

Proposed Te Tai o Poutini Plan

Variation 2 – Coastal Natural Hazards Mapping

Submission by: Forest Habitats Ltd

It needs to be made clear in the TTPP that all hazard mapping, including the Coastal Natural Hazards Mapping, is inherently a high level, overview, modelling exercise. It cannot take the place of a site specific engineering assessment based on detailed topographical data.

The hazard mapping should be for guidance purposes only and to put people on notice that there may be a potential hazard.

Reasons

- Looking at the Alert level mapping in the Arthurstown Road area, south of the Hokitika River (Appendix 1), it is difficult to understand how the mapped boundary relates to the hazard mapping in the Land River Sea report, which is presumably what this latest mapping is based on. The boundaries seem to have changed even though in the background information for Variation 2 it is noted that the data around Hokitika was accurate enough for hazard mapping purposes, as originally included with the TTPP, and should therefore be unchanged.
- Furthermore the 2019 data from the Land River Sea report on which the TTPP flood hazard mapping was based, and presumably also the Variation 2 Alert level mapping around Hokitika, is already out of date, as evidenced by the aerial photos in the attached Appendix 2, Sheets 1 - 3 show the bed of the Hokitika River migrating northwards and resulting in significant accretion along the southern riverbank.
- Hazard mapping should be a guide only and should not be used by Councils for making definitive decisions when assessing development proposals.
- Out of date and inaccurate maps are placing undue restrictions and costs on property owners without site specific engineering evidence to support these restrictions.
- Following on from this point, it is clear that properties outside the hazard mapping areas are not being thoroughly assessed and development is being allowed to proceed where actual hazards do exist. An example of this is the approved subdivision on Golf Links Road (refer Appendix 2, Sheet 4 attached) where because the subdivision site was just outside the hazard mapping limit, there was little assessment made of flood hazard. A subsequent assessment by Stuart Challenger, a registered engineer, has concluded that much of the approved subdivision is actually at risk of flooding.
- The submitter agrees with Variation 2, that a site specific investigation by a registered engineer, assessing projected flood levels and proposing mitigation such as building platforms above the projected flood level, based on detailed topographical information,

should always take precedence over the high level and often out of date, modelling based hazard mapping.

- This point is clearly made in the WCRC submission on the TTPP (S488.020) included at Appendix 3. In summary this submission concludes that the hazard maps do not even follow contours and need further refinement to exclude areas not proven to be subject to natural hazards. Relying on general studies is placing undue restrictions on some property owners, where no natural hazard risk has been proven.

Agent;

Barry MacDonell

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Te Tai o Poutini Plan (TTPP) Coastal Hazard Mapping Variation for Consultation

Existing pTTPP Coastal Hazard Layers

- Coastal Setback
- Coastal Hazard Alert
- Coastal Hazard Severe

Final Coastal Hazard Variation Layers

Coastal Hazards Variation - Setback

Stage

- No Mapping Changes and Carried Over From Proposed Plan
- Mapping Changes Included Within Variation

Coastal Hazards Variation - Alert

Stage

- No Mapping Changes and Carried Over From Proposed Plan
- Mapping Changes Included Within Variation

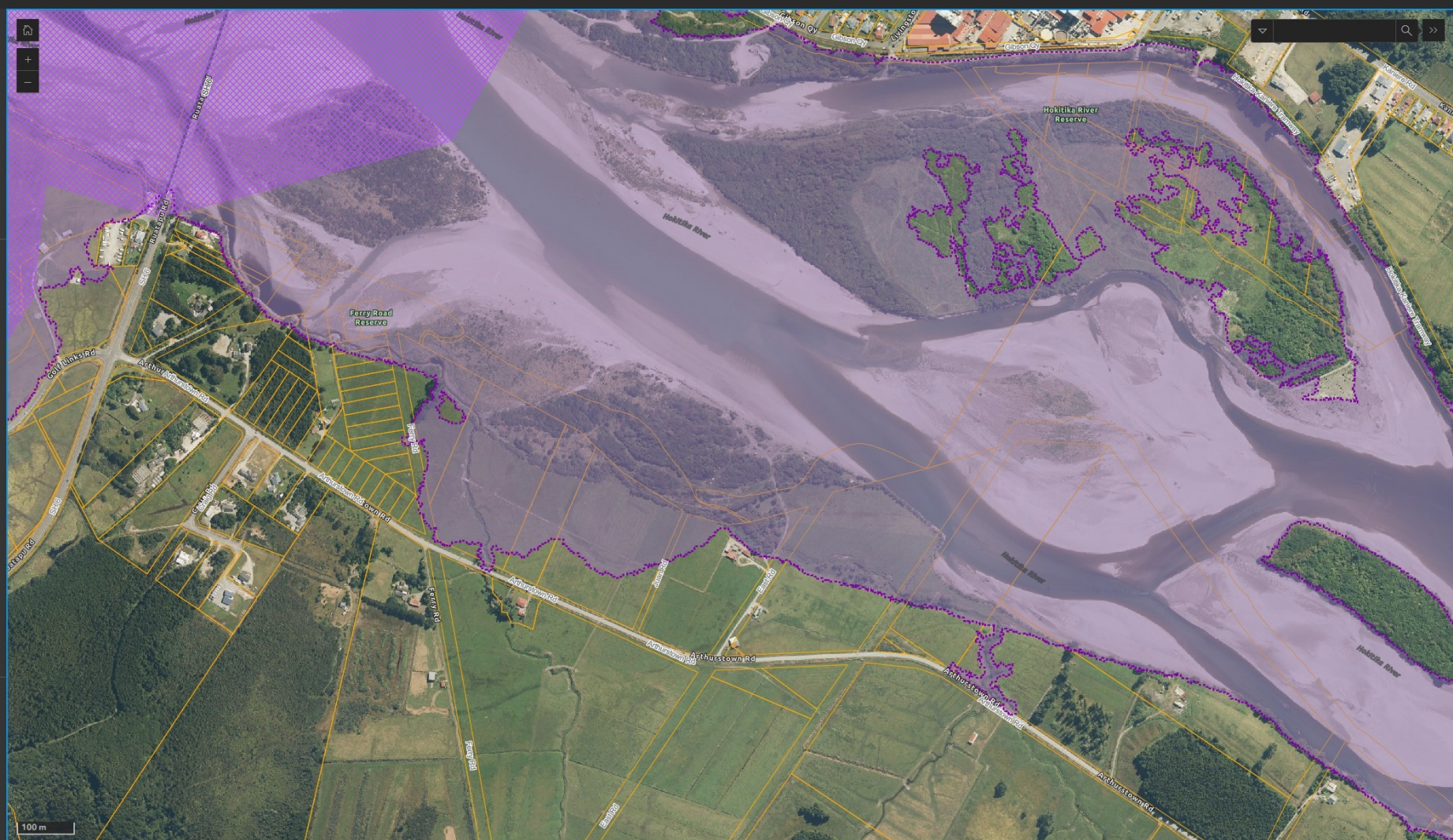
Coastal Hazards Variation - Severe

Stage

- No Mapping Changes and Carried Over From Proposed Plan
- Mapping Changes Included Within Variation

Property Data

Cadastral Boundaries



Forest Habitats Ltd Arthurstown Property edged yellow Selection of Google Earth Time line Photos



July 2006



March 2009



January 2021



October 2023

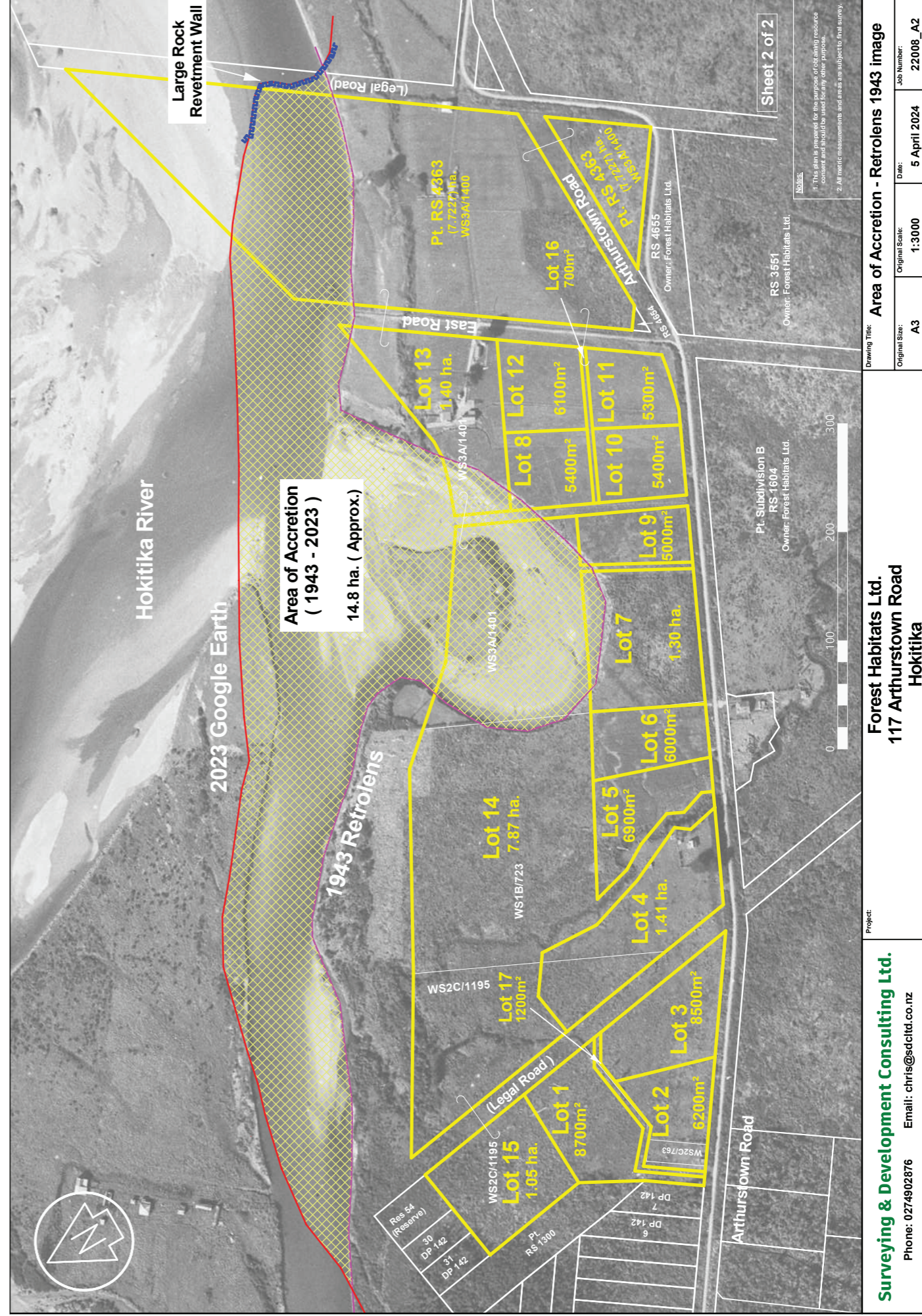
Arthurstown Block Accretion Plans



Surveying & Development Consulting Ltd.
 Phone: 0274902876 Email: chris@sdcltd.co.nz

Forest Habitats Ltd.
 117 Arthurstown Road
 Hokitika

Drawing Title: **Area of Accretion - Google Earth 2023 image**
 Original Size: A3
 Original Scale: 1:3000
 Date: 5 April 2024
 Job Number: 22008_A1

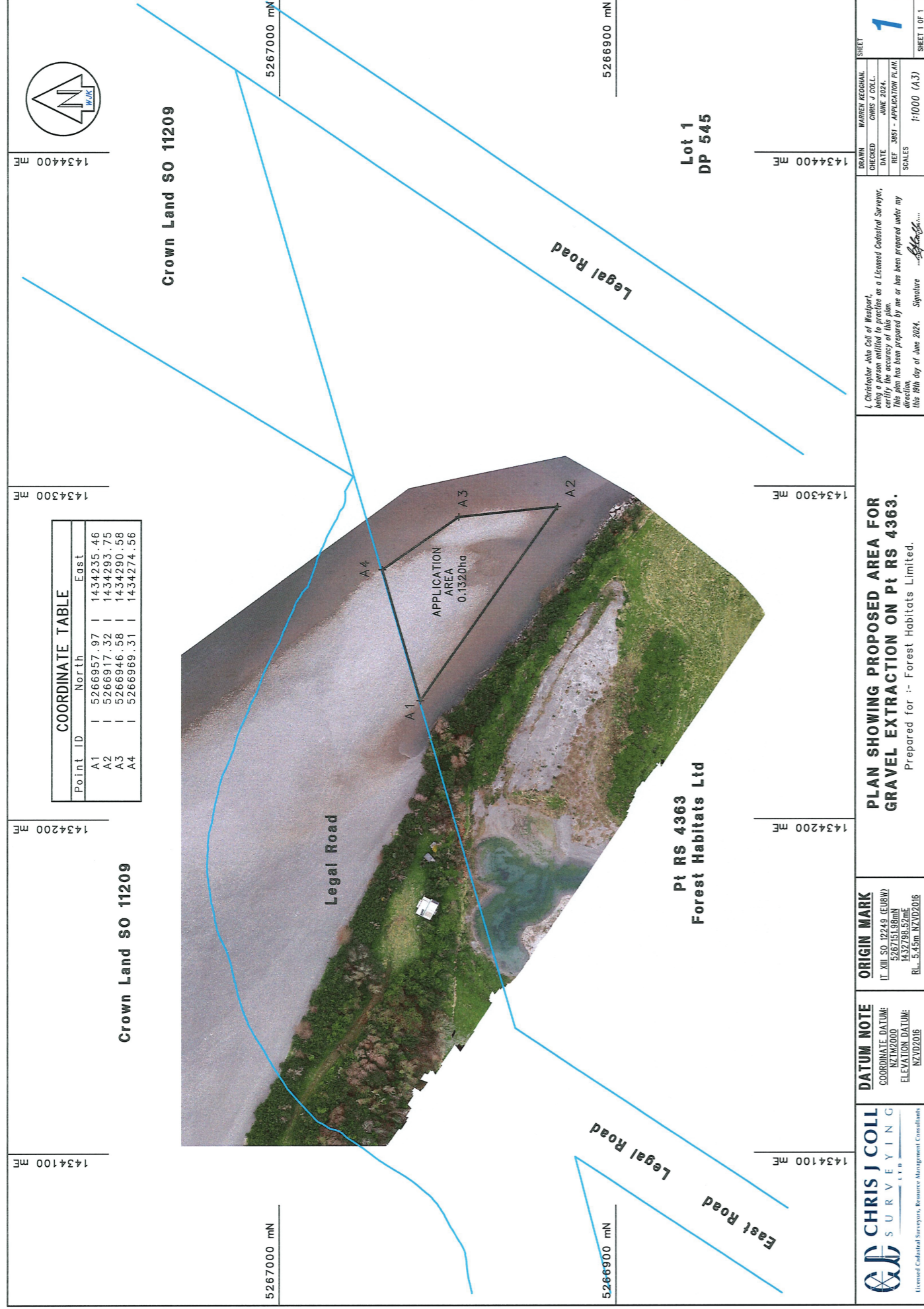


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 117 Arthurstown Road
 Hokitika

Drawing Title: **Area of Accretion - Retrolens 1943 image**
 Original Size: A3
 Original Scale: 1:3000
 Date: 5 April 2024
 Job Number: 22008_A2

Current Hokitika River Bed adjacent FHL land June 2024



Golf Links Subdivision

DECLARATION: I, the Surveyor, declare that this information is only to be used for the intended purpose. All rights reserved.

SURVEY INFORMATION
 SURVEYED: []
 SURVEY DATE: []
 COORD SYSTEM: []
 CHECKED: []
 DATUM: []
 ORIGIN OF LEVELS: []
 NOTES: []

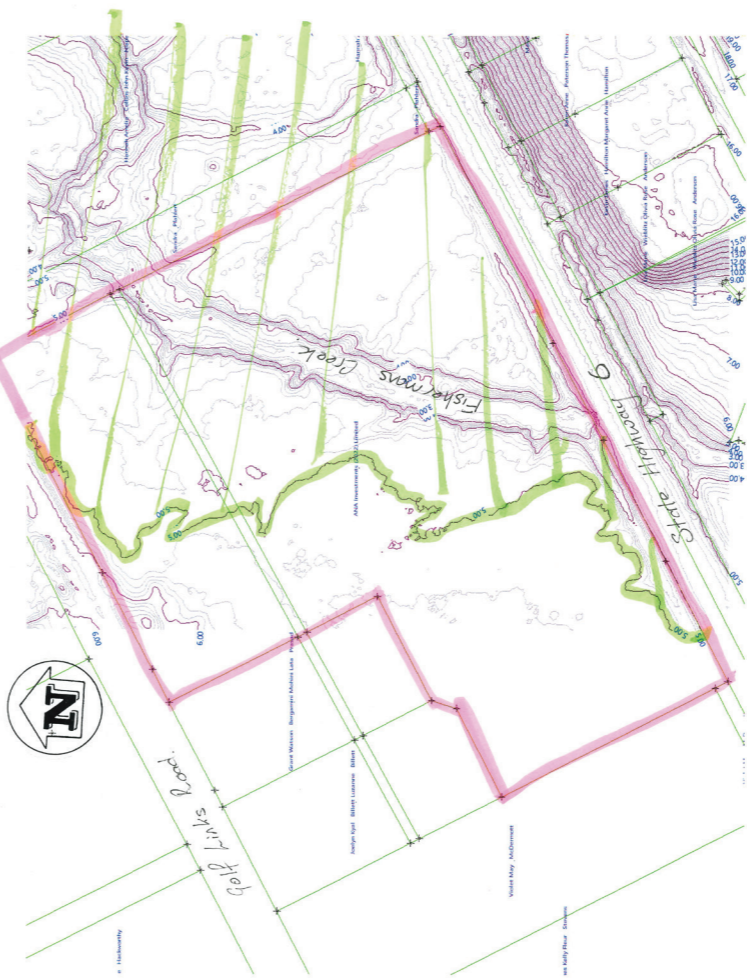
Pol 46609
 185mm 4 core to lot 1
 95mm 4 core to 2/3

Proposed Easements		BURDENED LAND	SHOWN	BENEFITED LAND
NATURE		Lot 1	E	Lot 2
Right of Way		Lot 2	F	Lot 1
Right of Way		Lot 7	M	Lot 8
Right of Way		Lot 8	N	Lot 7
Right of Way		Lot 4	G, A, H	Lot 5 & 6
Right to convey electricity		Lot 4	G, H, A, I	Lot 5
Right to convey telecommunication		Lot 6	G, H, A, I, J	Westpower Ltd
		Lot 2	K	
		Lot 3	L	
		Lot 4	G, H, A, I	Chorus NZ Ltd
		Lot 6	J	
		Lot 2	K	
		Lot 3	L	

Notes:
 Lots 1, 2 & 3 are Stage 1
 Lots 4, 5, 6 & 8 are Stage 2

Application for Subdivision Consent
 Comprised in R.T. 1098916
 Total Area: 4.3655ha
 ZONE: Rural Zone
 Westland District Plan
 (Operative)
NOTE: Areas and dimensions are subject to final survey. THIS PLAN IS PREPARED FOR THE PURPOSE OF OBTAINING A RESOURCE CONSENT. THE INFORMATION CONTAINED HEREIN SHOULD NOT BE USED FOR OTHER PURPOSES.

Existing Easements in Gross		SERVIENT TENEMENT	SHOWN	CREATED BY
NATURE		Lot 4	A	EI 12602361.2
Right to convey electricity		Lot 1	B	EI 12602361.2
Right to convey electricity		Lot 2	C	EI 12602361.2
Right to convey electricity		Lot 3	D	EI 12602361.2



eliot sinclair

CHRIS J COLL SURVEYING LTD

Licensed Cadastral Surveyors, Engineers
 Resource Management Consultants
 19 Brougham Street / PO Box 204, Westport 7866
 Phone 03 789 8425 | Email jan@cjcl.co.nz
 Our Reference: 3851

22 March 2024
 Barry MacDonell
 MacDonell Consulting Ltd.

Via email: barry@macdonellconsulting.co.nz

Dear Barry,
Flooding in Lower Hokitika Catchment

The proposed Forest Habitats subdivision on Arthurstown Road, is shown as being in the Flood Plain and Flood Hazard Susceptibility hazard overlays in the proposed Te Tai o Poutini Plan, while the recently approved subdivision of Lot 3 DP 580219 on Golf Links Road, which is lower in elevation, is not shown as being in the Hazard overlays. I understand that the Hazard overlays have been developed from flood modelling of the Lower Hokitika River. I have looked at sites and the flood modelling scenarios and make comments on whether the outputs are appropriate for the Golf Links Road site. I am not a flood modeller and have very limited experience in modelling, I have though been involved in validating flood models.

Flood modelling is an art, not a science, as the inputs cannot be precise as we do not know how much rain will fall over a specific time and area, and how much of that rain will infiltrate or runoff, it is made using best "guesses" of what the weather will do and what the antecedent weather conditions were. Hence the results are an indication and not necessarily the absolute answer. The Land River Sea Hokitika River Flood Modelling report 2020, gives an indication of where flooding will occur and to what depth, due to a flood event in the Lower Hokitika River catchment. Judgement has to be used because it does not necessarily model the effect in the side minor catchment, and when looking at the effect of flooding in those catchments.

The Fishermans Creek catchment is one of the minor catchments that will be affected when the Hokitika River floods. The modelling shows that the Hokitika River will back up the Fishermans Creek to Golf Links Road in events including and greater than the 1 in 50 year event in the current climate with a 0.4m storm surge, as shown in the following two figures.

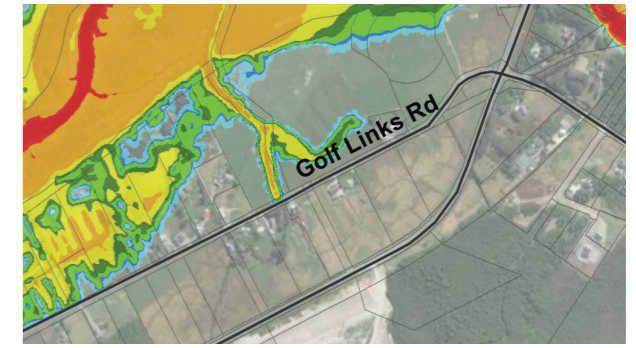


Figure 1. 1 in 50 year event (current climate) 0.4m Storm Surge



Figure 2. 1 in 100 year event including climate change (2100) RCP Scenario 8.5, 1.4m Sea Level Rise, 0.4m Storm Surge

What the modelling is not able to show because catchment information is not available, is what the effect that the Hokitika River flooding will have on the Fishermans Creek. Yes, the area southeast of Golf Links Road may not be flooded by the Hokitika River, but if the water level in Fishermans Creek on the upstream side of Golf Links Road is about the level of the road above the culvert, then Fishermans Creek downstream of Golf Links Road, will not be able to flow out, so will back up to a similar level.

From this assessment I consider that flooding is likely to occur to a similar level to that of Golf Links Road above the Fishermans Creek culvert, on the downstream of Golf Links Road when the Hokitika River floods, due to backing up of water in Fishermans Creek. This a level of about 5m in terms of NZVD 2016, and is shown on the attached contour plan.

Yours sincerely

Stuart Challenger
 Civil & Environmental Engineer
 BE NatRES, BSc, CMEngNZ, CPEng

Submitter	Submission Point	Plan Section	Provision	Position	Reasons	Decision Requested
					areas, particularly to serve existing communities.	
Jane Whyte & Jeff Page (S467)	S467.004	Natural Hazards	Natural Hazards	Oppose	The natural hazards overlays are not clear in their geographic application and relationship with other plan provisions, and are overly restrictive;	Review natural hazard overlays to enable tourism development at Punakaiki village
Jane Whyte & Jeff Page (S467)	S467.017	Natural Hazards	Natural Hazards	Oppose		Specific provision should be made for the continued management and development of hazard mitigation structures for Punakaiki Village, recognising the existing investment in, and the character of, the present coastal defence wall.
Troy Scanlon (S468)	S468.001	Natural Hazards	Natural Hazards	Not Stated	Six hazards mitigated by one scheme make a compelling argument	Progress implementation of the flood mitigation scheme at Westport.
Katherine Gilbert (S473)	S473.019	Natural Hazards	Natural Hazards	Amend	Natural Hazard Section statements need to turn into policy or rules otherwise it is just misleading. It must be made perfectly clear what is intended considering the future and climate disruption.	Amend natural hazards policies and rules so that they implement the statements in the description and reflect the seriousness of future climate disruption.
Frank and Jo Dooley (S478)	S478.019	Natural Hazards	Natural Hazards	Amend	to ensure landowners do not have to engage expensive consultants to know how to achieve compliance.	Introduce a Council operated tool that generates the minimum floor levels required across the overlay when a protection scheme is not in place,
Frank and Jo Dooley (S478)	S478.025	Natural Hazards	Natural Hazards	Amend	Ought to be included within the flood defences offer by this solution.	amend to ensure property be fully included within the limits of future stop bank protection designed to service Westport.
West Coast Regional Council (S488)	S488.020	Natural Hazards	Natural Hazards	Oppose	The natural hazard overlay maps do not follow natural land contours. Maps need to be refined to exclude areas that are not subject to natural hazards, rather than relying on general studies. WCRC are concerned that the general natural hazard provisions are unduly restrictive	The Council seeks to be a party to the refinement of objectives, policies, rules and accompanying maps for Natural Hazards. That the Plan is refined to ensure there are no adverse effects on the social or economic wellbeing of West Coast people and communities, and no undue burden is placed on the West Coast Community from the proposed Plan

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					when flood hazard areas have not been refined in the flood maps.	provisions. WCRC are concerned that the general natural hazard provisions are unduly restrictive when flood hazard areas have not been refined in the flood maps.
Michael Snowden (S492)	S492.007	Natural Hazards	Natural Hazards	Amend	This creates negative emotional triggers	Remove any reference to a 'red zone" in TTPP
Michael Snowden (S492)	S492.008	Natural Hazards	Natural Hazards	Amend		Adopt a more realistic timeframe for assessment of coastal hazards than 100 years
Michael Snowden (S492)	S492.009	Natural Hazards	Natural Hazards	Amend		include a method to actively engage with community on mitigation strategies for specific local hazard threats. eg local rating fund or joint investment programme.
Bert Hofmans (S504)	S504.002	Natural Hazards	Natural Hazards	Support		Support a risk based approach to natural hazards.
Lindy Millar (S505)	S505.002	Natural Hazards	Natural Hazards	Support		Support a risk based approach to natural hazards.
Federated Farmers of New Zealand (S524)	S524.044	Natural Hazards	Natural Hazards	Not Stated	There should be provision for unoccupied farm buildings in natural hazard areas as these have a lower risk than occupied buildings	There should be provision for unoccupied farm buildings in natural hazard areas as these have a lower risk than occupied buildings
Lee Cummings (S554)	S554.003	Natural Hazards	Natural Hazards	Support	Support the proposals which have resulted in our property no longer being caught in the requirements for hazard assessment.	Retain the approach to natural hazards
Royal Forest and Bird Protection Society of New	S560.004	Natural Hazards	Natural Hazards	Amend	From 1 December 2022, councils when making and amending regional policies, and regional and district plans, must have	Amend the Plan to have regard to emissions reduction plan and national adaptation plan.