MWP

Assessment of Impacts of Marine Usage Report

River Barrow Pre-Dredging Surveys

Wexford County Council

October 2024

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24449	24449-6004-A	A	10/10/2024	WM	PP	PP	DRAFT
24449	24449-6004-B	B	24/10/2024	WM	PP	PP	FINAL

MWP, Engineering and Environmental Consultants
Address: [redacted]

www.mwp.ie

1. Introduction

Access to New Ross Port can be restricted by shallow water depths at several locations between New Ross and the Barrow Bridge downstream at the confluence of the Barrow/Nore and Suir. To establish baseline oceanographic and environmental data for use in assessments in relation to the potential dredging of these locations Wexford County Council (the authority for the port of New Ross) propose to undertake a number of surveys in this section of estuary.

The Marine Area Regulatory Authority (MARA) is responsible for the licencing of any works to be carried out in Ireland's marine areas – including estuarine areas. The aim is to ensure that all potential impacts from such works are identified and mitigated and/or prevented where possible. To this end, all applicants are required to submit an Assessment of Impacts of Marine Usage (AIMU) report to assist MARA in the decision-making process when granting licences for such works. The scale and complexity of the AIMU should reflect the scale and complexity of the project. This report identifies and analyses the likely effects for the proposed activity.

Following consultation (pre application meeting on the 15th of February 2024) with MARA it was determined that an application for a Marine Usage Licence would be appropriate for the proposed survey work. This AIMU document has been prepared as part of supporting documentation for such an application.

2. Legislative Considerations

2.1 Marine Strategy Framework Directive (MSFD)

The MSFD was produced to safeguard the marine environment, and the ecosystems and biodiversity that form part of that environment and enable our economic and holistic interactions with the marine environment. The proposed survey works are to inform future potential dredging work, subject to a separate application, and identify any potential impacts that can be mitigated for at this early stage. The proposed surveys will result in important habitat and environmental information that can be used to update current baseline that for that area.

Since none of the negative impacts stated in the MSFD, which include pollution, biodiversity loss, seabed damage, overexploitation, non-indigenous species introduction, marine litter, are assessed to occur with the proposed survey work of the application, the works are deemed cognisant of the MSFD. While there will be some underwater noise generated during the proposed survey works, a Risk Assessment of Annex IV Species was carried out by the Irish Whale and Dolphin Group, and deemed no mitigation was needed given the nearest designated site with cetaceans as a Qualifying Interest in the Hook Head SAC, which is approximately 20km from the closest point of the surveys. The temporary nature and short duration of the surveys, combined with there being no lasting impact on the receiving environment, shows compliance with the MSFD.

2.2 Water Framework Directive (WFD)

The WFD aims to protect, and enhance where possible, the water quality status of waterbodies within the European Union and is the main law for water protection. It applies to all inland, transitional and coastal bodies. The proposed surveys are taking place in the river Barrow, which is recognised by the Environmental Protection Agency as part of the New Ross Port Waterbody (IE_SE_100_0200) and is deemed 'At Risk'. The river Barrow itself acts as a border between two catchments recognised by the WFD, catchment 14 Barrow, and Catchment 15 Nore.

This is the same for the WFD subcatchments of the area, with the Nore subcatchment (_SC_140) on the west side of the river, and subcatchment Barrow (Barrow_SC_150) located on the east side.

The proposed survey works are short-term in nature and will not cause any lasting impacts on water quality in the area that would contradict the objectives of the WFD.

2.3 National Marine Planning Framework (NMPF)

The NMPF was published in 2021, with the objective of managing marine based human activities that will interact with each other and the marine environment. It recognises the dynamic space that is the marine environment and aims to prevent user/user and user/environment conflicts. It combines various EU Directives to set a clear path forward in the managing of our waters. A NMPF Compliancy Statement has been submitted with this report and should be referred to regarding the proposed works compliancy.

3. Project Description

Malachy Walsh and Partners are providing Consulting Engineering services to Wexford County Council in relation to surveys regarding potential dredging works in the River Barrow estuary between New Ross Town Jetty downstream to the Barrow Bridge at the confluence with the River Suir. It is proposed to undertake a benthic ecological survey, an oceanographic survey and to take a number of riverbed samples for analysis to inform assessments in relation to potential future dredging work.

There are six areas on the Barrow estuary that might be dredged at some time in the future. The most upstream is adjacent to the Town Pier within New Ross, the next is adjacent to an existing jetty at Marshmeadows just downstream of New Ross and the remaining four areas are within the navigation channel between New Ross and the Barrow Bridge in the vicinity of Stokestown, Pink Rock, Halfway and just upstream of the Barrow Bridge.

The length of the estuary between the Town Pier and the Barrow Bridge is approximately 16km. The survey work will be limited to a fraction of this length and will be undertaken over a number of days.

3.1 Programme of Works

3.1.1 Benthic/Ecological Surveys

The benthic survey will be undertaken by means of taking grab sampling from subtidal and intertidal habitats at 26 locations, and the inspection of the estuary bed using video and stills imagery at some 30 locations. For the most part sampling and imagery will be taken within potential dredge areas. In addition, imagery will be used in areas between the potential dredge areas.

Of the above:

- 21 sub tidal samples will be taken, 3 at each of the six potential dredge sites and also within the tidal pond area north of Pink Rock.
- 5 intertidal samples will be taken at the potential dredge areas except the Town Quay.
- 15 videos/still imagery will be taken, 3 at each of the potential dredge areas except the Town Quay
- A further 15 videos/still imagery will be taken at 5 transects between the potential dredge areas.

The field work is anticipated to take a total of 3 days. 1.5 days will be allocated for the sub tidal sampling, 0.5 days for the intertidal and Pink Rock dredge spoil area, and 1 day for the drop video survey.

All estuary bed sampling using a 0.1m² Day Grab deployed from MERC's in-house survey platform. Intertidal areas will be access during suitable tidal conditions. A single 0.1m² grab sample will be collected at each of the subtidal sampling stations. An additional grab will be collected for Grainsize and Loss on Ignition. All samples (if possible-TBD) will be taken outside of the NPWS Designated tidal mudflats and sandflats (CO1140) which spans much of the Barrow's riverbank in this area, as shown in Figure 3-1 below.

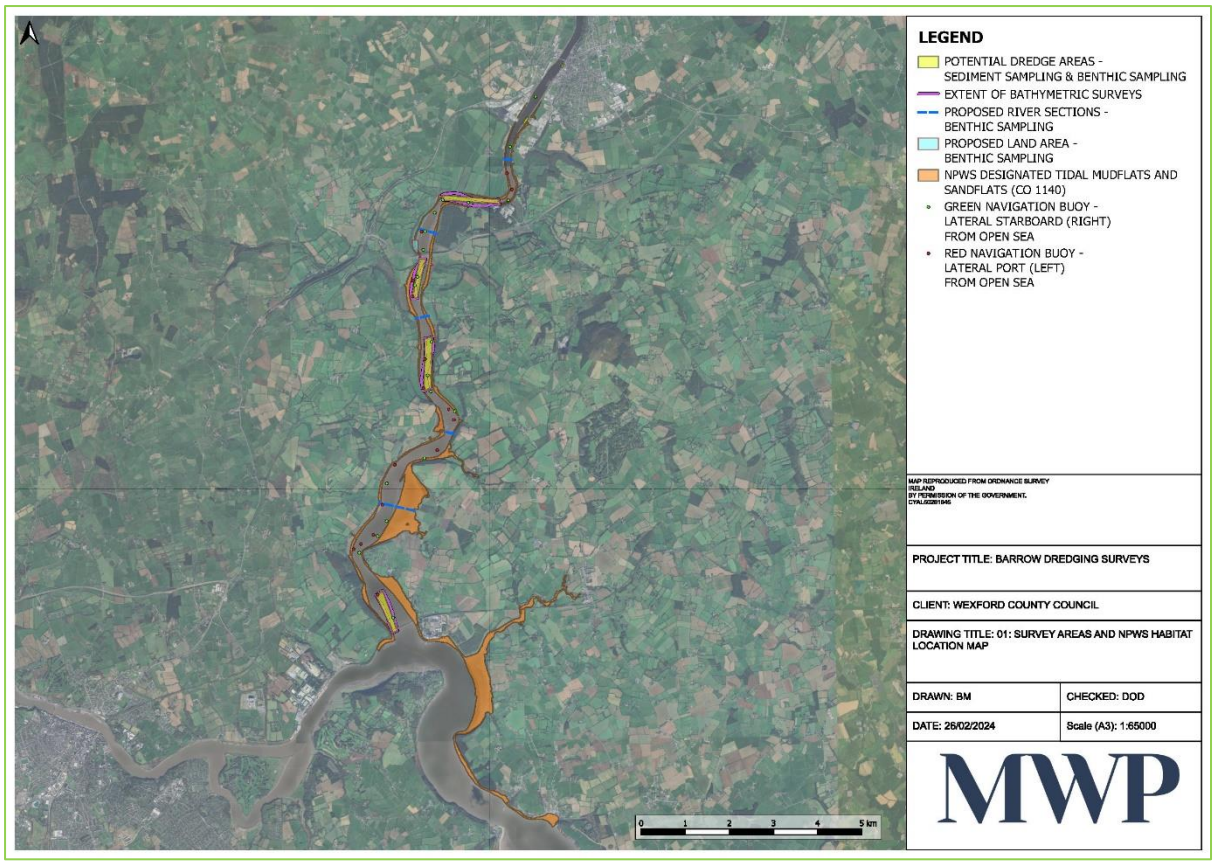


Figure 3-1: Dredging Location and Features

3.1.2 Oceanographic Surveys

The scope of the oceanographic surveys is to include:

- The sampling and analysis of estuary bed sediment for contaminants, 10 samples,
- Tide level measurements at two locations,
- Tidal current measurements at three locations,
- Turbidity and suspended sediment concentration measurements at the same three locations as the tidal current measurements,
- Concurrent/simultaneous River levels at existing Brownsbarn and St Mullins River level gauges fromwaterlevel.ie,
- Side-scan sonar and magnetometer surveys for archaeological purposes.

Sediment sampling will be conducted in line with a Marine Institute Sampling Plan. Ten samples are to be taken within the six potential dredge areas. All the samples will be analysed for suite of contaminants drawn up by the

Marine Institute (MI), which checks suitability for disposal at sea. A further 10 samples will be taken at the same locations. Of these, samples from the two locations nearest New Ross (Town Quays and Marshmeadows) will also be analysed for what is termed the Rilta/WAC suite of criteria – for disposal of material to land and to classify the material for such disposal. The further 8 will be stored in case further analysis is required.

The sediment sampling survey will be undertaken vis hand deployed stainless steel Van Veen grab sampler deployed from a small boat, the details of which are in the following section. At each of the 10 locations a few kg of material will be recovered to ensure sufficient material for analysis.

It is anticipated that the 10 samples will be taken over a 3-to-6-hour period on one day.

Tide level gauges are proposed for 2 locations, New Ross town pier and Cheekpoint Pier, and are proposed for a deployment of 30 days. Tidal/River currents will be measured at 3 locations and will be placed in the riverbed for 14 days. Water samples will be taken at these 3 locations also using Niskin bottles, as will turbidity measurements at hourly intervals.

Side scan sonar and magnetometer surveys are to be undertaken within the potential dredge sites. These involve a boat pulling the sonar or magnetometer in a series of lines over the potential dredge areas. The line spacing is likely to be 10 to 20m or greater to ensure 100% coverage. These surveys will be undertaken over 2/3 days.

3.1.3 Research Vessels

The benthic and oceanographic surveying and sampling work will be undertaken using the vessels detailed below.

RV Reefrunner

- 8.5 M P3 Licensed Dept of Transport survey vessel
- Beam 2.9m
- Draught 0.6m
- Propulsion 300HP
- Crew 2 + scientific staff
- Max operating speed 15 knots

MV Sharpshooter

- 11.5m Aquastar P5 Dept of Transport licensed vessel
- Beam 3.2m
- Draught 1.6m
- Propulsion 315HP diesel inboard motor
- Crew 2 + scientific staff
- Max operating speed 15 knots

MV Keltoi Warrior

- Interceptor 38ft vessel
- Hull GRP
- Beam: 3.8m
- Length: 11.5m
- Draft: 1.0m

Figure 3-2: Reefrunner, Sharpshooter, and Keltoi Warrior (L-R)

4. Considerations

4.1 Planning & Development

A desktop search of planning applications was performed, and the proposed survey work will have no effect on any developments in the vicinity given the short-term nature of the surveys.

4.2 Land and Soils

Sediment along the riverbed will be disturbed during the grab sampling. This is a short-term effect and deemed to have a negligible impact.

4.3 Water

There will be no negative effects on the water quality in the area of the survey works given the short-term nature of the works proposed. Some sediment will be disturbed during grab sampling, but this will have a negligible impact.

4.4 Biodiversity

The short-term nature of the works will have no negative affect on biodiversity in the area. A Risk Assessment for Annex IV Species and a Statutory Information Supporting Appropriate Assessment (SISAA) was performed and is submitted with this application.

4.5 Fisheries & Aquaculture

The short-term nature of the works will have no negative effect on fishing activity in the area, which would be limited to recreational. There is no aquaculture sites located in the area of the proposed survey works.

4.6 Air Quality

The short-term nature of the works will have no negative affect on air quality in the area.

4.7 Noise & Vibration

There is potential for some small-scale disturbance due to the use of acoustic equipment. However, the nearest Special Area of Conservation which include Annex IV species (cetaceans) as qualifying interests is Hook Head SAC, with the nearest boundary nearly c. 17 km to the southeast and the proposed marine activities and will have no impact on the Conservation Objectives of this site. The proposed surveys are cognisant of the objectives of the MSFD, as mentioned in Section 2.1. A Risk Assessment for Annex IV Species was also carried out, along with a SISAA Report, both of which have been submitted with this application. The short-term nature of the works will have no negative effects on existing species in the River Barrow.

4.8 Landscape & Seascape

The short-term nature of the works will have no negative affect on the landscape or seascape.

4.9 Traffic & Transport

The short-term nature of the works will have no negative affect on traffic or transport in the area. Deployment will be organised with the Port of New Ross to avoid any potential conflicts with marine traffic.

4.10 Cultural Heritage

There are 19 recorded shipwrecks along the Barrow where the surveys will take place and will be avoided during the proposed survey works. The short-term nature of the works will have no negative affect on cultural heritage in the area, including archaeological sites. Any archaeological sites discovered during the course of the works will be reported.

4.11 Population & Human Health

The short-term nature of the works will have no negative affect on the population or human health in the area.

4.12 Climate

The short-term nature of the works will have no negative affect on climate quality in the area.

4.13 Waste

The nature of the works will produce no waste in the area.

4.14 Material Assets

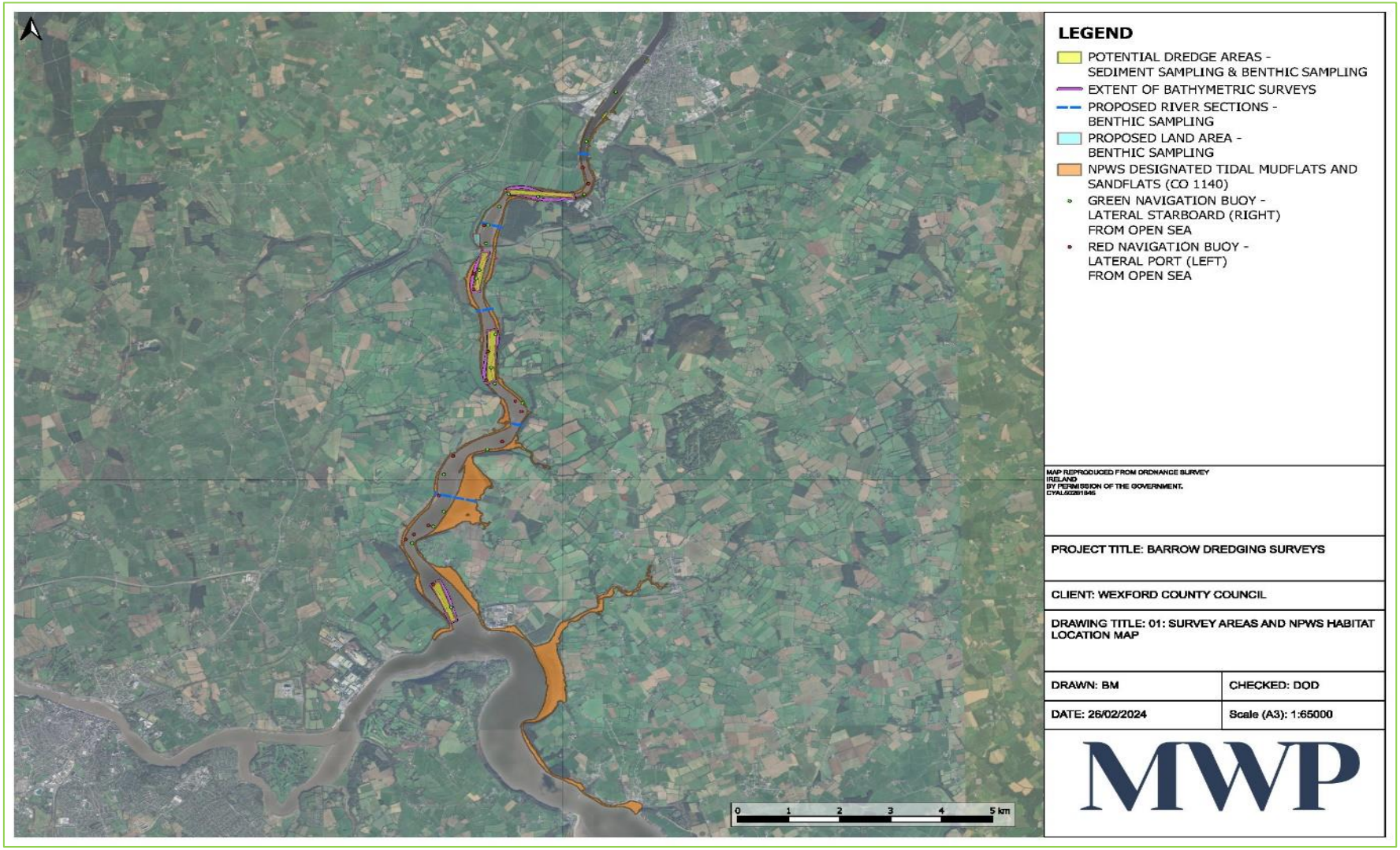
The short-term nature of the works will have no negative effect on existing material assets in the area.

5. Summary of Mitigations

The assessment carried out in this document is for benthic and oceanographic surveys for pre-dredging of areas of the River Barrow to remove sediment build up. It is not for the dredging work. The conditions assessed above are considerate of the short-term of the nature of these survey works, with vessel and survey activity expected to be less than 1-month. A SISAA and Risk Assessment for Annex IV Species was also carried out to assess the impact of these surveys, and the findings recommend that due to the short duration of the works, no significant impacts are likely to occur, and no mitigation measures are required for the pre-dredging surveys, which is consistent with the findings of this assessment.

Appendix 1

Site Survey Plan


LEGEND
POTENTIAL DREDGE AREAS - SEDIMENT SAMPLING & BENTHIC SAMPLING
EXTENT OF BATHYMETRIC SURVEYS
PROPOSED RIVER SECTIONS - BENTHIC SAMPLING
PROPOSED LAND AREA - BENTHIC SAMPLING
NPWS DESIGNATED TIDAL MUDFLATS AND SANDFLATS (CO 1140)
GREEN NAVIGATION BUOY - LATERAL STARBOARD (RIGHT) FROM OPEN SEA
RED NAVIGATION BUOY - LATERAL PORT (LEFT) FROM OPEN SEA
MAP REPRODUCED FROM ORDNANCE SURVEY IRELAND BY PERMISSION OF THE GOVERNMENT. CYAL50281946
PROJECT TITLE: BARROW DREDGING SURVEYS
CLIENT: WEXFORD COUNTY COUNCIL
DRAWING TITLE: 01: SURVEY AREAS AND NPWS HABITAT LOCATION MAP
DRAWN: BM
CHECKED: DOD
DATE: 26/02/2024
Scale (A3): 1:65000
0 1 2 3 4 5 km
MWP