

**BEFORE THE COMMISSIONERS APPOINTED ON BEHALF OF
CENTRAL OTAGO DISTRICT COUNCIL**

Under	The Resource Management Act 1991 (the Act)
In the Matter	an application for subdivision and consents and boundary adjustment RC250259
Between	AO MARAMA LIMITED Applicant
And	CENTRAL OTAGO DISTRICT COUNCIL Local Authority

BRIEF OF EVIDENCE OF MARCUS BROWN

DATED 4 SEPTEMBER 2026



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BRIEF OF EVIDENCE OF MARCUS BROWN

Introduction

1. My full name is Marcus Brown, I am a surveyor, residing at Alexandra. I hold a Bachelor of Surveying with Honours (BSurv(hons)) from the University of Otago.
2. I have 16 years of post-graduate experience as a surveyor, including 11 years undertaking land development engineering. I am a Member of Survey and Spatial New Zealand and have been a Licensed Cadastral Surveyor since 2018.
3. Whilst this is not an Environment Court hearing, I have been given a copy of the Environment Court's code of conduct for expert witnesses. I have reviewed that document and confirm that this evidence has been prepared in accordance with it and that all opinions that I offer in this evidence are within my expertise. I have not omitted to refer to any relevant document or evidence except as expressly stated.

Background

4. I have been engaged by Ao Marama to assist with responses to technical requests for further information raised during processing of this application. I have provided advice, support and technical assistance regarding the access arrangements and stormwater management.
5. In particular I have been working with the Applicant and the Council regarding the options to address overland flow at the proposed entrance to Lots 5-8 at Hawley Road.
6. The site and surrounding areas have a number of features that have been considered. I have prepared a Stormwater Management Plan

which is attached with this evidence. This and the following explanation were provided to the Council on 17 June 2026.

7. The plan demonstrates the following key features of the existing site context and drainage patterns:
 - (a) Multiple established overland flow paths discharge from the subject site, across the unformed legal road comprising access to Ao Marama, discharging to localised low points on Lot 3 DP 500577 and ultimately to the unnamed tributary of Fraser River
 - (b) The low-lying receiving environment is a known flood prone area, having been subject to historic floods that have washed out the Hawley Road bridge and deposited silt across the floodplain. These are described within the 'Floodplain Management Report – Central Otago District' (March 1993), accessible via the Otago Regional Council Natural Hazards Portal.
 - (c) Accordingly, this catchment and associated flood effects are influenced by a much larger catchment reaching to the top of the Old Man/Kopuwai Range, with discharges from the subject site being relatively small by comparison.
 - (d) There is no evidence of channels being formed within Lot 3 DP 500577 or Lot 2 DP 345599 to convey or direct these existing overland flow paths through these sites.
 - (e) Hawley Road acts as an overland flow path directing and concentrating sheet flows back to the north.

Proposed Stormwater Management Approach

8. Existing overland flow paths pre-date any development of this area and proposed subdivision works will not have a material impact on run-off

from these catchments, given that stormwater from buildings and other impervious surfaces will be attenuated per proposed conditions, and do not discharge into the catchment contributing to Culvert 1 shown on the Stormwater Management Plan. Natural overland flow path discharge locations are all within private landholdings, and are the responsibility of the owners.

9. On this basis, the proposed stormwater management approach is to:
 - (a) Manage and dispose of primary stormwater runoff from the ROW in typical storm events via appropriately sized soak pits or to natural overland flow paths
 - (b) Maintain existing overland flow paths and discharge locations for secondary flow;
 - (c) Convey flows across proposed access locations via appropriately sized culverts, with scour protection to mitigate any downstream erosion effects; and
 - (d) Reinststate any modified drainage back to original pre-development flow paths as part of subdivision works.
10. The measures noted above will ensure that post-development run-off from the site will replicate the pre-development environment. Any further measures to manage, attenuate or direct secondary flows are beyond what can reasonably be expected of the Ao Marama developer.

Detail Requirements for Resource Consent

11. The s42A Planning Report includes comments in various locations to the effect that: *"in the absence of a detailed access design there is a lack of certainty over whether this is a feasible solution."*

12. These comments suggest that Mr Anderson's concerns relate not so much to the stormwater management approach being proposed, but to the level of detail that is required in order to demonstrate that this can be achieved.
13. With respect to this matter, I note that it is normal practice to undertake detailed design following the issue of Resource Consent, with reference to consent conditions prescribing the outcomes to be achieved. Conversely, it is unusual to prepare details such as pipe sizing calculations, access long sections and earthworks modelling prior to obtaining resource consent.
14. This is similar to how subdivision consents can be granted within infrastructure constrained areas on the condition that the constraints are resolved prior to giving effect to the subdivision. If the infrastructure constraints cannot be resolved, then the applicant cannot give effect to the subdivision.
15. Therefore, I am satisfied that a feasible solution to achieve the proposed discharge approach is possible. I expect to confirm the particulars of the approach through the detailed engineering design process required by consent conditions.

Recommended Consent Conditions

16. To formalise this approach, I recommend the following stormwater related consent conditions:
 - (a) Stormwater from buildings and other impervious surfaces within Lots 2–8 must be stored for beneficial reuse or disposed of via soak pits designed by a suitably qualified and experienced person within each lot or discharged to overland flow paths / existing watercourses with discharge attenuated to pre-

development levels. This requirement is to be secured by consent notice on the new titles. (as proposed by CODC)

- (b) Access is designed to recognise existing overland flow paths and convey these via appropriately sized culverts to their existing pre-development discharge locations, including scour protection as required.
- (c) The existing overland flow path currently intersected and partially redirected toward Hawley Road by informal access works is to be reinstated to its original alignment via an appropriately sized culvert and/or flow paths designed to convey the 1% AEP storm event.

Affected Parties

17. On the basis that:

- (a) Existing flow paths are maintained or reinstated; and
- (b) Pre-development runoff locations and quantities are not materially impacted by the proposed development

18. I consider that the proposal does not result in adverse effects on adjacent landowners and no landowners should be considered affected by this stormwater management proposal. Any effect will be positive, by reinstating drainage patterns to those that existed prior to any informal access works. Accordingly, we consider there is no requirement for post-consent engagement or liaison with neighbouring parties.

Response from Council

19. Following the provision of this information I received a response from Tim Anderson. A copy of that email is attached with this evidence. Effectively, Mr Anderson confirmed that the proposed solution was acceptable, subject to conditions reflecting what is proposed being incorporated into the consent. I understand that the Applicant is satisfied with this outcome. Draft conditions to this effect are to be proposed above and are accepted as appropriate by the Applicant.

Dated 4 September 2026

M Brown

From: Marcus Brown <Marcus@caldersurveying.co.nz>
Sent: Friday, 7 August 2026 3:01 pm
To: Tim Anderson
Cc: Phil Murray
Subject: RE: Ao Marama | Engineering Storm Water Plan Hawley RD | RC250259

Many thanks Tim

On this basis I understand there is nothing further required from me to progress this application, but please let me know if there is anything further required.

Kind regards,

Marcus Brown | Licensed Cadastral Surveyor
24 The Half Mile | Bridge Hill | Alexandra
t: 03 448 8501 | m: 027 703 3643



From: Tim Anderson <Tim.Anderson@codc.govt.nz>
Sent: Friday, 7 August 2026 1:13 pm
To: Marcus Brown <Marcus@caldersurveying.co.nz>
Cc: Phil Murray <philh.murray@outlook.com>
Subject: Ao Marama | Engineering Storm Water Plan Hawley RD | RC250259

Hi Marcus,

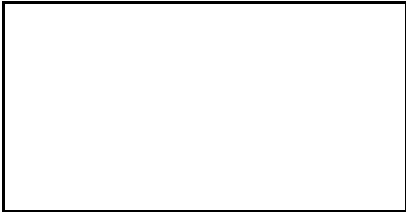
Sorry about the delay in getting back to you on this. I trust that Walt has discussed this with you, in summary he is satisfied that the plan you provided satisfactorily addresses the flow paths.

The assessment by Marcus Brown of Calder Surveying has correctly identified that if natural flow paths can be reinstated and maintained through appropriate consent conditions, then the predevelopment runoff quantities should not be materially impacted by the proposed development. To achieve this, the access design needs to recognise the locations of natural overland flow paths and convey flood waters through appropriately sized culverts to their existing predevelopment discharge locations. These culverts would need to be designed to handle 1% AEP flood flows. So long as the proposed consent conditions have these specifics covered off then this proposed access should not have any negative effects on flood waters at this location.

Kind Regards

Tim

Tim Anderson
Team Leader - Planning - Cromwell



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