

**From:** [District Plan Review](#)  
**To:** [warren.pettigrew@raztec.co.nz](mailto:warren.pettigrew@raztec.co.nz)  
**Cc:** [DPR Submissions](#)  
**Subject:** Copy of your submission on the Proposed Selwyn District Plan DPR-0031  
**Date:** Monday, 16 November 2020 3:41:05 p.m.

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Submitter ID: DPR-0031

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### Trade Competition Declaration

**I could gain an advantage in trade competition through this submission.**

No

***If yes: I am directly affected by an effect of the subject matter of the submission that***

**(a) adversely effects the environment; and**

**(b) does not relate to trade competition or the effects of trade competition.**

### Hearing Options

**Do you wish to be heard in support of your submission?**

*If you choose yes, you can choose not to speak when the hearing date is advertised.*

Yes

**If others are making a similar submission would you consider presenting a joint case with them at the hearing?**

Yes

### Point 1

Provisions to which my/our submission relates:

Flood hazards buiding requirements

My position on this provisions is:

Oppose

The reasons for my/our submission are:

I am opposed to the requirement that new builds be required to have a floor level 300mm above the modelled 200 year flood level for a number of reasons. We have already struck this issue with the same requirement within the Christchurch City Council when we investigated building a barn to support a business venture. The extra cost of the near 1m high foundation and associated ramping made the whole venture uneconomic.

## REASONS:

When we consider global warming, carbon emissions and resource depletion, it is rapidly becoming clear that society needs a whole new operating model. In particular, we cannot continue to add blanket requirements in an attempt to mitigate risk without considering the risks to the environment imposed by the mitigation measures and at the same time assuring a beneficial risk to cost ratio. In other words, we may be adding to overall long-term risk in an attempt to mitigating a particular risk.

Society throughout the world MUST consider the carbon loading and resource depletion on everything that we do, use and build. Much of Selwyn district is specified as flood prone so constructing many hundreds of new builds with high foundations will add significantly to carbon emissions and add significant extra cost. Moving millions of tonnes of hard-fill around the district would release thousands of tonnes of CO<sub>2</sub> from the fuel burned to do the moving and compacting. This is not taking us into a zero carbon economy.

Current flood levels are based on modelling. As an engineer, I know that models can be wrong – very wrong. Every millimetre of error could add millions of dollars to build costs throughout the district with zero return on the investment and add thousands of tonnes of unnecessary carbon emissions.

When one compares the modelling with historical photographic evidence, there is very obviously something wrong. Photographic flood levels are nowhere near as high as the model. With any engineering calculations it is vital that sanity checks are performed. In this case a sanity check would be to add historical rainfall data into the model and check the model results against photographic evidence. Historical evidence is 100% accurate, modelling may not be.

There has to be a better way to assess risk and mitigate flood level risk.

## ALTERNATIVES:

As a better way, I propose that rather than having blanket requirements based on modelled flood levels, historical evidence is used instead. There is plenty of good evidence. The assessment needs to include the cost of building damage at that time and the cost of damage to their contents and balance this against the cost of prevention. I put it to the council that flood level loss would be much, much less than the cost of preventing any damage through the proposed blanket measures.

I suggest that it's not the council's responsibility to specify degrees of risk and mitigation measures. At the end of the day it is the insurance companies and property owners who should make the final decision. It is the council's responsibility to present the (historical) data required to assess risk. Insurance companies may or may not want to use the present flood modelling or use their own. Risk assessment is their game.

It could well be that property owners may not want to insure against flood damage and take their own protective measures. I like to think that society should be given some freedom to manage our own risks and not told explicitly what to do.

The council must not take the responsibility for assessing risk and must declare that it does not so that in no way can be held liable. When land is released for development, all the data should be presented to the developer so that they can take responsibility for risk, take necessary protection measures and present residual risks to the eventual owner.

## FACTS:

When I look at old flooding photographs in Selwyn which are so well presented on the council web site, I see that flooding events are rare and when they do happen, even though flood areas are extensive, there generally is no great depth of water. Water will drain much more quickly as the depth increases. To me, this hints at an error in the modelling.

And then add 300mm on top of this .....

#### SUMMARY:

1. There should not be blanket requirements for flood risk mitigation.
2. The carbon loading and resource depletion of all mitigation measures must be considered.
3. Very likely the present modelling is far too pessimistic. This model should be cross checked against historical evidence.
4. Insurance companies must take the responsibility for imposing mitigation measures and negotiate these with the owner/developer.
5. It should be the council's responsibility to collect data for presentation to insurance companies, developers and owners to enable them to assess their own risk.

#### NOTE:

With global warming, sea level rise and weather instability, insurance companies will have more and more say on what is built, how it is built and where it is built. Their present operational model for them, is unsustainable. After the insurance companies comes the banks. They won't lend into high risk situations.

The decision I/we want Council to make:

Imposed flood level mitigation measures need to be ammended.