
HELENSBURGH PIER

1.0 EXECUTIVE SUMMARY

- 1.1 This report provides Members with an update on the condition of Helensburgh Pier, along with options for future consideration.
- 1.2 A principal inspection was organised for Helensburgh Pier and carried out by the consultant Arch Henderson; their report was produced in October 2018. The report recommended that a restriction be put in place to prevent vessels berthing - a Notice to Mariners was duly issued based on the report recommendations.
- 1.3 A structural analysis was organised utilising in-house resources and options to reinstate the pier were considered:-
- Minor repairs to the existing timber pier. This option would ensure safe access for pedestrians only; it would not facilitate berthing of the Waverley and the fire-damaged section of the pier would remain off-limits. Related costs are likely to be in the region of £60K.
 - Major repairs to the timber pier to reinstate all damaged sections: This option would facilitate Waverley berthing and permit full pedestrian access. Essentially, all damaged timbers would be replaced on a like-for-like basis, including timbers in the fire-damaged area. Costs for this option are likely to be in the region of £850K.
 - Construct new berthing structure (monolithic piles with fendering system) adjacent to the pier and connected by an access gangway: This option would allow the Waverley to berth. Costs are likely to be in the region of £580K for this option.
 - A further option could also be considered which would allow the re-opening of the berth face to smaller vessels i.e. with lesser berthing loads than the Waverley. A cost estimate for related works is yet to be produced.
 - Following a meeting with Waverley Excursions, yet another option is now being considered which would involve berthing the Waverley to the west side of the pier. This option would involve dredging to allow the Waverley to approach the west side of the pier, but would involve less work on the pier itself. Again, a cost estimate for related works is yet to be produced.
- 1.4 Funding has not been identified for any of the current options under consideration; as such, high cost options identified above in sections 1.3.2 and 1.3.3 will not be pursued.

- 1.5 Listing of the pier – Helensburgh Pier has recently been listed as a Category C structure. It is likely that at least some of the proposals being considered for Helensburgh Pier would require listed building consent.
- 1.6 Council officers and representatives from Helensburgh Seafront Development Project (HSDP) have now met on a number of occasions to exchange information and discuss HSDP's plans. Gerard Lindsay and David Cantello from HSCP have now stated that their objective is to develop the pier to cater for small craft by installing pontoons to the east side and confirmed their understanding that refurbishment of the main pier structure is a matter for the council. Discussions have centred on assessing the viability of introducing these pontoons. A plan, indicating the likely location for new pontoons, is attached in Appendix D to this report. As both planned works could well be inter-dependent i.e. a) the Council's potential plans to re-instate a safe pedestrian area and/or re-open the berth face and b) the HSDP's plans to introduce pontoons, it is proposed that liaison between both groups continues for the mutual benefit of all interested parties.
- 1.7 The Area Committee is asked to:-
 - a) Note the update provided regarding the condition of the pier.
 - b) Endorse working between the Council and HSDP in relation to their aspiration for pontoons, with officers providing technical advice and support.
 - c) Recommend to the Council's Harbour Board that Officers continue to liaise with 'Waverley Excursions Ltd.' to arrive at the most cost effective, and low-cost, solution which would allow the Waverley to berth at Helensburgh Pier in the future, and
 - d) Agree that Officers provide a further update report at a future meeting of the Helensburgh and Lomond Area Committee.

HELENSBURGH PIER

2.0 INTRODUCTION

- 2.1 A 'Notice to Mariners' (NTM) was issued in October 2018 to advise mariners that the berthing face at Helensburgh Pier was now closed – albeit on a temporary basis. The NTM is still in force. A number of briefing notes have been issued to Members to provide updates on surveys / design analysis etc. This report provides Members with details of the analysis which was carried out, to ascertain the actual condition of the pier, along with potential remedial options for future consideration.

3.0 RECOMMENDATIONS

3.1 The Area Committee is asked to:-

- a) Note the update provided regarding the condition of the pier.
- b) Endorse working between the Council and HSDP in relation to their aspiration for pontoons, with officers providing technical advice and support.
- c) Recommend to the Council's Harbour Board that Officers continue to liaise with 'Waverley Excursions Ltd.' to arrive at the most cost effective, and low-cost, solution which would allow the Waverley to berth at Helensburgh Pier in the future, and
- d) Agree that Officers provide a further update report at a future meeting of the Helensburgh and Lomond Area Committee.

4.0 BACKGROUND

- 4.1 Helensburgh Pier dates from circa 1800's and was constructed to facilitate berthing of steam ships. The original stone wall and infill structure was extended with a timber pier head in 1871. Prior to its closure to vessels in October 2018 it was little used, although the Waverley berthed on occasion over the summer months. Due to mechanical issues, the Waverley is not operating this season. In a normal season, the Waverley berths on approximately 20 separate days each year – from spring to early autumn. The income generated at the pier over the last few years has been minimal - as the Waverley is operated as a charity, no fees or dues have been applied by the Council.
- 4.2 A substantial section of the timber pier was damaged by fire in the nineteen nineties, following which, a decision was taken to fence the damaged section off from public access. At this time, no further works

were planned to reinstate fire damage timbers as the sub-structure of the pier was considered to be structurally sound.

4.3 As part of the site investigation works for the development of Helensburgh waterfront, a survey was carried out on Helensburgh Pier. Aecom Ltd was engaged by the Council to carry out this task and a Pier Visual Inspection Report was duly produced in early 2016. AECOM's report highlighted various areas of concern and made reference to some areas which posed a high risk to pedestrian safety – mainly tripping hazards on the decking; these areas were all duly attended to and made safe at the time. The report also recommended that a fully detailed inspection be carried out on the timber pier 'due to the need for more information to determine the overall structural condition'.

4.4 A consultancy brief for a detailed 'principal' inspection and structural report on a number of the Council's main piers and harbours, including Helensburgh Pier, was issued in early 2017, in line with AECOM's recommendations, and awarded to the consultant Arch Henderson in May 2017. Principal inspections provide information on the underlying condition of the facility and any potential limitations on berthing loads. The report for Helensburgh Pier, received by the Council in October 2018, recommended that:-

- *'...there may be eccentric loading put into piles due to missing timbers and coupled with the erosion of the timber structure within the tidal zone, it is recommended that a detailed structural analysis is carried out to confirm the structural; integrity of the pier.'*
- *'It is further recommended that a restriction should be put in place to prevent any vessels from berthing at the pier until the above analysis is carried out.'*

A Notice to Mariners was duly issued based on the report recommendations.

5.0 DETAIL

5.1 Following receipt of the Arch Henderson report, a structural analysis was organised utilising in-house resources; Argyll and Bute Council's Infrastructure Design Department inspected the structure above the water level, whilst Tritonia Scientific Ltd undertook a dive survey of the structure below. BM Trada undertook invasive testing of the timber piles and several other timber members. The surveys carried out identified that much of the bracing timbers, high-level horizontal members and connection plates require replacing. The underwater survey found no evidence of significant structural damage to the majority of the timber piles, however noted that the South East corner had suffered significant impact damage. Results from computer analysis indicated that the structure undergoes significant movement when berthing loads are applied. The design analysis and related surveys have cost, to date, in the region of £30K.

5.2 A topographic, bathymetric, and 3D laser scan survey of the pier and surrounding area was undertaken by Aspect Land + Hydrographic Surveys during July 2017. An excerpt is presented in Appendix A. The diagram in Appendix B shows movement in the structure when berthing

loads are applied and the photograph in Appendix C shows missing timbers in the fire-damaged area.

5.3 No funding has, as yet, been identified for carrying out reinstatement works at the pier. The following options are currently under consideration:-

- Minor repairs to the existing timber pier. This option would ensure safe access for pedestrians only; it would not facilitate berthing of the Waverley and the fire-damaged section of the pier would remain off-limits. Related costs are likely to be in the region of £60K.
- Major repairs to the timber pier to reinstate all damaged sections: This option would facilitate Waverley berthing and permit full pedestrian access. Essentially, all damaged timbers would be replaced on a like-for-like basis, including timbers in the fire-damaged area. Costs for this option are likely to be in the region of £850K.
- Construct new berthing structure (monolithic piles with fendering system) adjacent to the pier and connected by an access gangway: This option would allow the Waverley to berth. Costs are likely to be in the region of £580K for this option – but see 5.6 below – listing of the pier.
- A further option could also be considered which would allow the re-opening of the berth face to smaller vessels i.e. with lesser berthing loads than the Waverley. A cost estimate for related works is yet to be produced.
- Following a meeting with Waverley Excursions, yet another option is now being considered which would involve berthing the Waverley to the west side of the pier. This option would involve dredging to allow the Waverley to approach the west side of the pier, but would involve less work on the pier itself. Again, a cost estimate for related works is yet to be produced.

5.4 As mentioned previously, funding has not been identified for any of the current options under consideration; as such, high cost options identified above (2nd and 3rd bullet points) will not be pursued.

5.5 At this time, it is understood that work to replace Waverley's boilers is likely to cost in the order of £2 million. Although Waverley Excursions are confident that all necessary works will be carried out, it is unlikely that the Waverley will return to Helensburgh Pier until the 2020 sailing season.

5.6 Listing of the pier – Helensburgh Pier has recently been listed as a Category C structure. The guidance document issued by Historic Environment Scotland on the principles of listed buildings consent, states the following:-

'Listed buildings are protected under the Planning (Listed Buildings and Conservation Areas) Scotland Act 1997. This establishes that any work which affects the character of a listed building will require listed building consent. It is a criminal offence to carry out such work without listed building consent.'

The guidance document also states:-

'In assessing an application for listed building consent, the planning authority is required to have special regard to the desirability of preserving the building, or its setting, or any features of special architectural or historic interest which it possesses.'

It is therefore likely that, at least some of the proposals being considered for Helensburgh Pier, may require listed building consent – although, further advice in the guidance note states that *'like-for-like repairs would not normally require listed building consent'*. If a proposal is identified which is likely to affect the appearance of the pier, further guidance will be sought on this issue.

- 5.7 In the meantime, a local group made up of volunteers with professional backgrounds, the 'Helensburgh Seafront Development Project' (HSDP), has been researching options to introduce pontoons at Helensburgh Pier. The HSDP was set up as a SCIO Charity in December 2015 (SC046191). Their Scottish Charity Registration states:

The organisation's purposes are:

1. To develop new recreational and community facilities at Helensburgh seafront for the benefit of the community and the general public and to foster wider community regeneration of the town.
2. To enable provision and organisation of recreation activities to improve quality of life and wellbeing for residents of Helensburgh & Lomond and its environs.
3. To enable the advancement of public participation in sports and recreation by creation of facilities and to targeting those affected by poverty, ill health and disability by working in partnership with other groups and agencies such as Enable to allow participation in canoeing and other water sports in the water basin area (West Bay Lagoon).

A Crowdfunder campaign in 2017 raised £850 for a feasibility study to progress the regeneration project. The HSDP's intention at that time was to save and regenerate Helensburgh Pier, and install a Wavebreaker / Walkway which would help with flood prevention and also provide a calm safe environment for water sports in Helensburgh's West Bay Lagoon. They also intended to install pontoons to attract visitors and small craft to the town and accommodate the Waverley Paddle Steamer.

HSDP's website currently outlines phase 1 of their project as a "technical feasibility study & business plan - the study will be used to assess the technical issues, operational constraints and the initial business case for the pier refurbishment".

- 5.8 Council officers and representatives from HSDP have now met on a number of occasions to exchange information and discuss HSDP's plans. Gerard Lindsay and David Cantello from HSCP have now stated that their objective is to develop the pier to cater for small craft by installing pontoons to the east side and confirmed their understanding that refurbishment of the main pier structure is a matter for the council. Discussions have centred on assessing the viability of introducing these pontoons. A plan, indicating the likely location for new pontoons, is attached in Appendix D to this report. As both planned works could well be inter-dependent i.e. a)

the Council's potential plans to re-instate a safe pedestrian area and/or re-open the berth face and b) the HSDP's plans to introduce pontoons, it is proposed that liaison between both groups continues for the mutual benefit of all interested parties.

- 5.9 Council officers have confirmed to HSCP representatives a willingness to share any helpful information obtained by them while assessing or progressing works agreed by the Harbour Board. It has been made clear that any additional studies/information required specifically to progress the HSCP's proposals will be the responsibility of HSCP.

6.0 CONCLUSION

- 6.1 A slow accumulation of decay, mechanical and fire damage has resulted in serious degradation of the Helensburgh Pier timber structure. Vessel berthing can only be permitted once strengthening works have been completed. Officers will continue to consider options, whilst liaising with both the Waverley Trust and HSDP.

7.0 IMPLICATIONS

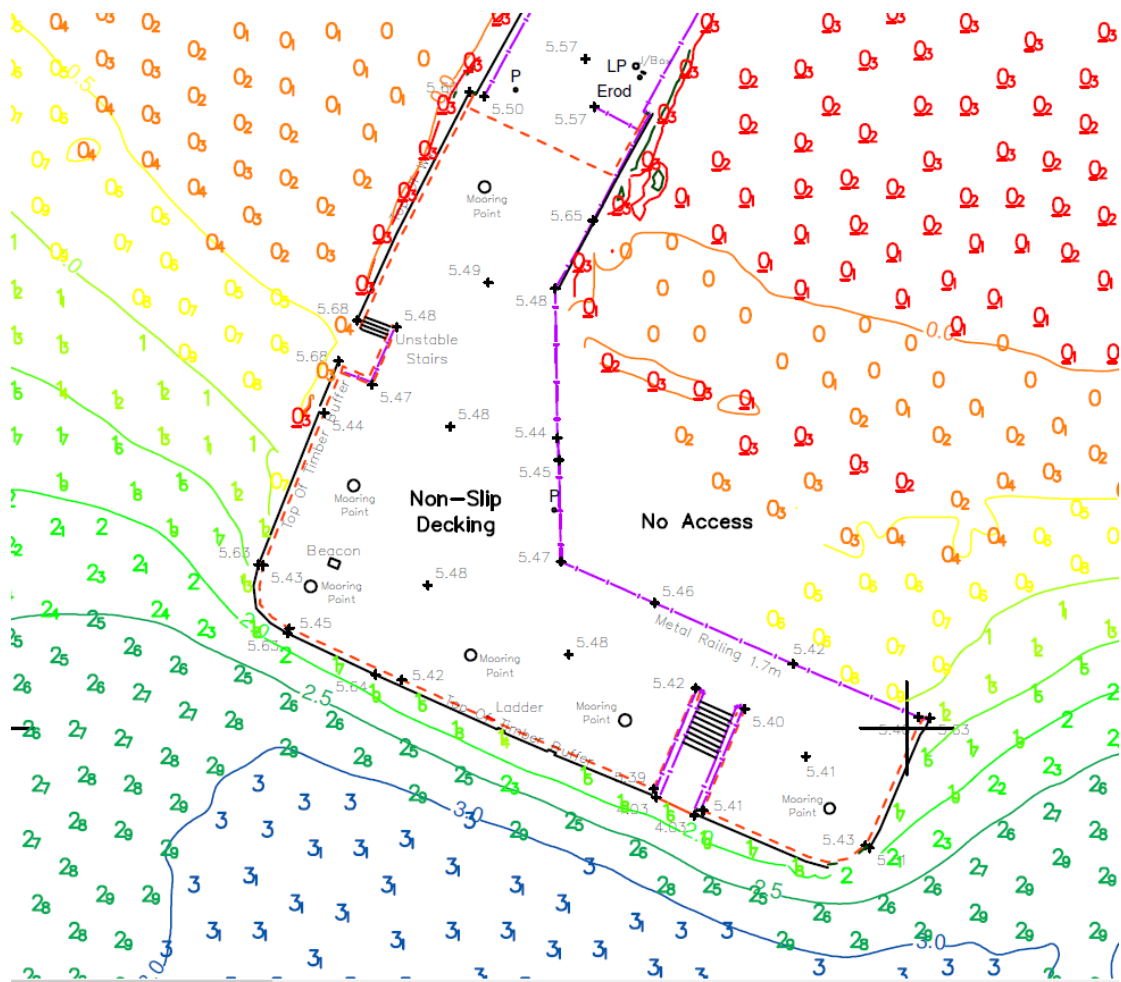
- 7.1 Policy - None
- 7.2 Financial – Currently, no funding source has been identified.
- 7.3 Legal – The Council has a responsibility to ensure that the pier remains safe for users.
- 7.4 HR - None
- 7.5 Equalities / Fairer Scotland Duty – None
- 7.6 Risk – The berth at Helensburgh Pier will remain closed until such times as strengthening works have taken place.
- 7.7 Customer Service – None.

Executive Director of Development and Infrastructure: Pippa Milne
Head of Roads & Amenity Services: Jim Smith
Policy Lead: Councillor Roddy McCuish
22 May 2019

For further information contact: Stewart Clark, Marine Operations Manager
Tel: 01546 604893

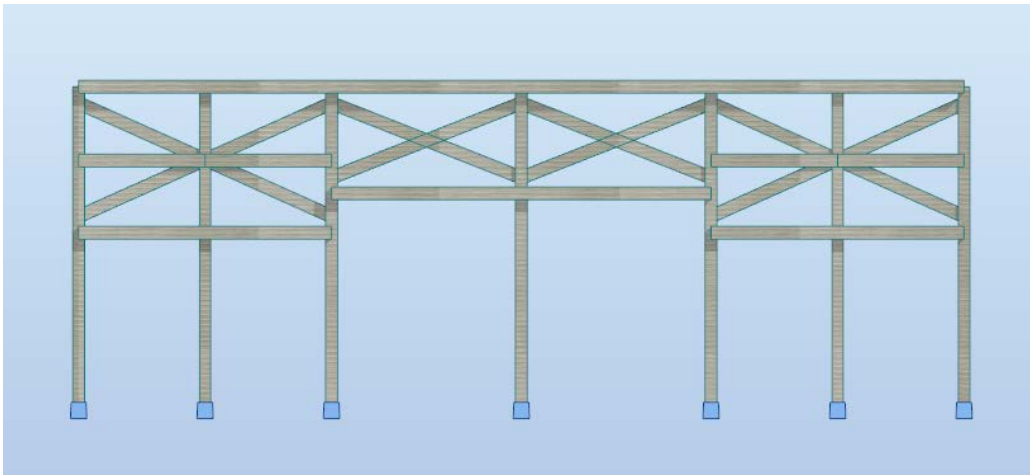
APPENDIX A

Bathymetric Survey

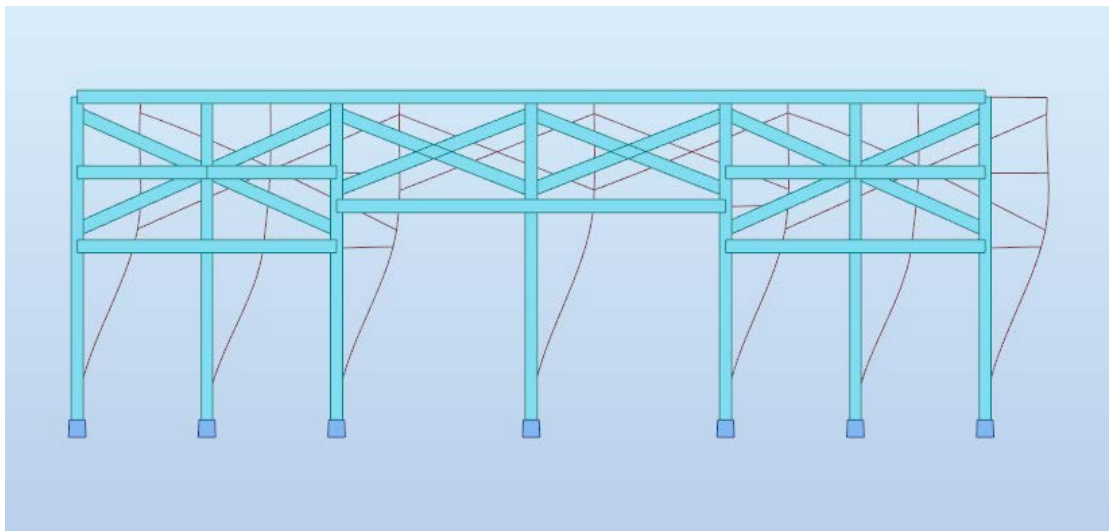


APPENDIX B

Structural / Sway Analysis



2D analysis of three cross sections of the timber pier head structure was undertaken.



With the present condition of the timber elements, the structure failed with regards to BS 6349 calculated berthing and impact loads for a vessel representing the PS Waverley. The failure of the members was observed in exceeding the allowable displacements and stresses.

APPENDIX C



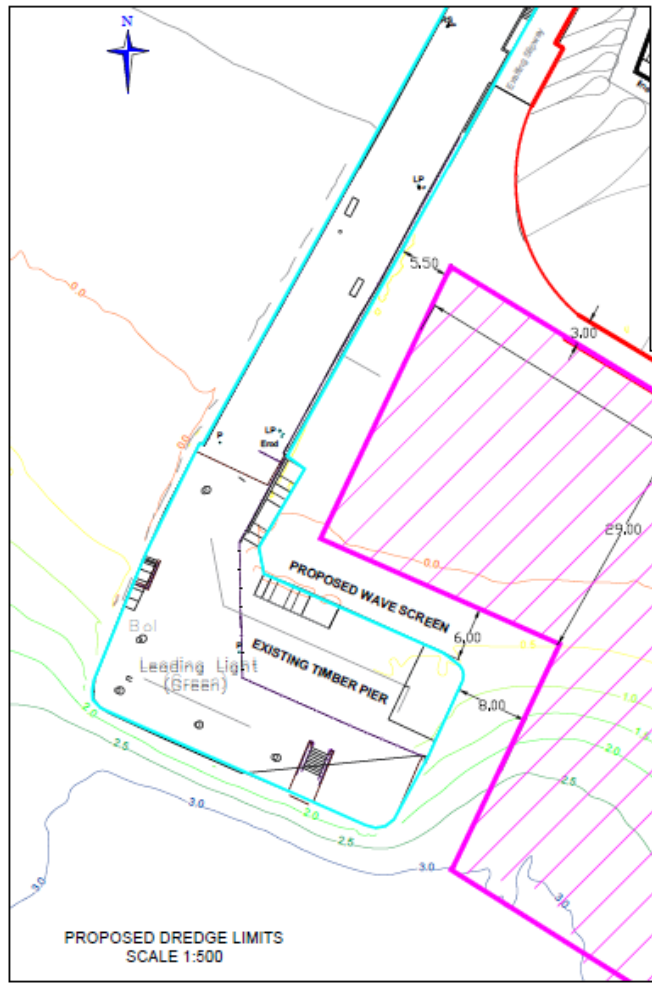
Fire damaged area missing deck planks

APPENDIX D

ARGYLL & BUTE COUNCIL --- DEVELOPMENT AND INFRASTRUCTURE SERVICES

0 1 2 1:100 SCALE BAR 10

100
1500 SCALE BAR
20
10
0

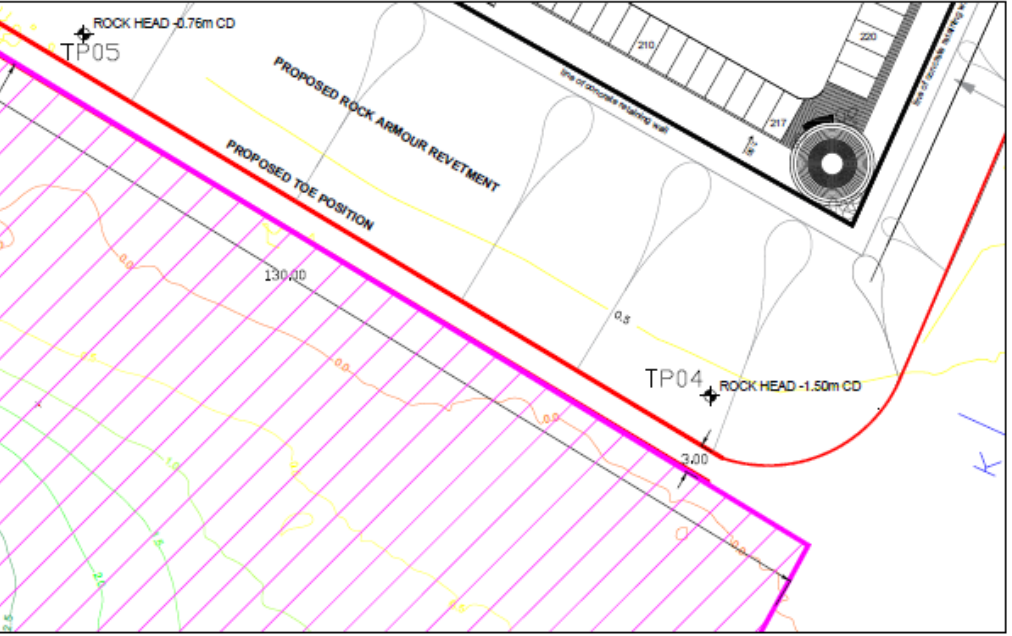


	CD	OD	CD	OD	
H.A.T.	+4.1	+2.48			
M.H.W.S.	+3.4	+1.78			
M.H.W.N.	+2.85	+1.23			
O.D.	+1.62	+0.00			
M.L.W.N.	+1.00	-0.62			
M.L.W.S.	+0.4	-1.22	+0.36	-1.26	Seabed (Varies)
L.A.T.	-0.1	-1.72	-0.76	-2.38	Estimated Rock head (Varies)

TIDAL BAR - TRIAL PIT 05
SCALE 1:100

	CD	OD	CD	OD	
H.A.T.	+4.1	+2.48			
M.H.W.S.	+3.4	+1.78			
M.H.W.N.	+2.85	+1.23			
O.D.	+1.62	+0.00			
M.L.W.N.	+1.00	-0.62			
M.L.W.S.	+0.4	-1.22	+0.30	-1.32	Seabed (Varies)
L.A.T.	-0.1	-1.72	-1.50	-3.12	Estimated Rock head (Varies)

TIDAL BAR - TRIAL PIT 04
SCALE 1:100



Legend:

- Proposed Rock Armour Revetment Toe
- Existing Timber Pier
- Dredging Boundary

Notes:

- 1) All dimensions are in metres unless stated otherwise
- 2) Levels shown are in metres to Chart Datum
- 3) Do not scale from this drawing
- 4) Dredging prohibited within:
 - 3.0 metres from toe of proposed revetment
 - 5.5 metres from approach pier
 - 6.0 metres from north east face of pier head
 - 8.0 metres from east face of pier head.

© Crown copyright and database right 2019. All right reserved. Ordnance Survey Licence number 100023368

TITLE		Director of Development and Infrastructure Services Pippa Milne	
Helensburgh Pier Proposed Dredge Limits		DESIGNED BY	JM
		DRAWN BY	JM
DESIGN OFFICE, MANSE BRAE, LOCHGILPHEAD, ARGYLL.PA31 8RD		CHECKED BY	ES
		APPROVED BY	ES
DATE		21/05/19	21/05/2019
		DRAWING NUMBER:	00040-28-101
		SCALE:	As shown on A3
		DATE ISSUED:	21/05/2019

