# Maritime Usage Licence and Planning Advisory Directorate

## Appropriate Assessment Screening and Determination Report

| | | | |
|---|---|---|---|
| **To:** | Dr. Alison McCarthy, Senior Marine Advisor | **From:** | Dr. Micheál Mac Monagail Marine Analyst |
| **Date:** | 20/10/2026 | **Maritime Usage Licence Application No:** | MUL260020 |
| **MUL Applicant Name:** | | Limerick City and County Council | |
| **MUL Applicant Registered Address:** | | City Hall, Merchant's Quay, County Limerick, V94EH90 | |
| **Types of maritime usage activity in accordance with Schedule 7 of the Maritime Area Planning Act 2021:** | | 3. Marine environmental surveys for the purposes of site investigation or in support of an application under Part XXI of the Act of 2000. | |
| **Location of proposed maritime usage:** | | The upper Shannon Estuary extending from the townlands of Cooperhill and Cratloe to Knockballynameath. | |
| **Licence application received:** | | 15/05/2026 | |

## 1. Background

Limerick City and County Council has applied to the Maritime Area Regulatory Authority (MARA) for a Maritime Usage Licence (MUL) to undertake marine environmental surveys for the purposes of site investigations falling under Schedule 7(3), of the Maritime Area Planning Act 2021 (the MAP Act). The proposed activities are required to inform the identification and design of a flood relief scheme, and the preparation of a subsequent application for planning consent. The proposed scheme is intended to alleviate flood risk to communities in Limerick.

## 2. Description of maritime usages and local site characteristics

### 2.1 Brief description of the maritime usage

The proposed site investigation (SI) activities comprise a suite of geophysical, geotechnical and environmental surveys. A description of the proposed SI activities, including the indicative equipment to be used and anticipated timeframes, are set out in Table 1.

A 5-year MUL is sought by the Applicant to accommodate for potential weather and procurement-related constraints. The SI activities will be undertaken in a phased manner, with geophysical surveys undertaken before the geotechnical surveys.

### 2.2 Brief description of the site characteristics

The proposed MUL area encompasses sections of the River Shannon and Abbey River, including Saint Thomas Island and King's Island, with water depths ranging from ~0-10 m. The site is characterised as a large estuary within the Shannon Estuary and Tralee Bay Seascape Character Area.

The proposed MUL area spatially overlaps the Lower River Shannon SAC and a large portion of the River Shannon and River Fergus Estuaries SPA. The proposed MUL area located east of the Shannon bridge does not overlap with the River Shannon and River Fergus Estuaries SPA.

Extensive areas of mudflats and sandflats not covered by sea water at low tide [1140] are present within the site. Marine community types found within the area include estuarine subtidal muddy sand to mixed sediment with gammarids community complex and intertidal sand to mixed sediment with polychaetes, molluscs and crustaceans' community complex.

Saltmarsh vegetation frequently fringes the mudflats within the Lower River Shannon SAC, and extensive saltmarsh (potential 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)) are present to the west of the proposed site. Also present are watercourses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260], primarily *Schoenoplectus triqueter* and smaller amounts of *Groenlandia densa*.

The broad benthic habitat types within the proposed MUL area are currently unclassified. However, the wider estuarine environment downstream of the MUL area is generally classified as circalittoral and infralittoral sand and mixed sediment.

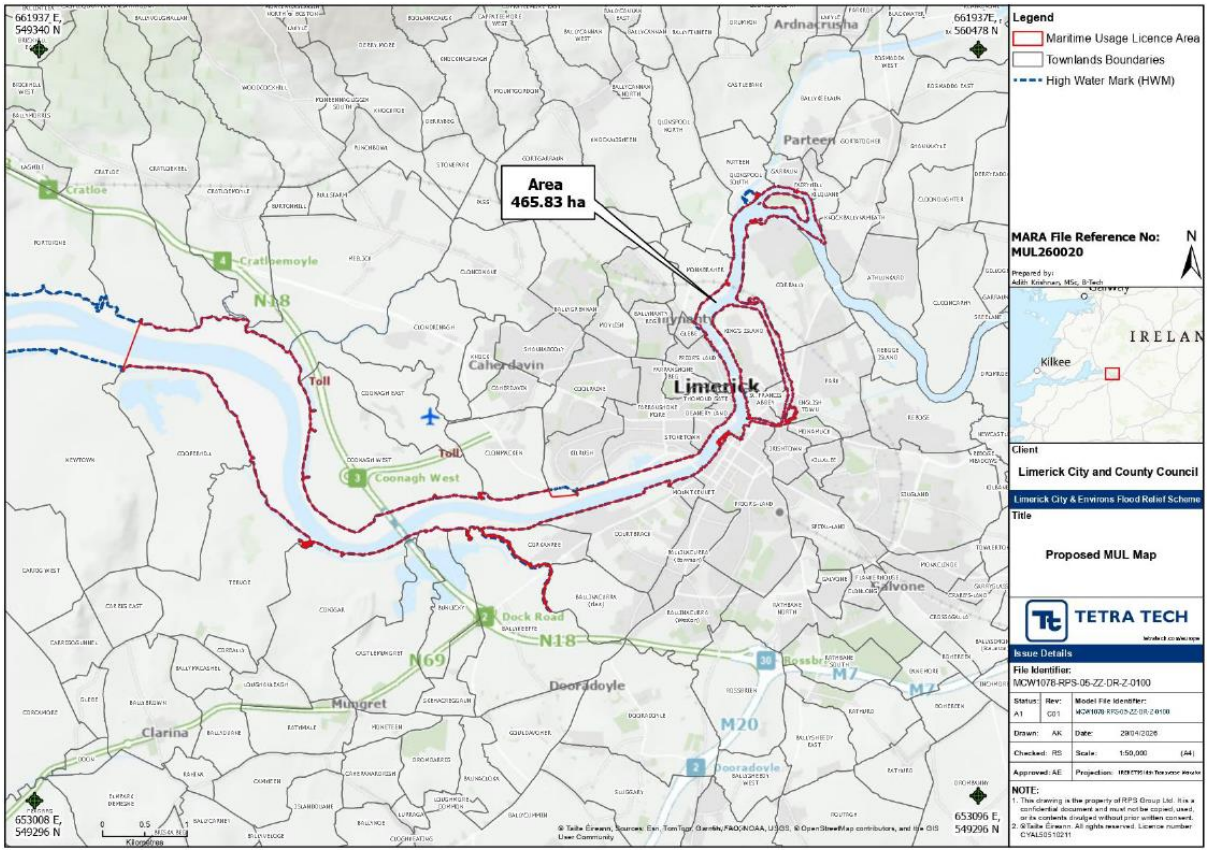



**Figure 1:** The proposed MUL area.

**Table 1:** Summary of the proposed site investigation activities, proposed methodologies, equipment and indicative timeframes.

| SI activity | Proposed methodology | Equipment | Indicative timeframe |
|---|---|---|---|
| **Land-based topographical surveys (below High-Water Mark)** | Land-based topographical surveying within the proposed MUL area. | Survey station, including tripod and total station; handheld devices; survey backpacks; and handheld GNSS devices. | Two months. |
| **Marine-based geophysical and archaeological surveys** | | | One week. |
| Multibeam echosounder (MBES) | Bathymetric survey of the seabed within the proposed MUL area. | Standard MBES equipment operating at a frequency of at least 200 kHz. | |
| Side-scan sonar (SSS) | High-resolution imaging of the seabed within the proposed MUL area. | Standard side-scan sonar equipment operating at a frequency of between 100 and 900 kHz. | |
| Sub-bottom profiler (SBP) | Stratigraphy of the proposed MUL area. | SBP-P: Innomar Light parametric SBP, operating at a primary high frequency of 100 kHz and a secondary low frequency of 4-15 kHz; SBP-C: GeoPulse 2 chirper-pinger SBP, operating at a frequency of 1.5-18 kHz. | |
| Geomagnetic survey | Detection of magnetic anomalies and potential buried objects within the proposed MUL area. Collected data will help inform potential cultural heritage impact. | Geometrics G-882, Marine Magnetics SeaSPY, G-Tec Magwing system or similar. | |
| Geophysical archaeological surveys | To collect baseline data which will be used to inform the cultural heritage impact assessment. The archaeological data will be collected during the same | Using the same equipment as described above (MBES, SSS, SBP and magnetometer). | |

| | | | |
|---|---|---|---|
| | campaign as described above. | | |
| **Marine geotechnical surveys** | | | Two days per geotechnical sampling location (51 sites total). |
| Boreholes | Cable-percussive and rotary borehole drilling at 51 locations from a barge; max depth 20 m. | Rotary core drilling rig and cable-percussive drilling rig. Maximum casing diameter of 300 mm and core diameter of 150 mm. | |
| Standard Penetration Tests (SPTs) | SPTs undertaken from a barge. | 50 mm split-spoon sampler and jacking equipment. | |
| Wall cores | Twelve cores will be taken to determine quay-wall thickness. | Concrete cores drilled using a diamond-tipped coring bit to produce 100 mm cores. | Six days. |
| **Marine environmental surveys** | | | Two weeks. |
| Benthic grab sampling | Two 0.1 $m^2$ grab samples will be taken at each of the 27 sampling locations: 1x for faunal analysis and 1x for sediment analysis. An additional 9x samples will be collected, giving a total of 63 grab samples. | Day, Hamon or Van Veen grabs deployed from a survey vessel. | |
| Water sampling | Water samples to be taken at 27 sampling locations for analysis of metals, chlorophyll and other parameters. Three measurements to be taken per location. | CTD and water-sampling equipment deployed from a survey vessel. | |
| Drop-down video survey | Video and/or photo transects may be taken at each benthic sampling location. | High-resolution DDV system. | |
| **Additional non-geophysical archaeological surveys (where necessary)** | | | Several weeks. |

| | | | |
|---|---|---|---|
| Intertidal walkover survey | A metal-detection and photographic survey to be conducted at low tide*. | Handheld metal detectors and cameras. | |
| Dive/ROV survey | An archaeological dive survey may be undertaken at specified locations, where necessary. | Potential use of a Remotely Operated Vehicle (ROV). | |
| Wade surveys | An archaeological wade survey may be undertaken in shallow water at specified locations, where necessary. | Not specified. | |
| Archaeological sampling | Samples may be removed from the site for more detailed archaeological assessment, where necessary. Any samples removed will be properly stored and transported off site. | Not specified. | |

*a drone survey may be required; however, the licencing of drone operations in the maritime area is outside the remit of the MARA.

## 3. Identification of relevant European sites

The MUL application is subject to screening for appropriate assessment in accordance with Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended, to determine if it alone, or in-combination with other plans or projects, is likely to have a significant effect on a European sites, in view of best scientific knowledge and the conservation objectives of the sites. The applicant submitted a Supporting Information for Screening of Appropriate Assessment (SISAA) report in support of the application which was referred to during this assessment.

The proposed maritime usage is not directly connected with or necessary to the management of any European site(s). The European sites (Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) listed on Table 2 have been considered for appropriate assessment, given the nature, scale and Zone of Influence of the maritime usage, the conservation objectives of the European sites and using the Source-Pathway-Receptor model.

**Table 2:** Identification of relevant European sites, their qualifying interests and site-specific conservation objectives. Those Qualifying Interests marked in bold have been screened in for Stage 2 appropriate assessment.

| European site & site code | Distance from proposed MUL area (km) | List of Qualifying Interests | Connections (Source-pathway-receptor) | European Site Screened in | Site-specific conservation objectives |
|---|---|---|---|---|---|
| Lower River Shannon SAC [002165] | 0 | **Estuaries [1130]**<br>**Mudflats and sandflats not covered by seawater at low tide [1140]**<br>**Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]**<br><br>***Petromyzon marinus* (Sea Lamprey) [1095]**<br>***Lampetra fluviatilis* (River Lamprey) [1099]**<br>***Salmo salar* (Salmon) [1106]**<br><br>***Tursiops truncatus* (Common Bottlenose Dolphin) [1349]** | **Yes – potential habitat disturbance from geotechnical activities**<br><br>**Yes – i) potential barrier to connectivity; ii) potential underwater noise disturbance; iii) potential reduction in water quality; iv) potential physical disturbance to larval and juvenile lamprey**<br><br>**Yes – potential underwater noise and vibration disturbance** | **Yes** | NPWS (2012)<br>Conservation Objectives: Lower River Shannon SAC 002165. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. |

| | | | | | |
|---|---|---|---|---|---|
| | | ***Lutra lutra* (Otter) [1355]** | **Yes – potential visual and above-water noise disturbance** | | |
| | | *Lampetra planeri* (Brook Lamprey) [1096]<br>Sandbanks which are slightly covered by sea water all the time [1110]<br>Coastal lagoons [1150]<br>Large shallow inlets and bays [1160]<br>Reefs [1170]<br>Perennial vegetation of stony banks [1220]<br>Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]<br>*Salicornia* and other annuals colonising mud and sand [1310]<br>Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]<br>Mediterranean salt meadows (*Juncetalia maritimi*) [1410]<br>*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410]<br>Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0] | No significant S-P-R | | |

| | | | | | |
|---|---|---|---|---|---|
| | | *Margaritifera margaritifera* (Freshwater Pearl Mussel) [1029] | | | |
| River Shannon and River Fergus Estuaries SPA [004077] | 0 | **Cormorant (*Phalacrocorax carbo*) [A017]**<br>**Scaup (*Aythya marila*) [A062]**<br><br>**Whooper Swan (*Cygnus cygnus*) [A038]**<br>**Shelduck (*Tadorna tadorna*) [A048]**<br>**Teal (*Anas crecca*) [A052]**<br>**Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]**<br>**Pintail (*Anas acuta*) [A054]**<br>**Ringed Plover (*Charadrius hiaticula*) [A137]**<br>**Golden Plover (*Pluvialis apricaria*) [A140]**<br>**Grey Plover (*Pluvialis squatarola*) [A141]**<br>**Lapwing (*Vanellus vanellus*) [A142]**<br>**Knot (*Calidris canutus*) [A143]**<br>**Dunlin (*Calidris alpina*) [A149]**<br>**Black-tailed Godwit (*Limosa limosa*) [A156]** | **Yes – i) potential visual and above-water noise disturbance ii) potential underwater noise disturbance while diving**<br><br>**Yes – potential visual and above-water noise disturbance** | **Yes** | NPWS (2012)<br><br>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. |

| | | | | | |
|---|---|---|---|---|---|
| | | **Bar-tailed Godwit (*Limosa lapponica*) [A157]**<br>**Curlew (*Numenius arquata*) [A160]**<br>**Redshank (*Tringa totanus*) [A162]**<br>**Greenshank (*Tringa nebularia*) [A164]**<br>**Black-headed Gull (*Chroicocephalus ridibundus*) [A179]**<br>**Wigeon (*Mareca penelope*) [A855]**<br>**Shoveler (*Spatula clypeata*) [A857]**<br><br>**Wetland and Waterbirds [A999]** | **Yes – potential habitat disturbance from geotechnical activities** | | |
| Lough Derg (Shannon) SPA [004058] | 19 | Cormorant (*Phalacrocorax carbo*) [A017]<br>Tufted Duck (*Aythya fuligula*) [A061]<br>Goldeneye (*Bucephala clangula*) [A067]<br>Common Tern (*Sterna hirundo*) [A193]<br>Wetland and Waterbirds [A999] | No significant S-P-R | No | NPWS (2024)<br><br>Conservation Objectives: Lough Derg (Shannon) SPA 004058. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage. |

## 4. Assessment of likely significant effects

**Table 3**: Identification of potential direct and indirect impacts that may have an effect on the conservation objectives of European sites, taking into account the nature and scale of the proposed maritime usage.

| Potential Impacts | Possible significance of Potential impacts (duration, magnitude, etc.) |
|---|---|
| Potential habitat disturbance from geotechnical activities | Possible temporary and localised impacts on marine habitats |
| Potential barrier to connectivity | Possible temporary and localised disruption to fish migration |
| Potential reduction in water quality | Possible temporary and localised deterioration in water quality and impacts on migratory fish |
| Potential physical disturbance to juvenile lamprey | Possible localised disturbance, injury or mortality of larval and juvenile lamprey |
| Potential underwater noise disturbance | Possible temporary and localised disturbance to migratory fish and diving birds |
| Potential underwater noise and vibration disturbance | Possible temporary and localised disturbance to common bottlenose dolphin |
| Potential visual and above-water noise disturbance | Possible temporary and localised disturbance and/or displacement of otter, diving birds and shorebirds/waterbirds |

In-combination effects

The potential impacts of the proposed site investigations must be considered individually and also in combination with other plans or projects. All types of plans or projects that could, in-combination with this application, have a significant effect, have been considered. This in-combination assessment has been undertaken using professional and scientific judgement and is assessed primarily in terms of potential spatial and temporal impacts.

The spatial scope of the in-combination assessment is 3 km and is based on the Effective Deterrence Range[1] of Harbour porpoise which is most sensitive to underwater noise. The temporal scope of the in-combination assessment is based on the period over which the activities are proposed. e.g. The applicant has applied for a 5-year licence and thus the temporal scope is 5 years.

A search of relevant databases, including MARA, *An Coimisiún Pleanála*, the EPA and Limerick City and County Council, was undertaken on the 28/09/26. Table 4 below outlines those

[1] Effective Deterrence Range – the radius of a circular area assumed to be disturbed

activities which are considered to have the potential to act in-combination with the proposed maritime usage.

**Table 4:** List of projects which were considered to have potential in-combination impacts on European sites.

| Application Ref. | Project description | Distance from proposed MUL area (km) | Project Status |
|---|---|---|---|
| S0009-03 | The loading of dredged material from maintenance dredging at Ted Russell Dock and approaches, Limerick and at Foynes Harbour and the dumping of the dredged material in the Shannon Estuary, Co. Limerick. | 0 | Active |
| FS006975 | Maintenance dredging at Limerick Docks and the Port of Foynes (2x locations), Co. Limerick. | 0 | Active |
| MUL260004 | Routine maintenance dredging of accumulated sediments within the existing navigational channel upstream of Sarsfield Lock, (2x sites) Limerick City, Co. Limerick. | 0 | Applied |
| FS007190 | The installation of flood protection measures at King's Island Co. Limerick | 0 | Active |
| ACP306270 | Construct a Flood Relief development on Kings Island, Limerick City, Co. Limerick. | <1 | Active |

The following plans, related to the development of the maritime environment were also considered:

- The Climate Action Plan 2025,
- River Basin Management Plan (RBMP) 2022-2027,
- Limerick Development Plan 2022-2028,
- Clare County Development Plan 2023–2029, and
- Strategic Integrated Framework Plan for the Shannon Estuary (SIFP).

Likely significant in-combination effects between this application and the plans listed above and projects listed in Table 4 on the conservation objectives of the European sites considered in this report cannot be excluded at this stage.

Projects S0009-03, FS006975 and MUL260004 involve dredging and the loading of dredged material within the proposed MUL area, while FS007190 and ACP306270 relate to the installation of flood protection measures on King's Island, Co. Limerick (also within the MUL area). These projects, in combination with the proposed SI, could result in habitat

disturbance, a reduction in water quality, barriers to connectivity, and disturbance from above-water and underwater noise and vibration.

**Were mitigation measures considered during the screening process?**

No.

## 5. Screening Determination Statement

The assessment of significant effects:

Having considered the legal framework applicable to appropriate assessment, the information on file, and having regard to:

- The nature and scale of the proposed development,
- The distance to the nearest European sites,
- The potential for in-combination effects with other plans and projects,
- Potential habitat disturbance,
- Potential barrier to connectivity,
- Potential reduction in water quality,
- Potential physical disturbance to larval and juvenile lamprey,
- Potential underwater noise disturbance to diving birds and migratory fish,
- Potential underwater noise and vibration disturbance,
- Potential visual and above-water noise disturbance,

it was concluded that the proposed maritime usage by Limerick City and County Council, City Hall, Merchant's Quay, County Limerick, V94EH90 to carry out Marine environmental surveys for the purposes of site investigation falling under Schedule 7(3) at the Shannon upper and lower river basin (MUL260020) will require Stage 2 appropriate assessment. It cannot be excluded on the basis of objective scientific information, that the proposed project, either individually or in combination with other plans or projects, will have a significant effect on a European site.

| | | |
|---|---|---|
| Signature and Date of Recommending Officer | Dr. Micheál Mac Monagail<br>Marine Analyst | 20/10/2026 |
| Signature and Date of Decision Maker | Dr. Alison McCarthy,<br>Senior Marine Advisor | 20/10/2026 |