**Hartlepool Channel EIA**

### Purpose of the project

PD Teesport (PDT) has been promoting Victoria Harbour on the north-east coast of England as a facility which is ideally placed to meet the needs of the offshore wind industry.

The dimensions of the latest wind turbine installation vessels mean that they cannot be safely accommodated with the current dimensions of the approach channel. The channel therefore needs to be widened, deepened and extended to accommodate the needs of the offshore wind industry. As well as supporting the offshore wind industry, PDT is also seeking to support its existing customers at Victoria Harbour.

### Key Issues

The proposed scheme lies within and adjacent to sensitive areas for a range of waterbird and seabirds (i.e. the proposed scheme is within the Teesmouth and Cleveland Coast potential Special Protection Area (pSPA), Ramsar site and Site of Special Scientific Interest (SSSI)). The proposed scheme footprint is also located adjacent to a number of residential properties on the Hartlepool headland.

The key issues subject to assessment within the EIA were largely related to potential direct and indirect impacts on protected species within the pSPA, Ramsar site and SSSI, as well as potential impacts on the residential receptors from construction related disturbance and operational phase effects on the hydrodynamic regime.

Sediment plume modelling predicted that the spatial extent of changes in suspended sediments would be highly localised, with the plume being dissipated approximately 10 minutes following completion of the dredge. Effects on the hydrodynamic regime and wave regime during operation are predicted to be low.

Underwater noise modelling was undertaken to determine impacts to both fish and marine mammals. Modelling predicted a risk of mortality to fish within 100m of the piling activities, with a worst case minor impact to fish from the proposed dredge. No impacts to migratory species are predicted.

Given the relatively localised nature of predicted effects of the proposed scheme in relation to the use of the area by waterbirds and seabirds, all potential construction phase impacts to marine and coastal ornithology are assessed as being minor adverse at worst.

Airborne noise modelling predicted that all construction noise impacts to residents would be negligible, with the exception of noise generated at night by the proposed backhoe dredger.

The Habitats Regulations Assessment concluded no adverse effect on integrity of the European sites.

### Description of the project

Royal HaskoningDHV was commissioned to lead the Environmental Impact Assessment (EIA) submitted to the Marine Management Organisation (MMO) in December 2018 in support of a Marine Licence application.

The construction phase of the proposed scheme will involve dredging of materials on the seabed, comprising up to 650,000m³ of material (comprising, rock, boulder clay and sand), installation of up to 145 tubular piles to construct an underwater retaining wall and the disposal of dredged material at an offshore site.
### Proposed Mitigation

A number of mitigation measures have been proposed, where available and practicable, in those cases where significant impacts were identified. The key mitigation measures proposed are outlined below.

Best practice measures would be adopted during dredging to minimise the potential for resuspension of sediments. Such measures of relevance to backhoe dredging would include use of an experienced operator, limiting swing of the backhoe over water and avoiding smoothing the area by dragging the backhoe bucket along the sea bed. For the Trailing Suction Hopper Dredger (TSHD), limiting suspended sediment can be achieved by ensuring the trailing speed, position of the suction mouth and discharge of the pump are optimised with respect to each other.

To minimise the risk of injury to resident fish species, a soft start approach would be adopted for the proposed piling activities. This mitigation measure would also reduce the significance of potential indirect impact to waterbirds and seabirds, through the reduction of potential impacts to prey resource for birds.

To manage the potential construction-related noise disturbance to residents from the backhoe dredger, it is proposed that either a temporary 2m high noise attenuation barrier is installed during the evening and night time period, or that backhoe dredging is avoided during the evening and night time periods within 300m of the channel closest to the residential properties on Town Wall.

Other proposed mitigation measures comprised the production of an archaeological reporting protocol to manage any unexpected archaeological discoveries, undertaking load calculations or tests prior to placement of machinery on the existing breakwater (to ensure no damage to the structure) and issue of an Notice to Mariners prior to starting works.

### Lessons learnt

The outline design of the proposed scheme was undertaken in parallel with the impact assessment process. It was therefore important for the EIA team to work closely with the designers to ensure that the proposed scheme was appropriately defined and assessed.

It was not possible for PDT to commit to a dredge footprint prior to submission of the Marine Licence application as the final alignment will be dependent on a number of factors. The impact assessment was therefore undertaken based on a realistic maximum dredge envelope, which will provide PDT with additional time and flexibility to ensure that the alignment of the channel is appropriate.

The EIA involved a benthic ecological survey. The draft laboratory results identified a particular species which would not be expected at Hartlepool given its habitat characteristics. We therefore liaised with the laboratory to determine the confidence levels in its reporting. The laboratory confirmed that it was not possible to state with 100% confidence that the species was present, and adjusted the record to family level.

Following submission of the Marine Licence application, the MMO received comments from residents who were principally concerned about construction-related noise and vibration. These comments have been recognised by PDT and are being addressed with the MMO. A public consultation exercise prior to submission may have alleviated some of these concerns in advance.

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