Geosolutions Ltd
GI -	Geotechnical Investigations
HWM	High Water Mark
ITM -	Irish Transverse Mercator
INFOMAR -	Integrated Mapping for the Sustainable Development of Ireland's Marine Resource
LAT -	Lowest Astronomical Tide
MG -	Magnetometer
N -	Northing
NGR -	National Grid Reference
NMS -	National Monuments Service
OD -	Ordnance Datum
RMP -	Register of Monuments and Places
SBCPT -	Sub-bottom cone penetration test
SBP -	Sub-bottom Profile
SI -	Site Investigations
SSS -	Side-Scan Sonar
UAIA -	Underwater Archaeological Impact Assessment
UAU -	Underwater Archaeology Unit

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Executive Summary

Project: Dublin Port Company 3FM project EIAR
Location: Dublin Port, along south side of navigation channel
ITM: 718327E 734153N (centrpoint)
Lat/Long: 53° 20' 39.677" Latitude, -6° 13' 22.666" Longitude
Consent 22R0287
Subject: Archaeological review of marine geophysical survey data acquired for seabed areas

Introduction

A marine geophysical survey has been carried out on behalf of Dublin Port Company to inform the Port's proposed Third and Final Masterplan (3FM) project.

The marine geophysical survey took place in two locations: Area 1 extended from the Thomas Clarke Bridge downstream to Berth 41; Area 2 extended from Berth 47A Hardstand downstream to the Cooling Water Outfall next to the Great South Wall.

The purpose of the current report is to provide sufficient information to understand the nature and extent of the archaeological risk associated with the survey area by describing and discussing the existing baseline information established from desk studies, previous survey and from the 2022 site-specific marine geophysical survey.

Receiving environment

As Ireland's principal port, it is no surprise that the approaches to the city along the Liffey estuary retain historic records of shipwreck, while the deltine nature of the shallow estuary provides the potential for the observation of submerged palaeo landscapes.

The approach channel to Dublin Port has been the subject of detailed marine geophysical survey, archaeological interpretation and subsequent dive inspections and archaeological monitoring in recent years, associated with the Alexandra Basin Redevelopment project and the MP2 project. While the archaeological potential remains high, the significant new discoveries have taken place outside the breakwaters.

Marine geophysical survey 2022

The Marine geophysical survey completed in 2022 for the project under consent 22R0287 included multibeam bathymetry, side-scan sonar, magnetometry and sub-bottom profile survey.

The primary data files and report were reviewed by ADCO in accordance with the requirements of the Department, to facilitate an independent archaeological interpretation. The multibeam bathymetry achieved 100% coverage of the survey area. Side-scan sonar, magnetometer and sub-bottom profile were deployed along main survey lines at 10m intervals, which provided over 100% coverage in what are shallow water depths.

The data shows a predominately sand /silt seabed surface with coarser material downstream of Pigeon House Harbour.

The sub bottom profile data did not record any obvious features indicative of palaeo coastlines that are considered to have existed offshore.

A large number of contacts were recorded by the side scan sonar and by the magnetometer but the majority of these are associated with moorings in Poolbeg Marina. The remains of several possible boats were recorded that are likely to have been lost at their moorings in the marina.

Archaeological review of the survey data did not identify any locations within the data sets acquired that may indicate high archaeological risk.

The archaeological review informed a programme of underwater archaeological inspections that took place in 2023 as an additional layer of baseline information to inform the project. The results of the underwater inspections form Appendix 16-5 of the EIA.

1.0 Introduction

The Archaeological Diving Company Ltd (ADCO) was appointed by RPS on behalf of Dublin Port Company to carry out an archaeological interpretation of marine geophysical survey data acquired by Hydromaster Ltd to inform the 3FM project.

The marine geophysical survey was conducted under archaeological licence 22R087, granted to the current report author. The survey was to consider two locations focused on the channel side of the south port area (Figures 1–2). Area 1 extended from the Thomas Clarke Bridge downstream to Berth 41; Area 2 extended from Berth 47A Hardstand downstream to the Cooling Water Outfall next to the Great South Wall.

The survey was completed in October and November 2022 and Hydromaster’s report forms Appendix 16-2 of the 3FM EIAR.

ADCO has reviewed the marine geophysical survey primary side-scan sonar and sub-bottom profile files acquired, in conjunction with magnetometer data sets and multibeam bathymetry geo-referenced Digital Elevation Maps that record the seabed bathymetry.

ADCO’s review informed the Underwater Archaeological Impact Assessment completed for 3FM and reported as Appendix 16-5 of the 3FM EIAR.

2.0 Receiving environment

As Ireland’s principal port, the approaches to the city along the Liffey estuary retain historic records of shipwreck, while the deltine nature of the shallow estuary provides the potential for the observation of submerge palaeo landscapes.

The approach channel to Dublin Port has been the subject of detailed marine geophysical survey, archaeological interpretation and subsequent dive inspections and archaeological monitoring in recent years, associated with the Alexandra Basin Redevelopment project and the MP2 project. While the archaeological potential remains high, the significant new discoveries have taken place outside the breakwaters.

The potential for submerged landscape is informed, for example, by discoveries upriver at Spencer Dock, where a fish trap dating to the Mesolithic period (c. 6,000 BC) presents clear evidence of early activities along the sand flat.¹

Archaeological inputs to the ABR project and the MP2 project have enabled continual archaeological review of data being gathered along the approach channel since 2013. The

¹ Melanie McQuade, 'Building C, Spencer Dock, 03E0654' www.excavations.ie

current survey considered the seabed close against the south port area, which lay outside those locations surveyed previously.

3.0 Marine geophysical survey 2022

Marine geophysical survey completed in 2022 for the project under consent 22R0287 conducted multibeam bathymetry, side-scan sonar, magnetometry and sub-bottom profile survey within the two survey locations (Appendix 16-2, Figure 2).

The primary data files and report were reviewed by ADCO in accordance with the requirements of the Department, to facilitate an independent archaeological interpretation. The multibeam bathymetry achieved 100% coverage of the survey area. Side-scan sonar, magnetometer and sub-bottom profile were deployed along main survey lines at 10m intervals, which provided over 100% coverage in what are shallow water depths.

4.0 Archaeological review and conclusion

The data shows a predominately sand /silt seabed surface with coarser material downstream of Pigeon House Harbour.

The sub bottom profile data did not record any obvious features indicative of palaeo coastlines that are considered to have existed offshore.

A large number of contacts were recorded by the side scan sonar and by the magnetometer but the majority of these are associated with moorings in Poolbeg Marina. The remains of several possible boats were recorded that are likely to have been lost at their moorings in the marina.

Archaeological review of the survey data did not identify any locations within the data sets acquired that may indicate high archaeological risk.

The archaeological review informed a programme of underwater archaeological inspections that took place in 2023 across the same survey locations, and contributed an additional layer of baseline information to inform the project. The results of the underwater inspections form Appendix 16-5 of the EIAR.

The 2022 marine geophysical survey has completed detailed survey of the River Liffey channel as it traverses from the Thomas Clarke Bridge and North Wall Quay Extension upriver to the Cooling Water Outfall next to the Great South Wall downstream. Acoustic targets occupy the seabed area but none of the features recorded represent archaeologically significant features or sites exposed on the seabed.

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6.0 References

McQuade, Melanie, 'Building C, Spencer Dock, 03E0654' www.excavations.ie

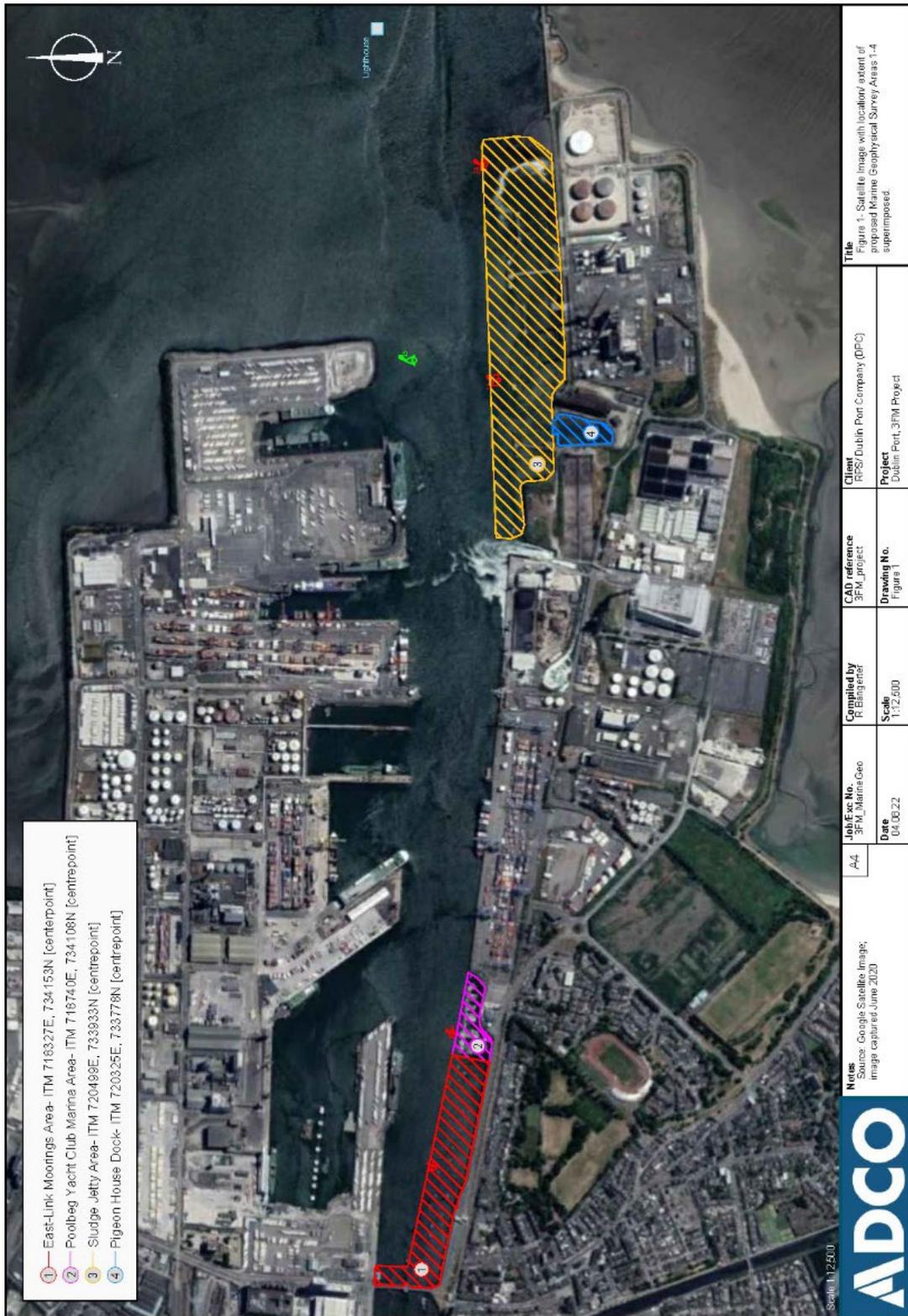


Figure 1: Location map showing marine geophysical survey locations based on satellite image

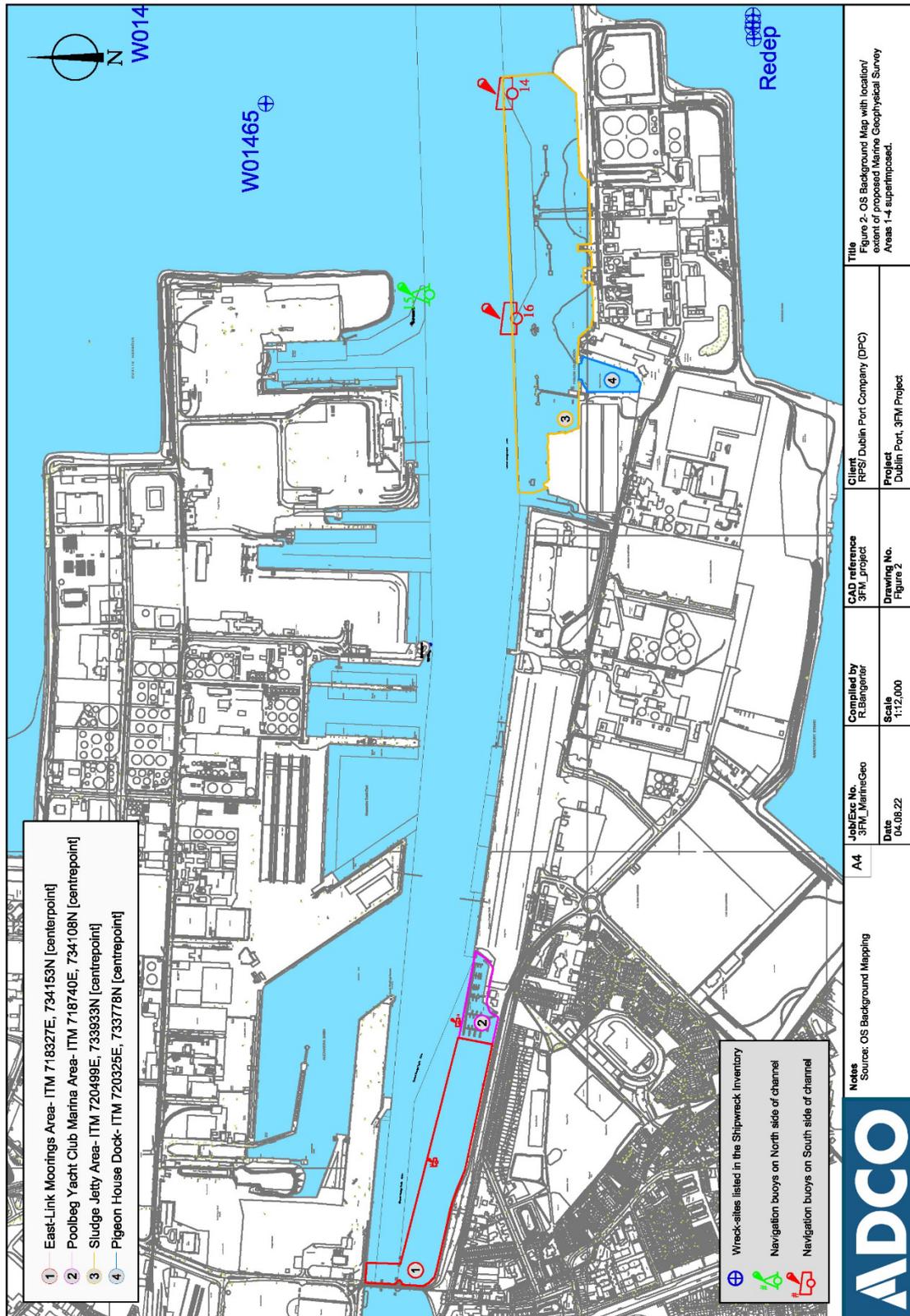


Figure 2: Marine geophysical survey area, based on background OS mapping