

I refer to the consultation response from NRW, dated 11 April 2023, in which they make the following comments in respect of Habitats Regulations Assessment.

Due to the location of the development, we have concerns that a significant effect from the proposed development on the Severn Estuary Special Area of Conservation (SAC) and Ramsar site cannot be ruled out.

We advise that further information is submitted to assess any impacts on the protected site and their features and to enable a Habitats Regulations Assessment under Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended) to be undertaken by your Authority.

Due to the potential operational impact of the new marina, which may increase or change the distribution of vessel movement in the Severn Estuary and Inner Bristol Channel, we would advise that information is submitted to inform any subsequent HRA. Depending on the nature of the vessels which will use the proposed marina, their movements may cause disturbance or potential injury/mortality to the diadromous fish features of the Severn Estuary SAC and Ramsar site, as well as other upstream SACs.

Applicant's Response

It is not envisaged that the application proposals will lead to a significant increase or change in the distribution of vessel movement in the Severn Estuary and Inner Bristol Channel. The proposed marina will be used to berth relatively small pleasure craft boats and many of these are likely to be already using the Severn Estuary to access existing marinas and attractions along the South Wales Coast and South of West of England e.g. Neyland Yacht Marina, Milford Haven, Swansea Marina, Penarth Marina, Cardiff Bay, Weston-Super-Mare and Portishead Marinas.

In terms of Barry Docks itself, limited site-specific information is available on the marine ecology of Barry Docks. However, the habitats and species are highly likely to be characterised by those typical of estuarine settings, such as the wider Severn Estuary and Inner Bristol Channel. Typically, subtidal sediments in estuarine settings comprise mud and sand, with associated infaunal communities comprising of polychaetes and molluscs.

The main difference between estuarine sediments and those within the Dock relate to the enclosed nature and stable environment provided by the Dock compared to the dynamic environment in a lower estuarine setting. This will lead to the sediments within the Dock being more cohesive and also potentially poorly oxygenated, therefore potentially hosting slightly different ecological communities than those characterising the estuarine habitats outside the Dock.

Studies of harbour docks around the UK and abroad have demonstrated very low densities of only a few macrobenthic species within the dock sediments (e.g. Derweduwen *et al.*, 2014¹) and those that have been recorded have been short lived species (e.g. Hawkins *et al.*, 2002²). In addition to benthic species associated with the dock sediments, encrusting benthic flora and fauna are also likely to be

¹ Derweduwen, J & Hostens, Kris & Backer, Annelies & Hillewaert, Hans & Van Steenbrugge, Lies & Van Tieghem, Pieter & Wittoeck, Jan & T'Jampens, Michiel & Cattrijsse, Andre. (2014). Dock harbour walls as biodiversity hotspots.

² Hawkins, S.J., Allen, J.R., Ross, P.M. and Genner, M.J (2002) Marine and coastal ecosystems. In Handbook of Ecological Restoration. Volume 2, Restoration in Practice. Edited by Perrow, M.R and Davy, A.J.

present in association with the hard substrate (i.e. dock walls) including taxa such as bryozoans, barnacles, mussels, sea squirts and sea anemones (e.g. Russell *et al.*, 1983³; Hawkins *et al.*, 2002; Derweduwen *et al.*, 2014).

As such, the benthic subtidal habitats, species and communities within the Dock with the potential to be affected by the proposed works are expected to have very low ecological or conservation importance. Due to the short-lived nature of these species and communities, recovery rates are expected to be high following disturbance activities.

With respect to mobile marine ecological receptors (e.g., fish and marine mammals) these are likely to be highly limited within the Dock. While the Severn Estuary and Inner Bristol Channel are known to host a range of fish species, many of which have spawning and/or nursery habitats in the wider area, these will not extend into the Dock due to the enclosed Dock being completely separate from the wider marine environment. Where fish populations occur within the Dock, these will be limited to common species of limited ecological or conservation importance. The most likely functional group to occur in Barry Docks are estuarine resident species, which spend their entire life-cycle within the estuarine habitats and include (but are not limited to) species such as common goby, black goby, sand smelt and three-spined stickleback (Bird, 2008⁴). Other fish species which have the potential to occur in the Dock include those species which may use the Severn Estuary, such as sprat, herring, whiting, bib/pouting, poor cod, bass and flounder. These species have the potential to occur within Barry Dock, although in low numbers, entering from the wider environment during periods when lock gates are open.

While the Severn Estuary is known to host a number of protected migratory fish species (e.g. Atlantic salmon, sea and river lamprey), these are unlikely to occur within the Dock. These species are only present in the estuary when migrating to and from spawning grounds in the rivers flowing into the Severn Estuary (e.g. the River Wye and River Usk) and are therefore highly unlikely to occur in the dock. Any works within Barry Docks would therefore not affect habitats used by these species or affect these species as they migrate through the Severn Estuary. It is highly unlikely for marine mammals to occur within the enclosed dock.

Due to the limited ecological or conservation importance of the marine habitats, species and communities within Barry Dock and the temporary nature of the proposed construction operations, the proposed development will not lead to a significant impact on marine ecology within the Dock or the wider marine environment.

³ Russell G., Hawkins S.J., Evans L.C., Jones H.D. & Holmes G.D. (1983) Restoration of a disused dock basin as a habitat for marine benthos and fish. *Journal of Applied Ecology*, 20, 43-58

⁴ Bird, D.J. (2008) The Biology and Conservation of the Fish Assemblage of the Severn Estuary. CCW Report CCW/SER/08/01.