The Highland Council

Agenda Item	**10**
Report No	**SR/6/25**

Committee: **Isle of Skye & Raasay**

Date: **17 February 2025**

Report Title: **Portree Harbour Update**

Report By: **Assistant Chief Executive - Place**

1 Purpose/Executive Summary

1.1 The purpose of this report is to provide an update of progress for the planning of repairs to Portree Harbour.

2 Recommendations

2.1 Members are asked to:-

i. Note the funding position in respect of the Portree Harbour; and
ii. Note the draft delivery programme

3 Implications

3.1 **Resource** - The project will be funded through the capital programme, note the current allocation of £2m is earmarked for capital spending in 2026/27 in the re-profiled capital programme review which was undertaken in March 2024.

3.2 **Legal** - The works outlined in the scope for the project are within the Portree Harbour Order Area and the planned works are operational maintenance and therefore planning permission is not applicable. The works do lie within the Portree Conservation Area and as such notification of the works will be required and proportionate engagement will be carried out to ensure the local community groups are informed of the programme of works. No marine licence is required for the works as the Harbour Authority will be carrying out works for the purpose of maintaining the harbour within the existing boundaries.

3.3 **Risk** - The works are within an operational harbour and as such require interfacing with harbour users on a daily and weekly basis to ensure coordination of the works. The works will be managed by the Contractor in consultation with local Harbour Staff. There are a number of factors which will require detailed coordination including access for cruise ship passengers, lifeboat access, recreational and small fishing vessels. In addition the weather risk in marine works can impact on the delivery programme.

3.4 **Health and Safety (risks arising from changes to plant, equipment, process, or people)** - Construction risks will be managed as part of the Construction, Design and Management regulations.

3.5 **Gaelic** – No implications arising directly from this report.

4 Impacts

4.1 Integrated Impact Assessment - Summary

4.2 An Integrated Impact Assessment screening has been undertaken.

4.3 The Screening process has concluded that due to the size and scale of the project there are minor positive impacts with respect to improved access infrastructure but no other major impacts. Members are asked to consider the summary in **Appendix 1** to support the decision-making process.

4.3.1

Impact Assessment Area	**Conclusion of Screening**
Equality	• Children and Young People – *no impact* • disability – *no impact*
Socio-economic	*Positive*
Human Rights	*no impact*
Children's Rights and Well-being	*no impact*
Island and Mainland Rural	*no impact*
Climate Change	*no impact*
Data Rights	*no impact*

5 Works progress and programme

5.1 The planned works are required to maintain the existing facility to ensure that income through harbour dues can be sustained into the future.

5.2 The report within **Appendix 2** is provided to outline the works required within the harbour area. The project has been progressed using the SCAPE Scotland Utilities – Works and Services framework agreement. RJ Macleod and their consultant, Wallace Stone, have carried out an assessment of the harbour works which was provided to the Council in December 2024.

5.3 The detailed costings and draft works programme have been prepared and are currently subject to on-going discussions. They have highlighted that there are £2.25m worth of critical works in pile repairs and protection works as well as concrete deck repairs, slipway repairs and masonry repairs. The exercise has also identified a further £1m+ of non-critical works that could be undertaken at the same time if budget were available. Discussions are ongoing regarding the scope of the critical works to bring them within the available capital budget.

5.4 Due to the specialised equipment and personnel as well as procurement of piling and cathodic protection materials the lead in time from contract award to start of works on site is 17 weeks with the works programmed to take 12 weeks. There is therefore an allowance of around 6 months from award to completion. This work could be completed in 2025 if there is an opportunity to accelerate the capital programme spend profile. A draft construction programme is included in **Appendix 3** to illustrate an indicative lead-in and construction timetable.

Designation:	Assistant Chief Executive - Place
Date:	31 January 2025
Author:	Garry Smith – Place - Service Lead Infrastructure
Background Papers:	None
Appendices:	Appendix 1 – Integrated Impact Assessment Appendix 2 – Feasibility Report Appendix 3 – Draft Tender Programme

Appendix 1

Integrated Impact Screening Summary

The screening highlighted overall positive impacts for the community

Equality, Poverty and Human Rights
The screening notes that there are no negative impacts on any protected characteristics.
The screening noted that there are no negative human rights issues raised by the proposal.

Children's rights and wellbeing
The screening notes that there are no negative impacts on children's rights.

Data Protection
The screening notes that there are no negative impacts on data protection.

Island and mainland Rural communities
The screening notes that there are no negative impacts on island and mainland rural communities.

Climate Change
The screening notes that the proposal will mitigate any environmental and ecological impacts during construction and given the size and scale of the proposal will have no impact on climate change.

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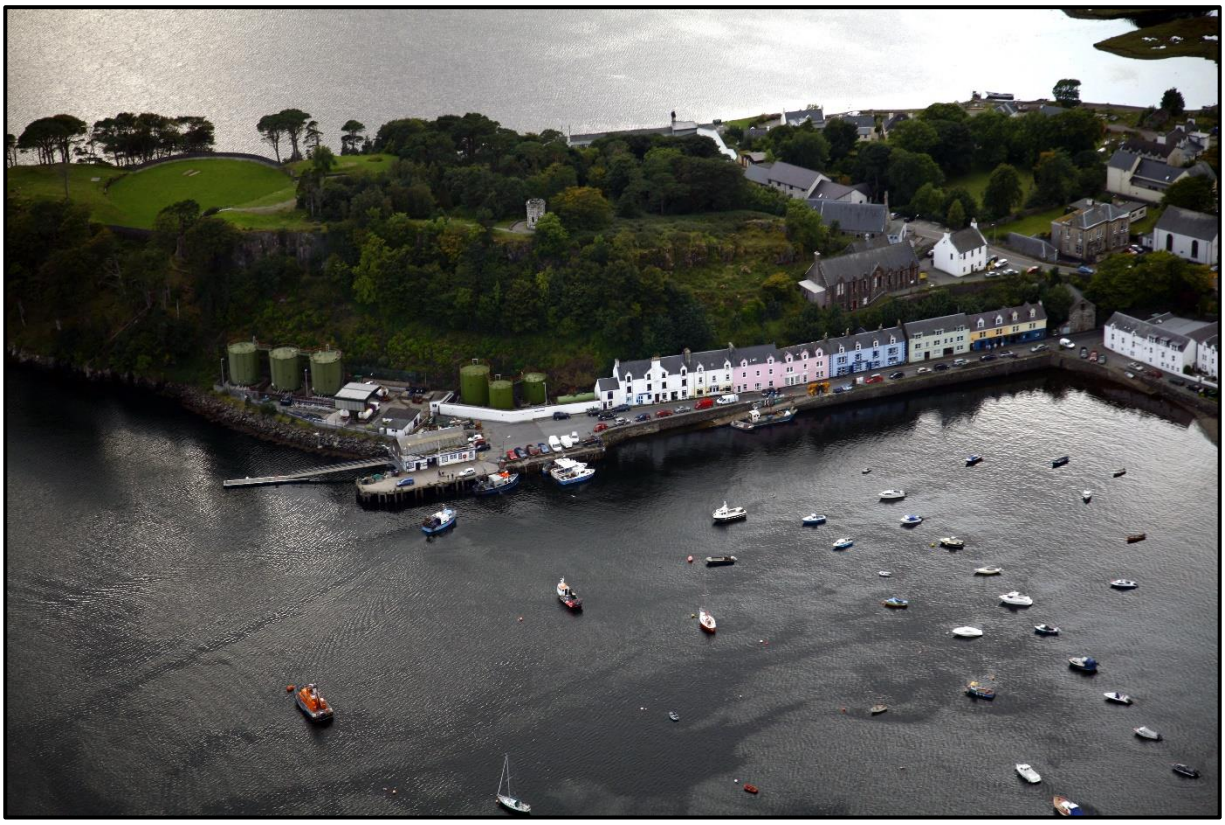
PORTREE HARBOUR REPAIRS



FEASIBILITY STUDY

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Date: October 2024

Member of the Association
for Consultancy and Engineering

Doc Ref – 2567-Doc-001

This document was prepared as follows:-

	Name	Signature	Date
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Checked By	D Armstrong		01.11.2024
Approved By	T Rea		01.11.2024

and revised as follows:

REVISION STATUS INDICATOR

Page No	Date	Revision	Description of Change	Initial

This document has been reviewed for compliance with project requirements in accordance with Wallace Stone LLP Quality Management System.

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PORTREE HARBOUR REPAIRS

FEASIBILITY STUDY

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APPENDICES

HIGHLAND COUNCIL / RJ McLEOD
PORTREE HARBOUR REPAIRS

FEASIBILITY STUDY

1. Introduction

This document provides a developed scope of repair works to be carried out by RJ McLeod (RJM) at Portree Harbour, under the SCAPE Scotland Utilities - Works and Services framework agreement with Highland Council (HC).

This scope has been prepared by Wallace Stone (WS), following inspections by Joe Mackay (HC), John Macleod (RJM) and Tom Rea (WS), on 18th September 2024. Selected inspection photos are in Appendix A

This scope includes outline construction details prepared by WS and costings prepared by RJM.

2. Project Brief and Scope

The following text is copied from the HC Brief document.

Concrete repairs to Quay side, Masonry repairs to old harbour. Steel plate repairs to in-situ steel piles. Ancillary works as agreed in developed scope. The Contractor will engage a designer under an Option E PSC to develop the design and define the inscope work and budget cost. An Option A project delivery agreement contract will be prepared for each work package. Portree Harbour lies within a conservation area and as such the works will require to be approved by the HC planning department. The harbour is used by a number of cruise ships throughout the year and works will require to be phased around and be sympathetic to harbour operations.

The project scope document prepared by Wallace Stone, and submitted to RJ McLeod previously is in Appendix B.

3. Pier Repairs

Brief Description

The original pier at Portree was built by Thomas Telford in 1818 to 1820 as a stone masonry structure with a similar form to the adjoining retaining wall along Quay Street which is still visible today.

To allow the depth of water at the pier to be increased, a steel sheet piled wall using Larssen 2 piles was driven to allow dredging at the pier. These piles are a light section with a flange of 10.2mm and web of 7.8mm. The piles are driven directly in front of the masonry wall and the gap infilled, probably with concrete or grout. The sheet piles were anchored to the masonry wall with a line of bolts down from the top of the piles. These piles were installed circa 1960 to drawings by Sir Alexander Gibb and Partners. This type of deepening has been seen all over the highland harbours with the same detail and prevents undermining of the masonry wall and increased water depth only by 1m or 2m to help prevent boats drying out at the pier.

The pier was also extended with an open piled constructed in front of the sheet piled pier out into deeper water. This used a rendhex box pile formed by welding 2 sheet piles together. The pile section used was a rendhex No 3 with a 12.7mm steel thickness. It is understood that this extension was also undertaken at the same time as the sheet piles installed, circa 1960.

Extensive pile repairs were undertaken in 1994 organised by Bullen and Partners; comprising the welding of steel plates over corrosion holes to both sheet piles and rendhex piles. Two of the rendhex piles were fitted with a circular collar tube that was then grouted (pile reference R5 and R16).

The timber fenders around the outer pier have recently been replaced and steel caps added for protection from fishing vessels during high tides.

The pontoons and access bridge were installed in 2006 to provide improved access to and from cruise ship tenders and other tourist boats that aren't using the slipway.

Further description is available in HC document titled *Inspection Report - Portree Harbour* and dated July 2021.

Condition and Issues

The pier is used for fishing vessels and tourist boats. The RNLI also operates at the pier with sole use of the sheet piled berth where they have a davit crane.

The HC document mentioned above reports that the quay structure is generally in good condition. The main issues to be addressed under the SCAPE framework are: -

- Holes in the sheet piles and rendhex piles.
- Lack of a CP system to prevent further corrosion of sheet piles and rendhex piles.
- Pier deck surface has frost damage and impact damage that presents a trip hazard.
- Unused recesses in the slab with open mesh flooring presents a maintenance issue and trip hazard.
- Unused pipework under the deck to be removed and redundant chamber to be infilled to eliminate a trip hazard.

3.1 Ref 1 – Sheet Pile Wall Under Pier

Issue

Significant loss of section due to accelerated low water corrosion (ALWC) has occurred in the sheet piles at the bed level and just above, with numerous holes in the outpans and extensive orange corrosion visible. The most recent steel thickness measurements were undertaken in 2021 and generally showed thicknesses of 5mm or more (refer to Appendix C for readings). The lowest was 3.1mm at pile 100. There were two holes recorded at piles 125 and 127. During the recent inspection more holes were visible at piles 93, 83 (long slot), 75 and 73 (refer to photos in Appendix A).

Previous repairs were undertaken at piles 69, 71, 75, and 81. There is no evidence of Cathodic Protection (CP) being installed to these piles.

Proposed Solution

Given that there is a masonry wall behind the sheet piles, repairs to the sheet piles are proposed at low level only.

Welding on 10mm thick steel repair plates, localised to the holes, is the simplest solution. Based on the recent steel thickness readings, the majority of the piles still have a reasonable steel thickness remaining at high level.

An alternative option would to be to fit a 1.5m high 10mm thick plate along the front of all the sheet piles, weld this along the top of the outpans, bury it 500mm below bed level and fill the gap between the plate and inpans with underwater concrete.

Cathodic protection anodes must also be installed to the sheet piles and plate repairs. These anodes should be placed horizontally to keep them under the water as long as possible, to be most effective, but above bed level so they do not become buried by sediment. Note that the CP will only protect the sheet piles up to mid tide level. Above this level the sheet piles will continue to corrode away over time.

3.2 Ref 2 – Rendhex Piles to Suspended Deck

Issue

The piles are showing patches of ALWC. The piles have been patched in the past and there are the remnants of a CP system that has been depleted, with just the rod left in place.

The upper portions of the piles are heavily corroded as they are unprotected by the CP (which is only effective below mid tide level) and lack any protective coating.

There was a note of a small hole in one of the piles (R25A) in the June 2021 inspection. Otherwise, steel thickness measurements were reasonable for the age of the structure and sufficient to continue to support the concrete deck structure.

Proposed Solution

A new CP system needs to be installed to all piles. Any holes should be repaired by welding on 10mm thick steel plates.

The upper sections of the piles should be protected from further corrosion with a pile wrapping system such as Denso Seashield 70, a petroleum paste, Denso marine tape with a glass fibre outer wrap.

3.3 Ref 3 – Sheet Piled Quay

Issue

The sheet piles have holes due to ALWC at the bed level and low water zone. The upper section of steel piles has a measured steel thickness of between 5.5mm and 9.7mm from the 2021 survey (refer to Appendix C for readings).

The timber fenders are taking a lot of vessel impact, are in a poor condition and are even missing at the inner end next to the ladder.

Proposed Solution

Given that there is a masonry wall behind the sheet piles, repairs to the sheet piles are proposed. As the structure is used for berthing, the repair plates need to be extended to full height to prevent a step or ledge being present which could snag vessels.

Similar repairs were undertaken at Helmsdale Harbour (refer to drawing no. 1129-105 Rev B).

We are also aware that the RNLI would be interested in a pontoon berth at the quay if the sheet piles were replaced to allow an increased dredge depth of -2.0m CD.

At a more recent project at Lybster Harbour, we found that installing new sheet piles from a leader rig was more economical than the welding of full height repair plates. The pile section used was a HOESCH H1807 which is made from a 9mm thick steel with a section modulus of 1804cm³/m compared to Larssen 2 piles of 850cm³/m. The larger pile section should allow the dredge depth to be increased to -2m CD in front of the wall where it is currently 0m CD at the deepest point. The required toe level will need to be determined using PLAXIS FE analysis to model the buried structure. The installation of the new piles pushes the line of the wall out 570mm with a 150mm gap and 420mm deep pile section. These piles will need to be held at the top with an anchor bolt resin anchored into the existing capping beam and a new RC capping beam cast, level with the existing capping beam.

New timber fendering will be required, extending above the capping beam level and protected by steel caps.

Piles and repair plates will require CP anodes to be installed to protect the steel from ALWC. Anodes will need to be as short and low as possible to keep them immersed.

3.4 Ref 4 – Pier Services

Issue

There are redundant oil pipes under the deck entering to a chamber on the pier.

Proposed Solution

The redundant pipework and brackets are to be removed from under the deck. This will make it easier to wrap the piles.

3.5 Ref 5 – Pier Concrete Surface

Issue

The surface of the pier edge is in a poor condition and likely caused by impact damage of dropped cargo and equipment as well as frost damage to a poor quality concrete.

There are old recesses where fendering or ladders were present that have a GRP open mesh flooring panel in place.

There is a large redundant oil chamber with a cover that is a trip hazard and gets in the way of vehicle use.

Proposed Solution

The concrete surface is to be removed by hydro-demolition and cut back 20mm under the reinforcement bars to allow a concrete repair system to be applied. The rebar should be protected with a corrosion inhibiter paint and an R4 concrete repair product used for reinstatement. The width of the repair is over a 2m wide strip on the north side of the pier and is approximately 26m long.

The two recesses with GRP mesh are to be infilled with concrete; with rebar to be resin anchored into the existing deck and the concrete placed inside a soffit and side shutter.

Whilst undertaking other concrete repairs, the existing chamber should be infilled with concrete.

3.6 Ref 6 - Slipway

Issue

The stone masonry wall above the slipway has open joints and missing stones. It is not known whether the wall was ever fully pointed, but pointing does improve its longevity as it prevents stones becoming dislodged during wave attack.

The steps at the outer end, that are adjacent to the pier, are in a poor condition and unusable, which is why they are currently barriered off. The outside handrailing is also missing.

The outer end of the steps and slipway is broken against the sheet piled wall and needs concrete repairs.

A bulge in the stonework wall above the lower end of the slipway raises concerns of the stability of the structure given the large HGV oil tankers accessing the oil depot.

The lower wall of the slipway is undermined at the seabed over the majority of the outer section due to wave action.

The surface of the slipway is rough and uneven, but this does help provide a grippy surface. There are two joints that are eroded and possibly being used for drainage from the inner edge channel out to the sea. This inner edge drainage channel is also eroded and has an irregular form. These are causing a trip hazard to users of the slipway.

Proposed Solution

The stone wall above the slipway should be repaired where stone is missing by fitting new stone into the voids and pointing the open joints. The type of mortar to be used will need to be agreed with the HC Planners as this is a conservation area.

Use of lime mortar is difficult in the tidal zone, so the use of cement mortar should be proposed. The stone looks to be a hard local stone so is not likely to be damaged by the use of cement mortars with 30N/mm² or 40N/mm² strength (such as Tarmac PPM30 or PPM40).

The lower sections of undermined wall should be underpinned with a concrete toe beam. The seabed should be excavated, and underwater mix concrete placed inside a shutter, set 100mm out from the face of the masonry. Voids and joints in this lower section should also be repaired and pointed using a quick set mortar such as Tarmac PPM/30W/QS. It is important to leave some vertical joints open to allow for tidal lag drainage as weep holes.

Where the inner drainage channel and two joints are damaged, these should be repaired with an R4 Concrete Repair product and shaped to provide a smooth formed channel and eliminate the trip hazards as it will be made more visible.

The outer end of the steps needs to be cleaned of marine growth and damaged concrete removed to allow the structure to be recast inside a shutter to the original profile. Steel dowels will be required to attach new and old concrete together.

The existing steps should be replaced with a steel staircase with GRP or open mesh treads. The prefabricated staircase unit will have an integrated outer handrailing.

The bulge in the wall will require the wall to be rebuilt over a 9m length and 3.5m height. It is proposed that an L-shaped reinforced concrete wall constructed with masonry facing, reusing the original stone. An alternative would be to use the stone effect formwork liner and coloured concrete. The line of the new wall will improve the manoeuvring space for vehicles turning at this congested location.

A 3D laser scan is needed of this structure to confirm the extent of missing masonry stones, repointing, extent of the undermining and the geometry of the wall at the bulge.

3.7 Ref 7 – Quay Street Retaining Wall

Issue

The stone masonry wall has voids where stones are missing, open joints and voids where the masonry meets the rockhead. There are also sections that are undermined at bed level due to scour.

The top of the wall has plants growing that are detrimental as when the roots grow they dislodge the stones.

The top of the wall has three sections of 12m length of missing handrailing that permits pedestrians to access the wall and use it as a seat. This public use of the wall is unsafe with the hazard of falling into the sea or worse onto the beach at low tide. There is no infill mesh between the handrailing to prevent the hazard of children falling through the gap.

Proposed Solution

The vegetation should be removed, and the stonework repointed with cement mortar in the tidal zone. Lime mortar could be used on the upper and top areas if required by HC Planners. New stone shall be provided to fit the holes. The voids at the rock interface should be grouted up with a cement based grout such as Tarmac PPM/30W/QS.

Undermined sections shall be underpinned with underwater concrete after airlifting a 0.5m deep trench to form a toe beam which will provide future proofing protection.

3.8 Ref 8 – Beaumont Crescent Slipway

Issue

The beach access slipway at the corner of Quay Street and Beaumont Crescent has an outer wall which is in a poor condition. Historical concrete repairs are falling off, with the edge of the deck slab exposed.

There is no handrailing on either the inner or outer edge of the slipway which is quite steep and difficult for the less mobile to access the beach.

Proposed Solution

The outer face wall of the slipway needs to be taken down and rebuilt with new stone of appropriate source to match the existing.

Alternatively, the outer face wall could be encased in a new concrete wall using coloured concrete and a formwork liner to create a stone effect. This concrete wall would protrude out from the adjacent wall but would provide a suitable foundation to attach a new handrail on the outer edge.

3.9 Ref 9 – Beaumont Crescent Retailing Wall

Issue

The bulge, recorded in the 2021 report, has failed and this section of the wall has been rebuilt by the Hotel. Note this work appears to have been undertaken with cement based mortar.

No issues are present in the wall.

4. Summary of Repairs for Costing

Ref	Location	Proposal
1	Sheet piled wall under pier	Weld repair plates to holes by divers
		Design, supply and install CP system
2	Rendhex steel piles supporting the pier.	Weld repair plates to holes by divers
		Design, supply and install CP system
		Pile wrapping - Seashield 70 system
3	Sheet piled quay on north side of pier	Weld full height steel repair plates as Helmsdale or install new sheet piles like Lybster
		New timber fenders with steel caps
		Design, supply and install CP system
4	Pier services	Remove redundant oil pipework from under the deck including brackets
5	Pier concrete surface	Hydro-demolition of 2m strip 26m long to 25mm below top rebar cage; reinstatement with R4 repair concrete
		Infill recesses to deck edge with rebar resin anchored into existing deck; use R4 repair concrete
		Infill redundant services chamber with fibre concrete
6	Slipway	3D laser scan and Revit model
		Repointing of joints in stone wall
		Supply and placing of missing stones in wall
		Repair to undermining - concrete toe beam
		Concrete repairs to inner edge and joints
		Take down bulge in wall and construct RC L-shape wall with stone facing
		Steel staircase over steps with handrailing
7	Quay Street Retaining Wall	3D laser scan and Revit model
		Repointing of joints in stone wall
		Supply and placing of missing stones in wall
		Grouting of voids at rock masonry interface
		Repair to undermining - concrete toe beam
		Handrailing to gaps - 3No 12m long sections
		Fit infill mesh to all handrailing
8	Slipway at Beaumont Crescent	New RC side wall to be cast 0.5m below bed level
		Supply and installation of galvanised steel handrailing to outer edge
9	Beaumont Crescent Retaining Wall	Nothing required

Appendix A –Photographs

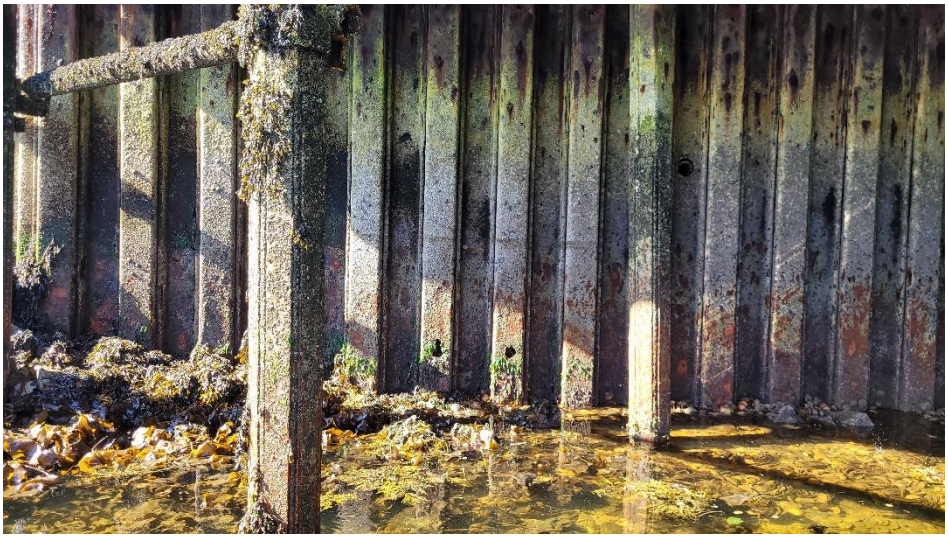

Photo 1: Sheet Piles under Deck

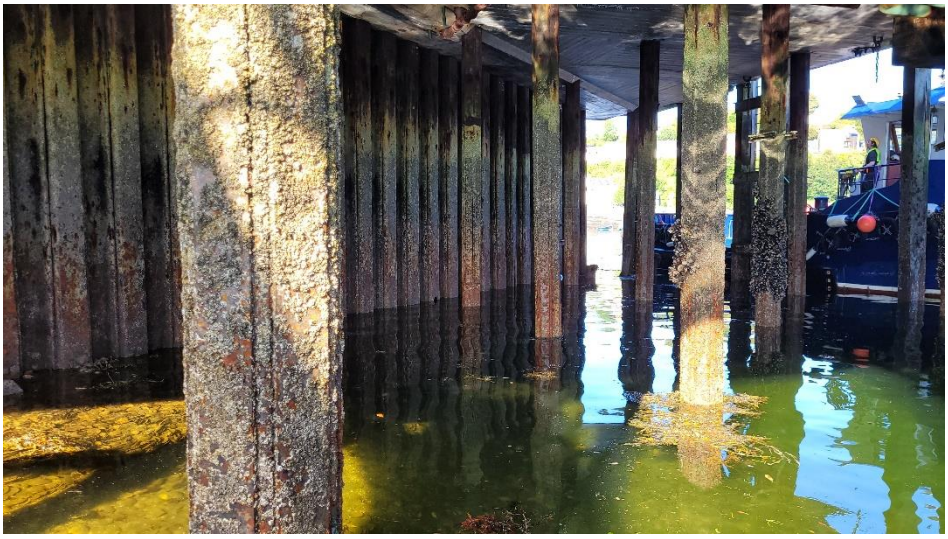

Photo 2: Sheet Piles under Deck

Photo 3: Sheet Piles under Deck

Photo 4: Sheet Piled Wall

Photo 5: Sheet Piled Wall

Photo 6: Sheet Piled Wall

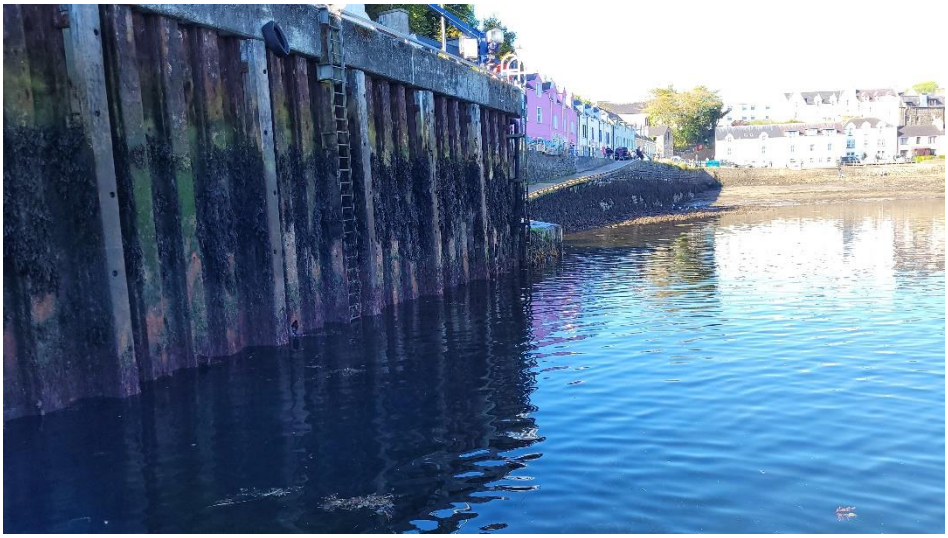

Photo 7: Sheet Piled Wall

Photo 8: Sheet Piled Capping Beam & Fenders

Photo 9: Rendhex Piles – Old Anodes

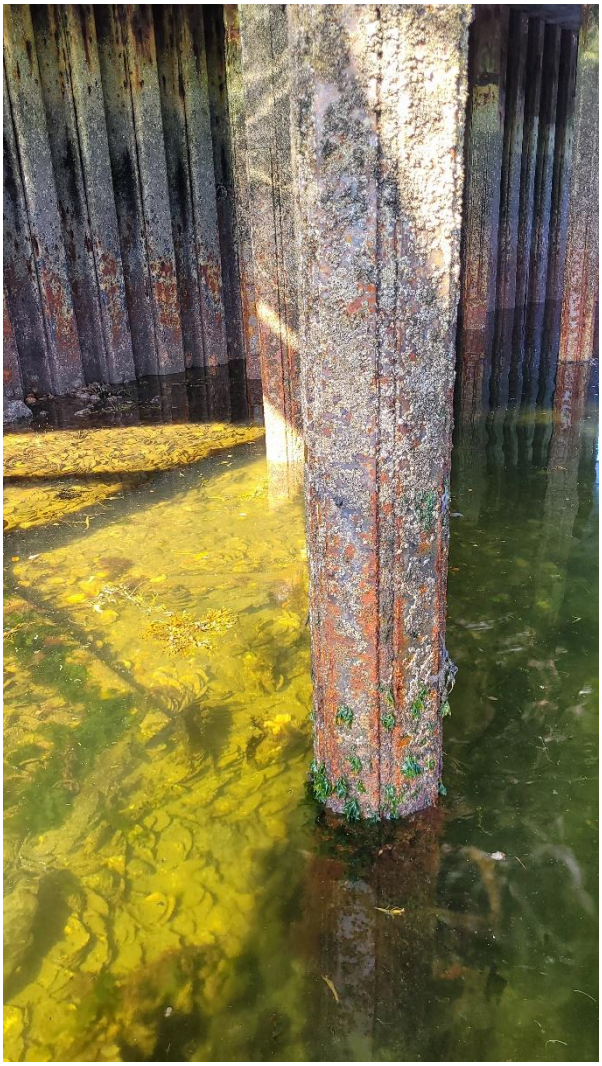

Photo 10: Rendhex Piles – Plate Repairs Visible

Photo 11: Redundant Pipework

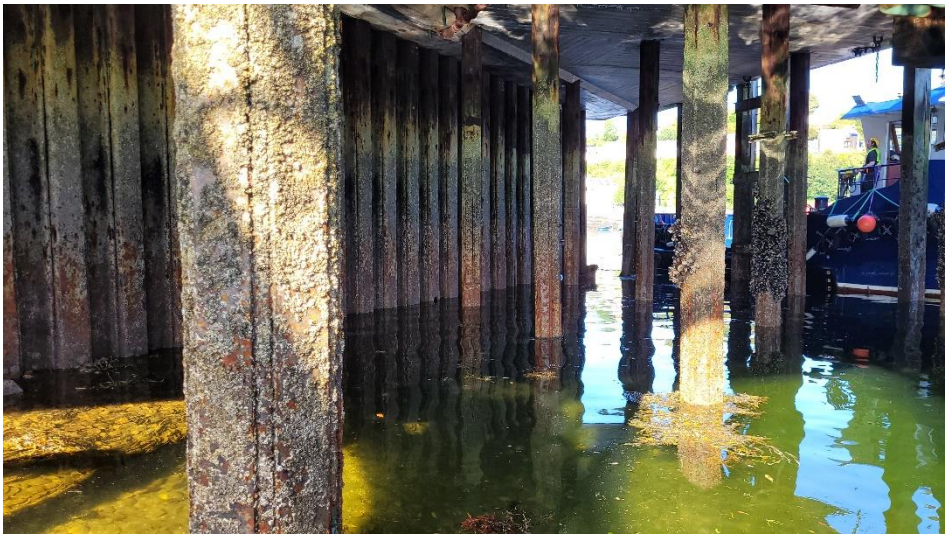

Photo 12: Rendhex Piles

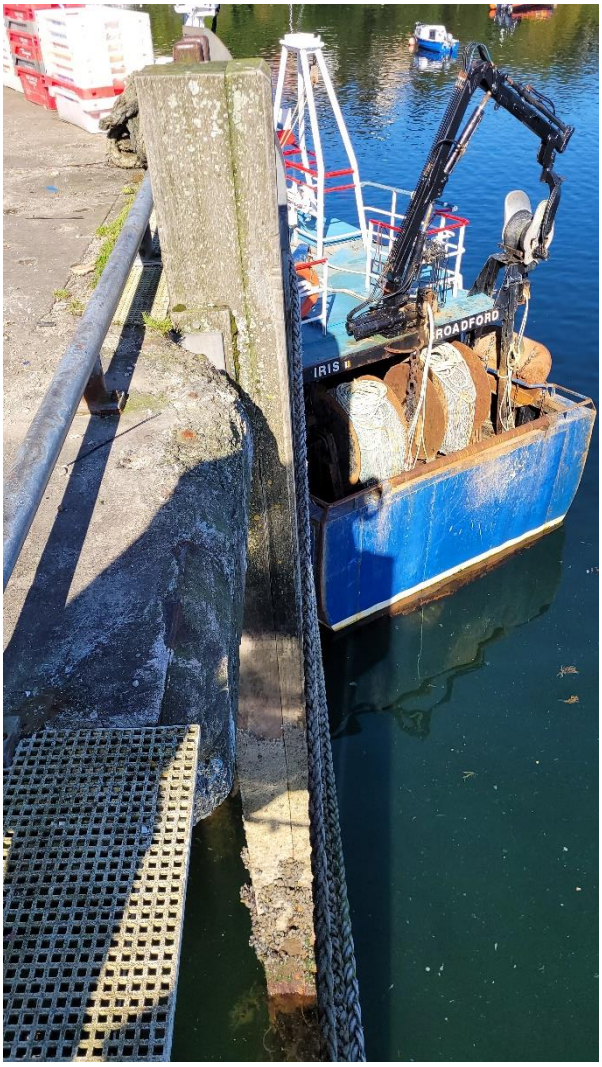

Photo 13: Pier Fenders

Photo 14: Pier Fenders with Steel Caps

Photo 15: Fender Recess with Open Mesh Flooring

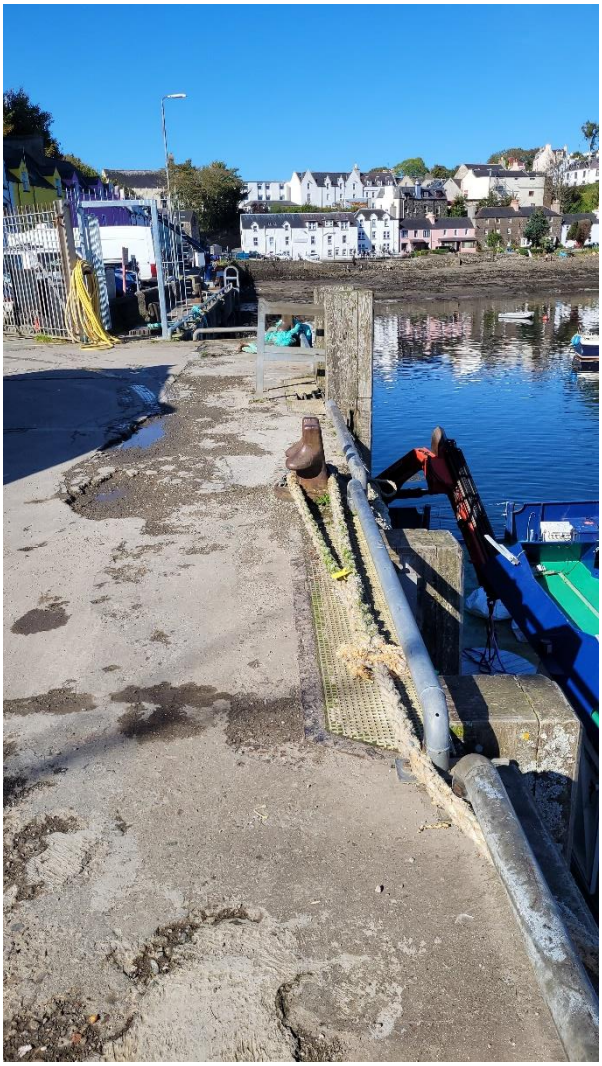

Photo 16: Damaged Concrete Deck

Photo 17: Pier Steps

Photo 18: Slipway

Photo 19: Bulge in Wall

Photo 20: Missing Stones in Retaining Wall above Slipway

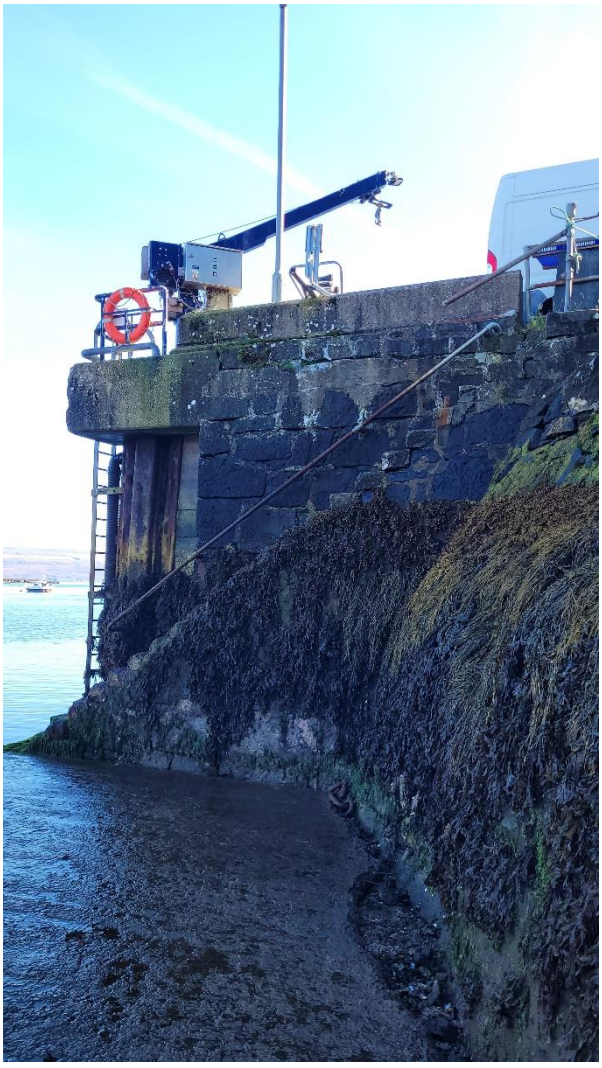

Photo 21: Eroded Channel at Back of Slipway

Photo 22: Missing Handrailing along Quay Street

Photo 23: Open Joints & Missing Stones at Quay Street Retaining Wall

Photo 24: Voids in Wall at Rock Masonry Interface

Photo 25: Undermining of Masonry Wall

Photo 26: Undermining of Masonry Wall

Photo 27: Beaumont Crescent Slipway

Photo 28: Repaired Sea Wall below Hotel at Beaumont Crescent

Appendix B – Proposed Scope

Brief	*Concrete repairs to Quay side, Masonry repairs to old harbour. Steel plate repairs to in-situ steel piles. Ancillary works as agreed in developed scope. The Contractor will engage a designer under an Option E PSC to develop the design and define the inscope work and budget cost. An Option A project delivery agreement contract will be prepared for each work package. Portree Harbour lies within a conservation area and as such the works will require to be approved by the HC planning department. The harbour is used by a number of cruise ships throughout the year and works will require to be phased around and be sympathetic to harbour operations*						
Ref	Location	Description	Extent	Proposal	Design Activities	In Project Brief	Identified on Site
1	Sheet piled wall under pier	Holes in sheet piles due to ALWC and the lack of CP anodes.	Numerous locations - can assume all piles outpans need a plate repair.	Due to the presence of a mass structure behind the sheet piles - they can be plated up. Pile section is a Larssen 2 pile and has been used in similar locations to allow dredging below a older masonry wall. Propose steel plates welded to piles with concrete infill into the inpan space.	Design of steel plates to be flexible to suit pile profiles and the need to find thick enough steel to weld too. Sea bed will need to be locally excavated to find sound piles and then backfilled following plate installation - diver work.	Y	Y
2	Rendhex steel piles supporting the pier.	Existing CP anodes have been used up and no longer providing protection to the piles and ALWC now present. Piles have previously been plated up or had grouted sleeves added, so not likely to need plate repairs.	All piles.	Provide new anodes and check steel thickness results. Piles to be protected from further corrosion above MSL with wrapping system.	Detail a replacement CP system. Specify a pile wrapping system such as Denso Seashield 80.	Y	Y
3	Sheet piled quay on north side of pier	Holes in sheet piles due to ALWC and the lack of CP anodes.	Numerous locations - can assume all piles outpans need a plate repair.	Weld steel plates to piles and place infill concrete into the inpan space. Extend the timber fenders to above the deck level with steel cappings as the rest of the pier, to protect vessels at high tide levels.	Design of steel plates to be flexible to suit pile profiles and the need to find thick enough steel to weld too. Sea bed will need to be locally excavated to find sound piles and then backfilled following plate installation - diver work. Detail new extended timber fenders and steel caps.	Y	Y
4	Pier services	Removal of redundant pipework from under the pier.	All pipes	Remove redundant pipes from under the deck and cap any buried pipes.	Detail and remedial works.	Y	Y
5	Pier concrete surface	Concrete surface has suffered localised frost damage and impact damage and presenting a trip hazard. Ladder recesses and unused services chamber covers and mesh flooring present a hazard.	The outer 2m northern edge over full length of pier. Infill the 2 ladder recesses and chamber.	Concrete to be removed by hydro-demolition to below top repair and reinstated. Install rebar at infill of ladder recess and services pit and concrete these areas.	Detail a concrete repair system and rebar for the infilling of the ladder recesses and chamber.	Y	Y

Ref	Location	Description	Extent	Proposal	Design Activities	In Project Brief	Identified on Site
6	Slipway	Stone wall above slipway has voids and open joints. Steps at outer end are in poor condition and not used. Surface of slipway has 2 joints that are trip hazards. Concrete inner edge and outer end are damaged. Bulge in wall adjacent to steps.	Defects at locations described.	Stonework to be repointed and missing stones replaced. Steps to be overlaid with steel and GRP treads and handrailing. Joints in slab to be made good to remove trip hazard. Concrete repairs to edge and end of slipway. Bulge in wall to be repaired by taking down wall (over a 3m to 3.5m height and 9m length) and rebuilding with concrete wall faced in stone or use of formwork with blockwork pattern and coloured concrete.	Organise a 3D scan of slipway at LW to pick up the defects in the wall and extent of repointing. Determine if the wall is listed and what type of pointing is allowed (lime mortar or cement mortar). Specify the concrete repair details at joints and defects. Design of replacement retaining wall to bulged wall.	Y	Y
7	Quay Street Retaining Wall	Missing stone blocks and open joints. Voids at interface of stone wall to bedrock. Undermining of base of wall at seabed. Missing sections of handrailing at bollards.	Defects at locations described. Outer section undermined at slipway section. 3 missing sections of 12m length of handrailing.	Stonework to be repointed and missing stones replaced. Voids to be grouted with cement grout. Undermined sections to be infilled with concrete. Provide handrailing at gaps, install infill mesh to all handrailing and add signage to stop public sitting on the wall.	Organise a 3D scan of wall. Determine if the wall is listed as a Telford structure and what type of pointing is allowed (lime mortar or cement mortar). Specify the concrete underpinning and grouting repair details - possible concrete toe beam along slipway length to prevent further undermining. Specify additional handrailing and infill mesh.	Y	Y
8	Slipway at Beaumont Crescent	Outer face of slipway in poor condition. Slipway has no handrailing - only used for public beach access.	Whole length of slipway needs repair to outer face wall. Handrailing to 2/3 of length would be sufficient.	Construct a new outer face wall with concrete using blockwork effect panelled formwork and coloured concrete. Provide handrailing with suitable foundation.	Check with HC planning that a concrete wall is permitted in this location, as they may require a masonry wall. Design a foundation and handrail.	Y	Y
9	Beaumont Crescent Retaining Wall	Stone masonry wall bulge at hotel has been repaired.	NA	NA	NA	Y	N

Appendix C – Steel Measurement Thicknesses 2021

Pile No	Sygnus			Comments
	ext / int	thick	height	
5		7.8	-3.60	
7				large hole visible at base of pile.
8		8.0	-3.31	
9		8.7	-3.60	
15	ext	6.4	-4.02	heavy barnacle cover.
16	int	6.2		layer of seaweed and some corrosion removed to obtain reading. General signs of rusting visible.
17	ext	7.4	-3.90	
24	int	8.7	-3.74	despite corrosion stains & layer of seaweed and barnacles the underlying surface was relatively easy to clean and obtain a reading from.
25	ext	9.7	-3.34	
29		-	-	ladder obscures full face of sheet pile. Ladder is in very good condition but surface corrosion is visible across all areas towards the lowest rungs
31		8.7	-0.20	corrosion zone along top of sheet piles - approx 5mm thick layer must be removed locally to reveal sound steel.
32		9.4	-3.53	
33		5.5	-3.53	Attempt was also taken to obtain reading from side of pile but this failed.
37		9.0	-3.20	
37		8.2	-0.20	5mm thick layer of corrosion removed.
38		9.2	-3.38	
48	int	8.6	-3.08	
49	ext	9.5	-3.08	
54		9.7	-2.91	
55		-	-0.20	surface of metal underlying corosion was rough. Reading was not successfully obtained.
56		9.0	-0.20	less than 5mm thick layer of corrosion removed
57	ext	8.7	-2.91	
58		10.0	-3.00	
59				drain pipe through top of pile (almost full width).
59		-	-0.20	chipped through 10mm layer of corrosion - reading could not be obtained.
67		7.0	-0.20	10mm thick layer of corrosion.
92		8.9		
100		3.1		
107		5.3		Reading taken at base of pile. Pile is 5.43m high from seabed to concrete soffit above.
115		6.3		
125		4.7		taken directly above hole at base of wall - hammer tapping indicates large hollow cavity behind pile above hole.
127		-		cleaned up steel but unable to obtain reading. A hole is present near pile base. Pile is 5.09m high from seabed to concrete soffict.
136		8.2		
137				full height = 4.38 (seabed to soffit of concrete)

Pile No	Sygnus 1			Sygnus 2			Sygnus 3			Sygnus 4			Comments
	face	thick	height	face	thick	height	face	thick	height	face	thick	height	
1	D	13.1	-2.53	F	12.7	-2.53	E	13.2	-2.53	F	9	-0.2	All readings unplated. R4 was taken at high tide - v.close to soffit. Heavy corrosion was hard and time consuming to chip away using a bolster, hammer and wire brush. One reading was obtained from two cleaned areas. Power tools could have been invaluable at speeding up the process.
2													
3	C	-	-2.5	C	-	-3							Readings were attempted in two areas on Face C. Underlying metal was rough when exposed and cleaning up of surface was difficult. The failed attempts were taken between -2.5 and -3.0m in level.
4													
5	C	11.8	-2.94										Unplated.
6													
7	D	11.3	-2.81	C	12.5	-2.59							All readings in unplated areas.
8	D	12.1	-2.87										Unplated.
9	B	14.5	-3.86	B	12.8	-3.36	F	14.6	-4.49				R1 plated. Thin layer of barnacles removed revealed signs of minor corrosion but only along the edges of the plating. R2 unplated but only just above the plated area. R3 was in plated area.
10													
11	F	13.2	-3.86	F	14.8	-3.93	C	13.1	-3.82	C	14.5	-3.9	R1 in unplated area. R2 plated. R3 unplated. R4 plated. Accessible surface (intertidal) coated in mussels & a thin layer of barnacles. Underlying metal appears sound with no real sign of corrosion at this level. Corrosion is clearly visible higher up in splash zone.
12													
13													
14													
15	F	8.9	-1.74	E	9.7	-0.96	F	-	-0.96				R1 Unplated. R2 required time consuming removal of significant corrosion layer. R3 reading attempt failed - surface of underlying steel was very pitted (photo P6250064).
16													
17	C	14.6	-4.78										Plated.
18													
19	A	12.9	-4.00	A	14.7	-4.23							R1 unplated. R2 plated.
20	E	11.1	-3.705	A	11.3	-3.75							R1 taken just above collar (unplated). Solid metal present below thin surface layer of barnacles. Very little sign of corrosion at this level. Ver yclear corrosion towards splash zone (above mean high tide).
21													Significant depth of corrosion removed in attempt to obtain reading (c.20mm) the underlying steel was visually the worst example of pitting corrosion seen during the inspection. Photo P6250065. Attempt was taken at around -0.9m in level.
22													
23	A	6.4	-0.48	B	8.8	-0.48							Signifiant corrosion layer had to be removed in order to obtain a readable surface for thickness measurements.
24	D	14.8	-4.27	D	14.7	-4.27							Not clear which face is wrong! Both areas were plated and noted as being unusually clean and requiring little work to obtain a reading.
25													
25A	E	11	-5.16										Unplated - taken below plating). Small hole visible in face A near base of pile.
26													
27	A	10.4	-5.45	F	14.5	-5.06							R1 unplated and very close to base. R2 plated.
28	A	5.3	-5.143	F	9.9	-5.143	B	8.9	-5.143				All readings in unplated areas and very close to base of pile.
Inspecto													Date: 24/06/2021

Appendix D – Drawings

GENERAL NOTES

1. ALL LEVELS ARE IN METRES RELATIVE TO CHART DATUM U.N.O.
2. ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.
3. TIDE INFO FOR PORTREE HARBOUR IS:
   HAT = +6.1mCD
   MHWS = +5.3mCD
   MLWS = +0.7mCD
   LAT = +0.1mCD
4. CHART DATUM IS 2.63m BELOW ORDNANCE DATUM.
5. FOR PILE ELEVATIONS REFER TO DRAWING 2567-WS-XX-XX-D-C-0002.
6. SHEET PILE INFORMATION TAKEN FROM BULLEN AND PARTNERS DRAWING 90839/R/03.

REV	DATE	DETAILS	DRAWN	CHK'D	APP'D

AMENDMENTS

CLIENT

The Highland Council
Comhairle na Gàidhealtachd

PROJECT

PORTREE HARBOUR REPAIRS

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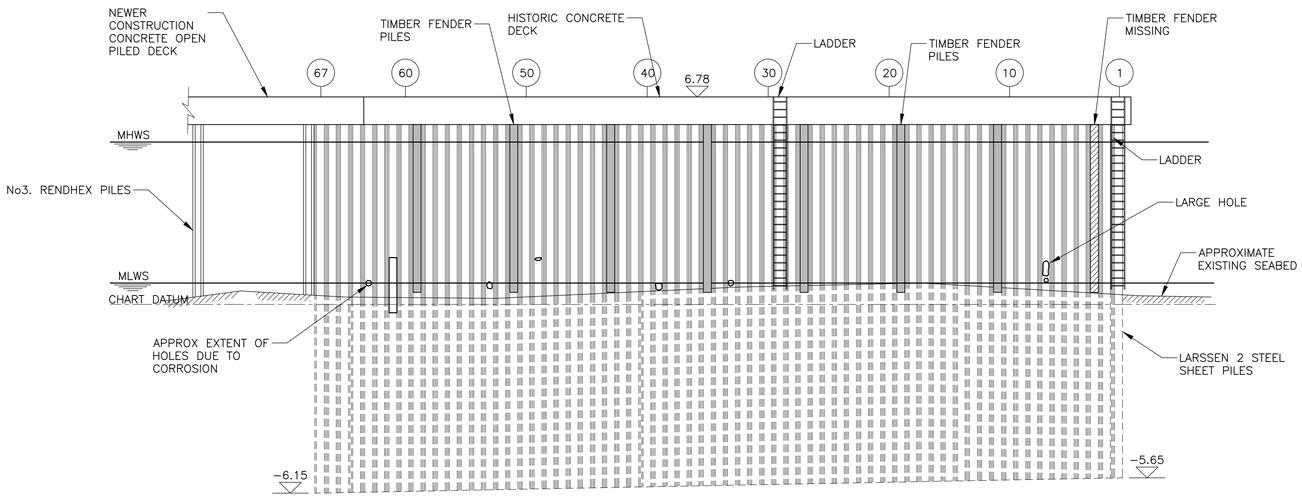
DRAWING TITLE

EXISTING PIER PILE LAYOUT

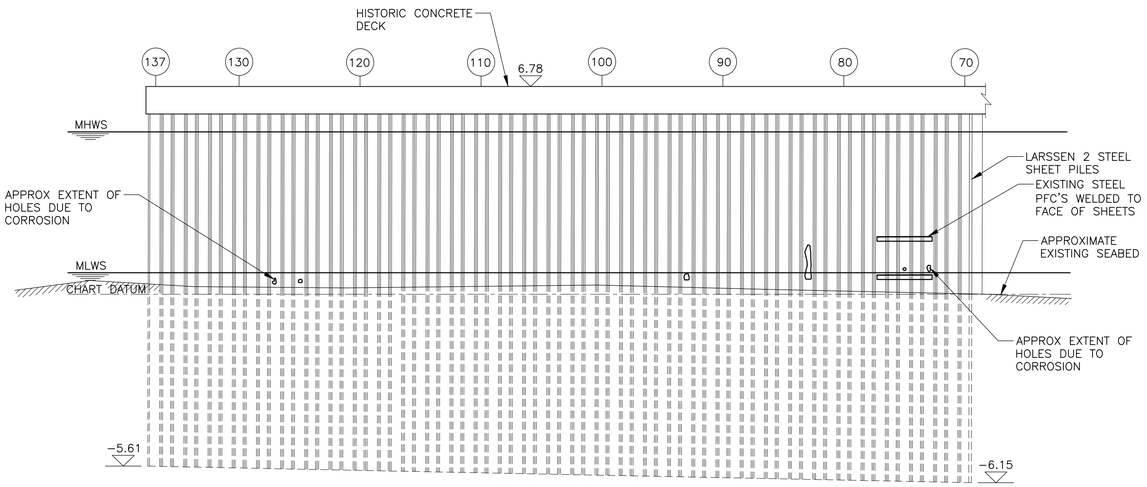
DRAWN	CHECKED	APPROVED
JR	TR	TR
DATE	DATE	DATE
OCT 24	OCT 24	OCT 24
SCALE (A1) 1:100	STAGE PRELIMINARY	REV P01

DRAWING No.
2567-WS-XX-XX-D-C-0001



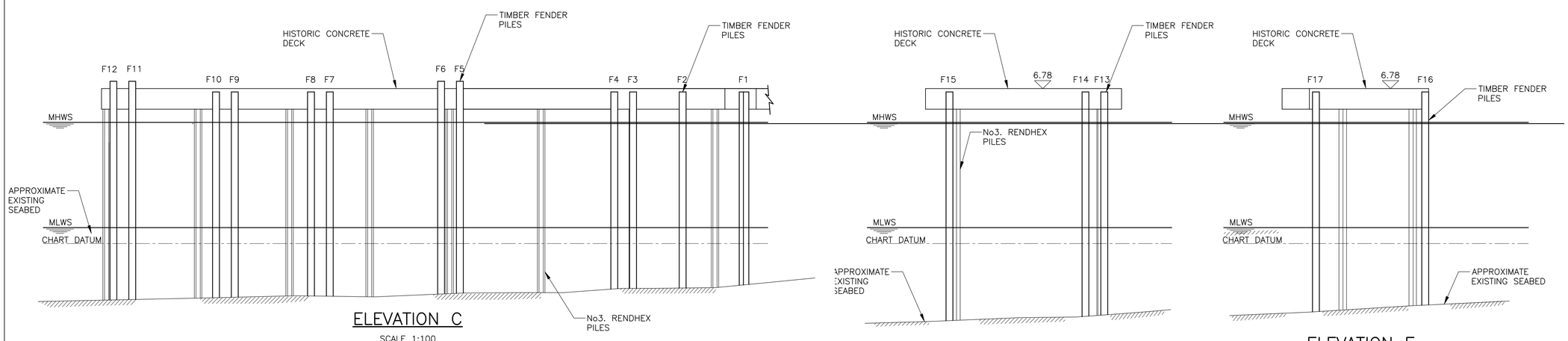
ELEVATION A

SCALE 1:100



ELEVATION B

SCALE 1:100



ELEVATION C

SCALE 1:100

ELEVATION D

SCALE 1:100

ELEVATION E

SCALE 1:100

GENERAL NOTES

1. ALL LEVELS ARE IN METRES RELATIVE TO CHART DATUM U.N.O.
2. ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.
3. TIDE INFO FOR PORTREE HARBOUR IS:
   HAT = +6.1mCD
   MHWS = +5.3mCD
   MLWS = +0.7mCD
   LAT = +0.1mCD
4. CHART DATUM IS 2.63m BELOW ORDNANCE DATUM.
5. FOR PIER LAYOUT REFER TO DRAWING 2567−WS−XX−XX−D−C−0001.
6. SHEET PILE INFORMATION TAKEN FROM BULLEN AND PARTNERS DRAWINGS 90839/R/04−05.

REV	DATE	DETAILS	DRAWN	CHK'D	APP'D

AMENDMENTS

CLIENT

The Highland Council
Comhairle na Gàidhealtachd

PROJECT

PORTREE HARBOUR REPAIRS

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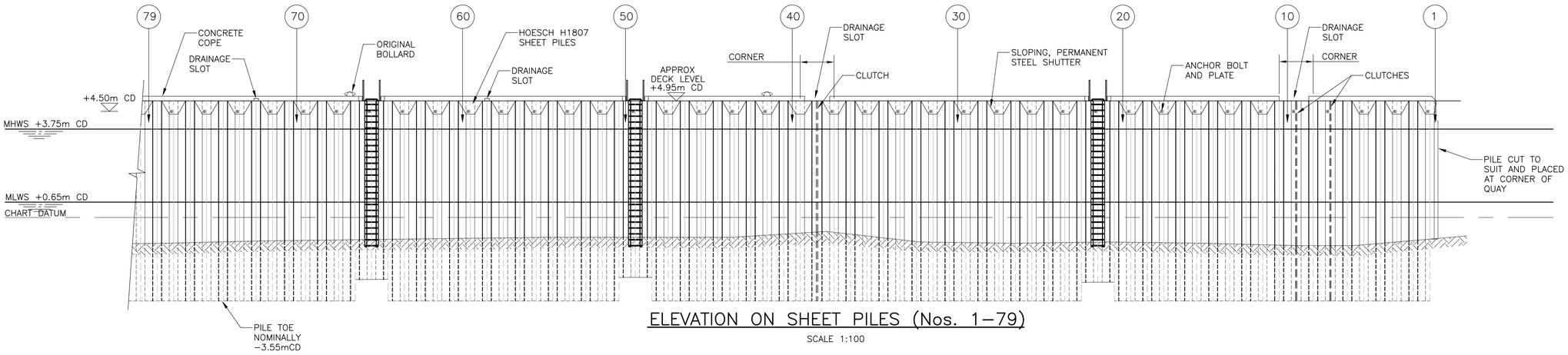
DRAWING TITLE

EXISTING PIER PILE ELEVATIONS

DRAWN	CHECKED	APPROVED
JR	TR	TR
DATE: OCT 24	DATE: OCT 24	DATE: OCT 24
SCALE (A1): 1:100	STAGE: PRELIMINARY	REV: P01

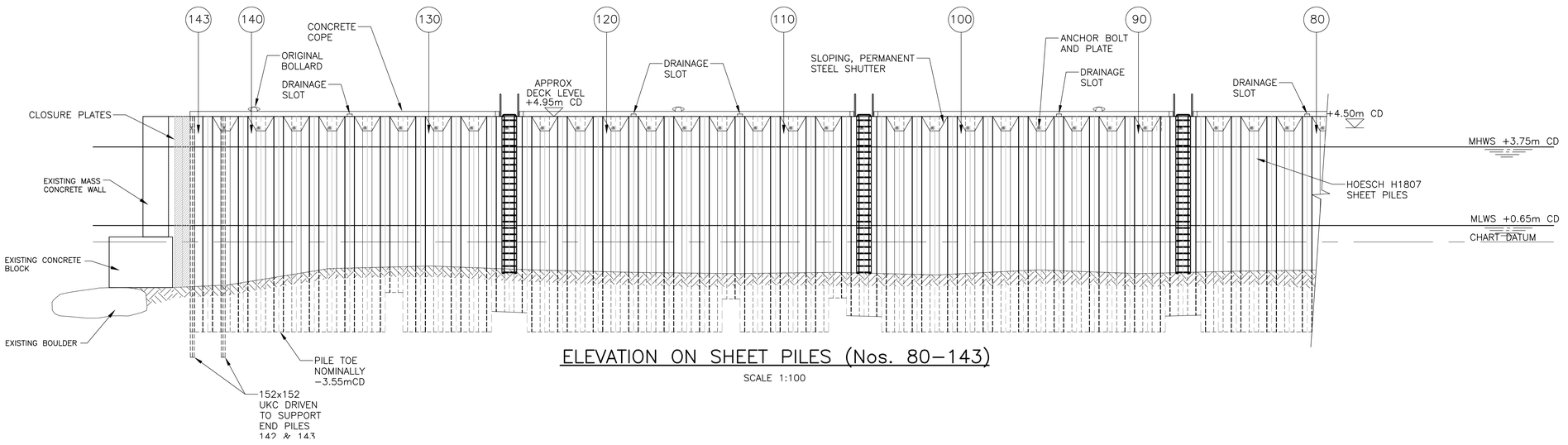
DRAWING No.

2567−WS−XX−XX−D−C−0002



ELEVATION ON SHEET PILES (Nos. 1–79)

SCALE 1:100



ELEVATION ON SHEET PILES (Nos. 80–143)

SCALE 1:100

GENERAL NOTES

1. ALL LEVELS ARE IN METRES AND RELATE TO CHART DATUM.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. REFER TO DRAWING 1700–110 FOR PLAN LOCATION OF SHEET PILES.
4. MHWS– +3.75m CD
   MLWS– +0.65m CD
5. TIMBER COPE TO BE HARDWOOD GREENHEART OR OPEPE
6. UNDER WATER CONCRETE TO BE USED BELOW THE LEVEL OF MID–TIDE.

LEGEND

REV	DETAILS	BY	DATE
R	RECORD	ADS	28.07.14

AMENDMENTS

CLIENT
LYBSTER HARBOUR SOCIETY

PROJECT
LYBSTER PIER REPAIRS

ELEMENT
LIGHTHOUSE PIER ELEVATION

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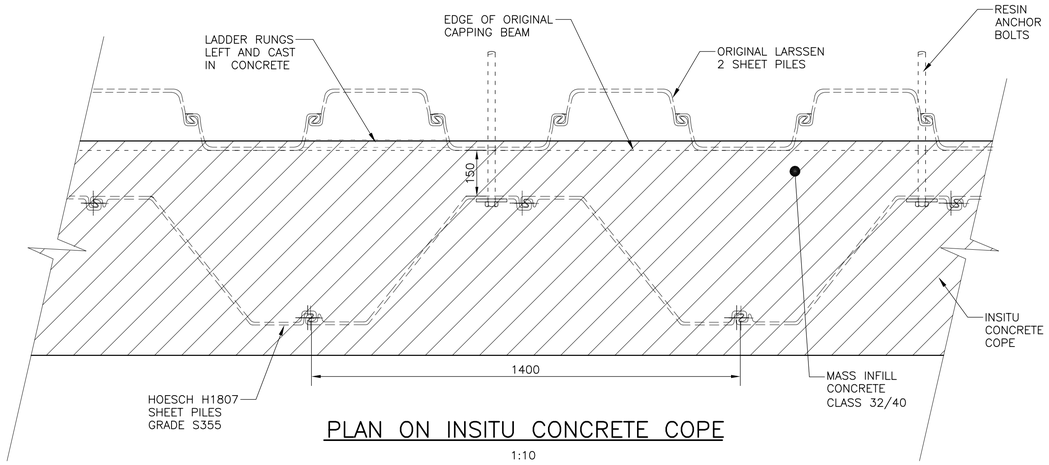
DRAWING TITLE
ELEVATIONS ON PROPOSED SHEET PILES

DRAWN	CHECKED	APPROVED
IS	TR	TR
DATE 25/02/14	DATE MAR 14	DATE MAR 14

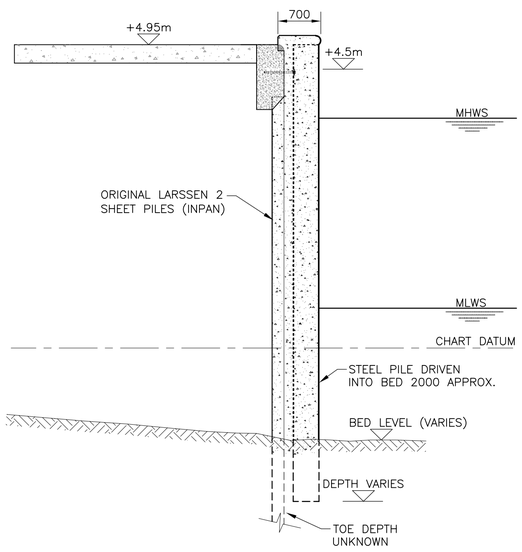
SCALE (A1) 1:100
STAGE RECORD
REVISION R

PROJECT No. 1700
DRAWING No. 111



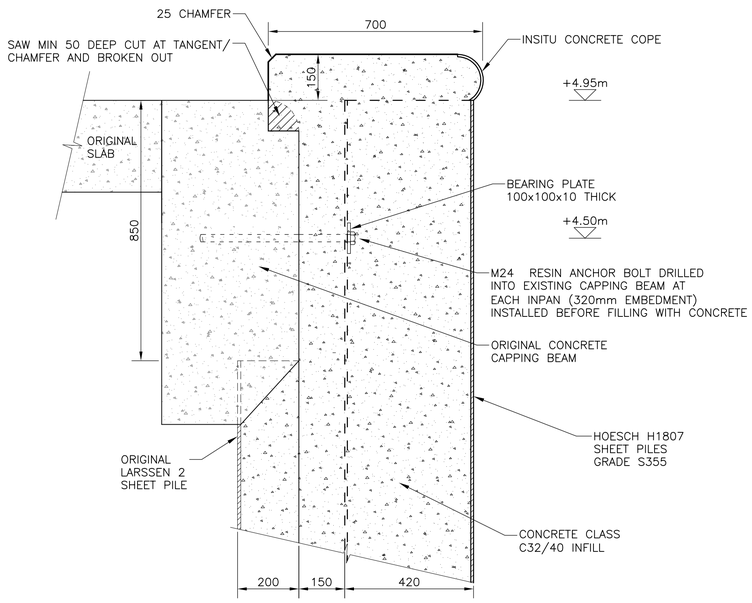
PLAN ON INSITU CONCRETE COPE

1:10



TYPICAL SECTION

1:50



INSITU CONCRETE COPE AND TIE FIXING DETAIL

1:10

GENERAL NOTES

1. ALL LEVELS ARE IN METRES AND RELATE TO CHART DATUM.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. REFER TO DRAWING 1700–110 FOR PLAN LOCATION OF SHEET PILES.
4. MHWS– +3.75m CD
   MLWS– +0.65m CD
5. UNDER WATER CONCRETE TO BE USED BELOW THE LEVEL OF MID–TIDE.

LEGEND

REV	DETAILS	BY	DATE
R	RECORD	IS	07.08.14

AMENDMENTS

CLIENT: LYBSTER HARBOUR SOCIETY

PROJECT: LYBSTER PIER REPAIRS

ELEMENT: QUAY FURNITURE

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DRAWING TITLE: CONCRETE COPE AND TIE BAR DETAILS

DRAWN	CHECKED	APPROVED
IS	TR	TR
DATE: FEB 2014	DATE: FEB 2014	DATE: FEB 2014

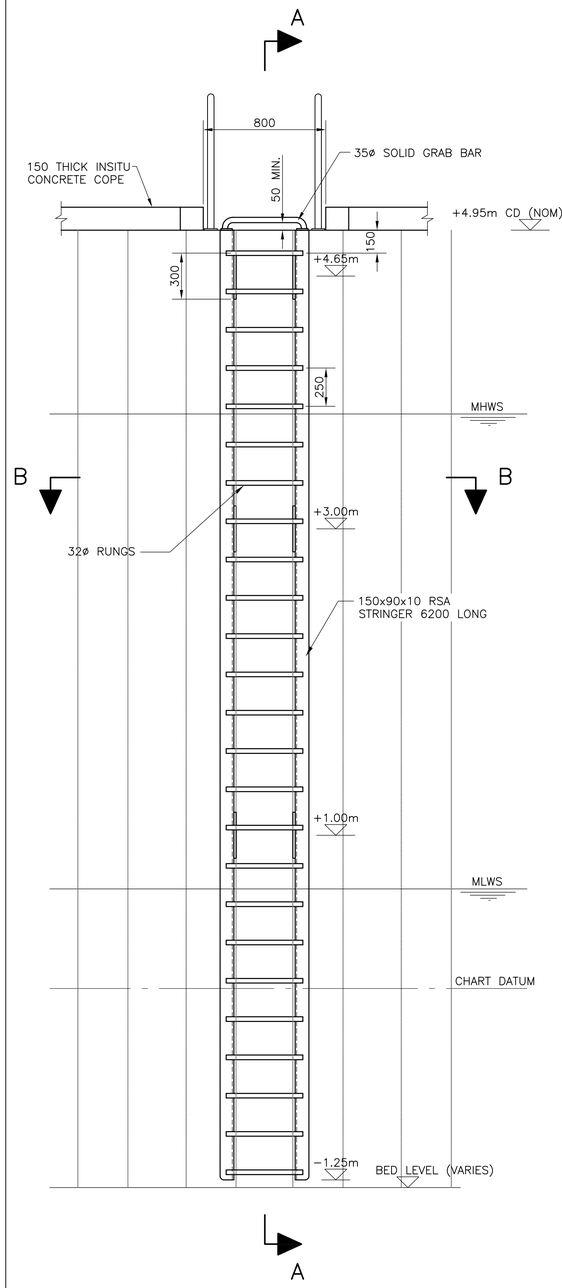
SCALE (A1): AS SHOWN

STAGE: RECORD

REVISION: R

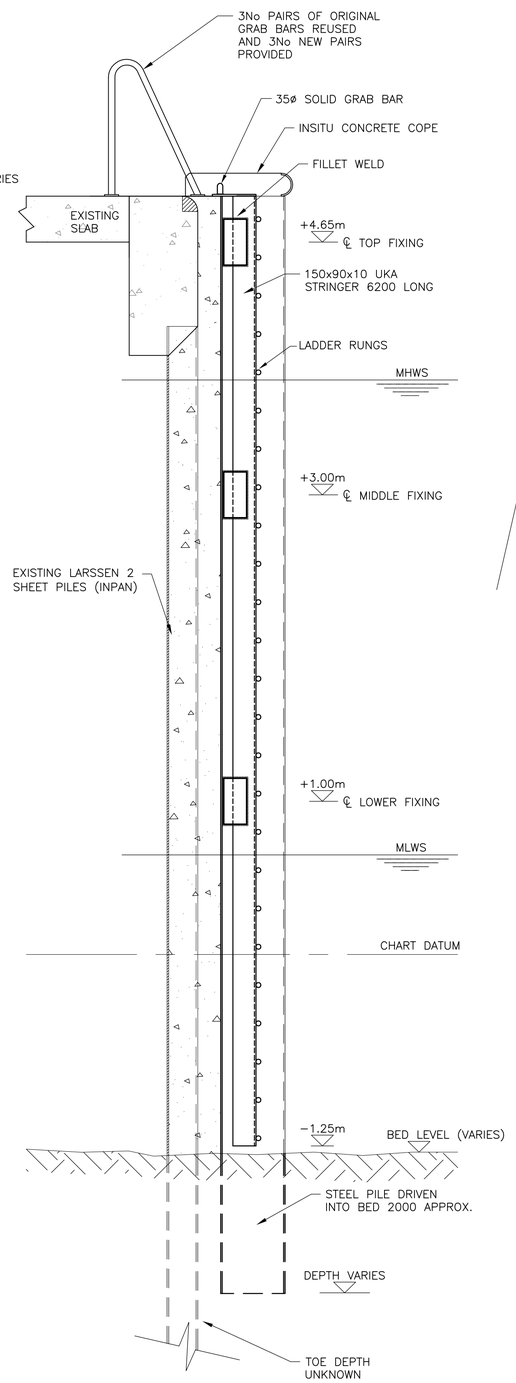
PROJECT No.: 1700

DRAWING No.: 112



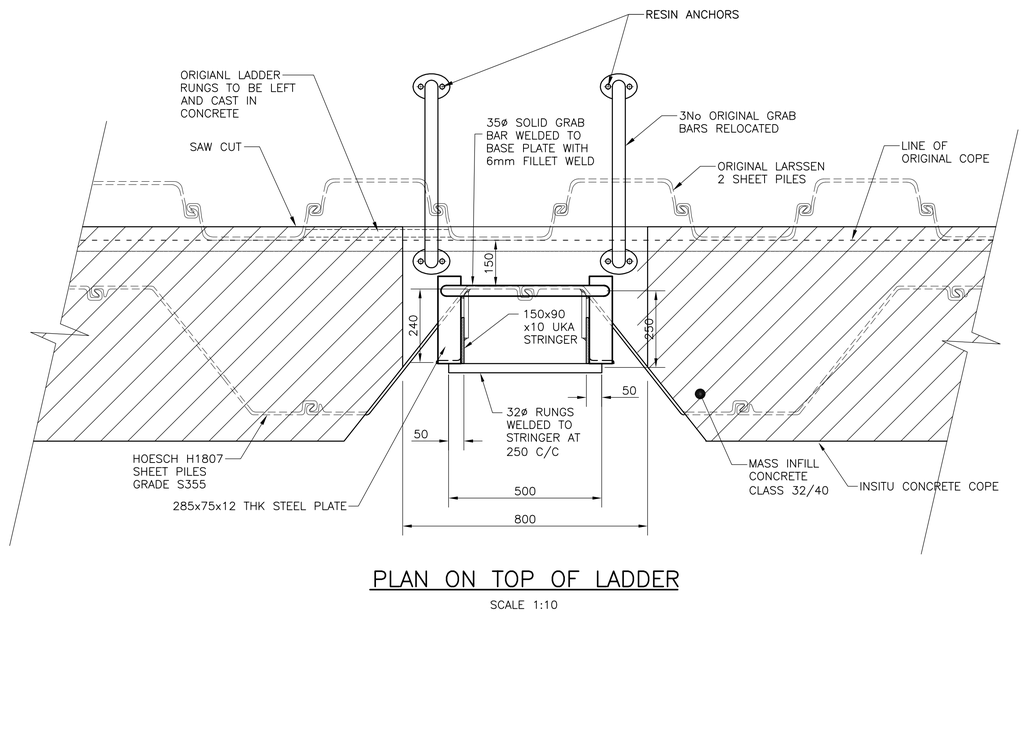
ELEVATION ON LADDER

SCALE 1:20



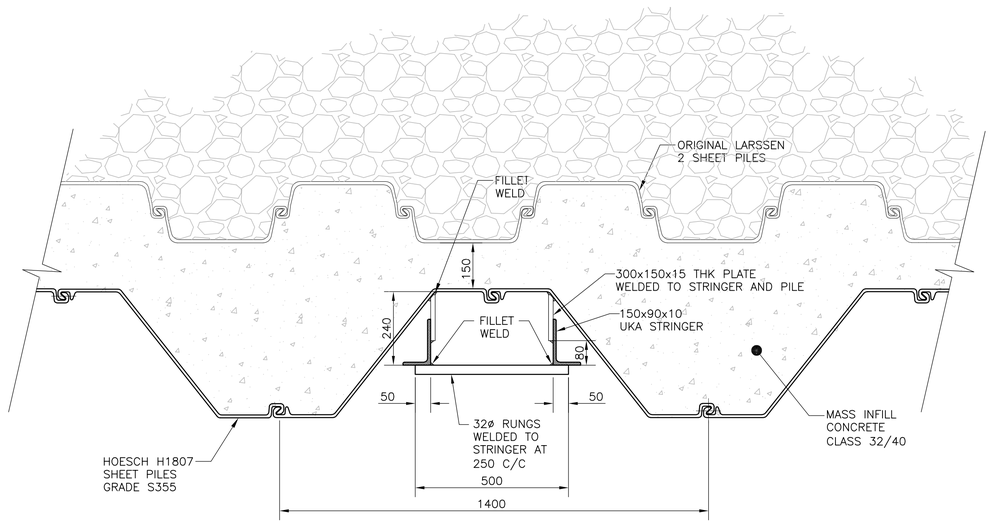
SECTION A–A

SCALE 1:20



PLAN ON TOP OF LADDER

SCALE 1:10



SECTION B–B

SCALE 1:10

GENERAL NOTES

1. ALL LEVELS ARE IN METRES AND RELATE TO CHART DATUM.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. RESIN ANCHOR BOLTS HAS ROD GRADE 8.8 GALVANISED TO 140 MICRONS. RESIN ANCHOR SYSTEM HILTI HIT RE500.
4. ALL STEELWORK GRADE S355.
5. ALL BOLTS, NUTS AND WASHERS GALVANISED GRADE 8.8.
6. ALL STEELWORK HOT DIP GALVANISED IN ACCORDANCE WITH THE SPECIFICATION EXCEPT LOW LEVEL LADDER FIXING BRACKETS WHICH ARE PAINTED WITH COAL TAR EPOXY PAINT.
7. ALL GALVANISING TO BS EN ISO 1461 (140 MICRONS)
8. ALL WELDS 8mm CONTINUOUS FILLET WELDS UNLESS NOTED OTHERWISE.
9. MHWS – 3.75m CD;
   MLWS – 0.65m CD

LEGEND

REV	DETAILS	BY	DATE
R	RECORD	IS	07.08.14

AMENDMENTS

CLIENT: LYBSTER HARBOUR SOCIETY

PROJECT: LYBSTER PIER REPAIRS

ELEMENT: QUAY FURNITURE

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DRAWING TITLE: LADDER DETAILS

DRAWN	CHECKED	APPROVED
IS	TR	TR
DATE: FEB 2014	DATE: FEB 2014	DATE: FEB 2014

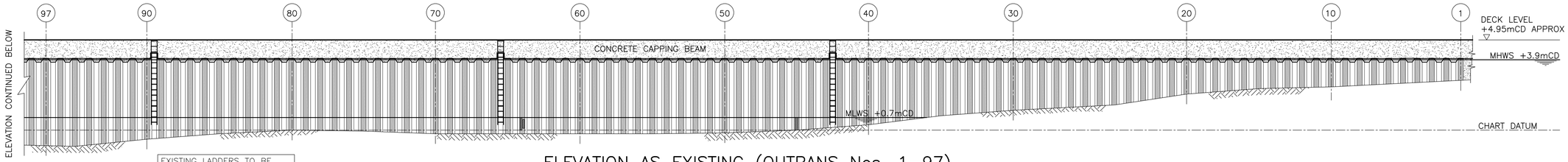
SCALE (A1): AS SHOWN

STAGE: RECORD

REVISION: R

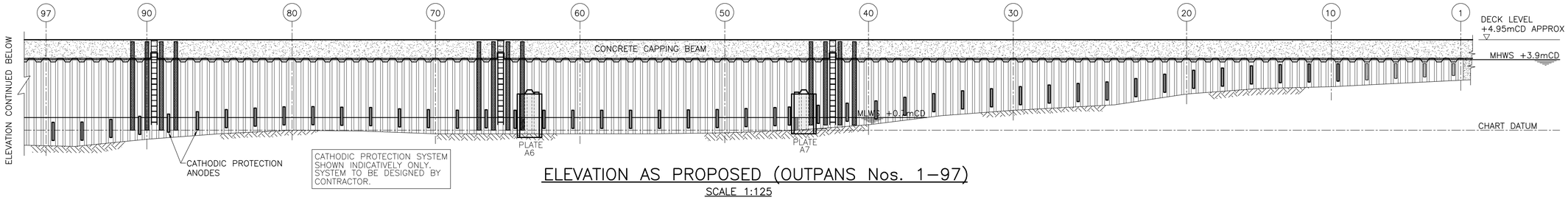
PROJECT No.: 1700

DRAWING No.: 113



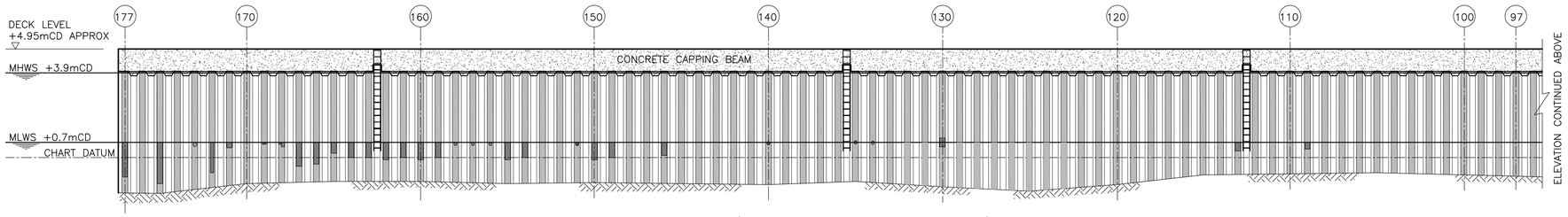
ELEVATION AS EXISTING (OUTPANS Nos. 1–97)

SCALE 1:125



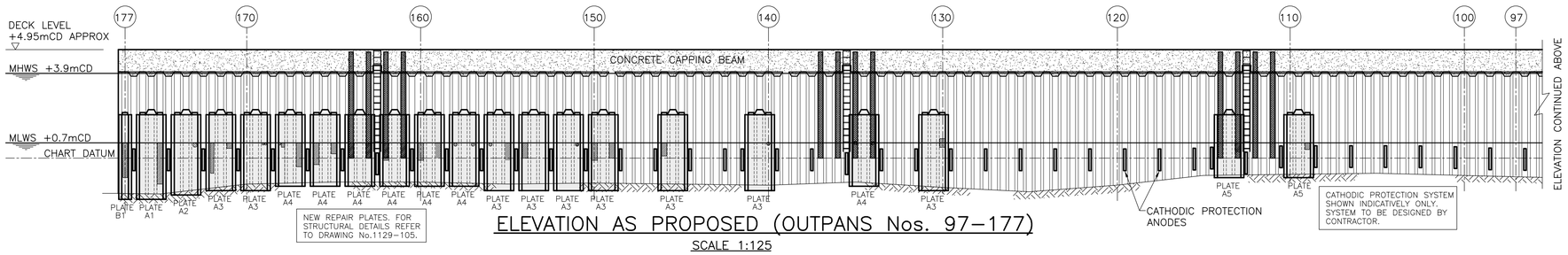
ELEVATION AS PROPOSED (OUTPANS Nos. 1–97)

SCALE 1:125



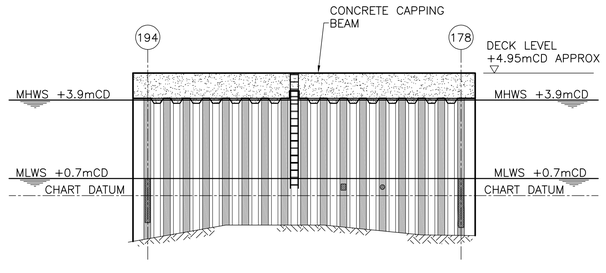
ELEVATION AS EXISTING (OUTPANS Nos. 97–177)

SCALE 1:125



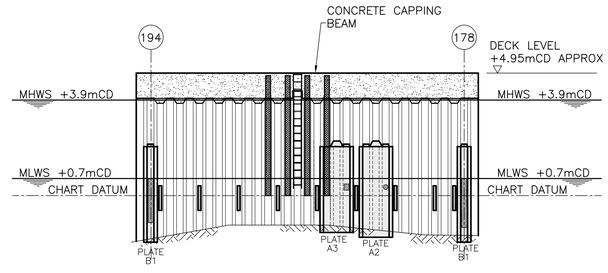
ELEVATION AS PROPOSED (OUTPANS Nos. 97–177)

SCALE 1:125



ELEVATION AS EXISTING (OUTPANS Nos. 178–194)

SCALE 1:125



ELEVATION AS PROPOSED (OUTPANS Nos. 178–194)

SCALE 1:125

GENERAL NOTES

1. ALL LEVELS IN METRES RELATIVE TO CHART DATUM.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL ELEMENTS OF ANODES AND FIXINGS TO LIE AT A MINIMUM OF 25mm BEHIND THE BERTHING LINE.
4. CATHODIC PROTECTION SHOWN IS INDICATIVE ONLY. DESIGN TO BE BY CONTRACTOR.
5. TIMBER COPING AND LADDER GRAB BARS OMITTED FOR CLARITY. FOR DETAILS REFER TO DRAWING No.1129–107.

LEGEND

(1) – PILE OUTPAN NUMBERS

□ – HOLE IN PILE OUTPAN

REV	DETAILS	BY	DATE
A	CONSTRUCTION ISSUE	JHG	04.12.06

AMENDMENTS

CLIENT
HIGHLAND COUNCIL HARBOURS

PROJECT
HELMSDALE HARBOUR

ELEMENT
WEST PIER REPAIRS

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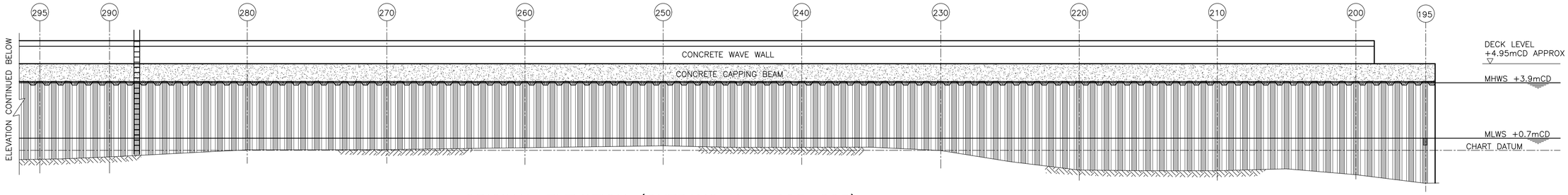
DRAWING TITLE
ELEVATIONS
SHEET 1 OF 2

DRAWN	CHECKED	APPROVED
GMcC	WM	JP
DATE: AUG 2006	DATE: AUG 2006	DATE: AUG 2006

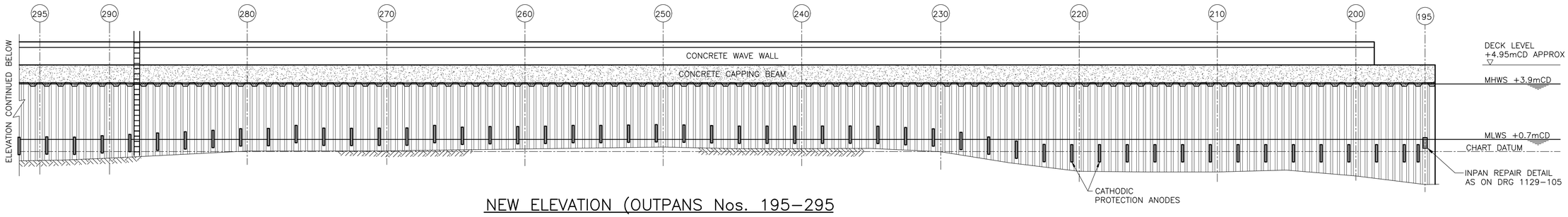
SCALE (A1): AS SHOWN
STAGE: CONSTRUCTION
REVISION: A

PROJECT No. 1129
DRAWING No. 103



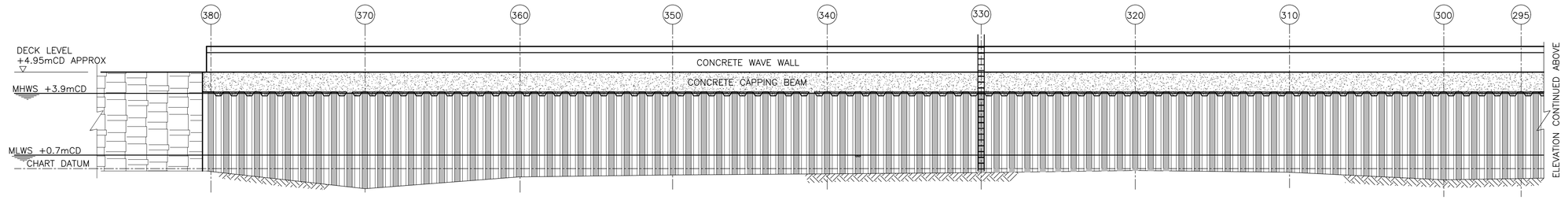
ORIGINAL ELEVATION (OUTPANS Nos. 195–295)

SCALE 1:125



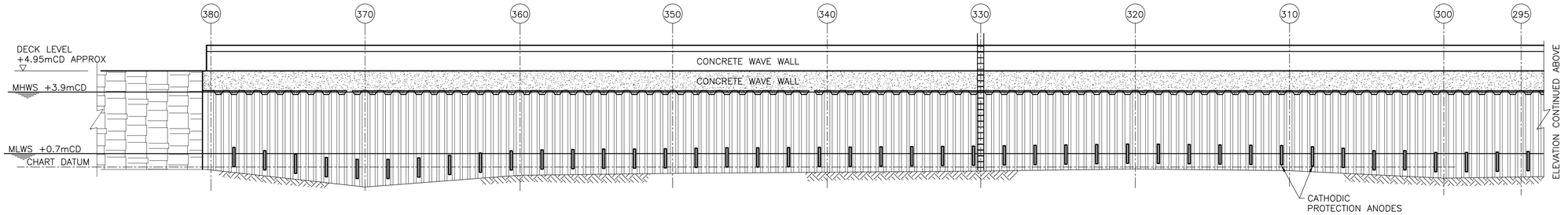
NEW ELEVATION (OUTPANS Nos. 195–295

SCALE 1:125



ORIGINAL ELEVATION (OUTPANS Nos. 295–380)

SCALE 1:125



NEW ELEVATION (OUTPANS Nos. 295–380)

SCALE 1:125

GENERAL NOTES

1. ALL LEVELS IN METRES RELATIVE TO CHART DATUM.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL ELEMENTS OF ANODES AND FIXING LIE AT A MINIMUM OF 25mm BEHIND THE BERTHING LINE.
4. TIMBER COPING AND LADDER GRAB BARS OMITTED FOR CLARITY. FOR DETAILS REFER TO DRAWING No.1129–107.

REV	DETAILS	BY	DATE
B	AMENDED TO RECORD DRAWING	JHG	12.05.08
A	CONSTRUCTION ISSUE	LS	05.12.06

AMENDMENTS

CLIENT
HIGHLAND COUNCIL HARBOURS

PROJECT
HELMSDALE HARBOUR

ELEMENT
WEST PIER REPAIRS

WALLACE STONE & PARTNERS
CONSULTING CIVIL ENGINEERS
NORTH OFFICE
Royal Bank Buildings
High Street, Dingwall
Ross–shire IV15 9HA
Tel: (01349) 866775 Fax: (01349) 863197

DRAWING TITLE
ELEVATIONS
SHEET 2 of 2

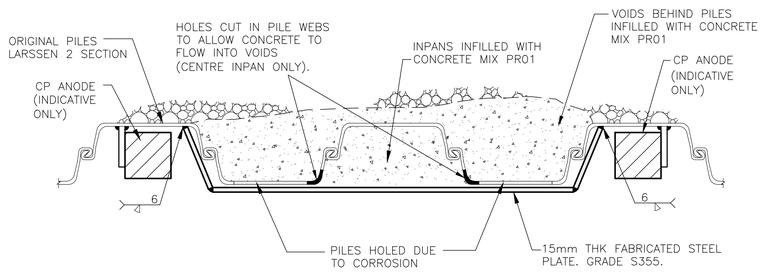
DRAWN	CHECKED	APPROVED
GMC	WM	JP
DATE AUG 2006	DATE AUG 2006	DATE AUG 2006

SCALE (A1) AUG 2006 | STAGE RECORD

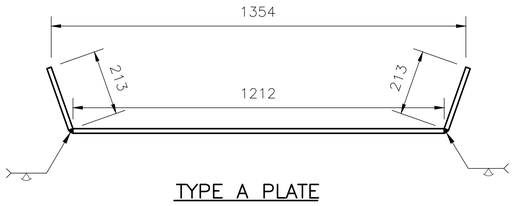
REVISION A B

PROJECT No. 1129

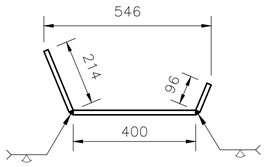
DRAWING No. 104



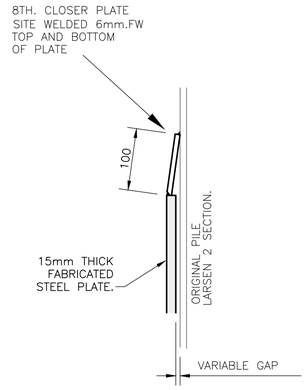
CROSS SECTION A–A THROUGH PLATE REPAIR TYPE A
SCALE 1:10



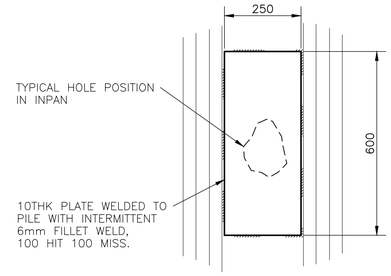
TYPE A PLATE
SCALE 1:10



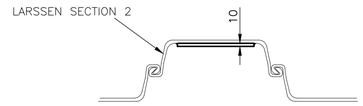
TYPE B PLATE
SCALE 1:10



SECTION C–C
SCALE 1:5

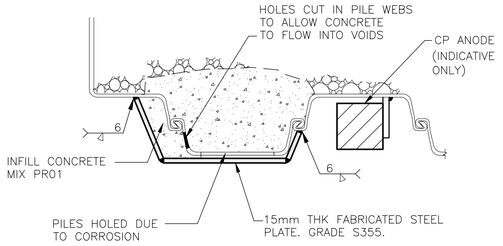


ELEVATION

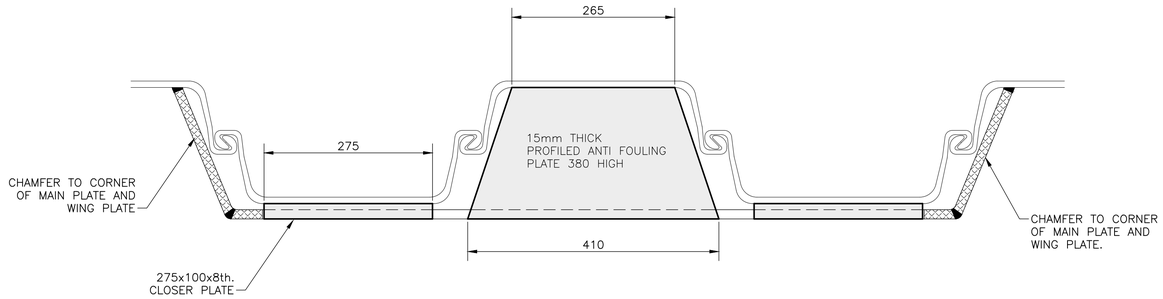


SECTION

INPAN REPAIR DETAIL
(5NO. SIMILAR – PROVISIONAL)
SCALE 1:50



CROSS SECTION D–D THROUGH PLATE REPAIR TYPE B
SCALE 1:10



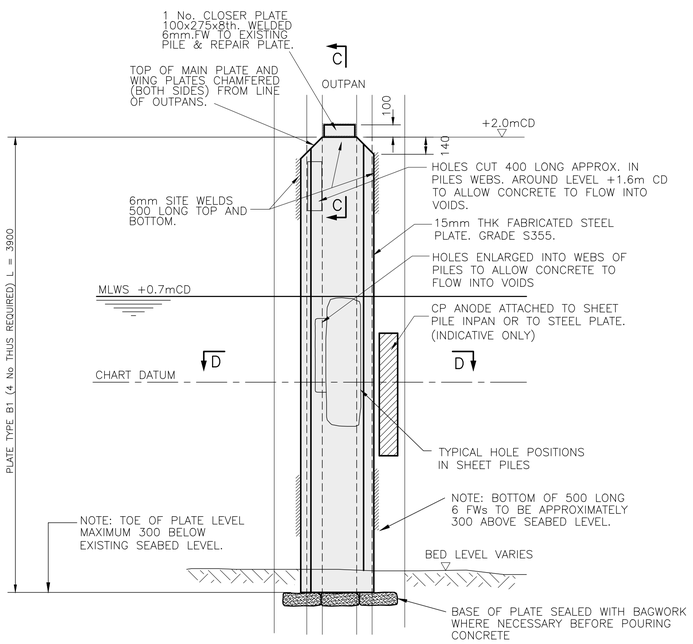
PLAN AT TOP OF TYPE REPAIR PLATE
SCALE 1:5

GENERAL NOTES

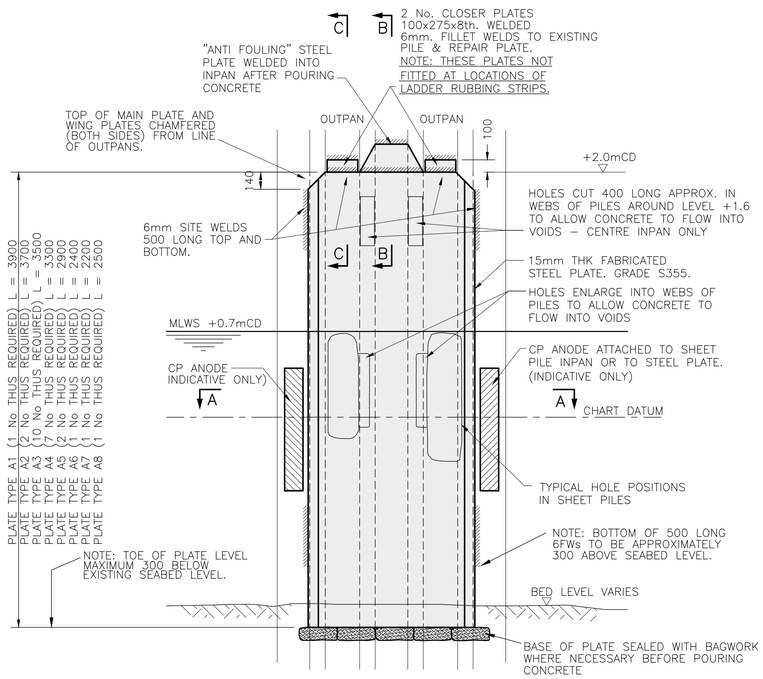
1. ALL LEVELS IN METRES RELATIVE TO CHART DATUM.
2. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTE OTHERWISE.
3. ALL STEEL IS GRADE S355
4. INFILL CONCRETE IS PRESCRIBED MIX PR01 IN ACCORDANCE WITH THE SPECIFICATION.

REV	DETAILS	BY	DATE
B	AMENDED TO RECORD DRAWING	JHG	12.05.08
A	CONSTRUCTION ISSUE	LS	05.12.06

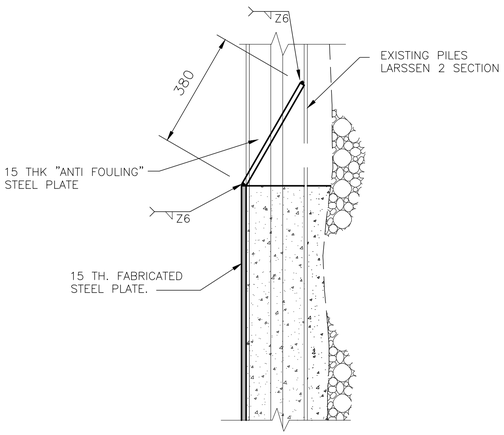
AMENDMENTS



ELEVATION ON PLATE TYPE B1
SCALE 1:25



ELEVATION ON PLATE TYPE A
SCALE 1:25



SECTION B–B
SCALE 1:10

CLIENT
HIGHLAND COUNCIL HARBOURS

PROJECT
HELMSDALE HARBOUR

ELEMENT
WEST PIER REPAIRS

WALLACE STONE & PARTNERS
CONSULTING CIVIL ENGINEERS
NORTH OFFICE
Royal Bank Buildings
High Street, Dingwall
Ross–shire IV15 9HA
Tel: (01349) 866775 Fax: (01349) 863197

DRAWING TITLE
STEEL PILE REPAIRS
PLATE DETAILS

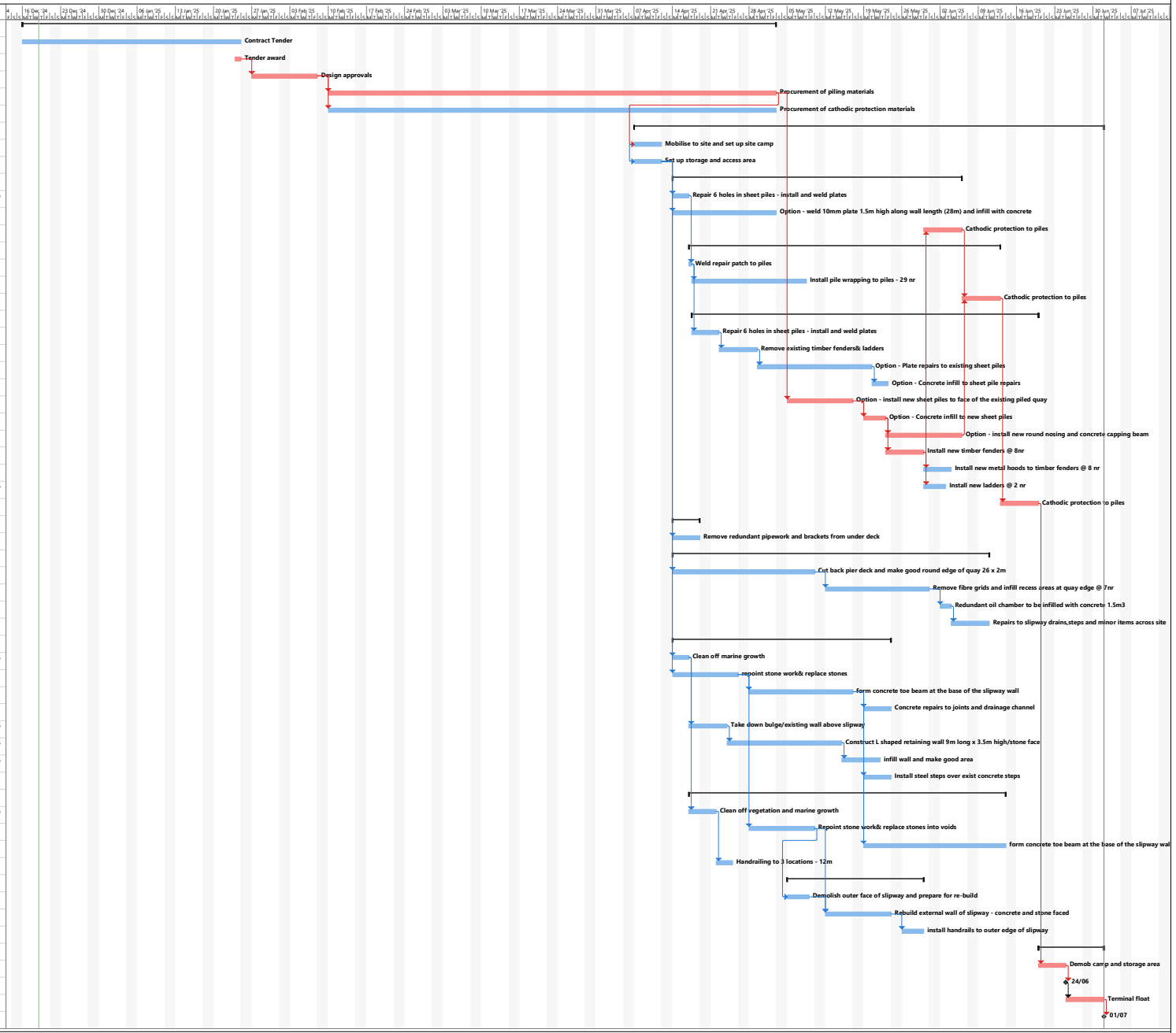
DRAWN	CHECKED	APPROVED
GMC	WM	JP
DATE: AUG 2006	DATE: AUG 2006	DATE: AUG 2006

SCALE (A1): AUG 2006
STAGE: RECORD
REVISION: A B

PROJECT No. 1129
DRAWING No. 105

PORTREE HARBOUR
TENDER PROGRAMME DRAFT
16-12-24

ID	Task Mode	Task Name	Duration	Start	Finish
1		**Portree Harbour - Planning and procurement**	**100 days**	**Mon 16/12/24**	**Fri 02/05/25**
2		Contract Tender	30 days	Mon 16/12/24	Fri 24/01/25
3		Tender award	1 day	Fri 24/01/25	Fri 24/01/25
4		Design approvals	10 days	Mon 27/01/25	Fri 07/02/25
5		Procurement of piling materials	60 days	Mon 10/02/25	Fri 02/05/25
6		Procurement of cathodic protection materials	60 days	Mon 10/02/25	Fri 02/05/25
7		**Portree Harbour - Site Works**	**62 days**	**Mon 07/04/25**	**Tue 01/07/25**
8		Mobilise to site and set up site camp	5 days	Mon 07/04/25	Fri 11/04/25
9		Set up storage and access area	5 days	Mon 07/04/25	Fri 11/04/25
10		**Ref 1 - Sheet Pile wall under Pier**	**39 days**	**Mon 14/04/25**	**Thu 05/06/25**
11		Repair 6 holes in sheet piles - install and weld plates	3 days	Mon 14/04/25	Wed 16/04/25
12		Option - weld 10mm plate 1.5m high along wall length (28m) and infill with concrete	15 days	Mon 14/04/25	Fri 02/05/25
13		Cathodic protection to piles	5 days	Fri 30/05/25	Thu 05/06/25
14		**Ref 2 - Rendhex Piles to Suspended Deck**	**41 days**	**Thu 17/04/25**	**Thu 12/06/25**
15		Weld repair patch to piles	0.5 days	Thu 17/04/25	Thu 17/04/25
16		Install pile wrapping to piles - 29 nr	15 days	Thu 17/04/25	Thu 08/05/25
17		Cathodic protection to piles	5 days	Fri 06/06/25	Thu 12/06/25
18		**Ref 3 - Sheet piled Quay**	**45.5 days**	**Thu 17/04/25**	**Thu 19/06/25**
19		Repair 6 holes in sheet piles - install and weld plates	3 days	Thu 17/04/25	Tue 22/04/25
20		Remove existing timber fenders & ladders	5 days	Tue 22/04/25	Tue 29/04/25
21		Option - Plate repairs to existing sheet piles	15 days	Tue 29/04/25	Tue 20/05/25
22		Option - Concrete infill to sheet pile repairs	3 days	Tue 20/05/25	Fri 23/05/25
23		Option - install new sheet piles to face of the existing piled quay	10 days	Mon 05/05/25	Fri 16/05/25
24		Option - Concrete infill to new sheet piles	4 days	Mon 19/05/25	Thu 22/05/25
25		Option - install new round nosing and concrete capping beam	10 days	Fri 23/05/25	Thu 05/06/25
26		Install new timber fenders @ 8nr	5 days	Fri 23/05/25	Thu 29/05/25
27		Install new metal hoods to timber fenders @ 8 nr	3 days	Fri 30/05/25	Tue 03/06/25
28		Install new ladders @ 2 nr	2 days	Fri 30/05/25	Mon 02/06/25
29		Cathodic protection to piles	5 days	Fri 13/06/25	Thu 19/06/25
30		**Ref 4 - Pier Services**	**5 days**	**Mon 14/04/25**	**Fri 18/04/25**
31		Remove redundant pipework and brackets from under deck	5 days	Mon 14/04/25	Fri 18/04/25
32		**Ref 5 - Pier Concrete Services**	**42 days**	**Mon 14/04/25**	**Tue 10/06/25**
33		Cut back pier deck and make good round edge of quay 26 x 2m	20 days	Mon 14/04/25	Fri 09/05/25
34		Remove fibre grids and infill recess areas at quay edge @ 7nr	15 days	Mon 12/05/25	Fri 30/05/25
35		Redundant oil chamber to be infilled with concrete 1.5m3	2 days	Mon 02/06/25	Tue 03/06/25
36		Repairs to slipway drains, steps and minor items across site	5 days	Wed 04/06/25	Tue 10/06/25
37		**Ref 6 - Slipway - Main Quay**	**30 days**	**Mon 14/04/25**	**Fri 23/05/25**
38		Clean off marine growth	3 days	Mon 14/04/25	Wed 16/04/25
39		Repoint stone work & replace stones	10 days	Mon 14/04/25	Fri 25/04/25
40		Form concrete toe beam at the base of the slipway wall	15 days	Mon 28/04/25	Fri 16/05/25
41		Concrete repairs to joints and drainage channel	5 days	Mon 19/05/25	Fri 23/05/25
42		Take down bulge/existing wall above slipway	5 days	Thu 17/04/25	Wed 23/04/25
43		Construct L shaped retaining wall 9m long x 3.5m high/stone face	15 days	Thu 24/04/25	Wed 14/05/25
44		Infill wall and make good area	5 days	Thu 15/05/25	Wed 21/05/25
45		Install steel steps over exist concrete steps	5 days	Mon 19/05/25	Fri 23/05/25
46		**Ref 7 - Quay Street Retaining Wall**	**42 days**	**Thu 17/04/25**	**Fri 13/06/25**
47		Clean off vegetation and marine growth	3 days	Thu 17/04/25	Mon 21/04/25
48		Repoint stone work & replace stones into voids	10 days	Mon 28/04/25	Fri 09/05/25
49		Form concrete toe beam at the base of the slipway wall	20 days	Mon 19/05/25	Fri 13/06/25
50		Handrailing to 3 locations - 12m	3 days	Tue 22/04/25	Thu 24/04/25
51		**Ref 8 - Beaumont Crescent Slipway**	**19 days**	**Mon 05/05/25**	**Thu 29/05/25**
52		Demolish outer face of slipway and prepare for re-build	4 days	Mon 05/05/25	Thu 08/05/25
53		Rebuild external wall of slipway - concrete and stone faced	10 days	Mon 12/05/25	Fri 23/05/25
54		Install handrails to outer edge of slipway	4 days	Mon 26/05/25	Thu 29/05/25
55		**Demob and Completion**	**8 days**	**Fri 20/06/25**	**Tue 01/07/25**
56		Demob camp and storage area	3 days	Fri 20/06/25	Tue 24/06/25
57		Planned completion	0 days	Tue 24/06/25	Tue 24/06/25
58		Terminal float	5 days	Wed 25/06/25	Tue 01/07/25
59		Completion	0 days	Tue 01/07/25	Tue 01/07/25



Project: Portree Construction Pr
Date: Thu 19/12/24

Task | Split | Milestone | Summary | Project Summary | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | External Tasks | External Milestone | Deadline | Critical | Critical Split | Progress | Manual Progress