

# **Tarbert (Loch Fyne) Harbour Authority**

Access Slipway and Car Park: Intertidal Survey  
Report

October 2025

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October 2025

# Issue and Revision Record

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# Contents

<b>Introduction</b>	<b>1</b>
1.1 Scheme background	1
1.2 Survey aim	1
<b>2 Methodology</b>	<b>3</b>
2.1 Survey	3
2.2 Limitations	3
<b>3 Results</b>	<b>4</b>
3.1 Intertidal habitats within the site	4
3.2 Pontoon/ subtidal	7
3.3 Additional locations <i>Ascophyllum nodosum</i> ecad <i>mackayi</i> recorded	7
3.4 Summary	9
<b>4 Discussion</b>	<b>11</b>
4.1 Sea loch egg wrack beds	11
4.1.1 Potential effects of the scheme	12
<b>5 Mitigation</b>	<b>13</b>
<b>Appendices</b>	<b>16</b>
<b>A. Development drawings</b>	<b>17</b>
<b>B. Habitat Map</b>	<b>20</b>
<b>C. <i>Ascophyllum nodosum</i> ecad <i>mackayi</i> extent</b>	<b>22</b>
<b>D. Nature Scot consultation</b>	<b>24</b>
<b>Tables</b>	
Table 2.1: Tide Times Tarbert Harbour	3
Table 4.1: Summary of biotopes and species observed	9

## Figures

Figure .1: Proposed development	1
Figure .2: Site location plan	2
Figure 3.1: Rocky shore habitat in northern end	4
Figure 3.2: Littoral zone facing south from the north end of site	4
Figure 3.3: <i>A. nodosum</i> ecad <i>mackayi</i>	5
Figure 3.4: Slipway, facing west from the intertidal area	5
Figure 3.5: <i>A. nodosum</i> ecad <i>mackayi</i> located between the slipway and pontoon	6
Figure 3.6: Outfall	6
Figure 3.7: <i>S. lacerata</i> , <i>M. edulis</i>	7
Figure 3.8: Ascidiacea	7
Figure 3.9: Extent of <i>A. nodosum</i> ecad <i>mackayi</i> (green areas)	8
Figure 3.10: Facing north towards Tarbert Harbour	9
Figure 3.11: Facing south south-east towards Harbour Street	9
Figure 3.12: Facing east from the A83 and Harbour Street junction	9
Figure 4.1: Distribution of ecad <i>mackayi</i> (beach form) on the mainland of Scotland and the isles of Skye, Mull and Arran	11

Mott MacDonald has been commissioned by Tarbert (Loch Fyne) Harbour Authority (THA) to undertake an intertidal walkover survey for a proposed development on the north side of Tarbert Harbour, in Tarbert, Scotland (shown in Figure 1.1, Proposed Development drawings are provided in Appendix A).

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The Proposed Development is for the extension of an existing car park (via land reclamation) and construction of an adjacent concrete slipway for sea-sports and vessel access to and from the sea. The land reclaim shall be used to provide additional car parking or vessel dry berthing capacity dependant on season. Installation of a kayak / seasports access pontoon is also included in the proposals.

The focus area for the survey, herein referred to as the 'site', is highlighted in red on Figure 1.2 which encompasses the foreshore intertidal area in the immediate area of the proposed development.

The aim of the survey was to characterise the intertidal species present, provide an informative assessment of the range of coastal biotopes in the area and identify any Features of Conservation Importance (FOCI) or Priority Marine Features (PMFs) present.

Figure 1.2: Site location plan



Source: Mott MacDonald, 2025.

## 2 Methodology

### 2.1 Survey

An intertidal walkover survey was undertaken on 27<sup>th</sup> August 2025 by suitably qualified marine ecologists from Mott MacDonald, using the following best practice guidance:

- Joint Nature Conservation Committee (JNCC) Marine Monitoring Handbook<sup>1</sup>.
- The JNCC Handbook for Phase 1 Habitat Survey, a Technique for Environmental Audit<sup>2</sup>.

Marine habitat codes adopted from the Marine Habitat Classification for Britain and Ireland<sup>3</sup> are used to describe the biotopes observed during the survey, and the SACFOR<sup>4</sup> abundance scale utilised to record the cover/density of species identified<sup>5</sup>. The survey commenced two hours before the low tide. This approach ensures safe access to the upper and lower littoral areas. The survey focussed on mapping the lowest section during the ebbing tide, up-until the point when low tide occurred, and then focussed on the upper extent as the flood tide came in (see Table 2.1 for tide times).

**Table 2.1: Tide Times Tarbert Harbour**

Date	Low tide time	Height above chart datum (m)	High tide time	Height above chart datum (m)
27 <sup>th</sup> August 2025	8.46am	0.38	4.00pm	3.31

Source: WillyWeather<sup>6</sup>

In addition, photographs of the wider bay were taken to provide context to the directly surveyed area.

### 2.2 Limitations

Ecological surveys represent a snapshot of conditions at the time of the survey and are limited to factors which affect the presence of species, such as time of year, migration patterns and behaviour. With a single site visit and non-systematic survey approach it is possible that cryptic fauna and complex species may be underrepresented.

Species were identified to the lowest possible level by eye and as such, some species have only been represented at a family level. Given no samples were taken, the infaunal community and quality of habitats has not been assessed.

The overall extent of the *Ascophyllum nodosum* ecad *mackayi* habitat throughout Tarbert harbour (outside of the survey area boundary) has been derived from photographs, as such this is considered an approximation of the wider habitat extent.

<sup>1</sup> Davies et al., 2001. Marine Monitoring Handbook [Online] Available at: [Marine Monitoring Handbook: Procedural Guidelines \(PG 4-5. Using photographic identification techniques\)](#)

<sup>2</sup> JNCC, 2010. Handbook for Phase 1 habitat survey – a technique for environmental audit [Online] Available at: [Handbook for Phase 1 habitat survey](#)

<sup>3</sup> JNCC, 2010. Marine Habitat Classification for Britain and Ireland. [Online] Available at: [JNCC Marine Habitat Classification](#)

<sup>4</sup> Super-abundant, Abundant, Common, Frequent, Occasional, Rare, Present

<sup>5</sup> JNCC, 1990. SACFOR abundance scale used for both littoral and sublittoral taxa from 1990 onwards [online] Available at: [sacfor.pdf](#)

<sup>6</sup> WillyWeather, 2025. Tides in Tarbert (Argyll and Bute) [Online] Available at: [Tarbert \(Argyll and Bute\) Tide Times, Argyll and Bute PA29 6 - WillyWeather](#)

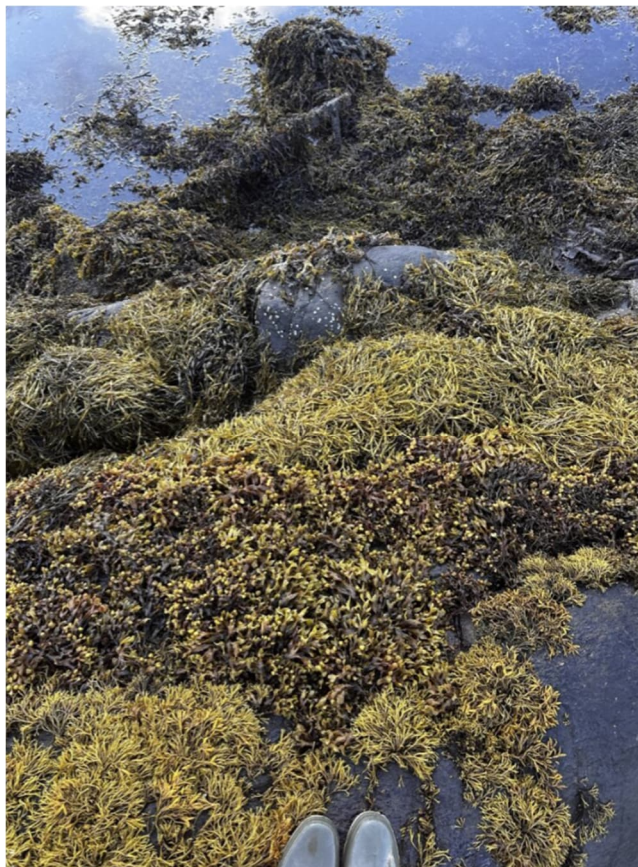
## 3 Results

Descriptions of the habitats identified during the walkover survey have been outlined in the following sections, their locations are provided in the habitat map (Appendix B).

### 3.1 Intertidal habitats within the site

The upper littoral zone in the north end of the site featured rocky shore, with the splash zone characterised by white, orange (*Caloplaca* spp) and green lichens. Below this, the upper littoral was dominated by bands of channel wrack (*Pelvetia canaliculata*) and spiralled wrack (*Fucus spiralis*), forming the biotope ***Pelvetia canaliculata* on sheltered littoral fringe rock LR.LLR.F.Pel** (Figure 3.1). The mid littoral comprised bladder wrack (*Fucus vesiculosus*), egg wrack (*Ascophyllum nodosum*) and wrack siphon weed (*Vertebrata lanosa*). The invasive modest barnacle (*Austrominus modestus*), native common rock barnacle (*Semibalanus balanoides*), and *Littorina* spp were also identified. The biotope of the mid littoral therefore comprised **Fucoids on sheltered marine shores LR.LLR.F**. The lower littoral comprised the biotope ***Fucus serratus* on full salinity lower eulittoral mixed substrata LR.LLR.F.Fserr.X**, featuring Serrated wrack (*Fucus serratus*) and egg wrack. These habitats were also identified directly adjacent to the south of the slipway, also featuring horned wrack (*Fucus ceranoides*) (O).

Figure 3.1: Rocky shore habitat in northern end



Source: Mott MacDonald, 2025

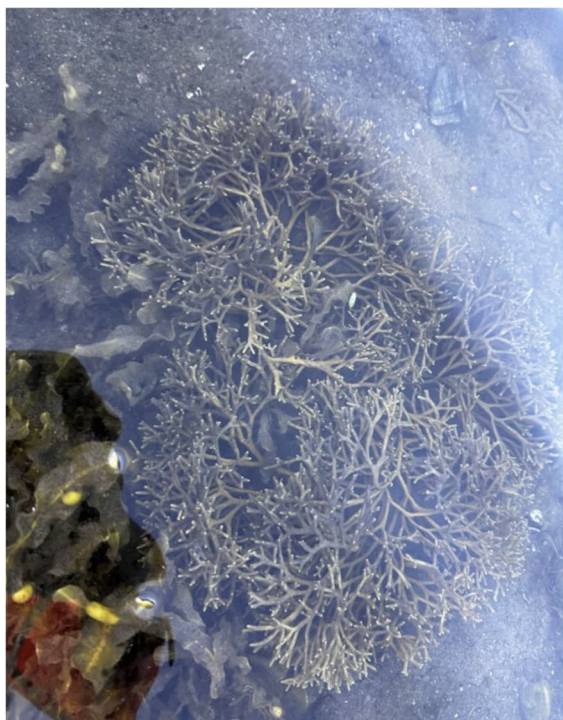
Figure 3.2: Littoral zone facing south from the north end of site



Source: Mott MacDonald, 2025

South of the rocky shore, between this and the slipway, the littoral zone comprised a mixed sediment of muddy gravels with boulders. Boulders on the upper littoral featured yellow lichen, with barnacles (*A. modestus* and *S. balanoides*) and *Littorina* spp in sheltered crevices. The upper littoral featured the biotope **Fucoids in variable salinity LR.LLR.FVS** (Figure 3.2). Egg wrack (*A. nodosum*) (A) and bladder wrack (*F. vesiculosus*) (C) were noted on cobbles throughout the mid to lower littoral, along with barnacles (*A. modestus* and *S. balanoides*), common limpet (*Patella vulgata*) and *Littorina* spp. The catworm (*Nephtys hombergii*) and casts, likely lugworm (*Arenicola marina*), were also noted within the muddy substrate at the lower littoral. Additionally, the non-attached growth form of egg wrack (*Ascophyllum nodosum* ecad *mackayi*) (O) was identified (Figure 3.3) extending from the mid to lower littoral. As such the biotope comprises **Ascophyllum nodosum ecad mackayi beds on extremely sheltered mid eulittoral mixed substrata LR.LLR.FVS.Ascmac**. Note, this habitat is a designated Habitat of Principal Importance (HPI)<sup>7</sup>, Habitat of Conservation interest (HCI), Annex 1 habitat<sup>8</sup>, UK Biodiversity Action Plan (BAP)<sup>9</sup> habitat and Priority Marine Feature (PMF)<sup>10</sup>.

**Figure 3.3: *A. nodosum* ecad mackayi**



Source: Mott MacDonald, 2025

**Figure 3.4: Slipway, facing west from the intertidal area**



Source: Mott MacDonald, 2025

The small pontoon off the car park comprises **littoral rock LR**, featuring blue mussel (*Mytilus edulis*) (C), common limpet (*P. vulgata*) (R), dog whelk (*Nucella lapillus*) (R) and barnacles (*A. modestus* and *S. balanoides*) (O) (Figure 3.4). The mid to lower littoral in front of the pontoon featured egg wrack (*A. nodosum*) (C), bladder wrack (*F. vesiculosus*) (A), serrated wrack (*F.*

<sup>7</sup> Habitats listed under section 2(4) of the Nature Conservation (Scotland) Act 2004 [online] Available at: [The Habitats Directive and Habitats Regulations | NatureScot](#)

<sup>8</sup> Habitats Directive [The Habitats Directive and Habitats Regulations | NatureScot](#)

<sup>9</sup> UK biodiversity framework [online] Available at: [UK Biodiversity Framework | JNCC Resource Hub](#)

<sup>10</sup> [Priority Marine Features - Marine environment - gov.scot](#)

*serratus*) (F). The habitat here comprised ***Ascophyllum nodosum* on full salinity mid eulittoral mixed substrata LR.LLR.F.Asc.X.**

The upper littoral was characterised by channel wrack (*Pelvetia canaliculata*) and spiralled wrack (*Fucus spiralis*), with bladder wrack and horned wrack (*F. ceranoides*) extending below this, comprising **Fucoids on sheltered marine shores LR.LLR.F.**

The intertidal area to the south of the slipway was characterised by egg wrack (*A. nodosum*), its non-attached growth form (*ecad mackayi*) and serrated and spiralled wracks (*F. serratus* and *spiralis*), extending from the mid to lower littoral (Figure 3.5). This also comprised the designated habitat ***Ascophyllum nodosum ecad mackayi* beds on extremely sheltered mid eulittoral mixed substrata LR.LLR.FVS.Ascmac.**

**Figure 3.5: *A. nodosum ecad mackayi* located between the slipway and pontoon**



Source: Mott MacDonald, 2025

**Figure 3.6: Outfall**



Source: Mott MacDonald, 2025

An outfall (Figure 3.6) was located about halfway between the slipway and pontoon (TN1) on the upper littoral, horned wrack (*F. ceranoides*) (A), a tubular green seaweed (*Ulva* spp., likely *Blidingia* spp. or tubular *Ulva* spp.) (O), bladder wrack (*F. vesiculosus*) (C), egg wrack (*A. nodosum*) (S), spiralled wrack (*F. spiralis*) (F) and the non-attached growth form of egg wrack (*A. nodosum ecad mackayi*) (R).

South of the pontoon, the rocky substrate of the upper littoral comprised ***Pelvetia canaliculata* on sheltered littoral fringe rock LR.LLR.F.Pel** and gravelly mud substrate forming the biotope **Fucoids on sheltered marine shores LR.LLR.F.** The lower littoral comprised the designated habitat ***Ascophyllum nodosum ecad mackayi* beds on extremely sheltered mid eulittoral mixed substrata LR.LLR.FVS.Ascmac.**

### 3.2 Pontoon/ subtidal

The area of the pontoon in front of the car park and slipway was surveyed to check for any subtidal FOCI that may be present.

The fountain anemone (*Sagartia lacerata*), blue mussel (*M. edulis*), tunicates (Ascidiacea) and kelp (*Laminaria* spp.) were identified on the pontoon and mooring buoys (Figure 3.7 and Figure 3.8).

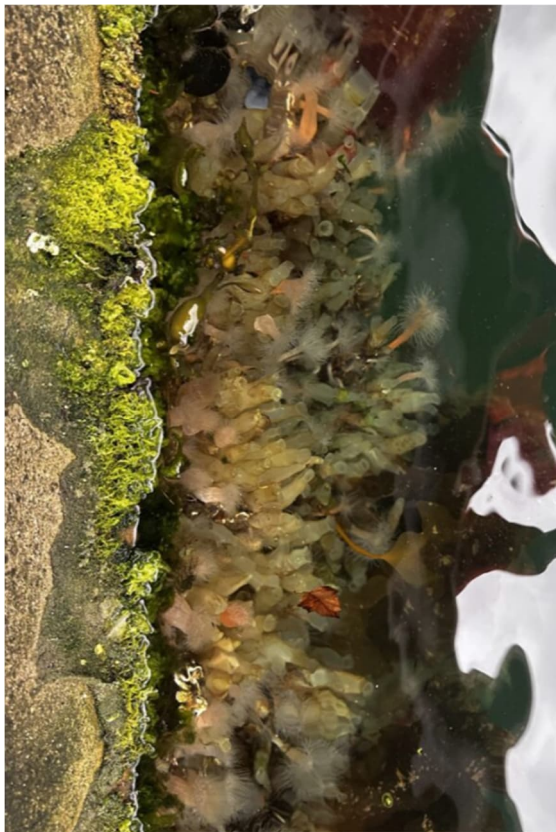
Green algae were also noted along the pontoon, likely *Ulva* spp.

**Figure 3.7: *S. lacerata*, *M. edulis***



Source: Mott MacDonald, 2025

**Figure 3.8: Ascidiacea**



Source: Mott MacDonald, 2025

### 3.3 Additional locations *Ascophyllum nodosum* ecad *mackayi* recorded

Incidental sightings of *Ascophyllum nodosum* ecad *mackayi* were photographed within the wider harbour area. These photos were utilised to map out the approximate boundaries of the priority marine feature (PMF) to provide potential context of its wider prevalence.

Generally, it appears the habitat is widespread throughout the southern extent of the harbour. The total area within Tarbert harbour identified during the survey<sup>11</sup> is estimated to be 1.08Ha, with 0.1Ha located within the area of the Proposed Development.

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<sup>11</sup> Note: this value is likely to be higher as only the southern area of the harbour was incidentally recorded.

The map showing the approximate extent of the habitat is provided in Appendix C, with an extract given in Figure 3.9. Photographs of the habitat are provided below (Figure 3.10, Figure 3.11 and Figure 3.12).

**Figure 3.9: Extent of *A. nodosum* ecad *mackayi* (green areas)**



Source: Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS user community.

**Figure 3.10: Facing north towards Tarbert Harbour**



Source: Mott MacDonald, 2025

**Figure 3.11: Facing south south-east towards Harbour Street**



Source: Mott MacDonald, 2025

**Figure 3.12: Facing east from the A83 and Harbour Street junction**



Source: Mott MacDonald, 2025

### 3.4 Summary

A summary of the biotopes and associated species observed within the survey areas have been outlined in Table 3.1.

**Table 3.1: Summary of biotopes and species observed**

Area	Biotope	Associated species observed
Upper littoral	<i>Pelvetia canaliculata</i> on sheltered littoral fringe rock LR.LLR.F.Pel	<ul style="list-style-type: none"><li>Channel wrack (<i>Pelvetia canaliculata</i>)</li><li>Spiralled wrack (<i>Fucus spiralis</i>)</li></ul>

Area	Biotope	Associated species observed
	Fucoids in variable salinity LR.LLR.FVS	<ul style="list-style-type: none"> <li>• Modest barnacle (<i>Austrominus modestus</i>)</li> <li>• Common rock barnacle (<i>Semibalanus balanoides</i>)</li> <li>• <i>Littorina</i> spp</li> </ul>
	Fucoids on sheltered marine shores LR.LLR.F	<ul style="list-style-type: none"> <li>• Channel wrack (<i>Pelvetia canaliculata</i>)</li> <li>• Spiralled wrack (<i>Fucus spiralis</i>)</li> <li>• Bladder wrack (<i>Fucus vesiculosus</i>)</li> <li>• Horned wrack (<i>Fucus ceranoides</i>)</li> <li>• Tubular green seaweed (<i>Ulva</i> sp., likely <i>Blidingia</i> spp. or tubular <i>Ulva</i> spp.)</li> <li>• Egg wrack (<i>Ascophyllum nodosum</i>)</li> <li>• <i>Ascophyllum nodosum</i> ecad <i>mackayi</i></li> </ul>
Mid littoral	Fucoids on sheltered marine shores LR.LLR.F	<ul style="list-style-type: none"> <li>• Bladder wrack (<i>Fucus vesiculosus</i>)</li> <li>• Egg wrack (<i>Ascophyllum nodosum</i>)</li> <li>• Wrack siphon weed (<i>Vertebrata lanosa</i>)</li> <li>• Horned wrack (<i>Fucus ceranoides</i>)</li> <li>• Modest barnacle (<i>Austrominus modestus</i>)</li> <li>• Common rock barnacle (<i>Semibalanus balanoides</i>)</li> <li>• <i>Littorina</i> spp</li> </ul>
	Littoral rock LR	<ul style="list-style-type: none"> <li>• Blue mussel (<i>Mytilus edulis</i>)</li> <li>• Common limpet (<i>Patella vulgata</i>)</li> <li>• Dog whelk (<i>Nucella lapillus</i>)</li> <li>• Modest barnacle (<i>Austrominus modestus</i>)</li> <li>• Common rock barnacle (<i>Semibalanus balanoides</i>)</li> <li>• <i>Littorina</i> spp</li> </ul>
Lower littoral	<i>Fucus serratus</i> on full salinity lower eulittoral mixed substrata LR.LLR.F.Fserr.X	<ul style="list-style-type: none"> <li>• Serrated wrack (<i>Fucus serratus</i>)</li> <li>• Egg wrack (<i>Ascophyllum nodosum</i>)</li> <li>• Bladder wrack (<i>Fucus vesiculosus</i>)</li> </ul>
Mid to lower littoral	<i>Ascophyllum nodosum</i> ecad <i>mackayi</i> beds on extremely sheltered mid eulittoral mixed substrata LR.LLR.FVS.Ascmac	<ul style="list-style-type: none"> <li>• Egg wrack (<i>A. nodosum</i>)</li> <li>• <i>Ascophyllum nodosum</i> ecad <i>mackayi</i></li> <li>• Bladder wrack (<i>F. vesiculosus</i>)</li> <li>• Modest barnacle (<i>Austrominus modestus</i>)</li> <li>• Common rock barnacle (<i>Semibalanus balanoides</i>)</li> <li>• Common limpet (<i>Patella vulgata</i>)</li> <li>• Catworm (<i>Nephtys hombergii</i>)</li> <li>• Lugworm (<i>Arenicola marina</i>)</li> </ul>
	<i>Ascophyllum nodosum</i> on full salinity mid eulittoral mixed substrata LR.LLR.F.Asc.X	<ul style="list-style-type: none"> <li>• Serrated wrack (<i>Fucus serratus</i>)</li> <li>• Egg wrack (<i>Ascophyllum nodosum</i>)</li> <li>• Bladder wrack (<i>Fucus vesiculosus</i>)</li> </ul>
Sublittoral (pontoon)	N/A	<ul style="list-style-type: none"> <li>• Fountain anemone (<i>Sagartia lacerata</i>)</li> <li>• Blue mussel (<i>M. edulis</i>)</li> <li>• Tunicates (Ascidacea)</li> <li>• Kelp (<i>Laminaria</i> spp)</li> <li>• Tubular green seaweed (<i>Ulva</i> sp., likely <i>Blidingia</i> spp. or tubular <i>Ulva</i> spp.)</li> </ul>

## 4 Discussion

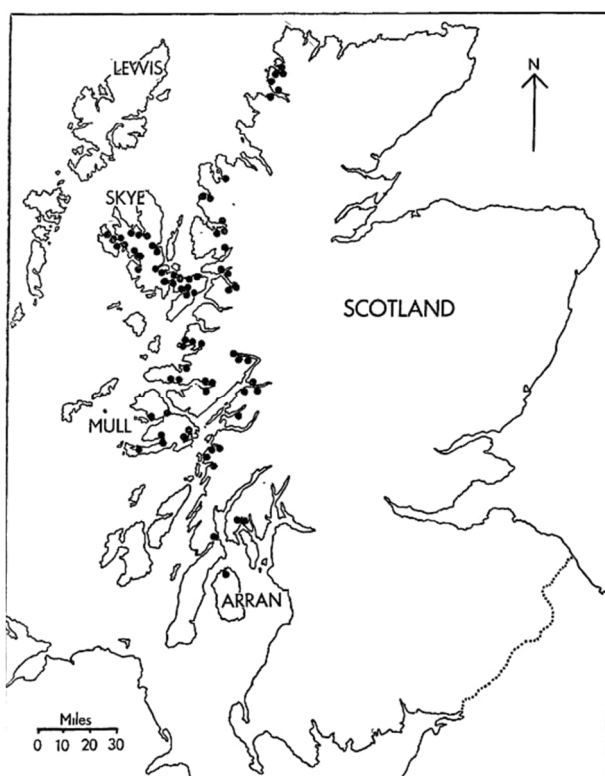
### 4.1 Sea loch egg wrack beds

In very sheltered areas, such as sea lochs, a detached variety of common egg wrack (*A. nodosum*) forms unattached, often bladderless, distinct ball shaped masses in the mid to upper tide zone which are classified as *Ascophyllum nodosum* ecad *mackayi*. These aggregate across low-angled shores, found along the west coast of Scotland from Loch Sween to Loch Laxford, the Outer Hebrides and within Brindster Voe in Shetland<sup>12</sup>. It is found in areas where *A. nodosum* is often exposed to frequent alternation of high and low salinities<sup>13</sup>.

The associated biotope (*Ascophyllum nodosum* ecad *mackayi* beds on extremely sheltered mid eulittoral mixed substrata LR.LLR.FVS.Ascmac) is an Annex 1 habitat, UK BAP priority habitat, Scottish biodiversity list species and Priority Marine Feature (PMF).

Distribution of the habitat throughout the west coast of Scotland has been recorded frequently, and in abundance (Figure 4.1)<sup>13</sup>.

**Figure 4.1: Distribution of ecad *mackayi* (beach form) on the mainland of Scotland and the isles of Skye, Mull and Arran<sup>13</sup>**



Source: Gibb, D.C. The free-living forms of *Ascophyllum nodosum* (L.) Le Jol. J. Ecol. 1957, 45, 49–83

<sup>12</sup>Tyler-Walters, H., James, B., Carruthers, M. (eds.), Wilding, C., Durkin, O., Lacey, C., Philpott, E., Adams, L., Chaniotis, P.D., Wilkes, P.T.V., Seeley, R., Neilly, M., Dargie, J. & Crawford-Avis, O.T. 2016. Descriptions of Scottish Priority Marine Features (PMFs). Scottish Natural Heritage Commissioned Report No. 406 [online] Available at: [SNH Commissioned Report 406: Descriptions of Scottish Priority Marine Features \(PMFs\)](#)

<sup>13</sup> Gibb, Dorothy C. "The Free-Living Forms of *Ascophyllum Nodosum* (L.) Le Jol." *Journal of Ecology*, vol. 45, no. 1, 1957, pp. 49–83. JSTOR, <https://doi.org/10.2307/2257076>. Accessed 13 Oct. 2025.

#### 4.1.1 Potential effects of the Proposed Development

Impact pathways from the Proposed Development on the *A. nodosum* ecad *mackayi* habitat are anticipated to include the following:

- Presence of personnel on the foreshore;
- Presence of machinery on the foreshore;
- Increase in suspended sediment during construction;
- Loss of habitat area from land reclamation; and
- Change in habitat (change in substrate from mixed to hard and change in intertidal incline).

*A. Nodosum* ecad *mackayi* is considered sensitive to light smothering and siltation. Given they are located within very sheltered environments with limited currents and wave action, any sediment being deposited with the dropping tide will stay in the area<sup>13</sup>.

Conversely, *A. Nodosum* ecad *mackayi* is not considered sensitive to a reduction in water clarity as it is free-floating<sup>14</sup>.

Given its location on the mid littoral, *A. nodosum* is considered sensitive to trampling. Given slow recovery rates of *A. nodosum* and its ecads, there is evidence to suggest that *F. vesiculosus* would replace *A. nodosum*, with studies by Rita *et al.*, 2012<sup>15</sup> indicating recovery of *A. nodosum* taking over 5 years, presence of personnel on the foreshore would potentially impact on the habitat.

The intertidal area would be 'squeezed' as a result of the land reclamation. *A. nodosum* ecad *mackayi* is dependent on relatively shallow slope shores and as a result, it is likely that the habitat directly outside of the curtilage directly changed by the reclaimed land works would remain suitable. Though infauna would be lost as a result of the land reclamation, the characterising species would remain given it is free floating, so could be relocated during construction.

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<sup>14</sup> Beer, S. & Kautsky, L., 1992. The recovery of net photosynthesis during rehydration of three *Fucus* species from the Swedish West Coast following exposure to air. *Botanica Marina*, 35 (6), 487-492.

<sup>15</sup> Rita, A., Isabel, S.-P., Serrao, E.A. & Per, Å., 2012. Recovery after trampling disturbance in a canopy-forming seaweed population. *Marine Biology*, 159 (3), 697-707.

## 5 Mitigation

Given the sensitivities and the importance of the priority marine habitat present, measures will be taken to mitigate potential impacts from the Proposed Development. Consultation with NatureScot has been undertaken regarding the presence of *A. nodosum* *ecad mackayi*, the response has been provided in Appendix D. As such, the below measures will be implemented.

Care has been taken to minimise the development footprint so that only the essential area is affected by the proposed development. This includes the area that will be reclaimed, contractor planned work areas and movements across the foreshore. In addition, the slope of the existing foreshore should be maintained where possible.

Prior to construction, areas of free-floating *A. nodosum* *ecad mackayi* within the footprint of the land reclamation will be relocated from the works area, by hand, to a suitable alternative location further along the bay where the habitat already occurs. Where feasible, cobbles/mixed substrate featuring *A. nodosum* should also be relocated temporarily and replaced to further encourage recolonisation following construction. A relocation plan and ecological enhancement plan will be produced to meet National Planning Framework 4 (NPF4) as part of planning conditions for the Proposed Development.

During construction, the following best practice will be implemented:

- Pollution prevention measures that would avoid pollution or run-off of materials into the tidal waters of the harbour and the surrounding habitats<sup>16</sup>, for example:
  - Designation of impermeable areas for concrete handling/mixing and for washing and cleaning at least 10m from surface drainage systems, local waterbodies and marine environment;
  - Collection of foul effluent and removal from site by licensed waste disposal companies as controlled waste;
  - Good housekeeping for fuels, oils and chemicals including the use of drip trays/bunds; and
  - Toolbox talks on pollution prevention.
- Toolbox talks on potential risks of contamination – All site staff will receive toolbox talks on the potential risks of contamination and the potential threats this can pose to the environment including designated features and supporting habitats. All staff will be required to report any observations of deceased or visibly affected marine life (including designated species and their prey sources) to the site manager. Should any instance of this occur it will be communicated with the environmental lead for the scheme who can investigate. If it is deemed that the release of contamination is having adverse effects on the environment, then associated works will need to be paused whilst a solution is determined.
- Site waste management plan – this would prevent contamination of the habitats surrounding the site from any hazardous waste arising from construction.
- A site-specific Biosecurity Management Plan will be developed to guidance<sup>17</sup> and certain biosecurity protocols will be adhered to. These include the following:

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<sup>16</sup> In line with SEPA's Guidance for Pollution Prevention. The primary guidance for such activities is SEPA's 'GPP5: Works and maintenance in or near water'

<sup>17</sup> Payne, R.D., Cook, E.J. and Macleod, A. (2014). Marine Biosecurity Planning – Guidance for producing site and operation-based plans for preventing the introduction of non-native species. Report by SRSL Ltd. in conjunction with Robin Payne to the Firth of Clyde Forum and Scottish Natural Heritage 39 pp. [Online] Available at: [Guidance-Biosecurity-Planning.pdf](#)

- Pre-construction walkover surveys will be undertaken to search for the presence of INNS across accessible areas of the proposed development prior to any works taking place. If INNS are identified, these will be cordoned off and avoided / dealt with appropriately.
- Toolbox talks will be held with site workers to raise the awareness of how to avoid, deal with and identify INNS (if present).
- If INNS are identified on site and are not treated prior to works, the following should be implemented:
  - If new INNS are spotted on site, work will be stopped, and the site manager will be contacted immediately with advice sought from environmental specialists.
  - Enhanced management measures shall be implemented such as the use of Virkon (a disinfectant), and deep cleaning of plant and machinery before arriving at the site and changing sites, along with adhering to a Clean-Check-Dry procedure will be implemented.
  - Boot washing as well as equipment cleaning facilities (with a biocide such as Virkon) shall be provided and boot washes shall be carried out when entering and exiting areas of the site where INNS are identified.
  - To minimise the risk of identified INNS being transferred, a stringent system of vehicle maintenance and cleanliness will be implemented during construction works, including frequent vehicle washing, particularly before departure from site where vehicles have accessed the foreshore or any high INNS risk areas. Biosecurity measures will be applied in line with 'Check-Clean-Dry' recommendations from the Non-Native Species Secretariat (NNSS). This would involve washing down, visual inspection, disinfection and / or thorough drying.
- Sections of the plant that would come into direct contact with the intertidal area(track/wheels), if any, should be thoroughly cleaned before and after departure from site to avoid the spread of any INNS (e.g. wheel washing facilities should be provided).
- Where possible, existing material will be reclaimed, therefore lowering the risk of the introduction of invasive species. Any imported material will be bespoke. If this is not possible, it will be ensured that imported material has not been utilised in the marine environment previously. Again, if this is not possible, imported material will be screened for INNS ahead of its use on site.
- Any vessels that may be used will demonstrate compliance with relevant ballast water management requirements including where travelling to the site from outwith UK waters the IMO Ballast Water Management (BWM) Convention 2004, which establishes standards and procedures for the management and control of ships' ballast water and sediments. Measures within the ballast water management plan will include detail of vessel specific measures, require vessels to complete a ballast water record book, conduct regular inspection, and where necessary hold an international ballast water management certificate.
- Relevant sections of the Scottish Marine Wildlife Watching Code<sup>18</sup> shall be followed as required.
- Erosion prevention measures (to include restricting plant movement on intertidal habitats), avoidance of repeated tracking;
- Damping down of dust sources and other measures to minimise air quality effects to habitats, associated run-off shall be managed to avoid entry into the marine environment;
- Implementation of a designated refuelling area located a minimum of 10m from any watercourses; and

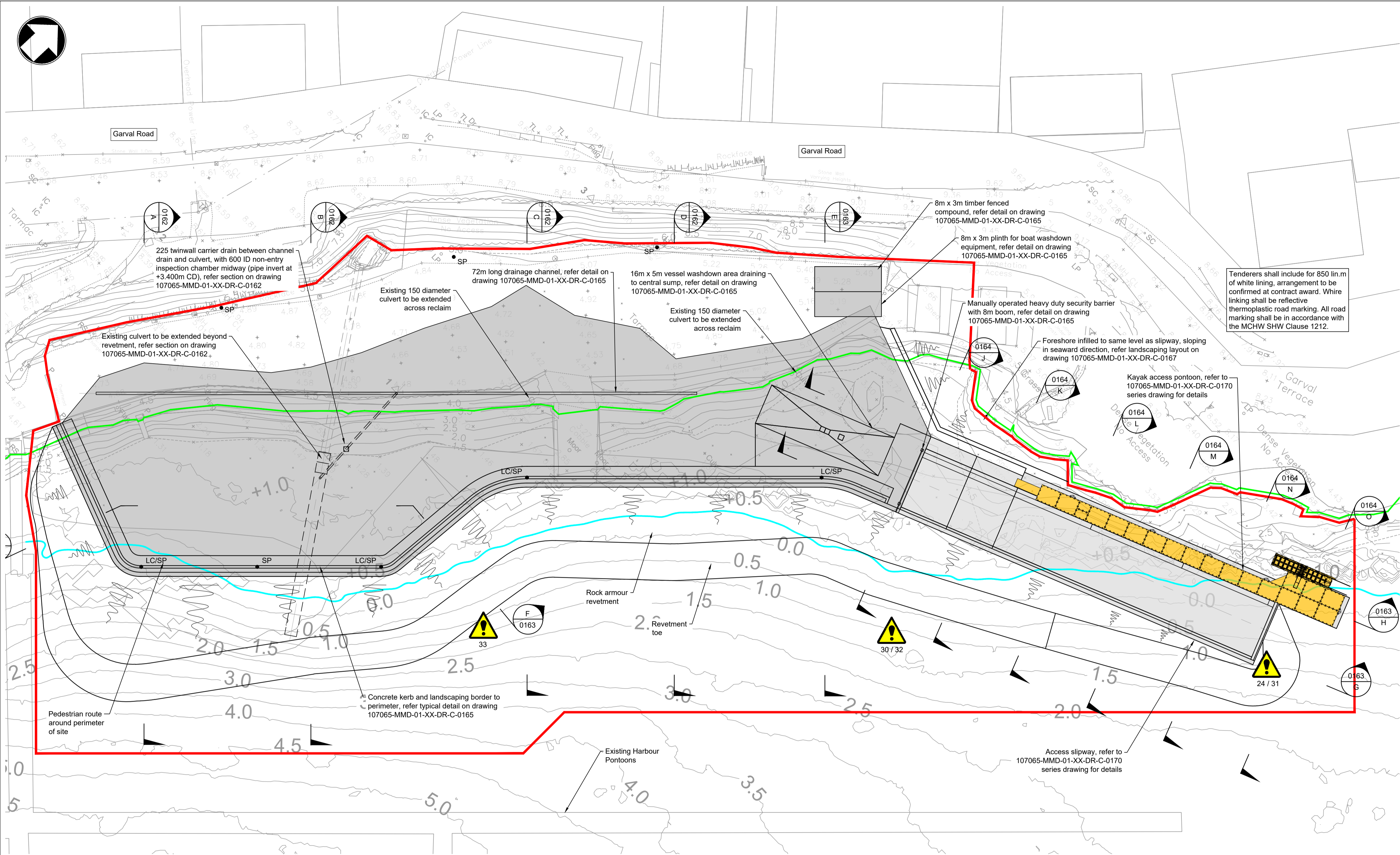
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<sup>18</sup> NatureScot, 2017. Scottish Marine Wildlife Watching Code [Online] Available at: [Scottish Marine Wildlife Watching Code | NatureScot](#)

- Implementing construction methods to minimise disturbance to sediments.

# Appendices

# A. Development drawings



- 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 asterisk (\*) 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  
107065-MMD-01-XX-DR-C-0160 Series  
107065-MMD-01-XX-DR-C-0170 Series  
107065-MMD-01-XX-DR-M-0180 Series
- Site Location Drawings:  
107065-MMD-01-XX-DR-C-0160  
107065-MMD-01-XX-DR-C-0161  
107065-MMD-01-XX-DR-C-0162  
107065-MMD-01-XX-DR-C-0163  
107065-MMD-01-XX-DR-C-0164  
107065-MMD-01-XX-DR-C-0165  
107065-MMD-01-XX-DR-C-0166  
107065-MMD-01-XX-DR-C-0167
- Site Location Drawings:  
General Arrangement & Sections  
Slipway Structure  
Mechanical, Electrical & Lighting
- General Arrangement  
Downtakings and Demolitions  
Sections and Elevations (Sht. 1 of 3)  
Sections and Elevations (Sht. 2 of 3)  
Sections and Elevations (Sht. 3 of 3)  
Standard Details  
Proposed Construction Sequence  
Setting Out

Topographic & Bathymetric Survey:  
A9639\_Composite\_CD Aspect Survey  
Survey Date 15.07.2025

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

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**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	1:250	Status	TEN	Rev	0
				Security	STD

Drawing Number

**107065-MMD-01-XX-DR-C-0160**

#### 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.

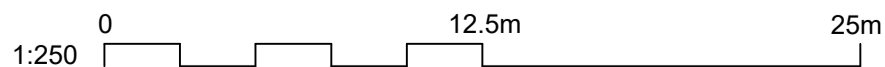
#### CONSTRUCTION:

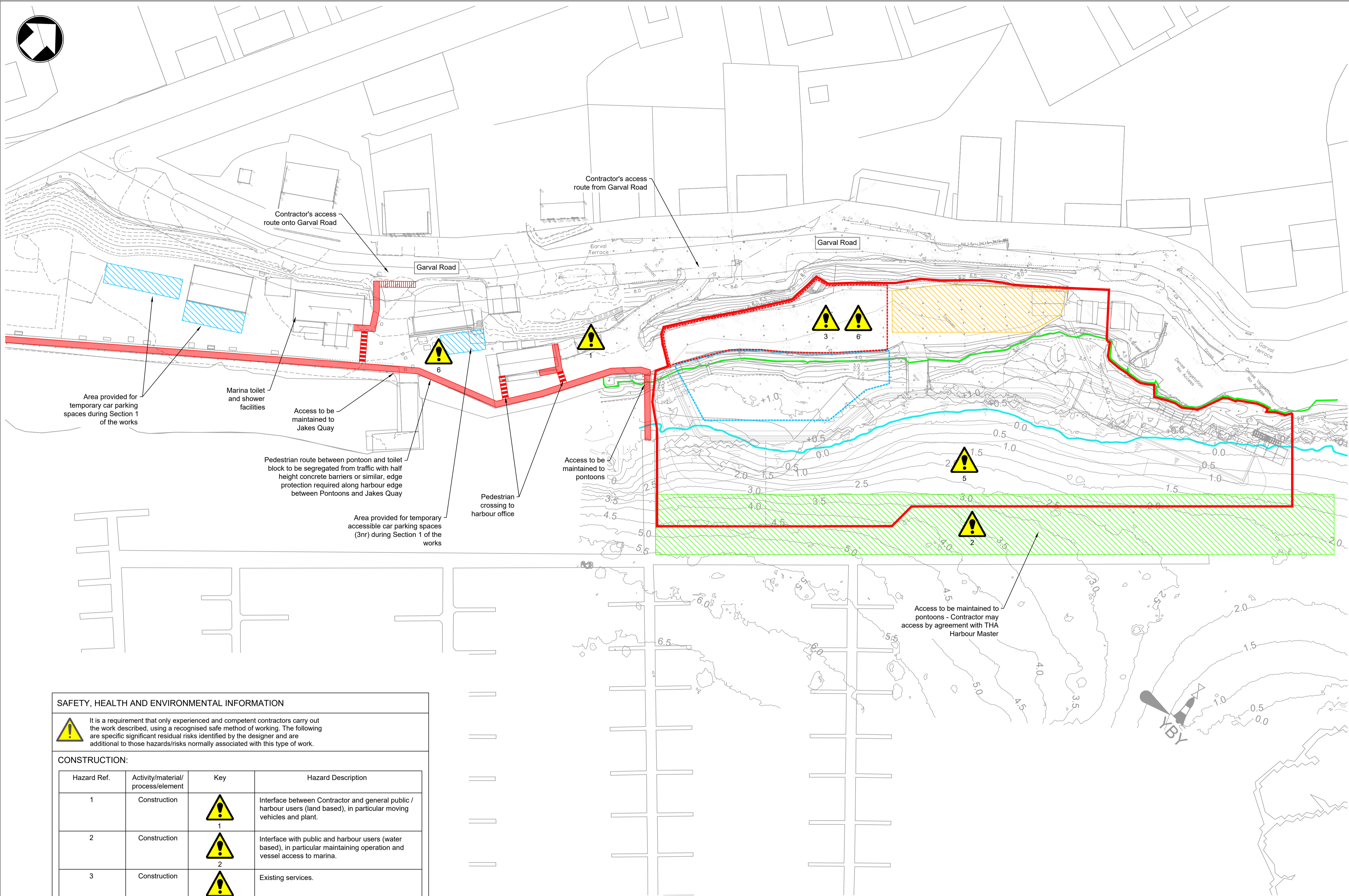
Refer 107065-MMD-01-XX-DR-C-0160, 0170 & 0180 series drawings.

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





- 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. 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.
  5. All dimensions are in millimetres (mm) unless noted otherwise.
  6. Levels are in metres relative to Chart Datum (CD) unless otherwise noted.
  7. The drawing shall not be scaled. FOLLOW WRITTEN DIMENSIONS ONLY.
  8. 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.
  9. Dimensions marked with an asterisk (\*) shall be confirmed on site by the Contractor.

- 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

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

M

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Tarbert (Loch Fyne) Harbour Authority  
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PA29 6TR


  
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					

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

#### OPERATIONS:

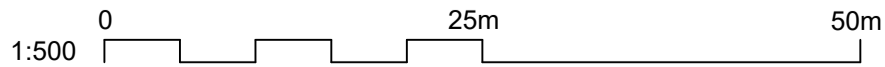
Refer 107065-MMD-01-XX-DR-C-0160, 0170 & 0180 series drawings.

#### MAINTENANCE:

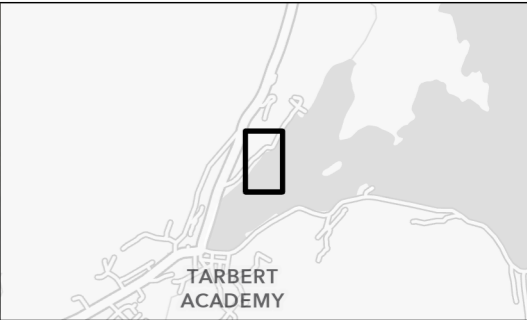
Refer 107065-MMD-01-XX-DR-C-0160, 0170 & 0180 series drawings.

#### Site Boundary and Working Areas - Sections 1 & 2

Scale 1:500



# B. Habitat Map



- Site boundary
- Target note
- Mean high water spring (MHWS)
- Mean low water spring (MLWS)
- Proposed addition
- Revetment toe
- Survey route
- Harbourside development area (raised existing ground levels and land reclamation)
- Intertidal habitat**
  - Ascophyllum nodosum ecad mackaii* beds on extremely sheltered mid eulittoral mixed substrata LR.LLR.FVS.Ascmac
  - Ascophyllum nodosum* on full salinity mid eulittoral mixed substrata LR.LLR.F.Asc.X
  - Fucoids* in variable salinity LR.LLR.FVS
  - Fucoids* on sheltered marine shores LR.LLR.F
  - Fucus serratus* on full salinity lower eulittoral mixed substrata LR.LLR.F.Fserr.X
  - Pelvetia canaliculata* on sheltered littoral fringe rock LR.LLR.F.Pel

Coordinate system: British National Grid; Datum: OSGB 1936

Data sources:  
Intertidal survey data, design data, site boundary: Mott MacDonald, 2025.  
MHWS, MLWS, NatureScot, 2025.  
Microsoft, Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

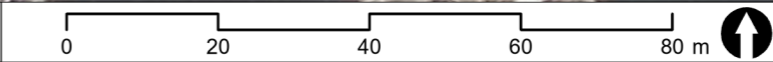


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### Access Slipway and Car Park Intertidal Survey Report Intertidal Habitats

Drawn C Donald	GIS Checked M Hargest	Checked A Jones	Approved M Thompson
Scale at A3 1:1,000	Status INF	Revision 01	Security STD



## **C. *Ascophyllum nodosum* ecad *mackayi* extent**



Viewpoint

**Intertidal habitat**

*Ascophyllum nodosum ecad mackaii*

beds on extremely sheltered mid eulittoral mixed substrata

LR.LLR.FVS.Ascmac

Coordinate system: British National Grid; Datum: OSGB 1936

Data sources:  
Intertidal survey data: Mott MacDonald, 2025.  
Maxar, Microsoft, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS,  
© OpenStreetMap contributors, and the GIS User Community

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**Access Slipway and Car Park  
Intertidal Survey Report  
Incidental Survey**

Drawn C Donald	GIS Checked M Hargest	Checked A Jones	Approved M Thompson
Scale at A3 1:1,500	Status INF	Revision 01	Security STD

# D. Nature Scot consultation

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**Re: Tarbert (Loch Fyne) Harbour car park and slipway**

---

From: [REDACTED] <[REDACTED]@nature.scot>  
Date: Tue 2025-10-21 15:27  
To: [REDACTED] <[REDACTED]@mottmac.com>

**Caution:** This is an external email and has a suspicious subject or content. Please take care when clicking links or opening attachments. When in doubt, contact your IT Department

Good morning, we have the following advice regarding Priority marine features (PMF) within the Tarbert harbour works site.

Priority Marine Features

Based on the data provided it can be said that PMF seaweed species are present within the works area, however the survey data also shows that PMF seaweeds are present throughout the harbour area.

Therefore, it seems that it is possible for the works to have an effect on PMF seaweed species, but it's unlikely to be significant when compared to the overall harbour species makeup.

Mitigation

we would like you to consider mitigation for the following PMF:

*Ascophyllum nodosum ecad mackaii*:

You will be aware that this form of *Ascophyllum* grows vegetatively and unattached. And is the species of most concern.

[https://www.marlin.ac.uk/habitats/detail/138/ascophyllum\\_nodosum\\_ecad\\_mackayi\\_beds\\_on\\_extremely\\_sheltered\\_mid\\_eulittoral\\_mixed\\_substrata](https://www.marlin.ac.uk/habitats/detail/138/ascophyllum_nodosum_ecad_mackayi_beds_on_extremely_sheltered_mid_eulittoral_mixed_substrata)

We ask that this seaweed is left undisturbed where possible within the site boundary. But we do understand that areas of this species will be covered during land reclamation.

*Pollution/siltation:*

We ask that water pollution guidance is followed to rescue the effect on the overall harbour PMF species to ensure the survival of the species out with the site boundary.

Please let me know if you require any further information or clarification in relation to our advice.

Yours sincerely,

[REDACTED]

---

**From:** [REDACTED] <[REDACTED]@mottmac.com>  
**Sent:** Friday, September 19, 2025 5:02 PM  
**To:** [REDACTED] <[REDACTED]@nature.scot>; [REDACTED] <[REDACTED]@nature.scot>  
**Cc:** [REDACTED] <[REDACTED]@mottmac.com>; [REDACTED] <[REDACTED]@mottmac.com>  
**Subject:** Tarbert (Loch Fyne) Harbour car park and slipway

Good afternoon,

Tarbert (Loch Fyne) Harbour Authority recently obtained full conditional planning permission for the development of a village watersports facility with complementary activities. The Proposed Development is for a new slipway provision which will allow for the launching and recovery of leisure boats and small fishing vessels up to 25 ton using a modern submersible trailer towed by a tractor / telehandler and the reclamation of additional area of the foreshore. This extra land space would increase the revenue to

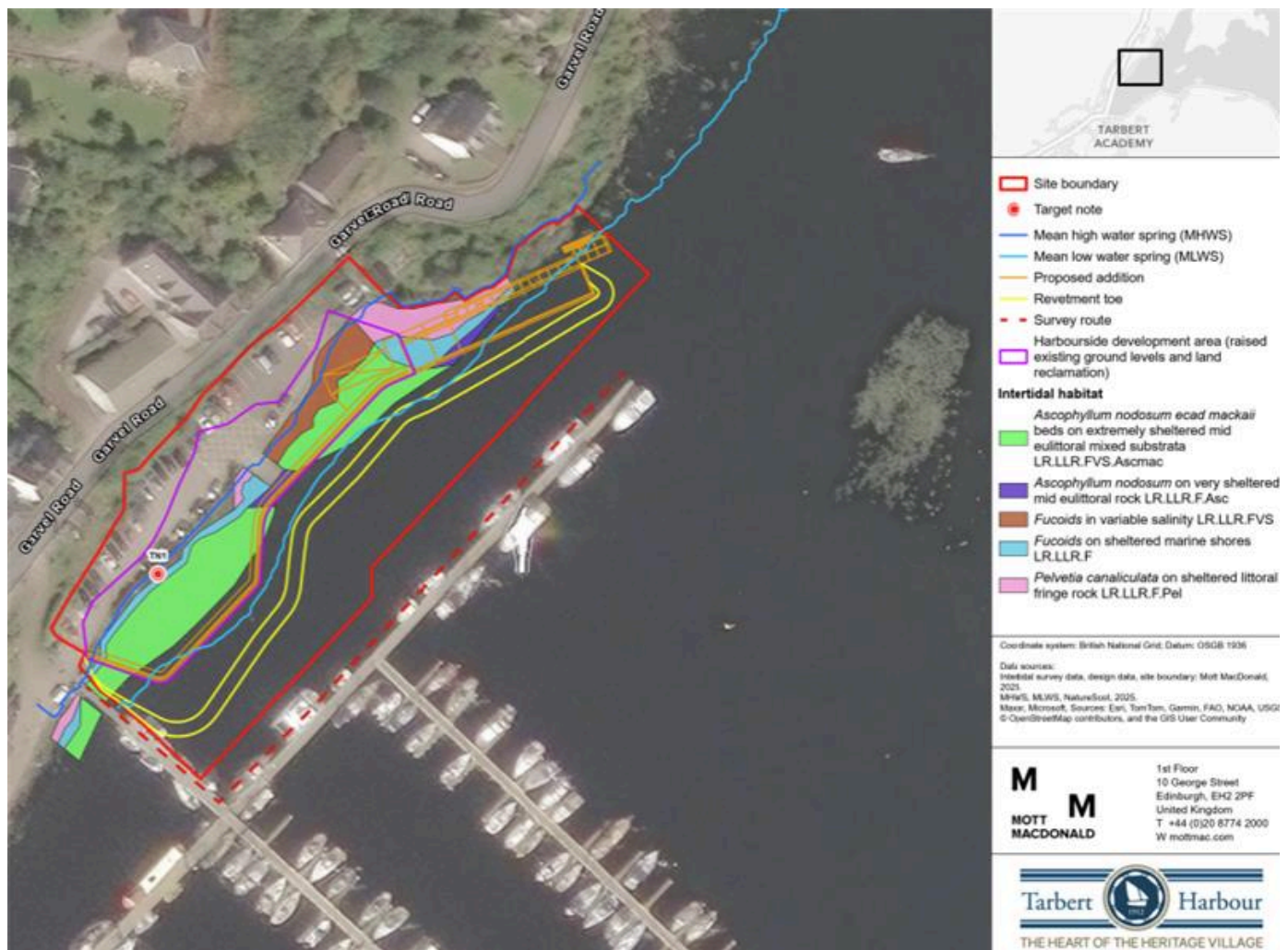
the marina, provide valuable boat storage space and parking for the marina to increase the service level that THA can offer its customers.

Proposed construction activities and method are outlined as follows:

- Set-up site compound;
- Remove existing vegetation along seaward edge of site;
- Remove existing revetment rock armour and store for re-use (subject to confirmation of suitability through testing);
- Remove and dispose of any soft material from foreshore. Where possible this will be re-incorporated into the works, otherwise material will be disposed off-site;
- Form toe trench for rock revetment and place rock to form toe of revetment;
- Sequentially place layer of imported fill material, add next course of rock armour, place and compact fill material behind until required finished ground level achieved;
- Install precast concrete slipway segments and grout into position;
- Install ductwork for services (electrical and water);
- Re-grade overall site to required levels;
- Place sub-grade, install required kerbing and lay surfacing;
- Install boat wash-down water treatment unit;
- Install access pontoon and associated supports;
- Complete landscaping works; and
- Remove site compound.

More details are provided in the EIA screening report (uploaded to the FPT site). More recent addition includes rock breaking (either ripping or peckering) activities to be undertaken in a small area of the intertidal area, if it proves not possible to pick up with an excavator directly.

We undertook intertidal surveys of the area within and adjacent to the proposed land reclamation for the car park and slipway. We identified presence of the BAP priority habitat and Priority Marine Feature *Ascophyllum nodosum* ecad *mackayi* beds, which made up a large proportion of the intertidal area within the footprint of the proposed land reclamation, see the image below (green polygons). A higher resolution PDF has been provided on the file transfer site).



Outside of the targeted survey area for the project, we incidentally noticed that this habitat appears to be present throughout the south-western harbour area, we took photographs on site and mapped out the approximate areas from these, shown below:



Full sized PDFs along with photographs of the habitat have been provided here with the following credentials:

[REDACTED]

username: [REDACTED]

password: [REDACTED]

Note: this FTP site will be available for 7 days, expiring on 26/09/2025 15:47

Please can you advise on mitigation we could implement to enable the proposed works to go ahead with as little disturbance to this habitat as possible? Do you think the attached survey information is sufficient to undertake your assessment or do you require further evidence?

When responding, please can you reply all as I will be on site most of next week and [REDACTED] is on leave next week.

Kind regards,

[REDACTED]

[REDACTED]

Marine Environment Consultant

D [REDACTED]

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Thoiribh an aire airson adhbharan gnothaich, 's dòcha gun tèid sùil a chumail air puist-dealain a' tighinn a-steach agus a' dol a- mach bho NàdarAlba.

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