

Appropriate Assessment Report

Assessment of the likely effects of the construction of a piped outfall on the foreshore at Foynes Harbour, Co. Limerick on the integrity of the Lower River Shannon SAC and River Shannon and River Fergus SPA

Project Description:

The proposed works involves the construction of a piped outfall and associated bed protection works at Foynes Harbour, Co. Limerick. The outfall would be use to discharge treated sewage and storm water effluent from the nearby Oil Storage Terminal. Planning Permission for the Terminal and associated treatment plant and outfall was granted by Limerick County Council in July 2008 and an Effluent Discharge Permit was granted under the Local Government (Water Pollution) Acts, 1977 and 1990 by Limerick County Council in February 2009. The total area of foreshore involved is 24m².

The location of the proposed works is within the Lower River Shannon SAC (Site Code 002165) and adjacent to (approximately 5km west) from the boundary of the River Shannon and River Fergus Estuaries SPA (Site Code 004077)

Lower River Shannon SAC

This very large site stretches along the Shannon valley from Killaloe to Loop Head/ Kerry Head, a distance of some 120 km. The site thus encompasses the Shannon, Feale, Mulkear and Fergus Estuaries, the freshwater lower reaches of the River Shannon (between Killaloe and Limerick), the freshwater stretches of much of the Feale and Mulkear catchments and the marine area between Loop Head and Kerry Head.

The site is selected for lagoons and alluvial wet woodlands, both habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for floating river vegetation, *Molinia* meadows, estuaries, tidal mudflats, Atlantic salt meadows, Mediterranean salt meadows, *Salicornia* mudflats, sand banks, perennial vegetation of stony banks, sea cliffs, reefs and large shallow inlets and bays all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive – Bottle-nosed Dolphin, Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Atlantic Salmon and Otter.

There is a resident population of Bottle-nosed Dolphin in the Shannon Estuary. This is the only known resident population of this E.U. Habitats Directive Annex II species in Ireland. Otter, a species also listed on Annex II of this directive, is commonly found on the site.

As set out in the NPWS (2010)¹ the key Conservation Objectives for this site are to maintain the favorable conservation status of the Qualifying Interests of the SAC;

¹ NPWS (2012) Conservation Objectives: Lower River Shannon SAC 002165. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

- Freshwater pearl mussel (*Margaritifera margaritifera*)
- Sea lamprey (*Petromyzon marinus*)
- Brook lamprey (*Lampetra planeri*)
- River lamprey (*Lampetra fluviatilis*)
- Salmon (*Salmo salar*)
- Sandbanks which are slightly covered by sea water all the time
- Estuaries
- Mudflats and sandflats not covered by seawater at low tide
- Coastal lagoons
- Large shallow inlets and bays
- Reefs
- Perennial vegetation of stony banks
- Vegetated sea cliffs of the Atlantic and Baltic coasts
- *Salicornia* and other annuals colonizing mud and sand
- Spartina swards (*Spartinion maritimae*)
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- Bottle-nosed dolphin (*Tursiops truncatus*)
- Otter (*Lutra lutra*)
- Mediterranean salt meadows (*Juncetalia maritimi*)
- Water courses of plain to montane levels with the Ranunculion fluitantis and *Callitricho-Batrachion* vegetation
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)

and to maintain the extent, species richness and biodiversity of the entire site

Impact of Project on key species and key habitats

Considering the location, nature, scale and of the proposed works no direct or indirect effects are likely on the following species / habitats

- Freshwater pearl mussel (*Margaritifera margaritifera*)
- Sandbanks which are slightly covered by sea water all the time
- Coastal lagoons
- Vegetated sea cliffs of the Atlantic and Baltic coasts
- Mediterranean salt meadows (*Juncetalia maritimi*)
- Water courses of plain to montane levels with the Ranunculion fluitantis and *Callitricho-Batrachion* vegetation
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)
- Spartina swards (*Spartinion maritimae*)
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- Sea lamprey (*Petromyzon marinus*)
- Brook lamprey (*Lampetra planeri*)

- River lamprey (*Lampetra fluviatilis*)
- Salmon (*Salmo salar*)

The dredging will result in minor but not significant alteration / disturbance to the following habitats:

- Estuaries
- Mudflats and sandflats not covered by seawater at low tide

The works will be carried out within the confines of Foynes harbour. While some noise will be generated during the works it is not likely, that the noise associated with the works will result significant disturbance and / or displacement of Bottle-nosed dolphins. ,

Impact on the integrity of the site

The Shannon Estuary is an important habitat for bottlenose dolphins. Research carried out since 1993 has shown that the dolphins are resident, occur throughout the year and it is an important calving area. Surveys carried out by Berrow et al, (2010)² showed that dolphins were located throughout the mid to outer estuary, from Tarbert west to Kilcredaun Head at the mouth of the estuary, with the main concentrations off Kilcredaun Head, Kilbaha, Leck Point in the outer estuary and Carrig buoy in the middle estuary..

The noise producing works will not be continuous, and will take place during normal working hours. The noise will be localised, confined to Foynes harbour area and will not occur within or adjacent to important dolphin calving areas or the area of main dolphin concentration further down estuary.

The water column in the estuary is highly turbid due to resuspension by strong tidal currents. Increase in water column turbidity as a result of the installation of the outfall on the seabed will be temporary, localised and within the natural range of variability caused by current induced sediment resuspension. The increase in turbidity will not be significant and the passage of migratory fish will not be impeded.

The habitats within the dredged area will be disturbed during the operations. These impacts will be temporary and localised. This will have a slight adverse impact on the Conservation Objectives for these habitat types. Considering the scale of the impact, however, there will not be significant disturbance to key habitats or species. Additionally there will be no habitat or species fragmentation and the overall integrity of the site will not be affected.

The footprint of activities is within the scale of normal erosion or deposition capacities of the channel and any impacts will be minor, localised and temporary. Similarly any increase in water column turbidity will be temporary, localised and within the natural range of variability caused by current induced sediment resuspension

2 Simon Berrow, Joanne O'Brien, Lisa Groth, Aoife Foley and Kerstin Voigt (2010) Bottlenose Dolphin SAC Survey 2010. Report to the National Parks and Wildlife Service. Shannon Dolphin and Wildlife Foundation. pp.24.

There will be no direct discharge of pollutants into the environment during the works and water quality will not be affected.

River Shannon and River Fergus SPA (Site Code 004077)

The estuaries of the River Shannon and River Fergus form the largest estuarine complex in Ireland. The site comprises all of the estuarine habitat west from Limerick City and south from Ennis, extending west as far as Killadysert and Foynes on the north and south shores respectively of the River Shannon (a distance of some 25 km from east to west). Also included are several areas in the outer Shannon estuary, notably Clonderalaw Bay and Poulmasherry Bay, as well as the intertidal areas on the south shore of the Shannon between Tarbert and Beal Point.

The site is the most important coastal wetland site in the country and regularly supports in excess of 50,000 wintering waterfowl. NPWS 2012(a)³ have identified the following as being the Feature of Interest for this SPA

Cormorant (*Phalacrocorax carbo*)
Whooper Swan (*Cygnus cygnus*)
Light-bellied Brent Goose (*Branta bernicla hrota*)
Shelduck (*Tadorna tadorna*)
Wigeon (*Anas penelope*)
Teal (*Anas crecca*)
Pintail (*Anas acuta*)
Shoveler (*Anas clypeata*)
Scaup (*Aythya marila*)
Ringed Plover (*Charadrius hiaticula*)
Golden Plover (*Pluvialis apricaria*)
Grey Plover (*Pluvialis squatarola*)
Lapwing (*Vanellus vanellus*)
Knot (*Calidris canutus*)
Dunlin (*Calidris alpina*)
Black-tailed Godwit (*Limosa limosa*)
Bar-tailed Godwit (*Limosa lapponica*)
Curlew (*Numenius arquata*)
Redshank (*Tringa totanus*)
Greenshank (*Tringa nebularia*)
Black-headed Gull (*Larus ridibundus*)
Wetlands & Waterbirds

Disturbance to overwintering birds will be avoided as no works will be carried out during the period November – March inclusive when the main concentration of these birds are present in the site. There will be no significant impact on wetland habitats and habitat or species fragmentation will not occur. The overall integrity of the site will not be affected.

³ NPWS (2012a) Conservation Objectives: River Shannon and River Fergus Estuaries SPA 004077. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

Conclusion

Based on the above it is concluded that the construction of a piped outfall and associated bed protection works at Foynes Harbour, Co. Limerick will not have a significant adverse impact on the Conservation Objectives of the Lower River Shannon SAC or the River Shannon and River Fergus SPA and that the integrity of these sites will not be affected.

Prepared by Marine Institute, on behalf of the MLVC

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