

**MEMORANDUM**

**Job 10740**

**To:** Jade McRae  
**From:** Victroia Jones and Hamish Lowe, LEI  
**Date:** 6 September 2022  
**Subject:** Request for Further Information on Resource Consent Application - APP-20222055

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Dear Jade

Thank you for your further request for information for Capil Grove Farm 444. The purpose of this memo is to provide responses to your questions, which are provided below.

**RESPONSE**

1. An explanation / justification as to why the sludge bed is appropriate to be used as an agricultural effluent storage facility within the Dairy Effluent Storage Calculator (DESC). Sludge beds are generally considered effluent treatment facilities, not storage facilities. If the sludge bed is considered appropriate as an effluent storage facility then please provide pond drop test results undertaken by a suitably qualified person, in accordance with Appendix P of the proposed Southland Water and Land Plan. Please also provide details on how the effluent is isolated within one side of the sludge bed when the tanks are full, what alarm systems are in place on the sludge bed to alert the PIC it is full and whether effluent can be irrigated directly from the sludge bed.

**Response:** The sludge bed is not intended on being used as a storage facility. It was added in the calculator as this facility contributes to the FDE effluent system via catching rainfall. That is why the pond has been designed to be big enough to catch the effluent that is expected to be generated from the whole farming operation, and without using the sludge bed as a storage facility. It is also why the effective volume of the sludge bed is 0.0 m<sup>3</sup> in the DESC.

**Storage pumped?** On  
**Covered:** No  
**Type:** Regular - Rectangular  
**Dimensions:** length 16m, width 18m, and depth 1m  
**Volumes:** Freeboard volume 28.5m<sup>3</sup>, effective volume 0.0m<sup>3</sup>, sludge volume 226.9m<sup>3</sup>, total volume 255.3m<sup>3</sup>

2. A Farm Environmental Management Plan and a written record of the good management practices occurring on the applicant's other farm; Capil Road Farm. I am requesting this information because housing 200 cows in the winter barn from Capil Grove Farm results



in both properties (Farm 444 and Capil Grove Farm) being part of the overall "landholding" as defined in the Glossary section of the Proposed Southland Water and Land Plan.

Response: See attached to the email.

3. The Riparian Management Plan mentioned in Section 5.5 of the Farm Management & Conversion Environmental Plan included as Appendix B of the application.

Response: The riparian management plan has not been completed or attached as it has not been updated to reflect the recently purchased properties. As these have only recently been purchased, and the properties are going to be combined under a new farming operation, no new riparian plantings are expected this coming season. Once the farm is under operation, then the applicant will decide where/ if new riparian plantings are required. Note that all waterways are fenced and cattle cannot enter waterways.

4. A description of the existing wetland area located at approximately NZTM2000 1251179E 4873341N. The description should include the range and diversity of any indigenous ecosystems and habitats located within this area, any physical works that has been undertaken to preserve, protect or restore this area, when that works was undertaken and any future plans for this area. Photos of this area would also be helpful.

Response: This area is a gorse and pastoral area that has been used for grazing both in the past and currently. There are no indigenous ecosystems and habitats located in this area. Capil grove do not intend on making this a wetland.

The National Policy Statement for Freshwater Management 2020 defines a wetland below.

*A natural wetland means a wetland (as defined in the Act) that is not:*

*(a) a wetland constructed by artificial means (unless it was constructed to offset impacts on, or restore, an existing or former natural wetland); or*

*(b) a geothermal wetland; or*

*(c) any area of improved pasture that, at the commencement date, is dominated by (that is more than 50% of) exotic pasture species and is subject to temporary rain derived water pooling.*

As can be seen in the photos provided in Appendix A, the makeup of this area is far more than 50% exotic pasture species.

The Resource Management Act further defines a wetland as:

*Permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.*

This area does not support natural ecosystem of plant and animals adapted to wet conditions as there are no wet areas (except during heavy rainfall which causes temporary puddling, as occurs with other areas of the property and Southland).



The vegetation of this area is unimproved compared with other areas of the farm. There is gorse and other low performing pasture species in this area, and in recent years weed management has been taking place to improve the quality of the pasture. This includes fencing the area off and digging up the root systems of the gorse. This was occurring before the Lindsay's purchased the property and is typical of weed management which has occurred on other areas of the property in the past. The works has not been fully completed but is in the process of being completed.

- Confirmation that the applicant is applying to discharge agricultural effluent to land via a slurry tanker at 5mm depth on Category C land. The discharge has been assessed as a discretionary activity against RWP Rule 50, however high rate discharge on Category C land is a non-complying activity under Rule 50(f). If high rate discharge via slurry tanker on Category C land is proposed then please provide further assessment on potential effects for this proposed activity.

Response: Slurry tankers are not high rate discharges. Applying 5 mm of effluent on Category C land is still under the Max depth for both low rate and high rate tools, as shown in Figure 4.5 of the application. Capil grove does not intend on applying effluent at high rates onto Category C land. This is particularly the case as they would not want to drive a slurry tanker on land that is too steep, not only for environmental reasons, but also safety reasons. Further, at risk times (which are to be avoided for the above reasons) are typically when the soil's are wet and this would lead to soil compaction issues.

Category	A	B	C	D	E
Soil and landscape feature	Artificial drainage or coarse soil structure	Impeded drainage or low infiltration rate	Sloping land (>7%) or land with hump & hollow drainage	Well drained flat land (<7%)	Other well drained but very light flat land (<7%)
Risk	High	High	High	Low	Low
Application depth (mm)	< SWD <sup>1</sup>	< SWD	< SWD	< 50% of PAW <sup>2</sup>	≤ 10 mm & < 50% of PAW <sup>3</sup>
Storage requirement	Apply only when SWD exists	Apply only when SWD exists	Apply only when SWD exists	24 hours drainage post saturation	24 hours drainage post saturation <sup>4</sup>
Max depth: High rate tool	10 mm	10 mm	10 mm <sup>5</sup>	25 mm <sup>4</sup> (10 mm at field capacity)	10 mm
Max depth: Low rate tool	25 mm	25 mm	10 mm	25 mm	10 mm

Figure 4.5: FDE application guide (Dairy NZ).

- An assessment of the water take from a spring against Appendix L.2 (pSWLP). I am requesting this information because Table L.2 of the proposed Southland Water and Land plan classifies any groundwater take within 5 metres of a surface water body as having Riparian hydraulic connection and should be managed by considering the water take as an equivalent surface water take, unless there is clear hydrogeological evidence that demonstrates that pumping from the groundwater source will not impact on the surface water body.



Response: There are no surface water bodies within 5 m that are classified as requiring stream depletion effects to be assessed. As mentioned in Appendix L.2, "water bodies characterised as ephemeral will be excluded from consideration of stream depletion effects". The surface body is an ephemeral and the only time where this would flow is during a heavy rainfall/ flood event as mentioned in Section 6.2.2 of the application.

### Appendix L.2 Stream depletion effects

The stream depletion effects resulting from groundwater abstraction will be classified and managed following the criteria outlined in Table L.2:

- assessment of the magnitude of stream depletion will be supported by a conceptual hydrogeological model that describes the nature of local surface water/groundwater interaction;
- calculation of the magnitude of stream depletion will be undertaken using relevant analytical or numerical assessment techniques which are suitable for application in the hydrogeological setting in which abstraction will occur;
- representative hydraulic properties for assessment of the magnitude of stream depletion will be derived from aquifer testing undertaken in accordance with requirements outlined in Appendix L.1, as well as an assessment of representative values from the wider hydrogeological environment;
- water bodies characterised as ephemeral will be excluded from consideration of stream depletion effects;

7. If the hydraulic connection is 'riparian', or 'direct' as defined in Appendix L.2 of the proposed Water and Land Plan, and clear hydrological evidence that demonstrates the pumping will not impact the surface water body is not available, an assessment of:
- a. The stream depletion effect (in litres per second),
  - b. The Q95 and median flows of the adjacent surface waterway (not including any effect from the applicant's water take),
  - c. Cumulative allocation from the stream and wider catchment,
  - d. A description of how minimum flows will be observed, or how adverse effects on the values of the waterway will be avoided or mitigated, and
  - e. If the take will be subject to a minimum flow restriction, a description of how the applicant will continue to operate during the periods that the restrictions apply.

Response: As above.

8. Confirmation of the size of the proposed winter barn. I am requesting this information because the main application document and DESC specify  $4,590\text{m}^2$  (current barn) +  $3,650\text{m}^2$  (new barn) =  $8,240\text{m}^2$  combined but the Part B form says  $4,590\text{m}^2$  (current barn) +  $4,380\text{m}^2$  (new barn) =  $8,970\text{m}^2$  combined.



Response: Sorry this was a mistake as the estimated barn size changed part way through the application. The correct size is current barn (4,590 m<sup>2</sup>) + new barn dimensions being 36.5 m x 120 m (4,380m<sup>2</sup>) (as mentioned in Section 4.3 of the application) = 8,970 m<sup>2</sup> combined. I note 8,240 m<sup>2</sup> has been used in the DESC, but again this is a mistake. However, this won't affect the DESC as the rainwater is diverted as the barns are covered. I have attached the DESC below in Appendix B to show there has been no change in required effluent storage.

9. Confirmation of how many cows the applicant proposes to accommodate combined in the existing and proposed Winter barns. I am requesting this information because the main application document states 956 cows but table 4.3 on page 19 of the winter barn application and the DESC have used 840 in May to October.

Response: The barn has the capacity to hold upto 956 cows, however the applicant only intends on holding upto 840 cows.

10. Confirmation that the winter barn repairs stipulated in Condition 8 of AUTH-20211143-04 have been completed. If so, then please provide evidence of the completed repairs. If not, please provide a plan of when, how and who will undertake the repairs.

Response: Yes, repairs have been completed. Please see attached evidence in Appendix C.

11. Confirmation that the land at the southern end of the farm known as Lot 2 DP 13790 is owned by Caleb Harwood. If so, please provide some form of agreement between Caleb Harwood and Capil Grove Limited confirming the landowner is aware of the activities that are proposed to be undertake on Lot 2 DP 13790. I am requesting this information because Council's GIS system shows this land is not owned by Capil Grove Limited and I cannot find a connection between Caleb Harwood and Capil Grove Limited.

Response: The sales and purchase agreement was in the process of being signed when the application was applied for to ES. Capil Grove now officially own this block. See Purchase and Sales Agreement in Appendix D.

12. An explanation as to the management of the calves produced by the milking herd. Are all calves sold as 4 day olds? Or are the calves raised until weaning and then sold? I am requesting this information because the Overseer Nutrient budgets do not show any calves on the property at any time of the year.

Response: Yes, calves sold at 4 days old.

13. Confirmation that all mature age milking cows will get in calf via Artificial Breeding (AB). I am requesting this information because there are no mating bulls present in the Overseer Nutrient budgets at any time of the year.

Response: Capil Grove buy the replacement cows in calf as the farmer is paid by Capil Grove to leave the bulls in for an extra period of time. There are no bulls intended to be on the farm.



14. Additional information to address the concerns raised in the attached pond design review report undertaken by RDA. I am requesting this information because the reviewer does not consider that the proposed pond design meets IPENZ Practice Note 21.

Response: We have sent the queries of the pond auditor through to the Engineer who has completed the design and will await his response. We will send his response/required changes through once we receive them.



**Appendix A  
Gorse Area Photos**





















**Appendix B  
Updated DESC**





# Dairy Effluent Calculator Report



### Disclaimer

I/We acknowledge and agree that:

1. the results contained in the report which DairyNZ will provide following my/our use of the Dairy effluent storage calculator ("the calculator") are generated based on the data which I/we have inputted into the calculator; and
2. the reliability of the results and the report is dependent upon a number of variables including, without limitation, the accuracy of the input data, and the validity of the assumptions and algorithms used in the calculator in relation to the input data which may be updated to reflect development in effluent knowledge; and
3. the results contained in the report cannot be relied upon solely to ensure the effluent storage system:
  - a. meets the current or future requirements of the district or regional plans of the local territorial authority or regional council or any other authority having jurisdiction.
  - b. has the storage capacity to allow practical management of the effluent system.

Accordingly, DairyNZ does not accept liability for any loss, damage, cost or expense suffered or incurred by me/us or any third party to whom this report has been provided (whether by me/us or another person) in connection with the use of, and reliance on, the report and the results contained in it. DairyNZ's website terms and conditions (which can be found at <https://www.dairy.co.nz/terms-and-conditions>) otherwise apply to the use of this service and the provision of the report and the results in it.

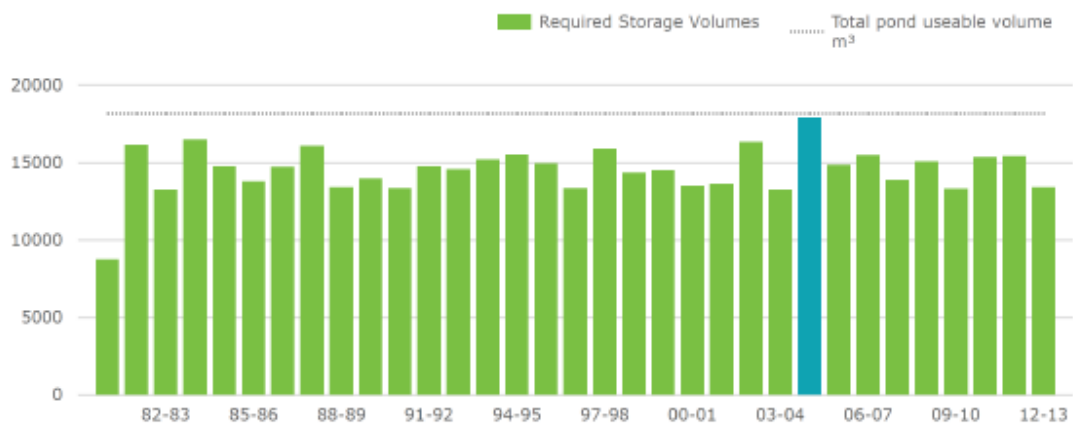
## Farm 444 DESC - Stage 4 barn dimensions corrected

444 Springhills-Tussock Creek Road

Supplier Number	
Storage max m <sup>3</sup>	17,902.36
90th percentile m <sup>3</sup>	16,136.67
Total pond useable volume m <sup>3</sup>	18,180.00
File owned by	Victoria Jones Lowe Environmental Impact
Created by	Victoria Jones Lowe Environmental Impact
Created on	19 Jul 2022
Last edited by	Victoria Jones Lowe Environmental Impact
Last edited on	19 Jul 2022

Stage 4 - No lease, new effluent pond, new winter barn, 200 cows from Capil Grove. 16,136 m<sup>3</sup> required for 640 cows from 444 Farm (milking year round) and 200 cows from Capil Grove Farm (wintering in barn) at 5 mm depth (if not applying effluent Mid May- Mid Sep).

### Required Storage Volumes





Dairy Effluent Calculator Report



Climate

Site	Mean Rainfall mm	Altitude m
Winton	958	44

Soil

Low Risk Soil ha	Minimum High Risk Soil ha	Surplus high risk soil ha
0	340	315

Irrigation

Calculated option	Application depth mm	Pump volume m <sup>3</sup>
Specified	5	200

Solid Storage Volumes --- No Data Available

Catchment

Shed		Yard		Feedpad			Animal Shelter			Other
Area m <sup>2</sup>	Diverted	Area m <sup>2</sup>	Diverted	Area m <sup>2</sup>	Covered	Diverted	Area m <sup>2</sup>	Covered	Diverted	Area m <sup>2</sup>
404	Yes	970	No	0	No	No	8970	Yes	Yes	0

	Yard				Animal Shelter		
	Cows	Hours	Volume m <sup>3</sup>	Wash LCD	Cows	Hours	Volume m <sup>3</sup>
Jan	640	6	32	50	0	0	0
Feb	640	6	32	50	0	0	0
Mar	640	6	32	50	0	0	0
Apr	640	6	32	50	0	0	0
May	640	6	32	50	840	20	0
Jun	640	6	32	50	840	24	0
Jul	640	6	32	50	840	24	0
Aug	640	6	32	50	840	24	0
Sep	640	6	32	50	840	20	0
Oct	640	6	32	50	0	0	0
Nov	640	6	32	50	0	0	0
Dec	640	6	32	50	0	0	0



**Calendar**

**Milking**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Jan																															
Feb																															
Mar																															
Apr																															
May																															
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Jul																															
Aug																															
Sep																															
Oct																															
Nov																															
Dec																															

**Animal Shelter Diversion**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Jan																															
Feb																															
Mar																															
Apr																															
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Jun																															
Jul																															
Aug																															
Sep																															
Oct																															
Nov																															
Dec																															

**Non Irrigation**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Jan																															
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Oct																															
Nov																															
Dec																															

**Solid Unit**

No Data Available



**Storage**

Emergency Storage Period 0

<i>Storage Name</i>	<i>Covered</i>	<i>Pumped</i>	<i>Type</i>	<i>Dimension</i>
Weeping Wall	No	On	Regular - Rectangular	length 16m, width 18m, height 1m, sludge height 0.9m freeboard height 0.1m and batter 1:1
New Pond	No	On	Regular - Rectangular	length 82.25m, width 53m, height 8.5m, sludge height 0.5m freeboard height 0.5m and batter 2:1



Appendix

Season	Required Storage Volumes m <sup>3</sup>
80-81	8,751.70
81-82	16,150.07
82-83	13,273.39
83-84	16,486.68
84-85	14,763.06
85-86	13,763.38
86-87	14,725.03
87-88	16,083.04
88-89	13,437.88
89-90	13,976.65
90-91	13,372.81
91-92	14,754.18
92-93	14,569.52
93-94	15,225.54
94-95	15,534.25
95-96	14,948.38
96-97	13,352.89
97-98	15,901.79
98-99	14,353.32
99-00	14,524.38
00-01	13,514.37
01-02	13,608.43
02-03	16,346.60
03-04	13,254.94
04-05	17,902.36
05-06	14,865.63
06-07	15,495.98
07-08	13,867.81
08-09	15,074.44
09-10	13,316.72
10-11	15,366.52
11-12	15,437.96
12-13	13,438.07

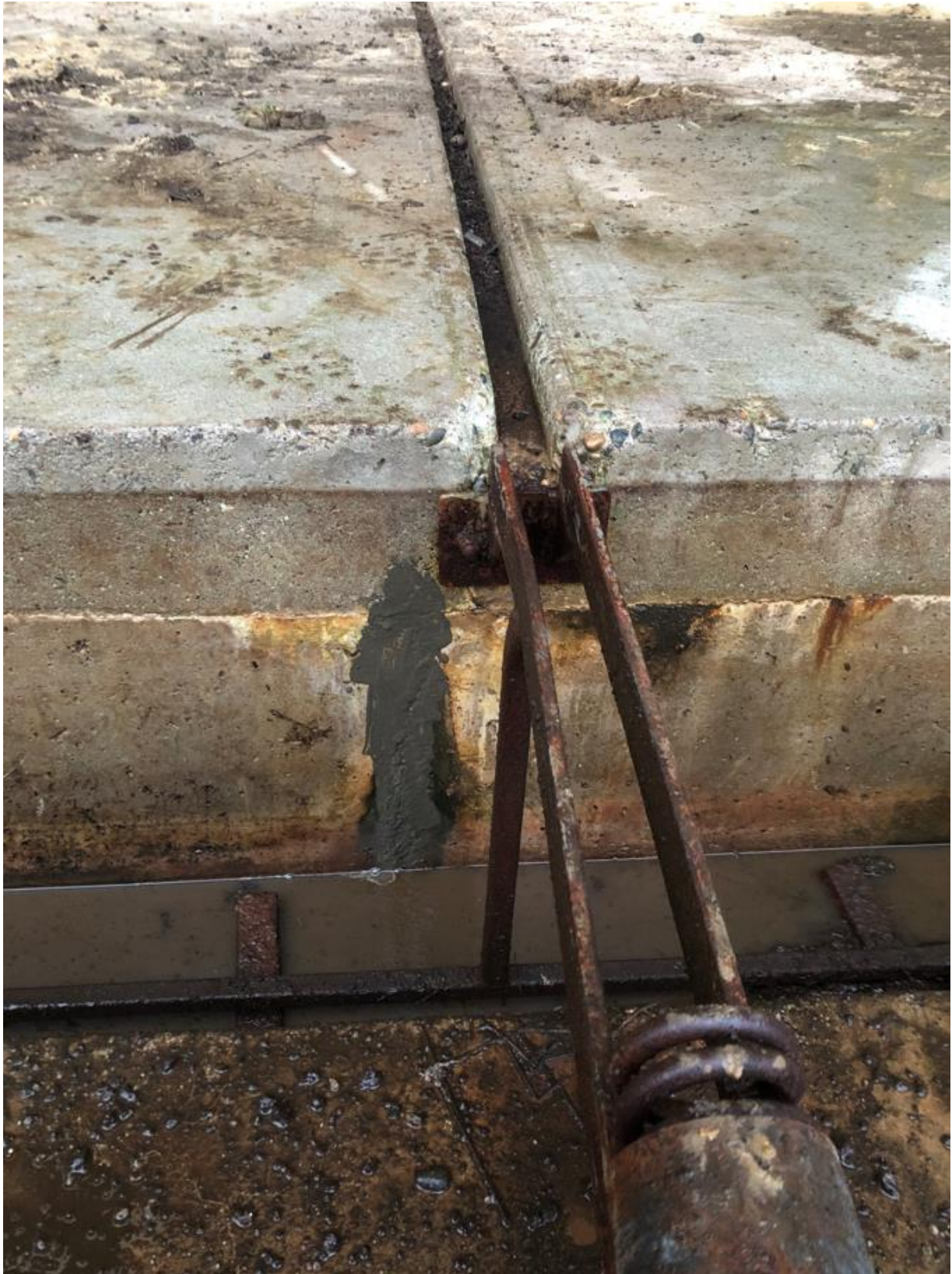




## Appendix C Evidence of Cracks Fixed

















**Appendix D**  
**Sales and Purchase Agreement**  
**Caleb Harwood and Capil Grove**







<b>SCHEDULE 2</b>			
List all chattels included in the sale (strike out or add as applicable)			
Stove	Rangehood	Wall oven	Cooktop
Dishwasher	Kitchen waste disposal	Light fittings	Smoke detector(s)
Burglar alarm	Heated towel rail(s)	Heat pump(s)	Garage door remote control(s)
Blinds	Curtains	Fixed floor coverings	

<b>SCHEDULE 3</b>			
<b>Residential Tenancies</b>			
Name of Tenant(s):			
Rent:	Term:	Bond:	
<b>Commercial/Industrial Tenancies</b> (If necessary complete on a separate schedule)			
1. Name of Tenant(s):			
Rent:	Term:	Right of Renewal:	Other:
2. Name of Tenant(s):			
Rent:	Term:	Right of Renewal:	Other:

**WARNING** (This warning does not form part of this agreement)  
This is a binding contract. Read the information set out on the back page before signing.

**Acknowledgements**

Where this agreement relates to the sale of a residential property and this agreement was provided to the parties by a real estate agent, or by a licensee on behalf of the agent, the parties acknowledge that they have been given the guide about the sale of residential property approved by the Real Estate Authority.

Where this agreement relates to the sale of a unit title property, the purchaser acknowledges that the purchaser has been provided with a pre-contract disclosure statement under section 146 of the Unit Titles Act.

Signature of Purchaser(s):

Signature of Vendor(s):

NW Lindsay  
 Director / ~~Trustee~~ / ~~Authorised Signatory~~ / ~~Agent~~ / ~~Attorney\*~~  
 Delete the options that do not apply  
 If no option is deleted, the signatory is signing in their personal capacity

C E Harwood  
 Director / ~~Trustee~~ / ~~Authorised Signatory~~ / ~~Agent~~ / ~~Attorney\*~~  
 Delete the options that do not apply  
 If no option is deleted, the signatory is signing in their personal capacity

\_\_\_\_\_  
 Director / ~~Trustee~~ / ~~Authorised Signatory~~ / ~~Agent~~ / ~~Attorney\*~~  
 Delete the options that do not apply  
 If no option is deleted, the signatory is signing in their personal capacity

\_\_\_\_\_  
 Director / ~~Trustee~~ / ~~Authorised Signatory~~ / ~~Agent~~ / ~~Attorney\*~~  
 Delete the options that do not apply  
 If no option is deleted, the signatory is signing in their personal capacity

- \*If this agreement is signed under:
- (i) a Power of Attorney – please attach a Certificate of non-revocation (available from ADLS: 4098/WFP or REINZ); or
  - (ii) an Enduring Power of Attorney – please attach a Certificate of non-revocation and non-suspension of the enduring power of attorney (available from ADLS: 499/WFP or REINZ); or
  - (iii) where the attorney signs for a trustee, a Certificate in the relevant form in Schedule 4 to the Trustee Act 1956.

Also insert the following wording for the Attorney's Signature above:  
 Signed for [full name of the donor] by his or her Attorney [attorney's signature].



IN ACCOUNT WITH -

**AWS Legal**  
Solicitors  
PO Box 1207  
INVERCARGILL 9840

Capil Grove Limited  
C/- Cunningham Taylor Law  
PO Box 1003  
Christchurch 8140

**SETTLEMENT STATEMENT**

**C E HARWOOD TO CAPIL GROVE LIMITED - 346 SPRINGHILLS TUSSOCK CREEK ROAD**  
**SETTLEMENT DATE: 1 APRIL 2022**

Consideration as per GST Tax Invoice (attached)	445,305.96	
Deposit paid		44,500.00
Balance of funds required for settlement as at 1 April 2022		\$400,805.96
	<u>\$445,305.96</u>	<u>\$445,305.96</u>

**NOTES:**

1. Purchaser to arrange own insurance.
2. Settlement to be in accordance with our settlement requirements attached.

E. & O.E.  
**AWS Legal**  
per:

24 March 2022