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REPORT ON REMEDIAL WORKS

A & S SANDERS
LOCHMARA BAY

Our Ref: 28061
Date: December 2025

davidson group

PROJECT PLANNERS
RESOURCE MANAGERS
CIVIL & STRUCTURAL ENGINEERS
BUILDING DESIGNERS
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Our Ref: 28061

2 December 2025

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1. BACKGROUND

This property (Lot 11 Deeds 95, Lochmara Bay), suffered land damage during an intense rainfall event in August 2022, including further regression of an old slip seaward and close to the house, movement of a retaining wall behind a shed, inundation from slip debris originating from a significant slip in a gully above this property, destroying some outbuildings and the wastewater system for these and other undamaged buildings, and causing erosion and infilling of the natural watercourse passing through the property.

2. SCOPE

We have been requested to comment on the background work carried out by us, remedial works that we have been directly involved with, and also other work carried out on site by others.

3. RETAINING WALL ON LAWN EAST OF MAIN HOUSE

We had been engaged by the previous owners (Barnett) in 2013 to inspect a slip on the face to the foreshore and made some suggestions for remedial works, but nothing was carried out.

In April 2022, Scott Sanders engaged us to design a rock anchored retaining wall to eliminate the risk of the slip regressing further back into the lawn, reducing this well-used recreational area and also threatening the integrity of the septic tank which is located at the rear of the lawn.

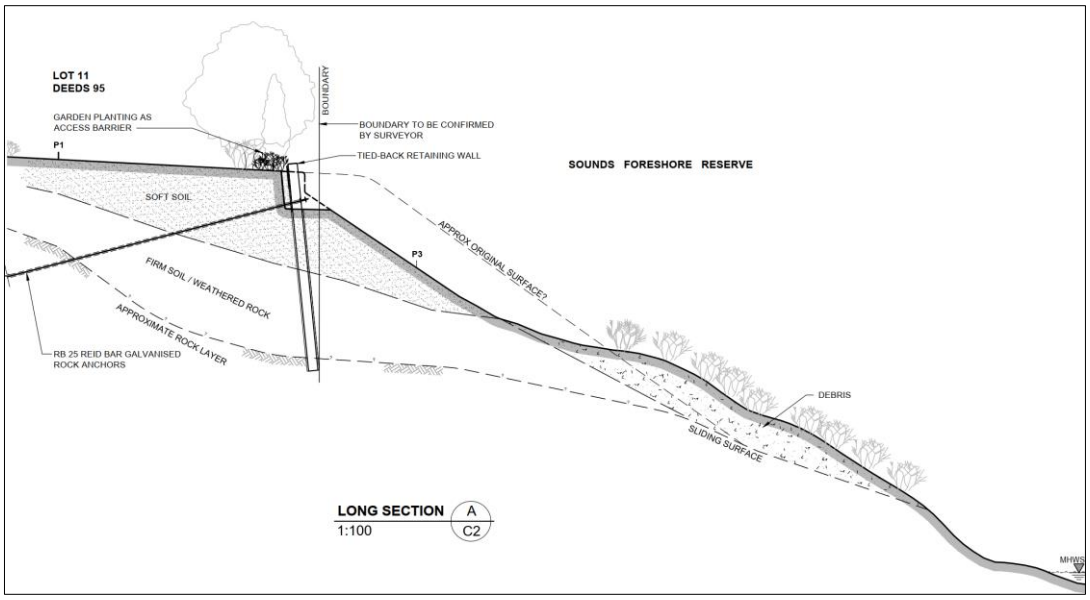
The wall consists of timber poles embedded 8 m deep and tied back with 25 mm diameter galvanised steel rods anchored into the rock.

We obtained a Resource Consent for the work (U220950). No Building Consent was required as the work was exempt under Exemption 20 of Schedule 1 of the Building Act 2004.

The work was carried out by competent local contractors and we monitored the work, including proof testing the rock anchors.

No barrier was required because the fall height is less than 1 m.

Details below.



General long section and retaining wall details



Old slip prior to the retaining wall



Proof loading the rock anchors



Completed wall

4. STORM EVENT AUGUST 2022

4.1 General

In August 2022, an extreme rainfall event caused a collapse in the upper catchment feeding the creek running through the western side of the property. The resultant debris filled the channel, blocked the culvert, destroyed some sleepouts and the boatshed. The main house and immediate surroundings were not affected. The series of photographs below confirm.



General area affected by debris flow



Upper catchment collapse

4.2 Outbuildings

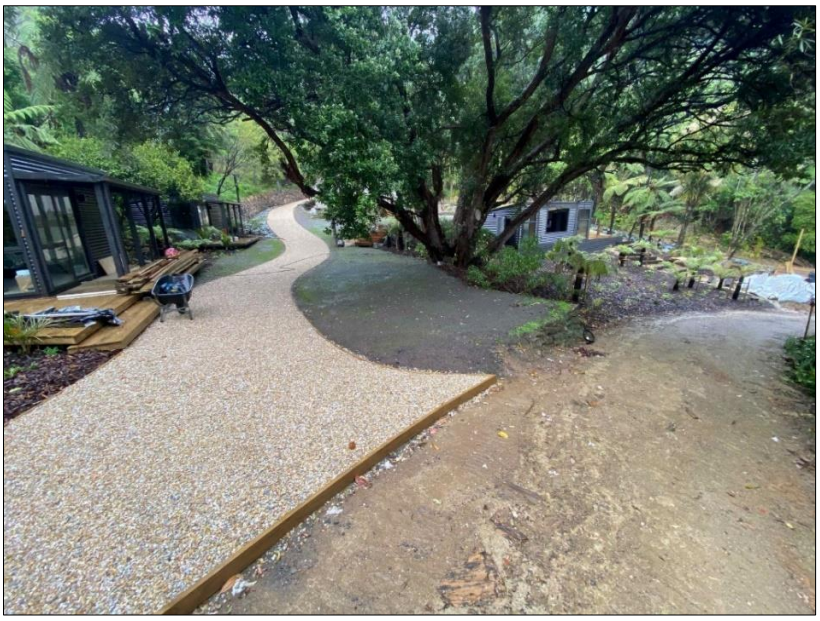
The outbuildings destroyed have since been replaced, including some sleepouts that were not destroyed but required upgrading.

The new building structures were exempt from a Building Consent, but nevertheless had to comply with the Building Code. We assisted in carrying out soil tests to confirm the minimum depths for the driven piles.

A Building Consent was required however for the drainage work associated with the ablution buildings. Building Consent BC230235 and a subsequent Code Compliance Certificate were obtained.



Destroyed buildings



Current



Prior

4.3 Creek Bed

The debris from the creek bed was removed and rock was placed to eliminated erosion. The access over the creek was also destroyed but a bridge was placed to restore the access. See photos below.



Creek bed



Site after clearance and formation of stopbank



Rock rip rap



Bridge placed to restore access

4.4 Boatshed

The boatshed was destroyed and has since been removed.

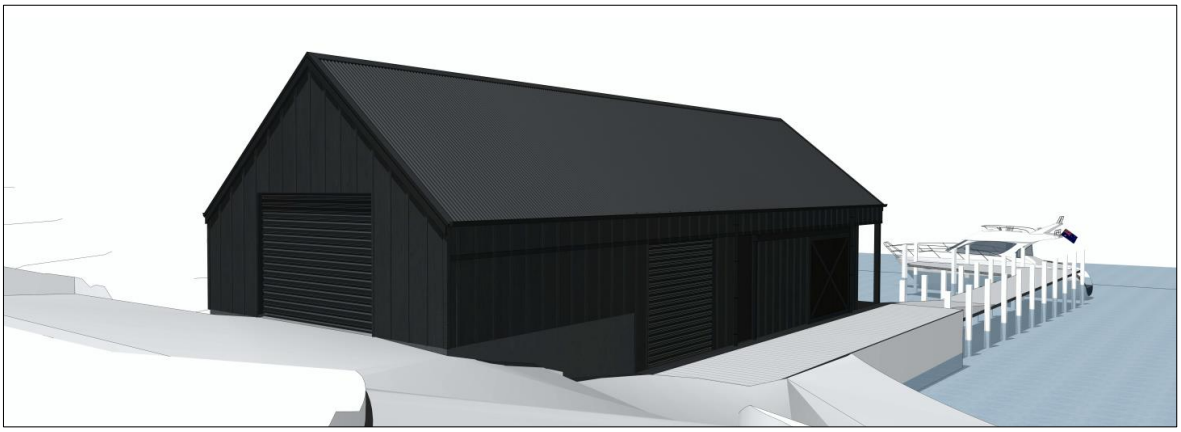
Plans have been prepared for a replacement boatshed and these have an approved Building Consent (BC231151).



Boatshed



Current cleared site (with temporary container storage)



Approved boatshed replacement

5. LAND MOVEMENT BEHIND WOODSHED

A small section of bank beside a track slumped during the August 2022 storm event and pushed against a woodshed, causing some damage.

Tonkin & Taylor carried out a report for EQC purposes and recommended the construction of a 2 m high retaining to enable the woodshed to be rebuilt to satisfy the landowner's rights under the Act.

However, given the nature of the damaged building (the woodshed could be rebuilt further out from the bank or in a completely different location), and the fact that the track above was not affected and could be repaired if it was, the construction of the retaining wall is not considered to be absolutely essential and was not built.



Damaged woodshed

6. WASTEWATER SYSTEM

The previous wastewater system serving the outbuildings was completely inundated in the storm event. We designed and obtained a Resource Consent (U230112) and a Building Consent BC(230173) for a new system involving a new primary treatment and pump chamber pumping to an irrigation field.

The house is served by an independent system, as shown below.



Wastewater system (new system for the outbuildings located upper left. System for the house located on the slopes top the south)

This was completed by a competent local drainlayer. We have inspected and signed off the work. See photos below.



New treatment tanks and pump chamber



New irrigation field

7. DISCLAIMER

7.1 This document has been prepared for the sole use of our client for the particular brief and on the terms and conditions agreed with our client. It may not be used or relied on (in whole or in part) by anyone else, other than potential purchasers for general background purposes only, or for any other purpose or in any other contexts, without our prior written agreement.

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