Submission on a Change to the Tasman Resource Management Plan

Return your submission by the advertised closing date to:
Manager, Policy
Tasman District Council
Private Bag 4, Richmond 7050 OR
189 Queen Street, Richmond OR
Fax 03 543 9524 OR Email steve.markham@tasman.govt.nz

Note:
This form is only for the purpose of making a submission on the Plan. It is NOT for making a further submission (i.e. in support or opposition to an original submission) or for making a submission on a resource consent or on Council's Annual Plan.

Cover Sheet

OFFICE USE
Date received stamp:

R 2.2.16

Initials:

Submitter No.
2782

Submitter Name: H. AND A. SEIFRIED
(organisation/individual)

Representative/Contact: LAND DIMENSIONS LTD ATTN: STEFFAN EDEN
(if different from above)

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P.O. Box 2144
STOKE
NELSON

Home Phone:

Bus. Phone: 03 9280213

Fax:

Email: steffan@landdimensions.co.nz

Date: 27 JANUARY 2016

Signature:
NOTE: A signature is not required if you make your submission by electronic means.

Total number of pages submitted *(including this page)*:

Postal address for service of person making submission:
(if different from above)

IMPORTANT – Please state:

This submission relates to Change No.: 57

Change Title/Subject:
BRIGHTWATER STRATEGIC REVIEW - PROPOSED PLAN CHANGE.

☑ I/we wish to be heard in support of my/our submission.

☐ I/we would be prepared to consider presenting my/our submission in a joint case with others making a similar submission at any hearings.

Please attach this cover sheet to your supplementary sheet(s) outlining your submission request(s).

Plan Change 57 - Brightwater Strategic Review

Submission on Proposed Plan Change

Submission on behalf of:

H & A Seifried

Please find appended to this submission:

Copy of of the initial submission

Land and River Ltd report dated 4th July 2016

Fig 1 Extent of subject land holding

The land that is the subject of this submission has frontage to the recently formed extension of Wanderers Ave, Lord Rutherford Road and SH6 and is bounded by Pitfure Stream to the North West and residential sections to the North East. H & A Seifried also own land on the North Western side of Pitfure Stream.

Background

A submission to the Draft Plan Change 57 was lodged with Tasman District Council in 2015. This submission sought to have the whole of the subject land rezoned to cater for future residential use.

A copy of the original submission is appended to this submission.

As a result of that submission, Proposed Plan Change 57, identified part of the subject land to be rezoned as Residential Deferred.

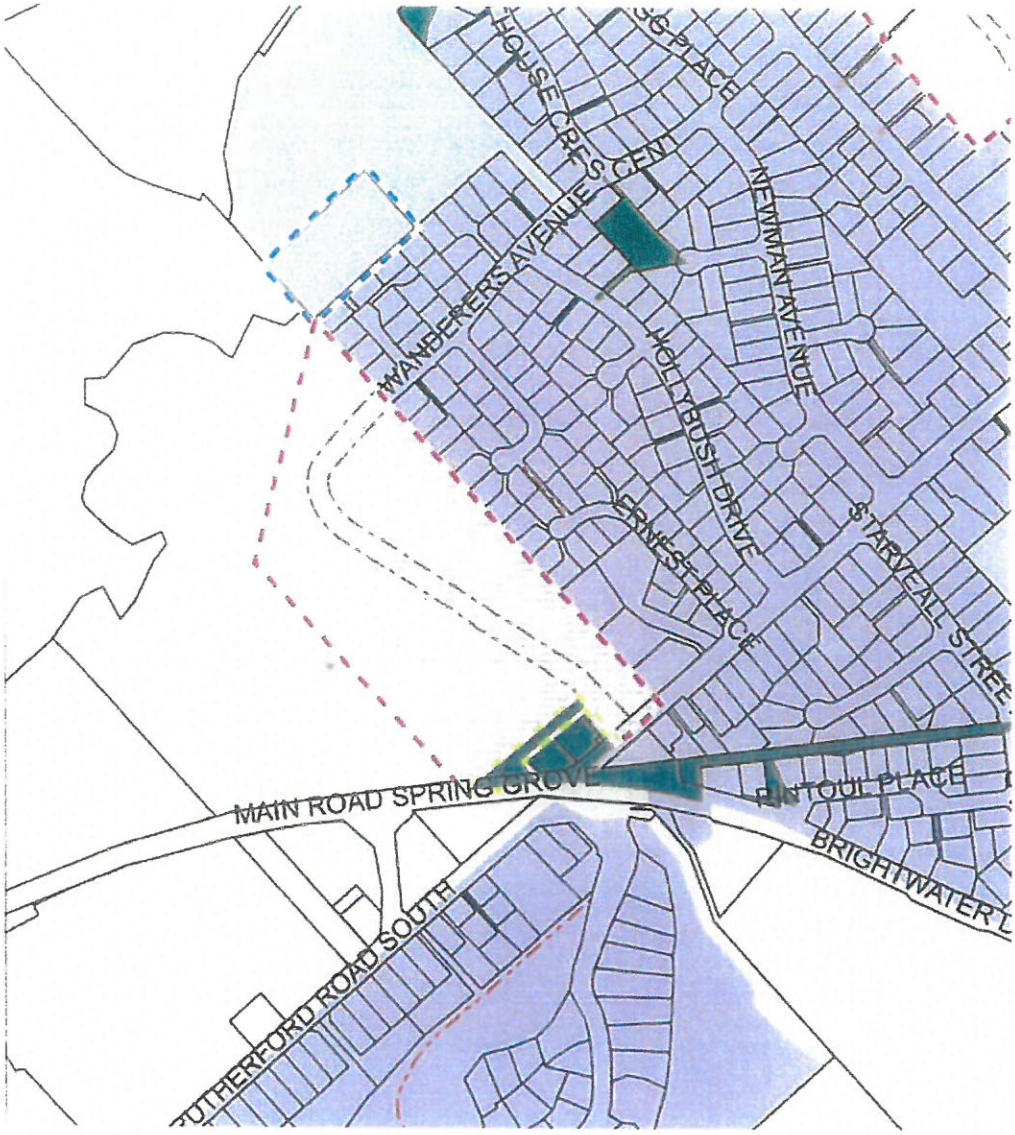

Fig 2 Proposed Plan Change 57 – Residential Deferred Zoning

As well as the change to the zoning, the map identifies a future roading alignment from Lord Rutherford Road through to Wanderers Ave.

This rezoning demonstrates that Council is not adverse to residential development occurring on this land subject to hazards being mitigated and conditions being met.

It is our understanding that the principle reason for the Residential Deferred status is that the land is not currently deemed suitable for residential development until the potential flooding risk is mitigated.

Subsequent to the publication of Proposed Plan Change 57, Mr Seifried and Steffan Eden (Land Dimensions Ltd as agent) met with Council representatives Rose Biss, Dugald Ley and Glenn Stevens. The discussion centred on why part, and not all, of the subject land was proposed to be been rezoned. It seems that the initial Council view was that partial rezoning was a compromise between rezoning all or none of the

land. The original submission proposed filling of all of the subject land and managing flood flows by controlling water through the site. It was Councils assessment that it was not achievable to recontour all of the subject land to protect it from flooding without adverse effects on neighbouring properties. To a degree this was not an unreasonable assessment. As the meeting progressed, further, discussion turned to whether the zoning boundary could be adjusted to include more, but not all of the subject land. It was suggested that the zone boundary could be adjusted to that indicated on Fig 3.

Fig 3 Suggested Re-Zoning realignment.

The suggested realignment of the zone boundary would see the inclusion of more land to the South West of the site included in the Residential Deferred Zone.

The alignment of the zone boundary on the Western side of the property would be such that flood waters could be redirected and managed within the subject land without adverse effects on neighbouring properties. TDC flood mapping indicates two potential areas where flood waters would likely impact on the subject land:

- From the low point in the State Highway adjacent to the Robertson Road intersection.
- From land adjacent to the South Western corner of the property.

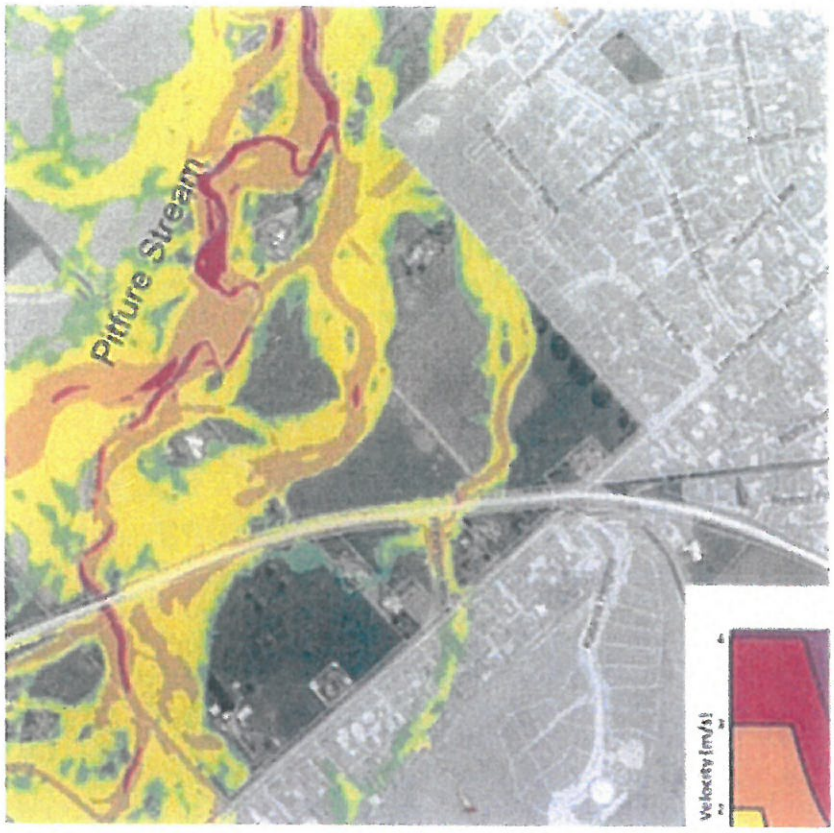

Fig 4 TDC Flood Map

These risks could be mitigated by:

- Forming a broad swale through the site to manage the floodwaters originating from the Robertson Road intersection.
- The land to the East of the realigned zone boundary would be raised or bunded to protect it from flood waters. The land to the West of the realigned zone boundary would be left lower, in its natural state. This would allow the floodwaters to follow their predicted course accross the subject land without pushing water on to neighbouring properties. It may also be that fill is sourced from the Western side of the zone boundary to lift up the residential land. This would assist further in controlling flood waters and minimising risk to other properties.

The general consensus at the meeting was that was a reasonable scenario worthy of further investigation and consideration.

To that end, Land and River Ltd was engaged to undertake an analysis and report on the feasibility of the stormwater management proposal.

A copy of the Land and River Report is appended to this submission.

Land and River Ltd were provided with flood flow volumes from TDC and considered the management of these flows along the lines of the discussion had with Council. The report concluded that the proposed stormwater management method was technically feasible subject to detailed design.

It is therefore further submitted that:

> ***The Residential Deferred zone boundary be adjusted to the alignment indicated in Fig 3.***

This adjustment is justified and appropriate because:

1. It has been shown that the land contained within the adjusted zone boundary can be modified to be protected from floodwaters.
2. Sufficient land outside of the Residential Deferred zone (but within the subject land) will remain available, and if necessary modified, to accommodate predicted flood flows.
3. These modifications to the land can be undertaken without adversely affecting neighbouring properties.

The submitter would be happy to meet with Council to talk through this submission further if required.

Please make contact as below.

Steffan Eden

Land Dimensions Ltd

PO Box 2284, Stoke Nelson

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(03) 9280215

Appendix 1 – Original Submission

2782

Brightwater Strategic Review

Submission on Draft Plan Change

Submission on behalf of:

H & A Seifried

Map 1 Extent of subject land holding

The land that is the subject of this submission has frontage to the recently formed extension of Wanderers Ave, Lord Rutherford Road and SH6 and is bounded by Pitfure Stream to the North West and residential sections to the North East. H & A Seifried also own land on the North Western side of Pitfure Stream.

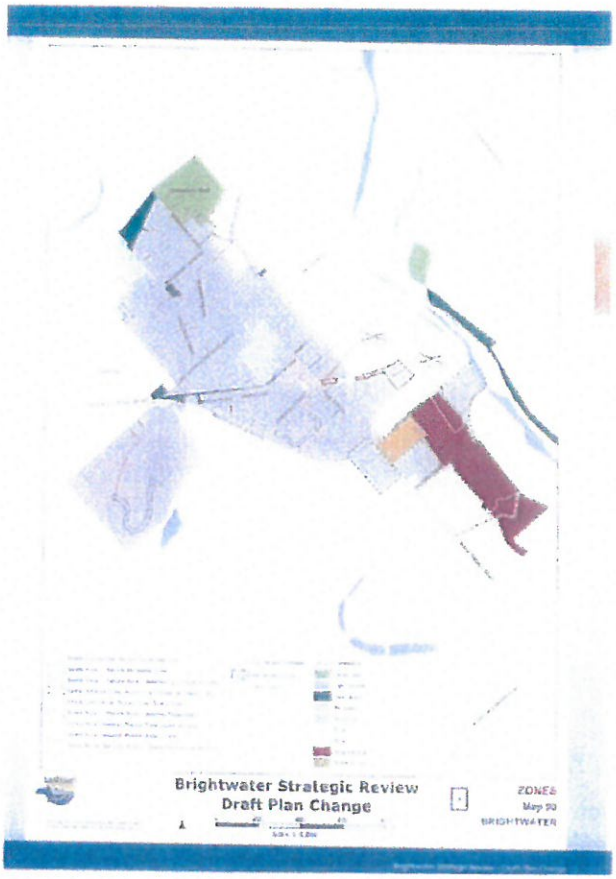
Background

Tasman District Council have undertaken a Strategic Review of the Brightwater township to manage growth in Brightwater over the next 20 years and to provide a forum to discuss the Draft Plan Change to the TRMP.

Key objectives include:

- Updating population and land needs.
- Reviewing the type and location of land uses that will be permitted.

To that end, Tasman District Council have issued a booklet to inform the public on the Brightwater Strategic Plan Review. Included in this booklet is a map indicating the proposed adjustments to zoning to accommodate Brightwaters future needs.



Map 2 Draft Plan Change Zone Map

This map identifies existing residential zone areas available for future development which is essentially limited to the balance of the Katania Heights (Watertank Hill) block and a block adjacent to Starveal Street. The remaining stages of the residential subdivision off Wanderers Ave are nearing completion which infills all available land in that location.

Consideration has been given then to what other land could be rezoned to provide for future residential needs. The map identifies an area adjacent to Snowdens Bush which is currently zoned Rural 1 that is proposed to be rezoned as Residential Deferred.

The main drivers in determining the suitability of land for residential purposes have been:

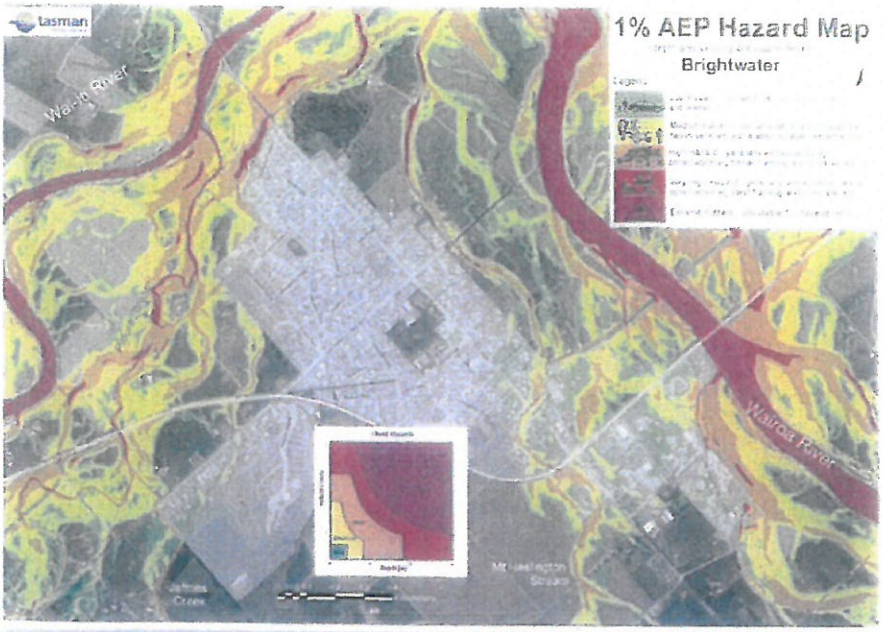
1. A desire not to extend the township to the southern side of the Brightwater Deviation (SH6).
2. To limit the impact on productive land.
3. Flood Risk

Dealing with each of these points:

1. The desire not to provide for residential growth south of SH6 is understandable as the Brightwater Deviation effectively bisects this land from the greater part of the Brightwater community. This would create issues with transport links. Additionally this land is established and productive vineyard which does not meet objective 2.

2. Although Council states that it will not encourage residential development of productive land, however it does accept that encroaching into some productive land will be necessary if Brightwater is to have a continuing supply of flat sections.

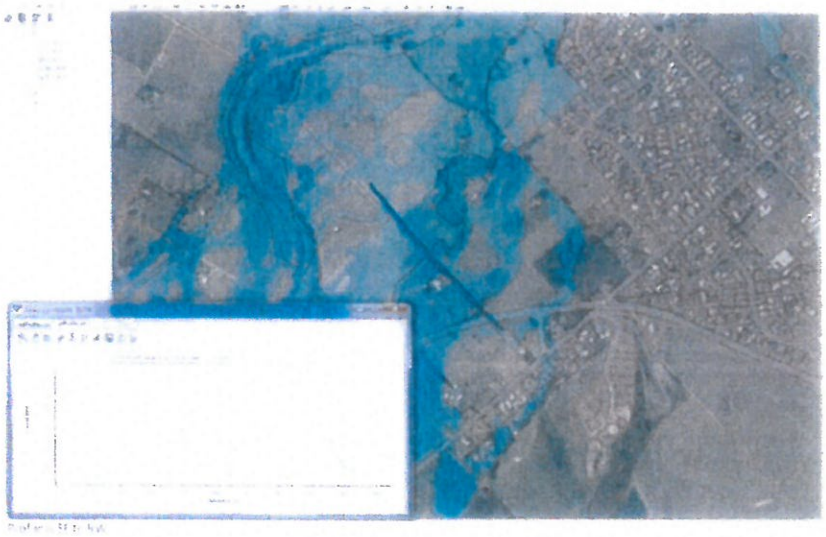
3. The flood modelling undertaken for the Brightwater area shows that significant areas are prone to flooding from the Wai-iti and Wairoa river systems and to a lesser degree from the Pitfure and Mt Heslington streams. The projected flooding model severely impacts on future growth potential at Brightwater.

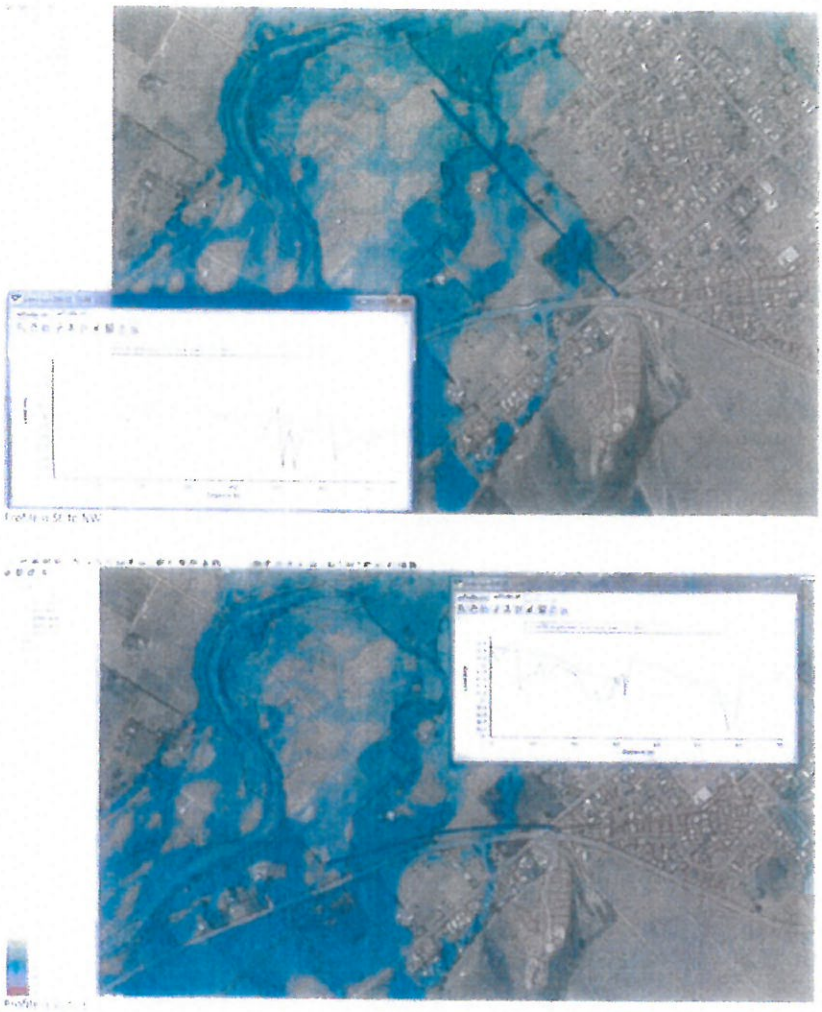


AEP stands for 'annual exceedence probability' and 1% AEP means there is 1 chance in a 100 of this size flooding occurring in any one year.

Map 3 Flood Modelling Map

With regard to the land that is the subject of this submission, the flood modelling indicates that during a 1% AEP event, part of the property would be subject to flooding. These 1% AEP areas are detailed on the following maps with cross sections along the alignments indicated.





These maps indicate that the depth of flood waters for a 1% AEP (or 1 in 100 year event).

Flood Mitigation

Flood risk to the Seifried land can be mitigated by filling and recontouring of the land with earthworking to lift the land to the 1% AEP flood level.

Extent and Depth of Filling to 1% AEP Level

Essentially this is the worst case scenario.

Measures to reduce the amount of fill could be:

- To fill the land to 2% AEP flood level (1 in 50 years) and provide extra protection by bunding the upstream side of the property.

- Examine the efficiency of the culvert under SH6. Improvements may alleviate flooding.
- Realignment and improvements to the Pitfure Stream Channel to manage flood flows. This would potentially drop the flood level as it affects the Seifried property.
- Managing the flood flows through the site with dedicated swale areas and bunding.
- Designing a roading pattern in such a way that primary flows are catered within pipework and provision is made for secondary flows (1% AEP+) within road corridors.

Suggested Roading Pattern

Downstream Effects

It is anticipated that as downstream areas are shown to be prone to flooding, the development of the Seifried land would need to incorporate stormwater attenuation methods. This is likely to be in the form of a detention basin. Suitable land exists for establishing a stormwater detention area adjacent to the Pitfure Stream.

The Submission

It is submitted that:

Tasman District Council review the area of land that it is rezoned for residential purposes to include the Seifried Land.

The reasons why this submission should be considered favourably are:

1. The rezoning of additional residential land in Brightwater will assist Council in meeting its projected target for supplying flat sections. Council have identified that flood risk will impact on the ability to supply sufficient sections in Brightwater and that currently there is insufficient land to provide for the projected demand of 259 dwellings by 2034.
2. The Seifried land can be protected from flood risk through filling, recontouring, bunding or a combination of these, and other measures as detailed above,
3. Brightwater has very limited future opportunities for flat land residential development so areas such as the Seifried land that can be improved to mitigate flood risk should be reconsidered.
4. That the filling and re contouring of the subject land could be done in such a way that it provides significantly better flood protection to the recent adjoining residential development to the North East.
5. In terms of the loss of productive land, the subject land is impacted by cross boundary effects from the residential activity to the North East. Mr Seifried advises that this has a real impact on the use of this land. It discourages the establishment of horticultural activities and the inevitable complaints that arise from neighbouring residents. It is the Seifrieds intention to plant vineyard on the other (Western) side of the Pitfure Stream as the stream provides a natural buffer between the horticultural and residential activity.
6. The land has frontage to existing roads being Wanderers Ave and Lord Rutherford Road therefore the land does not rely on the cooperation of others to provide roading access.

The Seifrieds would be happy to meet with Council to talk through this submission further.

Please make contact as below.

Steffan Eden

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(03) 9280215

Appendix 2 – Land and River Report

Land & River Limited

- RIVERS
- DRAINAGE
- RESOURCE MANAGEMENT

Puramahoi, R.D.2, Takaka New Zealand
Ph: 64 3 5258243
Email: landandriverltd@gmail.com

PROPOSED ZONE CHANGE - H & A SEIFRIED, BRIGHTWATER

INTRODUCTION

Tasman District Council (TDC) is in the process of a resource management plan change for Brightwater area. Submissions have been called for; TDC has released a number of proposed zone changes and called for comments.

H. & A. Seifreid own a property adjacent to the residential area of Brightwater (Figure 1) which is currently zoned rural but they wish to have it rezoned residential to facilitate residential subdivision. TDC has proposed that a part of the property be rezoned residential but H. & A. Seifreid want a larger part of the property to be rezoned as residential. Unfortunately, parts of the property that they want rezoned are subject to occasional flooding. As part of their submission to TDC, H. & A. Seifreid want to demonstrate that there are practical options for reducing the existing flood hazards.

This report presents an option for reducing the flood hazard across the entire area proposed for rezoning to an acceptable level.

BACKGROUND

The TDC flood model (figure 2) shows two flooding issues for part of the property proposed for rezoning;

1. Robertson Road flood water: Flood water crossing State Highway 6 in the vicinity of the Robertson Road intersection and flowing generally northwards across the property to eventually enter Pitfure Creek, and
2. Pitfure flood water: Pitfure Creek overflows entering the north western side of the subdivision area.

PROPOSED OPTION FOR REDUCING FLOOD HAZARD

Robertson Road flood water Form a channel to provide a defined floodway from S.H. 6 out to the Pitfure (figures 1 & 3).

Relevant design data for the floodway:

Q100: 11.5 m^3s^{-1} (from TDC flood model),
Upstream Q_{100} flood level: 31.0 m (from TDC flood model),
Downstream Q_{100} flood level: 30.5 m (from TDC flood model),
Floodway length: 300 m
gives gradient: 0.0017.

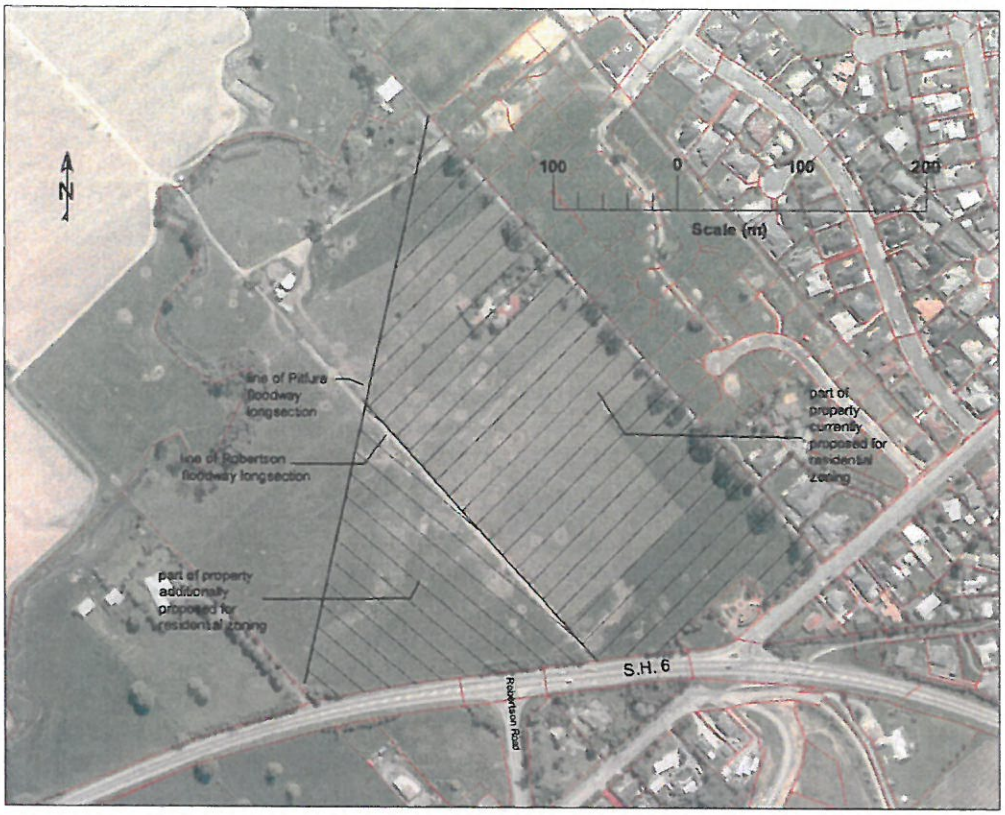

Figure 1: Areas for proposed rezoning and optional floodway routes

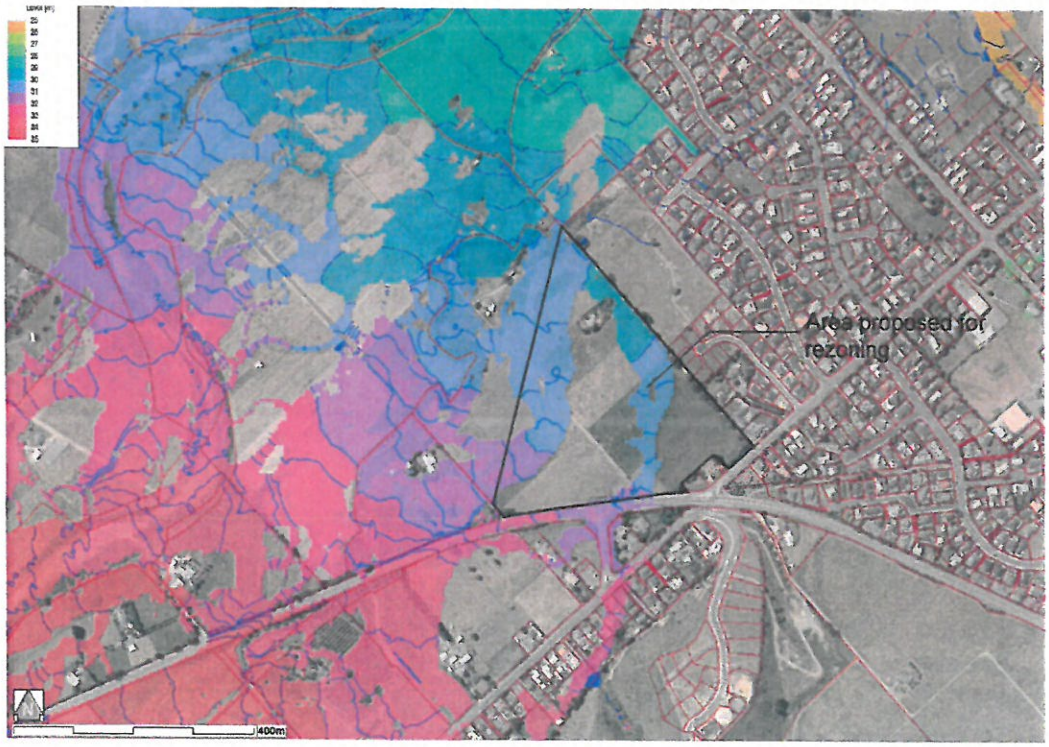

Figure 2: Q_{100} flood extent modelled by TDC

Hydraulic calculations give the depth of flow in a floodway with a 20 m bottom width and 1:3 batters as 0.6 m (Appendix I). A total floodway depth of 1.1 m would provide a 0.5 m freeboard above the Q_{100} flow. Any subdivision development would have to be laid out to prevent impediment to flow in the floodway.

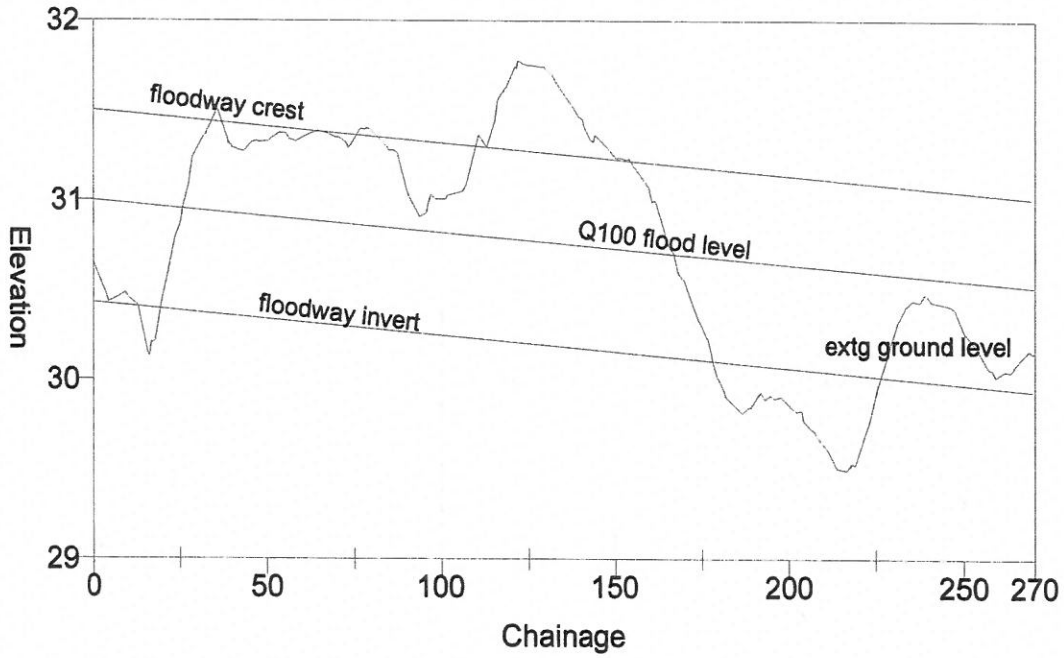

Figure 3: Longsection of proposed Robertson Road floodway

Pitfure flood water

An option for reducing the flooding along the north western boundary of the area is to excavate a broad shallow channel to form a floodway outside of the area to intercept flood water that would otherwise flow onto the subdivision area, and use the excavated material to raise the ground level within the area as required to provide freeboard above the 100-year flood level (figures 1 & 4).

Relevant design data for the floodway:

Q100: 30.1 m^3s^{-1} (from TDC flood model),
Upstream Q_{100} flood level: 31.5 m (from TDC flood model),
Downstream Q_{100} flood level: 30.0 m (from TDC flood model),
Floodway length: 465 m

gives gradient: 0.0032.

Hydraulic calculations give the depth of flow in a floodway with a 30 m bottom width and 1:3 batters as 0.7 m (Appendix II). A total floodway depth of 1.2 m would provide a 0.5 m freeboard above the Q_{100} flow. The floodway crest should be built only on the residential

side to provide protection to the area developed; the Pitfure side of the floodway should be left at existing level to allow floodwater to flow out to the Pitfure. (This will adversely affect land between the subdivision and the Pitfure??)

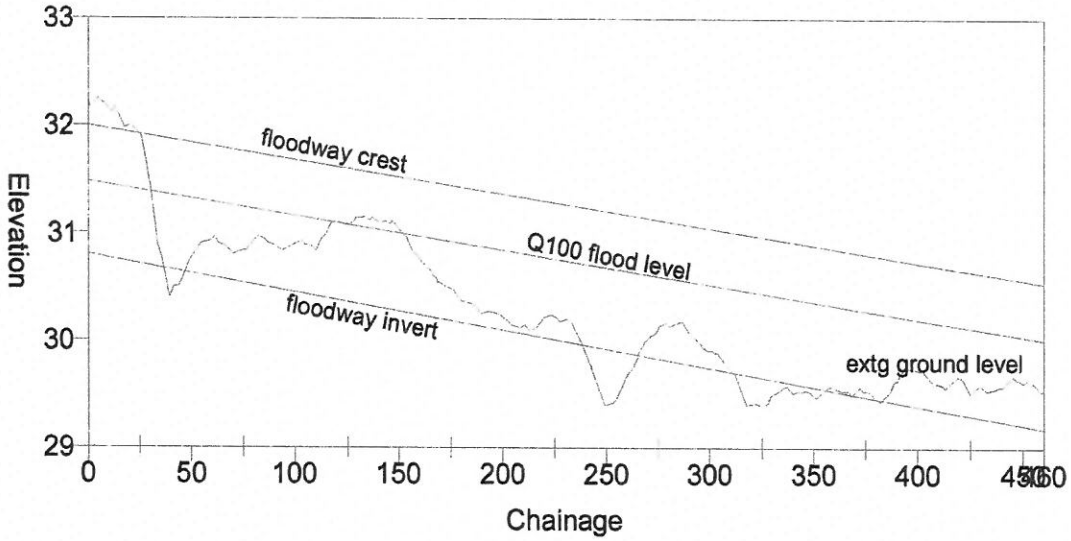

Figure 4: Longsection of proposed Pitfure floodway

CONCLUSIONS AND RECOMMENDATIONS

- there is a technically feasible option for reducing the existing flood hazard to provide for residential development of parts of the property,
- this option may be subject to resource consent process,
- the above option is a concept level option and is not intended as a final design. At subdivision design time, other options need to be considered to address layout and cost issues.

The endorsement of this site in this report in respect of flooding does not imply that there would be no damage by flooding, only that the probability of damage is limited to the proscribed levels.

This report has been prepared for the benefit of H. & A. Seifried with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without Land & River Ltd's prior review and agreement.

APPENDIX I
ROBERTSON ROAD FLOODWAY CALCULATIONS

TRAPEZOIDAL CHANNEL ANALYSIS
NORMAL DEPTH COMPUTATION

January 2, 2016

PROGRAM INPUT DATA

DESCRIPTION	VALUE
Flow Rate (cu m/s)	11.5
Channel Bottom Slope (m/m)	0.0017
Manning's Roughness Coefficient (n-value)	0.03
Channel Left Side Slope (horizontal/vertical)	3.0
Channel Right Side Slope (horizontal/vertical)	3.0
Channel Bottom Width (m)	20.0

COMPUTATION RESULTS

DESCRIPTION	VALUE
Normal Depth (m)	0.583
Flow Velocity (m/s)	0.908
Froude Number	0.3947
Velocity Head (m)	0.042
Energy Head (m)	0.625
Cross-Sectional Area of Flow (sq m)	12.67
Top Width of Flow (m)	23.496

APPENDIX II
PITFURE FLOODWAY CALCULATIONS

TRAPEZOIDAL CHANNEL ANALYSIS
NORMAL DEPTH COMPUTATION

January 2, 2016

PROGRAM INPUT DATA

DESCRIPTION	VALUE
Flow Rate (cu m/s)	30.1
Channel Bottom Slope (m/m)	0.0032
Manning's Roughness Coefficient (n-value)	0.03
Channel Left Side Slope (horizontal/vertical)	3.0
Channel Right Side Slope (horizontal/vertical)	3.0
Channel Bottom Width (m)	30.0

COMPUTATION RESULTS

DESCRIPTION	VALUE
Normal Depth (m)	0.676
Flow Velocity (m/s)	1.39
Froude Number	0.5569
Velocity Head (m)	0.099
Energy Head (m)	0.774
Cross-Sectional Area of Flow (sq m)	21.648
Top Width of Flow (m)	34.056