The Highland Council

Agenda Item	**5**
Report No	**LA/37/26**

Committee: **Lochaber Area**

Date: **9 November 2026**

Report Title: **Fort William Common Good Fund – Parking Costs**

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

1 Purpose/Executive Summary

1.1 The operational management costs to deliver the car parking at the West End carpark must be considered and approved by this Committee before being recharged against the Fort William Common Good Fund.

1.2 The report outlines the maintenance responsibility within the carpark and for the seawall.

2 Recommendations

2.1 Members are asked to:-

i. **Agree** that £6,905 costs incurred by the Council's Parking Enforcement Team to operate the paid parking scheme at the Fort William Common Good site is charged against the Fort William Common Good Fund; and
ii. **Agree** that the Highland Council will retain the maintenance responsibility for the seawall.

3 Implications

3.1 **Resource** - Financial implications are as outlined in this report. There are costs incurred by the Parking Enforcement Team in running the West End Carpark on behalf of the Common Good Fund. These costs should be borne by the Common Good Fund.

3.2 **Legal** - This application of Common Good funds will fall within the competency guidelines set out both in statute and in common law in relation to Common Good Funds.

3.3 **Risk** - Minimum income requirements must be achieved to cover committed costs.

3.4 **Health and Safety (risks arising from changes to plant, equipment, process, or people)** – No Implications.

3.5 **Gaelic** - No Implications.

4 Impacts

4.1 In Highland, all policies, strategies or service changes are subject to an integrated screening for impact for Equalities, Poverty and Human Rights, Children's Rights and Wellbeing, Climate Change, Islands and Mainland Rural Communities, and Data Protection. Where identified as required, a full impact assessment will be undertaken.

4.2 Considering impacts is a core part of the decision-making process and needs to inform the decision-making process. When taking any decision, Members must give due regard to the findings of any assessment.

4.3 This is a monitoring and update report and therefore an impact assessment is not required.

5 Income generated to date

5.1 In 2025/26 the West End Carpark has generated £80,125 of income for the Common Good Fund all of which is paid to the Fort William Common Good Fund.

2025/26	Totals
Gross Income	£174,819
Income less VAT	£145,682
Common Good 55%	£80,125
Highland Council 45%	£65,557

A full income and cost breakdown has been provided in **Appendix 1**.

6 Costs to be recharged

6.1 The costs incurred by the Parking Enforcement Team in respect of the operation and maintenance of the West End Carpark are as follows: -

Item	Cost	Common Good 55%
Card Transaction and processing fees	£9,798	£5,389
Maintenance agreements 4 payment machines at £400 each per annum	£1,600	£880
Staff Costs to retrieve cash and monitor sites 1.5 hours per week for 12 months	£1,157	£636
Total costs	**£12,554**	**£6,905**

7 Maintenance

7.1 The Lochaber Area Roads Team have done a considerable amount of work to surface section of the carpark to bring these up to a good standard so that the maintenance cost of the carpark surface and lining can be shared proportionately with the Common Good Fund moving forward. It is proposed that future lining and surfacing works be split inline with the income 55% Common Good 45% Highland Council with all but emergency works being pre-approved by this Committee.

7.2 An inspection of the seawall was undertaken in March of 2026 the report of which can be found in **Appendix 2.** The report identifies the structure is in fair condition for its age but has made the following recommendations:-

- Holes in the sheet piles should be repaired by welding steel plates to cover the holes. An additional detailed inspection is required in advance of repairs to determine the full extent of repair works;
- A suitable cathodic protection system should be installed to prevent the ongoing spread of Accelerated Low Water Corrosion (ALWC);
- Infill mesh (or similar) must be provided in the opening on the edge protection system to prevent risk of fall-through; and
- The entire structure should be regularly inspected, with special attention paid to:
    - The area where ALWC was noted and holes are present in the sheet piles.
    - The tie rod ends where the threaded length does not protrude beyond the nut to ensure that no slippage or movement has occurred.

7.3 The Highland Council will undertake to identify funding to make the necessary repairs to the seawall. It is also proposed that due to the age and burden it would cause the Fort William Common Good Fund that the Highland Council will remain solely responsible for the maintenance of the seawall.

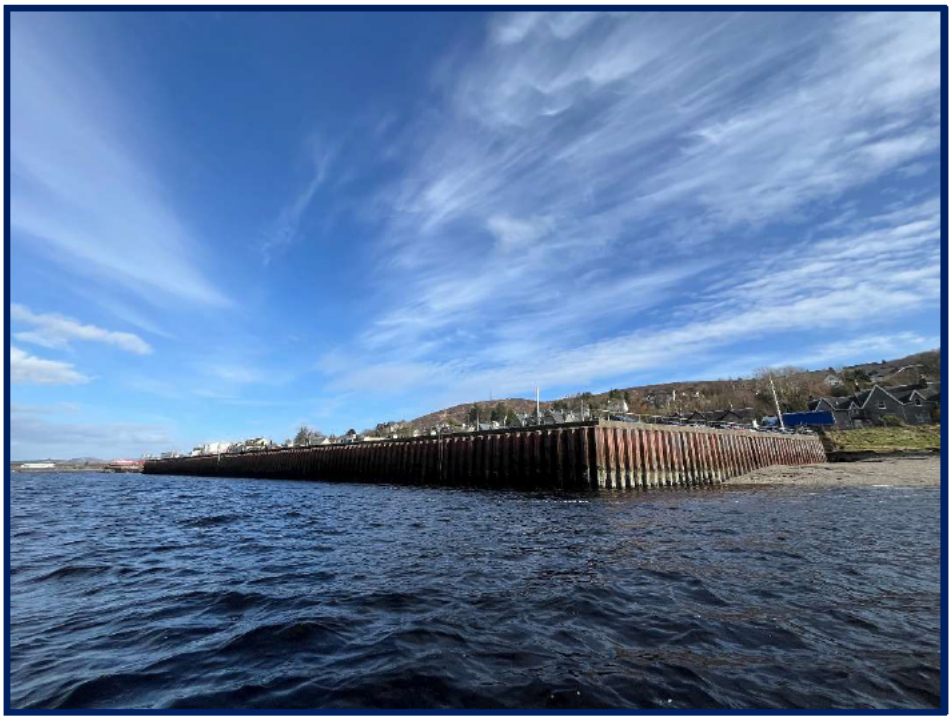
Designation:	Assistant Chief Executive - Place
Date:	9 October 2026
Author:	Ross Bartlett Principal Officer
Background Papers:	The Highland Council Parking Policy 2018 – 2023 Off-Street Car Parking Policy Review
Appendices:	Appendix 1 – Income and Expenditure Appendix 2 – Fortwilliam West End Car park Inspection Report

Appendix 1 – Income and Expenditure

2025/26	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Totals
RingGo Income	£ 4,071	£ 3,030	£ 3,381	£ 4,222	£ 6,058	£ 4,191	£ 4,757	£ 2,183	£ 2,261	£ 1,727	£ 2,547	£ 3,377	£ 41,805
RingGo transactions	935	639	753	978	1,443	927	845	373	419	292	424	609	8,637
Machine Transactions	3,373	3,211	4,207	5,591	6,835	4,702	2,971	1,189	976	757	970	1,515	36,297
Machine Income Cash	£ 2,528	£ 2,360	£ 3,004	£ 3,350	£ 3,906	£ 3,339	£ 1,833	£ 663	£ 536	£ 409	£ 584	£ 769	£ 23,281
Machine Income Card	£ 9,368	£ 8,868	£ 11,688	£ 16,179	£ 19,703	£ 13,159	£ 9,398	£ 5,173	£ 3,643	£ 2,960	£ 3,721	£ 5,873	£ 109,733
Gross Income	£ 15,967	£ 14,259	£ 18,073	£ 23,750	£ 29,667	£ 20,689	£ 15,988	£ 8,019	£ 6,441	£ 5,096	£ 6,852	£ 10,018	£ 174,819
Income less VAT	*£ 13,306*	*£ 11,882*	*£ 15,061*	*£ 19,792*	*£ 24,723*	*£ 17,241*	*£ 13,323*	*£ 6,682*	*£ 5,367*	*£ 4,247*	*£ 5,710*	*£ 8,349*	£ 145,682
Common Good 55%	*£ 7,318*	*£ 6,535*	*£ 8,283*	*£ 10,886*	*£ 13,597*	*£ 9,482*	*£ 7,328*	*£ 3,675*	*£ 2,952*	*£ 2,336*	*£ 3,141*	*£ 4,592*	£ 80,125
Service Budget 45%	*£ 5,988*	*£ 5,347*	*£ 6,777*	*£ 8,906*	*£ 11,125*	*£ 7,758*	*£ 5,995*	*£ 3,007*	*£ 2,415*	*£ 1,911*	*£ 2,570*	*£ 3,757*	£ 65,557
Transaction Fees 100%	£ 855	£ 779	£ 1,003	£ 1,372	£ 1,705	£ 1,144	£ 883	£ 470	£ 358	£ 287	£ 375	£ 567	£ 9,798
Annualised Costs 100%	£ 133	£ 133	£ 133	£ 133	£ 133	£ 133	£ 133	£ 133	£ 133	£ 133	£ 133	£ 133	£ 1,600
Staff Costs	£ 96	£ 96	£ 96	£ 96	£ 96	£ 96	£ 96	£ 96	£ 96	£ 96	£ 96	£ 96	£ 1,157
Transaction Fees CG 55%	£ 470	£ 428	£ 552	£ 754	£ 938	£ 629	£ 486	£ 258	£ 197	£ 158	£ 206	£ 312	£ 5,389
Annualised Costs CG 55%	£ 73	£ 73	£ 73	£ 73	£ 73	£ 73	£ 73	£ 73	£ 73	£ 73	£ 73	£ 73	£ 880
Staff Costs	£ 53	£ 53	£ 53	£ 53	£ 53	£ 53	£ 53	£ 53	£ 53	£ 53	£ 53	£ 53	£ 636
												55% Total	***£ 6,905***

THE HIGHLAND COUNCIL

FORT WILLIAM WEST END CAR PARK INSPECTION



INSPECTION REPORT

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THE HIGHLAND COUNCIL
FORT WILLIAM WEST END CAR PARK INSPECTION

INSPECTION REPORT

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THE HIGHLAND COUNCIL
FORT WILLIAM WEST END CAR PARK INSPECTION

INSPECTION REPORT

1. Introduction

Wallace Stone LLP were appointed by the Highland Council to carry out an inspection of the West End Carpark structure in Fort William.

The structure is located at grid reference NN097735 and protrudes from the A82 beside the West End roundabout into Loch Linnhe. A steel sheet piled wall extends around the three seaward sides of the carpark.

The carpark provides public parking for the town of Fort William on a 'pay and display' basis. There is a marina facility block and pontoon located on the north side of the carpark structure.

This report provides a commentary on the following works requested by the Highland Council:

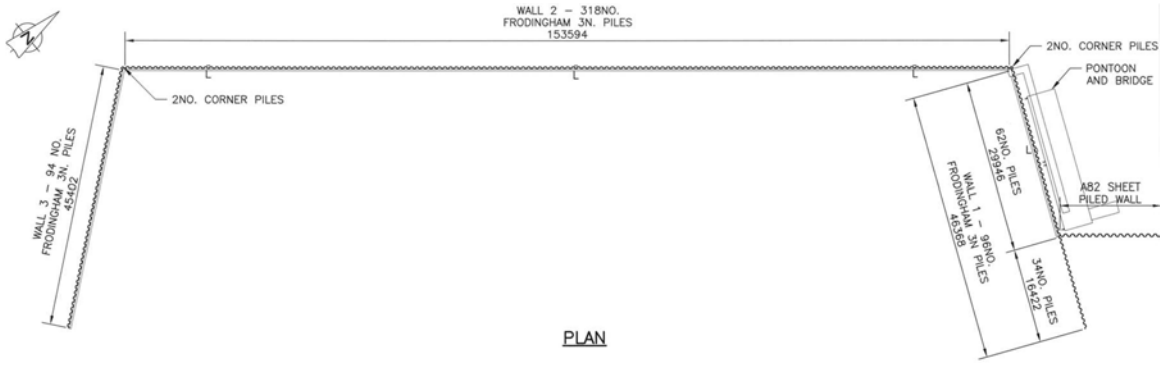
- Full inspection to the standard of a Principal Inspection;
- Steel thickness survey with measurements at various levels and positions;
- Identification of steel sections;
- Estimation of corrosion losses, and comparison of actual vs expected rates of loss;
- Comment on the presence and structure specific risk of advanced low water corrosion;
- Recommendations for maintenance and repairs.

The inspection was carried out by two Chartered Civil Engineers on the 18th, 19th and 20th March 2026. Engineers used dry suits to access the base of the structure during periods of low water and a small RIB was used to conduct the remainder of the inspection.

The weather conditions during the inspection each day were fair, with bright sunshine and light winds and an average temperate of around 5°C.

2. Description of the Structure

General arrangement drawings of the structure are included in Appendix B

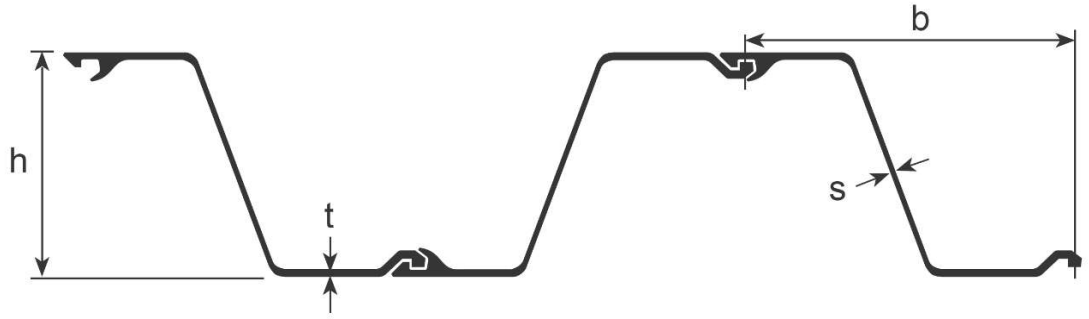


The structure comprises a three-sided tied sheet piled quay wall with anchor walls. The North Wall (Wall 1) is approximately 29m long, the West Wall (Wall 2) is approximately 154m long and the South Wall (Wall 3) is approximately 45m long.

The seabed level varies between -0.6mCD and -0.4mCD at Wall 1, between -1.2mCD and 0mCD at Wall 2 and between 0mCD and +3.9mCD at Wall 3 which rises with the natural foreshore gradient on the south face. A dip survey was undertaken to confirm the level of the seabed at regular intervals around the structure.

The steel sheet pile section is Frodingham No. 3N. This is shown on the record drawing and was confirmed on site by measurement and stamps clearly visible on the sheet piled wall.

The section properties for Frodingham No. 3N are shown below.



Section	b (mm)	h (mm)	t (mm)	s (mm)	Sectional Area (cm^2/m)	Section Modulus (cm^3/m)
3N	483	283	11.7	8.9	175	1,688

Steel tie rods are noted on drawings as being 2 ¾" (70mm) diameter and are at 9'- 6" (2.90m) centres.

3. Quay Wall Inspection

Inspection of the Quay Wall was carried out by Engineers in dry suits during low water and from a small RIB at intermediate and high tide levels. At various tide levels, each sheet pile was inspected, and steel thickness measurements using an ultrasonic steel thickness gauge were taken every 5th (double) pile on both the outer flange and the web.

3.1 Low Water

Inspection was carried out at low water around the entire face of the structure. The lowest tide levels were approximately +0.2mCD during the low water inspections and the front of the structure did not entirely dry out. However, shallow water of approximately 1.4m maximum and clear visibility allowed the low water inspection to take place.

The sheet piles at low water were generally in fair condition. There was little marine growth at this level and the faces of the sheet piles were largely covered in barnacles.

Weepholes appeared to be operational with water discharging during low tide.

On the Wall 1 and the northern half of the Wall 2, some light pitting was noted on the face of the steel. A hole was formed with little effort while clearing a localised area on pile P83. Two localised areas with section loss of up to 5.35mm were noted on Wall 2 piles P19 and P29.

Between Wall 2 piles P140 and P229 there is generally deeper water at the base of the structure due to the lower seabed level. Around these piles, presence of accelerated low water corrosion (ALWC) was noted indicated by orange soft organic bacteria (Ferric 3+ oxides) and a black layer (ferric sulphide) concealing bright, pitted steel beneath. This has led to the formation of localised holes occurring between piles P169 and P229 and low steel thickness readings around this part of the structure, with section loss noted up to 5.60mm. The steel was noted to be locally brittle in this area whilst clearing with a chipping hammer and in some instances the process of clearing formed additional small holes. Holes and areas of ALWC were generally found on the pile webs which is consistent with published expectations for Frodingham piles in CIRIA C634.

Wall 3 at low water exhibited surface corrosion and delamination. This is likely due to wave action running up the foreshore producing frequent wetting and drying cycles and shingle erosion. The loss of steel section in this area was up to 3.75mm.

3.2 Mid-Tide

Inspection around mid-tide level was carried out around the entire face of the structure. This zone of the structure exhibited significant marine growth.

The sheet piles around mid-tide were generally in good condition. The paint coating in this section remains largely intact. No significant corrosion was noted with a maximum loss of section of 2.50mm encountered at this level throughout the structure.

Several tie rods protruding from the wall appear to be short, with no threaded length extending beyond the nut. In some cases, the tie rod ends terminate only halfway through the nut. Standard construction practice requires a sufficient length of thread to project beyond the nut to ensure proper engagement and secure full load transfer. The condition appears to be as constructed, as there is no evidence of slippage or subsequent movement.

Tie rods and nuts exhibit surface corrosion, but not significant loss of section of structural integrity was noted.

3.3 Splash Zone

The splash zone refers to the section of wall between mid and high tide which experiences frequent wetting and drying cycles due to wave action.

Inspection at the splash zone was carried out around the entire face of the structure. This area exhibited significant surface corrosion, with delamination of the steel. There was little marine growth and build up or barnacles in this area.

Despite the noted surface corrosion, there was little loss of section observed with maximum 2.20mm noted throughout the structure.

3.4 High Level

The section of the structure above high tide level was generally in good condition. The paint system at this location remains intact in places with slight surface rust staining. There was no significant corrosion noted or any evidence of section loss therefore no steel thickness readings were taken at the high level.

3.5 Steel Thickness and Corrosion Rates

A full schedule of steel thickness readings is given on the drawings contained in Appendix B. These are summarised in the table below.

Summary of Steel Thickness Survey Readings

	Wall 1 (North)				Wall 2 (West)				Wall 3 (South)			
	Mean		Min		Mean		Min		Mean		Min	
	t_f	t_w	t_f	t_w	t_f	t_w	t_f	t_w	t_f	t_w	t_f	t_w
Splash Zone	10.88	7.68	10.3	6.75	11.1	8.30	10.1	7.60	11.1	8.38	9.50	7.70
Mid Tide	10.75	7.86	9.25	7.16	10.9	8.01	9.20	7.00	11.1	8.41	9.65	7.90
Low Level	8.30	6.70	6.40	5.10*	9.03	6.80	7.40	3.30*	9.15	6.22	7.95	6.05

The following table shows the computed loss of section based on the initial steel thicknesses presented in Section 2.

Summary of Computed Section Loss

	Wall 1 (North)				Wall 2 (West)				Wall 3 (South)			
	Mean		Max		Mean		Max		Mean		Max	
	Loss t_f	Loss t_w	Loss t_f	Loss t_w	Loss t_f	Loss t_w	Loss t_f	Loss t_w	Loss t_f	Loss t_w	Loss t_f	Loss t_w
Splash Zone	0.82	1.22	1.40	2.15	0.62	0.60	1.60	1.30	0.60	0.52	2.20	1.20
Mid Tide	0.95	1.04	2.45	1.80	0.72	0.89	2.50	1.90	0.63	0.49	2.05	1.00
Low Level	3.4	2.20	5.30	3.80*	2.67	2.10	4.30	5.60*	2.55	2.48	3.75	2.90

Nb. readings marked * are taken adjacent to a hole in the pile, so minimum effective thickness at this localised location is 0mm and maximum section loss is the full thickness of the member.

The above tables clearly show that the most severe corrosion has occurred in the low water zone of the structure, with maximum section loss across both the mean and maximum on each of the three walls.

There is not a clear discernible pattern in the computed section loss values for the mid tide zone and the splash zone. The mean values generally show more significant section loss around the mid tide level, though maximum values of section loss often occur within the splash zone. It would generally be expected to observe higher corrosion levels in the splash zone than at mid tide. These readings demonstrate that although the corrosion in the splash zone is more visually apparent, there is not a significantly greater loss of section than observed in the mid tide zone.

Consideration has been given to published rates of corrosion used for design in BS EN 1993-5:2007 to give an estimation of expected section loss throughout the life of the structure.

The structure is believed to have been completed in 1972, which to present date is around 54 years ago.

Rates of corrosion for the front and rear faces of the structure have been extracted from NA to BS EN 1993-5:2007 Table 4.1 and Table 4.2 and are given in the table below.

	Loss of Thickness Per Face Due to Corrosion (mm)		
	50 years	**54 years [Interpolated]**	**75 years**
Front Face Sea water in temperate climates in the high tide splash zone or in the low water zone [Table 4.2]	3.75	4.00	5.60
Rear Face Non-compacted and non-aggressive fills [Table 4.1]	1.20	1.28	1.70
Total Loss	**4.95mm**	**5.28mm**	**7.30mm**

As the above table shows, the expected section loss within the splash zone and low water zones for a structure age of 54 years is 5.28mm.

Several loss of section readings in the low water zone were observed to be equal or greater than this with maximum section loss of 5.60mm recorded throughout the structure (aside from holes).

Generally, the condition and steel thickness were found to be within the expected range or greater for this age of structure. The mean values of loss are all less than published values in BS EN 1993-5:2007.

Note that areas where ALWC is present or at risk of occurring may continue to rapidly deteriorate so it is strongly advised to carry out recommendations outlined in Section 5 of this document.

4. Deck Level Inspection and Life Saving Equipment

The structure deck contains carparking facilities with surface dressed bitmac makeup. Parking bays are separated by white line road markings, many of which are deteriorated. There are potholes and some erosion damage to the surfacing at various places throughout the carpark.

There is no evidence of significant rutting or instability at surface level which would suggest any defects or loss of fill material within the sheet piled box structure.

The east side of the structure is bounded by a concrete retaining wall supporting the A82 above the carpark level. This was not included in the inspection.

A reinforced concrete upstand wall, 760 mm in height and approximately 300 mm in thickness, is provided around the seaward perimeter of the car park, constructed inside the sheet pile inpans. This is supplemented by a single horizontal tubular steel rail mounted on vertical posts at approximately 1960 mm centres, giving an overall containment height of 1330 mm.

While the overall barrier height is considered satisfactory in relation to relevant safety guidance, there is an approximate 560 mm vertical gap between the top of the concrete wall and the horizontal rail. Current Building (Scotland) Regulations require that guardrails must prevent a 100mm sphere passing through. This opening presents a potential fall-through risk within a public environment, particularly for children, and may not constitute a fully effective barrier without additional infill or intermediate guarding. A section of railing is deformed above Wall 3 (South) and the concrete wall is slightly displaced at a joint, likely due to vehicle impact.

The carpark has two life rings positioned on the quay edge. Where ladders are present, they are either damaged, bent, unsecured, or corroded away entirely at the bottom rendering them unusable and unsafe. In accordance with HSE Standard L148 – Safety in Docks, provision of lifesaving equipment alone is sufficient without ladders if sufficient edge protection is provided. Due to the potential fall-through risk, the current provision of ladders is insufficient as they are largely inoperable.

5. Conclusion and Recommendations

The structure is generally in fair condition, and the observed levels of corrosion generally fall within the expected rates for the age of the structure.

ALWC was noted at localised areas where the seabed level is lower between Wall 2 Piles P140 and P290. In this area there were several holes in the sheet piles and the greatest level of section loss was observed.

The carparking area is serviceable. The concrete wall and tubular steel rail are in good condition, though the opening between them is large and presents a potential fall through risk.

The following actions are recommended to increase the longevity of the structure and to address safety concerns:

- Holes in the sheet piles should be repaired by welding steel plates to cover the holes. An additional detailed inspection is required in advance of repairs to determine the full extent of repair works;
- A suitable cathodic protection system should be installed to prevent the ongoing spread of ALWC;
- Infill mesh (or similar) must be provided in the opening on the edge protection system to prevent risk of fall-through;
- The entire structure should be regularly inspected, with special attention paid to:
    - The area where ALWC was noted and holes are present in the sheet piles;
    - The tie rod ends where the threaded length does not protrude beyond the nut to ensure that no slippage or movement has occurred.

Appendix A –Photographs



Photo 1 – Wall 1 (North) Low Level

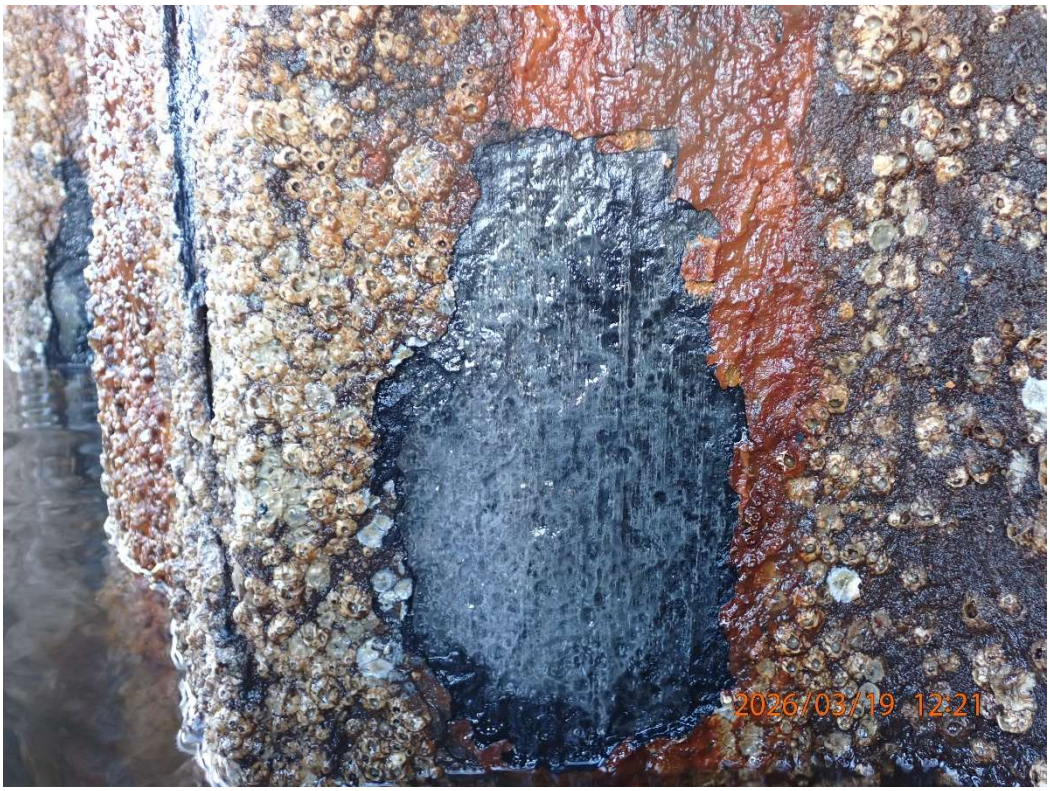


Photo 2 – Wall 1 (North) Pitting at Low Level

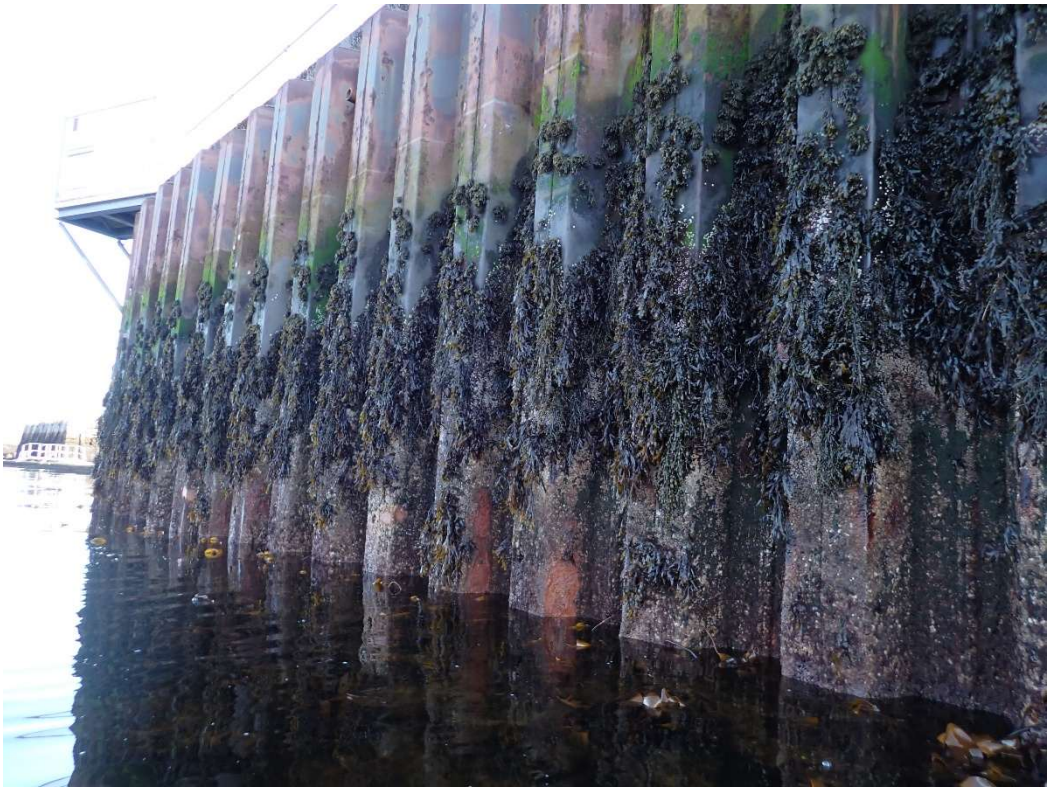


Photo 3 – Wall 2 (West) Low Level



Photo 4 – Wall 2 (West) Low Level Weep Holes Discharging



Photo 5 – Wall 2 (West) Low Level Hole in Web



Photo 6 – Wall 2 (West) Low Level ALWC and Small Hole



Photo 7 – Wall 2 (West) Low Level Localised ALWC



Photo 8 – Wall 2 (West) Low Level Pitting

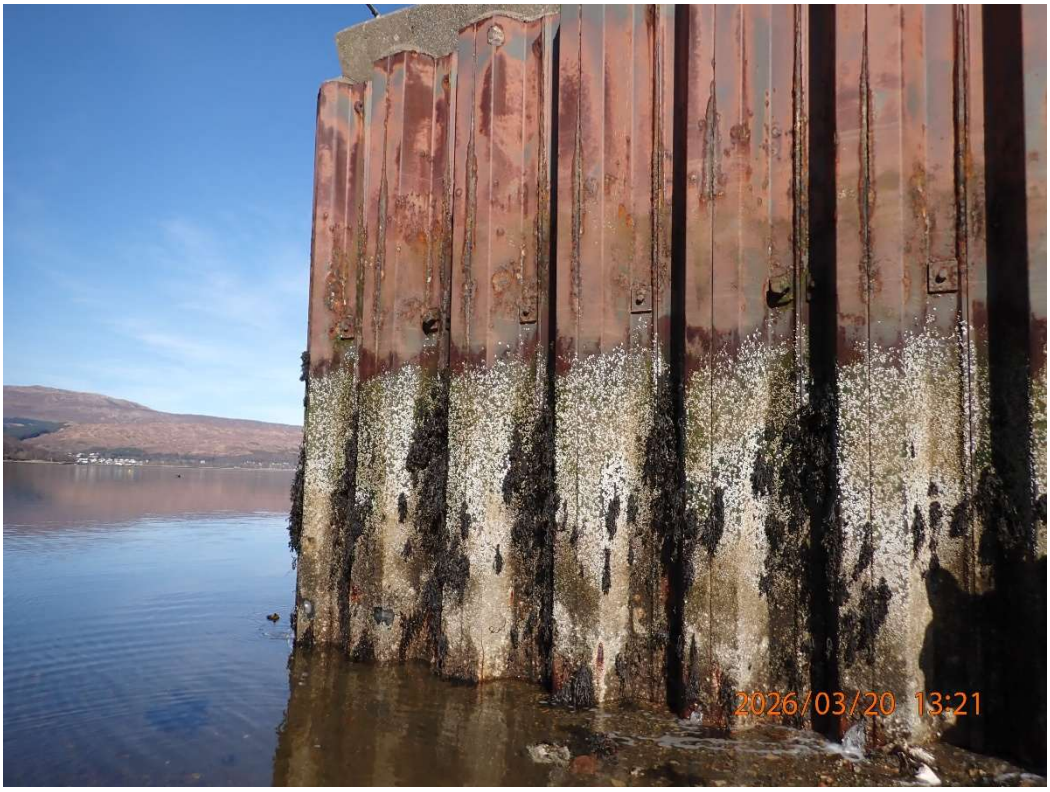


Photo 9 – Wall 3 (South) Low Level



Photo 10 – Wall 3 (South) Low Level



Photo 11 – Wall 1 (North) Mid Tide Level

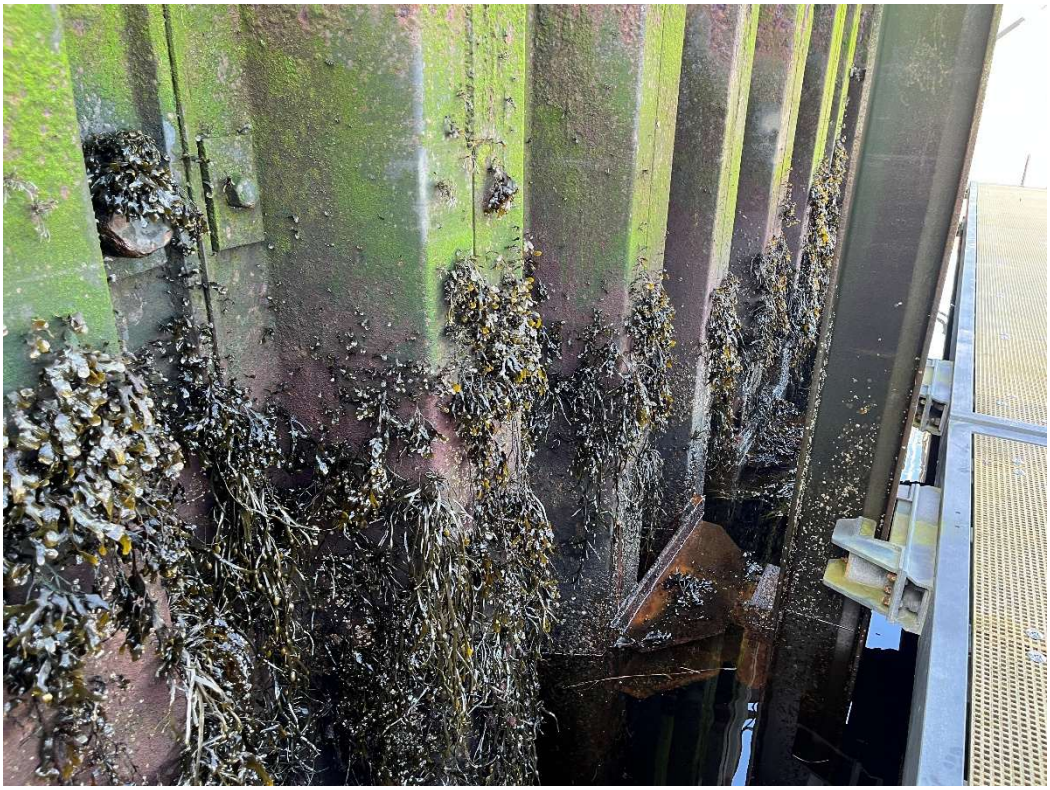


Photo 12 – Wall 1 (North) Mid Tide Level

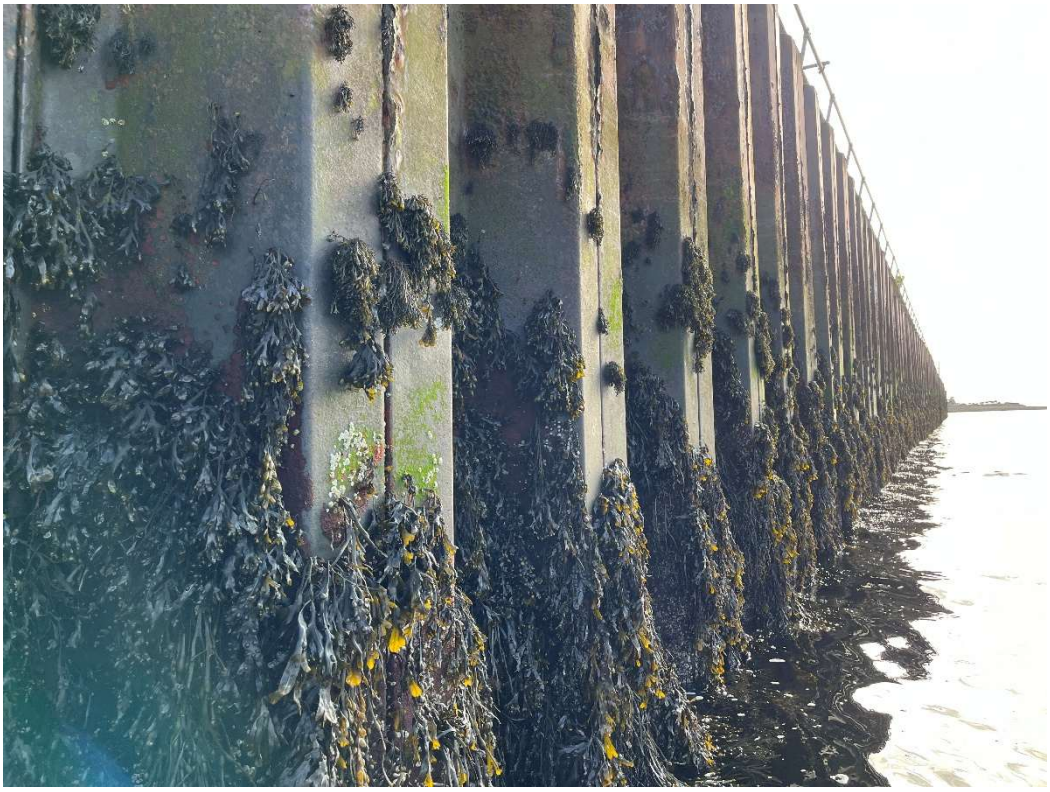


Photo 13 – Wall 2 (West) Mid Tide Level



Photo 14 – Wall 2 (West) Mid Tide Level



Photo 15 – Wall 2 (West) Mid Tide Level Tie Rod Nut



Photo 16 – Wall 2 (West) Mid Tide Level Defective Ladder



Photo 17 – Wall 3 (South) Mid Tide Level



Photo 18 – Wall 3 (South) Mid Tide Level Corrosion due to Wave Action



Photo 19 – Wall 1 (North) Splash Zone / High Level

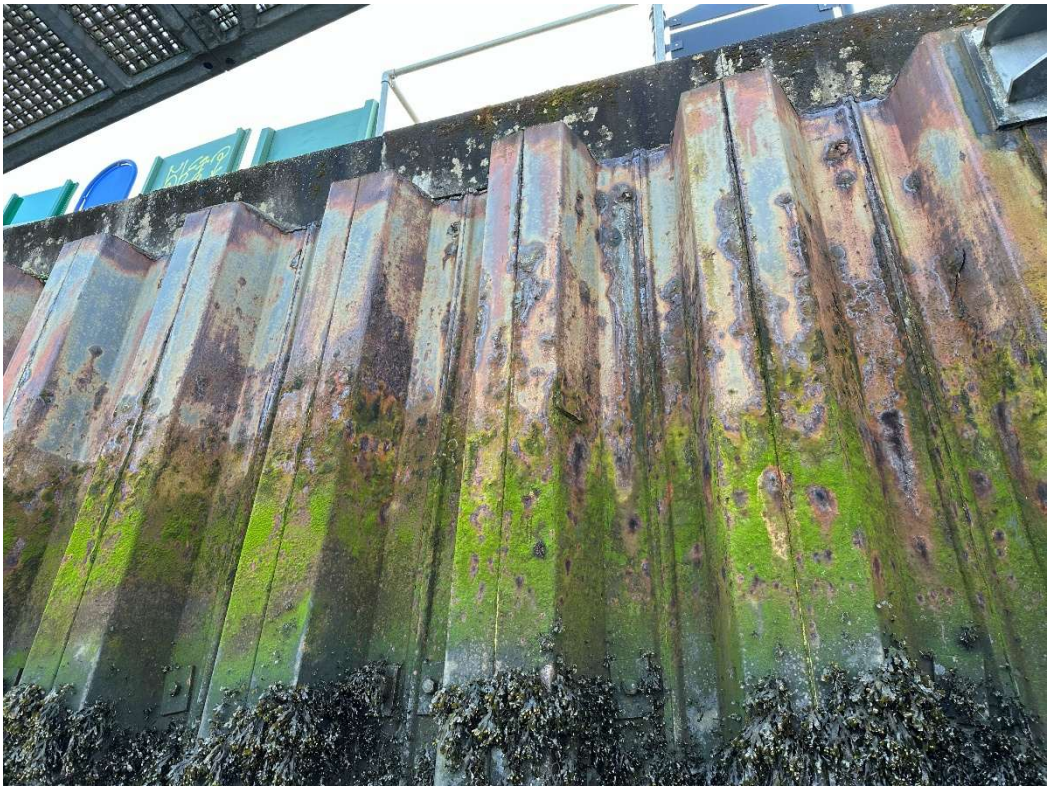


Photo 20 – Wall 1 (North) Splash Zone / High Level

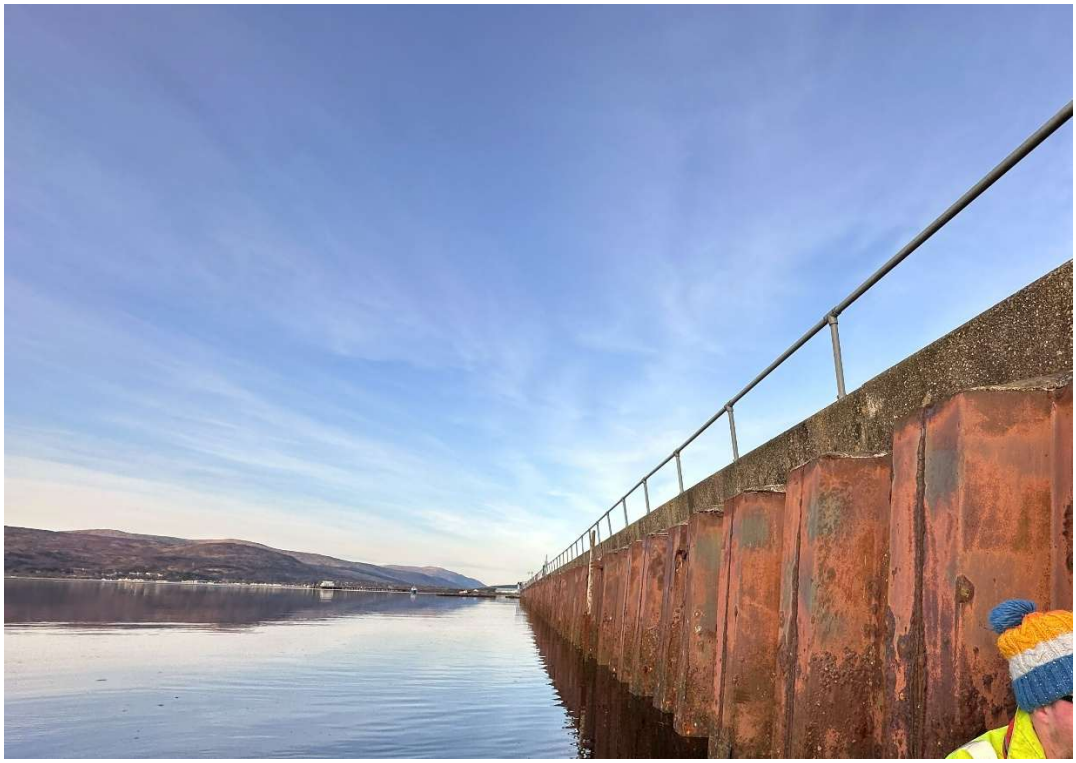


Photo 21 – Wall 2 (West) Splash Zone / High Level

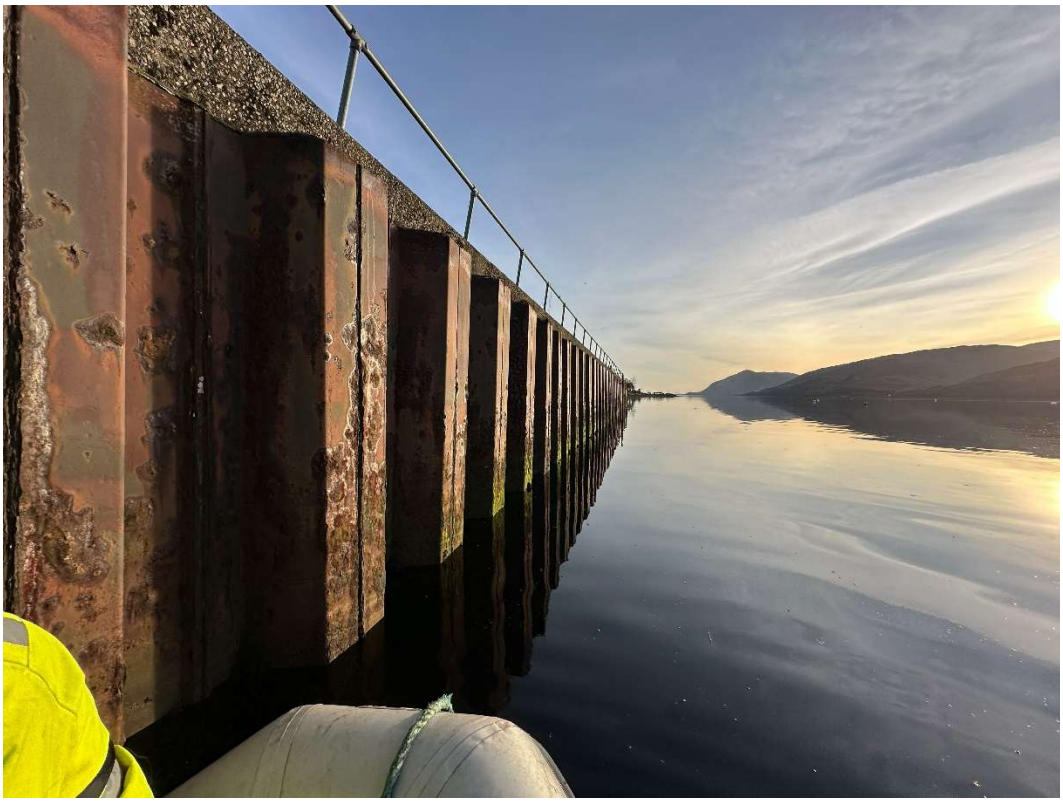


Photo 22 – Wall 1 (North) Splash Zone / High Level



Photo 23 – Wall 2 (West) Splash Zone / High Level



Photo 24 – Wall 2 (West) Splash Zone / High Level with Previous Plate Repairs/Bracket

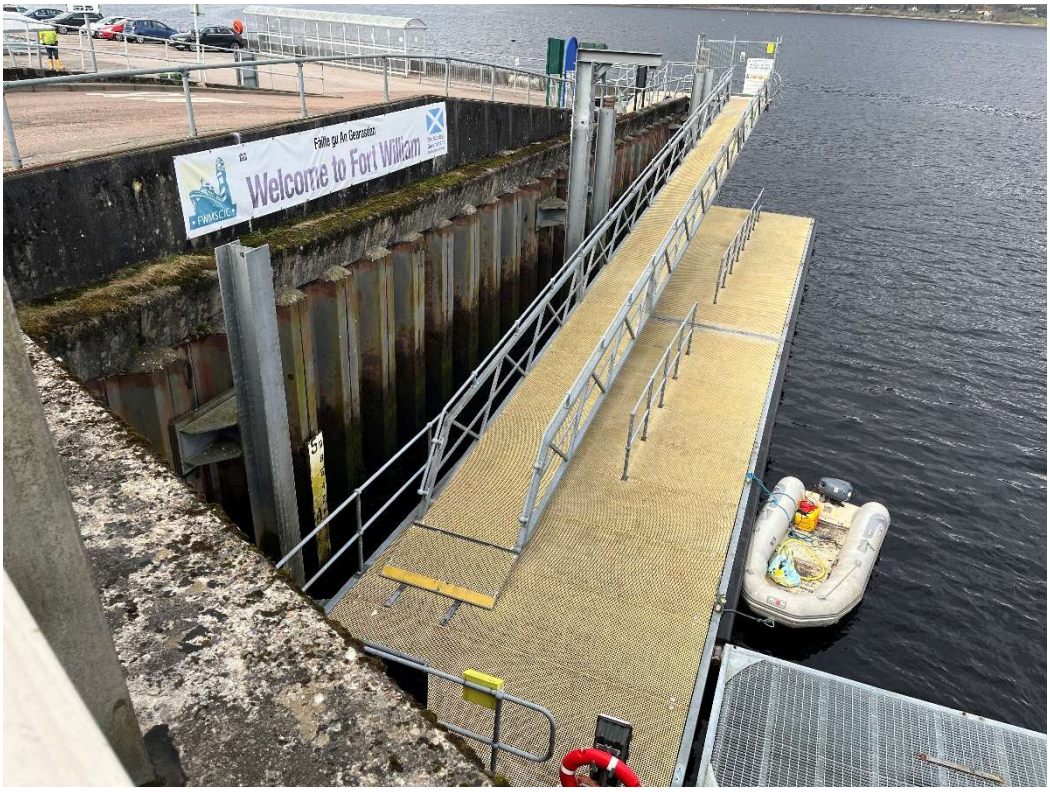


Photo 25 – Wall 1 (North) Adjacent Pontoon Facility



Photo 26 – Carpark Entrance



Photo 27 – Carpark Overview



Photo 28 – Retaining Wall at East of Carpark



Photo 29 – Concrete Wall and Steel Rail Edge Protection



Photo 30 – Distorted Rail above Wall 3 (South)

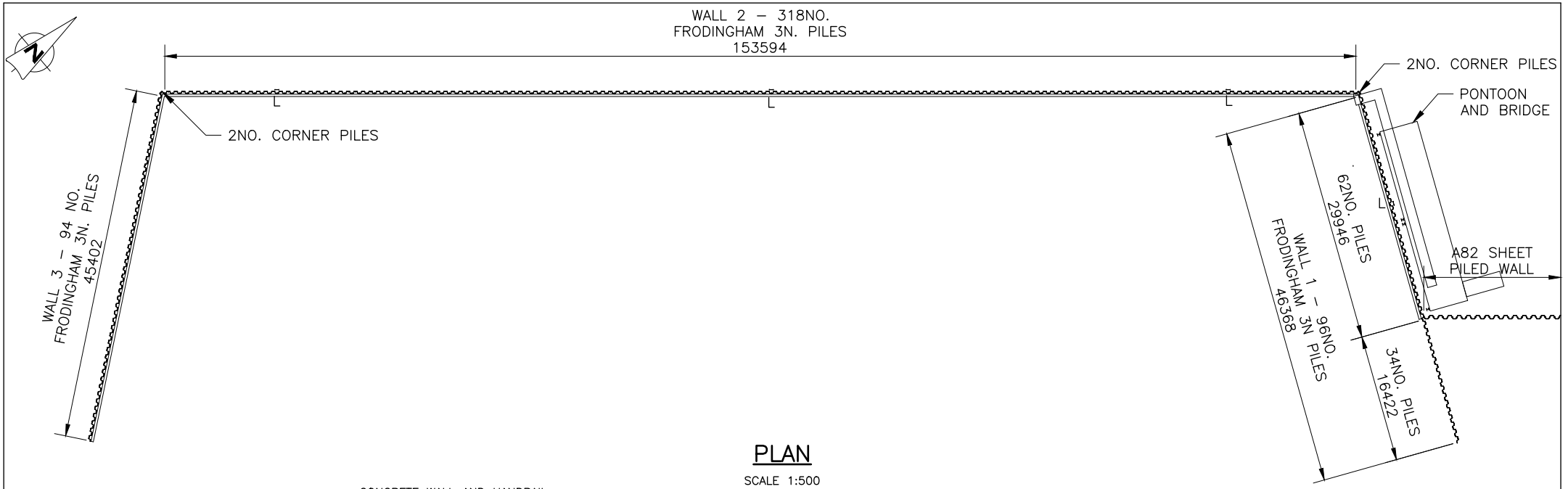


Photo 31 – Displaced Section of Concrete Wall above Wall 3 (South)



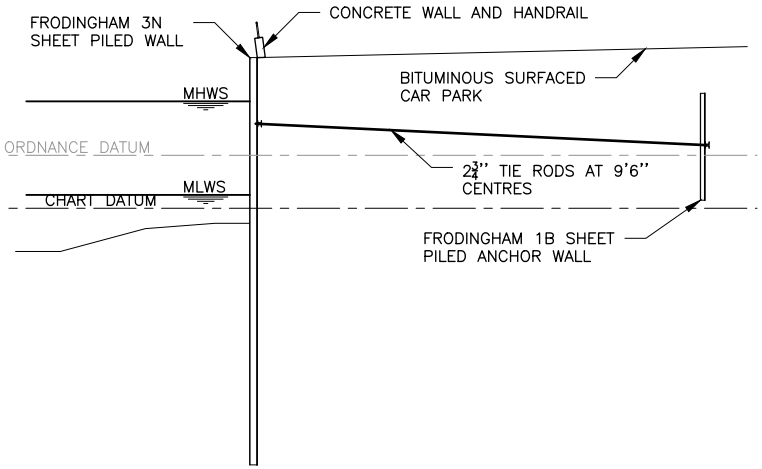
Photo 32 – Life Ring at Edge of Carpark

Appendix B –Drawings



PLAN

SCALE 1:500



TYPICAL SECTION THROUGH WALL

SCALE 1:200

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES RELATIVE TO CHART DATUM UNLESS NOTED OTHERWISE.
3. CHART DATUM IS 1.98m BELOW ORDNANCE DATUM.
4. TIDE LEVELS ARE AS BELOW:

   MHWS +4.0mCD
   MLWS +0.5mCD

5. CONDITION SURVEY AND STEEL THICKNESS READING WERE CARRIED OUT BY WALLACE STONE IN MARCH 2026.
6. EXISTING INFORMATION BASED OFF CARTER AND WILSON DRAWINGS JUNE 1972.

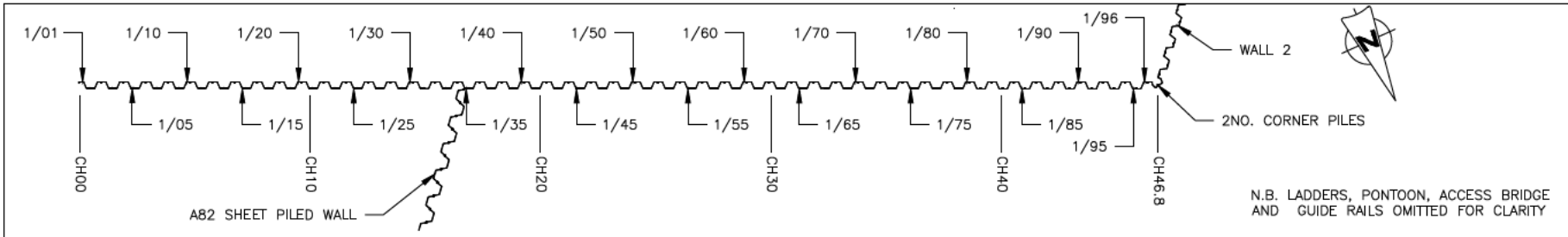
THE HIGHLAND COUNCIL
FORT WILLIAM WEST END CAR PARK INSP.
EXISTING PLAN AND TYPICAL SECTION

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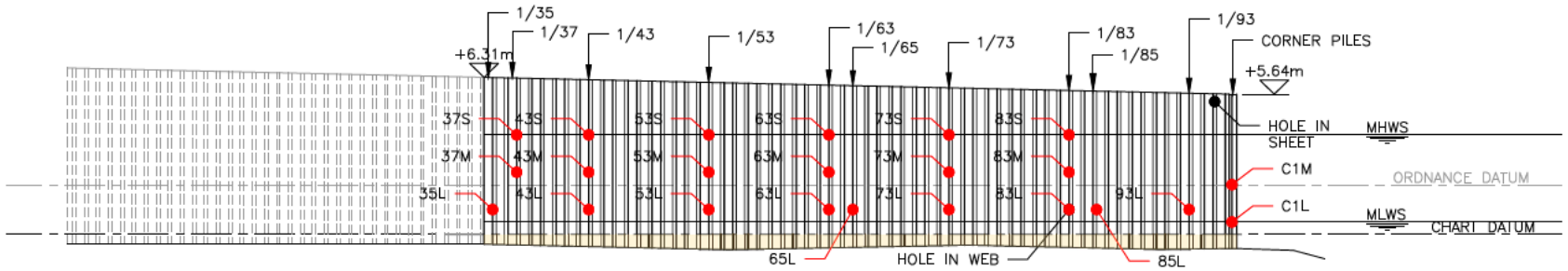
DINGWALL
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DRAWN: PM	DATE DRAWN: 31.03.26
CHKD: DM	DATE CHKD: 10.04.26
APPRVD: TR	DATE APPRVD: 15.04.26
DRG NO. 2657–001	SCALE (A3): 1:500



WALL 1 PLAN

SCALE 1:200



WALL 1 ELEVATION

SCLLE 1:200

ORIGINAL FRODINHAM 3N DIMENSIONS:
FLANGE THICKNESS – 11.7mm
WEB THICKNESS – 8.9mm

WALL 1 – SHEET PILED WALL READINGS

PILE		35		37		43		53		63		65		73		83		85		93		CORNER	
READING LOCATION	READING TYPE	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)
SPLASH ZONE (S)	WALL THICKNESS (LOSS OF SECTION)	–	–	10.95 (0.75)	–	10.30 (1.40)	7.90 (1.00)	11.45 (0.25)	8.90 (0.00)	10.70 (1.00)	7.35 (1.55)	–	–	11.40 (0.30)	6.75 (2.15)	10.50 (1.20)	7.50 (1.40)	–	–	–	–	–	–
MID TIDE ZONE (M)	WALL THICKNESS (LOSS OF SECTION)	–	–	10.40 (1.30)	7.10 (1.80)	10.50 (1.20)	7.15 (1.75)	11.50 (0.20)	8.35 (0.55)	11.50 (0.20)	7.90 (1.00)	–	–	10.70 (1.00)	8.05 (0.85)	9.25 (2.45)	7.90 (1.00)	–	–	–	–	11.40 (0.30)	8.60 (0.30)
LOW TIDE ZONE (L)	WALL THICKNESS (LOSS OF SECTION)	11.00 (0.70)	7.80 (1.10)	–	–	7.10 (4.60)	5.85 (3.05)	9.00 (2.70)	7.54 (2.36)	8.75 (2.95)	6.10 (2.80)	6.30 (2.60)	–	6.60 (5.10)	5.10 (3.80)	6.40 (5.30)	HOLE (8.90)	9.50 (2.20)	–	8.40 (3.30)	7.05 (1.85)	9.95 (1.75)	7.70 (1.20)

NOTES:

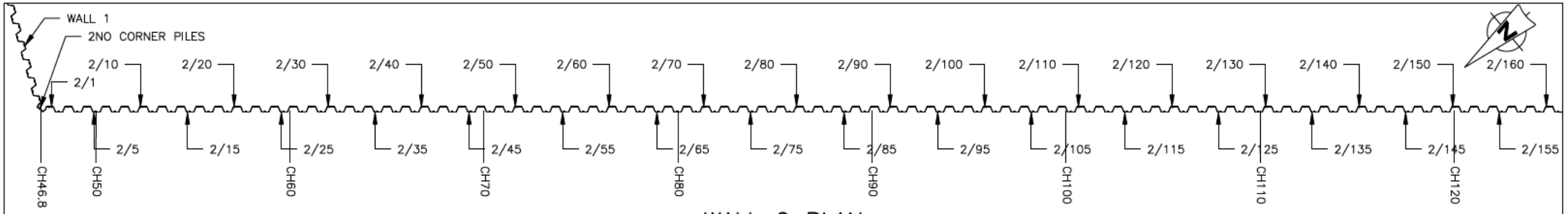
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
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4. TIDE LEVELS ARE AS BELOW:

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   MLWS +0.5mCD
5. CONDITION SURVEY AND STEEL THICKNESS READING WERE CARRIED OUT BY WALLACE STONE IN MARCH 2026.
6. EXISTING INFORMATION BASED OFF CARTER AND WILSON DRAWINGS JUNE 1972.

THE HIGHLAND COUNCIL
FORT WILLIAM WEST END CAR PARK INSP.
WALL 1 SURVEY RESULTS

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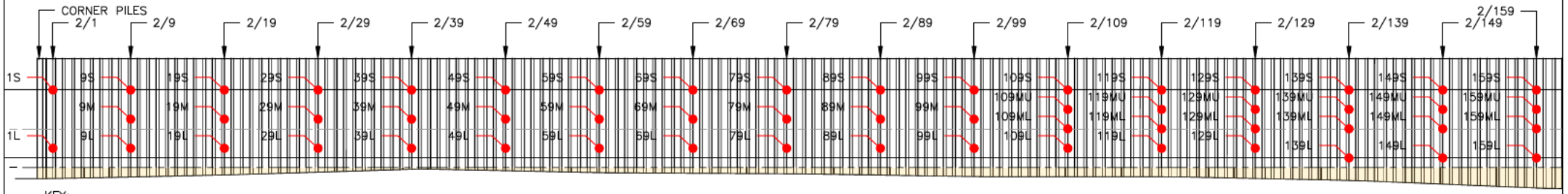
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CHKD: DM	DATE CHKD: 10.40.26
APPRVD: TR	DATE APPRVD: 15.04.26
DRG NO. 2657–002	SCALE (A3): 1:200



WALL 2 PLAN

SCALE 1:200

N.B. LADDERS OMITTED FOR CLARITY



KEY:

AREA WITH PRESENCE OF ACCELERATED LOW WATER CORROSION

WALL 2 ELEVATION

SCALE 1:200

ORIGINAL FRODINHAM 3N DIMENSIONS:
FLANGE THICKNESS – 11.7mm
WEB THICKNESS – 8.9mm

WALL 2 – SHEET PILED WALL READINGS 1/4

PILE			1		9		19		29		39		49		59		69		79		89		99		109	
READING LOCATION		READING TYPE	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)
SPLASH ZONE (S)		WALL THICKNESS (LOSS OF SECTION)	10.10 (1.60)	7.80 (1.10)	11.30 (0.40)	8.40 (0.50)	11.70 (0.00)	8.80 (0.10)	11.70 (0.00)	8.60 (0.30)	11.20 (0.00)	8.40 (0.50)	11.30 (0.40)	8.20 (0.70)	11.30 (0.40)	7.90 (1.00)	10.80 (0.90)	8.50 (0.40)	11.40 (0.30)	8.60 (0.30)	11.40 (0.30)	8.30 (0.60)	11.70 (0.00)	8.40 (0.50)	11.40 (0.30)	8.30 (0.60)
MID TIDE ZONE (M)	UPPER (MU)	WALL THICKNESS (LOSS OF SECTION)	–	–	11.20 (0.50)	8.40 (0.50)	11.00 (0.70)	8.10 (0.80)	11.30 (0.40)	8.25 (0.65)	11.30 (0.40)	7.60 (1.30)	11.20 (0.50)	8.30 (0.60)	10.40 (1.30)	7.60 (1.30)	10.50 (1.20)	7.60 (1.30)	9.20 (2.50)	7.70 (1.20)	10.80 (0.90)	7.60 (1.30)	11.70 (0.00)	7.60 (1.30)	10.80 (0.90)	8.10 (0.80)
	LOWER (ML)																								11.30 (0.40)	8.20 (0.70)
LOW TIDE ZONE (L)		WALL THICKNESS (LOSS OF SECTION)	8.70 (3.00)	8.30 (0.60)	9.50 (2.20)	6.05 (2.85)	8.45 (3.25)	3.55 (5.35)	8.45 (3.25)	3.55 (5.35)	8.95 (2.75)	6.85 (2.05)	9.90 (1.80)	7.45 (1.45)	8.35 (3.35)	6.50 (2.40)	8.60 (3.10)	6.25 (2.65)	8.35 (3.35)	6.35 (2.55)	8.10 (2.60)	8.05 (0.85)	9.10 (2.60)	6.20 (2.70)	9.20 (2.50)	5.90 (3.00)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES RELATIVE TO CHART DATUM UNLESS NOTED OTHERWISE.
3. CHART DATUM IS 1.98m BELOW ORDNANCE DATUM.
4. TIDE LEVELS ARE AS BELOW:

   MHWS +4.0mCD
   MLWS +0.5mCD
5. CONDITION SURVEY AND STEEL THICKNESS READING WERE CARRIED OUT BY WALLACE STONE IN MARCH 2026.
6. EXISTING INFORMATION BASED OFF CARTER AND WILSON DRAWINGS JUNE 1972.

WALL 2 – SHEET PILED WALL READINGS 2/4

119		129		139		149		159	
FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)
11.50 (0.20)	8.35 (0.55)	11.70 (0.00)	8.40 (0.50)	11.50 (0.20)	8.60 (0.30)	11.50 (0.20)	8.00 (0.90)	11.70 (0.00)	8.30 (0.60)
10.70 (1.00)	7.60 (1.30)	11.20 (0.50)	7.90 (1.00)	10.30 (1.40)	7.70 (1.20)	11.30 (0.40)	8.50 (0.40)	11.30 (0.40)	8.20 (0.70)
11.30 (0.40)	7.90 (1.00)	10.10 (1.60)	7.80 (1.10)	11.30 (0.40)	7.20 (1.70)	9.50 (2.20)	7.80 (1.10)	10.50 (1.20)	7.20 (1.70)
8.65 (3.05)	6.65 (2.25)	8.75 (2.95)	5.25 (3.65)	9.75 (1.95)	6.35 (2.55)	9.10 (2.60)	3.65 (5.25)	10.60 (1.10)	7.05 (1.85)

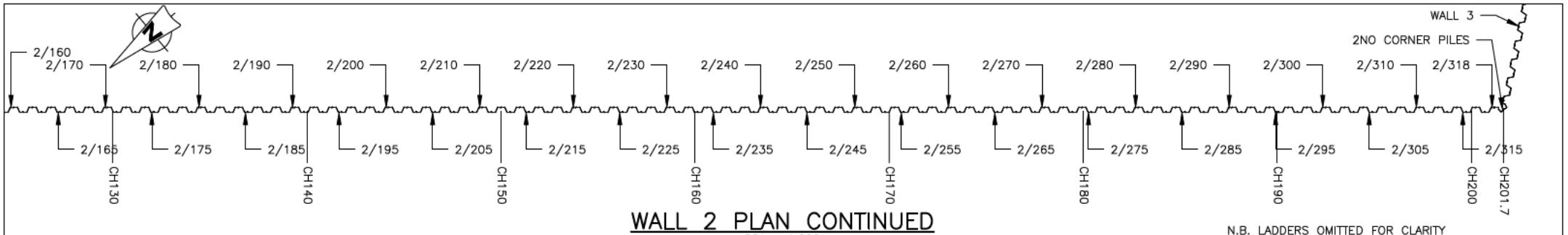
THE HIGHLAND COUNCIL
FORT WILLIAM WEST END CAR PARK INSP.
WALL 2 SURVEY RESULTS 1/2

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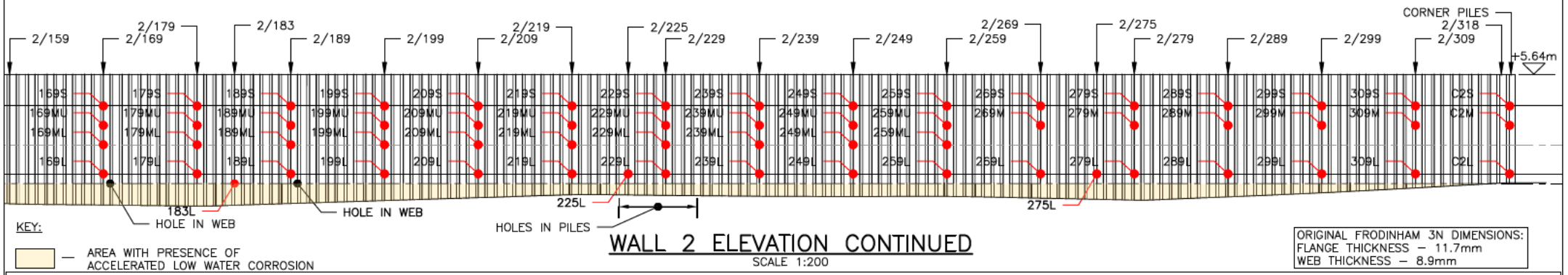
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CHKD: DM	DATE CHKD: 10.04.26
APPRVD: TR	DATE APPRVD: 15.04.26
DRG NO. 2657–003	SCALE (A3): 1:200



WALL 2 PLAN CONTINUED

SCALE 1:200

N.B. LADDERS OMITTED FOR CLARITY



KEY:

— AREA WITH PRESENCE OF ACCELERATED LOW WATER CORROSION

WALL 2 ELEVATION CONTINUED

SCALE 1:200

ORIGINAL FRODINHAM 3N DIMENSIONS:
FLANGE THICKNESS – 11.7mm
WEB THICKNESS – 8.9mm

WALL 2 – SHEET PILED WALL READINGS 3/4

	PILE	169		179		183	189		199		209		219		225	229		239		249		259		269	
READING LOCATION	READING TYPE	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)
SPLASH ZONE (S)	WALL THICKNESS (LOSS OF SECTION)	11.30 (0.40)	8.10 (0.80)	11.50 (0.20)	8.30 (0.60)	–	11.60 (0.10)	8.70 (0.20)	11.70 (0.00)	8.40 (0.50)	11.40 (0.30)	8.30 (0.60)	11.70 (0.00)	8.50 (0.40)	–	11.50 (0.20)	8.30 (0.60)	11.60 (0.10)	8.70 (0.20)	11.30 (0.40)	8.60 (0.30)	11.20 (0.50)	7.70 (1.20)	11.40 (0.30)	7.90 (1.00)
MID TIDE ZONE (M) UPPER (MU)	WALL THICKNESS (LOSS OF SECTION)	11.20 (0.50)	8.40 (0.50)	11.70 (0.00)	8.30 (0.60)	–	11.00 (0.70)	7.60 (1.30)	11.30 (0.40)	7.90 (1.00)	11.70 (0.00)	7.90 (0.00)	11.40 (0.30)	8.30 (0.60)	–	11.10 (0.60)	8.10 (0.80)	11.30 (0.40)	8.70 (0.20)	11.40 (0.30)	8.30 (0.60)	10.60 (1.10)	8.00 (0.90)	11.40 (0.30)	8.60 (0.30)
MID TIDE ZONE (M) LOWER (ML)	WALL THICKNESS (LOSS OF SECTION)	11.40 (0.30)	8.10 (0.80)	11.10 (0.60)	7.00 (1.90)	–	11.30 (0.40)	8.20 (0.70)	10.90 (0.80)	8.90 (0.00)	11.30 (0.40)	8.30 (0.60)	11.70 (0.00)	8.10 (0.80)	–	10.80 (0.90)	8.10 (0.80)	10.60 (1.10)	7.20 (1.70)	10.30 (1.40)	7.90 (1.00)	10.90 (0.80)	7.90 (1.00)		
LOW TIDE ZONE (L)	WALL THICKNESS (LOSS OF SECTION)	9.20 (1.50)	HOLE (8.90)	8.95 (2.75)	6.85 (2.05)	7.35 (1.55)	10.50 (1.20)	HOLE (8.90)	9.95 (1.75)	7.10 (1.80)	9.10 (2.60)	7.05 (1.85)	10.85 (0.85)	5.65 (3.25) (HOLE)	5.45 (3.45) (HOLE)	7.70 (4.00)	4.85 (4.05) (HOLE)	7.40 (4.30)	8.20 (0.70)	9.55 (2.15)	7.10 (1.80)	8.55 (3.15)	6.70 (2.20)	9.20 (2.50)	5.90 (3.00)

NOTES:

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6. EXISTING INFORMATION BASED OFF CARTER AND WILSON DRAWINGS JUNE 1972.

WALL 2 – SHEET PILED WALL READINGS 4/4

275	279		289		295	299		309	
WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)
–	11.40 (0.30)	8.80 (0.10)	11.60 (0.10)	8.20 (0.70)	–	11.60 (0.10)	8.10 (0.80)	11.10 (0.60)	7.60 (1.30)
–	9.70 (2.00)	8.90 (0.00)	11.60 (0.10)	8.30 (0.60)	–	10.90 (0.80)	8.20 (0.70)	11.40 (0.30)	8.20 (0.70)
5.80 (3.10)	8.50 (3.20)	7.10 (1.80)	10.05 (1.65)	6.60 (2.30)	5.60 (3.30)	8.90 (2.80)	3.30 (5.60)	8.50 (3.20)	7.05 (1.85)

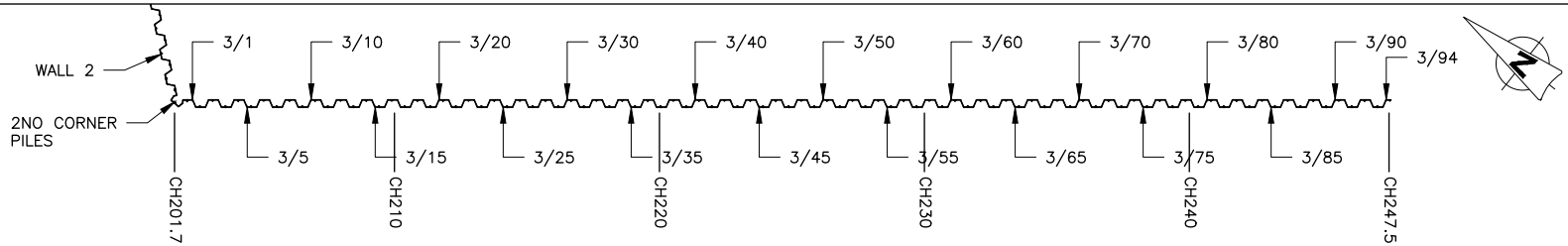
THE HIGHLAND COUNCIL
FORT WILLIAM WEST END CAR PARK INSP.
WALL 2 SURVEY RESULTS 2/2

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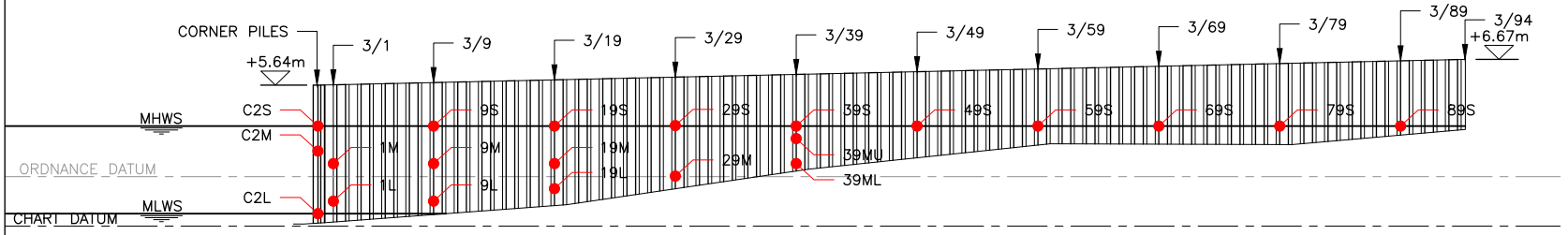
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DRAWN: PM	DATE DRAWN: 31.03.26
CHKD: DM	DATE CHKD: 10.04.26
APPRVD: TR	DATE APPRVD: 15.04.26
DRG NO. 2657–004	SCALE (A3): 1:200



WALL 3 PLAN

SCALE 1:200



WALL 3 ELEVATION

SCLLE 1:200

ORIGINAL FRODINHAM 3N DIMENSIONS:
FLANGE THICKNESS – 11.7mm
WEB THICKNESS – 8.9mm

WALL 3 – SHEET PILED WALL READINGS

		PILE	CORNER		1		9		19		29		39		49		59		69		79		89	
READING LOCATION		READING TYPE	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)	FLANGE (mm)	WEB (mm)
SPLASH ZONE (S)		WALL THICKNESS (LOSS OF SECTION)	11.50 (0.20)	8.60 (0.30)	–	–	11.40 (0.30)	7.90 (1.00)	10.80 (0.90)	8.20 (0.70)	11.70 (0.00)	7.90 (1.00)	11.70 (0.00)	8.90 (0.00)	11.10 (0.60)	8.30 (0.30)	11.70 (0.00)	8.90 (0.00)	9.60 (2.10)	8.80 (0.10)	9.50 (2.20)	8.00 (0.90)	11.70 (0.00)	7.70 (1.20)
MID TIDE ZONE (M)	UPPER (MU)	WALL THICKNESS (LOSS OF SECTION)	10.80 (0.90)	8.60 (0.30)	11.25 (0.45)	7.90 (1.00)	11.65 (0.05)	7.95 (0.95)	9.65 (2.05)	8.90 (0.00)	11.40 (0.30)	8.40 (0.50)	11.70 (0.00)	8.90 (0.00)	–	–	–	–	–	–	–	–	–	–
	LOWER (ML)												11.40 (0.30)	8.90 (0.00)										
LOW TIDE ZONE (L)		WALL THICKNESS (LOSS OF SECTION)	8.20 (3.50)	3.40 (5.50)	7.95 (3.75)	6.60 (2.30)	8.70 (3.00)	6.05 (2.85)	10.80 (0.90)	6.00 (2.90)	–	–	–	–	–	–	–	–	–	–	–	–	–	–

NOTES:

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6. EXISTING INFORMATION BASED OFF CARTER AND WILSON DRAWINGS JUNE 1972.

THE HIGHLAND COUNCIL
FORT WILLIAM WEST END CAR PARK INSP.
WALL 3 SURVEY RESULTS

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DRAWN: PM	DATE DRAWN: 31.03.26
CHKD: DM	DATE CHKD: 10.04.26
APPRVD: TR	DATE APPRVD: 15.04.26
DRG NO. 2657–005	SCALE (A3): 1:200