

Attachment 3.1

Description of proposed Maritime Usage

Introduction

AQUAFACT (APEM Group) has been commissioned by Uisce Éireann to prepare a Maritime Usage Licence (MUL) application for a programme of marine and intertidal site investigation surveys in Liscannor Bay, County Clare. The surveys are required to inform the design and consenting of a new Wastewater Treatment Plant (WWTP) to serve the agglomerations of Lahinch and Ennistymon.

The existing wastewater treatment plants in both towns are outdated and underperforming, currently discharging untreated or inadequately treated effluent into the Inagh River, contributing to water quality concerns. Uisce Éireann proposes to construct a new treatment facility on a greenfield site with a design capacity of approximately 9,300 Population Equivalent (PE). This facility will provide at least secondary treatment, improve compliance with the Water Framework Directive, and protect the ecological integrity of local riverine and coastal waters.

A key element of the project is the development of a new long sea outfall discharging treated effluent into Liscannor Bay from Cregg Beach. To support the final design, siting, and environmental assessment of this outfall and diffuser system, a suite of marine environmental and geotechnical surveys must be undertaken in the bay. The purpose of this MUL application is solely to secure permission for the temporary site investigation surveys within the defined maritime area.

Proposed Activities – Area A

The proposed investigation surveys will be undertaken across Area A, an area of approximately 287.4 hectares in Liscannor Bay and Area B, an area of approximately 6430.28 m² within Inagh River. Within Area A, the following activities are proposed:

Bathymetric and Geophysical Surveys

- Multibeam echo-sounder, side-scan sonar, and sub-bottom profiler to map seabed topography and subsurface features.
- Magnetometer surveys may be included to identify any ferrous material or archaeological features of interest.

Seabed Sampling and Benthic Surveys

- Grab samples and vibrocores to characterise sediment type and benthic fauna.
- Biotope classification of benthic communities to establish ecological baseline conditions.

- Drop-down video and still photography to visually assess seabed habitats and features.

Geotechnical Investigations

- Boreholes, Cone Penetration Tests (CPTs), vibrocores, and trial pitting in intertidal areas (particularly Area A at Cregg Beach) to assess ground conditions along the proposed pipeline and diffuser route.

Archaeological Survey

- Assessment of the potential for underwater cultural heritage features within the survey area.

Water Quality Sampling

- Collection of baseline samples for key physico-chemical parameters to support future monitoring and assessment.

Proposed Activities – Area B

Water Quality Sampling

- Kick sampling and water quality surveys will also be undertaken at Area B (upstream of the Waterfalls Hotel in Ennistymon).

Maps of the proposed maritime usage licence area (Area A, 287.4 ha and Area B, 6430.28 m²) are presented below (Figure 1; Figure 2) and are included in the MUL application as Attachment 3.4.

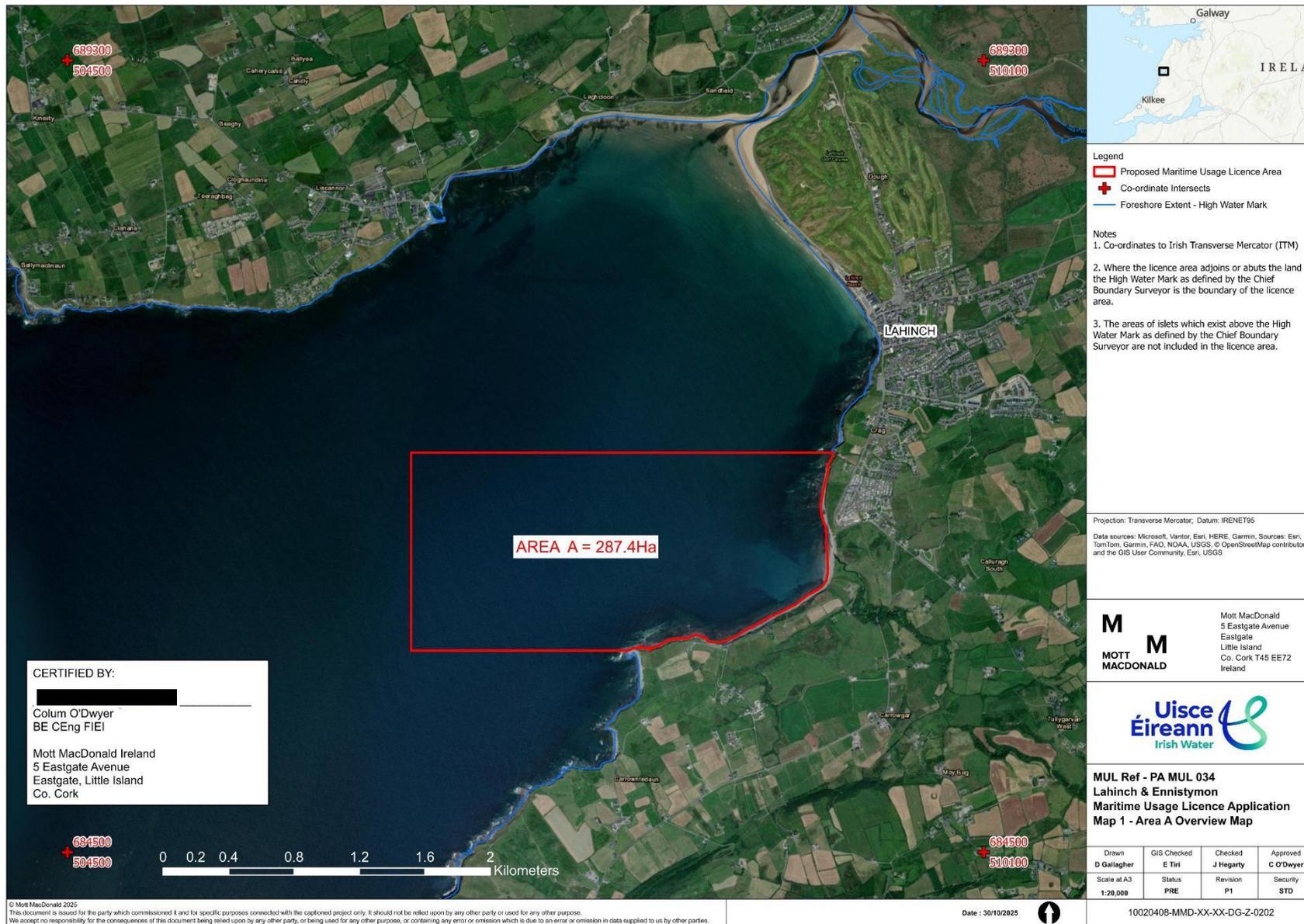


Figure 1 Maritime Usage Licence Area A.

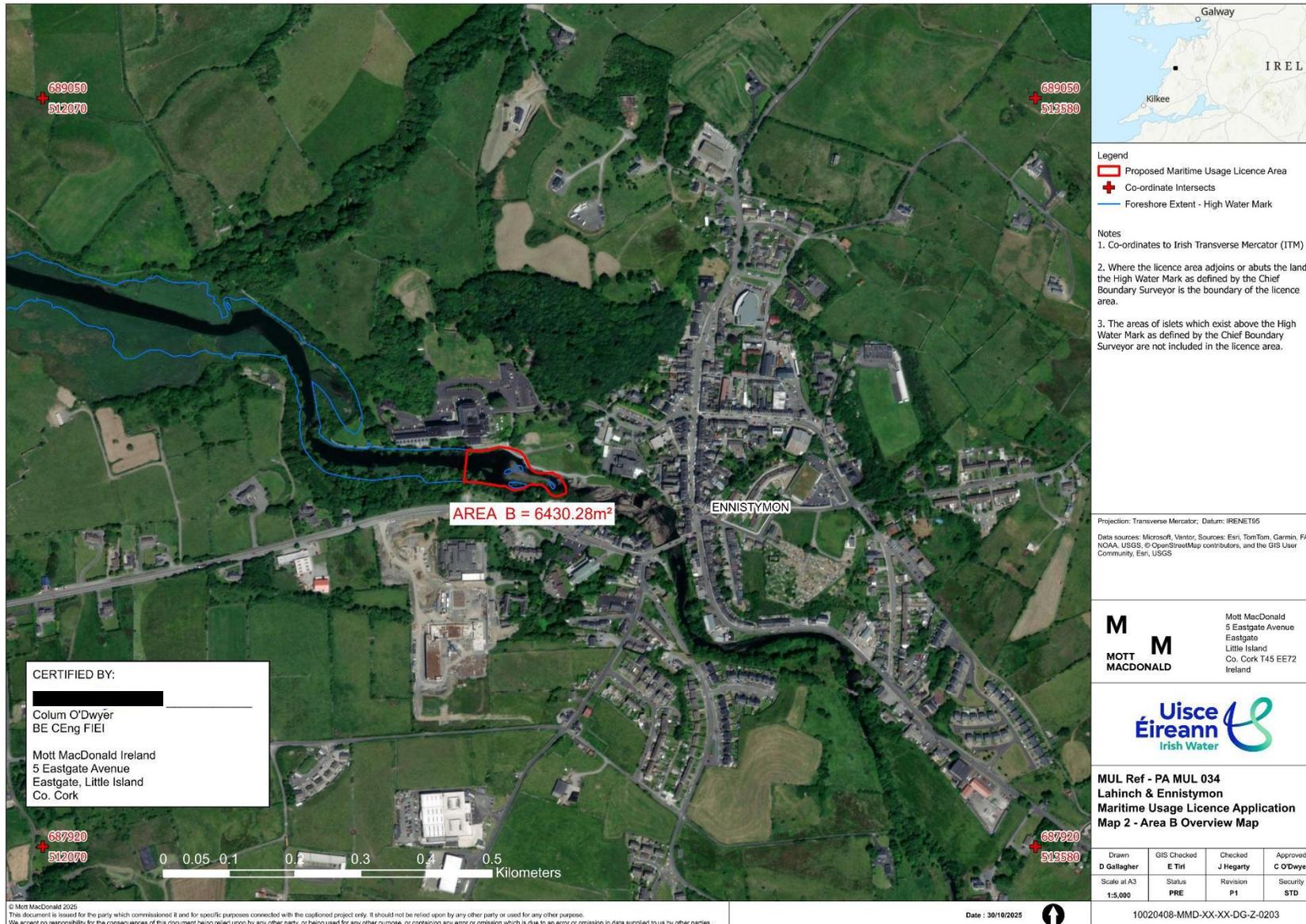


Figure 2 Maritime Usage Licence Area B

Activity Schedule

The site investigation surveys are provisionally scheduled to take place from Q4 2026 to Q1 2027. However, to account for contingency in sourcing appropriate contractors to carry out all SI works, potential weather down-time, unforeseen issues with scheduling or sequencing, a total duration of 24 months is being sought for this MUL.

All activities are temporary in nature and essential to inform the design and environmental assessment of the proposed outfall system. The site investigation surveys will be undertaken in line with best practice measures to minimise environmental disturbance, including the use of Marine Mammal Observers (MMOs), soft-start procedures for acoustic equipment, and timing of surveys to avoid sensitive ecological periods where necessary (please see attachment 4.3 and Attachment 4.4 for more on this).

Full details of each element of the proposed Maritime Usage are provided in **Table 1** below.

Table 1: Indicative site investigation surveys and schedule.

Survey Type	Coverage / Location Focus	Max Quantity / Spacing	Worst-Case Equipment and Justification	Vessel Operations (length, width, duration)
Geophysical Surveys				
Sub-bottom profiling	Corridor extending 50–100m either side of the indicative pipeline route, including diffuser zone and trenchless construction exit area	25–50 m line spacing	Towed boomer/sparker system from survey vessel. Required to map sediment layers and bedrock depth for trenchless construction technique feasibility and diffuser siting.	Length: 10–15m, Width: 3–4m; 3 - 5 days total
Magnetometer	Corridor extending 50–100m either side of the indicative pipeline route and diffuser zone (UXO check, seabed obstructions)	25 m line spacing	Marine magnetometer (e.g., Geometrics G-882). Detects ferrous objects that may interfere with trenching or diffuser installation.	Length: 10–15m, Width: 3–4m; 3 - 5 days total
Side Scan Sonar	Corridor extending 50–100m either side of the indicative pipeline route and diffuser zone, especially nearshore and outlet areas	Dual-frequency, full coverage	Edgetech 4200 or Klein 3000 side scan sonar. Maps seabed features, habitats, and potential obstructions for routing and diffuser design.	Length: 10–15m, Width: 3–4m; 3 - 5 days total
Geotechnical Surveys				
Boreholes	1 at landfall (trenchless construction entry), 1 near trenchless construction exit/diffuser, others	Up to 20 total (including contingency for repositioning / redrills to	Jack-up barge with soil and rotary drilling rig equipment (e.g., Dando 2000 / Commachio 3000 / GeoborS Drilling rig). Needed to confirm stratigraphy and trenchless construction.	Length: 20–30m, Width: 10–15m;

Survey Type	Coverage / Location Focus	Max Quantity / Spacing	Worst-Case Equipment and Justification	Vessel Operations (length, width, duration)
	positioned at 100m centres	overcome obstructions)	technique feasibility; barge ensures safe access offshore.	24hrs – 36hrs per borehole (24 hr working assumed) – up to 30 days total
CPTs (Overwater and Intertidal)	At landfall, at 200m centres along route, and diffuser zone	Up to 10 total	CPT rig on jack-up barge or floating platform (e.g., ROSON). Provides in-situ soil strength for trenchless construction pullback and trench stability.	Length: 15–25m, Width: 8–10m; 0.5 - 1 day per CPT – up to 10 days total
Vibrocores	Distributed along route, with focus on diffuser zone and sediment variability	Up to 15 total	OSIL Vibrocorer deployed from floating vessel. continuous sediment sampling for classification and environmental assessment.	Length: 10–15m, Width: 3–4m; 0.5 - 1 day per vibrocore – up to 15 days total
Seabed Sediment Sampling	Nearshore, mid-route, and diffuser zone	Up to 20 total	Van Veen or Day grab sampler from vessel. Environmental and chemical analysis; supports MARA's ecological impact review.	Length: 10–15m, Width: 3–4m; Up to 4 days total
Trial Pits (Intertidal)	Cregg beach landfall area, spaced across beach width	Up to 4 total	Mini-excavator or hand-dug pits. Confirms constructability of trenchless construction entry pit or trench; low-impact equipment for sensitive zone.	Land-based mini-excavator; 1 day per pit, up to 4 days total
Dynamic Sampling and Probing (Intertidal)	Cregg beach landfall area, spaced across beach width	Up to 4 total	Tracked mini rig (Terrier or similar) to characterise ground conditions with <i>in situ</i> testing	Mini boring rig with probing attachment 0.5 day per position, up to 2 days total