

ED3394/DML2301: New Quay Harbour Dredge Disposal Marine Licence Application Additional Information

Date: 14/03/2023

Ceredigion County Council (CCC) received a series of concerns/queries from Natural Resources Wales (NRW) in relation to CCC's proposed deposit areas for the New Quay Harbour dredge disposal marine licence application: DML2301. These have been copied and pasted below, with CCC responses in red. Comments are aggregates of the Highways Ecologist (George Ryley), Harbour Manager (Owen Morgan), Project Managers Representative (Dai Rees), and Assistant Site Supervisor (Dai Russell).

Query 1: Details on how many dredging campaigns would be planned each year, and how many lorry movements will be made across the beach to access the disposal site. If precise numbers are not available please submit maximum values to be assessed.

There will be one dredge campaign per annum.

The operation consists of excavators and dumpers, with the latter doing the transportation to the deposit area after being loaded up by the former.

Unfortunately, it is not possible to provide an accurate estimate on the number of dumper movements, as this will depend on the exact volume dredged in a particular year. This could be anywhere from 0m³ up to the proposed limit of 10,000m³ depending on the conditions in the harbour. The number of dumper trips will also be determined by the resources available to contractors on CCC's framework – some will have access to dumpers of a larger capacity which will mean fewer trips, but others will have smaller ones, which will be lighter, but will mean more frequent trips. These dumpers are typically broad-tyred to spread the weight and minimise risks of sand compaction.

Query 2: A map showing the route of the disposal lorries across the beach to the disposal areas.

We are still in the process of drafting a map depicting the route to be taken by the dumpers. This is pending site visits to determine specifics, but it is hoped this can be finalised **by the end of Friday the 24th of March 2023** at the latest.

Our provisional route proposes that dumpers track the base of the headland as far as is reasonably practical, so that they are the maximum possible distance away from the Mean Low Water Springs, and the more sensitive habitats in this location. The base of the headland at Cei Bach represents the Mean High Water Springs Boundary. Due to the cliff edge at this point, it is not possible to track higher than the boundary. There is also no alternative access route than trekking along a suitable beach route given the lack of road infrastructure nearby. The only area where tracking the headland will not be possible due to exposed bedrock and boulders, is the initial few metres immediately following the harbour demise (see "ED3394_23_New Quay Harbour Dredge & Disposal_S_alveolata_Plan" attached in email).

Query 3: Evidence to provide a baseline to support the hydrodynamics of the bay to assess how the placement of the disposal material in the disposal area will be transported under wave and current conditions. This should include information on the movement of the sediment in wave and storm conditions.

The proposed deposit areas are below Mean Highwater Springs (but above MLWS), and so on a general basis, the material is likely be re-mobilised by the tides and dispersed

northwards by the prevailing currents, which run South to North. In support of this prevailing current, the harbour authority is convinced that material deposited at our former deposit area in previous dredge campaigns, has re-emerged back in the Harbour, as Traeth Y Dolau is southerly to the Harbour.

Storms may cause some variation in this general pattern, depending on storm tracks and swells.

It is possible that some of the material may circulate in the lower energy bay currents before being picked up by the stronger south-north general pattern.

The volume of material is likely to be small in comparison to the total movement of naturally mobilised sand in the bay and south-north current. The risk of reef smothering should therefore remain close to background, especially when spread across the deposit areas evenly.

CCC also discussed the proposed deposit area with NRW's Coastal Process Specialist via Katie Reynolds – conversation attached. The coastal processes specialist had no concerns with the using the proposed areas.

Query 4: Confirmation that the disposal material will be spread evenly in both disposal areas

As per our attached conversation with NRW's Coastal Processes Team, we can confirm that the material will be spread as evenly as possible in both areas. Additionally, the Harbour Authority is aware of the importance of this and will ensure each year's contractor is equally aware.

Query 5: Confirmation that the natural gradient of the beach will be maintained within the disposal areas, as much as possible

Yes, we will seek to maintain the natural gradient of the beach as much as possible – hence our two, expansive, and long proposed deposit areas. Please also refer to our conversation with NRW's Coastal Processes Team for some discussion on gradients.