MOTT MACDONALD

EPS Risk Assessment

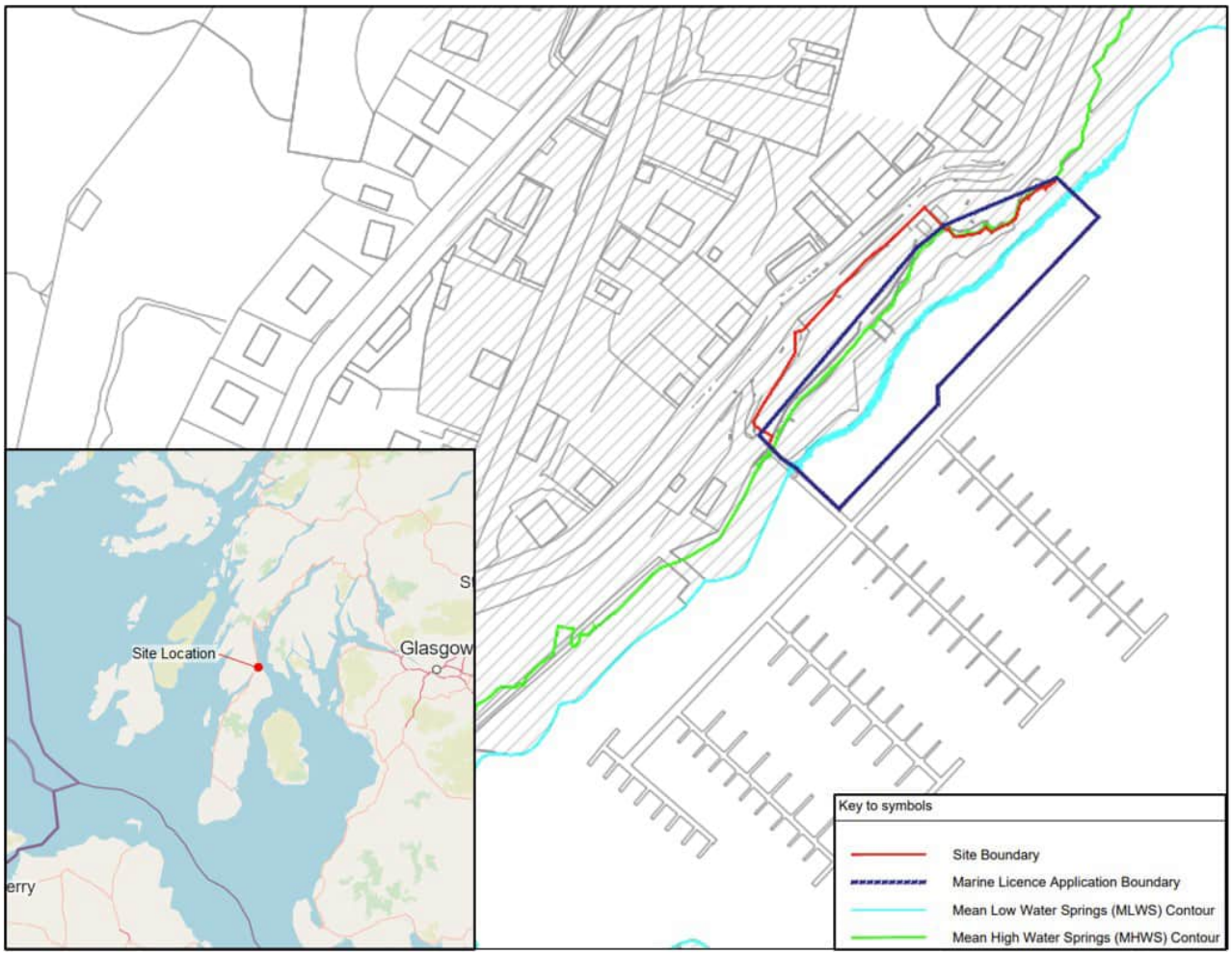
Project:	Tarbert (Loch Fyne) Harbour Authority - Access Slipway and Car Park Construction		
Our reference:	107065-25		
Prepared by:	[Redacted]	**Date:**	28/11/2025
Approved by:	[Redacted]	**Checked by:**	[Redacted]
Subject:	EPS Risk Assessment		

1 Introduction

Mott MacDonald have prepared this risk assessment on behalf of Tarbert (Loch Fyne) Harbour Authority and in support of a European Protected Species (EPS) and Basking Shark licence application submitted to the Marine Directorate – Licensing Operations Team (MD-LOT), in support of proposed construction of an access slipway and adjacent area of land reclamation, on the north side of the inner area at Tarbert Harbour on the coast of Loch Fyne, Argyll, in west Scotland (Figure 1.1, see Appendix A for the full sized drawing).

In advance of submitting the ground investigations EPS and Basking Shark licence application to MD-LOT, Mott MacDonald sought advice from NatureScot via email with regards to the potential impacts of the proposed survey works to protected species and a response was received on 06/08/2025. Regarding designated bird species under the Sound of Gigha SPA, it was advised that the proposed survey would have minimal impact due to the presence of more suitable areas for bird species to reside and the overall busy nature of the works locations. Given the construction works are located within a similar area to that of the survey, the advice provided in relation to SPA bird species has been applied for the construction works. In addition, it was advised within the consultation response for the EIA screening that due to the distance of the SPA from the proposed works, there would be no impacts as such, birds have not been considered further within this risk assessment.

Figure 1.1: Site Location Plan



Source: Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

2 Proposed works

2.1 Overview

The Project comprises the following:

- Land reclamation on the foreshore to extend the existing car park and provide additional car parking spaces/boat storage (as an extension of current use);
- Construction of a reinforced concrete access slipway for boat recovery/launching;
- Construction of an access pontoon (adjacent to the access slipway) for use as a launching point for water sports and marine recreational activities and for access during boat recovery/launching;
- Installation of a boat washdown facility.

These proposed works will allow the applicant, Tarbert (Loch Fyne) Harbour Authority, to broaden the range of services which they can offer and will support the development of a future water sports activity centre and associated building (to be built on nearby harbour land, subject to funding).

3 Works equipment and method statement

3.1 Construction phase

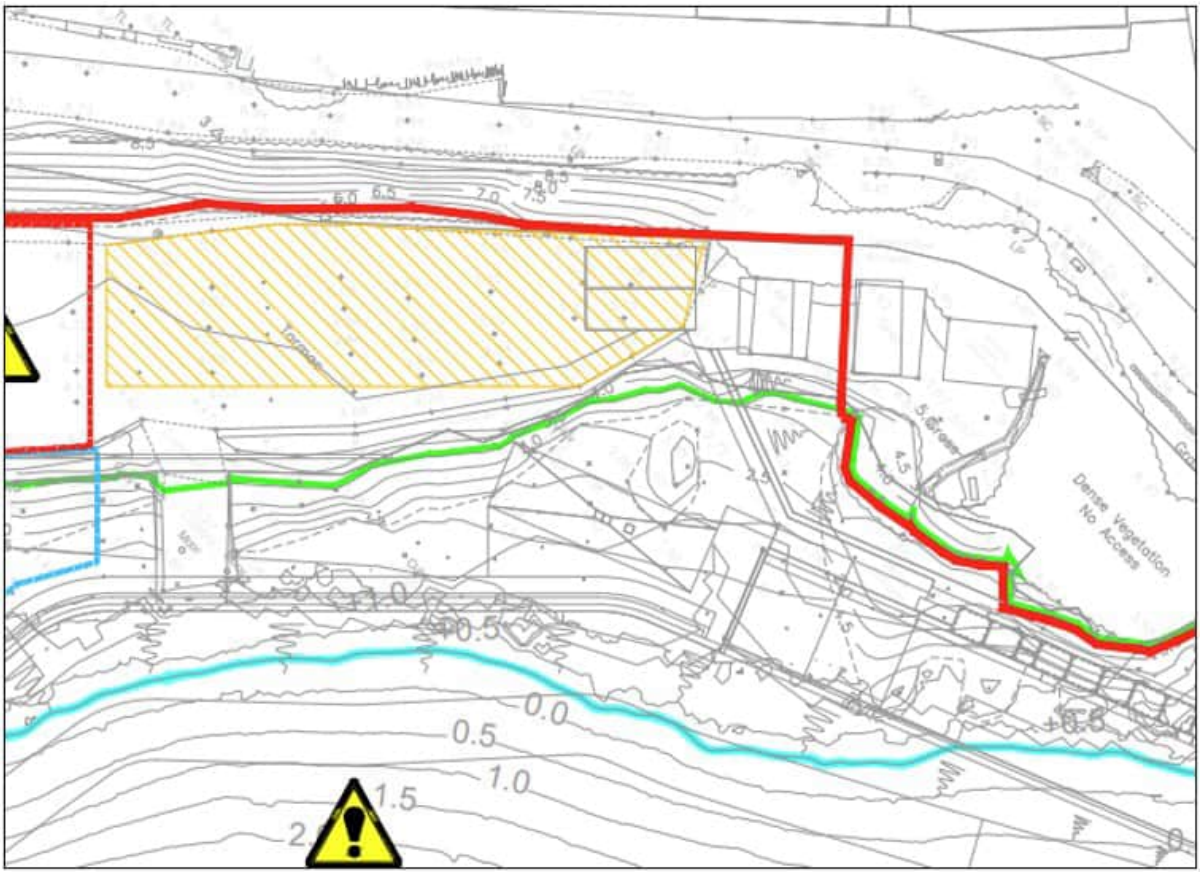
The following is a summary of the main tasks and methods associated with the construction of the maritime aspects of the works, in the chronological sequence in which they are expected to be undertaken. This has been prepared by Mott MacDonald on behalf of the applicant (Tarbert (Loch Fyne) Harbour Authority). The methods used will be confirmed following the appointment of a contractor to undertake the works.

Anticipated durations for tasks have been provided. For the maritime works, this will be dependent on suitable tides and weather windows, therefore an extension to the licence period has been applied for (to 2027) to make allowances for any delay/overrun to the programme.

3.1.1 Compound location

A site compound (including laydown areas and site accommodation) will be established on the existing carpark area (as hatched yellow in Figure 3.1). Site access routes to the site compound/works will be established, along with pedestrian routes. Good general practice will be followed in the establishment and maintenance of the compound.

Figure 3.1: Compound location (orange hatched area)

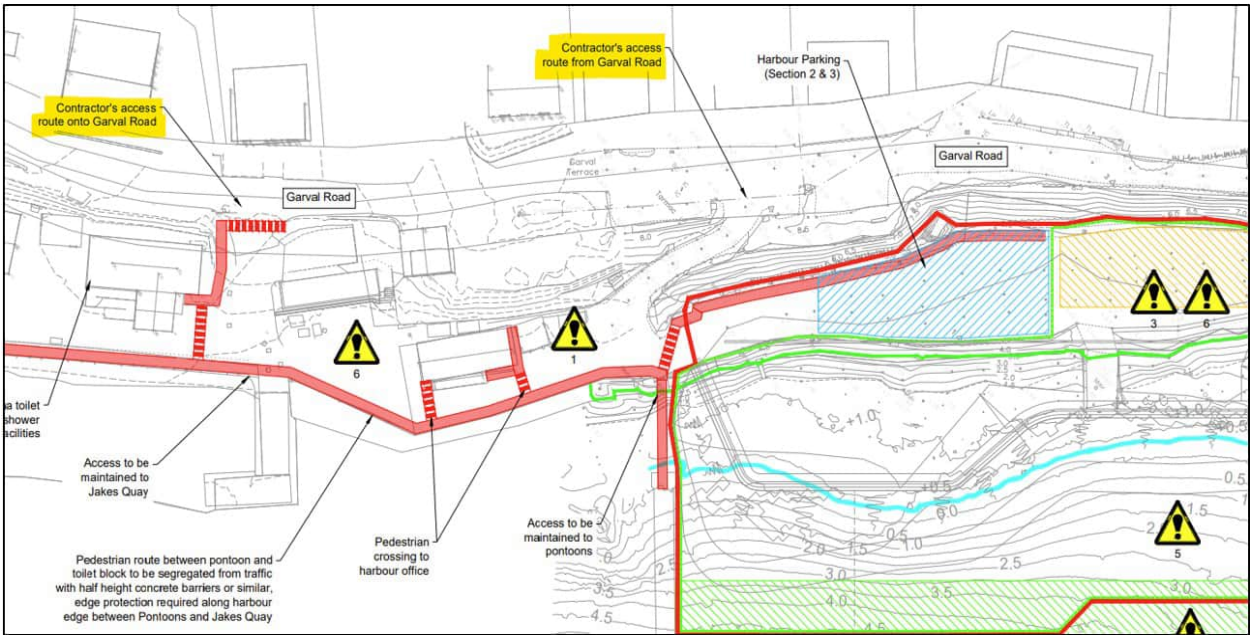


Source: Mott MacDonald, 2025.

3.1.2 Material and plant deliveries

Methods for delivering plant and materials to site may either be by land or by sea. For the purpose of the EPS risk assessment, a worst-case scenario of delivery by sea via barge has been assumed. However, it is anticipated that the majority of materials will be delivered to site via land using lorries, accessing the site from Garval Road, with separate entrance and entry points, shown in Figure 3.2. Full sized drawings are provided in Appendix A.

Figure 3.2: Access to and from the site



Source: Mott MacDonald, 2025. For the full-sized drawing, refer to 107065-MMD-01-XX-DR-C-0154 in Appendix A

Access for delivery of materials from sea would be via landing craft or similar, landing onto a temporary working platform where materials can be stockpiled. In event of this approach being used, the temporary landing platform would comprise a deposit of rockfill (reinforced with geotextile/geogrid) on the foreshore, which has been included in the licence application. It is envisioned that any temporary working platform would be within the envelope of and incorporated into the permanent works.

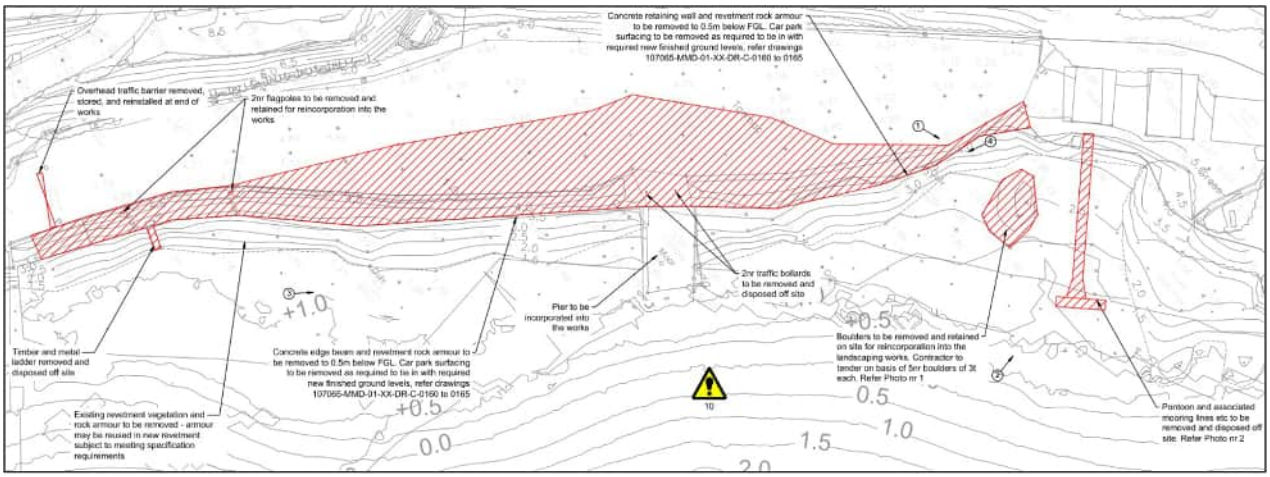
3.1.3 Site clearance

During the works, the following will be removed from the intertidal area (see Figure 3.3):

- Timber and metal ladder located to the east of the pontoon
- Existing revetment vegetation and rock armour. Note, rock armour may be reused (subject to meeting technical specification requirements);
- Concrete edge beam/retaining wall and revetment rock armour to be removed to 0.5m below finished ground level;
- Boulders in the eastern end of the works; and
- Pontoon and associated mooring lines in the eastern end to be removed and disposed of offsite.

Anticipated method for removal of boulders (for retention and reuse in landscaping works) will be via a land-based excavator. Existing pontoon and associated mooring lines will be removed from the foreshore using land-based excavator and disposed offsite at a licenced facility. Demolition of the existing concrete retaining wall will likely be via excavator with pneumatic breaker, operating when tides are out and always above the waterline. Similarly, the existing rock revetment made of rock armour will be removed and reincorporated into the works, either as rock armour in the permanent works (subject to meeting technical specification requirements) or as fill material.

Figure 3.3: Items being removed/demolished



Source: Mott MacDonald, 2025. For the full-sized drawing, refer to 107065-MMD-01-XX-DR-C-0161 in Appendix A.

3.1.4 Construction of land reclaim

Construction is anticipated to commence on the western side of the site, create a working platform which can be used to construct the land reclaim, moving in an eastward direction as works progress. Assuming land-based plant is used, the main activities, which are to be constructed below the Mean High-Water Spring (MHWS) tidal level, are expected to be as follows:

- Create a working platform on the foreshore (requirement to be confirmed by contractor), using reclaim material and potentially geotextiles. This will permit access to construct the rock armour revetment toe. This will be constructed using long reach excavators, dependant on levels, divers may be required to lay the geotextile.
- Construct the toe of the revetment using rock armour. Rock to be placed/pushed into soft foreshore deposits, no excavation permitted.
- Remainder of reclaim material placed to build out reclaim. Primary and secondary rock armour placed up to level of reclaim. Geogrid/geotextile will be installed and anchored into position; commercial divers may be required to lay this.
- Sequential placement of fill, secondary armour, primary armour, and geogrid to form reclaim. Fill material is to be faced with secondary and primary armour after placement to minimise any washout of fine material into the water.
- Three existing outfalls are to be extended through revetment/reclaim.

Subsequent activities above the MHWS mark will include the following:

- Completion of placement of fill material to top of sub-base level.
- Completion of rock armour placement to finished top of revetment level.
- Installation of boat washdown bunded area and water treatment equipment, including one new outfall for treated washdown water, discharged 650mm above MHWS mark.
- Drainage and service duct installation.
- Kerb and pedestal plinths installed.
- Surfacing and white lining.
- Electrical, lighting and water service/pedestal installation testing and commissioning.

3.1.5 Construction of slipway and pontoon

Construction of the slipway is anticipated to take place as follows:

- Removal of existing foreshore material along inner (landward) side of slipway and at toe beam using a hydraulic pecker mounted to an excavator. Based on current ground investigation information, this material is expected to be rock, and any arisings are planned to be incorporated into the permanent works. Subject to further testing and site investigation, should the excavation of soft material be required, this will be discussed with MD-LOT and a dredging and disposal licence will be applied for, if necessary.
- Fill material will be placed, compacted, and trimmed to correct level.
- Rock armour and blinding concrete placed.
- Placement of toe beam *in-situ* reinforcement, and concrete for first stage toe beam poured to correct level.
- Precast toe beam placed at correct location and level. It is anticipated that the toe beam will be moved into position using either land-based lifting plant or floated into position using a bag lift approach. Second stage toe beam *in-situ* concrete poured.
- Slipway precast steel support beams connected to toe beam and installed to correct line and level. Support beams bedded in concrete to secure them in position. Blinding concrete placed between support beams.
- Precast slipway slab placed onto support beams. It is anticipated that a precast slab will be lifted onto support beams using land-based plant, starting from the lowest point and working upwards.
- *In-situ* concrete poured below precast units, anticipated that this will be completed on 2 bays at a time.
- Repeat installation of support beams and placing slipway slabs onto support beams until all precast units are laid into position and all *in-situ* pours are completed.
- Excavation of foundations (in rock) for pontoon pile guides. Note, while referred to as piles these are tubes cast into concrete foundations and no percussive pile driving is required. Preparation, placing of reinforcement, and pouring of concrete for *in-situ* reinforced concrete slabs and pile guide foundations for the pontoon. It is anticipated that the precast pile guide block will be moved into position using either land-based lifting plant or floated into position using bag lift approach.
- Wheel guide installed.
- Precast cope beams installed.
- Pontoon installed.
- Navigation marker to be installed (markings to be agreed/confirmed).

3.2 Operation and decommissioning

There are no new works planned for the operational phase or plans to decommission the refurbished assets in the future as part of the Project.

3.3 Project programme

Works will be completed over eight months, dependent on weather conditions and planned downtime.

Construction timescales are also subject to obtaining a marine licence; however, contract award is anticipated to be end of December 2025/early January 2026 and completion of construction in October 2026 (though this could be take longer depending on tides and weather windows).

Standard working hours are currently anticipated to be 08:00 – 18:00 Monday to Friday and 08:00 – 13:00 on Saturday, with no working on Sundays or during public holidays.

There is the potential that the contractor may seek to extend this to 07:00 – 19:00 Monday to Friday, with occasional working required outside of these hours to suit tidal constraints. The contractor will endeavour to restrict noisy activities to standard working hours

Deliveries including the transport of materials, plant, and equipment to the Project site will only take place during the following hours:

- Standard working hours: 07:00 to 18:00, Monday to Friday
- No deliveries on Sundays or Public Holidays

To provide an indication for assessment of the extent of disturbance the construction works may cause, estimated duration ranges for the construction activities are presented in Table 3.1. These estimates have been based upon professional knowledge and experience from other projects.

Table 3.1: Indicative activity durations

Activity	Estimated duration range (days) (total number of days activity undertaken on i.e., not necessarily consecutive)
Rock peckering (breaking up of rock using pneumatic breaker)	20 days
Demolition of existing concrete wall using pneumatic breaker*	7 days

*Note: this is being undertaken at low tides to remove underwater noise effects from this activity.

4 Noise assessment

During construction, the consideration of injurious or disturbing noise for marine mammals, arising from breaking of rocks below MLWS (if required) and placement of rocks for the revetment should be considered. Given commercial divers may also be required for works below Mean Low Water Springs (MLWS) activities such as for the placement of geotextiles, final preparation/levelling of formation, placement of blinding concrete, installation of steelwork placement of precast and *in-situ* concrete, installation of any furniture (e.g. pontoon guideposts etc.)), use of diver tools and equipment (e.g. drills, wrenches, grinders, bolt guns, and jackhammers) have also been considered.

Note that works to demolish the existing concrete wall will be undertaken during low tides, therefore no impact pathway from airborne noise is anticipated as it is minimised when it changes between mediums (air to water) as airborne noise is largely reflected off the water surface.

4.1 Rock placement

Regarding rock placement, this will be done during low tides however there may be the requirement for placement below MHWS. Any placement of rocks below MHWS has the potential to generate underwater noise however, noise is unlikely to cause harm and may cause disturbance at most.

Noise assessments were undertaken for rock placement associated with a proposed Nord Stream 2 gas pipeline in offshore Danish waters[1], their model determined that resulting noise levels were low under the assumption that animals would remain stationary at the same location for 2 hours. Modelled noise levels

[1] Sveegaard, S., Teilmann, J. & Tougaard, J. 2017. Marine mammals in the Swedish and Danish Baltic Sea in relation to the Nord Stream 2 project. Expert Assessment. Aarhus University, DCE – Danish Centre for Environment and Energy, 68 pp. Scientific Report from DCE – Danish Centre for Environment and Energy No. 237 http://dce2.au.dk/pub/SR237.pdf

were not high enough to induce PTS though TTS could be induced if the animal was to remain within 80m for over 2 hours, with impacts considered negligible. Therefore, given the shallow nature and substantially more limited footprint within water in comparison to the Nord Stream projects rock placement, only disturbance is likely to occur from this activity in Tarbert.

4.2 Rock breaking

No specific noise modelling has been undertaken for this project however, similar schemes, such as Kennacraig Vessel Port Enabling Works undertook a noise assessment for similar works[2]. This assessment included rock peckering using a pneumatic breaker attachment on an excavator. Given there may be the requirement to break some boulders during clearance works for the Project, this assessment has been used to inform potential underwater noise impacts for this Project.

The Kennacraig underwater noise assessment for rock peckering and rock pre-drilling was based on 10 hours of continuous activity. For rock peckering, this resulted in a single strike Sound Exposure Level (SEL) of 186 decibels (dB) re 1µPa2s at 1m and cumulative SEL of 231 24hr at 1m (dB re 1µPa2s). For rock pre-drilling, 145 Level root mean square (Lrms) at 1m (dB re 1µPa), 194 SEL 24hr at 1m (dB re 1µPa2s)[2].

For rock peckering, predictions also identified the most sensitive mammal hearing group to be the LF cetaceans with cumulative Sound Exposure Level (SEL_{cum})Temporary Threshold Shift (TTS; a temporary loss in hearing or hearing sensitivity) distances at 3200m and Permanent Threshold Shift (PTS; a permanent loss in hearing) distances at 860m. A fleeing receptor model was also undertaken which identified Very High Frequency cetaceans as the most sensitive receptor, with resulting maximum PTS and TTS predicted to be <10m and 70m respectively. For rock pre-drilling, predictions identified the most sensitive mammal hearing group to be the VHF cetaceans with maximum TTS and PTS distance respectively of 130m and 20m.

In comparison, an underwater noise assessment for a pipeline duplication project[3] involving the use of a hydraulic hammer for 2x 4-hour durations, at depths of 5m, 9.2m and 13.1m resulted in behavioural response for both low and high frequency cetaceans of 270m. Marine mammal behavioural response thresholds are 120 dB re 1 µPa (Sound Pressure Level (SPL)) and 160 dB re 1 µPa (SPL) for non-impulsive and impulsive sound sources respectively[4].

4.3 Diver tools

Noise levels of diver tools were obtained for drills, wrenches, grinders, bolt guns and jackhammers[5]. These give Peak SPLs of up to 200 dB re 1 µPa @ 1 m and average SPLs of up to 161 dB re 1 µPa @ 1 m[6,7]. The average SPL for diver tools is below the threshold for all marine mammal hearing groups. Although the peak SPL is above the threshold; it is not anticipated that noisier tools will be utilised for the Project.

[2] Mott MacDonald, 2023. New Islay Vessel Port Enabling Works – Kennacraig Underwater Noise Assessment 105612-MMD-00-ZZ-RP-O-0004-S2-P01-NIV

[3] Connell, S.C., M.W. Koessler, and C.R. McPherson. 2023. Santos Barossa Darwin Pipeline Duplication: Acoustic Modelling for Assessing Marine Fauna Sound Exposure. Document 02954, Version 2.0. Technical report by JASCO Applied Sciences for Santos [online] Available at: Appendix 9 - Underwater Noise Modelling Report - Rock Breaking (JASCO)

[4] National Oceanic and Atmospheric Administration (US). 2019. ESA Section 7 Consultation Tools for Marine Mammals on the West Coast [online] Available at: ESA Section 7 Consultation Tools for Marine Mammals on the West Coast | NOAA Fisheries

[5] Nedwell, J. and Howell, D., 2004. A review of offshore windfarm related underwater noise sources. *Cowrie Rep*, *544*, pp.1-57.

[6] Nedwell, et al., "Underwater tool noise: implications for hearing loss", Advances in underwater technology, ocean science and offshore engineering, vol. 31, pp. 267-275, 1993.

[7] Parvin, S., et al., "A survey of noise exposure of divers operating underwater tools." Tech. Rep. QinetiQ/CHS/PPD/CR010322/1.0, QinetiQ Ltd, Alverstoke, Fort Road, Gosport, Hants., PO12 2QU, 2001.

4.4 Auditory injury onset criteria

Thresholds of auditory injury onset (received level) have been updated since the underwater noise assessment for the pipeline duplication (section 4.2), which utilised Southall et al., (2019)[8]. Table 4.1 outlines the differences between the sources. Given the auditory injury onset criteria for impulsive sources has increased from Southall et al., 2019, impact distances calculated for the Project are anticipated to be reduced from previous values.

Kennacraig utilised NOAA, 2024[9] however there are no changes in non-impulsive auditory injury onset criteria in the latest 2025 update[10].

Table 4.1: Auditory injury onset criteria (received level)

Hearing group	Auditory injury onset criteria: non-impulsive		Auditory injury onset criteria: impulsive	
	NOAA, 2024	**NOAA, 2025**	**Southall et al., (2019)**	**NOAA, 2025**
Low-frequency (LF) cetaceans	$L_{E,p,\ LF,24h}$: 197 dB	$L_{E,p,\ LF,24h}$: 197 dB	$L_{E,p,\ LF,24h}$: 168 dB	$L_{E,p,\ LF,24h}$: 183 dB
High-frequency (HF) cetaceans	$L_{E,p,\ HF,24h}$: 201 dB	$L_{E,p,\ HF,24h}$: 201 dB	$L_{E,p,\ LF,24h:}$ 170 dB	$L_{E,p,\ HF,24h}$: 197 dB
Very high-frequency (VHF) cetaceans	$L_{E,p,\ VHF,24h}$: 181 dB	$L_{E,p,\ VHF,24h}$: 181 dB	N/A	$L_{E,p,\ VHF,24h}$: 159 dB
Phocid pinnipeds (PW)	$L_{E,p,\ PW,24h}$: 195 dB	$L_{E,p,\ PW,24h}$: 195 dB	N/A	$L_{E,p,\ PW,24h}$: 183 dB
Otariid pinnipeds (OW)	$L_{E,p,\ OW,24h}$: 199 dB	$L_{E,p,\ OW,24h}$: 185 dB		

Source: Summarised from Table ES3 (NOAA, 2024)

4.5 Summary

For Kennacraig, low frequency cetaceans TTS distances were modelled to be 3.2km based on ten hours of rock peckering activities. Rock breaking for the pipeline duplication project resulted in behavioural response for both low and high frequency cetaceans up to 270m away, based on two 4-hour durations.

Although the rock breaking activities are to be undertaken over a shorter period than Kennacraig, and likely to be predominantly undertaken intertidally (i.e. above MLWS), thus limiting underwater noise generation further, given acoustic properties of the site differ from those obtained in the underwater noise assessments, a precautionary distance of 1km has been assumed.

5 Sediments

Construction activities may result in temporary increases in suspended sediment within the water column, posing a hazard to filter feeding organisms. The basking shark (*Cetorhinus maximus*) is an obligate ram feeder, using its gill rakers to filter zooplankton from the water. High suspended sediment concentrations

[8] Southall, B.L., J.J. Finneran, C.J. Reichmuth, P.E. Nachtigall, D.R. Ketten, A.E. Bowles, W.T. Ellison, D.P. Nowacek, and P.L. Tyack. 2019. Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects. Aquatic Mammals 45(2): 125-232. https://doi.org/10.1578/AM.45.2.2019.125.

[9] NOAA, 2024. [online] Available at: 2024 Update to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 3.0): Underwater and In-Air Criteria for Onset of Auditory Injury and Temporary Threshold Shifts

[10] NOAA, 2025. Summary of recommended marine mammal protection act acoustic thresholds [online] Available at: NMFS Summary of Marine Mammal Acoustic Thresholds

(SSC) in the water column could detrimentally affect normal gill ventilation for respiration and filter-feeding, and it is possible that large, mobile planktivores, such as basking shark, will be disturbed by such conditions[11].

Remobilisation of sediments may also increase organic enrichment which could potentially affect basking shark indirectly, by influencing primary productivity and, therefore, prey abundance[12]. This may also disturb their natural behaviours. Basking shark are less sensitive to sound and are more likely to be disturbed by increases in SSC[13]. Though marine mammals are unlikely to be affected by increases in SSC, there is the potential for indirect effects through impacts to their prey.

Given no dredging is being undertaken as part of the works, increases in SSC are anticipated to be localised and temporary. Additionally, given the preference of basking shark to open coastal/pelagic areas with most records being within the wider Loch Fyne area[14] they are not anticipated to be present in the immediate vicinity of the site. Mitigation for SSC comprises limiting visible plumes to within 50m and given this is much smaller than the anticipated noise disturbance distance, impacts from increases in SSC are considered to be negligible.

6 Sensitive receptors

Tarbert Harbour does not lie within any designated sites; however, the Sound of Gigha Special Protection Area (SPA) is located 2.1km west of the Harbour, separated by a 1km strip of land. The site is designated for non-breeding greater northern diver (*Gavia immer)*, eider (*Somateria mollissima)*, Slavonian grebe (*Podiceps auritus)* and red-breasted merganser (*Mergus serrator)*. Though these are not themselves European protected species, they form part of the UK designated sites network and are highly mobile species. However, it is not anticipated these will be in the vicinity of the proposed works and have not been considered further.

The Upper Loch Fyne and Loch Goil Marine Protected Area (MPA) is located 15km north north-east of the Harbour, designated for burrowed mud, flame shell beds (*Limaria hians)*, horse mussel (*Modiolus modiolus)* beds and ocean quahog (*Arctica islandica)* aggregates. This MPA is considered sufficiently separated from the proposed works and has not been considered further under this risk assessment.

The Inner Hebrides and the Minches Special Area of Conservation (SAC), designated for harbour porpoise (*Phocoena phocoena)*, is located 15km south-west of the Harbour. This is separated from the proposed survey area by a 1km strip of land and the distance marine mammals would need to travel from the SAC to the proposed survey area boundary is approximately 140km. As such, this site has not been considered under this risk assessment.

From review of the data in Hague *et al*. (2020) and use of the Hebridean Whale and Dolphin Trust recent sightings data (HWDT, 2025), the following protected species are anticipated within the region:

- Grey seal (*Halichoerus grypus);*

[11] Rohner, C.A., Pierce, S.J., Marshall, A.D., Weeks, S.J., Bennett, M.B. and Richardson, A.J., 2013. Trends in sightings and environmental influences on a coastal aggregation of manta rays and whale sharks. Marine Ecology Progress Series, 482, pp.153-168.

[12] Wilson, C.M., Wilding, C.M. & Tyler-Walters, H., 2020. Cetorhinus maximus Basking shark. In Tyler-Walters H. and Hiscock K. (eds) Marine Life Information Network: Biology and Sensitivity Key Information Reviews, [on-line]. Plymouth: Marine Biological Association of the United Kingdom. DOI https://dx.doi.org/10.17031/marlinsp.1438.3

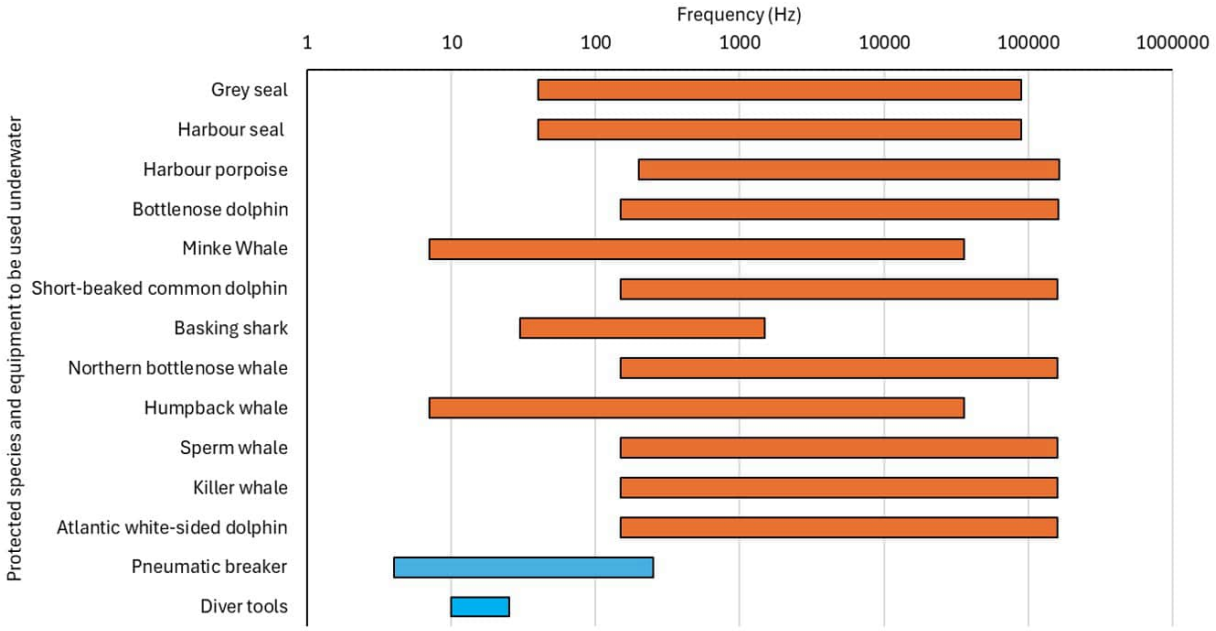
[13] Mott MacDonald, 2023. 105612-MMD-KE-ZZ-RP-O-0007-S2-P01-New Islay Vessel Enabling Works Kennacraig Dredge Dispersion Modelling Report

[14] NMPi. Basking shark incidental sightings and distribution in Scotland's seas [online] Available at: Marine Scotland - National Marine Plan Interactive

- Harbour seal (*Phoca vitulina)*;
- Harbour porpoise (*Phocoena Phocoena*);
- Bottlenose dolphin (*Tursiops truncatus)*;
- Minke whale (*Balaenoptera acutorostrata)*;
- Short-beaked common dolphin (*Delphinus delphis);*
- Basking shark (*Cetorhinus maximus);*
- Northern bottlenose whale (*Hyperoodon ampullatus)*;
- Humpback whale (*Megaptera novaeangliae)*;
- Sperm whale (*Physeter macrocephalus)*;
- Atlantic white-sided dolphin (*Lagenorhynchus acutus)*; and
- Orca (*Orcinus orca)*.

Given the variable nature and effort of sightings there may be other marine mammals in the region, although those listed above are deemed most likely to be apparent during the survey. All of these species are shown to have auditory ranges that overlap with the operating frequencies of the pneumatic breaker (see Figure 6.1). As such and with reference to the noise assessment (Section 3.3), these species are potentially at risk from disturbance or harm and require mitigation for the intended operations to proceed which is outlined in Section 7.

Figure 6.1: Hearing frequencies (Hz) of sensitive protected species receptors against underwater equipment operating frequencies.



Source: Adapted from Southall et al. (2019) and National Marine Fisheries Service (2024). Basking shark range from Chapuis et al. (2019). Borehole range obtained from Erbe & McPherson (2017).

7 Mitigation

Given the noise disturbance impacts are likely to be more in line with the pipeline duplication project, in order to prevent injury to any marine mammals or basking shark, best practice guidelines in the form of the Joint Nature Conservation Committee[15] (JNCC) guidelines for minimising the risk of injury to marine mammals from geophysical surveys and relevant sections of the Scottish Marine Wildlife Watching Code[16] shall be followed. These shall compromise the following mandatory aspects:

- Prior to commencing rock peckering and rock drilling works, a 1km and 500m zone around impulsive and continuous noise sources respectively shall be monitored for marine mammals, diving birds and basking sharks for 30 minutes in good daylight conditions (Beaufort Sea state 3 or less) by a suitably trained (JNCC methods) and dedicated[17] observer.
- Should marine mammals, diving birds or basking sharks be observed or acoustically detected, the start of operations shall be delayed until 20 minutes after the last sighting of the receptor within the monitoring zone (500m). Noting that non diving birds (i.e., those that are loafing) would not require a delay.
- Where possible equipment shall be soft started with either a ramp up in energy or gradual decreasing intervals between strikes over a period of 20-40 minutes duration.
- Activities which generate less noise shall precede the noisier activities.
- Vessels in transit and manoeuvring in coastal waters operating will be within speeds outlined by Maritime and Coastguard Agency's (MCAs) legislation and guidance[18].
- The SMWWC will also be adhered to during any vessel-based operations, measures include:
  - All vessels and equipment shall be well maintained and be inspected prior to use to minimise unnecessary noise.
  - Should a marine mammal or basking shark be encountered whilst underway outside of noise emitting operations, the vessel shall avoid sudden unpredictable changes in speed, direction, and engine noise.
  - The vessel shall seek to maintain a minimum of 100m separation unless directly approached whereupon the vessel shall maintain a steady speed and course whilst not presenting propellers to the approaching animal.
  - Where birds are observed to be rafting[19] the vessel shall avoid driving through the aggregated birds and maintain a 50m separation where practicable and safe to do so.
  - Where there are birds situated on the water, the vessel shall maintain a speed below 6 knots where safe to do so.

[15] JNCC. 2017. Guidelines for minimising the risk of injury to marine mammals from geophysical surveys (seismic survey guidelines) | JNCC Resource Hub. [online] Available at: https://hub.jncc.gov.uk/assets/e2a46de5-43d4-43f0-b296-c62134397ce4

[16] NatureScot, 2017. Scottish Marine Wildlife Watching Code [online] Available at: https://www.nature.scot/professional-advice/land-and-sea-management/managing-coasts-and-seas/scottish-marine-wildlife-watching-code

[17] For the periods of pre-clearance, the observer will have no other duties other than scanning to 500m zone. Though outside of this time they may undertake other roles.

[18] Maritime and Coastguard Agency, May 2014. Active marine guidance notes (MGNs) [Online] Available at: Active marine guidance notes (MGNs) - GOV.UK (www.gov.uk)

[19] Rafting is a behaviour where birds sit, often in groups, on the water close to their colony or nests.

8 Licence assessment justifications

Consistent with the EPS licence assessment process[20] the following section seeks to detail the necessary information to inform the three tests for approving a licence for an activity.

8.1 Licensable Purpose (Test 1)

In order for a licence to be issued the project must define how it relates to one of the purposes referred to in Regulation 44(2) of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). The project is intended to:

- Deliver a scheme which supports the economic and social development of the region creating business opportunities for local operators, both at the Water Sports & Activity Hub and on the water, fostering partnerships with local businesses, accommodation, and hospitality providers.
- Enable collaborations with local businesses to help attract more tourists and spending. Enhanced water access will offer safer, more enjoyable experiences for novices and individuals with disabilities.
- Provision of a new slipway will support launching and recovering leisure boats and small fishing vessels. Additional land will expand marina revenue, provide boat storage, and improve customer service through more parking and space.

As such it is considered that these intentions meet an imperative reason of overriding public interest from an economic and social nature with some benefit to the environment.

8.2 Assessment of Satisfactory Alternatives (Test 2)

The Project is considered to have potential impacts to EPS and as such, alternatives for this have been considered.

The works are intended to improve safety and access to the water. Consequently, the available alternative is to either:

1. Not undertake the works. This would have significant impact on social and economic development of the Harbour, which would also exacerbate pressures from projected population and service growth.
2. Use of noisier construction methods. Design choices have been sought to minimise or eliminate harmful noise and vibration effects adhering to the mitigation hierarchy, especially on sensitive species.

8.3 EPS Conservation Status Implications (Test 3)

Estimated density of the anticipated species that are in the estimated area of disturbance are detailed in Table 8.1 and should be used to inform the third test ensuring that the works will not be “detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.

The upper value of density estimates has been used for the calculations to identify a worst-case estimate for the number of individuals disturbed. Where this value is lower than the peak sightings recorded for the site, the peak sightings value has been used. Peak sightings for Atlantic white-sided dolphin, bottlenose dolphin, grey and harbour seals were obtained from the Sea Watch Foundation (2025). All other peak sightings were obtained from Hebridean Whale & Dolphin Trust (HWDT, 2025).

[20] See EPS licence guidelines (Marine Directorate, 2020)

No density estimates are available for sperm whale and orca, though SCANS IV surveys (Gilles et al., 2023) identified these as present during aerial surveys with a sighting rate being too low to determine abundance estimates. In addition, no density estimates were identified for humpback whale. The peak sightings have been taken in these instances.

Table 8.1: Estimated sightings densities and disturbance

Species	Density estimate (individuals km^{-2})	Peak sightings	Estimated number disturbed
Grey seal	0.000016[a]	1	1
Harbour seal	0.0048045084[a]	5	5
Harbour porpoise	0.336[b]	7	178
Bottlenose dolphin	0.060001 - 0.121000[c]	32	32
Minke Whale	0.027[b]	5	14
Basking shark	0.019275[d]	1	10
Short-beaked common dolphin	0.5[e]	25*	264*
Northern bottlenose whale	0.001[b]	10*	10*
Humpback whale	N/A	1	1
Sperm whale	N/A	1	1
Killer whale	N/A	10	10
Atlantic white-sided dolphin	0.0024[e]	22	22

Source: Density estimates obtained from: a) Carter et al., 2022; b) Hague et al., 2020; c) Hammond et al., 2021; d) Wave Action and The Wildlife Trusts (2003-2006); e) Gilles et al., 2023

*Note: Northern bottlenose whale habituates water depths of 500 – 1500m (Hague et al., 2020). It is likely that the species has been mis-identified, short-beaked common dolphin are also not often sighted in Scottish waters. If calculations were done based on density estimates as opposed to the peak sightings, number disturbed would be <1 individuals for both species.

9 Conclusion

The Project will provide social and economic benefits by providing enhanced water access to offer safer, more enjoyable experiences for novices and individuals with disabilities, as well as creating business opportunities for local operators, both at the Water Sports & Activity Hub and on the water, fostering partnerships with local businesses, accommodation, and hospitality providers.

Protected species anticipated to potentially be present at Tarbert Harbour comprise grey seal, harbour seal, harbour porpoise, bottlenose dolphin, minke whale, short-beaked common dolphin, basking shark, northern bottlenose whale, humpback whale, Atlantic white-sided dolphin, sperm whale and orca. However, most of these species are unlikely to approach the Project site given that it is within a functioning harbour, where there is already anthropogenic disturbance likely causing marine mammals and basking shark to avoid the area. In order to prevent any residual risk of injury of protected animals, mitigation measures have been recommended, including monitoring for any presence of marine mammals and basking shark before noise generating works and use of soft-starting. It is expected that a very small proportion of marine mammals and basking sharks could potentially be impacted in a small area for a relatively short duration, particularly when considering that some species may have been misidentified (Table 9.1). Though, with the mitigation in place, negligible impact is expected.

Consequently, in line with the EPS licensing Test 3, it is considered that the proposed works would not be "detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range".

Table 9.1: Abundance of protected species and number impacted

Species	Number of individuals impacted	Abundance
Grey seal	1	54,974[a]
Harbour seal	5	34,475[a]
Harbour porpoise	178	24,305[b]
Bottlenose dolphin	32	45[b]
Minke Whale	14	10,288[b]
Short-beaked common dolphin	264*	57,417[b]
Basking shark	10	N/A
Northern bottlenose whale	10*	4,809[c,d]
Humpback whale	1	N/A
Sperm whale	1	143[c]
Killer whale	10	15,014[e]
Atlantic white-sided dolphin	22	12,293[b]

Source: a) SCOS, 2024; b) IAMMWG, 2022; c) Gilles et al., 2023; d) abundance for beaked whales (all species) in the SCANS IV survey area; e) Jourdain et al., 2019 *As noted above, northern bottlenose whale habituates water depths of 500 – 1500m (Hague et al., 2020). It is likely that the species has been mis-identified, short-beaked common dolphin are also not often sighted in Scottish waters. If calculations were done based on density estimates as opposed to the peak sightings, number disturbed would be <1 individuals for both species.

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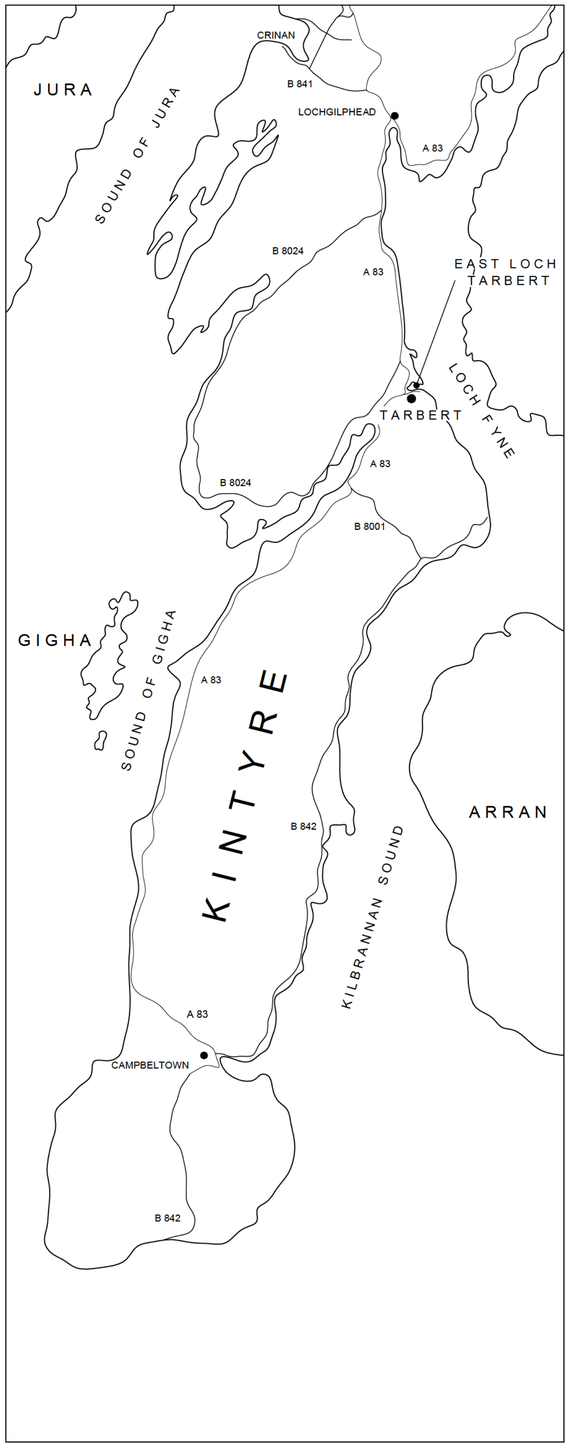
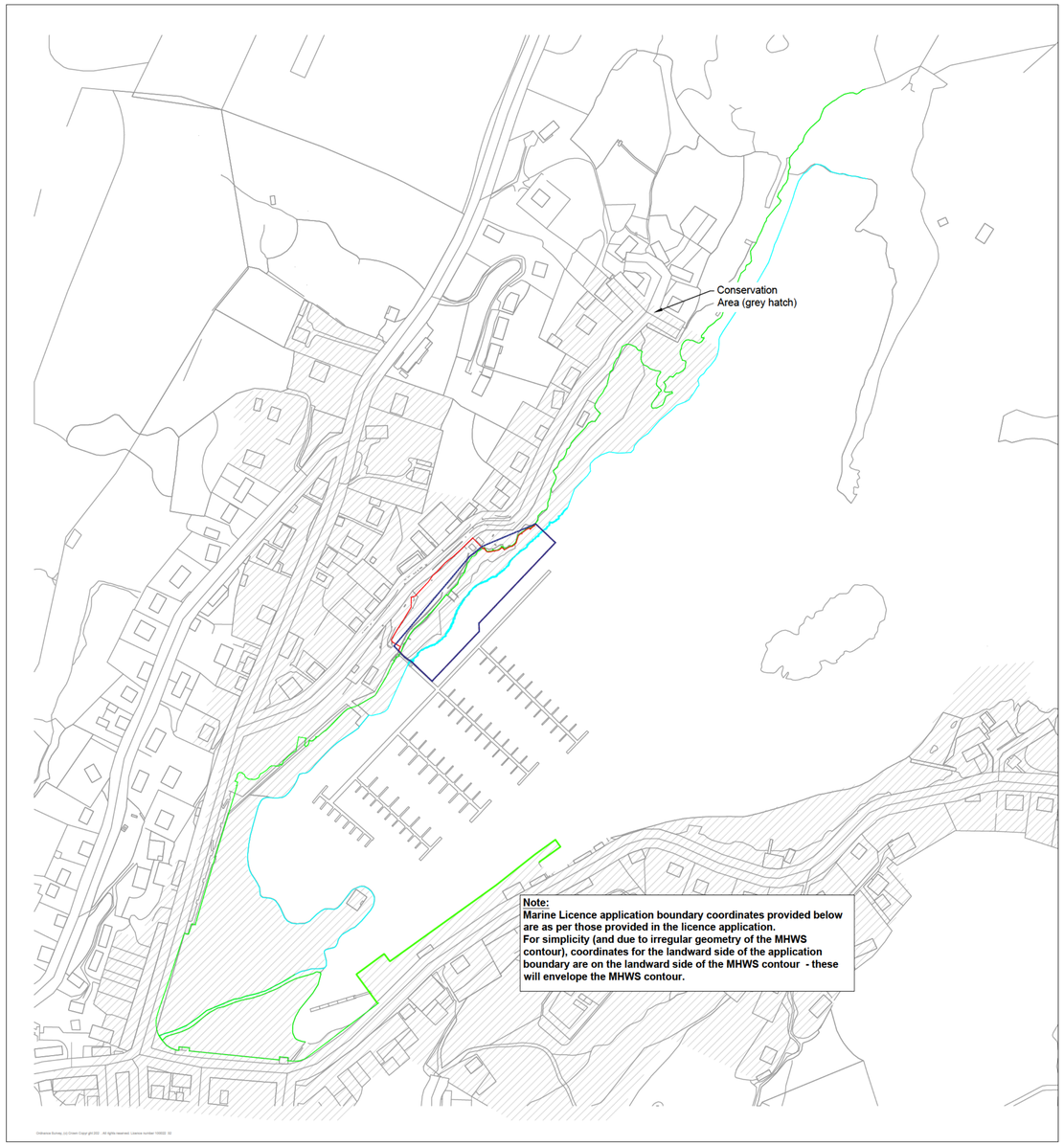
Appendices

A. Project drawings



Kintyre Peninsula

NTS



Site Extent - Maritime Works

Scale 1:2500

Latitude and Longitude co-ordinates (WGS84) defining the extent of the activity (continue on Appendix 01 Additional Co-ordinates form if necessary):

Latitude	Longitude
55° 51.983' N	005° 24.669' W
55° 52.008' N	005° 24.661' W
55° 52.011' N	005° 24.661' W
55° 52.051' N	005° 24.597' W
55° 52.060' N	005° 24.619' W
55° 52.048' N	005° 24.662' W
55° 52.043' N	005° 24.673' W
55° 52.000' N	005° 24.731' W
55° 51.944' N	005° 24.732' W

1:2500 0 125m 250m

Notes

1. All dimensions are in millimetres (mm) unless noted otherwise.
2. Levels are in metres relative to Chart Datum (CD) unless otherwise noted.
3. The drawing shall not be scaled. FOLLOW WRITTEN DIMENSIONS ONLY.

Key to symbols

- Site Boundary
- Marine Licence Application Boundary
- Mean Low Water Springs (MLWS) Contour
- Mean High Water Springs (MHWS) Contour

Reference drawings

Topographic & Bathymetric Survey:
A9639_Composite_CD Aspect Survey
Survey Date 15.07.2025

Rev	Date	Drawn	Description	Ch'k'd	App'd
P02	31/10/2025	LM	For Information	DB	
P01	24/10/2025	LM	For Information	DB	

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Tarbert (Loch Fyne) Harbour Authority
Harbour Office
Garval Road
Tarbert
PA29 6TR

Tarbert Harbour 1912 THE HEART OF THE HERITAGE VILLAGE

Title

Tarbert Harbour Regeneration
Access Slipway and Car Park
Marine Licence - Site Extent

Designed	D Brunner	DB	Eng check		
Drawn	L Marini	LM	Coordination		
Dwg check	D Brunner	DB	Approved		

Scale at A1	Status	Rev	Security
As Shown	PRE	P02	STD

Drawing Number

107065-MMD-01-XX-SK-C-0192

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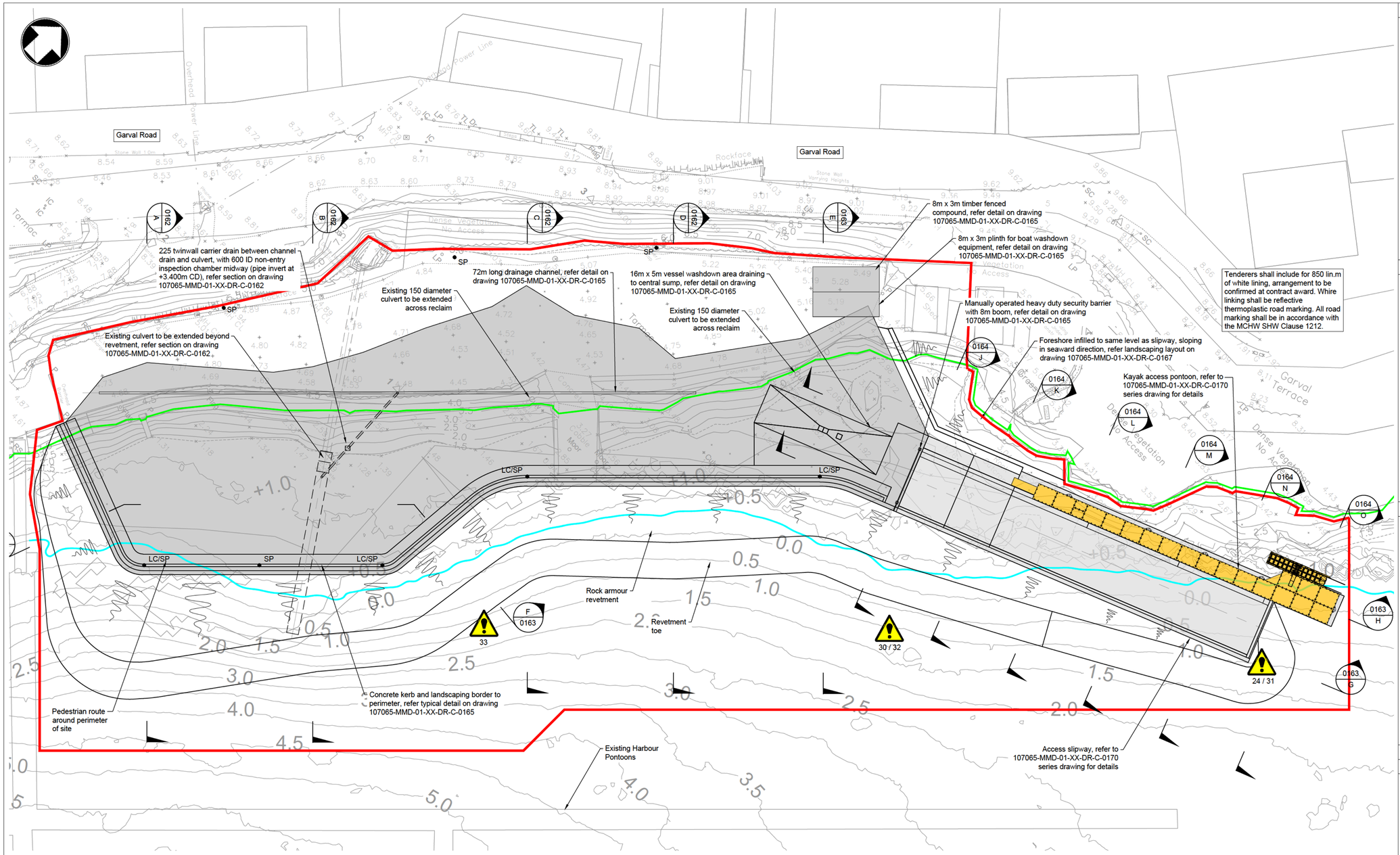

Notes

1. This drawing shall be read in conjunction with all parts of the Works Information.
2. Works shall be executed in accordance with the Specification and as set out in the Works Information.
3. The Contractor shall verify all dimensions, elevations, coordinates, and site conditions prior to execution. The Project Manager shall be notified immediately of any discrepancies encountered during execution.
4. All dimensions are in millimetres (mm) unless noted otherwise.
5. Levels are in metres relative to Chart Datum (CD) unless otherwise noted.
6. The drawing shall not be scaled. FOLLOW WRITTEN DIMENSIONS ONLY.
7. Details of existing structures and services have been taken from available record drawings and may not be complete in every detail. Details to be confirmed by the Contractor.
8. Dimensions marked with an asterix (*) shall be confirmed on site by the Contractor.
9. Access for harbour operations shall be maintained at all times. Harbour operations shall not be disrupted by the Contractor.
10. The Contractor is responsible for the temporary and permanent stability of the Works and adjacent structures during construction and shall implement necessary supports, monitor regularly, and address stability issues immediately.
11. Refer to the Site Information for tidal conditions and levels anticipated at Tarbert. The Contractor shall be responsible for determining the tidal conditions affecting the works and planning their works accordingly. Actual water levels can vary substantially due to meteorological conditions and other effects.
12. The Contractor shall be responsible for maintaining the seabed free of debris and obstructions within the working areas.

Key to symbols

- Site Boundary
- Mean High Water Springs (MHWS) Contour
- Mean Low Water Springs (MLWS) Contour
- Hardstanding/Car Park (Extension and Upgrade)
- Slipway
- Kayak Access Pontoon
- LC/SP — Lighting Column (LC) / Shore Power & Water Outlet (SP)

Reference drawings

107065-MMD-01-XX-DR-C-0150 Series	Site Location Drawings
107065-MMD-01-XX-DR-C-0160 Series	General Arrangement & Sections
107065-MMD-01-XX-DR-C-0170 Series	Slipway Structure
107065-MMD-01-XX-DR-M-0180 Series	Mechanical, Electrical & Lighting

Site Location Drawings:

107065-MMD-01-XX-DR-C-0160	General Arrangement
107065-MMD-01-XX-DR-C-0161	Downtakings and Demolitions
107065-MMD-01-XX-DR-C-0162	Sections and Elevations (Sht. 1 of 3)
107065-MMD-01-XX-DR-C-0163	Sections and Elevations (Sht. 2 of 3)
107065-MMD-01-XX-DR-C-0164	Sections and Elevations (Sht. 3 of 3)
107065-MMD-01-XX-DR-C-0165	Standard Details
107065-MMD-01-XX-DR-C-0166	Proposed Construction Sequence
107065-MMD-01-XX-DR-C-0167	Setting Out

Topographic & Bathymetric Survey:
A9639_Composite_CD Aspect Survey
Survey Date 15.07.2025

Rev	Date	Drawn	Description	Ch'k'd	App'd
P01	29/09/2025	LM	For Tender	DB	MR

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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

It is a requirement that only experienced and competent contractors carry out the work described, using a recognised safe method of working. The following are specific significant residual risks identified by the designer and are additional to those hazards/risks normally associated with this type of work.

CONSTRUCTION:

Refer 107065-MMD-01-XX-DR-C-0160, 0170 & 0180 series drawings.

Hazard Ref.	Activity/material/ process/element	Key	Hazard Description	Hazard Ref.	Activity/material/ process/element	Key	Hazard Description
24	Use (as workplace)	24	Vessel collision with fixed infrastructure.	32	Use (as workplace)	32	Marine growth in intertidal and submerged zone on slipway reducing vehicle and pedestrian grip/traction.
30	Use (as workplace)	30	Unauthorised or accidental vehicle access to slipway, with vehicle becoming stuck or immersed in seawater.	33	Use (as workplace)	33	Access onto rock revetment.
31	Use (as workplace)	31	Vehicle reversing off end of slipway.				

General Arrangement
Scale 1:250

1:250 0 12.5m 25m

Client
Tarbert (Loch Fyne) Harbour Authority
Harbour Office
Garval Road
Tarbert
PA29 6TR

Tarbert Harbour — THE HEART OF THE HERITAGE VILLAGE

Title
Tarbert Harbour Regeneration
Access Slipway and Car Park
General Arrangement

Designed	D Brunner	DB	Eng check	A Currie	AC
Drawn	L Marini	LM	Coordination	D Brunner	DB
Dwg check	D Brunner	DB	Approved	M Ross	MR

Scale at A1	Status	Rev	Security
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Drawing Number
107065-MMD-01-XX-DR-C-0160

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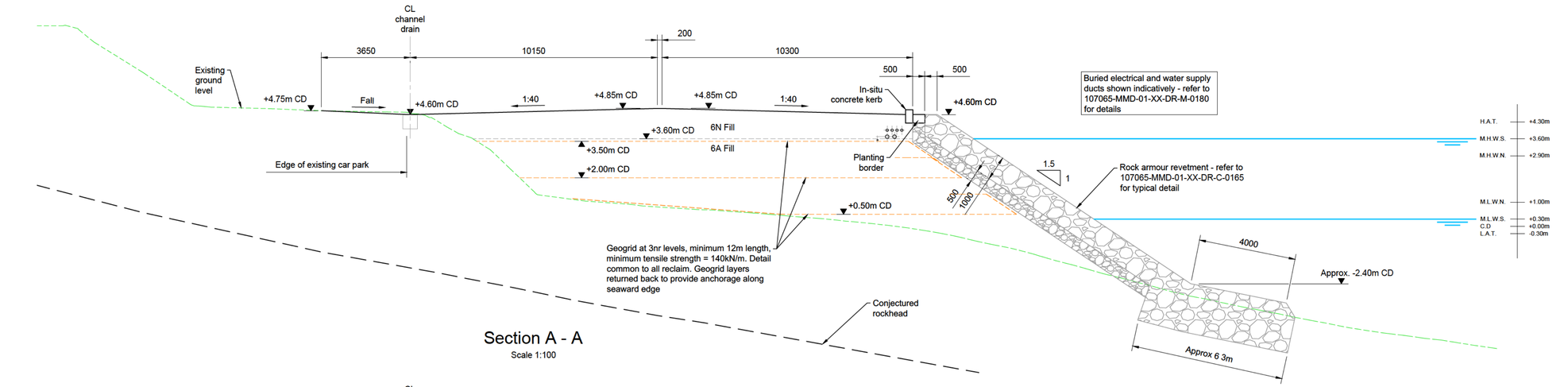

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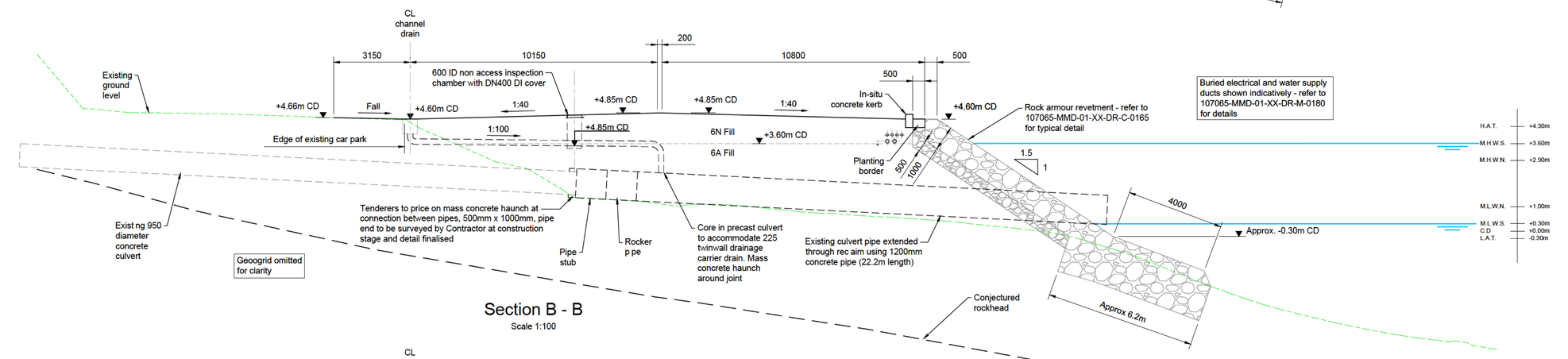

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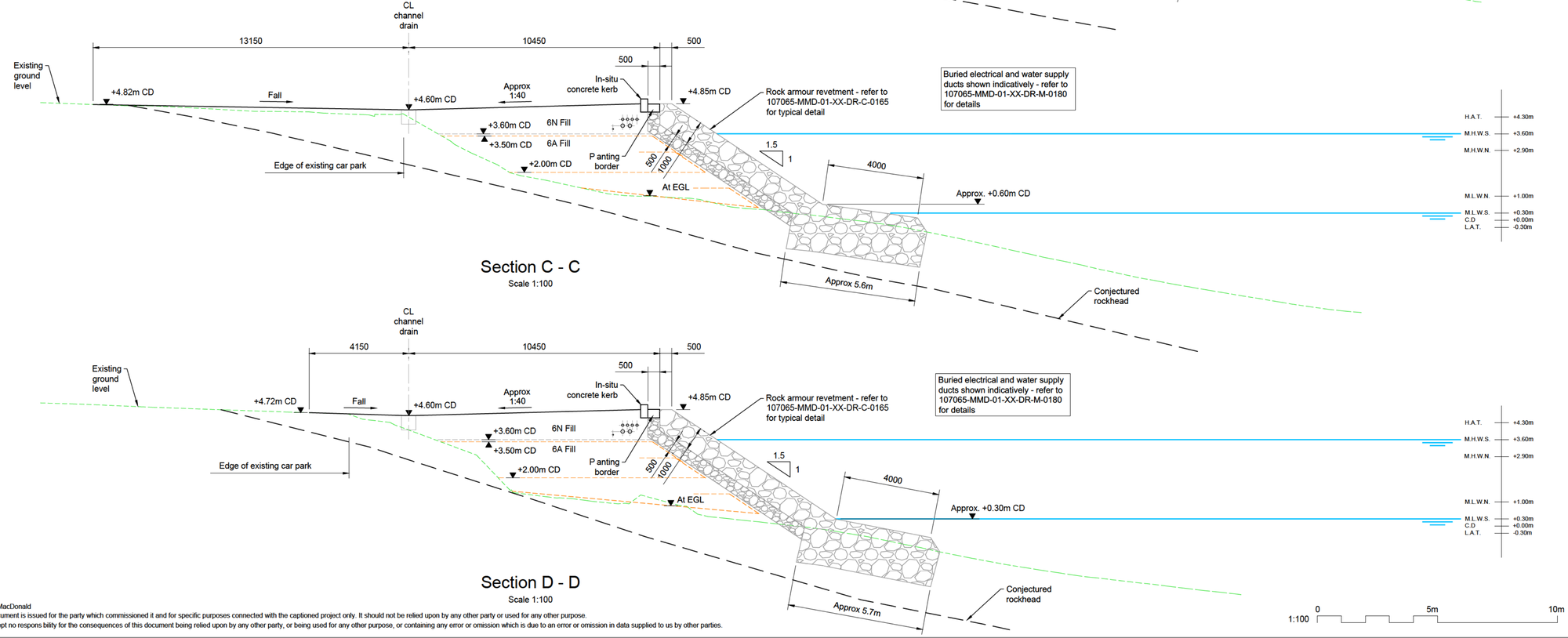

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Section D - D
Scale 1:100

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Notes

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Key to symbols

- Existing Ground Level
- Cojectured Rockhead Level
- Geogrid
- Water Level
- Primary Rock Armour (HMA 300/1000)
- Secondary Rock Armour (LMA 15/300)

Reference drawings

107065-MMD-01-XX-DR-C-0150 Series	Site Location Drawings
107065-MMD-01-XX-DR-C-0160 Series	General Arrangement & Sections
107065-MMD-01-XX-DR-C-0170 Series	Slipway Structure
107065-MMD-01-XX-DR-M-0180 Series	Mechanical, Electrical & Lighting

General Arrangement Drawings:

107065-MMD-01-XX-DR-C-0160	General Arrangement
107065-MMD-01-XX-DR-C-0161	Downtakings and Demolitions
107065-MMD-01-XX-DR-C-0162	Sections (Sheet 1 of 3)
107065-MMD-01-XX-DR-C-0163	Sections (Sheet 2 of 3)
107065-MMD-01-XX-DR-C-0164	Sections (Sheet 3 of 3)
107065-MMD-01-XX-DR-C-0165	Standard Details
107065-MMD-01-XX-DR-C-0166	Construction Sequence

Topographic & Bathymetric Survey:
A9639_Composite_CD Aspect Survey
Survey Date 15.07.2025

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	29/09/2025	LM	For Tender	DB	MR

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Harbour Office
Garval Road
Tarbert
PA29 6TR

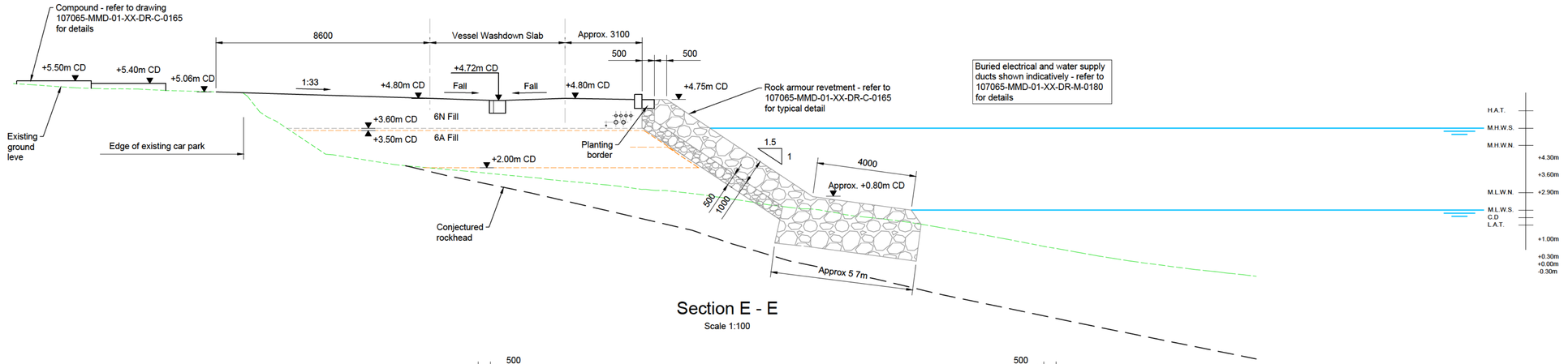
Tarbert Harbour
THE HEART OF THE HERITAGE VILLAGE

Title
Tarbert Harbour Regeneration Access Slipway and Car Park Sections (Sheet 1 of 3)

Designed	D Brunner	DB	Eng check	A Currie	AC
Drawn	L Marini	LM	Coordination	D Brunner	DB
Dwg check	D Brunner	DB	Approved	M Ross	MR

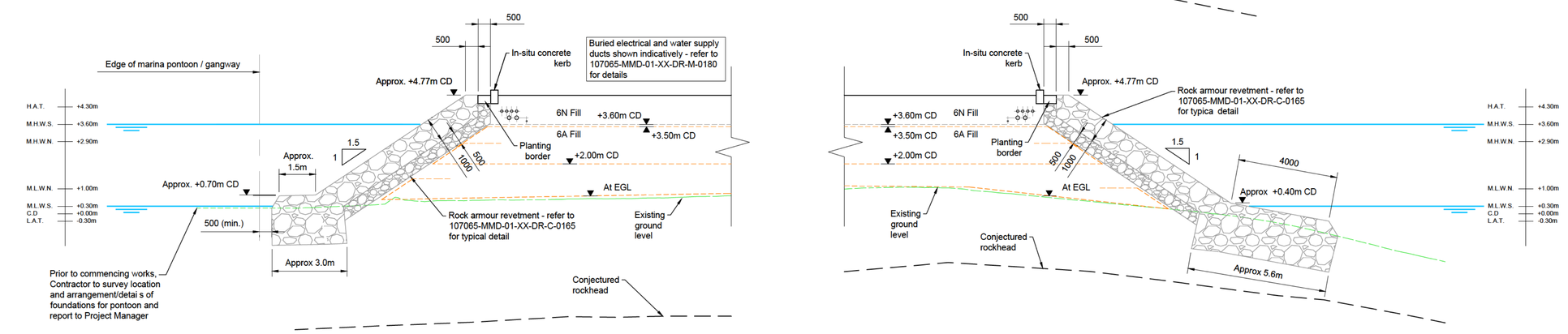
Scale at A1	Status	Rev	Security
1:100	TEN	0	STD

Drawing Number
107065-MMD-01-XX-DR-C-0162



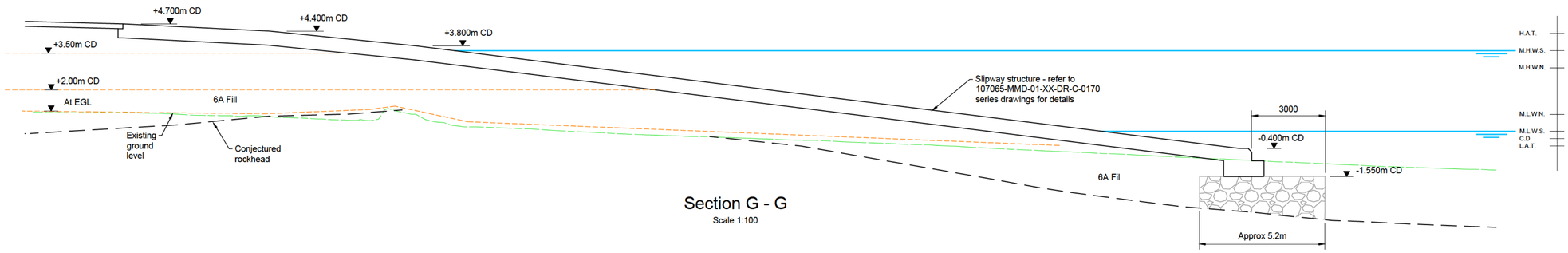
Section E - E

Scale 1:100



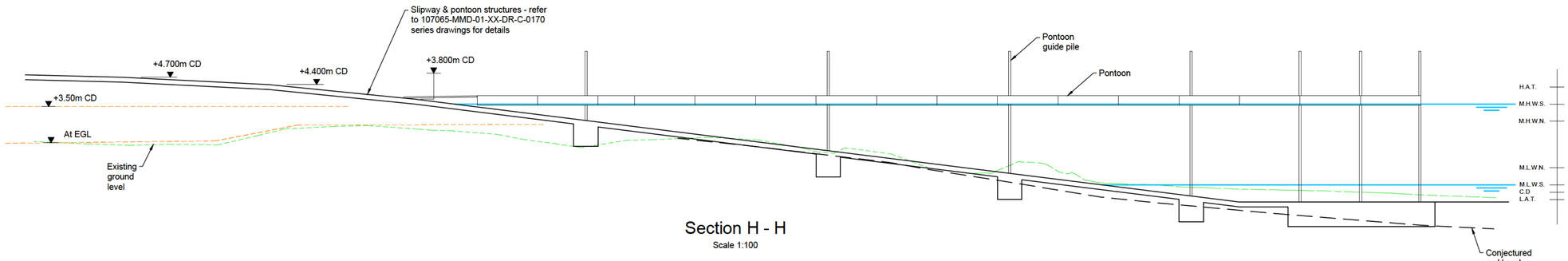
Section F - F

Scale 1:100



Section G - G

Scale 1:100



Section H - H

Scale 1:100

0 5m 10m
1:100

C:\Users\bru58260\Mott MacDonald\Tarbert (LF) Marine Consultancy Services - Do (2)\Develop\3. Option Development\3.0 Drawings\DWG (Working)\SLIPWAY (TENDER)\107065-MMD-01-XX-DR-C-0160 to 0164 0.dwg Sep 29, 2025 - 2:17PM BRU58260

Notes

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- Cojectured Rockhead Level
- Geogrid
- Water Level
- Primary Rock Armour (HMA 300/1000)
- Secondary Rock Armour (LMA 15/300)

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107065-MMD-01-XX-DR-C-0170 Series	Slipway Structure
107065-MMD-01-XX-DR-M-0180 Series	Mechanical, Electrical & Lighting

General Arrangement Drawings:

107065-MMD-01-XX-DR-C-0160	General Arrangement
107065-MMD-01-XX-DR-C-0161	Downtakings and Demolitions
107065-MMD-01-XX-DR-C-0162	Sections (Sheet 1 of 3)
107065-MMD-01-XX-DR-C-0163	Sections (Sheet 2 of 3)
107065-MMD-01-XX-DR-C-0164	Sections (Sheet 3 of 3)
107065-MMD-01-XX-DR-C-0165	Standard Details
107065-MMD-01-XX-DR-C-0166	Construction Sequence

Topographic & Bathymetric Survey:
A9639_Composite_CD Aspect Survey
Survey Date 15.07.2025

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	29/09/2025	LM	For Tender	DB	MR

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Harbour Office
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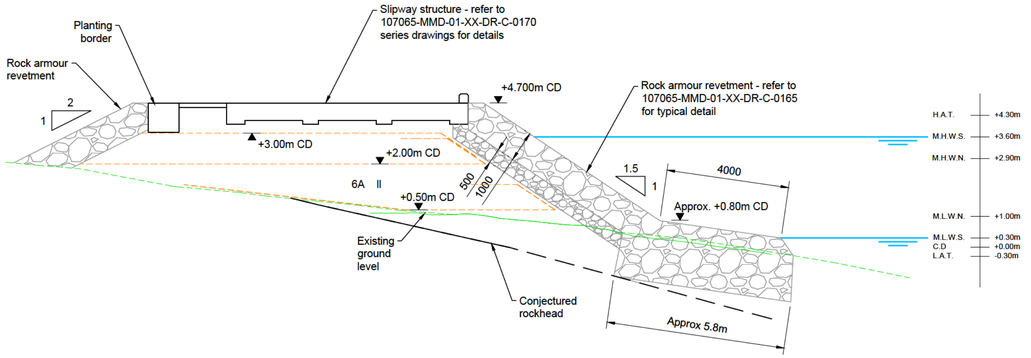
Tarbert
PA29 6TR

Title
Tarbert Harbour Regeneration
Access Slipway and Car Park
Sections (Sheet 2 of 3)

Designed	D Brunner	DB	Eng check	A Currie	AC
Drawn	L Marini	LM	Coordination	D Brunner	DB
Dwg check	D Brunner	DB	Approved	M Ross	MR

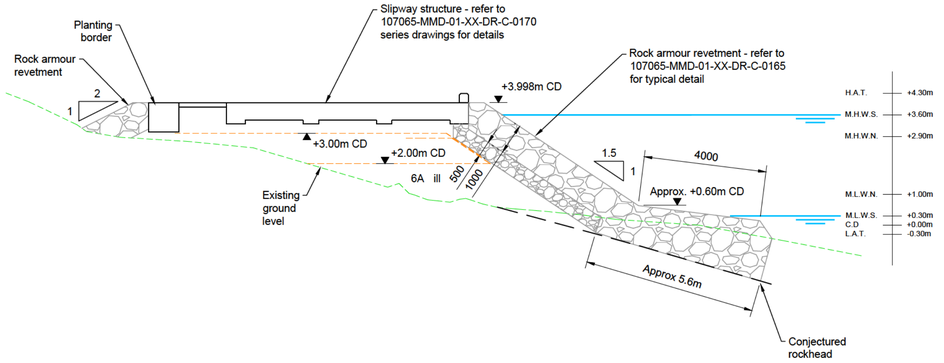
Scale at A1	Status	Rev	Security
1:100	TEN	0	STD

Drawing Number
107065-MMD-01-XX-DR-C-0163



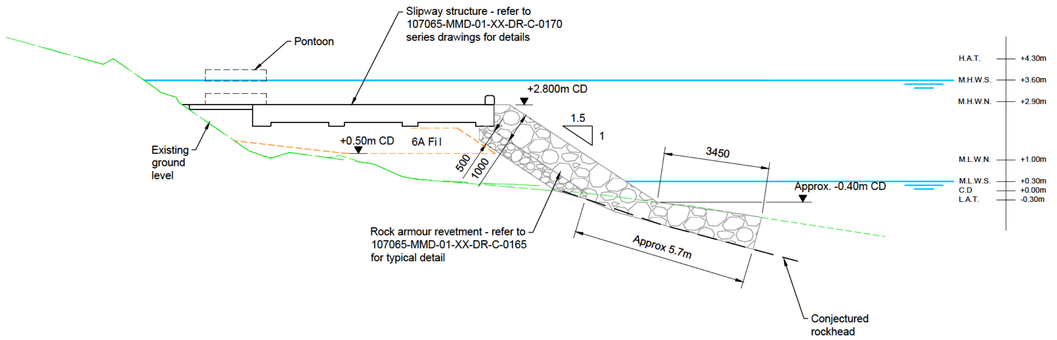
Section J - J

Scale 1:100



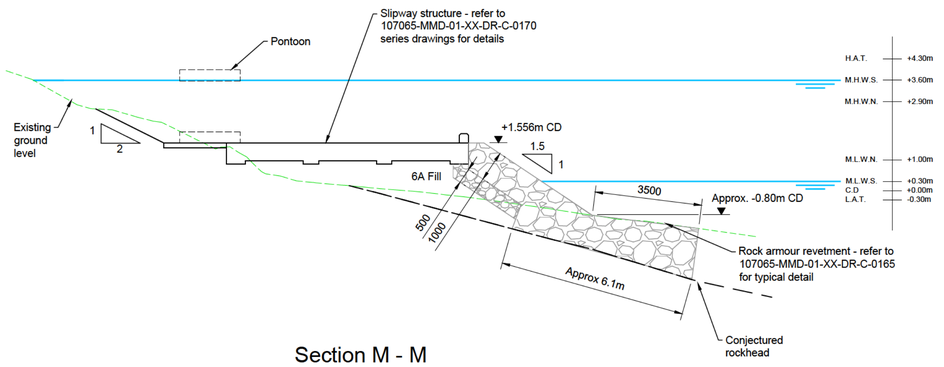
Section K - K

Scale 1:100



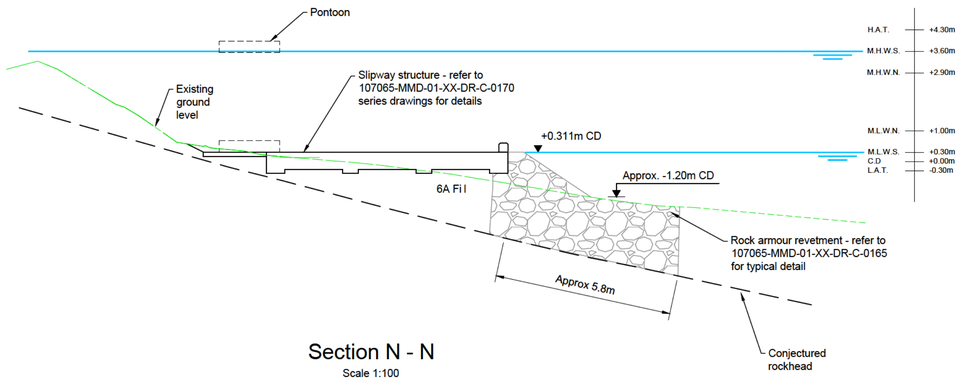
Section L - L

Scale 1:100



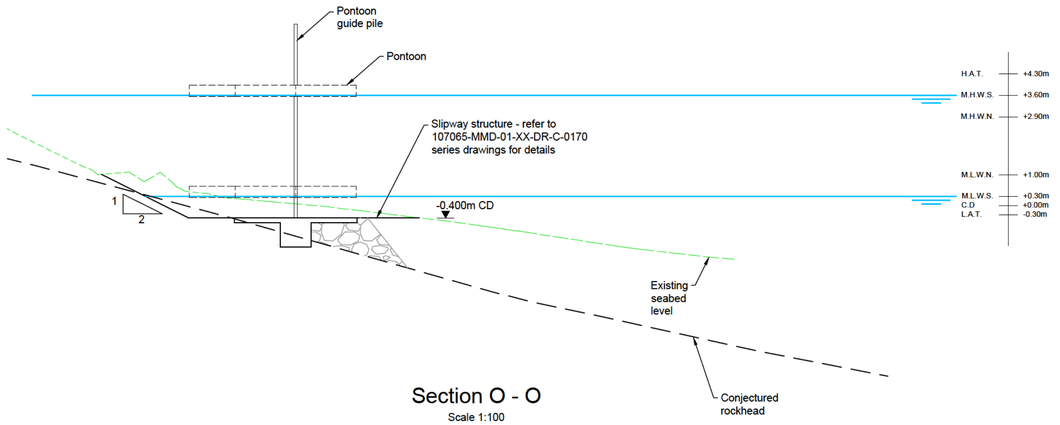
Section M - M

Scale 1:100



Section N - N

Scale 1:100



Section O - O

Scale 1:100

1:100 0 5m 10m

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Notes

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107065-MMD-01-XX-DR-C-0150 Series	Site Location Drawings
107065-MMD-01-XX-DR-C-0160 Series	General Arrangement & Sections
107065-MMD-01-XX-DR-C-0170 Series	Slipway Structure
107065-MMD-01-XX-DR-M-0180 Series	Mechanical, Electrical & Lighting

General Arrangement Drawings:

107065-MMD-01-XX-DR-C-0160	General Arrangement
107065-MMD-01-XX-DR-C-0161	Downtakings and Demolitions
107065-MMD-01-XX-DR-C-0162	Sections (Sheet 1 of 3)
107065-MMD-01-XX-DR-C-0163	Sections (Sheet 2 of 3)
107065-MMD-01-XX-DR-C-0164	Sections (Sheet 3 of 3)
107065-MMD-01-XX-DR-C-0165	Standard Details
107065-MMD-01-XX-DR-C-0166	Construction Sequence

Topographic & Bathymetric Survey:
A9639_Composite_CD Aspect Survey
Survey Date 15.07.2025

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	29/09/2025	LM	For Tender	DB	MR

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Tarbert
PA29 6TR

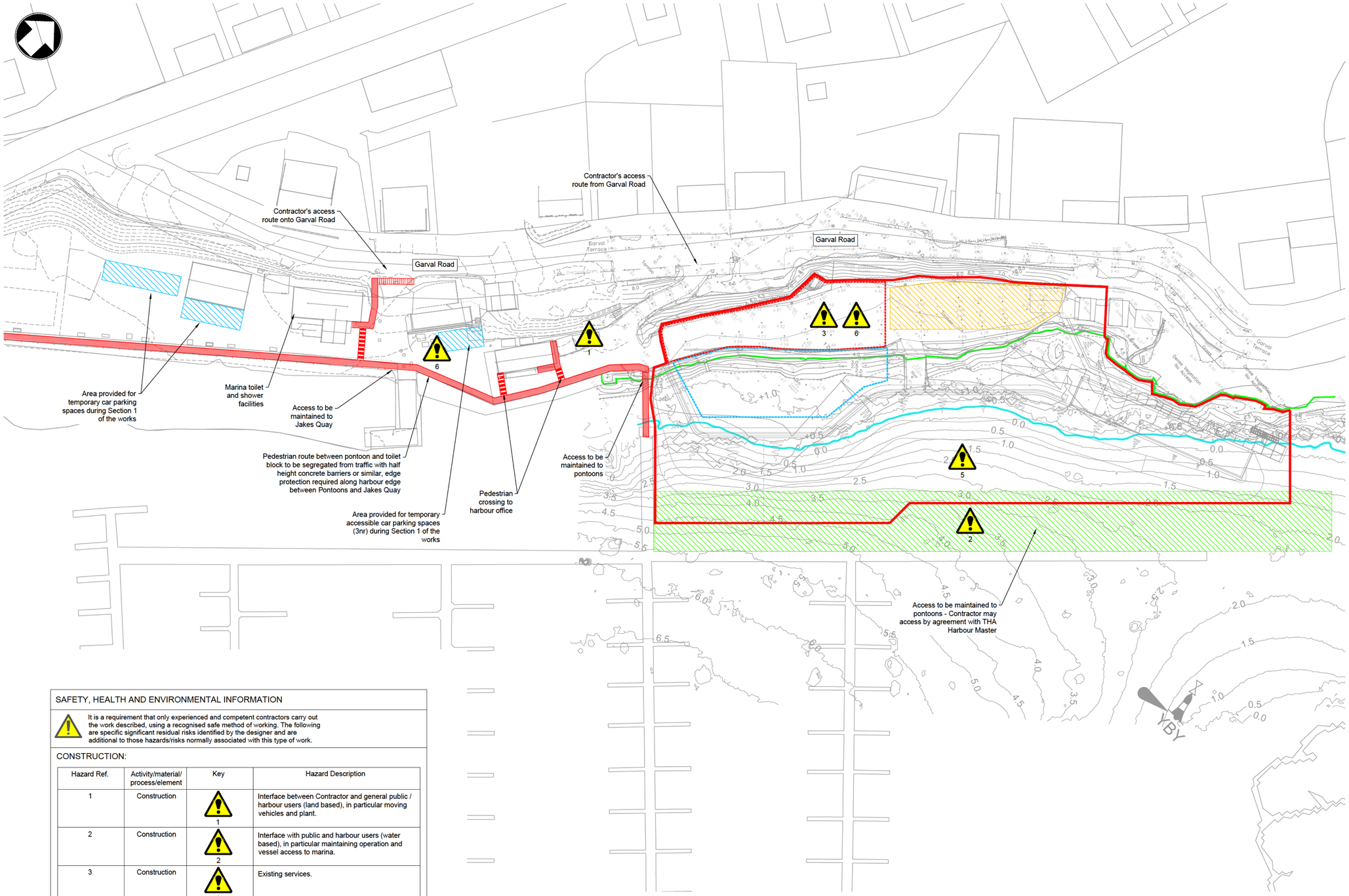
Tarbert Harbour 1912 THE HEART OF THE HERITAGE VILLAGE

Title
Tarbert Harbour Regeneration Access Slipway and Car Park Sections (Sheet 3 of 3)

Designed	D Brunner	DB	Eng check	A Currie	AC
Drawn	L Marini	LM	Coordination	D Brunner	DB
Dwg check	D Brunner	DB	Approved	M Ross	MR

Scale at A1	Status	Rev	Security
1:100	TEN	0	STD

Drawing Number
107065-MMD-01-XX-DR-C-0164



Site Boundary and Working Areas - Sections 1 & 2

Scale 1:500

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

It is a requirement that only experienced and competent contractors carry out the work described, using a recognised safe method of working. The following are specific significant residual risks identified by the designer and are additional to those hazards/risks normally associated with this type of work.

CONSTRUCTION:

Hazard Ref.	Activity/material/ process/element	Key	Hazard Description
1	Construction	1	Interface between Contractor and general public / harbour users (land based), in particular moving vehicles and plant.
2	Construction	2	Interface with public and harbour users (water based), in particular maintaining operation and vessel access to marina.
3	Construction	3	Existing services.
5	Construction	5	Submerged structures / tidal working
6	Construction	6	Unknown weight restrictions on existing structures

OPERATIONS:

Refer 107065-MMD-01-XX-DR-C-0160, 0170 & 0180 series drawings.

MAINTENANCE:

Refer 107065-MMD-01-XX-DR-C-0160, 0170 & 0180 series drawings.

Notes

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Key to symbols

- Site Boundary
- Outline of the Works
- Site Boundary (Section 1 of the works)
- Site Boundary (Section 2 of the works)
- Mean High Water Springs (MHWS) Contour
- Mean Low Water Springs (MLWS) Contour
- Access by agreement with THA Harbour Master
- Temporary Parking (Section 1 of works)
- Contractor Laydown & Compound Area
- Pedestrian Route
- Pedestrian Crossing

Reference drawings

107065-MMD-01-XX-DR-C-0150 Series	Site Location Drawings
107065-MMD-01-XX-DR-C-0160 Series	General Arrangement & Sections
107065-MMD-01-XX-DR-C-0170 Series	Slipway Structure
107065-MMD-01-XX-DR-M-0180 Series	Mechanical, Electrical & Lighting

Site Location Drawings:

107065-MMD-01-XX-DR-C-0150	Site Location
107065-MMD-01-XX-DR-C-0151	Topographic & Bathymetric Survey
107065-MMD-01-XX-DR-C-0152	Existing Site Layout
107065-MMD-01-XX-DR-C-0153	Site Boundary & Working Areas (1 of 2)
107065-MMD-01-XX-DR-C-0154	Site Boundary & Working Areas (2 of 2)

Topographic & Bathymetric Survey:
A9639_Composite_CD Aspect Survey
Survey Date 15.07.2025

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	29/09/2025	LM	For Tender	DB	MR

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Tarbert Harbour
THE HEART OF THE HERITAGE VILLAGE

Title

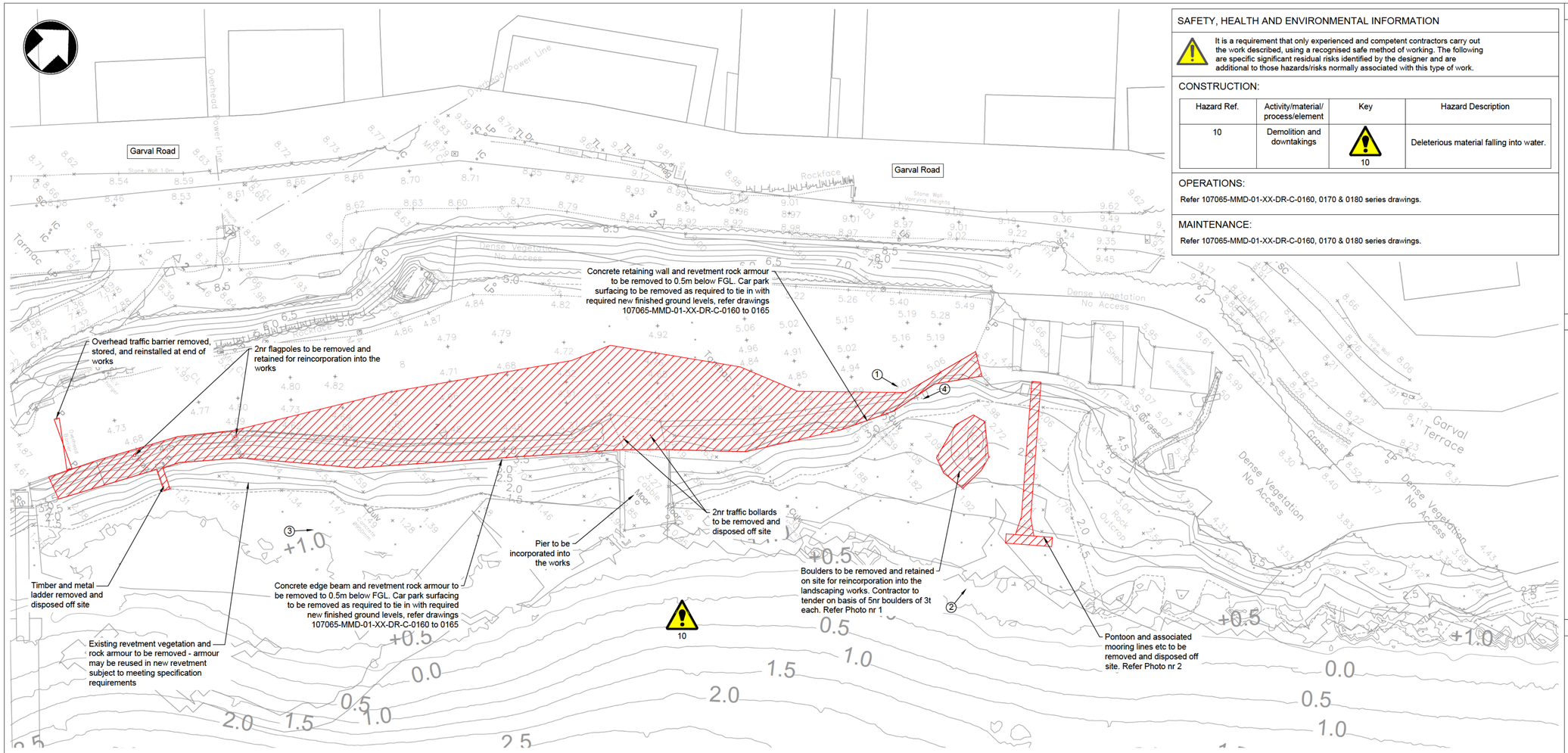
Tarbert Harbour Regeneration
Access Slipway and Car Park
Site Boundary and Working Areas
Sheet 1 of 2

Designed	D Brunner	DB	Eng check	A Currie	AC
Drawn	L Marini	LM	Coordination	D Brunner	DB
Dwg check	D Brunner	DB	Approved	M Ross	MR

Scale at A1	Status	Rev	Security
1:500	TEN	0	STD

Drawing Number
107065-MMD-01-XX-DR-C-0153

1:500 0 25m 50m



General Arrangement - Downtakings and Demolitions

Scale 1:250

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

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CONSTRUCTION:

Hazard Ref.	Activity/material/ process/element	Key	Hazard Description
10	Demolition and downtakings	10	Deleterious material falling into water.

OPERATIONS:

Refer 107065-MMD-01-XX-DR-C-0160, 0170 & 0180 series drawings.

MAINTENANCE:

Refer 107065-MMD-01-XX-DR-C-0160, 0170 & 0180 series drawings.

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Key to symbols

Approx. footprint of items for demolition/downtaking

Approx. photograph location and reference

Reference drawings

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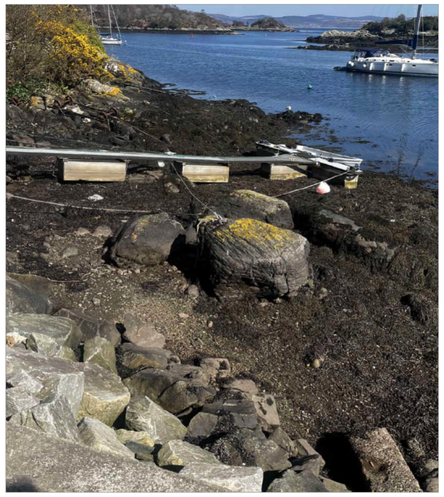
107065-MMD-01-XX-DR-C-0160	General Arrangement
107065-MMD-01-XX-DR-C-0161	Downtakings and Demolitions
107065-MMD-01-XX-DR-C-0162	Sections and Elevations (Sht. 1 of 3)
107065-MMD-01-XX-DR-C-0163	Sections and Elevations (Sht. 2 of 3)
107065-MMD-01-XX-DR-C-0164	Sections and Elevations (Sht. 3 of 3)
107065-MMD-01-XX-DR-C-0165	Standard Details
107065-MMD-01-XX-DR-C-0166	Proposed Construction Sequence
107065-MMD-01-XX-DR-C-0167	Setting Out

Topographic & Bathymetric Survey:
A9639_Composite_CD Aspect Survey
Survey Date 15.07.2025



Photograph Nr.1 (11/04/2025): Boulders on Foreshore

Photograph Nr.2 (11/04/2025): Pontoon

Photograph Nr.3 (11/04/2025): Revetment

Photograph Nr.4 (11/04/2025): Retaining Wall

1:250 0 12.5m 25m

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	29/09/2025	LM	For Tender	DB	MR

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Title

Tarbert Harbour Regeneration
Access Slipway and Car Park
Downtakings and Demolitions

Designed	D Brunner	DB	Eng check	A Currie	AC
Drawn	L Marini	LM	Coordination	D Brunner	DB
Dwg check	D Brunner	DB	Approved	M Ross	MR

Scale at A1	Status	Rev	Security
1:250	TEN	0	STD

Drawing Number
107065-MMD-01-XX-DR-C-0161

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(Working)\SLIPWAY (TENDER)\107065-MMD-01-XX-DR-C-0161 0.dwg Sep 29, 2025 - 1:42PM BRU58260