Note

HaskoningDHV UK Ltd.
Industry & Buildings

To:	Natural Resources Wales
From:	Sarah Marjoram
Date:	23/03/2020
Copy:	Jamie Gardiner, Simon Lewis, David Jones, Freddie Jones, Alistair Yates
Our reference:	PB8908-RHD-ZZ-XX-FN-Z-0018
Classification:	Project related

Subject: **Holyhead Waterfront Development - marine ecology survey specification**

1 Introduction

The Holyhead Waterfront Regeneration Scheme (the Proposed Development), being proposed by Conygar Holyhead Ltd, is located within Holyhead New Harbour, adjacent to the Great Breakwater (see **Figure 1**). An Environmental Statement (ES) for the Proposed Development was submitted to the Isle of Anglesey County Council (IoACC) in 2010 (the '2010 ES') (Axis, 2010), in support of an Outline Planning Application (with All Matters Reserved). The Proposed Development was awarded Outline Planning Permission, subject to a number of planning conditions, by the IoACC in 2014 (ref. 19C1046A/EIA/ECON) (the '2014 permission') which, amongst other things, required the submission of Reserved Matters applications by a certain date

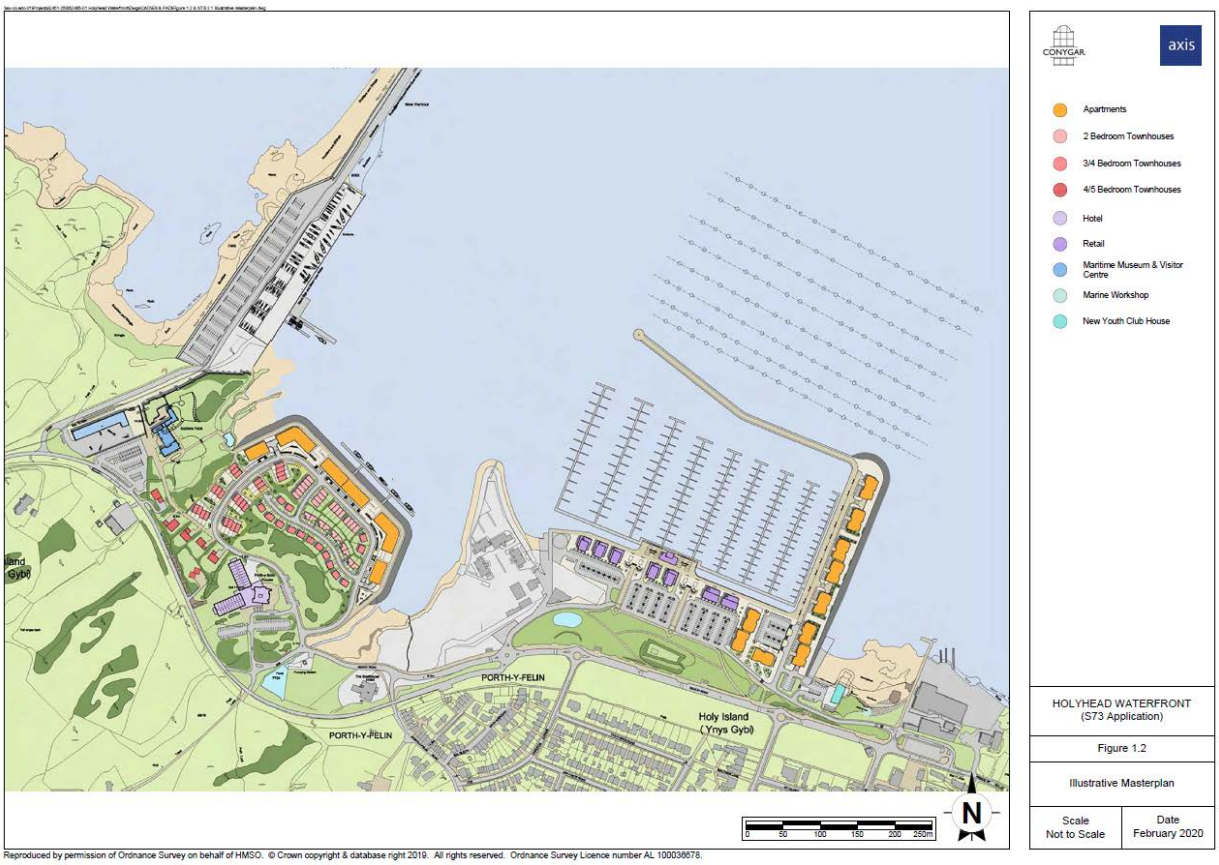


Figure 1 The Illustrative Masterplan for the Proposed Development for which Outline Planning Permission (with All Matters Reserved) was granted in 2014.

However, to-date, and for various reasons, Reserved Matters applications were not submitted pursuant to the Outline Planning Permission and the date by which they were required to be has now lapsed.

Consequently, a Section 73 (s73) application was submitted to the IoACC in February 2020 (ref. VAR/2020/20/EIA) in order, principally, to extend the period of time within which Reserved Matters applications can be submitted and also extend the time period for the development being implemented. The Illustrative Masterplan submitted with the s73 application was identical to that approved by the 2014 permission.

An ES (the '2020 ES') (Axis, 2020) was submitted in support of the s73 application that updated the 2010 ES to take account of new baseline information and changes to legislation since the 2010 ES was produced. The application, having only relatively recently been submitted, is currently being consulted on, as part of the 16-week statutory determination period.

In parallel with the s73 application determination period, consideration is being given to the requirements of the other consents required to permit the construction and operation of the Proposed Development, including a Marine Licence from Natural Resources Wales (NRW) and a Harbour Revision Order (HRO) from the Welsh Government, as well as seeking approval of the Reserved Matters, should permission for the s73 application be granted.

The applications for the Marine Licence and HRO will be accompanied by an ES (EIA Report), under the relevant EIA Regulations, which will also support the Reserved Matters applications to be submitted in compliance with the planning conditions attached to the new Outline Planning Permission. It is anticipated that this will be achieved by updating the 2020 ES.

Importantly in the context of this note, further work on the design of the Proposed Development has resulted in some configurative changes to the Illustrative Masterplan approved by the 2014 permission (an identical version of which was presented in the s73 application). Specifically related to the marine environment, the key changes are (see **Figure 2**):

- A reduction in the size of the proposed marina from 500 to 250 berths; and
- A reduction in the size of the reclamation area along Newry Beach, being shorter to the east by approximately 50m.

There is now the potential requirement to dredge soft sediments within the footprint of the breakwater. A sediment sample plan has recently been received from NRW (ref: SP2003).

To inform the 2010 ES, a suite of marine and coastal surveys was undertaken as summarised in **Section 2** and presented in full in **Appendix A**. With agreement from NRW (see **Appendix B**), these surveys were considered suitable to inform the 2020 ES, given the sheltered and stable environment within the New Harbour.

An environmental scoping exercise is currently being undertaken; however, in order to meet the Proposed Development's programme requirements, there is a need to progress the required surveys before the Environmental Scoping Report has seen submitted. As such, this note has been issued to NRW and the IoACC to set out and agree the proposed approach to the marine and coastal ecology surveys to be used to update the 2020 ES.

223500 224000 224500

384000 383500 383000

Holyhead Breakwater

Holyhead New Harbour

Soldiers Point

New Breakwater

Floating Breakwater

RNLI Lifeboat Mooring Station

New Marina

Porth-y-Felin

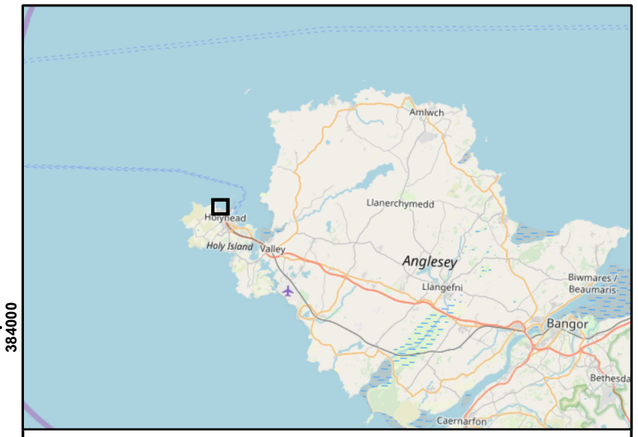
Newry Beach

Holyhead Boatyard

Inland Sea (Cymyran Strait) (N)

N

0 100 200 Metres



Legend

- Proposed Dredge Area
- Land Reclamation Area
- Low Water Mark

Client:	Project:
Conygar	Holyhead Waterfront Regeneration Scheme

Title: The Proposed Development

Figure: 2 | Drawing No: PB8908-RHD-ZZ-XX-DR-Z-0016

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
02	13/03/2020	FC	MR	A3	1:5,000
01	03/03/2020	MCP	MR	A3	1:5,000

Co-ordinate system: British National Grid

Royal HaskoningDHV
Enhancing Society Together

ROYAL HASKONINGDHV
INDUSTRY & BUILDINGS
2 ABBEY GARDENS
GREAT COLLEGE STREET
WESTMINSTER
LONDON, SW1P 3NL
+44 (0)20 7222 2115
www.royalhaskoningdhv.com

2 2009 Marine and Coastal Ecology Surveys

In order to inform the 2010 ES, a suite of marine and coastal ecology surveys was undertaken in September/October 2009 to characterise benthic ecology the area. This included:

- an intertidal walk-over survey;
- a drop-down video survey;
- collection of intertidal and subtidal cores; and,
- a dive survey.

A summary of the findings of the surveys is presented below, with the full report presented in **Appendix A**.

The intertidal walkover survey mapped the biotopes present along the intertidal zone from Salt Island to Soldiers Quay. During the walkover survey, cores were taken from two sites for infaunal analysis. Intertidal habitats were found to be diverse, dominated by littoral rock biotopes colonised by a variety of brown and green algae such as *Fucus spp.* and *Enteromorpha spp.* Mussels and barnacles were found throughout the survey area, and within the Porth y Felin intertidal shoreline Pacific oysters (*Crassostrea gigas*) were identified. However, the intertidal infaunal communities were depauperate.

The intertidal sediment along Newry Beach was artificial, being composed of crushed limestone, and the dominant species identified within the cores was the polychaete worm *Malacoceros fuliginosus*, which is characteristic of disturbed environments. The infaunal community within the Porth y Felin area was characteristic of muddy mixed sediments with slight salinity variations, owing to the Porth-y-felin stream that flows across the shore. No rare or endangered biotopes were noted during the survey.

The drop-down video survey was undertaken to identify the dominant sublittoral biotopes present within the survey area, which covered the entire Holyhead new harbour area (see **Figure 3**). The survey undertook 34 drop down video transects to define and map the sublittoral biotopes. This was supplemented by a series of MNCR Phase II level diving surveys to target key biotopes noted during the video survey. During the dive survey two sites were sampled for infaunal analysis.

The subtidal environment was found to be dominated by the biotope '*Philine aperta* and *Virgularia mirabilis* in soft stable infralittoral mud'. *V. mirabilis*, a sea pen, is an indicator species for the Biodiversity Action Plan (BAP) habitat 'deep mud'. Other abundant species identified included the common ascidian *Ascidiella aspersa* and on subtidal hard substrate the kelp *Saccharina latissimi* was dominant.

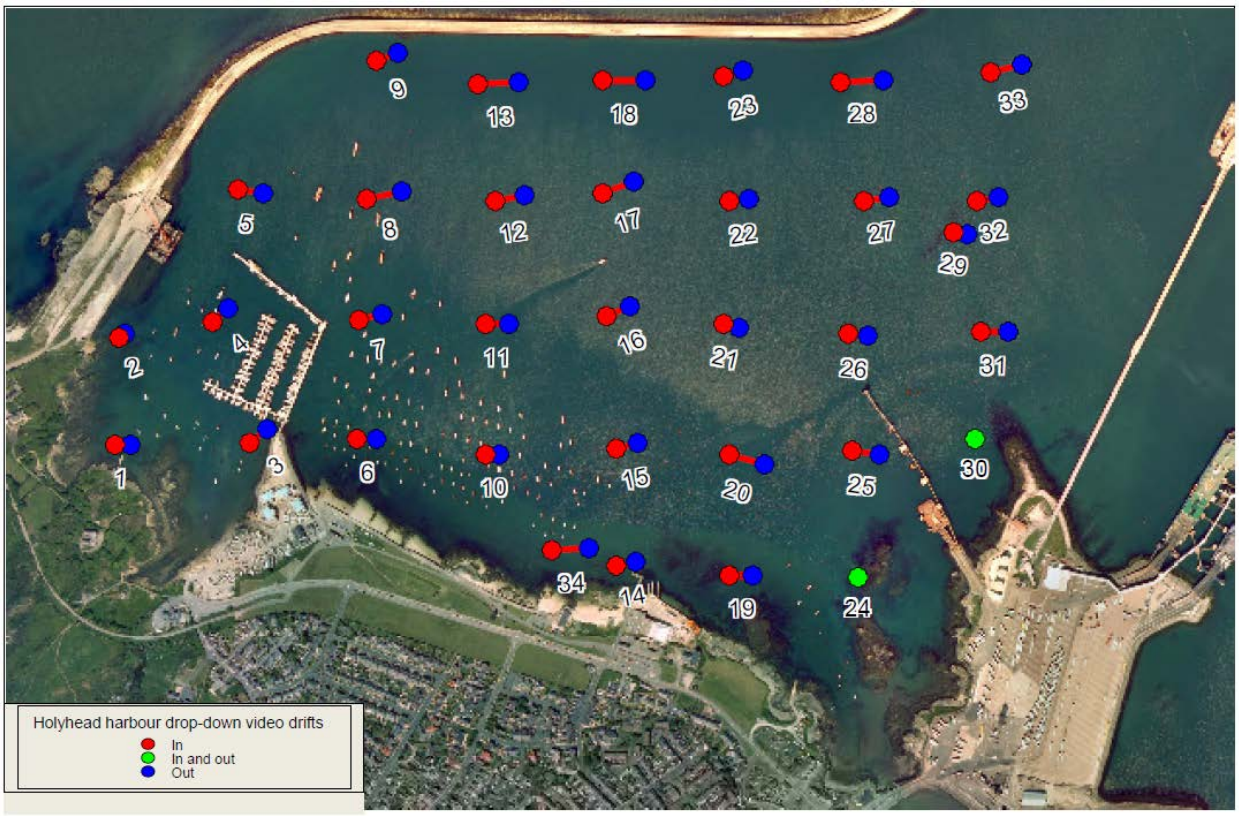


Figure 3 Video transects undertaken as part of the 2009 surveys.

3 Proposed Approach to the Marine and Coastal Ecology Surveys

3.1 Approach

Holyhead New Harbour is considered to be a largely stable environment, due to the shelter provided by the Holyhead Breakwater. Given this, it is not considered that the intertidal and subtidal habitats identified during the 2009 surveys will have changed significantly since the surveys were undertaken. This statement is supported by the findings of the 2009 survey, which confirmed that the intertidal biotopes had not significantly changed from those recorded in 1996 by the Countryside Council for Wales (CCW).

Regarding the design changes to the marine aspects of the Proposed Development to that approved by the 2014 permission and which are currently being considered by the s73 application, these reduce the overall scale of the Proposed Development within the marine environment. Given the sheltered conditions inside the New Harbour and the large extent of the 2009 survey area, any increase in suspended sediment and subsequent deposition as a result of any dredging activity, should dredging be required, is not considered to have a significant effect outside of the survey area.

In light of the above, it is proposed that a validation exercise is appropriate to confirm the findings of the 2009 surveys, rather than a complete repeat of the 2009 surveys. It is proposed that the following surveys will be undertaken to validate the 2009 surveys, for which further details are provided below:

- an intertidal walkover survey; and,
- a subtidal video survey.

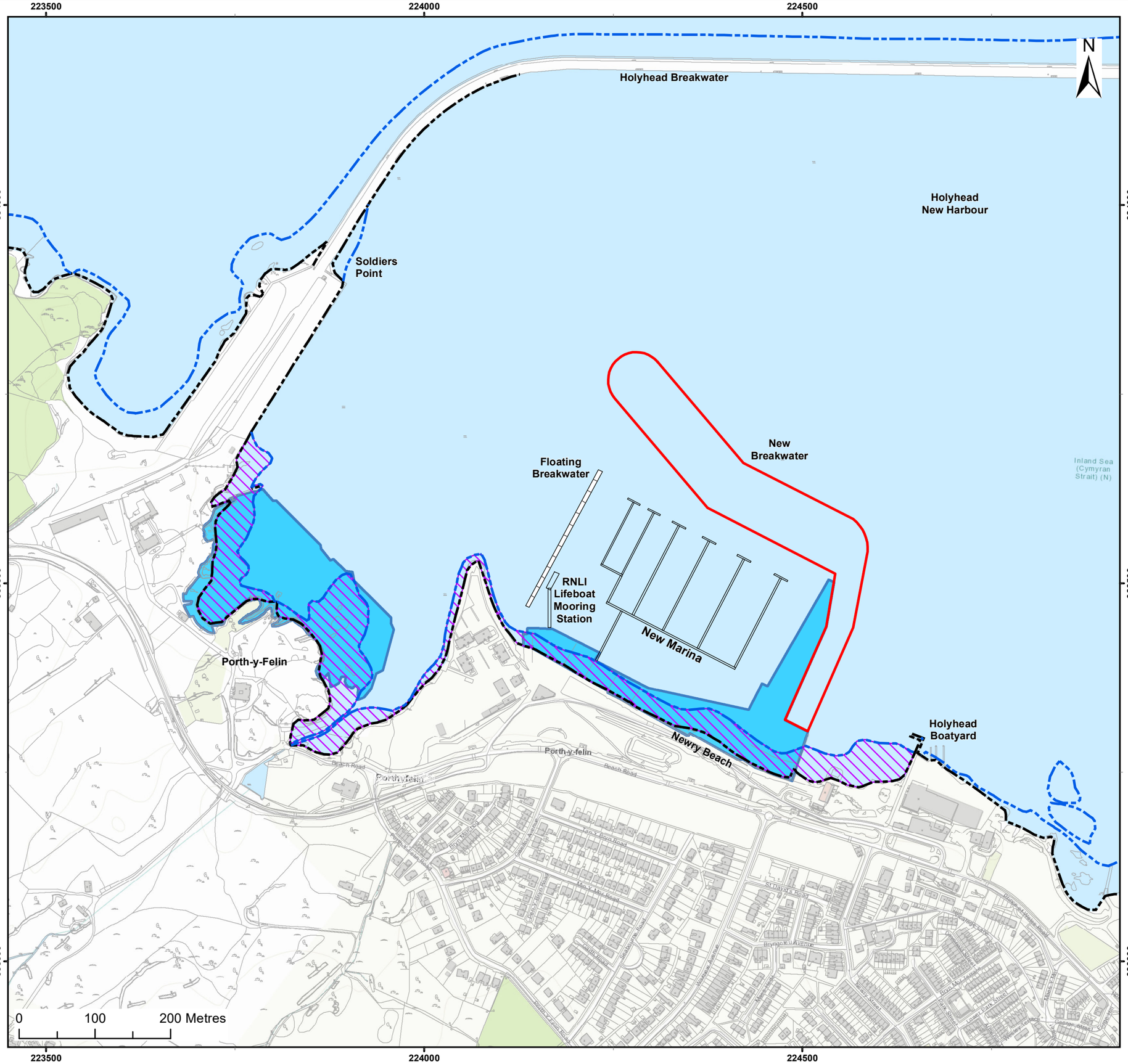
3.2 Intertidal walkover survey

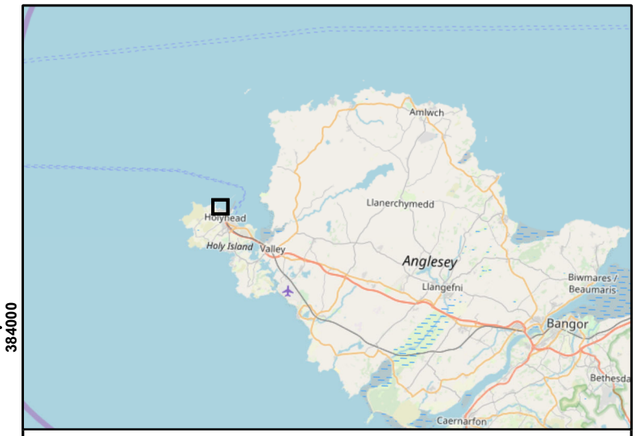
In order to validate the intertidal survey undertaken in 2009, an intertidal walkover survey will repeated between the Holyhead Boatyard in the east, and Soldiers Point to the west (**Figure 4**). The survey will be carried out in accordance with standard intertidal survey methodologies outlined in Guidance Note GN030: Benthic habitat assessment guidance for marine developments and activities[1]. The survey will be carried out two hours either side of low water (on a spring tide) to ensure as much of the intertidal zone is surveyed as possible.

The intertidal walkover survey will record the ecological and physical characteristics of the intertidal area. Survey notes will record shore type, wave exposure, sediments/substrates present and descriptions of species/biotopes present. The spatial relationships between these features will be observed and waypoints recorded by a hand-held global positioning system (GPS) device, in conjunction with hand-written descriptions and photographs.

All biotopes present will be identified, and their extents mapped using the hand-held GPS recorder. Any other features within the intertidal zone will be noted, including rock pools, man-made structures and any habitats/species of conservation importance. Features will be noted on an intertidal biotope map.

[1] https://cdn.naturalresources.wales/media/688959/gn030-guidance-note-final-2-mar2019.pdf





Legend

- Proposed Dredge Area
- Land Reclamation Area
- High Water Mark
- Low Water Mark
- Proposed Intertidal Phase 1 Walkover Survey Area

Client:	Project:
Conygar	Holyhead Waterfront Regeneration Scheme

Title:

Intertidal Phase 1 Walkover Survey Area

Figure:	Drawing No:
4	PB8908-RHD-ZZ-XX-DR-Z-0017

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
01	12/03/2020	FC	SM	A3	1:5,000

Co-ordinate system: British National Grid

ROYAL HASKONINGDHV
INDUSTRY & BUILDINGS
2 ABBEY GARDENS
GREAT COLLEGE STREET
WESTMINSTER
LONDON, SW1P 3NL
+44 (0)20 7222 2115
www.royalhaskoningdhv.com

Royal HaskoningDHV
Enhancing Society Together

3.3 Subtidal video survey

A subtidal video survey is proposed to validate the findings of drop-down video survey undertaken in 2009, using 8No, 75m long transects (**Figure 5**). The video transect locations have been chosen to allow a comparison with transects undertaken during the 2009 survey, within and around the Proposed Development area (2009 transects 4, 7, 10 and 11), to confirm the eastern and northern extents of the *V. mirabilis* biotope identified during the 2009 survey (2009 transects 8, 20 and 22), and to target the rock outcrop feature (2009 transects 29 and 32).

The transects will be undertaken using either a drop-down video or an ROV equipped with a 1080p High Definition (HD) or Ultra HD 4k video camera and subsea lights to ensure that the substrate can be adequately illuminated. The video will therefore be of high quality, enabling the identification of epi-fauna and -flora and the assignment of biotopes.

3.4 *Didemnum vexillum*

A detailed *D. vexillum* survey was recently carried out by NRW within the Holyhead Marina area in 2018 following the damage caused to the marina by Storm Emma (Holt, 2018). The survey confirmed that *D. vexillum* is present within the survey area. The survey confirmed that the species range was still confined to the marina area and was still only present on man-made floating materials, such as the old marina pontoons, mooring buoys and ropes, and vessel hulls.

As such, a further survey to determine the presence of *D. vexillum* is not considered necessary.

4 References

Aquatic Environments (2009) Holyhead Harbour Marine Ecological Surveys – September/October 2009. December 2009

Axis (2010) Holyhead Waterfront Regeneration Scheme. Environmental Statement. Volume 2. December 2010

Axis (2020) Holyhead Waterfront Regeneration Scheme: Section 73 application to amend and delete various conditions attached to outline planning permission ref: 19C1046A/EIA/ECON. Environmental Statement Volume 2. February 2020

Holt, R.H.F. (2018) *Didemnum vexillum*: survey of distribution and extent in Holyhead Harbour after storm *Emma*, October 2018. NRW Evidence report no. 306. 48 pp.

224000 224500 225000

384500 384000 383500 383000

N

Irish Sea

Holyhead Breakwater

Holyhead
New Harbour

Soldiers
Point

New
Breakwater

Floating
Breakwater

RNLI
Lifeboat
Mooring
Station

New Marina

Porth-y-Felin

Holyhead
Boatyard

Newry Beach

Inland Sea
(Cymyran
Strait) (N)

0 200 400 Metres

Legend

- Proposed Dredge Area
- Land Reclamation Area
- Low Water Mark
- Video Transect Location

Client:	Project:
Conygar	Holyhead Waterfront Regeneration Scheme

Title: Proposed Video Transect Locations

Figure: 5 | Drawing No: PB8908-RHD-ZZ-XX-DR-Z-0018

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
02	13/03/2020	FC	MR	A3	1:6,500
01	03/03/2020	MCP	MR	A3	1:6,500

Co-ordinate system: British National Grid

Royal HaskoningDHV
Enhancing Society Together

ROYAL HASKONINGDHV
INDUSTRY & BUILDINGS
2 ABBEY GARDENS
GREAT COLLEGE STREET
WESTMINSTER
LONDON, SW1P 3NL
+44 (0)20 7222 2115
www.royalhaskoningdhv.com