MARINE LICENCE VETTING COMMITTEE:
Re: DECLG file ref FS006837 for a lease/licence under the Foreshore Acts for a jetty extension at the portby Shannon Foynes Port Company

Request for observations from [redacted] (DECLG) dated 22.1.2019

Information from application:

This application is for construction of

- 116.5 m open-pile structure with a 25m wide decking. This new structure is designed to link two existing jetty sections at the port.
- Reinforced concrete transition slab to link to current reclamation work at rear of proposed site
- Approx 69 steel tubular piles will support the concrete decking, to be driven to provide approx. 3m depth of penetration Into rock
- Proposed usage of vibration hammer and hydraulic impact hammer for piling
- Quay furniture
- Current Small-craft landing pontoon to b removed and re-located. This will require installation of 2 X locating piles, pontoon-fixing and suitable land-accessing

Estimated construction period of 12 months.

The proposed East Jetty extension will comprise a deck supported by an open pile structure. Whilst the construction of the jetty extension may involve some marine traffic transporting materials, the most significant underwater noise element of the construction will be the piling requirement. The piles will be approximately 40-45 m long and driven 35-40 m into the seabed. Heavy piles such as this will sink several metres when lowered vertically to the seabed. A vibratory pile driver will then be used to drive the piles as far as possible but it remains likely however that further pile installation will require an impact hammer to drive the piles into rock.
The total duration of the piling activity is anticipated be 10 months meaning that on average it will take about 3 working days to complete each pile.(Section 4.2.2. of EIA)

Piling and associated activities at the proposed East Jetty extension area carry an inherent risk of noise induced effects upon some marine species as a result of significant underwater acoustic energy being intermittently released into the marine environment. As these risks cannot be discounted, then it follows that the risk of underwater acoustic energy escaping into the marine environment to provide a pathway of effect leading to physical injury or disturbance to fish or marine mammal species such as Atlantic Salmon, Sea Lamprey, Brook Lamprey, River Lamprey and Bottlenose dolphin, all QIs of the Lower River Shannon SAC, cannot be discounted in the absence of further evaluation and analysis and quite likely the application of mitigation measures.

There is a possibility of hydrocarbon leaks and spills associated with poorly maintained construction vehicles or during re-fuelling of plant at the site of the proposed jetty extension. Pre-cast concrete beams and planks will be used for the construction of the jetty, and liquid concrete will be poured over the top to bind all concrete elements together using concrete pumps or concrete skips suspended from a crane. Cement spills are possible.

5.2 MITIGATION MEASURES

A Construction stage Environmental Management Plan (CEMP) will be prepared to capture all mitigation measures together with any conditions imposed by the competent authority to develop a practical programme of measures for the Contractor. The CEMP will form part of the specification of the Contract Documents for the construction stage. The CEMP will include mitigation measures to safeguard the receiving waters.

IFI comment and queries:

IFI would wish to have sight of and agree CEMP in advance of construction – to be a condition of any foreshore licencing

The Mitigation measure suite listed in 5.2 is satisfactory and should be included as a requirement in ay licence condition. This suite covers issues of concrete and cements in vicinity of waters; oils, fuel, chemicals form works and machinery adjacent to waters; sediment releases etc.

IFI welcomes the coverage given to the issue of noise generation by pile driving in documentation provided and the recognition of noise/sound generation and propagation into the aquatic environment as an issue.

No specific piling mitigations are proposed. Marine mammal observer (MMO) proposal is standard. This has a value in, potentially, providing for time breaks in the piling process.

IFI would propose that mitigations to reduce any adverse impact of noise dispersion into the aquatic environment would be included in the foreshore licence conditions. It is noted that MMO is proposed, as is use of vibratin piling. IFI enquirs as to why drilling into rock is not undertaken, as opposed to hammer action piling? Mitigation measures to reduce levels of noise dispersion and adverse impact on fish should include:

- the practise of “ramping up” when starting each piledriving event, in order to "warn" the fish and marine mammals in the area. This start-up strategy should be employed each time the piledriving is initiated. It is common practise with MMO and may be inherent in mitigation proposals here
- Use of bubbler curtain around the immediate area of pile driving in order to reduce noise dispersal into the aquatic environment

- use of vibrating hammer (as proposed) to be made for piledriving in order to reduce noise generation and propagation
- extended time period to drive individual piles (as envisaged here – reference to 4 X days per pile in text)
- piling for limited time period each day and during daylight hours only – a large degree of migratory movement of fish occur in the hours of darkness

[redacted] (IFI R&D) and [redacted] (IFI Limerick)
Inland Fisheries Ireland
7.5.2019

CC [redacted] MLVC;