

File No: 42454

9 September 2022

Māpua Boat Ramp Community Trust
64 Aranui Road
MAPUA 7005

Attention: Mike Kininmonth
Email: mapuaboatramp@gmail.com

Dear Māpua Boat Ramp Community Trust,

**GEOTECHNICAL ADVICE - DESKTOP STUDY AND SITE WALKOVER, 11 ARANUI ROAD,
MĀPUA 7005, LOT 2 DP 11502 AND LOT 2 DP 11106**

1.0 INTRODUCTION

This letter aims to present the findings of a desktop study and site walkover to assist in development of a concept plan for the resource consent application associated with the proposed Māpua boat ramp development. A full geotechnical investigation and assessment will be required at a later stage to support detailed design. The lots involved in the proposed development include Lot 2 DP 11106 and Lot 2 DP 11502 along the foreshore “the site”.

2.0 PROPOSED DEVELOPMENT

The Māpua Boat Ramp Community Trust propose to construct a new boat ramp south of the existing Māpua wharf and restaurant complex involving an unsealed 11 m wide access road to an 11 m wide concrete boat ramp that will project into Waimea Inlet to the point of MLWS. The access road will incorporate a 180° U-turn facility to allow towing vehicles to back down the ramp to launch and retrieve craft.

The ramp will include an approximately 20 m long pontoon located adjacent and parallel to the boat ramp with a walkway bridge. The pontoon will facilitate the temporary berthing of boats and be operable from mid to low tide.

A building is also proposed to store boats and accessories for the Tamaha Sea Scouts. Toilet and kitchen facilities are also proposed to be included as part of that structure.

An excerpt of the draft preliminary concept design for the site is shown in Figure 1.



Figure 1: Draft Preliminary Concept design of the proposed boat ramp and associated access road and building provided by the Māpua Boat Ramp Community Trust. Not to scale.

3.0 COUNCIL UNDERGROUND SERVICES

Tasman District Council (TDC) owned wastewater infrastructure passes through the area of planned works within the foreshore, as shown in Figure 2 below.

Hand-dug test trenches are proposed to accurately locate a 200mm diameter PVC Rising main within the area of proposed works.

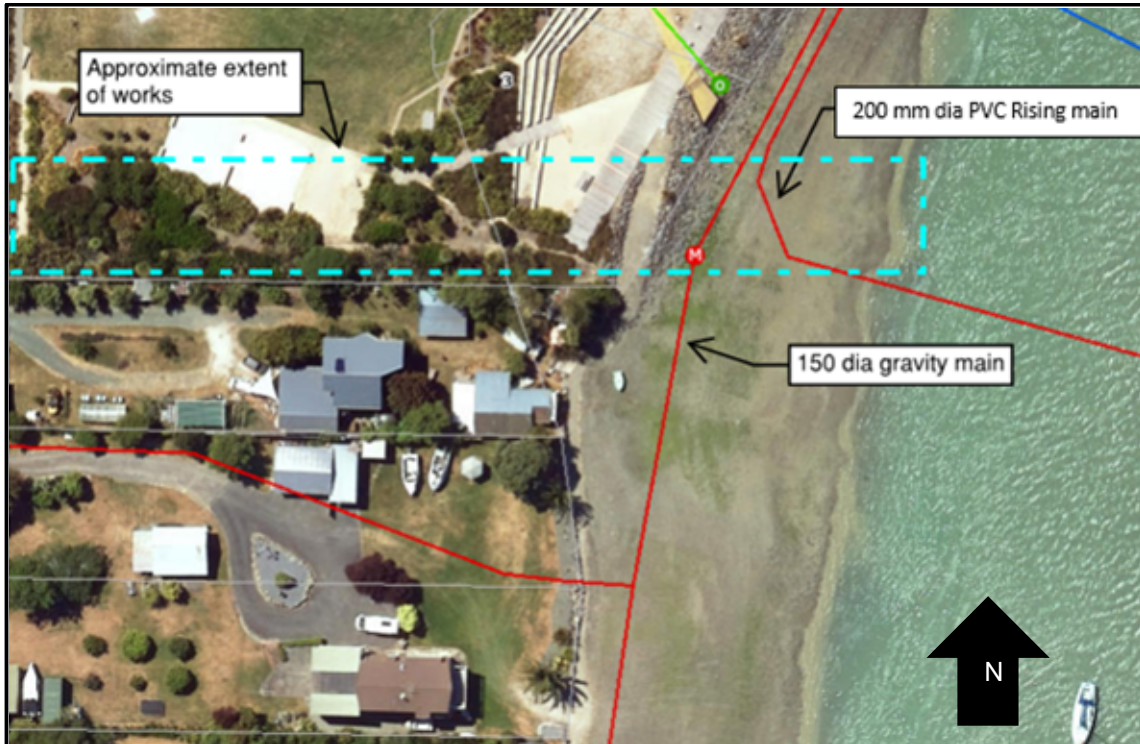


Figure 2: Location plan & existing wastewater infrastructure. Not to scale.

4.0 DESKTOP STUDY

A desktop study was undertaken, including a review of the following sources of information:

- Review of a Draft Preliminary Concept plan by the Māpua Boat Ramp Community Trust showing the proposed boat ramp, associated access road and building (an excerpt is shown in figure 1).
- Top of the South Maps including council underground services (approximate locations are subject to confirmation).
- A topographical survey titled *Proposed Boat Ramp Topographical Survey* by Davis Ogilvie, dated May 2022.
- Published Geological maps of the area¹.
- *Tasman Regional Liquefaction Assessment* by Beca Ltd (Beca) for TDC².
- Previous geotechnical data held on the NZ Geotechnical database.

4.1 Previous Regional Geological Studies

Previous geological mapping indicates the site consists of marine gravels, boulders, sand and mud of Holocene age (Q1b)¹. No active faults are recognized at the site, the nearest mapped active fault being the Waimea-Flaxmore Fault ~12.7 km to the southeast.³ Buried faults are mapped in the area, but due

¹ Johnston, M.R. 1982. Richmond. Geological Map of New Zealand 1:50,000, Sheet N27 (part). DSIR, Wellington.

² Beca Ltd Tasman Regional Liquefaction Assessment, dated 24 November 2021.

³ GNS Science Active Faults Database www.data.gns.cri.nz/af/ (accessed 8.7.22)

to their concealed nature, little is known about these structures. The area has not been recognized to be prone to landslides⁴ but is part of the Tsunami Evacuation Zone, where large distant-source tsunami may affect the coastline.⁵

The effects of sea level rise (SLR) have recently been mapped, and for a 0.5 m SLR scenario, the site has not been mapped to be prone to inundation, but under a 1.0 m SLR scenario this site is mapped to be subject to storm-tide inundation.⁶

The site is within a zone defined in a recent Beca report as an area in which “Liquefaction Damage is Possible”⁷. Such an area is defined where the underlying geologic unit may be susceptible to liquefaction.

The site is well documented in a series of environmental assessment reports, including but not limited to the following^{8,9,10,11}. The area of interest was remediated after contamination from the former Fruit growers Chemical Company (FCC) operations and contains over 4 m thick fill. The above reports provide detail on the pre-excavation and the type of backfill used in the remediation. The type of fill used includes topsoil, treated fines, marine sediments, clay, sand, gravel and crushed concrete.

4.2 Previous Geotechnical Investigations

Previous nearby geotechnical investigations that are publicly available include investigations at 24 Tahurangi Street ~200 m to the southwest of the site¹². At that address, a loose to medium dense sandy gravel was encountered to depths ranging from 0.7m to 1.4 m, overlying interbedded layers of sand and clay (with varying amounts of silt and gravel) to a depth of 22 m. Sandy silt and sand were found to a depth of 1.1 m below EGL at 23 Iwa Street ~340 m to the northwest. Deeper investigations have taken place at the corner of Langford Drive and Aranui Road ~450 m to the northwest where a borehole encountered loose to firm silt and sand (in part gravelly) to a depth of 4.1 m below EGL. Below that depth, sandy silt with fine to coarse gravels of the Moutere Gravel Formation (local bedrock) was encountered to a maximum testing depth of 5.1 m below EGL.

⁴ GNS Science Landslide Database www.data.gns.cri.nz/landslides (accessed 8.7.22)

⁵ Top of the South Maps www.topofthesouthmaps.co.nz (accessed 8.7.22).

⁶ Tasman District Council [Coastal hazards map viewer | Tasman District Council](#) (accessed 8.7.22).

⁷ Beca Ltd Tasman Regional Liquefaction Assessment, dated 24 November 2021.

⁸ TDC. Former Fruitgrowers Chemical Company Site, Mapua. FCC East and FCC Landfill Sites. Dated 8 March 2012.

⁹ Groundwater monitoring at former FCC site, Mapua – March 2013 sampling update. Report by PDP to TDC dated 11 March 2013.

¹⁰ Post-remediation contaminant monitoring of sediments and biota from estuarine sites located adjacent to former Fruitgrowers Chemical Company (FCC) site, Mapua, Nelson (2013-2015 update). Report by Davidson Environmental to TDC dated November 2016.

¹¹ Audit of the remediation of the former Fruitgrowers Chemical Company Site, Mapua. Report by PDP to the Ministry for the Environment, dated June 2009.

¹² NZGD www.nzgd.org.nz (accessed 8.7.22).

4.3 Previous Topographic Survey

Davis Ogilvie recently undertook a topographic survey¹³ of the site. It mapped flat ground behind the foreshore, highest around the area of the current graveled carpark (up to 5.28 m in terms of NZ vertical datum 2016), sloping gently toward the petanque court and boardwalk then dropping off to sea level. The topographic survey extended to -1.52 m RL.

5.0 SITE WALKOVER

The site comprises a muddy-sandy beach with scattered boulders and shells. A sloping bank covered by boulders serves as erosion protection at the site (Figure 3). To the south, private properties extend to near the coastline and have a combination of concrete walls, rock and fenced boundaries with the beach. At the site, the area adjacent to the foreshore comprises a reserve area of flat land, a mix of graveled carpark and grassed land, a petanque court, paths and a wooden boardwalk, concrete seating and native bush areas (Figure 4). A fenced viewing platform is located in one area of the sea wall.



Figure 3: View looking south of the foreshore, in the approximate area of the planned boat ramp. Existing erosion protection in the foreground comprises large boulders tapering down to a muddy-sandy beach with loose gravel and boulders. The image was taken on 6 July 2022.

¹³ Davis Ogilvie Proposed boat ramp topographical survey (aerial overlay), dated May 2022.



Figure 4: Open grassed area, paths, seating and native plantings in the reserve adjacent to the foreshore. View looking east. The image was taken on 14 February 2022.

6.0 PRELIMINARY CONCLUSION

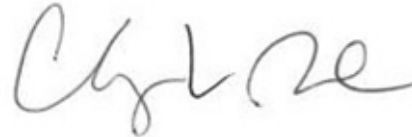
Based on the observations of our site walkover and the findings of our desktop study, the proposed development is considered geotechnically feasible, subject to a detailed site investigation and specific engineering design at the building consent stage.

7.0 CLOSURE

Should you have any queries regarding the above information, please contact the undersigned.

Yours faithfully

DAVIS OGILVIE & PARTNERS LTD



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Disclaimer

Davis Ogilvie did not complete an assessment of all possible conditions or circumstances that may exist at the site. The report and findings are based on the information provided. Conditions may exist which were undetectable given the limited investigation of the site. Variations in conditions may occur, and there may be conditions onsite which have not been revealed by the July 2022 inspection, which have not been taken into account in our reporting. No warranty is included—either expressed or implied—that the actual conditions will conform to the assessments contained in our reporting.

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