

Port Hills Discussion: 10 August (Not Government Policy)

Issue 1 : Mitigation for the Rock Roll White Zone

The table below highlights options in terms of mitigation. Engineering advice is that all of the options below will (subject to detailed design) be effective in reducing rock roll risks to an acceptable level. Hundreds of potential protection options exist; it is not feasible to analyse all options.

- Relevant issues are timeliness (accessing land, design, consenting and construction), impact on homeowners, public and residents' perceptions, ongoing management and maintenance responsibilities and funding, as well as benefit-cost considerations.
- Options that involve access or construction on private land are more difficult and likely to be more time consuming, especially if there are multiple private owners involved and / or access or construction is on private land where there is no significant benefit gained from the protective structures.
- Benefit-cost ratios below are somewhat conservative in that there will be benefits not counted in the calculation (vacant and commercial; in some cases some red zoned properties would gain protection). Only those areas that have a benefit cost ratio of greater than one (taking into account the value of properties in the White Zone and those in the Green Zone with s124 notices) are included in Table 1 below.
- A range of issues relate to mitigation. For example, should owner-initiated protection works be an option (some are likely to seek this) and if so through what process? Would some financial contribution be sought from those who would benefit?

Table 1 : Breakdown of areas

Area	Type of protection	Capital cost (\$m)	Total Cost Present Value (\$m)	Properties protected			Value of properties protected (\$m)	Benefit-cost ratio	Protection on private or public land	Cumulative cost of protection/mitigation (no protection = \$135m)
				White	Green with s124	Total				
Horotane (Area 1)	Bund	1.9	2.1	6	0	6	5.2	2.5	Private	\$132m
Bridle Path (Area 2)	Primarily bund, some fence and at source protection	5.3	6.2	31	0	31	13.7	2.2	Private	\$124m
Governors Bay East (Area 3)	Bund	0.9	1	2	0	2	2.1	2.2	Private	\$123m
Heberden (Area 4)	Mix of fence and bund, some at source protection	9.8	12.2	21	6	27	16	1.3	Public (CCC)	\$119m
Avoca Valley (Area 5)	Primarily bund, some fence and at source protection	-7.4	8.3	19	0	19	10	1.2	Private	\$118m
Cass Bay (Area 6)	At source protection	0.5	0.5	1	0	1	0.6	1.2	Private	\$118m
Bowenvale (Area 7)	Primarily fence, some at source protection	4.6	5.8	11	0	11	6.5	1.1	Private	\$117m
Total		30.4	36.1	91	6	97	54.1	N/A		N/A

Possible Packages for the 158 White Zone Properties

- Three packages developed reflecting different preferences for mitigation.

Table 2 : Description of Packages

	Scenario 1 : No mitigation	Scenario 2 : Mitigate in areas 1 to 3 above (BCA > 2:1)	Scenario 3 : Mitigate in all areas where benefits outweigh costs
Number of White Zone properties protected	0	39	91
Number of White Zone properties retreated	158	119	67
Cost (this includes green zoned s124s)	\$135m	\$123m	\$117m

- Preference will be influenced by the BCA results above, but also a range of non-monetised (but real) factors such as timeliness of response, precedent-setting, disruption caused through construction phase, risks associated with construction etc. The importance of these non-monetised factors should not be under-estimated.

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Issue 2 : Which properties ?

This question determines the scope of properties where a policy response (either protection or retreat) is implied – the “at-risk” group

Since 29 June, intensive exercise to:

- o match the intent of the Council with regard to s124 notices with 29 June zoning decisions, and
- o ensure definitions are consistent with those decisions made on the flat (eg. vacant, commercial, and other properties that would not receive an offer if they were on the flat – eg. Council owned properties are excluded)

Table 3 : Number and value of properties in different categories

	Red		White		Green with geotechnically-related s124 notices		Total
	Number of properties	Capital Value (\$m)	Number of properties	Capital Value (\$m)	Number of properties	Capital Value (\$m)	Number of properties
Rock roll	75	38	158	85	17	12	250
Cliff collapse	192	156	0	0	4	2	196
Total	267	194	158	85	21	14	446

Not included in these figures are:

- o 7 green-zoned cliff collapse properties (most likely baches) in Taylors Mistake Bay where the Council have placed a s124 notice. These have no rating valuation.
- o 5 rock roll properties that the PHGG recommended be rezoned from white to green. The capital value of these is approximately \$2m.

Questions that arise:

1. Do we confirm the definition used for current zoning (worse than 1 in 10,000 in 2016) and essentially think about properties in this risk zone as the at-risk group for whom a policy response is implied?
 - o Relatively few of these properties would reach 1 in 10,000 if the timeframe was extended (additional 20 properties by 2018; a further 9 by 2021). Some of these 29 properties that would reach 1 in 10,000 by 2021 have s124 notices in place
2. Do we add to the group of properties currently zoned as either red or white those who are zoned green but have a geotechnically-related s124 notice in place (as per the table above)?
 - o Note that there are other properties in the green zone where engineers consider there to be some risk; CERA has used a test of there being a geotechnically-related s124 notice in place as being the test for further consideration
 - o Taking a decision to rezone properties with a geotechnically-related s124 notice will place pressure around the 18 landslip properties that are zoned green where there is a geotechnically-related s124 notice in place
3. Do we include in the at-risk definition those 7 cliff collapse properties highlighted above in Taylors Mistake Bay, and do we rezone the 5 rock roll properties highlighted above from white to green?
4. Included in the white zone are some properties where the Council are unlikely to place a s124 notice (ie. the engineers' assessment does not completely align with the GNS mapping exercise). Do we include this group in the at-risk group?

NB. All capital values in the table are rounded. The figures have been drawn from data that has been formally signed off by the Christchurch City Council. Property numbers represent the count of buildings that fall within relevant definitions (residential, not for profits and residential part builds). As such, the general approach is that one building with 3 units is represented as 1 property in the tables above. This is the way in which the data has consistently been treated in the Port Hills but it does imply that the number of offers to property owners will be greater than this amount. Transaction and other costs are not included in the figures; neither are any returns from insurance. Some properties are at risk from both cliff collapse and rock roll; these have been included in the data as cliff collapse properties.

Other Broad Issues

- o Discussion with Council recommended
 - o Timing - complexity of the policy package will affect ability to make full announcements by 17 August
 - o Cost sharing – it has been agreed in principle that all costs associated with rock roll areas will be shared by the Crown and Christchurch City Council; details not yet finalised
- o Paper needs to be prepared for, and agreed by, joint Ministers (this must include agreement of formal criteria for zoning). Work on related matters such as transaction design is well underway, but requires completion and Ministerial consideration. Signals sent around the nature of any review are also important.