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Prepared for:
Christchurch City Council

Carry Over Qualifying Matters

Operative Christchurch District Plan - Plan Change 14

Report by Barker & Associates for Christchurch City Council

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Contents

Appendices

Appendix 1: Tsunami Inundation Area Map

Appendix 2: Residential Unit Overlay Map

Appendix 3: Overlap between Tsunami Inundation Area and Coastal Inundation Area Mapping

1.0 Executive Summary

The National Policy Statement on Urban Development (NPS UD) and the associated changes to the RMA allow for the intensification required to implement Policy 3 of the NPS UD to be limited in specific areas to limit inappropriate intensification. Only those features classified as Qualifying Matters (QM's) under section 77I(a)-(j) can be used to diminish intensification enabled by the Medium Density Residential Standards (MDRS) in urban residential zones and within and around commercial centres and rapid transport stops that would otherwise be enabled through Policy 3 of the NPS UD.

If an overlay feature (such as controls on subdivision layout) does not relate to enabling greater height and density, then the provisions can remain as a feature within the district plan however they do not need to be classified as QMs as they do not limit intensification.

The following table lists the features from the current District Plan proposed to be carried over as QM's. This report provides an overview of how and why these features meet the prerequisites of a QM. It also analysis how the respective controls are proposed to be applied and what their potential impact is likely to be in terms of reducing development enabled by the MDRS and Policy 3 NPS UD implementation.

Current DP features and overlays to be carried over as Qualifying Matters		
DP Feature	**QM Type (Relevant NPSUD and RMA sections)**	**QM Control (see sections in the main body of the report for detailed analysis of the effects of each QM)**
Sites of Ecological Significance	3.32(1)(a) – s6(c) matter	Limited overlap with PC14 outside of water body setback controls. Carryover current DP controls to apply alongside MDRS and policy 3 NPS UD changes – e.g. indigenous vegetation clearance in Schedule A sites are non-complying.
Outstanding Natural Features and Landscapes	3.32(1)(a) – s6(b) matter	Limited overlap with PC14. Carry over current DP controls to apply alongside MDRS and policy 3 NPS UD changes – e.g. new buildings and residential units require restricted discretionary, discretionary activity or non-complying activity consents.
Sites of Historic Heritage	3.32(1)(a) – s6(f) matter	(reported separately to this report)

High Flood Hazard Management Area (HFHMA) and Flood Ponding Management Area	3.32(1)(a) – s6(h) matter	Extensive overlap with PC14 and Medium density residential zone (MRZ). Carry over current DP controls to apply alongside MDRS and policy 3 NPS UD changes – e.g. FPMA restricts dwellings to 200m2 GFA or one residential unit per site. HFHMA makes subdivision creating new allotments and new buildings not in the Residential Unit Overlay, non-complying.
Electricity Transmission Corridors	3.32(1)(b) & (c): NPS-ET & nationally significant infrastructure	Extensive overlap with PC14 and MRZ. Carry over current DP controls to apply alongside MDRS and policy 3 NPS UD changes – e.g. 10-12m setbacks for buildings and sensitive activities from 66kV and 33kB lines and Heathcote to Lyttelton 11kV, notification requirements, new sensitive activities are non-complying within National Grid Yards, subdivision requires assessment through consent process within the maxim swing corridor.
Slope Instability Hazards including: rockfall, cliff collapse and mass movement	3.32(1)(a) – s6(h) matter	Limited overlap with PC14. Carry over current DP controls to apply alongside MDRS and policy 3 NPS UD changes – e.g. new buildings and subdivision require consent (non-complying or restricted discretionary depending on the overlay), subdivision prohibited within Cliff Collapse Management Area 1, New buildings prohibited within Cliff Collapse Manageme3nt Area 1.
Tsunami Hazards	3.32(1)(a) – s6(h) matter	Extensive overlap with PC14 and MRZ. Retain existing DP zones and do not apply MDRS or other policy 3 NPS UD up-zoning.

		Tsunami Inundation Area overlay overlaps with proposed Coastal Inundation Area overlay.
Waterbody setbacks and esplanade reserves and strips	3.32(1)(a) (b) and (c): s6(a), (d) and (e) matter and NPS-FM	Some overlap with PC14 and MDRZ. Effect of the requirement for restricted discretionary or discretionary activity consents uncertain but likely to restrict development within the setback areas.
Montgomery Spur Ridgeline Setback	Doesn't fall within the matters identified as qualifying matters in s77I(a)-(i)	Only affects 5 sites affected by PC14 and the only effect on density is a potential impact on building heights in relation to the ridgeline. Not supported as a QM in this report.
Airport Noise Contours	3.32(1)(c) - Nationally significant infrastructure	(reported separately to this report)
Lyttelton Port Influences Overlay		(reported separately to this report)
Residential Character		(reported separately to this report)
Sites Interfacing State Highways		Provisions do not have a clear impact on enabled height and density in their current form and are therefore nnot supported as a carry over QM in this analysis.
NZ Rail Network setbacks	3.32(1)(c) - Nationally significant infrastructure	Some overlap with PC14 and MDRZ and commercial zones. Setbacks from Rail corridor to be carried over in areas affected by the MDRS and policy 3 NPS UD implementation. QM control will generally restrict all new development within 4 metres of the rail corridor. (noise insulation standards do not affect density).
Significant and other Trees		(reported separately to this report)

Wāhi Tapu/Wāhi Taonga	3.32(1)(a) – s6 matter	Some overlap with PC14 and MDRZ -but for the most part fall within water body setback controls. Effect of the requirement for restricted discretionary or discretionary activity consents uncertain but likely to restrict development within the overlay. QM will carryover current DP controls that apply Wāhi Tapu / Wāhi Taonga sites.

2.0 Introduction

2.1 NPS UD and Qualifying Matters

The National Policy Statement on Urban Development 2020 (NPS-UD) and Resource management (Enabling Housing Supply and Other Matters) Amendment Act 2021 (the "Enabling Housing Act") requires district plans in Auckland, Hamilton, Tauranga, Wellington and Christchurch to be changed to reduce consent requirements for residential development in urban residential zones, and for commercial development within centres, to enable more building height and housing density in locations where it is most suited. However, some areas in Christchurch may not be suitable for maximum levels of intensification, or (in some cases) any intensification, because of a characteristic or feature described as a "qualifying matter". The government has identified a number of qualifying matters that modify the building heights and density standards normally required by the intensification policies and standards (policy 1 and policy 3 of the NPS-UD in particular[1]).

Where a qualifying matter applies, this does not mean intensification should not be enabled, rather, Council is required to carry out a comprehensive analysis and must seek to enable the greatest heights and densities possible while managing the specific qualifying matter appropriately.

The intensification requirements set out in the Enabling Housing Act and NPS UD may be modified, if necessary, if one of the qualifying matters in the NPS -UD apply:

- Matters of national importance such as the management of significant risks from natural hazards; protecting outstanding natural features and landscapes, historic heritage, and the natural character of the coastal environment and wetlands, from inappropriate development.

[1] https://environment.govt.nz/publications/national-policy-statement-on-urban-development-2020/, pages 10-11.

- Matters required for operating nationally significant infrastructure that provide essential services necessary for security, prosperity, health and safety such as key components of transport and energy systems.
- Land that is open space provided for public use.
- Land that is subject to a designation or heritage order.
- Matters needed to implement or be consistent with iwi participation legislation
- The need to ensure there will be sufficient business land to meet expected demand.

Where a qualifying matter is applicable, this does not mean intensification is excluded from an area, but the intensification potential that would otherwise be enabled can be modified to the extent necessary to accommodate the qualifying matter.

This may include:

- retaining consent requirements and assessments required by the rules and standards of the existing district plan
- reducing permitted building heights from the applicable minimum height required
- lowering densities below the applicable minimum density
- no intensification.

2.2 Operative Christchurch District Plan

The process and circumstances in which the Operative Christchurch District Plan (the CDP) was developed has influenced a number of key components of the CDP in unique ways, including those proposed to be retained in the plan following the introduction of PC14. Devastating earthquakes and widespread damage and destruction to homes, businesses and the city's infrastructure in 2010 and 2011 required a strong focus on immediate recovery needs and a long-term framework for rebuilding.

The Canterbury Earthquake Recovery Act 2011 directed a series of changes to planning documents which were directly incorporated into relevant plans and policies through a Land Use Recovery Plan (LURP) which took effect in December 2013. One of the actions of the LURP was a direction to Environment Canterbury to make changes to the Canterbury Regional Policy Statement and Regional Coastal Environment Plan for the Canterbury Region to direct the responsibility for coastal erosion and inundation and sea level rise to Christchurch City, Waimakariri, and Selwyn District Council.

An expedited hearing process presided over by an independent judge and panel of commissioners (IHP) and removal of many normal appeal rights was used. The IHP were an independent first instance quasi-judicial body having statutory responsibility, through the Order in Council, for the determination of proposals for the formulation of the Christchurch Replacement District Plan which has become the CDP.

The Canterbury Earthquake (Christchurch Replacement District Plan) Order 2014 modified the RMA to provide an expedited process for the review and replacement of existing plans by an independent Judge and Panel of Commissioners and contained a set of expectations from the Recovery Minister, that the plan:

i. reduce significantly, the reliance on the resource consent process, along with reduction in development controls, design standards and notification/written approvals;

ii. clearly state the intended outcomes in objectives and policies;

iii. provide for the effective functioning of the urban environment;

iv. facilitate an increase in the supply of housing;

v. ensure sufficient and suitable land is provided for commercial, industrial and residential activities;

vi. provide for a range of temporary and construction activities;

vii. set out transitional provisions for temporary activities;

viii. avoid or mitigate natural hazards; and

ix. use clear, concise language and be easy to use.

The various chapter objectives and provisions drafted with respect to the relevant resource management issues, subsequently reflected this recovery environment. Specific attention was given to the requirements of the Statement of Expectations of the Order in Council (OIC).

The resulting CDP contains a Strategic Directions chapter that provides overarching direction for the balance of the plan which is an important consideration for PC14 and includes strong and directive objectives of particular relevance to the existing qualifying matters, including:

- enabling recovery and facilitating future enhancement (Objective 3.3.1)
- minimising transaction costs, reliance on resource consents, development controls, design standards and notification requirements (Objective 3.3.2)
- avoiding subdivision use and development in areas with unacceptable natural hazard risks and mitigating natural hazard risks in other areas while enabling critical and strategic infrastructure and facilitating the repair of earthquake damaged land (Objective 3.3.6)
- promoting an attractive urban growth and a high-quality urban environment and increasing housing to meet intensification targets in specific areas (Objective 3.3.7)
- revitalising the central city (Objective 3.3.8)
- recognition and appropriate management of outstanding natural features and landscapes, the natural character of the coastal environment, wetlands, lakes and rivers and their margins, significant indigenous vegetation and fauna, and landscapes features and areas that are important to Ngāi Tahu mana whenua (Objective 3.3.9)
- providing for the benefits and operational efficiency of infrastructure including strategic transport networks, the Lyttelton Port, bulk fuel infrastructure, defence facilities, strategic telecommunication and radiocommunication facilities, the National Grid, Christchurch International airport, and 66kB, 33kB and 11kB electricity distribution lines (Objective 3.3.12).

2.3 Report Purpose

The purpose of this report is to provide a summary analysis of matters in the operative CDP that are proposed to be carried over as qualifying matters and applied (largely in their current from),

to modify and manage the provision and uptake of intensification provisions required by the Enabling Housing Act and NPS UD. It sets out a consideration of these existing qualifying matters in accordance with section 77K of the Act through the prescribed "alternative process". This includes describing for each qualifying matter to be carried over:

- where the qualifying matters are located
- the alternative density standards proposed
- why the qualifying matter is applied
- the level of development prevented by accommodating the qualifying matter.

The report does not address "other qualifying matters" that are being developed and added to the provisions of the current CDP as part of PC14.

2.4 Statutory Requirements for Existing Qualifying Matters

Section 77 J of the RMA (as amended by the Enabling Housing Act) requires Council to produce an evaluation report in relation to accommodating a qualifying matter demonstrating (amongst other things) why the area is subject to a qualifying matter, why the qualifying matter is incompatible with the level of development permitted by the Medium Density Residential Standards (MDRS) and implementation of Policy 3.

Existing qualifying matters however have an alternative process set out in section 77K of the Act, which requires the Council to:

a. identify by location (for example, by mapping) where an existing qualifying matter applies:

b. specify the alternative density standards proposed for those areas identified under paragraph (a):

c. identify in the report prepared under section 32 why the territorial authority considers that 1 or more existing qualifying matters apply to those areas identified under paragraph (a):

d. describe in general terms for a typical site in those areas identified under paragraph (a) the level of development that would be prevented by accommodating the qualifying matter, in comparison with the level of development that would have been permitted by the MDRS and policy 3:

e. notify the existing qualifying matters in the IPI.

Section 77I sets out that councils may modify the requirements of policy 3 and make plans less enabling of development if the following are present:

a. a matter of national importance that decision makers are required to recognise and provide for under section 6 of the RMA

b. a matter required in order to give effect to a national policy statement (other than the NPS-UD) or the New Zealand Coastal Policy Statement 2010

e. a matter required for the purpose of ensuring the safe or efficient operation of nationally significant infrastructure[2]:

f. open space provided for public use, but only in relation to land that is open space:

g. the need to give effect to a designation or heritage order, but only in relation to land that is subject to the designation or heritage order:

h. a matter necessary to implement, or to ensure consistency with, iwi participation legislation:

i. the requirement in the NPS-UD to provide sufficient business land suitable for low density uses to meet expected demand:

j. any other matter that makes higher density, as provided for by the MDRS or policy 3, inappropriate in an area, but only if section 77L is satisfied.

[2] Provisions relating to Waikato River, Hauraki Gulf Marine Park and the Waitakere Ranges Heritage Area (matters (c) and (d)) are not relevant in Christchurch.

3.0 Sites of Ecological Significance

The CDP contains a Schedule of 133 Sites of Ecological Significance (SES) in three different schedules (Low Plains, Banks Peninsular and Port Hills, and Sites on Private Land) shown on the planning maps and identifies, by location, where specific rules from each schedule will apply.

The Sites of Ecological Significance identified in the CDP are located in areas that, for the most part, fall outside of the urban residential and commercial zones affected by PC14 and are identified in the Natural and Cultural Heritage layer of the CDP District Plan Viewer and on the numbered downloadable PDF Planning Maps[3].

Figure 1 Avon River Boardwalk, South New Brighton, iStock by Getty Images

3.1 Effect of Sites of Ecological Significance Provisions in the CDP

Clearance of indigenous vegetation within a SES listed in Schedule A requires consent as a non-complying activity NCA under rule 9.1.4.1.5.

Key associated policies (in particular 9.1.2.2.6 Protection and management of significant indigenous vegetation and habitats of indigenous fauna listed in Schedule A of Appendix 9.1.6.1) starts with "avoiding adverse effects of vegetation clearance and disturbance as far as practicable" and "ensuring no net loss of indigenous biodiversity" before considering remedying, mitigating or offsetting adverse effects so, taken together with the non-complying activity status it is considered unlikely that any increased housing and commercial development opportunities would be able to be consented within listed SES.

These provisions apply to identified areas and not to the whole of the sites that contain SES; in other words, they do not apply to and constrain development beyond the area mapped as a SES. These rules are currently operative and will be operative in the district plan when the IPI plan change is notified.

Clearance of indigenous vegetation within a SES listed in Schedule B (ecological sites on private land) identifies ecologically significant areas where a collaborative process will be undertaken and

[3] https://districtplan.ccc.govt.nz/PropertySearch/PropertySearchContainer.html

the site will be added to Schedule A by way of a plan change. Schedule B is for information purposes and the rules for SES in Schedule A do not apply to Schedule B sites prior to identification in Schedule A.

In identified City and Settlement Water Body Setbacks located adjacent to a water body (other than in the Central City) identified as a Site of Ecological Significance, activities listed in Rule 6.6.4.3 including new buildings or structures and associated earthworks are a discretionary activity under Rule 6.6.4.4D1.

The associated objective, 6.6.2.1 Protection of water bodies and their margins from inappropriate use and development, seeks the following outcome:

> *"supporting the provision of ecological corridors and public access where possible, recognising this may not be fully achievable for some classifications of water body because of historic development patterns or adjoining land uses".*

Together with the associated policy (6.6.2.1.1 Naturalisation of water bodies and their margins) and its emphasis on:

> *"supporting the provision of ecological corridors and public access where possible, recognising this may not be fully achievable for some classifications of water body because of historic development patterns or adjoining land uses",*

this indicates that increasing density under the MDRS and commercial zones affected by PC14 in areas affected by this overlay is unlikely to be granted consent and if retained, should be identified as impacting on intensification and limiting yields to nil.

Density in those areas identified as SES under the CDP

Depending on the orientation of the development within the SES and the sensitivity of the ecological values of the SES, development is highly uncertain and it is prudent to assume that the SES will preclude potential for further housing intensification or commercial development within an area of SES.

3.2 Background to Sites of Ecological Significance Provisions

Higher order statutory documents

The RMA requires the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development in exercising RMA functions as a matter of national importance and that a district plan must give effect to any related provisions of the NZ Coastal Policy Statement 2010 (the NZCPS) or a Regional Policy Statement (in this case the Canterbury RPS - the CRPS). This direction is followed through in the objectives in the Strategic Directions chapter of the CDP which also have to be achieved.

Policy 11 of the NZCPS requires protection of indigenous biological diversity in the coastal environment by "avoiding adverse effects of activities on" threatened indigenous taxa or rare vegetation types or habitats of indigenous species with limited natural range, or nationally significant examples areas set aside for protection under other legislation.

Objectives 9.2.1 -9.2.3 and Policies 9.3.1 - 9.3.5 of the Canterbury Regional Policy Statement (together with the RMA and NZCPS) provide unambiguous direction supporting the protection of

significant indigenous biodiversity or indigenous biodiversity values. Appendix 3 of the CRPS set out criteria for identifying ecological significance based on representativeness, rarity/distinctiveness, diversity and pattern and ecological context.

Independent Hearing Panel Decision

The Independent Hearing Panel (IHP) considered a broad range of evidence in confirming the CDP provisions relating to Sites of Ecological Significance:

- Dr Antony Shadbolt gave evidence on the low plains ecological district that confirmed that this is an acutely threatened land environment with less than 10% of the original indigenous vegetation cover remaining[4].
- Andrew Crossland gave evidence on the state of native fauna species in New Zealand, Christchurch and Banks Peninsular, the protections of fauna in the Natural and Cultural Heritage provisions of the CDP[5], Christchurch's Pegasus Bay coastal strip, interdune and wetland habitats and discussed that the Burwood Landfill wetlands warrant protection as SES[6].
- Dr Judith Roper-Lindsay gave evidence on ecosystem protection, the role of offsetting and discussed the identification of Templeton Golf Course as a SES[7].
- Anita Spencer gave evidence on fauna species and faunal values in the New Zealand, Christchurch and Banks Peninsular area, and the protections of fauna and habitats in the Natural and Cultural Heritage provisions of the CDP including for lizards, seals and white-flippered penguins[8].
- Scott Hooson gave evidence on the identification and assessment of sites of ecological significance on Banks Peninsula, including further work on SES[9].

The IHP determined, that if an area is identified as significant, it is to be protected to ensure no net loss of indigenous biodiversity or indigenous biodiversity values which is reflected in the most relevant objectives (9.1.2.1.1 Protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna). It also found the activity classification for indigenous vegetation clearance inside and outside SES (mostly non-complying activities (NCA's) with exceptions for some specific restricted discretionary activities (RDA's) was appropriate to achieve the relevant objectives.

[4] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3723-CCC-Evidence-of-Antony-Shadbolt-9.1-Indigenous-Biodiversity-EIC-2-12-2015.pdf
[5] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3723-CCC-Evidence-of-Antony-Shadbolt-9.1-Indigenous-Biodiversity-EIC-2-12-2015.pdf
[6] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3723-CCC-Evidence-of-Andrew-Crossland-9.1-Indigenous-Biodiversity-3-12-2015.pdf
[7] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3482-Fulton-Hogan-Evidence-of-Judith-Roper-Lindsay-10-12-2015.pdf
[8] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3721-Crown-Evidence-of-Anita-Spencer-Fauna-10-12-20151.pdf
[9] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3723-CCC-Evidence-of-Scott-Hooson-9-1-Indigenous-Biodiversity-2-12-2015.pdf

3.3 Evaluation of Alternate Height and Density Standard Options

The preferred option for residential density standards within a Site of Ecological Significance is to rezone sites in accordance with the MDRS and approach to Policy 3 of the NPS UD and carry over the current activity status for residential and commercial development (mainly non-complying activities). This option does not modify the height and density standards directly and will have the effect of preventing additional development within the SES.

An assessment of the costs and benefits of the preferred approach is set out below.

Assessment of environmental economic social and cultural costs and benefits of this approach

Assessment of environmental economic social and cultural benefits
Retaining the SES provisions in their current form and an assumed zero development yield framework will have a range of environmental benefits in helping protect areas of significant indigenous vegetation and significant habitats of indigenous fauna, and which in turn contributes to social and cultural well-being.
Assessment of environmental economic social and cultural costs
These provisions are existing but continuing the application of the SES provisions will involve consent costs and create high levels of uncertainty for, or deterrence to any urban development and intensification in these areas. There is also an opportunity cost to the lost theoretical development potential and a cost to the wider public for the lost benefits that development could provide to the city.
Appropriateness in achieving the objectives/ higher order document directions
Efficiency: A consent process (as required by the existing SES provisions) allows for consideration of whether amending the development design and applying conditions of consent relating to monitoring and management of earthworks and construction can address the issue in an appropriate manner within a framework that should effectively ensure no net loss of ecological biodiversity and the protection of the values of these areas. Retaining the existing SES provisions provides scope to explore and test the suitability of such potential solutions and will efficiently achieve the relevant objectives.
Effectiveness: The proposed approach is effective in that higher order provisions in the RMA, NZCPS and CRPS requiring protection of these areas must be given effect to and would not be reconciled by alternative height and density standards. The proposed approach is effective in that it is enabled by the relevant provisions of the RMA. Section 77I(a) specifies that the height and density requirements to implement policy 3 of the NPS UD can be less enabling of development where a matter of national importance, required to be recognised and provided for (such as this), is present.
Risk of acting/not acting

It is unlikely there can be adequate certainty that changing height and density of development standards (such as setbacks, building coverage and landscaped area controls) will address the SES matter appropriately in most instances. Therefore, applying a 'one size fits all' set of alternate height and density standard to apply in areas identified as SES to allow a greater level of development as a permitted activity is unlikely to be appropriate in many situations.

3.4 Summary of Section 32 Evaluation

A detailed section 32 report was prepared for the proposed provisions of the Natural and Cultural Heritage Chapter (Chapter 9) in the Christchurch District Plan assessing the relevant objectives, policies and rule [10], and the process of identifying and assessing the Sites of Ecological Significance[11]. These reports have evaluated the appropriateness of the methods to achieve the relevant objectives, along with alternative options such as the [then] status quo, and reliance on non-regulatory methods, in terms of effectiveness and efficiency, costs and benefits, and risks with acting or not acting.

Pages 45-51 of the Chapter 9 section 32 Report evaluates the proposed policies, rules and methods for Indigenous Biodiversity and Ecosystems. This evaluation is supported by the technical reports for Sites of Ecological Significance on page 95 Appendix 7. An evaluation of this analysis as well as further evaluation of options under s32AA, considering options sought by submissions, was undertaken as part of the IHP hearing and decision process.

Retaining these existing SES provisions as a qualifying matter and carrying them over in their current form can be supported for the following reasons:

1. The direction in relevant higher order documents such as the NCPS, the CRPS Chapter 9 and Appendix 3), to protect the values of significant ecological sites and habitats, and the objectives of the CDP including the directive provisions in Chapter 3 of the CDP such as objective 3.3.9 have not changed between when these reports were prepared in 2015 and the present day;
2. In relation to the higher order direction in the Enabling Housing Supply Amendment Act and NPS-UD, specific provision is made to "qualify" or make building height and density requirements less enabling of development for matters of national importance such as the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna in section 77I (a) of the RMA.
3. The rules for Sites of Significance and clearance of indigenous vegetation are contained largely in chapter 9 Natural and Cultural Heritage 9.1-9.6 which are district wide provisions of the plan. These rules are integrated with related district wide rules such as earthworks and can apply notwithstanding the extent to which provisions in individual zones that are likely to be amended as part of PC14 enable development. Retaining these provisions therefore does not require changes to be made to objectives and policies.
4. As evidenced in the section 32 evaluation identified above, there are a high number of significant natural and cultural heritage features (sites, places, areas and landscapes)

[10] http://resources.ccc.govt.nz/files/policiesreportsstrategies/chapter9-naturalandculturalheritage-s32.pdf

[11] http://resources.ccc.govt.nz/files/policiesreportsstrategies/natural_and_cultural_heritage_section32_appendix%207.pdf

across the district which need to be recognised. The SES objectives and provisions recognise the strategic context (being section 6 matters of importance) and the costs, benefits, options, efficiency, effectiveness and risks of acting and not acting. They also reflect consideration of a range of options range of options to protect and manage natural and cultural resources. The provisions have been informed by a significant amount of technical / expert assessment and collaboration.

3.5 Potential Effect of Sites of Ecological Significance Provisions on Intensification

The Sites of Ecological Significance identified in the CDP are located in areas that, for the most part, fall outside of the urban residential and commercial zones affected by PC14. For this reason, the retention of these provisions as qualifying matters will have only limited effects on the enablement of housing and commercial intensification overall.

There are 277 sites where the Sites of Ecological Significance intersect with a zone where the Medium Residential Zone and the MDRS standards are proposed to be applied, as well as several sites in the High Density Residential Zone (11 sites) however on average, the encroachment of the SES on these sites is only 7% of the area of the sites. Added together, the area of the overlay intersecting with urban zones is 6.78 ha's.

As discussed above, given the policy context for the SES, it is a reasonable assumption that addressing the SES provisions appropriately will reduce development yields within the SES to nil, but additional development yields on the balance of these sites will be unaffected where the balance of the area is large enough to make additional development feasible.

Given the limited extent of encroachment onto sites by the SES overlay in most instances, the heights and density enabled by applying the MDRS and implementing Policy 3 of the NPS UD will be able to be achieved, and on most sites there will be no effect on permitted density or potential yield with a comprehensive redevelopment of affected sites. In most instances the SES could contain the land outside of the 50% site coverage limit allowed in the MDRS for instance.

Proposed Zoning	Number of Lots Affected	Average area of SES per site (m^2)	Average area of SES as % of site
Medium Density Residential	277	224m^2	7%
High Density Residential	11	534m^2	1.6%

Effects on developing a typical site

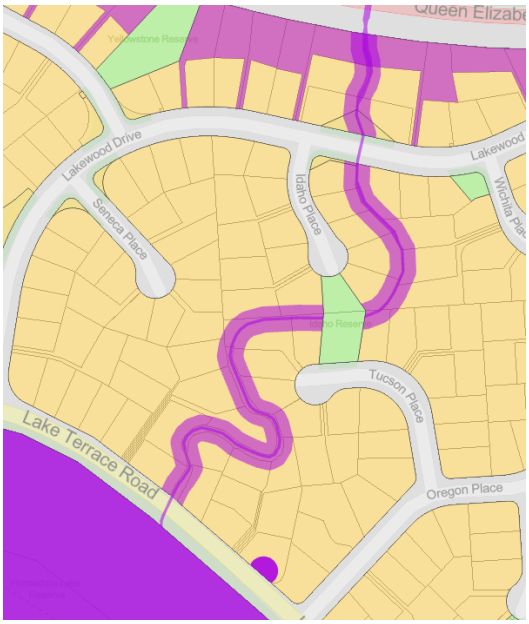
Developing land identified as a SES will be constrained based on:

- how much of the site is covered by the SES and how much area on the site is unaffected by the SES

- the nature of the ecological values themselves
- whether the development can be designed to accommodate and protect those values and
- the sensitivity of the values to the effects of development.

Each of the SES identifies a set of threats and risks which are likely to be incompatible with the MDRS permitted activity standards, controlled activity subdivisions rules and other provisions in Schedule 3A of the RMA [12].

Example: Old No. 2 Drain, QEII Drive, Burwood SES



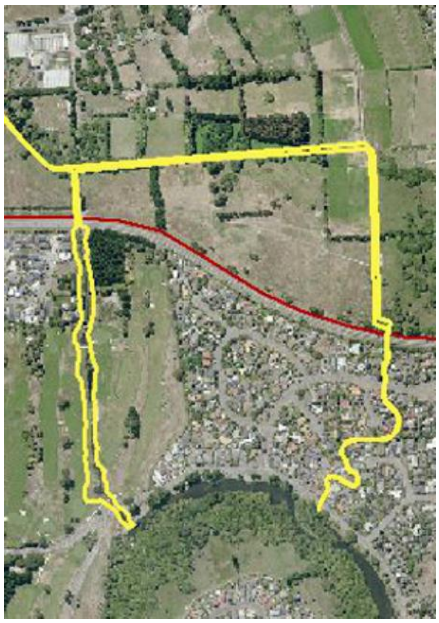


Figure 2. CCC Draft Plan Change 14 GIS Zoning Map. Figure 3. SES/LP/3 Old No. 2 Drain, Burwood

In this example, the MRZ is proposed to be applied to the sites identified in yellow in the figure on the left (Figure 2). The SES applies to the area within the yellow line in the image on the right (Figure 3) and is proposed to be retained as a qualifying matter where it passes through the urban residential area, as shown in the darker shade of purple in Figure 2.

The SES notation itself would not change the potential permitted development yield of these sites as the SES is located in the waterway and not on the land. However, the SES provisions would apply in addition to the Water Body Setbacks provisions in Rule 6.6.4, which seek to protect and enhance the values and functions of areas adjoining water bodies by promoting naturalisation of water bodies and their margins (Policy 6.6.2.1.1) and the management of adverse effects on water bodies themselves (Policy 6.6.2.1.3). Rule 6.6.4.4 D1 makes activities such as earthworks and new buildings within a water body setback adjacent to a water body identified as a SES a discretionary activity.

Although in practise it is possible new development could obtain consent in the water body setback with strict conditions with the current provisions carried over as a qualifying matter, it is reasonable to assume that the residential density standards within setbacks containing a SES be

[12] CDP, Chapter 9, Appendix A: SES/LP/6 Christchurch Coastal Strip

proposed to be zero. However, achieving the MDRS standard limiting site coverage to 50% will mean the SES overlay would not further constrain potential development yields on these sites.

The effect of retaining the SES provisions in this instance will assist in supporting at-risk fish species and protect an important ecological network/linkage and migration route for migratory species. It will promote sustainable management of these resources through maintaining the riparian margin and ecological corridor, promoting naturalised banks, preventing fish barriers, supplement riparian margin vegetation, reducing sediment discharges, treating stormwater, minimising light-spill and enhancing habitat[13].

4.0 Outstanding Natural Features and Landscapes

Highly valued features and landscapes in Christchurch district are identified in a series of schedules and in notations on the planning maps of the CDP. Objectives, policies, rules, standards and matters of discretion provide for the protection of outstanding natural features (ONFs) and outstanding natural landscapes (ONLs), the maintenance of significant features and rural amenity landscapes, and the preservation of the natural character of the coastal environment wetlands, and lakes and rivers and their margins.

There are 9 natural features identified as ONFs and 2 broad areas identified as ONLs in appendices 9.2.9.1.1 and 9.2.9.1.2, however these overlays cover an extensive range of environments and individual physical geographies:

- Kaitōrete Spit (ONF)
- Te Waihora / Lake Ellesmere (ONF)
- Wairewa / Lake Forsyth (ONF)
- Brooklands Lagoon and Spit / Te Riu o Te Aika Kawa (ONF)
- Waimakariri River (ONF)
- Travis Wetland / Ōruapaeroa (ONF)
- Te Ihutai / Avon-Heathcote Estuary (ONF)
- Pūtarikamotu / Riccarton Bush (ONF)
- South Brighton Spit / Te Kōrero Karoro and Estuary entrance (ONF)
- Banks Peninsula / Te Pātaka o Rākaihautū (ONL)
- Port Hills / Ngā Kohatu Whakarakaraka o Tamatea Pōkai Whenua (ONL).

The ONLs and ONFs identified in the CDP are located in areas that, for the most part, and with the exception of rivers, passing through the urban area, fall outside of the urban residential and

[13] CDP, Chapter 9, Appendix A: SES/LP/3 Old No. 2 Drain, Burwood

commercial zones affected by PC14 and are identified in the Natural and Cultural Heritage layer of the CDP District Plan Viewer and on the numbered downloadable PDF Planning Maps[14].

Figure 4. Lyttleton Harbour, iStock by Getty Images

4.1 Effect of ONFs and ONLs in the CDP

Resource consent is required for new buildings and residential units within an identified ONF or ONL overlay in the CDP. The activity status for these consents varies between restricted discretionary, discretionary, and non-complying activity depending on the specific overlay and the nature of the development activity.

Under Rule 9.2.4.1 Activity table, new buildings and residential units are generally non-complying activities, and in some locations discretionary activities, while residential units within an identified building area are generally restricted discretionary activities but are non-complying and discretionary activities in some areas.

Objectives 9.2.2.1.1-9.2.2.1.4 seek to achieve protection of outstanding natural features and landscapes. Policy 9.2.2.2.1 requires the qualities of these landscapes to be protected by avoiding use and development that detracts from extensive open views or damages landforms. Policy 9.2.2.2.2 requires avoiding use and development that breaks the skyline and avoiding subdivision, use and development in areas with little or no capacity to absorb change, and allowing limited subdivision use and development in areas with higher potential to absorb change.

[14] https://districtplan.ccc.govt.nz/PropertySearch/PropertySearchContainer.html

This emphasis on protecting the natural qualities of landscapes and features is unambiguous and suggests that urban intensification, as envisaged in the intensification requirements for residential zones in Schedule 3A and Policy 3 of the NPS UD, is inappropriate within ONFs and ONLs.

When developing land identified as ONLs or ONFs, Council's consideration of whether to grant or decline consent or impose conditions is likely to focus on the extensive list of matters of discretion set out in Rules 9.2.8.1, and will be restricted to those matters with restricted discretionary activities. Of relevance to potential intensification these include:

a. Whether the proposal is consistent with protecting and enhancing the qualities [of the ONL or ONF];
b. The extent to which the proposal will detract from the naturalness and openness of the landscape;
c. Whether the proposal recognises the context and values of historic and cultural significance and the relationship, culture and traditions of Ngāi Tahu;
d. Whether the proposal will integrate into the landscape and the appropriateness of the scale, form, design and finish (materials and colours) proposed and mitigation measures such as planting.
e. The proximity and extent to which the proposal is visible from public places, ease of accessibility to that place, and the significance of the view point;
f. The extent to which natural elements such as landforms and vegetation within the site mitigate the visibility of the proposal;
g. The extent to which the proposal will result in adverse cumulative effects;
h. The extent to which the proposal has technical or operational needs for its location; and
i. Within a site of Ngāi Tahu Cultural Significance, the matters set out in Rule 9.5.5 as relevant to the site classification.

Density in those areas identified as ONFs and ONLs under the ODP

Under the ODP, development yield is likely to limited to one unit per site in most instances depending on the position and extent of the overlay on each site. Where this is not the case, buffering of varying sizes may be required to protect the qualities of certain natural features.

4.2 Background to ONFs and ONLs in the CDP

Higher order statutory documents

The RMA requires the protection of outstanding natural features and landscapes from inappropriate subdivision, use and development in exercising RMA functions as a matter of national importance (s6(b)). The requirement that a district plan must give effect to any related provisions of the NZ Coastal Policy Statement 2010 (the NZCPS) or a Regional Policy Statement (in this case the Canterbury RPS - the CRPS) in section 75(3) requires strong adherence to directive provisions in these higher order documents.

The NZCPS directs the preservation of natural character of the coastal environment and protection of natural features and landscapes (particularly Policy 15 Natural features and natural landscapes in relation to the coastal environment).

Objective 12.2.1 and related policies 12.3.2 and 12.3.4 of the CRPS are unambiguous in requiring consistent identification and management of outstanding natural features and landscapes, recognition of their values, and control of inappropriate development in relation to these values.

Independent Hearing Panel Decision

The Independent Hearing Panel (IHP) considered a broad range of evidence in confirming the CDP provisions relating to ONF's and ONL's:

- Yvonne Fluger gave evidence for CCC on the methodology applied to landscape studies for Christchurch City and Banks Peninsula and for assessing the natural character in the coastal environment. She also addressed the policies and rules, mapping of overlays and site-specific issues[15].
- Shirly Ferguson gave evidence for CCC on the objectives, policies, rules, matters of discretion, overlays, the natural character of wetlands, lakes, rivers and margins and Ngai Tahu Values in relation to outstanding natural features and landscapes, significant features and landscapes and areas of natural character in the coastal environment[16].
- Peter Rough gave evidence on behalf of the Crown which supported the approach to outstanding natural features and landscapes, supported the identification of rural amenity landscapes, and supported plan provisions addressing the effects of urbanisation on natural character and the integrity of these matters.[17]

The IHP confirmed the objectives and policies relating to outstanding natural landscapes and features after making a series of changes to restructure them and to reduce complexity. The Panel decision expresses concerns with the complexity and "unfriendliness" of the activity table for plan users, however following a number of changes, the Panel confirmed that the provisions satisfactorily respond to the higher order documents and were the most appropriate for achieving related CRDP objectives.[18]

4.3 Evaluation of Alternate Height and Density Standard Options

The preferred option for residential density standards within a ONF or ONL is proposed to be zero additional residential and commercial units. The higher order provisions in the RMA, NZCPS and CRPS requiring strong protection of these areas must be given effect to and would not be reconciled by alternative height and density standards. Because of the varying and in many cases small percentage of encroachment on affected sites it is proposed to up-zone [meaning to apply a zone and associated plan provisions that enables greater levels of development on sites] the underlying zone in accordance with the MDRS and Policy 3 of the NPS UD but to retain the ONF and ONL provisions.

[15] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3723-CCC-Evidence-of-Yvonne-Pfluger-9-2-Outstanding-Natural-Features-2-12-2015.pdf
[16] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3723-CCC-Evidence-of-Shirley-Ferguson-9.2-Outstanding-Natural-Features-EIC-2-12-2015.pdf
[17] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3721-Crown-Evidence-of-Peter-Rough-Landscape-10-12-20151.pdf
[18] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Decision-38-Natural-and-Cultural-Heritage-Topic-9.2-Significant-Features-and-Landscapes-26-08-2016.pdf

Assessment of environmental economic social and cultural costs and benefits of this approach

Assessment of environmental economic social and cultural benefits
Changing the height and density standards applied in areas affected by ONFs and ONLs from those set out in Schedule 3A of the RMA and the Council's response to policy 3 of the NPS UD offers no benefits in that the ONF and ONL provisions which are required to give effect to provisions in higher order statutory documents, will most likely preclude the intensification of urban development within these overlays. Retaining the ONF and ONL provisions in their current form and an assumed zero development yield framework, while not precluding existing uses or all future development, will have a range of environmental benefits in helping protect outstanding natural features and landscapes from inappropriate subdivision use and development, which in turn contributes to social and cultural well-being.
Assessment of environmental economic social and cultural costs
Continuing the application of the ONF and ONL provisions is likely to involve substantial consent costs and create high levels of uncertainty for, or deterrence to any urban development and intensification in these areas.
Appropriateness in achieving the objectives/ higher order document directions
Efficiency: A consent process (as required by the existing ONL and ONF provisions) allows for consideration of whether amending the development design and applying conditions of consent relating to materials and design, and management of earthworks and construction can address the issue in an appropriate manner within a framework that should effectively ensure protection of the values of these areas. Retaining the existing ONF and ONL provisions provides scope to explore and test the suitability of such potential solutions and will efficiently achieve the relevant objectives.
Effectiveness: The proposed approach is effective in that it is enabled by the relevant provisions of the RMA. Section 77I(a) specifies that the height and density requirements to implement policy 3 of the NPS UD can be less enabling of development where a matter of national importance, required to be recognised and provided for (such as this), is present.
Risk of acting/not acting It is unlikely there can be adequate certainty that changing height and density of development standards (such as setbacks, building coverage and landscaped area controls) will address the ONF and ONL matter appropriately in most instances. Therefore, applying a 'one size fits all' set of alternate height and density standard to apply in areas identified as ONF and ONL to allow a greater level of development as a permitted activity and controlled activities is unlikely to be appropriate in most situations.

4.4 Summary of Section 32 Evaluation

The section 32 Report for the Natural and Cultural Heritage chapter[19] proposals has six separate appendices relating to outstanding natural landscapes and features comprising:

i. A technical overview report

ii. Banks Peninsular Landscape Review Addendum

iii. Landscape Character Descriptions – Christchurch City Landscape Study

iv. Banks Peninsular Landscape Study 2007

v. Te Pataka O Rakaihautu Ngai Tahu – Cultural Values Addendum

vi. Central City Technical Landscape Overview Report.

This analysis evaluates the appropriateness and necessity of the methods to achieve the relevant objectives, along with alternative options such as the [then] status quo, and reliance on non-regulatory methods, in terms of effectiveness and efficiency, costs and benefits, and risks with acting or not acting.

Pages 35-41 of the Chapter 9 section 32 Report evaluates the proposed objectives for landscapes and natural character and significant features and landscapes and pages 51-62 evaluates the policies, rules and methods for these matters. This evaluation is supported by the technical reports for landscapes on page 95 Appendix 7. An evaluation of this analysis as well as further evaluation of options under s32AA, considering options sought by submissions, was undertaken as part of the IHP hearing and decision process.

Retaining these existing SES provisions as a qualifying matter and carrying them over in their current form can be supported for the following reasons:

1. The direction in relevant higher order documents such as sections 5 and 6(b) of the RMA, the NCPS, the CRPS Chapter 12), regarding the identification and protection of ONLs and ONFs, and the objectives of the CDP including the directive provisions in Chapter 3 of the CDP such as objective 3.3.9 have not changed between when these reports were prepared in 2015 and the present;

2. In relation to the higher order direction in the Enabling Housing Supply Amendment Act and NPS-UD, specific provision is made to "qualify" or make building height and density requirements less enabling of development for matters of national importance such as the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna in section 77I(a) of the RMA. This national direction is still being addressed (at least in part) by the upzoning of the land affected by the overlay.

3. The rules for ONLs and ONFs are contained largely in chapter 9 Natural and Cultural Heritage 9.2.1-9.2.6 which are district wide provisions of the plan. These rules are integrated with related district wide rules such as earthworks and subdivision and can apply notwithstanding the extent to which provisions in individual zones that are likely to be amended as part of PC14 enable development. Retaining these provisions therefore does not require changes to be made to objectives and policies.

[19] http://resources.ccc.govt.nz/files/policiesreportsstrategies/chapter9-naturalandculturalheritage-s32.pdf

4. As evidenced in the section 32 evaluation identified above, there are a high number of significant natural and cultural heritage features (sites, places, areas and landscapes) across the district which need to be recognised. The ONL and ONF provisions recognise the strategic context (being section 6 matters of importance) and the costs, benefits, options, efficiency, effectiveness and risks of acting and not acting. They also reflect consideration of a range of options to protect and manage natural and cultural resources. The provisions have been informed by a significant amount of technical / expert assessment and collaboration.

4.5 Potential Effect of ONFs and ONLs on Intensification

The ONFs and ONLs identified in the CDP are located in areas that, for the most part, fall outside of the urban residential and commercial zones affected by the Housing and Business Choice Plan Change. For this reason, the retention of these provisions as qualifying matters will have only limited effects on the enablement of housing and commercial intensification overall.

GIS analysis identifies 55 sites where ONLs and ONFs intersect with a zone where the Medium Residential Zone and the MDRS standards are proposed to be applied, as well as 8 sites in the High Density Residential Zone and 1 site in the Town Centre zone. These 64 sites together contain an area of 3.36 hectares affected by the ONF and ONL overlays.

On these sites, and in light of the policy context and intent described above, it is assumed that addressing the ONL and ONF provisions appropriately will reduce development yields within these overlays to zero additional units, but additional development yields on the balance of these sites will be unaffected where the balance of the area is large enough to make additional development feasible.

Proposed Zoning	Number of Lots Affected	Average area of ONL's and ONF's per site (m^2)	Average area of ONL's and ONF's as % of site
Medium Density Residential	55	607m^2	22%
High Density Residential	8	30m^2	3%
Town Centre	1	0.1m^2	0%

Effects on developing a typical site

Whakaraupo Reserve, Lyttleton

In this example, the MDRS standards in Schedule 3A is proposed to be applied to the residential zoned sites identified in yellow in the figure below (Figure 5). The ONL/F notation is applied to an area that extends beyond the reserve as shown in the purple area.

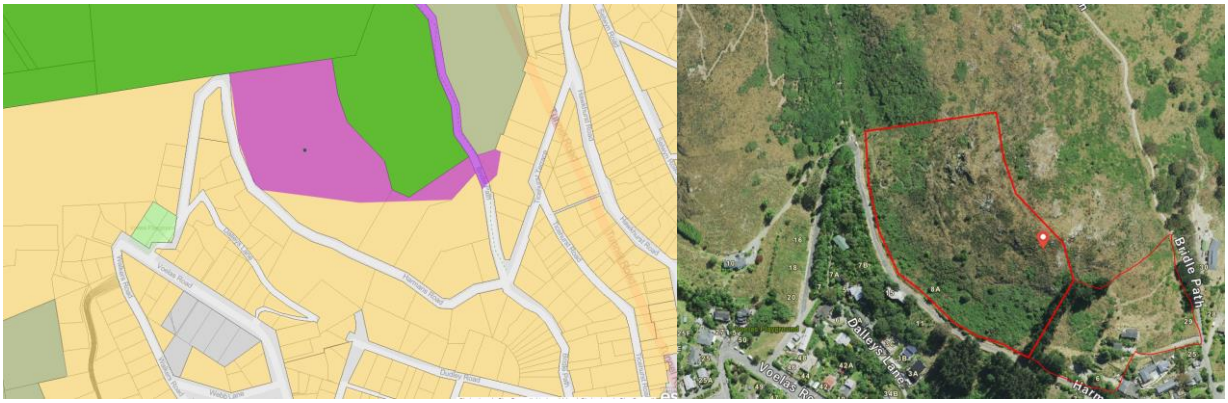


Figure 5. CCC Draft Plan Change 14 GIS Zoning Map. Figure 6. Canterbury Maps Property Search.

In theory the ONL/ONF overlay could change the potential permitted development yield of these 2 sites at 8A Harmans and 29 Bridle Path Road, Lyttleton from 280 and 126 potential additional residential units, at a density of 1 unit per 100m^2, to a yield of zero additional units. The aerial photo shows no existing dwellings on 8A Harmans and 1 dwelling on 29 Bridle Path Road. The theoretical effect of the ONL/ONF overlay in terms of the net resulting level of potential prevented development is therefore 406 units.

The effect on development yield described above is only theoretical however, as the ONL/ONF provisions would be just one of several constraints applying to these sites. The sites are also within the Slope Hazard overlay, most of both of the sites are contained within the Rockfall Management Area 1 and Rockfall Management Area 2 the net of effect of which is also likely to prevent any significant intensification and the site at 8A is largely within the Remainder of Port Hills and Banks Peninsula Slope Instability Management Area.

The effect of retaining the ONF and ONL provisions in this instance is unlikely to prevent all development on these sites, however it will assist in avoiding potentially inappropriate subdivision, use and development in a highly visible and highly valued area that is an important part of the dramatic natural setting of Lyttleton.

5.0 Flood Hazard Management Areas

The CDP maps hazard risks areas where annual exceedance probabilities for rainfall events or tide events are modelled to be greater than a certain level, allowing for sea level rise, additional buffering, and an increase in rainfall intensity as a result of climate change.

Flood Management Areas (FMAs), Flood Ponding Management Area (FPMAs) and High Flood Hazard Management Areas (HFHMAs) are mapped and the CDP seeks to avoid subdivision use or development where it will increase the potential risk to safety, well-being and property other than residential units on residential zoned land. Where risk from flooding is considered unacceptable and such risks cannot practically be reduced to acceptable levels, new activities in those areas are generally to be avoided. Where it is able to be managed to acceptable levels, assessment and mitigation is deemed acceptable.

The flat land which comprises most of Christchurch City is on the Waimakariri flood plain which is managed by the Waimakariri River stopbanks system. The Avon, Heathcote, Halswell and Styyx are spring-fed but can also flood from time to time. Flood storage and natural floodplains wetlands and ponding areas including the Henderson's Basin, Cashmere Stream, Hoon Hay Valley, Cashmere-Worsleys Ponding Area, Cranford Basin and Lower Styx Ponding area, and ensuring floor levels for buildings are a particular focus for flood hazard management in the CDP.

The history of the land on which Christchurch is located as a swamp and its low elevation relative to the sea means that the Flood Hazard Management Areas identified in the CDP are located in areas that fall both in and outside of the urban residential and commercial zones affected by PC14. They are identified on the CDP District Plan Viewer and on the numbered downloadable PDF Planning Maps.

Figure 7. Aerial view of Milton, Brisbane Flood 2011, iStock by Getty Images

5.1 Effect of FMAs FPMAs and HFMAs in the CDP

The Operative CDP :

- Rule 5.4.1.1b FMA requires new buildings to have a minimum floor level over the 1 in 200 rainfall event with a 1 in 20 year tidal event, or a 1 in 200 year tidal event with a 1 in 20 year rainfall event, including 1 metre sea level rise plus 400mm freeboard, as modelled by Council, or 12.3 metres above CCC Datum (whichever is highest).
- Permitted Filling or excavation for residential buildings is limited to achieving minimum floor levels.
- Conversion of a residential unit into two residential units in a FMA is a restricted discretionary activity under rule 14.4.1 and RD31.
- The FMA is not proposed to affect height and density and will not be evaluated as a qualifying matter.
- Rule 5.4.5 FPMA and P14 limits residential units to one per site and requires them to be on piles, or have a maximum of 200m^2 ground floor area. Earthworks restrictions apply.
- Rule 5.4.5.3 NC2 makes subdivision to create new vacant lots in the FPMA non-complying unless it can contain a residential unit outside the FPMA.
- Rule 5.4.6.3 RD2 in the HFHMA makes residential units within the Residential Unit Overlay (where not provided for as permitted) a restricted discretionary activity which is a key difference to the FPMA provisions.
- Rule 5.4.6.3 NC1 makes subdivision creating additional lots in the HFHMA non-complying unless it can contain a residential unit outside the HFHMA.
- New buildings in HFHMA not provided for as permitted or restricted discretionary activity are non-complying.

Proposed District Plan Changes:

- Proposed Plan Change 9C proposes to amend Chapter 5 Natural Hazards and Chapter 8 Subdivision Development and Earthworks provisions related to the Waimakariri River Stopback Setbacks.
- Proposed Plan Change 12 Coastal Hazards seeks to manage the development, subdivision and use of land within areas of potential coastal hazards that include inundation, erosion, rising ground water and tsunami.
- PC12 proposes to remove the FMA HGHMA, RUO overlays within coastal hazard areas.

The FMA overlay could still allow for up to 3 units (with certification) and engineering controls that place limits on filling and site coverage so as to not impede the flood plane. These matters will not conflict with PC14 and FMA's are not considered Qualifying Matters.

The FPMA and HFHMA overlays are likely to restrict development to one unit per site. In the case of the FPMA, and the HFHMA outside of the Residential Unit Overlay[20] the overlay is likely to result in zero development on the basis that this involves an increase in risk.

20

5.2 Background to FMAs, FPMAs and HFMAs in the CDP

Higher Order Documents

The management of significant risks from natural hazards is a matter of national importance in exercising functions and powers in relation to the use, development and protection of resources in section 6 of the RMA. Avoiding or mitigating natural hazards through controls on effects of use, development or protection of land is part of the functions of territorial authorities in s31(1)(b).

Policy 24 of the NZCPS requires that the effects of sea level rise are to be assessed by taking into account national guidance and best available information on climate change and its effects over at least a 100 year timeframe. Policy 25 includes (clause b) "avoid redevelopment, or change in land use, that would increase the risk of adverse effects from coastal hazards".

The Canterbury Regional Policy Statement 2013 ('CRPS'), updated through the Land Use Recovery Plan ('LURP') following the earthquakes, provides significant policy direction on these matters. Objective 11.2.1 of the CRPS is "Avoid new subdivision, use and development of land that increases risks associated with natural hazards". The CRPS requires objectives and policies and methods to avoid new subdivision, use and development that does not meet criteria set out in Policy 11.3.1 for known high hazard areas. CRPS, Policy 11.3.2 requires plans giving effect to the RPS to: Avoid new subdivision, use and development of land in known areas of subject to inundation by a 0.5% AEP (1 in 200 year) flood event, unless it is of a type that is not likely to suffer material damage in an inundation event, new buildings have an appropriate floor level to avoid inundation in a 0.5% AEP flood event, and taking into account climate change projections.

IHP Decision

The IHP considered a broad range of evidence in confirming FMA, FPMA and HFMA provisions and mapping and the IHP and Council have proceeded on the basis that modelling information was developing over time and was not always adequate in all areas and was:

- Janice Carter gave planning evidence on behalf of Council reviewing the natural hazards proposal of the CDP analysing key statutory directions, current research and literature, and approaches to hazard modelling in respect to instability, flooding and liquefaction, the outcome of caucusing and recommended responses to submissions [21].
- Graham Harrington (Senior Surface Water Planner) gave evidence on behalf of Council on the flooding aspects of the natural hazards chapter explaining flooding issues in Christchurch, flood modelling and related quality assurance. It discusses setting minimum floor levels above the 1/200 year level, the identification and protection of ponding areas serving as natural detention basins and the restriction of developments and intensification in high hazard areas[22].

[21] https://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Ms-Janice-Carter-Natural-Hazards-13-2-15.pdf

[22] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Mr-Graham-Harrington-Natural-Hazards-13-2-15.pdf

- The above evidence was supported by evidence on flood modelling, floor levels and fill management areas and associated mapping from Gregory Whyte[23] and Iris Brookland[24].
- Ruth Evans gave further evidence on behalf of Council in relation to the plan provisions and responses to submissions[25]
- Dr Wendy Saunders gave evidence for GNS Science and the Crown on risk-based land use planning for natural hazards, advocating an all-hazards approach to planning, use of the precautionary approach[26].
- John Aromowicz and Fiona Aston gave evidence for Castle Rock Limited on coastal erosion and inundation management areas, high flood hazard management areas, liquefaction, minimum floor overlays, floor level and fill management areas[27].
- Fiona Aston gave evidence for Castle Rock Limited on the rezoning of 195 Port Hills Road and 125 Scruttons Road[28].
- The evidence from Castle Rock was the subject of rebuttal from Brian Norton[29] and Ian Wright[30].

In Decision 6 Natural Hazards[31] and Decision 53 Natural Hazards[32] the IHP confirmed that natural hazards stand apart from other resource management issues as having particular strategic significance. Decision 53 extended the Flood Management Areas (FMAs) and Flood Protection Management Areas (FPMAs) to other parts of the city, added specific FMA rules for particular locations and provided for the High Flood Hazard Management Area (HFHMAs). The notified version of the CRDP originally proposed provisions concerning coastal hazards however those provisions were withdrawn from the Panel's jurisdiction by an Order in Council on 16 October 2015.

On the matter of whether the restrictions on the use, subdivision and development of residential land under the HFHMA are necessary or too onerous in the context of the plans objectives to achieve "rebuild", the IHP found that permitted activity certification for new buildings and dwellings not meeting permitted activity conditions was not appropriate in the FPMA and HFHMA, that non-complying activity status in the HFPMA's was too onerous, and that restricted

[23] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Mr-Greg-Whyte-Natural-Hazards-13-2-15.pdf
[24] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Ms-Iris-Brookland-Natural-Hazards-13-2-15.pdf
[25] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/07/3723-CCC-Natural-Hazards-Evidence-of-Ruth-Evans-Planning-21-1-2016.pdf
[26] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/495-Crown-Wendy-Saunders-Natural-Hazards-20-2-15.pdf
[27] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/07/2168-2169-Castle-Rock-Ltd-Residential-Evidence-John-Aramowicz-Jr.pdf
[28] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/07/2168-2169-Castle-Rock-Ltd-Residential-Evidence-Fiona-Aston-27-8-15.pdf
[29] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/07/2123-CCC-Residential-Stage-2-Rebuttal-evidence-of-Mr-Brian-Norton-2-9-15.pdf
[30] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/07/2123-CCC-Residential-Stage-2-Rebuttal-evidence-of-Dr-Ian-Wright-2-9-15.pdf
[31] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Natural-Hazards-Part.pdf
[32] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Decision-53-Chapter-5-Natural-Hazards-Stage-3-03-11-2016.pdf

discretionary activity was suitable. Decision 53 confirmed the appropriateness of the Residential Unit Overlay providing for establishment of residential units as a restricted discretionary activity in identified areas in New Brighton, Southshore and Redcliffs as mapped in Appendix .

5.3 Evaluation of Alternate Height and Density Standard Options

The preferred option for residential density standards within a FMA, is to permit up to 3 dwellings per site in the FMA (subject to engineering controls such as limits on fill and site coverage so as to not impede the flood plane) and limit development to one unit per site in the FPMA and HFHMA to protect the storage function, and to avoid increasing the extent of risk in the FPMA and HFHMA. It is proposed to up-zone the underlying zoning in accordance with the MDRS and Policy 3 of the NPS UD and continue to apply the flood overlays.

The higher order provisions in the RMA, NZCPS and CRPS requiring subdivision, use or development where it will increase the potential risk to people's safety, well-being and property to be avoided must be given effect to and would not be reconciled by alternative height and density standards (such as an adjusted setbacks, site coverage and landscaped area controls) and these options are therefore not assessed in detail.

Assessment of environmental economic social and cultural costs and benefits of this approach

Assessment of environmental economic social and cultural benefits
Changing the height and density standards applied in areas affected by the FMA, FPMA and HFMA provisions from those set out in Schedule 3A of the RMA and the Council's response to policy 3 of the NPS UD offers no benefits in that the FMA, FPMA and HFMA provisions which are required to give effect to provisions in higher order statutory documents, will in most instances either preclude the intensification of urban development within these overlays or necessitate the provision and assessment of substantial information that is best facilitated through a consent process. Retaining the FMA, FPMA and HFMA provisions in their current form and an assumed zero development yield framework in the FPMA and HFMA, while not precluding existing uses or all future development, will promote a consent process that, while likely to limit opportunities for housing intensification, will assist in avoiding subdivision, use or development that is likely to increase potential risks to people's safety, well-being and property.
Assessment of environmental economic social and cultural costs
Continuing the application of the FMA, FPMA and HFMA provisions is likely to involve consent costs and create high levels of uncertainty for, or deterrence to, urban development and intensification in the FPMA and HFMA areas. The alternative of allowing development to happen in a situation where there is reliable information about the presence of a potentially significant risk could put people and property at unacceptable risk and result in developments that are uninsurable and attach a share of potential liability to the regulatory authority in the event of a flood that leads to significant damage or harm.
Appropriateness in achieving the objectives/ higher order document directions

Efficiency: A consent process (where required by the existing FPMA and HFMA provisions) allows for consideration of whether amending the development design and applying conditions of consent relating to site coverage, floor levels for new buildings and additions, maintaining flood storage capacity and the management of earthworks and filling, can address the issue in an appropriate manner within a framework that should effectively ensure appropriate management of risk. Retaining the existing FMA, FPMA and HFMA provisions provides scope to explore and test the suitability of potential solutions and will efficiently achieve the relevant objectives. Removing the FMA FPMA and HFMA provisions in areas subject to identified coastal hazards where more current information supersedes the information that informed the flood hazard management area provisions and mapping is supported.
Effectiveness: The proposed approach is effective in that it is enabled by the relevant provisions of the RMA. Section 77I(a) specifies that the height and density requirements to implement policy 3 of the NPS UD can be less enabling of development where a matter of national importance, required to be recognised and provided for (such as this), is present.
Risk of acting/not acting It is unlikely there can be adequate certainty that changing height and density of development standards (such as setbacks, building coverage and landscaped area controls) will address the FMA, FPMA and HFMA matters appropriately in most instances. Therefore, applying a 'one size fits all' set of alternate height and density standards to apply in areas identified as FMA, FPMA and HFMA to allow a greater level of development as a permitted activity and controlled activities is unlikely to be appropriate in most situations.

5.4 Summary of Section 32 Evaluation

The Section 32 Reporting for the Natural Hazards provisions Part 1[33] and Part 2[34] provides in Part 1, an evaluation of proposed objectives, policies rules and methods, summary of consultation, an economic impact analysis, and modelling for floor level and fill management areas. Part 2 cites a large bibliography of studies and modelling reports that have informed the flood hazard and coastal hazard proposed provisions including:

i. Operative Plan Change 32 to the Christchurch City Plan - Waimakariri River Stopbank Floodplain Land Use Controls and supporting s32 report Banks Peninsular Landscape Review Addendum. CCC April 2013

ii. Preliminary Assessment of Historical Flooding in settlements of Akaroa Harbour May 2008

iii. Plan Change Section 32 Assessment Waimakariri Stopbank Floodplain Land Use Controls. July 2010

[33] http://resources.ccc.govt.nz/files/TheCouncil/policiesreportsstrategies/districtplanning/districtplanreview/Section32NaturalHazardsRevisedEvaluation.pdf

[34] http://resources.ccc.govt.nz/files/policiesreportsstrategies/chapter5-naturalhazards%28part2%29-s32.pdf

iv. Christchurch City High Flood Hazard District Plan Review DH I Water and Environment Ltd Nov 2014

v. Change to the Avon Surface Water Model DHI April 2015

vi. Woolston Hydraulic Model and Flood Hazard Mapping Update Summary Jacobs April 2015.

This analysis evaluates the appropriateness and necessity of the methods to achieve the relevant objectives, along with alternative options such as the [then] status quo, and reliance on non-regulatory methods, in terms of effectiveness and efficiency, costs and benefits, and risks with acting or not acting.

Pages 31-39 of the Part 1 Section 32 Report evaluates the proposed objectives for natural hazards and flood management and pages 39-68 evaluates the policies, rules and methods for these matters. An evaluation of this analysis as well as further evaluation of options reflecting comments from the Minister, under s32AA, considering options sought by submissions, was undertaken as part of the IHP hearing and decision process.

Retaining these existing provisions as a qualifying matter and carrying them over in their current form can be supported for the following reasons:

1. The provisions are necessary and appropriate for achieving higher order document directions. The direction in relevant higher order documents such as sections 5 and 6(b) of the RMA, the NCPS, the CRPS (Chapter 11), and the objectives of the CDP including the directive provisions in Chapter 3 of the CDP (objective 3.3.6) have not changed between when these reports were prepared in 2015 and the present;

2. In relation to the higher order direction in the Enabling Housing Supply Amendment Act and NPS-UD, specific provision is made to "qualify" or make building height and density requirements less enabling of development for matters of national importance such as the management of matters of national importance in section 77I (a) of the RMA. The direction is being given effect to some extent by up-zoning the land affected in accordance with the MDRS and Policy 3 of the NPS UD.

3. The rules for Flood hazard management are contained largely in chapter 5 Natural Hazards, which are district wide provisions of the plan. These rules are integrated with related district wide rules such as earthworks and subdivision and with the residential and commercial chapters and can be integrated with provisions in individual zones that are to be amended as part of PC14 to enable development without substantial modification. Carrying these provisions over will not require new objectives or policies.

4. As evidenced in the section 32 evaluation identified above, there are a high number of flood hazards across the district which need to be recognised and managed where they are significant. The flood hazard objectives and provisions recognise the strategic context (being section 6 matters of importance) and the costs, benefits, options, efficiency, effectiveness and risks of acting and not acting. They also reflect consideration of a range of options range of options to protect and manage natural and cultural resources. The provisions have been informed by a significant amount of technical / expert assessment consultation and evaluation.

5.5 Potential Effect of FPMAs and HFMAs on Intensification

The FPMA and HFMA overlays intersect with a large number of sites affected by the draft Housing and Business Choice Plan Change and a significant proportion of most of these sites are impacted by the overlay. 1,229 sites identified as potential MRZ sites intersect with the FPMA and HFMA overlays and these intersecting areas collectively add up to 48.99ha's.

Of these, approximately 785 have a starting site size of greater than 400m^2 where the area of encroachment is greater than 100m^2. If it is assumed that these sites could otherwise be developed to a density of 1 site per 100m^2, the average size of encroachment of these overlays is 408m^2 giving a typical development loss of 4 units per site.

Proposed Zoning	Number of Lots Affected	Average area of FPMA or HFMA per site (m^2)	Average area of overlay as % of site
Medium Density Residential	1,229	408m^2	67%

The proposed Medium Density Residential zone applies a site coverage standard of 50% of the site. Due to the site coverage rule, the FPMA and HFMA provisions will generally only reduce the density of development that can be achieved on residential sites if the overlay occupies more than 50% of the site, or if it is not practical to develop up to 50% building coverage in the area of the site outside the overlay.

Analysis of GIS data of residential sites affected by the water body setback shows that there are 851 sites where the area affected is 50% or greater of the total area of the site and of these 670 sites are greater than 400m^2 (the size of site where it is assumed sites are more likely to be comprehensively redeveloped).

The average area of setback on residential sites affected is 67% of Medium Density Residential. Therefore, more than two thirds of sites won't be able to develop to the full density that would otherwise be enabled. \

Effects on developing a typical site

Keyes Road, New Brighton

Figure 8. CCC Draft Plan Change 14 GIS Zoning Map. Figure 9. Canterbury Maps Property Search.

In this example, it is proposed to apply the MDRS standards in Schedule 3A to the residential zoned sites on Keyes Road identified in yellow in the figure above (Figure 8). The High Floodplain Hazard Management Area and Residential Unit Overlay within the HFHMA extends beyond the reserve into surrounding residential sites as shown in the purple area. The strong emphasis on avoiding increasing levels of risk suggests additional housing development within the HFHMA is likely to be nil.

The HFHMA overlay would change the potential permitted development yield of these 19 sites at Keyes Road New Brighton. With no HFHMA and no subdivision and relying on the permitted activity rules in the MDRS, developing 3 units a site would allow 57 units as permitted development. Comprehensive redevelopment of the sites could yield 134 potential units if the sites were developed to a density of 1 unit per $100m^{2.}$

With the HFHMA in play, this would likely reduce the potential for subdivision to zero additional units given the clear policy direction to avoid subdivision use or development where it will increase the potential risk to people's safety, well-being and property. The Residential Unit Overlay allows for residential units in the HFHMA as a restricted discretionary activity and is likely to limit development to one unit per site other than with the few instances where there is adequate area to incorporate a new residential unit or units outside of the HFHMA. The aerial photo shows each site contains an existing dwelling so the net resulting level of potential development on this selection of properties factoring in the HFHMA is no further units.

The effect of retaining the HFMA provisions in this instance will promote a consent process that is likely to limit opportunities for housing intensification but it will assist in avoiding subdivision, use or development that is likely to increase potential risks to people's safety, well-being and property.

The alternative of allowing significant intensification in a situation where there is reliable information about the presence of a potentially significant risk could result in developments that are uninsurable and could attach a certain amount of liability to the territorial authority in the event of a flood (or series of flood events) that leads to significant harm to people or property.

6.0 Tsunami Hazards

The Canterbury coast lies on the western edge of the Pacific Ocean and is subject to local, regional and distant-source tsunamis. The notified version of the CDP originally proposed provisions concerning coastal hazards however those provisions were withdrawn following an Order in Council in October 2015 which instructed Council to remove the coastal hazard provisions and to address them separately from the balance of the plan.

The CDP contains rules that maps tsunami inundation areas and excludes these areas from the permitted framework for conversion or replacement of one residential units into two in Rule 14.4.1.1 P10 and P11 making them restricted discretionary activities. The CDP does the same with the Enhanced Development Mechanisms in chapter 14 Residential Rules 14.13[35]. These provisions

[35] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Residential-Stage-1-decision.pdf

reference the map in Appendix 14.16.5[36] but are not identified on the planning maps. There are no equivalent provisions or cross references to this framework in the Natural Hazards chapter.

With Decision 53 in June 2016, the IHP confirmed flood management areas (FMA and HFHMA and Residential Unit Overlay) including in coastal areas. These provisions do not define the full extent of areas at risk of coastal hazards and only manage some activities in defined areas. They rely on a generic natural hazards objective and policies relating to flood management.

Figure 10. Tsunami damage in Murohama Miyato, Japan 2011, iStock by Getty Images

6.1 Effect of Tsunami Hazards Provisions in the CDP

The preferred approach to the Tsunami Hazard Provisions in the CDP is to retain the ODP zoning in these areas. The total effect of retaining the Tsunami hazard provisions on development is somewhat uncertain beyond the effect on permitted development. Where the risk is acceptable, the overlay could restrict the number of residential units on sites affected by this overlay to one unit per site within areas within Tsunami Inundation Area.

- Rule 14.4.1.1 P10 and P11 respectively permit the conversion of a residential unit into two residential units, and the replacement of a residential unit with two residential units, subject to standards including standards that the residential unit shall be outside the tsunami inundation area (with respect to conversions) and that the site shall be outside the tsunami inundation area (with respect to replacement of residential units).
- Under Rule 14.4.1.3 These activities are provided for as restricted discretionary activities where they are in the tsunami Inundation area and council's discretion includes minimum

[36] https://districtplan.ccc.govt.nz/pages/plan/book.aspx?HID=87276; from Environment Canterbury report number R12/38 "Modelling coastal inundation in Christchurch and Kaiapoi from a South American tsunami using topography from after the 2011 February Earthquake (2012), NIWA.

floor levels, potential for flood damage, flood management mitigation, and the adequacy of wastewater system capacity.

- Rule 14.13 Enhanced Development Mechanism contains an extensive set of qualifying standards limiting the availability of a comprehensive development mechanism, which include excluding sites that have any part of the site within the mapped Tsunami Inundation Area.

PC12 proposes to apply greater levels of control to areas with higher levels of risk. The provisions are applied through 6 overlay categories being the Coastal Inundation Risk Area (CIRA) overlay, which has four gradations (Very Low, Low, Medium, High), and a Coastal Erosion Risk Area (CERA) overlay, which comprises two gradations (Low and High-Medium / Single zone).

- Subdivision is proposed to be a restricted discretionary activity in the Very Low and Low Coastal Inundation Risk area and a non-complying activity in the Medium and High Coastal Inundation Risk Area and within both the Low and High-Medium Coastal Erosion Risk Area.
- Additional dwellings are proposed to be permitted in the Very Low CIRA, controlled activity in the Low, discretionary in the Medium and non-complying in the High CIRA. New dwellings are discretionary in the low CERA and non-complying in the High-Medium / Single zone.
- Hazard sensitive activities (e.g. education facilities, health care activities, elderly care facilities and any other activity in which users are more vulnerable to the adverse effects of hazards than the general population) are restricted discretionary activities in the very low and low CIRA and are otherwise non-complying.

Activity	Coastal Inundation Risk Area				Coastal Erosion Risk Areas	
	Very Low	Low	Medium	High	Low	High-Medium / Single zone
Subdivision	RD	RD	NC	NC	NC	NC
Building not otherwise included in this table	P	C	D	NC	D	NC
Replacement residential unit	P	P	C	RD	C	RD
Accessory buildings	P	P	C	RD	C	RD

Table 1 CCC, Coastal Hazards Consultation Document, page 7.

6.2 Background to Tsunami Hazards in the CDP

Higher Order Documents

The management of significant risks from natural hazards is a matter of national importance in exercising functions and powers in relation to the use, development and protection of resources in section 6 of the RMA. S31(1)b makes clear that controlling use and development of land for the avoidance or mitigation of natural hazards is part of the functions of a territorial authority.

Policy 24 of the NZCPS requires that the effects of sea level rise are to be assessed by taking into account national guidance and best available information on climate change and its effects over at least a 100 year timeframe. Policy 25 includes (clause b) “avoid redevelopment, or change in land use, that would increase the risk of adverse effects from coastal hazards”.

The Canterbury Regional Policy Statement 2013 ('CRPS'), updated through the Land Use Recovery Plan ('LURP') following the earthquakes, provides significant policy direction on these matters. Objective 11.2.1 of the CRPS is "Avoid new subdivision, use and development of land that increases risks associated with natural hazards". The CRPS requires objectives and policies and methods to avoid new subdivision, use and development that does not meet criteria set out in Policy 11.3.1 for known high hazard areas, however tsunamis are excluded from the definition of land subject to sea water inundation over the next 100 years that makes up limb four of the definition of high hazard areas in the CRPS[37].

The CRPS contains little specific discussion of tsunami, however Policies 11.3.5 and 11.3.7 are relevant. Policy 11.3.5 directs that subdivision, use and development of land shall be avoided if the risk from the natural hazard is considered to be unacceptable. When there is uncertainty in the likelihood or consequences of a natural hazard event, the local authority shall adopt a precautionary approach. Policy 11.3.7 states that:

> *…new physical works to mitigate natural hazards will be acceptable only where the natural hazard risk cannot reasonably be avoided…*

Objective 3.3.6 Natural hazards seeks similar outcomes:

> *New subdivision, use and development (other than new critical infrastructure or strategic infrastructure to which paragraph b. applies):*
> 1. *is to be avoided in areas where the risks from natural hazards to people, property and infrastructure are assessed as being unacceptable; and*
> 2. *in all other areas, is undertaken in a manner that ensures the risks of natural hazards to people, property and infrastructure are appropriately mitigated*

Policy 5.2.4 of the Natural Hazards chapter sets out a precautionary approach where there is uncertainty, hazards or a potential for serious or irreversible effects. Policy 5.5.5 and the rules in 5.10 implement a control regime for hazard mitigation works, which give effect to the policies in Chapter 11 of the CRPS.

IHP Evidence

- Adam Scott Blair gave planning evidence for Council on intensification provisions including Intensification mechanisms, the enhanced Development Mechanism and associated limiting conditions[38]. The evidence references the origins of these mechanisms with the Land Use Recovery Plan (LURP) and the section 32 evaluation supporting the proposed provisions. There is no detailed discussion on the need for, or merits of these mechanisms. The transcript for the hearing notes his explanation does not support enabling intensification in areas where there is a known risk of inundation in a Tsunami, as in addition to the direct risk to people and property, "it [greater intensification] could make escaping more problematic".
- Kelvin Berryman gave evidence on behalf of the Crown on natural hazards providing an overview of natural hazards including tsunamis and how to plan for them. His evidence stated that the plan should address all future hazards and risks including coastal erosion, storm surge inundation and tsunami:

[37] CRPS, July 2021, Definitions, page 242: https://www.ecan.govt.nz/document/download?uri=4218008
[38] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Residential-Adam-Blair-12-3-15.pdf

> *"A key aspect of risk based planning is to use plans to avoid or control development in risk areas, mitigate risk in existing developments, and prescribe restrictions on building type, use, occupancy, and density in high risk areas. The approach to manage the threat of natural hazards is to consider the vulnerability and exposure to the severity of the hazards – how many people are exposed and what are the potential economic losses?"*

- The Environment Canterbury report on which the Tsunami Inundation overlay was based "Modelling coastal inundation in Christchurch and Kaiapoi from a South American tsunami using topography from after the 2011 February Earthquake (2012), NIWA, states in relation the use of this report that:

> *"The scenario modelled has a high return period in the order of 2500 years and represents an extreme scenario, which is appropriate for evacuation planning and emergency management planning. The report is not intended to be used for land use planning, because land use planning generally uses shorter return periods of up to 500 years – the inundation from a 500 year return period tsunami may be considerably less than shown in this report. However, the information in the report may be useful for strategic development planning and infrastructure planning as it may, used with other hazard information, highlight areas of higher vulnerability where future development should be more carefully managed. The spatial data in these layers have been generated at a scale of 1:25,000 and should not be used at scales finer than this."*

IHP Decision

Decision 10 Residential, confirmed the rules that map Tsunami Inundation Areas and excludes these areas from the permitted framework for conversion or replacement of one residential unit into two in Rule 14.4.1.1 P10 and P11 making them restricted discretionary activities. The decision also confirmed the Enhanced Development Mechanisms in chapter 14 Residential Rules 14.13 which preclude areas in the TIA from eligibility as a EDM[39].

The decision does not discuss the particular merits of the provisions or their relationship with the withdrawn coastal hazards provisions. It should be noted however, that this decision came in a context where the Flood Hazard Management provisions proposed extensive controls on development in High Flood Management Areas, which affect areas which extensively overlap the Tsunami Inundation Areas (See Appendix 1 and 2 to this report for comparison).

PC12 Coastal Hazards

Draft Plan Change 12 (PC12) proposes to amend chapter 5 (Natural Hazards) to manage subdivision, development and the use of land within areas of potential coastal hazards that include inundation, erosion, rising ground water and tsunami. It is intended that the provisions in PC12 will replace the flood management and tsunami hazards provisions in the operative plan.

PC12 introduces a new objective and policies, rules and methods and mapping overlays identifying areas of potential coastal hazard risk. It also proposes to remove the FMA, HFHMA and RUO overlays within the Coastal Hazards areas and associated legacy provisions.

[39] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Residential-Stage-1-decision.pdf

PC12 is intended to address gaps in the effective management of risks. PC12 has been drafted and consulted on and will be notified before 20 August 2022 in time for hearings in 2023. The plan change will not use the Intensification Streamlined Planning Process being used for PC14.

The Coastal Hazards overlays are mapped on two separate GIS web viewers[40] and are intended to be integrated with the balance of the DCP planning maps.

6.3 Evaluation of Alternate Height and Density Standards

The preferred option for density standards within the TIA is to retain the ODP zones (primarily Residential Suburban) and carry over these consent requirements and height and density standards for buildings and subdivision, rather than apply the permitted and controlled activity framework in the MDRS and the height and density standards of the new PC14 zones. This option will entail updating the risk management methodology and mapping consistent with best practise and newly available risk modelling information. This option is likely to prevent significant intensification of development within the overlay area.

Alternatives to this are:

1. Have no Tsunami Inundation Area provisions and allow development within the overlay to the full extent that would otherwise be provided for by giving effect to the MDRS and Policy 3 of the NPSUD.
2. Remove the TIA overlay as part of PC14 and address tsunami inundation to the extent that it is warranted through a Coastal Inundation Risk Area (CIRA) overlay advanced through a separate plan change.

An assessment of the costs and benefits of the preferred approach is set out below.

Assessment of environmental economic social and cultural costs and benefits of this approach

Assessment of environmental economic social and cultural benefits
The key benefit of the TIA provisions is to provide guidance for managing activities in areas with known high consequence tsunami risks, notwithstanding their extremely low likelihood of occurrence. This is consistent with implementing policy to ensure risk is reduced to acceptable levels through avoidance or mitigation. Future natural hazard damages are avoided by new subdivision, use and development not occurring in areas of tsunami risk and from the effectiveness of mitigation measures where development is able to proceed. Where risks are mitigated, development proceeds and those measures are effective, this will help build resilience, reduce risk and potentially help prevent costly remediation being required in future. Reduction in the cost of hazard events, such as loss of life and damage to property, infrastructure and the environment, can be a substantial benefit in terms of both lives, happiness and property. The mapping provides greater certainty for areas not defined as subject to tsunami inundation risks.
Assessment of environmental economic social and cultural costs

[40] https://gis.ccc.govt.nz/portal/apps/webappviewer/index.html?id=ae428b7c5b624f629b2a6c506db1bf0b and https://gis.ccc.govt.nz/portal/apps/webappviewer/index.html?id=35fc899707cf43f2a3e10dab1ea40263

The main cost of the TIA provisions is in lost development potential where development is avoided or minimised in these overlay areas, which is mainly a loss for individual property owners. Another cost is negative perceptions on land values for those identified as TIA. The costs for the Council and community with natural hazard research advice, modelling, monitoring, and plan changes as information changes are another factor. These costs increase the more specific the policies and rules are and the more detailed the maps and provisions need to be.
Appropriateness in achieving the objectives/ higher order document directions
Efficiency: The proposed approach is efficient in that most of the sites affected by the overlay are almost entirely covered by the overlay (the average encroachment is 90%) so upzoning these sites would be inconsistent with a clear approach to integrating land use planning with planning for natural hazards. The benefits in avoiding significant increases in the numbers of people and property in an area where tsunami inundation could occur may outweigh the opportunity costs of development benefits and the administrative cost of these provisions. The proposed approach will allow for new evidence to be considered on the most efficient and effective approach to addressing coastal inundation hazards to be considered as part of PC14. The strength of national direction in favour of enabling development and intensification in existing residential areas in the NPS UD is to some extent balanced out by the equally clear directives of the NZCPS addressing natural hazards and the fact that the management of significant risks from natural hazards is a matter of national importance in achieving the purpose of the RMA.
Effectiveness: The proposed approach is effective in that it avoids creating inconsistency between the objectives of the zone and the rules that manage development to achieve those outcomes. It should also prevent development that may present an unacceptable degree of risk while enabling managed use of land and appropriate mitigation within the overlay and unfettered use of land outside the overlay area. The proposed approach is enabled by the relevant provisions of the RMA. Section 77I(a) specifies that the height and density requirements under the MDRS and policy 3 of the NPSUD can be less enabling of development where a matter of national importance under section 6 (in the case the management of significant risks from natural hazards) is present.

6.4 Section 32 Evaluation and further changes

The Section 32 evaluation report was prepared for the Residential Chapter 14 [41] provides information on the origin of the Tsunami Inundation provisions in Chapter 14. It notes (page 10 para vii) that the Enhanced Development Mechanism (EDM) was introduced by the LURP and

41 http://resources.ccc.govt.nz/files/TheCouncil/policiesreportsstrategies/districtplanning/districtplanreview/Section32ResidentialChapter.pdf

carried over into the replacement district plan. It also notes that the policies and rules relating to limiting housing development in locations subject to significant risks from natural hazards (Policies 14.2.1.1, 14.1.2, 14.2.1.4, 14.2.2.2.) are consistent with higher order directive provisions in the plan and the CRPS relating to natural hazards. There is no specific discussion of the merits and costs of the Tsunami Inundation provisions.

The second Chapter 5 Natural Hazards section 32 report[42] discusses the need to address tsunami inundation hazard risks in the context of the balance of natural hazards in Christchurch and Banks Peninsula. Page 14-15 notes the commitment of ECan to commission further research to assess Christchurch's exposure/vulnerability to tsunami but makes the following conclusion about address the risk with the current information:

> *The high return period of 2500 years (or an Annual Exceedance Probability of 0.0004%)* [for a distance source tsunami] *means this particular tsunami hazard has an extremely low likelihood of occurrence. For this reason the risk from this natural hazard has been assessed as being acceptable insofar as controls limiting development are not justified. However the landward extent of this tsunami is mapped in the Natural Hazard Planning Maps for "Information Only" as a means of achieving the Stage 1 Natural Hazards Objective 5.1.2 of increased public awareness of the range and scale of this natural hazard events. This mapping also implements Stage 1 Policy 5.2.7 by informing people about natural hazards affecting their properties.*

The map of the Tsunami Inundation Area was originally notified as an appendix to chapter 5 Natural Hazards with the notified plan for information purposes however submissions and evidence from Council subsequently requested that it be removed from Chapter 5 on the bases that there were no rules or other methods attached to it in the chapter.

Given the lack of specific support for these provisions in the section 32 reports and from the expert evidence, the impact of the provisions across a wide area, the uncertain but potentially significant effect on potential for development and intensification, it is not straight forward to recommend these provisions be carried over as a Qualifying Matter in their current form.

However, the clear direction of higher order plan statutory documents that have to be given effect to, and the potentially serious implications of intensifying in areas subject to this known hazard means that it cannot be simply put aside as part of PC14.

It is clear from GIS analysis of a proposed Coastal Inundation Risk Area that there is a very high degree of overlap between the Tsunami Inundation Area mapping and the CIRA overlay to the extent that the TIA is almost completely contained within the CIRA. The mapping of the CIRA can be introduced as part of the section 32 material and evidence for PC14 to ensure an appropriate response to the requirements of the NZCPS and to the potential additional exposure to risk that would otherwise come about with MDRS being applied in these areas. The result could be that a Coastal Hazards qualifying matter is applied to capture both inundation and tsunami risk.

[42] http://resources.ccc.govt.nz/files/policiesreportsstrategies/chapter5-naturalhazards%28part2%29-s32.pdf

6.5 Potential Effect of Tsunami Provisions on Intensification

The Tsunami inundation overlay intersects with a large number of sites affected by the draft Housing and Business Choice Plan Change. 7,215 sites identified as potential Medium Density Residential sites intersect with the Tsunami Inundation overlay and this overlay covers an area of approximately 584.30 hectares.

The median site size of the affected sites is 548m^2 and the average size of encroachment of these overlays is 491m^2 (90%). This means on an average site, the amount of permitted development is likely to be limited to 1 or no additional units and assuming the provisions prevented further intensification, the effect on density for a typical site would be 3 units per site under a permitted development scenario and 5 units per site with a scenario involving comprehensive redevelopment of a site to a density of 1 unit per 100m^2.

Proposed Zoning	Number of Lots Affected by TIA QM	Average Area of TIA per site (m^2)	Average area of overlay as % of site
Medium Density Residential	7,215	491m^2	90%

Looking at the matters for discretion and relevant policies it is clear that the overlay will trigger a consent requirement and thereby affect the extent of development provided for as a permitted activity but it may not reduce the potential amount of development on a site in all situations if carried through as a qualifying matter. In relation to the Enhanced Development Mechanism, many of these sites may already be constrained by the fact that the Enhanced Development Mechanism is only available for sites that are:

- greater than 1,500m^2 and less than 10,000m^2 in one continuous block of land (Rule 14.13.1.2)
- density will be limited to one unit per 150m^2 (Rule 14.13.1.3)
- sites have to be within 800 walking distance of centres, supermarkets and a primary or intermediate school, 400m of an Open Space Community parks Zone, 600m of a core public transport route
- sites can't be in a Special Amenity Area, 400 metres of an Industrial Heavy Zone or the catchment of the Riccarton Wastewater interceptor.

Loss of Potential Development in Commercial Areas

In areas where it is proposed to apply commercial zones as part of the plan change, the 211 sites affected by the overlay within the proposed Local Centre, Commercial Mixed Use and Neighbourhood Centre Zones are calculated to incur a total sum loss of commercial floor space of 38,368m$^{2.}$ as a result of retaining the qualifying matter.

Effects on developing a typical site

33 Hood Street, New Brighton

Figure 11. CCC Draft Plan Change 14 GIS Zoning Map.

Figure 12. Canterbury Maps Property Search.

In this example the site is 100% covered by the Tsunami Inundation Area overlay and retaining this as a qualifying matter will result in the site retaining its Residential Suburban Zone. With its site area of 489m^2 the site would not be eligible as an Enhanced Development Mechanism. The potential to do 3 residential units on the site as a permitted activity would be lost. If the site were to be comprehensively developed under the MDRS it may have been able to be have 4 units on the site if it were developed to a density of one unit per 100m^2. There is currently one dwelling on the site so the estimated lost potential for residential development is 3 residential units. It should be noted however that this area is also subject to a Liquefaction Management Area overlay and a Flood Management Area overlay, which although unlikely to prevent intensification of the site will effect the extent to which development is permitted and will involve additional conditions on earthworks, floor levels, foundation designs and related site engineering matters.

7.0 Slope Instability Hazards

The CDP identifies areas of slope instability in the Port Hills, Banks Peninsular and Lyttleton Port taking a risk based approach which factors in the scale of particular hazards together with the likelihood of an event and the effects it would cause on people and property. In areas of slope instability, risk is expressed as an Annual Individual Fatality Risk (AIFR) being the probability of a fatality occurring on a site in a year. Rockfall risk can be recalculated on a site-specific basis through an independent risk assessment supported by an independent peer review.

Areas of slope instability risk are identified on the Natural Hazards layer of the CDP District Plan Viewer and on the numbered downloadable PDF Planning Maps[43] at an area-wide scale. They are located in the Port Hills and Banks Peninsula in areas that, for the most part, fall outside of the urban residential and commercial zones affected by PC14.

Plan Change 2 to the Operative Plan addressed the availability of new technical information on different or lower risks in some parts of the Slope Instability Management Area overlays as a result of hazard removal works and recalculation of risks through site or area-specific geotechnical assessment. Plan Change 2 was made operative in August 2020.

Figure 13. Port Hills Rock Fall, Photo Dave Petley, The Landslide Blog, February 2011.

7.1 Effect of Slope Instability Provisions in the CDP

In Slope Instability Management Areas different overlays are applied to different areas which denote different activity statuses based on the varying level of risk – AIFR (Rule 5.6.1a):

- subdivision requires a restricted discretionary consent in the Rockfall Management Area 2 and Mass Movement Management Areas 2 and 3.
- subdivision is non-complying activity in the Cliff Collapse Management Area 2, Rockfall Management Area 1 and Mass Movement Management Area 1.
- subdivision is prohibited within Cliff Collapse Management Area 1 if solely within this area.
- new buildings require a restricted discretionary consent in the Rockfall Management Area 2 and Mass Movement Management Areas 2 and 3 and Mass Movement Management Area 1.

[43] https://districtplan.ccc.govt.nz/PropertySearch/PropertySearchContainer.html

- new buildings are non-complying in the Cliff Collapse Management Area 2 and Rockfall Management Area 1.
- new buildings are prohibited within Cliff Collapse Management Area 1.

Policy 5.2.2.1.1 requires new development to be avoided where there is unacceptable risk, and managing activities, chiefly through the consent process, to address natural hazard risks. The Slope Instability policy (5.2.2.4.3) requires evaluation of risk and only allowing subdivision, use and development where risk is acceptable. It also places strong controls on hazard mitigation works:

1. *In areas not already identified in Policy 5.2.2.4.1a as being subject to cliff collapse, rockfall or mass movement, but where the land may be subject to slope instability:*
   i. *to the extent appropriate, require proposals for subdivision, use and development to be assessed by a geotechnical specialist to evaluate the presence of hazards and level of risk to people and property (including infrastructure) from slope instability hazards; and*
   ii. *only allow subdivision, use and development where risk can be reduced to an acceptable level.*
2. *Avoid hazard mitigation works in areas of the Port Hills and across Banks Peninsula where cliff collapse or mass movement is likely to destroy or significantly damage such works, or where construction or maintenance of hazard mitigation works creates a safety hazard, unless reasonably required to protect critical infrastructure.*
3. *Control hazard mitigation works and hazard removal works for slope instability across all other areas of the Port Hills and Banks Peninsula, to ensure that works:*
   i. *are effective;*
   ii. *do not worsen any existing natural hazard; and*
   iii. *do not transfer or increase the risk to other people, property, including critical infrastructure or the natural environment.*

Density in those areas identified as SIMA under the CDP

Taking the precautionary direction of the policy framework into account the SIMA overlays are likely to restrict development to one unit per site. In the case of the higher rated Rockfall Management Areas and Cliff Collapse Management Area the overlay may result in zero development where this involves an increase in risk.

7.2 Background to Slope Instability Hazards in the CDP

Higher Order Documents

The management of significant risks from natural hazards is a matter of national importance in exercising functions and powers in relation to the use, development and protection of resources in section 6 of the RMA. S31(1)b makes clear that controlling use and development of land for the avoidance or mitigation of natural hazards is part of the functions of a territorial authority.

The CRPS contains little specific discussion of slope instability, however Policies 11.3.5 and 11.3.7 are relevant. Policy 11.3.5 directs that subdivision, use and development of land shall be avoided if the risk from the natural hazard is considered to be unacceptable. When there is uncertainty in the likelihood or consequences of a natural hazard event, the local authority shall adopt a precautionary approach. Policy 11.3.7 states that:

…new physical works to mitigate natural hazards will be acceptable only where the natural hazard risk cannot reasonably be avoided…

Objective 3.3.6 Natural hazards seeks similar outcomes:

New subdivision, use and development (other than new critical infrastructure or strategic infrastructure to which paragraph b. applies):

3. *is to be avoided in areas where the risks from natural hazards to people, property and infrastructure are assessed as being unacceptable; and*
4. *in all other areas, is undertaken in a manner that ensures the risks of natural hazards to people, property and infrastructure are appropriately mitigated*

Policy 5.2.4 of the Natural Hazards chapter sets out a precautionary approach where there is uncertainty, hazards or a potential for serious or irreversible effects. Policy 5.5.5 and the rules in 5.10 implement a control regime for hazard mitigation works, which give effect to the policies in Chapter 11 of the CRPS.

IHP Decision

The IHP considered a broad range of evidence in confirming the slope instability provisions and mapping and the IHP including:

- A Planning Expert Conferencing Statement described the Port Hills Geotechnical Group formed to consider necessary emergency response to slope instability hazards on the Port Hills, the engagement of GNS Science to get a better understanding of land instability hazards and the production of a series of reports that informed both the delineation of the Crown red zone in relation to cliff fall and rock fall.
- On behalf of Council, Helen Beaumont gave evidence on the mapping of land instability hazard management areas, the risk management approach and the AIFR, Erica Seville gave evidence on resilience[44], Donald MacFarlane gave evidence on slope stability hazards[45] and Dr Mark Yetton gave evidence on the delineation of the rockfall management areas and submissions challenging those delineations[46].
- Tony Taig gave evidence on the need for effective controls on development in areas subject to significant risk from slope collapse using different zones of AIFR and different levels of control that correspond to different levels of risk, defining and quantifying the level where risk is intolerable, changing degrees of precaution over time and risk terminology[47].
- Dr Christopher Massey gave evidence for Council and the Crown on rockfall, cliff collapse and mass movement risk assessments in the Port Hills carried out by GNS Science. He

[44] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Dr-Erica-Seville-Natural-Hazards-13-2-15.pdf
[45] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Mr-Donald-Macfarlane-Natural-Hazards-13-2-15.pdf
[46] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Dr-Mark-Yetton-Natural-Hazards-13-2-15.pdf
[47] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Mr-Anthony-Taig-Natural-Hazards-13-2-15.pdf

discussed area-wide risk assessment for landslide hazards and parameters in the risk assessments and perceptions of "conservatism"[48].

- Dr Matthew Gerstenberger from GNS Science gave evidence on the number, location and size of possible future earthquakes in Canterbury[49].

The Panel's decisions on the slope instability provisions show an evolution in thinking with concern that laissez fair approach would lead to unacceptable costs to people and society from known risks coming to pass becoming more nuanced and seeking to avoid an unduly conservative approach that could impose unjustified restrictions and compromise overly large areas of land and create unduly onerous consenting processes.

In response to concerns with the area-wide modelling of slope instability risk the panel supported methods to support ground truthing of the AIFR through individual site assessments (p55, para 211) [50]

A series of further changes to the mapping of Mass Movement Hazard Management Areas and were confirmed in Decision 53[51].

7.3 Section 32 Evaluation and further changes

The preferred option for density standards within the SIMA is to carry over the consent requirements for earthworks buildings and subdivision rather than apply the permitted and controlled activity framework in the MDRS proposed for the Medium Density Residential Zone. This option is likely to prevent intensification of development within the overlay areas.

The alternative to this is to have no slope instability provisions and to allow development within the overlays to the full extent that would otherwise be provided for by giving effect to the MDRS and Policy 3 of the NPSUD.

An assessment of the costs and benefits of the preferred approach is set out below.

Assessment of environmental economic social and cultural costs and benefits of this approach

Assessment of environmental economic social and cultural benefits
The key benefit of the slope instability provisions is to provide clear guidance for managing activities in areas with high instability to ensure risks are reduced to acceptable levels through avoidance or mitigation. Future natural hazard damages are avoided by new subdivision, use and development not occurring in areas of significant natural hazard risk and from the effectiveness of mitigation measures where development is able to proceed. Where risks are mitigated and those measures are effective, this will help build resilience, reduce risk and potentially help prevent costly remediation being required in future. Reduction in the cost of

[48] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Dr-Christopher-Massey-Natural-Hazards-13-2-15.pdf
[49] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Dr-Matthew-Gerstenberger-Natural-Hazards-13-2-15.pdf
[50] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Natural-Hazards-Part.pdf
[51] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Decision-53-Chapter-5-Natural-Hazards-Stage-3-03-11-2016.pdf

hazard events, such as loss of life and damage to property, infrastructure and the environment, can be a substantial benefit in terms of both lives, happiness and property.

The mapping provides greater certainty for areas not defined as subject to slope instability risks. The robust nature of the mapping and consent process can provide insurance companies with greater confidence and enable people to obtain insurance and more manageable insurance costs.

Assessment of environmental economic social and cultural costs

The main cost of the slope instability provisions is in lost development potential where development is avoided in areas subject to risk which is mainly a loss for individual property owners. As these are existing provisions, this cost is already 'priced-in' to land values at an individual site level.

Another cost is negative perceptions on land values for those identified as slope instability hazard management areas (cliff collapse, rockfall, mass movement areas).

The costs of obtaining specialist inputs into consent applications and assessments can be substantial, and mitigation required by the provisions will create costs for property owners.

The costs for the Council and community with natural hazard research advice, modelling, monitoring, and plan changes as information changes are another factor. These costs increase the more specific the policies and rules are and the more detailed the maps and provisions need to be.

Appropriateness in achieving the objectives/ higher order document directions

Efficiency:

The proposed approach is efficient in that the benefits in reduced or managed risk and greater certainty generally outweigh the administrative cost of these provisions and applies a nuanced approach to varying degrees of risk present in different areas. The IHP's conclusions that the provisions will promote greater consistency and reliability than relying on an independent self-certification method or individuals managing the risk to meet building consent and insurance requirements remain valid.

Effectiveness:

The proposed approach is effective in that it prevents development that may present an unacceptable degree of risk while enabling managed use of land and appropriate mitigation within the overlays and unfettered use of land outside the overlay area.

The proposed approach is enabled by the relevant provisions of the RMA. Section 77I(a) specifies that the height and density requirements under the MDRS and policy 3 of the NPSUD can be less enabling of development where a matter of national importance under section 6 (in the case the management of significant risks from natural hazards) is present.

7.4 Summary of Section 32 Evaluation

The Section 32 Reporting for the Natural Hazards provisions Part 1[52] and Part 2[53] provides in Part 1, an evaluation of proposed objectives, policies rules and methods (see pages 56-58 in particular), summary of consultation (page 68), a bibliography of relevant technical analysis (page 74) and an explanation of risk modelling on the Port Hills and Banks Peninsula (page 117). Part 2 provides an addendum to record amendments proposed to the Section 32 Report to reflect amendments proposed to "Chapter 5 – Natural Hazards" by the Stage 3 Proposal addressing revised rules from Janice Carter's Rebuttal evidence.

This analysis evaluates the appropriateness and necessity of the methods to achieve the relevant objectives, along with alternative options such reliance on self-certification and non-regulatory methods, in terms of effectiveness and efficiency, costs and benefits, and risks with acting or not acting.

An evaluation of this analysis as well as further evaluation of options reflecting comments from the Crown, under s32AA, considering options sought by submissions, was undertaken as part of the IHP hearing and decision process.

Taking this into account, retaining these existing provisions as a qualifying matter and carrying them over in their current form can be supported for the following reasons:

1. The provisions are necessary and appropriate for achieving higher order document directions. The direction in relevant higher order documents such as sections 5 and 6(b) of the RMA, the CRPS (Chapter 11), and the objectives of the CDP including the directive provisions in Chapter 3 of the CDP (objective 3.3.6) which have not changed between when these reports were prepared in 2015 and the present;
2. In relation to the higher order direction in the Enabling Housing Supply Amendment Act and NPS-UD, specific provision is made to "qualify" or make building height and density requirements less enabling of development for matters of national importance such as the management of matters of national importance in section 77I (a) of the RMA.
3. The slope instability rules and consent requirements are contained largely in chapter 5 Natural Hazards which are district wide provisions of the plan. These rules are integrated with related district wide rules such as earthworks and subdivision and with the residential chapters and can be integrated with provisions in individual zones that are to be amended as part of PC14 without significant modification.
4. As evidenced in the section 32 evaluation and material from expert witnesses considered in the plan review process, there are a number of slope instability areas in the Banks Peninsula and Port Hills areas which need to be recognised and managed where they are significant. The provisions have been informed by a significant amount of technical / expert assessment consultation and evaluation. The slope instability objectives and provisions recognise the strategic context (being section 6 matters of importance) and the costs, benefits, options, efficiency, effectiveness and risks of acting and not acting. They also reflect consideration of a range of options to protect and manage risk and to enable development where it is appropriate to do so.

52 http://resources.ccc.govt.nz/files/TheCouncil/policiesreportsstrategies/districtplanning/districtplanreview/Section32NaturalHazardsRevisedEvaluation.pdf

53 http://resources.ccc.govt.nz/files/policiesreportsstrategies/chapter5-naturalhazards%28part2%29-s32.pdf

7.5 Potential Effect of Slope Instability Provisions on Intensification

The Cliff Collapse Management Area, Rockfall Management Area, Mass Movement Management Area 1 and Remainder of Port Hills and Banks Peninsula Slope Instability Management Area overlays intersect with a large number of sites affected by the draft Housing and Business Choice Plan Change. 1,476 sites identified as potential Medium Density Residential sites intersect with the Cliff Collapse, Rockfall and Mass Movement Management Area overlays and these overlays cover an area of approximately 107.60ha's of residential land. Most of the affected sites are in the Residential Hills zone.

For some sites affected by the slope instability overlays the potential for redevelopment as a permitted activity would be limited by the 50% site coverage standard in the MDRS. 482 affected sites have an encroachment of more than 50% and those with less than 50% encroachment could otherwise develop up to 50% without needing to develop land within the overlay.

In terms of effects on capacity for comprehensive redevelopment of sites, 1,047 affected sites have a starting site size of greater than 400m^2 where the area of encroachment is greater than 100m^2. The average size of the affected sites is 1,003m^2 and the average encroachment is 385m2 (38%) giving a typical loss of potential development of 3 units per site.

Based on assumptions that sites more than 400m^2 in the Medium Density Residential zone could be comprehensively redeveloped to a density of one residential unit per 100m^2, the potential effect of retaining the Slope Instability provisions on development and intensification (and assuming that other qualifying matters and district plan rules wouldn't otherwise limit uptake of capacity for development) is in the order of 3000 residential units as set out in the following table:

Medium Density Residential Zone sites affected by CC, RF, MM Mngmnt Areas	MRZ sites over 400m^2 affected by CC, RF, MM	MRZ Sites over 400m^2 with an intersection area of more than 100m^2	Potential development prevented by the QM
1,476	1388	1,047	2,952 residential units

Effects on developing a typical site

Port Hills Road, St Martins

Figure 14. CCC Draft Plan Change 14 GIS Zoning Map. Figure 15. Canterbury Maps Property Search.

In this example, the Medium Density Residential zone is proposed to be applied to the sites identified in yellow in the figure on the left (Figure 14). The Cliff Collapse Management Area 2 and Rockfall Management Area 1 and 2 apply to the area identified in purple and with the exception of the remainder of Port Hills and Banks Peninsula Slope Instability Management Area, these overlays are proposed to be retained as a qualifying matter as shown in the figures below.

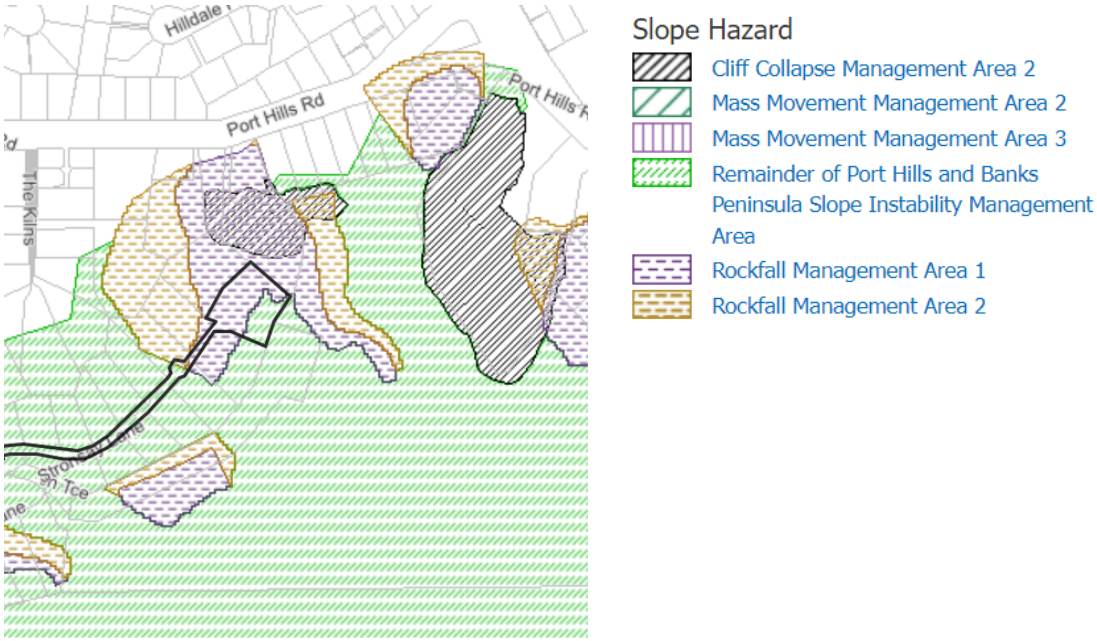


Figure 16. Christchurch District Plan Planning Map, Natural Hazard Layers.

With any proposal for comprehensive redevelopment of these sites on Port Hills Road, the effect is uncertain outside of the Cliff Collapse Management Area 2, where subdivision and new dwellings are non-complying activities and are unlikely to be granted consent. In other areas affected by these overlays, proposals for subdivision, use and development are a restricted discretionary activity that need to be assessed by a geotechnical specialist to evaluate the level of risk to people

and property from slope instability hazards and subdivision, use and development will only be allowed where risk can be reduced to an acceptable level.

The Slope Instability Management Areas will have limited effects on the potential permitted development yield of sites with less than 50% of the area affected by the overlay encroachment as permitted development on sites in the MDRS of up to 3 residential units per site can be located on the parts of the site unaffected by the overlay and site coverage is limited to 50% by the MDRS standards, regardless of the Slope Instability provisions.

8.0 Waterbody Setbacks

The CDP manages activities and development adjacent to classified water bodies and their margins in order to protect and enhance the values and functions of these areas. The characteristics of each water body classification are described in Appendix 6.11.5.1:

- Downstream waterways
- Upstream waterways
- Environmental asset waterway
- Network waterway
- Hill waterway
- Environmental asset standing water body
- Banks Peninsula waterway.

Some classified water bodies are identified on the CDP planning maps and the maps in Appendix 6.11.5.4 Water Body Classification Maps. Network and hill waterways are not shown on the planning maps or this appendix but are identified through their definitions in the Plan. Banks Peninsula waterways are not shown on the planning maps or the maps in the appendix but are natural waterways that are not network or hill waterways.

Figure 17 Christchurch waterway, Christchurch City Council Biodiversity Strategy 2008-2035, page 17

8.1 Effect of Waterbody Setbacks in the CDP

The CDP addresses different water body setbacks ranging from 5m (for network waterways) to 30m (for downstream waterways) in section 6.6 within the General Rules and Procedures chapter.

Earthworks, buildings and other structures including impervious surfaces are controlled within the setbacks and require a restricted discretionary activity consent, or discretionary consent if it involves a SES.

The provisions put limits on impervious surfaces and fencing design which could also constrain development.

The Matters of discretion for the associated consents address:

- hazards (in terms of displacement effects on adjacent properties, not impeding the function of the water body including its capability of to store or convey surface water)
- natural values (including ecological values, naturalisation of the water body and ecological corridors
- amenity and character (including visual impacts on the water body, landscaping, screening and design)
- cultural values (in terms of cultural practices, iwi management plans, archaeology and heritage, customary access, Tikanga Maori, and impacts on Wāhi Tapu, Nga Turanga Tupuna and Nga Wai)
- Access for maintenance
- Recreational use and access.

Setbacks for rural waterbodies and Natural Area Water Body Setbacks are larger than those for City and Settlement Water Body Setbacks. Christ's College and Mona Vale have their own setback rules.

	City and Settlement Water Body Setbacks	Rural Water Body Setbacks	Natural Area Water Body Setbacks
Downstream waterway	30m	30m	30m
Upstream waterway	10m	20m	20m
Environmental asset waterway	7m	10m	20m
Network waterway	5m	5m	5m
Hill waterway	10m	15m	20m
Environmental asset standing water body	7m	20m	20m
Banks Peninsula Waterway		15m	20m

A range of matters are considered in looking at new buildings and impervious surfaces in the water body setbacks including hazards, natural values, maintenance access, amenity and character, cultural values, public and recreational access and in the subdivision rules which will continue to apply. Although the provisions do not preclude development, they are highly uncertain and the number of dwellings is likely to be limited to one dwelling per site.

Of relevance to the Wāhi Tapu / Wāhi Taonga and Ngā Wai provisions the matters of discretion in rule 6.6.7 include the following:

1. *Any beneficial or adverse effects on cultural practices, including mahinga kai or customary use.*
2. *The degree to which the proposal has had regard to the objectives and policies of the Mahaanui Iwi Management Plan.*
3. *Any adverse effects on archaeological sites or historic heritage.*
4. *Any adverse effects on customary access where applicable.*
5. *The degree to which the proposal on Māori land in the Papakāinga / Kāinga Nohoanga Zone is in accordance with Tikanga Māori.*
6. *Within a site of Ngāi Tahu Cultural Significance identified in Appendix 9.5.6, the matters set out in Rule 9.5.5 as relevant to the site classification:*

0. *9.5.5.1 – Wāhi Tapu / Wāhi Taonga, Mahaanui Iwi Management Plan Silent Files and Kaitōrete Spit;*
1. *9.5.5.2 – Ngā Tūranga Tūpuna;*

2. *9.5.5.3 – Ngā Wai.*

8.2 Background to Waterbody Setbacks in the CDP

Direction in Higher Order Documents

The RMA requires Council as a matter of national importance to provide for the preservation of the natural character of wetlands, lakes, rivers and their margins and to protect them from inappropriate use and development. Section 6 also requires Council to maintain and enhance public access to and along lakes and rivers and to provide for the relationship of Māori and their culture and traditions with water and other taonga. Council must also have regard to the maintenance and enhancement of amenity values, the intrinsic values of ecosystems and the protection of the habitat of trout and salmon.

The National Policy Statement Freshwater Management 2020 requires prioritising first, the health and well-being of water bodies and freshwater ecosystems, second the health needs of people and third providing for social economic and cultural well-being of people and communities. The associated policies require giving effect to Te Mana o te Wai and a strong emphasis on establishing and achieving water quality targets.

The NZCPS 2010 includes provisions requiring reductions in contaminant and sediment loadings in stormwater at source by controls on land use activities (Policy 23).

A suite of provisions in Canterbury Regional Policy Statement 2013 requires the district plan to include objectives and policies and may include methods to control the effects of use and development of land on the values of the riparian zones of rivers and lakes, avoiding or mitigating flood hazards and protecting indigenous biodiversity and preserving natural character.

The Mahaanui Iwi Management Plan includes a number of objectives and policies related to enhancement of water quality including Policy WM12.4 that:

> *"all waterways in the urban and built environment must have indigenous vegetated healthy, functioning riparian margins" and Policy WM6.9 "to require that local authorities work to eliminate existing discharges of contaminants to waterways, wetlands and springs in the takiwa, including treated sewage, stormwater and industrial waste, as a matter of priority."*

Independent Hearing Panel Decision

The Independent Hearing Panel (IHP) considered a broad range of evidence in confirming the waterbody setbacks in the CDP:

- Alison McLaughlin gave planning evidence on water body setbacks summarising the outcomes of mediation and caucusing, protection of water body margins from inappropriate use, naturalisation of water body margins, management of activities in setbacks, classification of water bodies, setback distances and assessment matters[54].

[54] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/07/3723-CCC-Evidence-of-Alison-McLaughlin-Planning-4-2-2016.pdf

- Geoff Deavoll[55] and Andrew Willis[56] gave evidence on behalf of the Crown confirming that the issues of concern for the Crown had largely been resolved, other than several site-specific issues.
- Fiona Aston gave evidence on behalf of the Radford Family on Waterbody Setbacks supporting the water body setback provisions in the main but opposing the requirement for setbacks involving Sites of Cultural Significance to Ngai Tahu silent files to trigger a discretionary consent.
- Evidence from Matthew McCallum-Clark on behalf of network utilities provided evidence supporting the agreed provisions.

In Decision 56[57] the IHP made decisions following consideration of the section 32 evaluation report for Chapter 6 General Rules and Procedures. The Panel agreed with Ngai Tahu that restricted discretionary activity status is the most appropriate for most activities in waterbody setbacks, including Nga Wai sites and that the matter of discretion referencing the Manhaanui Iwi Management Plan should be included in the Decision Version.

The Panel did not agree with blanket requirements to limited notify applications in water body setbacks to Rūnanga and Schedule 9.5.6.4 Nga Wai sought by Ngai Tahu and required limited notification to the relevant Rūnanga when an activity is required by existing zone or district wide rules to do so and otherwise leave the Council to determine notification according to the usual site by site testing under the RMA.

The Panel agreed to reinstate the reference in Policy 6.6.3.2.3(a) to the words "to more than a minor extent" in order that it make the policy less stringent.

8.3 Evaluation of Alternate Height and Density Standards

The preferred option for density standards for development within a Waterbody setback is to carry over the current activity status for residential and commercial development (mainly restricted discretionary or discretionary activities). This option retains the CDP waterbody setbacks in preference to the setbacks in the MDRS. It does not modify the height and density standards directly and assumes additional development within the setbacks will generally be prevented or minimised.

An assessment of the costs and benefits of the preferred approach is set out below.

Assessment of environmental economic social and cultural costs and benefits of this approach

Assessment of environmental economic social and cultural benefits

[55] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/07/3721-Crown-Evidence-of-Geoff-Deavoll-Planning-water-body-setbacks-17-2-2016.pdf
[56] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/07/3721-Crown-Evidence-of-Andrew-Willis-Planning-all-other-topics-17-2-2016.pdf
[57] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Decision-56-Chapter-6-General-Rules-excluding-Noise-Airport-matters-and-Hagley-Park-10-11-2016.pdf

Retaining the setback provisions in their current form will have a range of environmental benefits in ensuring activities and development in water body margins are managed in a way that protects and/or enhances the values and functions of the water body and its margins. This includes flood management; water quality; riparian or aquatic ecosystems; the natural character and amenity values of the water body; historic heritage or cultural values; and access for recreation activities, customary practices including mahinga kai, or maintenance. These things in turn contribute to social and cultural well-being.
Assessment of environmental economic social and cultural costs
Continuing the application of the water body provisions is likely to involve substantial consent costs and create high levels of uncertainty for, or deterrence to any urban development and intensification in these areas. There is also an opportunity cost to the lost theoretical development potential and a cost to the wider public for the lost benefits that development could provide to the city.
Appropriateness in achieving the objectives/ higher order document directions
Efficiency: Consent processes (as required by the existing water body setback provisions) allows for consideration of whether amending the development design and applying conditions of consent relating to monitoring and management of earthworks and construction can address the issue in an appropriate manner within a framework that should effectively protect or enhance the values and functions of the water body and its margins. Retaining the existing provisions provides scope to explore and test the suitability of such potential solutions and will efficiently achieve the relevant objectives.
Effectiveness: The proposed approach is effective in that higher order provisions in the RMA, NZCPS and CRPS requiring integrated management of the effects of land use activities in these areas must be given effect to and would not be reconciled by alternative height and density standards. The proposed approach is effective in that it is enabled by the relevant provisions of the RMA. Section 77I(a) specifies that the height and density requirements to implement policy 3 of the NPS UD can be less enabling of development where a matter of national importance, required to be recognised and provided for (such as this), is present.
Risk of acting/not acting It is unlikely there can be adequate certainty that changing the setback height and density of development standards (such as setbacks, building coverage and landscaped area controls) will address the water body setbacks appropriately in most instances. Therefore, applying a 'one size fits all' set of alternate height and density standards to apply in areas identified as water body setbacks to allow a greater level of development as a permitted activity is unlikely to be appropriate in many situations.

8.4 Summary of Section 32 Evaluation

The section 32 reporting for the General Rules and Procedures Chapter 6[58] and the 25 July 2015 S32 Addendum[59] provides an evaluation of proposed objectives, policies rules and methods, summary of consultation, an economic impact analysis, and modelling for floor level and fill management areas. The initial report cites several studies and reports that informed the proposed provisions including:

i. A 2011 monitoring reports on the City Plan and Banks Peninsula District Plan evaluating the effectiveness and efficiency of the setback provisions generating large numbers of consents in environmental asset and utility waterways.

ii. Te Rūnanga o Ngāi Tahu, State of the Takiwa - Te Āhuatanga o Te Ihutai: Cultural Health Assessment of the Avon-Heathcote Estuary and its Catchment; 2007. This assessment of the cultural health of the Avon-Heathcote Estuary and its catchment rated the catchment as in a state of poor to very poor cultural health based on suitability for mahinga kai, physical and legal access, degree of water body modification and identification of valued and pest species.

iii. Discussions with key stakeholders including the Runanga Focus Working Group, the collaborative advisory Group, the Canterbury Water Management Strategy Implementation programme.

This analysis evaluates the appropriateness and necessity of the methods to achieve the relevant objectives, along with alternative options such as the [then] status quo, and reliance on non-regulatory methods, in terms of effectiveness and efficiency, costs and benefits, and risks with acting or not acting.

The reporting evaluates the proposed objectives for water body setbacks and evaluates the policies, rules and methods for these matters. An evaluation of this analysis as well as further evaluation of options reflecting comments from the Minister, under s32AA, considering options sought by submissions, was undertaken as part of the IHP hearing and decision process.

Retaining these existing provisions as a qualifying matter and carrying them over in their current form can be supported for the following reasons:

1. The provisions are necessary in giving effect to higher order statutory directions. The direction in relevant higher order documents such as sections 6(a) and 6(d) s6(e) and 7(c), s 7(d), s7(f), s7(h) of the RMA, the NCPS (Policy 23), the CRPS (Chapter 7 and 10), and the objectives of the CDP including the directive provisions in Chapter 3 of the CDP (objective 3.3.6 and 3.3.17) have not altered these requirements - other than possibly being strengthened with natural hazards becoming a matter of national importance and the introduction of the new NPS FM 2020;

2. As evidenced in the section 32 evaluation, water body margins play an important role in managing flooding, in the low-lying land with extensive and vulnerable settlement close to water bodies in many parts of Christchurch.

58 http://resources.ccc.govt.nz/files/TheCouncil/policiesreportsstrategies/districtplanning/districtplanreview/dpr_generalrules_section32.pdf

59 http://resources.ccc.govt.nz/files/policiesreportsstrategies/chapter6-generalrulesandprocedures-s32.pdf

3. Developments, stormwater management and earthworks in the margins of waterbodies can have a significant impact on the function and health of those water bodies. The water body setbacks help to protect aquatic and riparian habitat by encouraging planting adjacent to water bodies and managing the velocity and adulteration of stormwater runoff.
4. Christchurch's many water bodies such as the Avon and Heathcote Rivers and Te Waihora / Lake Ellesmere and Te Wairewa / Lake Forsyth make a significant contribution to Christchurch's character and provide a variety of economic benefits including tourism, commercial recreation and increased property values as well as intrinsic values that can be lost with excessive or inappropriate development.
5. Water bodies of Christchurch and Banks Peninsula are of primary importance to Ngai Tahu who as kaitiaki have a responsibility to ensure this taonga is enhanced and available to future generations.

In relation to the higher order direction in the Enabling Housing Supply Amendment Act and NPS-UD, specific provision is made to "qualify" or make building height and density requirements less enabling of development for matters of national importance such as the management of matters of national importance in section 77I (a) of the RMA.

8.5 Potential Effect of Waterbody Setbacks on Intensification

The Waterbody Setbacks affect a large number of urban residential sites where it is intended to implement the provisions of the MDRS and Policy 3 including 9,924 Medium Density Residential sites, 1,054 High density residential sites, 50 City centre zone sites, 16 Commercial Mixed Use sites, 23 Local centre zone sites, 23 Neighbourhood centre sites and 17 Town Centre zone sites. Together the intersection area of these overlays cover an area of 295.46 ha's.

The table below sets out the number of sites affected by the water body setbacks, and the average area of setback in total square metres and as a % of the site size for each of the relevant proposed zones it applies to.

Proposed Zoning	Number of Lots Affected	Average area of setback per site (m^2)	Average area of setback as % of site
Medium Density Residential	9,924	184m^2	24%
High density Residential	1,054	160m^2	26%
Commercial City Centre Mixed Use	50	117m^2	14%
Commercial Mixed Use	16	1,042m^2	17%

Town Centre	17	1,373m^2	17%
Local Centre	23	238 m^2	23%
Neighbourhood Centre	23	221 m^2	28%

Effects on residential sites

The effect of the water body setback provisions on the density that would otherwise be provided for under the MDRS and Policy 3 of the NPSUD will depend on site specifics. The proposed Medium Density Residential and High Density Residential zones apply a site coverage standard of 50% of the site, and a side and rear setback of 1m which is significantly less than the water body setbacks.

Due to the site coverage rule and yard setback rule, the water body setback provisions will generally only reduce the density of development that can be achieved on residential sites if the setback occupies more than 50% of the site, or if it is not practical to develop up to 50% building coverage in the area of the site outside the setback.

Analysis of GIS data of residential sites affected by the water body setback shows that there are 940 sites where the area affected is 50% or greater of the total area of the site and of these 640 sites are greater than 400m^2 (the size of site where it is assumed sites are more likely to be comprehensively redeveloped). In the High Density Residential Zone there are 84 sites over 300m^2 (the size of site where it is assumed sites are more likely to be comprehensively redeveloped) where the intersect with the overlay covers more than 50% of the site.

The average area of setback on residential sites affected is 24% of Medium Density Residential and 26% of High Density Residential sites. Therefore, it will at least theoretically, be possible to develop to the full density that would otherwise be enabled for the vast majority of affected sites. However, in practice, the water body setbacks are likely to constrain design and efficient use of the site in some cases.

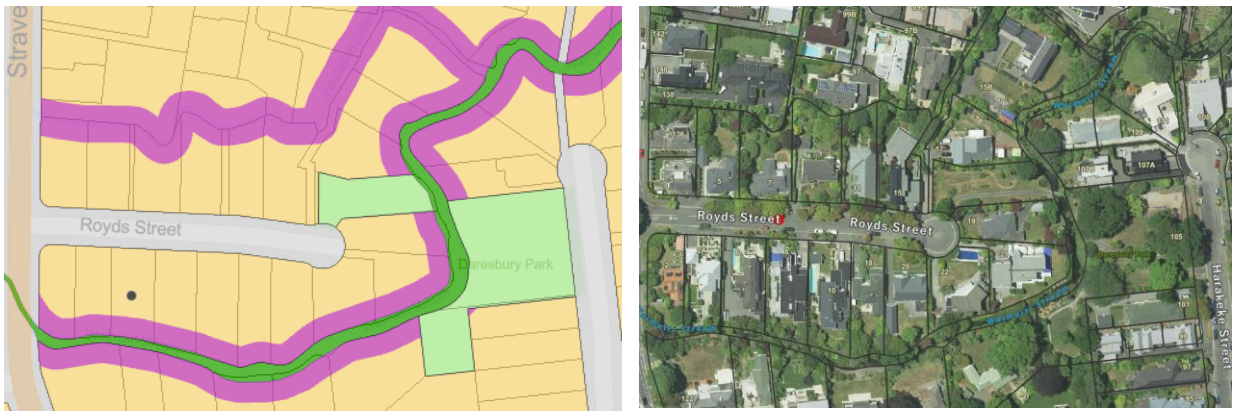
Effects on commercial sites

The water body setback provisions are likely to have a significant impact on the density that can be achieved on commercially zoned sites as these zones generally do not limit building coverage. The average coverage of the setback for commercial sites affected is between 14% and 28%. This will leave a significant area of site to develop in most cases but will also reduce the potential development of commercial floor space in the area affected.

Although many of the same caveats around the analysis of the effects on potential residential development apply to commercial development, a basic desktop analysis of commercial sites affected by the water body setback shows the provisions will lead to the loss of approximately 13,204m^2 of plan enabled commercial floor space compared to if the setback provisions did not apply.

Effects on developing a typical site

Example 1: Waimairi Stream, Royds Street, Fendalton



In the above example all 20 properties in Royds Street Fendalton (other than the reserve areas at the end of the cul de sac are proposed to be zoned Medium Density Residential, and to have the MDRS standards apply. The sites contain water body setbacks adjoining Waimairi Stream with an Upstream Waterway (10m setback) located to the south and an Environmental Asset Waterway (7m setback) located to the north of Royds Street.

Waimairi Stream is also identified as a Nga Wai feature and a significant landscape feature which trigger additional matters for assessment. Earthworks, buildings and structures including impervious surfaces, maintenance and enhancement all controlled activities residential development within the setback would be a restricted discretionary activity.

The sites range from 763 m^2 -1070 m^2 and the water body setbacks cover between 19% and 44.6% of the sites. Under this scenario the potential to enable a height and density of permitted development is likely to be unaffected as the 50% site coverage standard would be infringed by any development requiring land within the water body setback. However, in an unlikely scenario where the sites were all comprehensively redeveloped to a density of one unit per 100m^2, the waterbody setbacks would reduce the number of units enabled by 1 unit on 3 of the sites, 2 units on 11 of the sites, 3 units on one site and 4 units on one site.

9.0 Montgomery Spur Density Rule and Ridgeline Setback

The Montgomery Spur Ridgeline Setback applies through a built form standard in the Residential Hills Zone (14.7.2.6) and requires that:

> No buildings shall be erected on those parts of sites within a 10 metre elevation setback from the ridgeline as identified on Appendix 14.16.7.

The standard applies to only five properties located in the Residential Hills zone and has the effect of requiring Restricted Discretionary Resource Consent for any building within a 10 metre vertical elevation of the Montgomery Spur Ridgeline as shown in the plan contained in Appendix 14.16.7 and set out below.

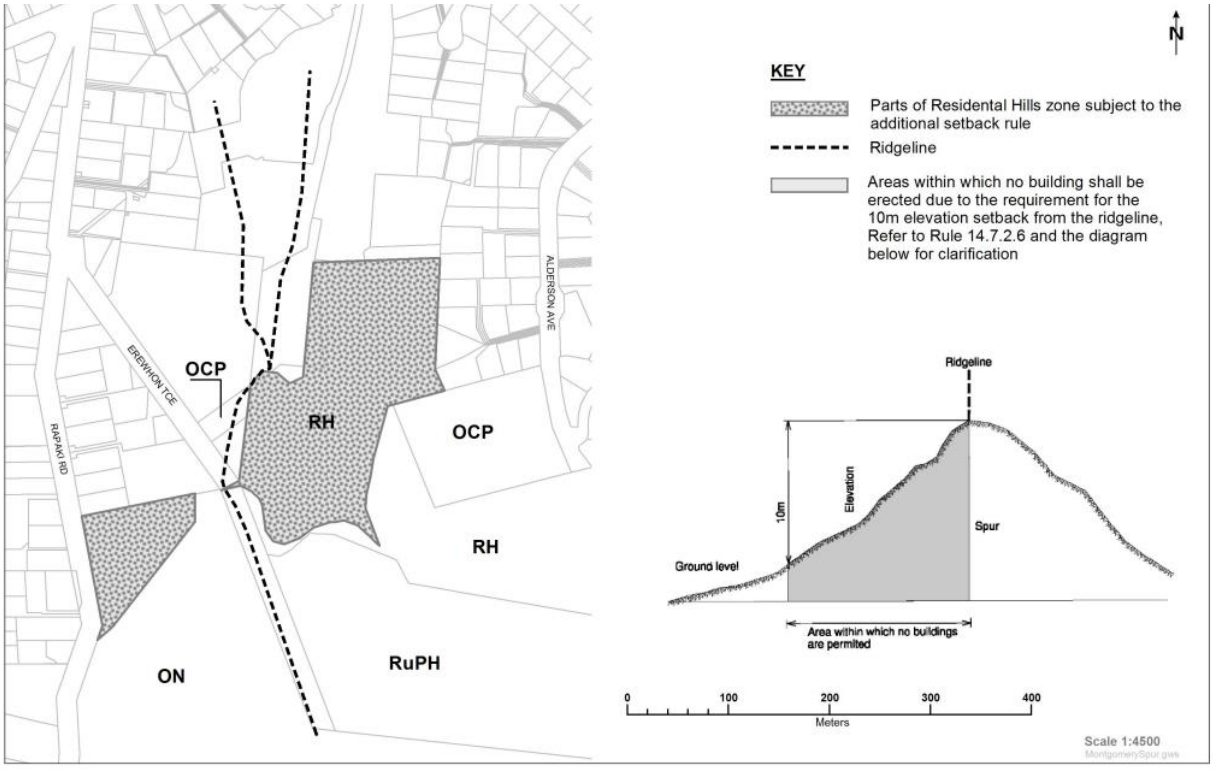


Figure 18 Christchurch District Plan, Chapter 14 Residential, Appendix 14.16.7 Montgomery Spur Minimum Building Setback from Ridgeline

There is also an accompanying activity standard in the subdivision chapter (8.6.1) which sets a 850m^2 minimum net site area within the setback area and requires that any allotment include a net site area capable of containing a complying residential unit in the area that is not subject to the building restriction.

9.1 Background to Montgomery Spur Ridgeline Setback in the CDP

The Montgomery Spur Ridegline provisions in the residential chapter were included in the notified version of the CDP[60].

The provisions were not specifically addressed in the Residential Chapter Section 32 report, but were retained in the decisions version of the plan.

The CDP also identifies Outstanding Natural Landscapes (ONLs) and Outstanding Natural Features (ONFs). There is a part of the Montgomery Spur feature within the Port Hills ONL, however this is separate from the area to which the Montgomery Spur Ridegline provisions in the residential chapter apply.

Yvonne Fluger provided landscape evidence to the IHP on behalf of CCC. This evidence discussed the boundaries of the Port Hills ONL and recommended amending the boundaries to exclude the Residential Hills zoned areas from the ONL.

60 http://resources.ccc.govt.nz/files/TheCouncil/policiesreportsstrategies/districtplanning/districtplanreview/dpr_chapter14_residential_stage2.pdf

9.2 Recommendation

As the Montgomery Spur Ridgeline area within the Residential Hills Zone area is not identified as an ONF or ONL, it does not match any of the categories for existing qualifying matters in section 77I(a) to (i), and there is little evidence to justify its elevation to meet the criteria for a qualifying matter, it is recommended that these provisions are not carried over into the Plan Change 14 version of the residential chapter of the CDP.

10.0 Wāhi Wāhi Tapu / Wāhi Taonga

The CDP contains a framework for the identification, management and protection of areas and sites of cultural significance to Ngāi Tahu - the mana whenua for the district. The provisions are intended to protect Wāhi Tapu / Wāhi Taonga sites referred to as Sites of Ngai Tahu Cultural Significance (SONTCS) from inappropriate development, and manage the effects of activities on sites such as water bodies, waipuna / springs, repo / wetlands and coastal areas and landscapes of significance.

These provisions are contained within both the zone provisions and district-wide chapters of the plan. Relevant features, sites and areas are identified on the planning maps of the District Plan GIS viewer and downloadable PDF planning maps. They are listed in schedules in Appendix 9.5.6 and in some instances (with sensitive sites that are vulnerable to disturbance or reflective on intangible Ngai Tahu values) are located in silent files, or shown on a set of Aerial Maps in Appendix 9.5.7.

10.1 Effect of Wāhi Tapu / Wāhi Taonga in the CDP

Chapter 9 Ngāi Tahu values and the natural environment Rule 9.5.4.1.3 RD1 makes all buildings restricted discretionary activities within any site of Ngāi Tahu cultural significance identified in Schedule 9.5.6.1.

Chapter 8 Subdivision Rule 8.5.1.3 RD11 provides for subdivision of land within or partly within an identified site of Ngāi Tahu Cultural Significance as a restricted discretionary activity and requires an identified building area to be identified on any allotment created and compulsory notification to relevant Rūnanga (absent their written approval).

Section 8.9 Earthworks Rule 8.9.2.3 RD5 provides for earthworks within an identified site of Ngāi Tahu Cultural Significance as a restricted discretionary activity and requires notification to relevant Rūnanga (absent their written approval).

The objectives and policies in 9.5.2 and related matters of discretion in Rule 9.5.5 for Wāhi Tapu / Wāhi Taonga, Mahaanui Iwi Management Plan Silent Files and Kaitōrete Spit, Ngā Tūranga Tūpuna, and Ngā Wai don't imply that intensification and redevelopment of sites affected by these matters is likely or unlikely to be consentable. The provisions suggest that the outcome of consultation, effects on character and effects on land and water, the sensitivity of the site and how Ngai Tahu values are recognised and addressed will need to be assessed on a case-by-case basis.

10.2 Background to Wāhi Tapu / Wāhi Taonga in the CDP

Higher order statutory documents

RMA section 6 requires those exercising RMA functions to recognise and provide for matters of national importance including:

- the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu and other taonga; and
- the protection of historic heritage [61] from inappropriate subdivision, use and development.

Section 7 directs having particular regard to kaitiakitanga and the ethic of stewardship. Section 8 directs taking into account the principles of the Treaty of Waitangi.

The need to give effect to any related provisions of the NZ Coastal Policy Statement 2010 (the NZCPS) or a Regional Policy Statement (in this case the Canterbury RPS - the CRPS) in a district plan in section 75(3) requires strong adherence to directive provisions in these higher order documents.

Objective 3 and Policy 2 of the NZCPS, Objective 1 and Policy 1 of the NPSFM, Objective 13.2.1 and Policy 13.3.1 of the CRPS expand on how these matters are to be addressed and provide consistent statutory direction featuring:

- clear recognition of the cultural and historic relationship of Māori, and in particular manawhenua, with the environment (and, in that regard, the matters referred to in s6, RMA)
- strong emphasis on consulting and working with tāngata whenua (iwi and hapū) and to take account of iwi management plans including in order to recognise kaitiakitanga, understand and respect cultural values, and identify and protect historic heritage; and
- A consistently clear direction to recognise cultural sensitivity, including with use of Silent Files.

Independent Hearing Panel Decision

The Independent Hearing Panel (IHP) considered a broad range of evidence in confirming the CDP provisions relating to Ngai Tahu Values:

- Craig Pauling's evidence addressed landscape overlays natural and cultural heritage and mediation outcomes on behalf of Ngai Tahu[62].

[61] The broad definition in the RMA of historic heritage in s6(f) includes archaeological sites, sites of significance to Māori including wāhi tapu and associated surroundings.

[62] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3723-CCC-Evidence-of-Craig-Pauling-9.2-Outstanding-Natural-Features-2-12-2015.pdf

- Lynda Marion Weastell Murchison[63], George Waitai Tikao[64], Yvonne Legarth[65] and Kyle Moore Davis[66] gave evidence for Te Runaga o Ngāi Tahu and Ngā Runanga in relation to Ngāi Tahu's relationship with the natural environment, supporting the concept of recognising cultural landscapes and discussing the relationship with outstanding natural landscapes and features.
- Shirley Ferguson gave evidence for Council on the framework of objectives and policies in the notified provisions following mediation with Ngai Tahu on 2 December 2015, rebuttal evidence on methods and rules proposed by Ngai Tahu on 15 January 2016, and supplementary evidence following the joint work program with Ngai Tahu in February in March 2016.[67]
- Alan Matheson gave evidence on the inclusion of an objective and policy framework to support rules relating to the preservation and protection of natural character and water quality of wetlands, lakes, rivers and their margins not meeting criteria as outstanding. His evidence noted concerns with lack of adequate information at that time but ultimately supported objectives and policies relating to subdivision and development seeking to protect Ngāi Tahu values for wāhi tapu and cultural landscapes[68].

The decision from the IHP on Chapter 9.5 Ngai Tahu Values[69] notes the extensive journey that the Wahi Tapu / Wahi Taonga provisions underwent before being finalised in the CDP with the Council and Ngai Tahu representatives supporting provisions that were substantially revised from those initially notified following a detailed submission from Ngai Tahu seeking extensive changes, mediation, facilitated drafting sessions and the IHP's consideration of submissions. The decision ultimately endorsed a two-tier system of provisions that apply to:

- Wāhi Tapu Wāhi Taonga identified and mapped in Schedule 9.5.1 and on the Wāhi Tapu / Wāhi Taonga Aerial Maps
- Schedule of Mahānui Iwi Management Plan Silent Files and Kaitōrete Spit mapped in an inexact way on the Wāhi Tapu / Wāhi Taonga Aerial Maps using broad circles so as not to reveal their precise location.

The Panel did not agree with blanket requirements to limited notify applications in Sites of Ngai Tahu Cultural Significance (SONTCS) to Rūnanga and Schedule 9.5.6.4 Nga Wai sought by Ngai Tahu and required limited notification to the relevant Rūnanga when an activity is required by existing

[63] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3722-Ng%C4%81i-Tahu-Evidence-of-Lynda-Murchison-10-12-2015.pdf
[64] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3722-Ng%C4%81i-Tahu-Evidence-of-George-Waitai-Tikao-10-12-2015.pdf
[65] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/12/3722-Ngai-Tahu-Evidence-of-Yvonne-Legarth-13-1-2016.pdf
[66] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3722-Ng%C4%81i-Tahu-Evidence-of-Kyle-Davis-10-12-2015.pdf and http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3722-Ng%C4%81i-Tahu-Evidence-of-Kyle-Davis-10-12-2015.pdf
[67] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/12/CCC-NCH-9.5-Ngai-Tahu-Shirley-Ferguson-Supplementary-Evidence-15-4-2016.pdf
[68] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/08/3723-CCC-Evidence-of-Alan-Matheson-Overview-2-12-2015.pdf
[69] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Decision-51-Chapter-9-Natural-and-Cultural-Heritage-Part-9.5-Ngai-Tahu-Values.pdf

zone or district wide rules to do so and otherwise leave the Council to determine notification according to the usual site by site testing under the RMA.

10.3 Summary of Section 32 Evaluation

The Panel had regard to the s32 report on the notified version of the provisions[70] but notes that the final revised version has extensively altered the provisions and gave no substantial weight to that report. The decision notes the Council's updated s32 report on the final revised version and that the s32AA evaluation in the decision is according to the evidence and related submissions and representations before the Panel[71]

The s32AA discusses the issue of requiring a consent process in relation to features that are not precisely mapped and values that are not framed with clear implications for land use and development activities. In addressing higher order direction in objectives and policies and matters raised in submissions the s32AA evaluation supports the RDA requirement for buildings and subdivision of land which includes a Wāhi Tapu or Wāhi Taonga listed in Schedule 9.5.5.1, earthworks rules and requirements to notify relevant rūnanga and Heritage New Zealand in the absence of their written approval.

According to this analysis this overlay and associated objectives, policies and rules for protection of Wāhi Tapu / Wāhi Taonga sites from inappropriate development, and the management of effects of activities on sites such as water bodies, waipuna / springs, repo / wetlands and coastal areas and landscapes of significance is appropriate to achieve the purpose of the RMA for the following reasons:

1. The RMA, CRPS and higher order objectives of the plan including key objectives 3.3.3 Ngai Tahu mana whenua, 3.3.9 Natural and Cultural Environment and 3.3.17 Wai features and values and Te Tai o Mahaanui require an effective and active approach to the identification and protection of these features.
2. Under section 77I(a) and (h) of the RMA the height and density requirements under the MDRS and policy 3 of the NPSUD can be less enabling of development for the purpose of addressing the following matters which apply to this qualifying matter:
    - the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga;
    - a matter necessary to implement, or to ensure consistency with, iwi participation legislation.
3. According to the expert evidence presented on behalf of Ngai Tahu and accepted by the IHP the provisions (following a number of amendments) are necessary in relation to intensification of development on sites containing or adjoining Wāhi Tapu / Wāhi Taonga sites and are proportionate, taking into account practical considerations around effectiveness and efficiency.

[70] http://resources.ccc.govt.nz/files/policiesreportsstrategies/chapter9-naturalandculturalheritage-s32.pdf
[71] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Decision-51-Chapter-9-Natural-and-Cultural-Heritage-Part-9.5-Ngai-Tahu-Values.pdf, see page 17

10.4 Potential Effect of Wāhi Tapu / Wāhi Taonga Provisions on Intensification

The Wāhi Tapu / Wāhi Taonga sites and areas identified in the CDP are located in areas that, for the most part, fall outside of the urban residential and commercial zones affected by the Housing and Business Choice Plan Change. For this reason, the retention of these provisions as qualifying matters will have only limited effects on the enablement of housing and commercial intensification overall.

GIS analysis identifies 47 sites where the Wāhi Tapu / Wāhi Taonga overlays intersect with a zone where the Medium Residential Zone and the MDRS standards are proposed to be applied, as well as 1 site in the High Density Residential Zone and 2 sites in the City centre zone. These 50 sites together contain an area of 3.28 hectares affected by the Wāhi Tapu / Wāhi Taonga overlays.

On these sites, and in light of the policy context and intent described above, the effect of the overlay on the amount of development enabled on the site is highly site specific. Taking a conservative approach, it is assumed that addressing the Wāhi Tapu / Wāhi Taonga provisions will reduce development yields within these overlays by half, but additional development yields on the balance of these sites will be unaffected where the balance of the area is large enough to make additional development feasible.

21 of the sites affected by this overlay have an encroachment less than 50% of the site which means that the MDRS standard limiting site coverage to 50% of a site is likely to be a greater constraint than these provisions and the overlay will not limit the height and density enabled on these sites. 18 of the sites affected are 100% covered by this overlay.

The median size of site is 641m^2, the average site encroachment is 65% giving an average loss of 419m^2 which could equate to a loss of four sites if this can be taken to represent a typical site scenario.

Proposed Zoning	Number of Lots Affected	Average area of SES per site (m^2)	Average area of SES as % of site
Medium Density Residential	47	419m^2	65%
High Density Residential	1	1025m^2	57%

11.0 Minimum building setbacks from Railway Lines

Kiwirail's railway network in Christchurch City is made up of the Main North Line, Main South Line, the Hornby Branch Line and associated spur lines and yards.

The CDP includes include built form standards for Minimum building setbacks of 4 metres from railway lines in the residential and commercial chapters. The spatial extent of these setbacks are described in the relevant zone provisions, but the extent of the setback areas are not identified on the planning maps.

As the minimum building setbacks from internal boundaries and railway lines standards apply to commercial and residential areas within the urban area of Christchurch they overlap significantly with the urban residential and commercial zones affected by PC14 and required to be up-zoned by the MRDS and under Policy 3 of the NPSUD.

Figure 19. Auckland City rail corridor, iStock by Getty Images

11.1 Effect of Minimum building setbacks from railway lines in the CDP

The railway setback provisions in the CDP apply through the Residential and Commercial Chapters as follows:

- In the residential chapter the 'Minimum building setbacks from internal boundaries and railway lines' Built Form Standards (14.4.2.7, and 14.5.2.7, and 14.8.2.4, and 14.12.2.5) requires "Buildings, balconies and decks on sites adjacent to or abutting a designated rail corridor" to be setback 4m from rail corridor boundary.
- This is supported by Objective 14.2.3 which states "*Development of sensitive activities does not adversely affect the efficient operation, use, and development of… the rail network..*"; and Policy 14.2.3.1 which requires avoidance of reverse sensitivity effects on strategic infrastructure including the rail network.
- In the Commercial Chapter – the 'Minimum building setback from railway corridor' Built Form Standards (15.4.2.9, 15.5.2.8, 15.8.2.9, 15.9.2.8) state:

- For sites adjacent to or abutting the railway line, the minimum building setback for buildings, balconies and decks from the rail corridor boundary shall be 4 metres.
- Any application arising from this rule shall not be publicly notified and shall be limited notified only to KiwiRail (absent its written approval).

These provisions generally have the effect of restricting all new development within 4 metres of the rail corridor in the commercial and residential zones to which they apply. The effect of these standards on the development potential of the sites to which they apply depends on site specifics. As the standard only applies within 4 metres of the boundary of the rail corridor

11.2 Background to NZ Railways Provisions in the CDP

Higher order statutory documents

The CRPS identifies railways as regionally significant infrastructure and requires that district plans protect the region's strategic infrastructure from the adverse effects of land use development (Policy 6.3.5).

Independent Hearing Panel Decision

Residential Chapter

The notified version of the Christchurch District Plan did not include provisions requiring Minimum building setbacks from railway lines. However, the notified plan included the following objective in the residential chapter (14.1.4 Objective – Strategic Infrastructure[72]) relevant to the railway setbacks:

> *Residential development that does not adversely affect the efficient operation, use, and development of Christchurch International Airport and Port of Lyttelton, and other strategic infrastructure.*

In its submission on the PDP, KiwiRail[73] sought amendments to this objective to refer to the rail corridor, and sought setbacks for buildings adjoining the rail corridor to manage effects on the railway corridor.

In his statement of planning evidence on behalf of Christchurch City Council, Adam Blair recommended amending a number of objectives including Objective 14.1.4 to include reference to rail operations and the rail corridor in response to the submission of Kiwirail[74].

Deborah Hewett provided expert evidence on behalf of Kiwirail to support their submission seeking setbacks for buildings adjoining the rail corridor. Ms Hewett provided the following reasons for seeking these setbacks[75]:

> *KiwiRail considers it appropriate that a setback be applied from a rail corridor boundary so that new buildings can be maintained without the need to enter the rail corridor as this raises serious health and safety issues for KiwiRail, and the risk of severe injury or worse*

[72] http://resources.ccc.govt.nz/files/TheCouncil/policiesreportsstrategies/districtplanning/districtplanreview/Chapter14Residential-part.pdf
[73] Kiwirail submission 897.
[74] Paragraph 11.7 http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Residential-Adam-Blair-12-3-15.pdf
[75] Paragraphs 3.13 – 3.20 http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/897-KiwiRail-Evidence-of-D-Hewett-20-3-151.pdf

to those who unwittingly and unlawfully enter the rail corridor. Trespass is a serious issue for KiwiRail and should not be encouraged by a need to maintain buildings on or close to the rail corridor where there is insufficient room or access to clean, paint and otherwise maintain these buildings on private property.

Ideally the setback should also apply to the extension or modification of existing buildings that take them closer to the rail corridor and the relocation of buildings.

KiwiRail considers that a 4 metre setback is appropriate as this would allow for vehicular access to the backs of buildings (e.g. a cherry picker) and would also allow scaffolding to be erected so buildings can be painted and/or maintained.

The nature of the activities within the rail corridor makes scheduling and accommodating safe access for third parties extremely difficult, and it is considered to be a significant health and safety risk for the business that KiwiRail seeks to minimise.

The need for setbacks is becoming increasingly important where intensification of development is proposed adjacent to the rail corridor.

In his rebuttal evidence Adam Blair accepted the evidence of Kiwrail and recommended that the setback rules be included in the plan[76]:

Taking into account the very significant safety issues raised by Ms Hewitt and that it is unclear whether other methods of addressing the safety issues (such as a signage and education programmes) would be effective I recommend that the setback rules be included in the plan.

The residential railway setback standards were subsequently included in the Revised Version of the Plan through Decision 10 of the IHP. In their Section 32AA evaluation the IHP noted the following[77]:

We have made a range of technical and other changes to the built form standards for the various zones included in the Revised Version (i.e. by way of deletion or amendment). In each case, we have determined on the evidence that the changes reduce unnecessary regulation and cost, and improve clarity and consistency. The changes we have made are therefore the most appropriate for achieving the relevant objectives, including the Strategic Direction objectives.

Commercial Chapter

Similarly to the residential provisions, the railway setback standards sought by Kiwirail in the Commercial Chapter were accepted by the Council's reporting officer through their statement of rebuttal evidence[78]:

I see merit in the rule put forward in paragraph 3.16 of her evidence which ensures access is maintained within a property in a manner that does not require private property owners to enter the rail corridor.

[76] Paragraph 20.3 http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Rebuttal-Mr-Scott-Blair-Residential-25-3-15.pdf
[77] Paragraph 419 http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Residential-Stage-1-decision.pdf
[78] Paragraph 27.2 http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/310-CCC-Mark-Stevenson-rebuttal-evidence-with-Annexures-A-C-included-planning-CommercialIndustrial-1-5-15.pdf

The railway setback standards were subsequently included in the Revised Version of the Commercial Chapter of the Plan through Decision 11 of the IHP[79].

11.3 Evaluation of Alternate Height and Density Standard Options

The preferred option for density standards within the railway setbacks is to carry over the 4 metre setback from the operative plan rather than apply the 1 metre setback as set out in the MDRS and proposed for the High Density Residential Zone. This option is likely to prevent all additional development within the setback area but will enable development of the remaining parts of the site.

The alternative to this is to have no railway setback provisions and to allow development within 4 metres of the railway network to the full extent that would otherwise be provided for by giving effect to the MDRS and Policy 3 of the NPSUD.

An assessment of the costs and benefits of the preferred approach is set out below.

Assessment of environmental economic social and cultural costs and benefits of this approach

Assessment of environmental economic social and cultural benefits
The key benefit of the railway setback provisions is providing for the safe and efficient operation of the strategic infrastructure that is the railway network. It also provides amenity and safety benefits to the inhabitants of the adjoining properties.
Assessment of environmental economic social and cultural costs
The main cost of the railway setback provisions is in the lost development potential within the setback area. The lost development potential is discussed further under section 11.5. As these are existing provisions, this cost is already 'priced-in' to land values at an individual site level. However, there is an opportunity cost to the lost theoretical development potential and a cost to the wider public of the lost benefits that development could provide to the city.
Appropriateness in achieving the objectives/ higher order document directions
Efficiency: The proposed approach is efficient in that the benefits generally outweigh the costs and there is minimal administrative cost to implementing these provisions.
Effectiveness: The proposed approach is effective in that it prevents development that may prevent the railway network from operating safely while enabling full use of the site outside the setback area. The proposed approach is enabled by the relevant provisions of the RMA. Section 77I(e) specifies that the height and density requirements under the MDRS and policy 3 of the NPSUD can be less enabling

[79] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Commercial-Part-and-Industrial-Part-Stage-1.pdf

of development for the purpose of ensuring the safe or efficient operation of nationally significant infrastructure such as the railway network.

11.4 Summary of Section 32 Evaluation

As the railway setback provisions were not included in the notified version of the CDP, the section 32 does not address these provisions specifically. However, the section 32 report for the Residential Chapter of the CDP identifies "managing the effects of residential activities on strategic infrastructure" as a key resource management issue[80], and identifies railways as being one of "the key infrastructure assets of strategic significance" for residential development.

According to the Section 32 report Proposed Objective 4, which addresses this issue of managing effects on strategic infrastructure, is the most appropriate way to achieve the purpose of the RMA for the following reasons:

- Strategic infrastructure assets are regionally important physical resources. Their ongoing ability to function and develop is critical to Christchurch's recovery and the long-term economic development of the region. The effects of their activities cannot realistically be expected to be entirely confined to their own sites and some regulatory control is needed to manage adverse effects of activities on affected communities. Furthermore, it is appropriate that reverse sensitivity effects on strategic infrastructure are addressed, as most of these assets were already well established before residential areas were developed.
- The need to protect strategic infrastructure is recognised in the LURP and CRPS and there is little option for the District Plan other than to implement these higher order objectives.
- The adopted objective followed consultation with statutory partners as explained in previous sections to this report. It is considered to be the most appropriate way of achieving the purpose of the RMA.

As outlined under 11.2 above the railway setback standards were included in the Revised version of the Plan through Decisions 10 and 11. The IHP provided a S32AA evaluation in support of the changes to the notified plan made through these decisions. The S32AA for Decision 10 noted the following:

> *We have made a range of technical and other changes to the built form standards for the various zones included in the Revised Version (i.e. by way of deletion or amendment). In each case, we have determined on the evidence that the changes reduce unnecessary regulation and cost, and improve clarity and consistency. The changes we have made are therefore the most appropriate for achieving the relevant objectives, including the Strategic Direction objectives.*

[80]http://resources.ccc.govt.nz/files/TheCouncil/policiesreportsstrategies/districtplanning/districtplanreview/Section32ResidentialChapter.pdf

Retaining the railway setback provisions as a qualifying matter and carrying them over in their current form can be supported for the following reasons:

4. The need to protect strategic infrastructure is recognised in the LURP and CRPS and the District Plan is required to implement these higher order objectives.
5. Under section 77I(e) of the RMA the height and density requirements under the MDRS and policy 3 of the NPSUD can be less enabling of development for the purpose of ensuring the safe or efficient operation of nationally significant infrastructure such as the railway network.
6. According to the expert evidence presented by Kiwirail and accepted by the IHP the railway setback provisions are necessary to enable the safe and efficient ongoing operation of the railway network particularly where intensification of development is proposed adjacent to the rail corridor.

11.5 Potential Effect of Railway Setback Provisions on Intensification

There is significant overlap between areas where the railway setback provisions apply, and areas that are to be up-zoned under PC14 in accordance with the NPSUD and MDRS. In total there are 581 relevant residential, and 64 commercial or mixed-use sites that are affected by the railway setback. This covers a total area of approximately 7.8 hectares. The average sized MRZ site affected by the setback is 690m^2 and the average encroachment is 87m^2 – 13% of the site area. The average sized HRZ site affected by the setback is 612m2 and the average encroachment is 130m2 (21%).

The table below sets out the number of sites affected by the railway setback, and the average area of setback in total square metres and as a % of the site size for each of the relevant proposed zones it applies to.

Proposed Zoning	Number of Lots Affected	Average area of setback per site (m^2)	Average area of setback as % of site
Medium Density Residential	447	87m^2	13%
High density Residential	34	130m^2	21%
Commercial City Centre Mixed Use	1	277m^2	11.2%
Commercial Mixed Use	48	107m^2	16.9%
Town Centre	14	998m^2	12.9%
Neighbourhood Centre	1	4755	11.9%

Effects on residential sites

The effect of the railway setback provisions on the density that would otherwise be provided for under the MDRS and Policy 3 of the NPSUD will depend on site specifics.

In relation to permitted development both the proposed Medium Density Residential and High Density Residential zones apply a site coverage standard of 50% of the site, and a side and rear setback of 1m. The railway setback of 4m will therefore apply an additional setback of 3m compared to that in the underlying zone.

Due to the site coverage rule, the railway setback provisions will generally only reduce the density of development that can be achieved on residential sites if the setback occupies more than 50% of the site, or if it is not practical to develop up to 50% building coverage in the area of the site outside the setback.

Analysis of GIS data of residential sites affected by the railway setback shows that there are only 7 sites where the area affected is 50% or greater of the total area of the site. Additionally, the average area of setback on residential sites affected is 13% of Medium Density Residential and 21% of High Density Residential sites. Therefore, it will, at least theoretically, be possible to develop to the full density that would otherwise be enabled for the vast majority of affected sites.

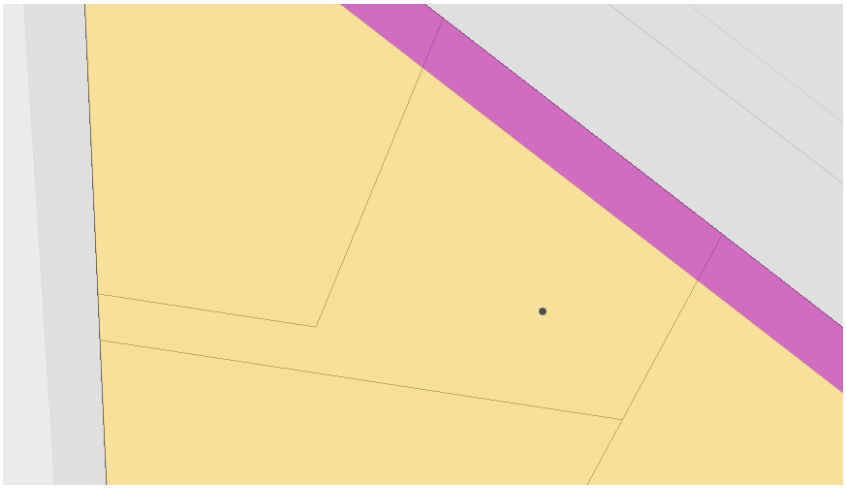
Effects on commercial sites

The railway setback provisions are likely to have a greater impact on the density that can be achieved on commercially zoned sites as these zones generally do not limit building coverage. The average coverage of the setback for commercial sites affected is between 11 and 13%. This will leave a significant area of site to develop in most cases but will also reduce the potential development of commercial floor space in the area affected.

According to analysis of commercial sites affected, the railway setback provisions will lead to the loss of approximately 10,000m^2 of plan enabled commercial floor space compared to the counter factual where the setback provisions do not apply.

Effects on developing a typical site

Example 1: 81 Scruttons Road, Heathcote



In the example above, the site at 81 Scruttons Road, Heathcote is proposed to be zoned Medium Density Residential zone, and to have the MDRS standards apply. The site adjoins the railway corridor to the north-east and the Railway Setback area is shown in purple. The site is approximately 635 m^2 and the railway setback covers approximately 17% of the site which is about the average for sites affected by the railway setback in the Medium Density Residential Zone.

In relation to the effect on a comprehensive redevelopment of the site, the site could realistically be redeveloped to a density of one unit per 100m^2 which would give a development yield of 6 residential units (minus the 1 existing unit on the site). The intersect area of the setback is 107.9m^2 so retaining the setback requirement would reduce the likely development yield by 1 residential unit.

In relation to the effect on permitted development, the MDRS provides a building coverage standard of 50% and the railway setback covers a significantly smaller area than this, so the site may still be developed to the full density provided by the MDRS. Therefore, on this site, which is typical of the MDRS sites affected, the railway setback has no practical effect on achieving the permitted height and density enabled by the MDRS.

12.0 Electricity Transmission and Distribution Corridors

The CDP includes land use and subdivision rules that regulate activities within a corridor around National Grid transmission lines, electricity distribution lines and associated support structures. These provisions are detailed below and are referred to as the *Electricity Transmission and Distribution Corridors* (land use provisions) and the *Electricity Transmission and Distribution Subdivision provisions* (subdivision provisions) for the purposes of this report.

The Electricity Transmission and Distribution lines are identified on the operative planning maps and the extent of the area that the provisions apply to is also described in the provisions themselves.

Figure 20. Los Angeles Power Towers, iStock by Getty Images

12.1 Effect of Electricity Transmission Provisions in the CDP

Electricity Transmission and Distribution Corridors

Under the CDP, in relevant Commercial and Residential zones, sensitive activities and buildings (excluding accessory buildings associated with an existing activity) are a non-complying activity[81]:

- within 12 metres of the centre line of a 110kV or 220kV National Grid transmission line or within 12 metres of the foundation of an associated support structure; or
- within 10 metres of the centre line of a 66kV National Grid transmission line or electricity distribution line, or within 10 metres of the foundation of an associated support structure; or
- within 5 metres of the centre line of a 33kV electricity distribution line or the 11kV Heathcote to Lyttelton electricity distribution line and associated support structures.

These provisions generally prevent any development of new buildings or dwellings within the Electricity Transmission and Distribution corridor area. While resource consent can technically be applied for, an applicant is unlikely to meet the threshold test in section 104D of the RMA.

These provisions are supported by Objective 14.2.3 Strategic Infrastructure in the residential chapter which states (emphasis added):

> Development of sensitive activities does not adversely affect the efficient operation, use, and development of Christchurch International Airport and Port of Lyttelton, the rail network*, the*

[81] Rules 14.4.1.5, 14.5.1.5, 14.7.1.5, 14.12.1.5, 15.4.1.5, 15.5.1.5, 15.9.1.5.

> *National Grid and the identified 66kV and 33kV electricity distribution lines and the Heathcote to Lyttelton 11kV electricity distribution line*, the state highway network, and other strategic infrastructure.

And Policy 14.2.3.1 which requires the avoidance of adverse effects on strategic infrastructure.

Electricity Transmission and Distribution Subdivision Provisions

Chapter 8 Subdivision, Development and Earthworks of the Operative Plan (rule 8.5.1.3 RD5) provides that:

- Subdivision of any site (other than an allotment to provide for a network utility) located within the following corridors is a restricted discretionary activity:
    - 37 metres of the centre line of a 220kV National grid transmission line as shown on planning maps; or
    - 32 metres of the centre line of a 66kV or 110kV National grid transmission line as shown on planning maps.
    - 32 metres of the centre line of a 66kV electricity distribution line as shown on planning maps; or
    - 24 metres of the centre line of a 33kV electricity distribution line as shown on planning maps;

Subdivision within these areas as a Restricted Discretionary activity requires that a building platform is identified on each allotment outside the areas of the Electricity Transmission and Distribution Yards identified above (12m for 220 or 110kv transmission lines, 10m for 66kv transmission and distribution lines, and 5m for 33kv distribution lines).

The effect of the subdivision provisions on development depends on site specifics but as the main effect of the provision is to ensure that building platforms are not created within the Electricity Transmission and Distribution Yards, in most cases the subdivision provisions do not constrain development additionally to the extent to which it is constrained by the non-complying activity status of the Electricity Transmission and Distribution Corridor provisions.

12.2 Background to Electricity Transmission Provisions in the CDP

Higher order statutory documents

The National Policy Statement on Electricity Transmission (NPSET) recognises the national significance of the electricity transmission network and recognises the need to manage the adverse effects of other activities on the network.

Of particular relevance is Policy 10 which states:

> *In achieving the purpose of the Act, decision-makers must to the extent reasonably possible manage activities to avoid reverse sensitivity effects on the electricity transmission network and to ensure that operation, maintenance, upgrading, and development of the electricity transmission network is not compromised.*

And Policy 11 of the NPSET which states:

> *Local authorities must consult with the operator of the national grid, to identify an appropriate buffer corridor within which it can be expected that sensitive activities will*

generally not be provided for in plans and/or given resource consent. To assist local authorities to identify these corridors, they may request the operator of the national grid to provide local authorities with its medium to long-term plans for the alteration or upgrading of each affected section of the national grid (so as to facilitate the long-term strategic planning of the grid).

The Canterbury Regional Policy Statement identifies the electricity transmission network and the electricity distribution network as strategic infrastructure. The CPRS requires that district plans protect the region's strategic infrastructure from the adverse effects of land use development (Objectives 5.2.1 and 5.2.2).

Independent Hearing Panel Decision

The notified version of the Christchurch District Plan included national grid provisions and these were modified through the hearings as a result of mediation between the Council and various infrastructure providers and other submitters. Under the notified version of the plan, sensitive activities and buildings within 'Electricity Transmission Line Corridors' were a Restricted Discretionary activity.

The IHP considered expert evidence from Transpower in relation to the National Grid Transmission line corridors and Orion in relation to the electricity distribution network.

The Electricity Transmission provisions were modified through the hearings to make sensitive activities within corridors around both the National Grid Transmission lines and the Electricity Distribution lines non-complying, rather than restricted discretionary activities.

The IHP's decision on the Residential Chapter of the Christchurch Replacement District Plan stated the following in relation to the National Grid Yard provisions[82]:

We find that non-complying activity status for activities and buildings within those setbacks is the most appropriate in the case of residential zones. That is because it signals that, within the corridor protection setbacks, sensitive activities and buildings are generally inappropriate due to the particular safety concerns and potential to interfere with the maintenance of this nationally important strategic infrastructure. We have included these changes in the Decision Version.

The IHP also found that a setback around the 66kV distribution line is the most appropriate, having regard to the matters in s32 of the RMA and the Higher Order documents, and inclusion of a corridor protection setback for the 33kV distribution line is the most appropriate way to achieve Strategic Directions Objective 3.3.12 and to give effect to the CRPS.[83]

Regarding the inclusion of rules relating to corridor protection setbacks from the 11kV Lyttelton to Heathcote electricity distribution line, the IHP directed that a proposal to include such setbacks should be notified as an additional proposal. The additional proposal was considered by the IHP in

[82] http://chchplan.ihp.govt.nz/wp-content/uploads/2015/03/Residential-Stage-1-decision.pdf
[83] Decision 10 Paragraphs 242 to 282.

a separate decision where they found that these provisions will be the most appropriate to achieve the strategic directions and objectives in Chapter 14 Residential and will give effect to the CRPS.[84]

12.3 Evaluation of Alternate Height and Density Standards

The preferred option for the Electricity Corridors is to carry over the non-complying activity status for development within the corridor areas. This option does not modify the height and density standards directly but will have the effect of preventing all additional development within the corridor area, while still enable full development of the remaining parts of the site.

The alternative to this is to have no Electricity Corridor provisions and to allow development in these areas to the full extent that would otherwise be provided for by giving effect to the MDRS and Policy 3 of the NPSUD.

An assessment of the costs and benefits of the preferred approach is set out below.

Assessment of environmental economic social and cultural costs and benefits of this approach

Assessment of environmental economic social and cultural benefits
The key benefits of the preferred approach are to allow ongoing efficient operation of the nationally significant infrastructure that is the electricity transmission and distribution network. This approach also provides benefits in protecting the occupants of adjoining properties from the adverse effects of that infrastructure on them.
Assessment of environmental economic social and cultural costs
The main cost of the Electricity Corridor provisions is in the lost development potential within the corridor area. The lost development potential is discussed further under section 12.5. As these are existing provisions this cost is already 'priced-in' to land values at an individual site level. However, there is an opportunity cost to the lost theoretical development potential and a cost to the wider public of the lost benefits that development could provide to the city.
Appropriateness in achieving the objectives/ higher order document directions
Efficiency: The proposed approach is efficient in that the benefits generally outweigh the costs and there is minimal administrative cost to continuing to implement these provisions.
Effectiveness: The proposed approach is effective in that it prevents development that may have an adverse effect on the operation of the Electricity Transmission and Distribution networks while generally enabling full use of the site outside the corridor area.

[84]Paragraph 23 https://proposeddistrictplan1.ccc.govt.nz/assets/Documents/proposed-Christchurch-Replacement-District-Plan/Decision-36-Residential-Stage-1-11KV-Heathcote-to-Lyttelton-Electricity-Distribution-Line-Proposal-12-08-2016.pdf

The proposed approach is enabled by the relevant provisions of the RMA. Section 77I(e) specifies that the height and density requirements under the MDRS and policy 3 of the NPS UD can be less enabling of development for the purpose of ensuring the safe or efficient operation of nationally significant infrastructure such as the Electricity Transmission and Distribution networks.

Additionally, the approach with regards to the National Grid Electricity Transmission Corridors is enabled by section 77I(b) which specifies that the height and density requirements under the MDRS and policy 3 of the NPS UD can be less enabling of development for the purpose of giving effect to a national policy statement, in this case the NPSET.

12.4 Section 32 Evaluation and further changes

The section 32 report for the Residential Chapter of the notified version of the CDP identifies "managing the effects of residential activities on strategic infrastructure" as a key resource management issue[85], and identifies railways as being one of "the key infrastructure assets of strategic significance" for residential development.

According to the Section 32 report Proposed Objective 4, which addresses this issue of managing effects on strategic infrastructure, is the most appropriate way to achieve the purpose of the RMA for the following reasons:

- Strategic infrastructure assets are regionally important physical resources. Their ongoing ability to function and develop is critical to Christchurch's recovery and the long-term economic development of the region. The effects of their activities cannot realistically be expected to be entirely confined to their own sites and some regulatory control is needed to manage adverse effects of activities on affected communities. Furthermore, it is appropriate that reverse sensitivity effects on strategic infrastructure are addressed, as most of these assets were already well established before residential areas were developed.
- The need to protect strategic infrastructure is recognised in the LURP and CRPS and there is little option for the District Plan other than to implement these higher order objectives.
- The adopted objective followed consultation with statutory partners as explained in previous sections to this report. It is considered to be the most appropriate way of achieving the purpose of the RMA.

As outlined under 11.2 above, the Electricity Transmission provisions were modified through the hearings to make sensitive activities within corridors around both the National Grid Transmission lines and the Electricity Distribution lines non-complying, rather than restricted discretionary activities. The IHP provided a S32AA evaluation in support of the changes to the notified plan made through these decisions. The S32AA for Decision 10 noted the following with regard to the *National Grid and electricity distribution lines and proximate activities and structures*:

[85]http://resources.ccc.govt.nz/files/TheCouncil/policiesreportsstrategies/districtplanning/districtplanreview/Section32ResidentialChapter.pdf

On the matter of strategic and other infrastructure, we were significantly assisted by the mediation and engagement that occurred between the Council and various infrastructure and other submitters. Most of the provisions we have included in the Decision Version are the product of the consensus reached. We are satisfied that those provisions properly give effect to the CRPS and accord with other Higher Order Documents. Given that, and in light of the consensus reached, we are also satisfied that the provisions are the most appropriate.

Retaining the Electricity Transmission and Distribution Corridor provisions as a qualifying matter and carrying them over in their current form can be supported for the following reasons:

1. The need to protect strategic infrastructure is recognised in the LURP and CRPS and the District Plan is required to implement these higher order objectives.
2. Under section 77I(b) of the RMA the height and density requirements under the MDRS and policy 3 of the NPSUD can be less enabling of development for a matter required in order to give effect to a national policy statement. The National Policy Statement on Electricity Transmission (NPSET) recognises the national significance of the electricity transmission network and recognises the need to manage the adverse effects of other activities on the network.
3. Policy 11 of the NPSET requires that local authorities consult Transpower to identify an appropriate buffer corridor within which sensitive activities (such as residential development) will generally not be provided for in plans and/or given resource consent. According to Transpower the Electricity Transmission provisions are necessary to protect the safe and efficient operation of the National Grid.
4. Under section 77I(e) of the RMA the height and density requirements under the MDRS and policy 3 of the NPSUD can be less enabling of development for the purpose of ensuring the safe or efficient operation of nationally significant infrastructure such as the electricity transmission and distribution networks.

According to the IHP and informed by the expert evidence presented on behalf of Transpower and Orion the Electricity Transmission and Distribution Setback provisions give effect to the CRPS and other higher order documents and are most appropriate.

12.5 Potential Electricity Transmission Provisions on Intensification

There is significant overlap between areas where Electricity Transmission and Distribution Corridor provisions apply, and areas that are to be upzoned under PC14 in accordance with the NPSUD and MDRS. In total there are 999 relevant residential sites intended to be zoned MRZ, and 147 commercial or mixed-use sites that are affected by the Electricity Corridor provisions. This covers a total area of approximately 54 hectares (roughly 42 hectares residential and 12 hectares commercial and mixed use).

The level of development that would be prevented by the non-complying activity status within the Electricity Transmission and Distribution Corridor areas is likely to be all additional development within the area affected. The effect of the Electricity Corridor provisions on the density that would otherwise be provided for under the MDRS and Policy 3 of the NPSUD will depend on site specifics. While resource consent can technically be applied for, an applicant is unlikely to meet the threshold test in section 104D of the RMA.

The table below sets out the number of sites affected, and the average area of corridor coverage on each site in square metres and as a percentage for each of the relevant zones.

Proposed Zoning	Number of Lots Affected	Average area of corridor per site (m^2)	Average area of corridor as % of site
Medium Density Residential	999	232m^2	34.3%
Commercial Mixed Use	133	191m^2	37.7%
Local Centre	11	1143m^2	34.3%
Neighbourhood Centre	3	26m^2	18.9%

Effects on residential sites

The effect of the Electricity Corridor provisions on the density that would otherwise be provided for under the MDRS and Policy 3 of the NPSUD will depend on site specifics.

The proposed Medium Density Residential Zone, which gives effect to the MDRS, applies a site coverage standard of 50% of the site. As the average encroachment of the Electricity Corridors is 34.3% of the site in the Medium Density Residential zone, most sites will still be able to develop to the maximum density permitted within the zone unless there are specific constraints preventing the development of the part of the site outside of the corridor area. However, there are a significant number of Medium Density Residential sites where the corridor covers more than 50% of the site or greater, meaning there will be a loss of development potential that would otherwise be provided.

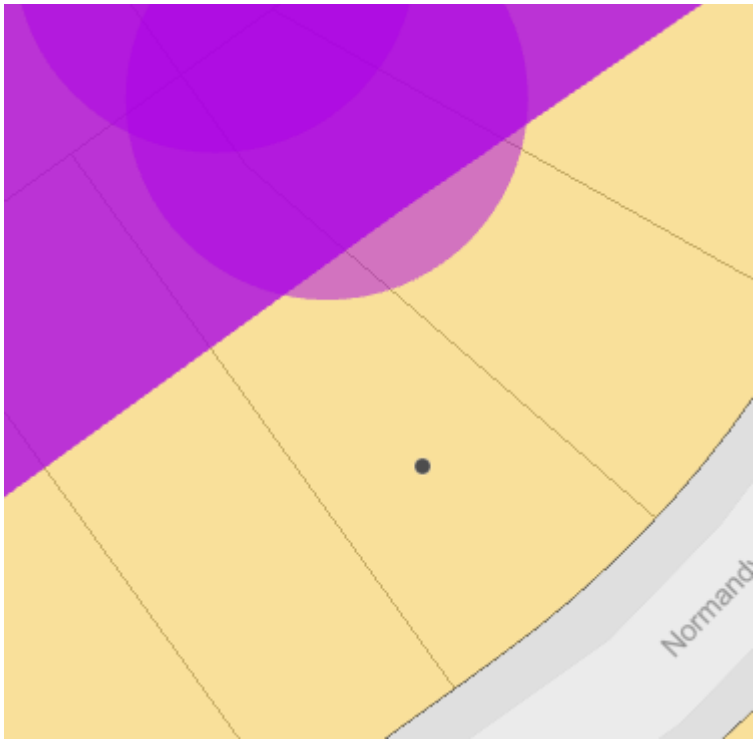
Additionally, on many sites it will not be possible to develop to the full MDRS density even if the electricity yard area occupies less than 50% of the site due to the practical needs of building placement.

Effects on commercial sites

The effect of these provisions on the density that would otherwise be provided for in commercial areas under Policy 3 of the NPSUD will also depend on site specifics. As site coverage is generally unconstrained by the provisions of the commercial zones the electricity corridor provisions are likely to have a greater effect on development on each commercial site affected in comparison to the residential sites.

According to analysis of commercial sites affected, the electricity corridor provisions will lead to the loss of approximately 18,635m^2 of plan enabled commercial floor space compared to if the corridor provisions are not applied.

Example 1: 35 Normandy Street, Bishopdale



In the example above the site is proposed to be zoned Medium Density Residential, and to have the MDRS standards apply. The site is encroached by the Electricity Corridor area to the north-west as shown in purple. The site is approximately 688m^2 and the Electricity Corridor covers approximately 29.2% of the site. This is an approximately typical site size and yard encroachment percentage for the Medium Density Residential sites affected. In this example it will still be theoretically possible to develop to the full density provided by the MDRS by developing the site to 50% coverage in the part of the site outside the yard area. However, the Electricity Transmission and Distribution provisions will prevent the site from being subdivided in two, and each of the resulting sites developed with three dwellings as would be possible under the MDRS provisions.

13.0 State Highway Provisions

The Noise, Transport, Subdivision, Residential and Commercial Chapters of the CDP contain a number of provisions relating to the State Highway network that may apply in areas where the MDRS or Policy 3 of the NPSUD apply. These provisions relate to noise insulation, high trip generation, and state highway access and include:

6.1.7.2.1 General Rules and Procedures, Sensitive activities near roads and railways

7.4.2.2 Transport, Controlled activities – outside the Central City

7.4.3.10 Transport, High trip generators

8.4.1.1 Subdivision - notification

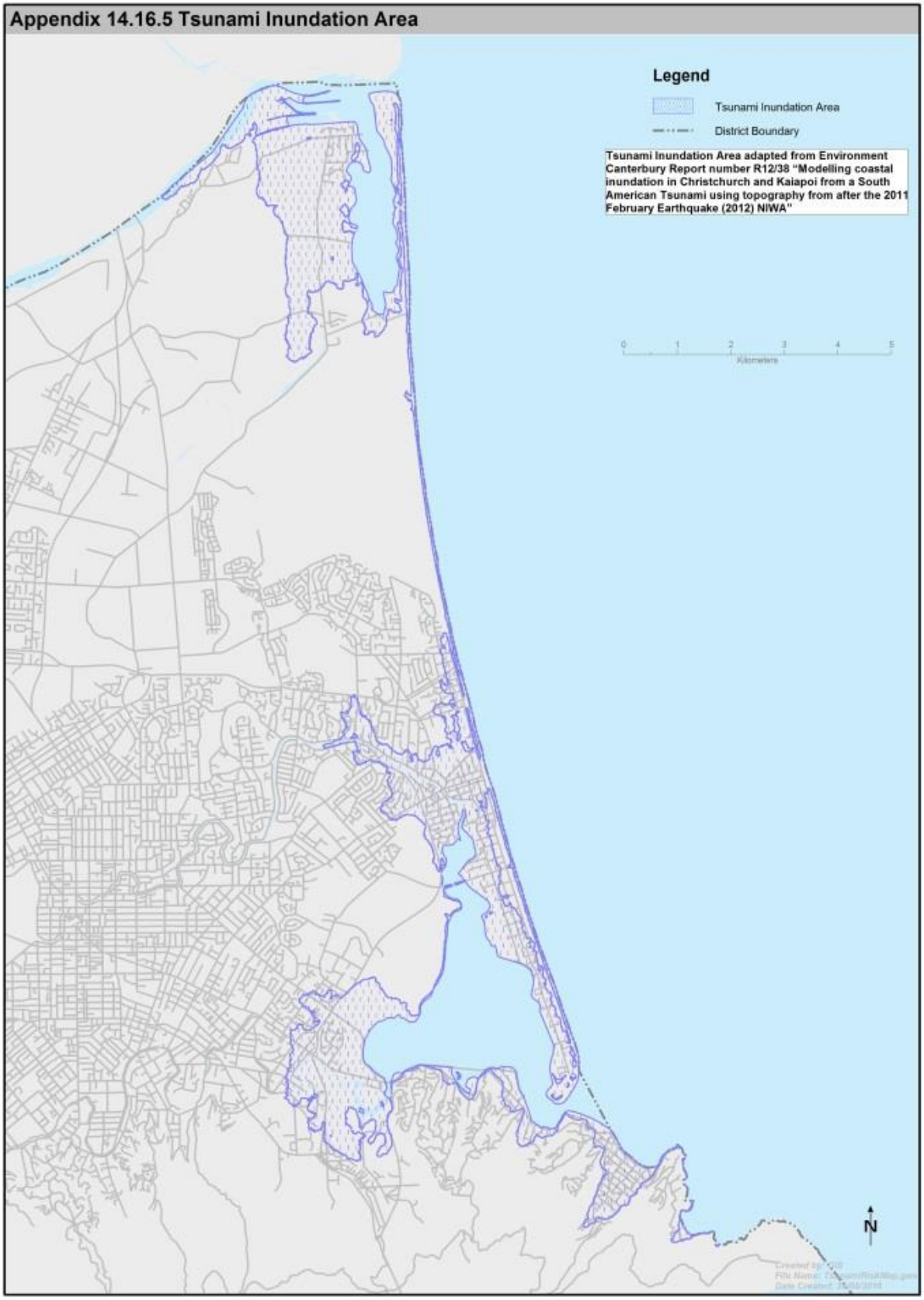
14.4.3.2.7 Residential – Noise insulation

14.13.3.10 Residential – Acoustic Insulation

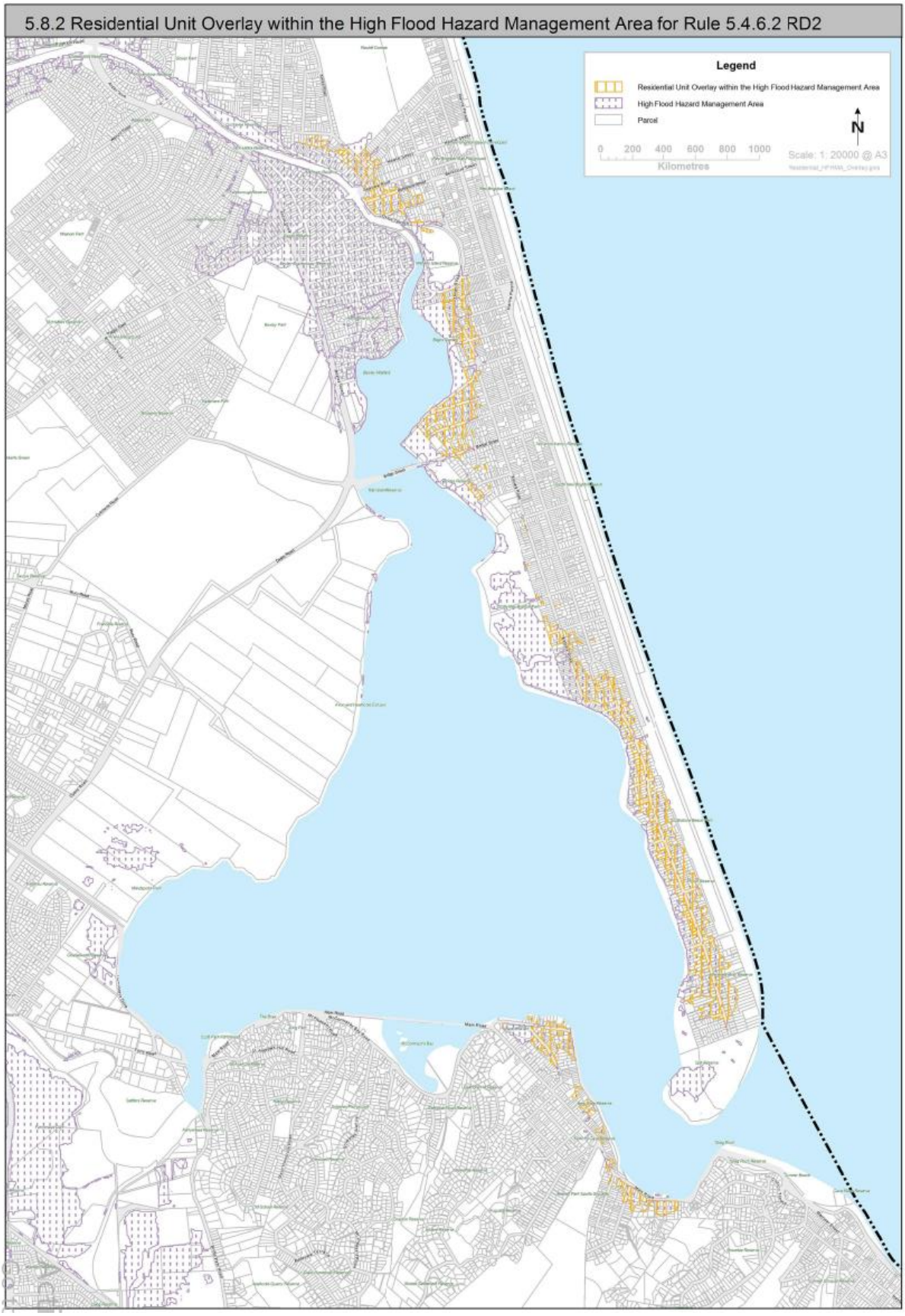
15.13.4.3.3 Commercial – Design and amenity

Having reviewed these provisions, it is concluded that they ultimately do not make the MDRS and the relevant building height or density requirements under policy 3 less enabling of development. That is, although the provisions apply additional standards to the prescribed MDRS standards, it will still be possible to achieve the heights and densities required by the MRDS and Policy 3 with these provisions in place. Therefore, it is concluded that these provisions can be retained without the need to justify them as qualifying matters under section 77I and section 77K of the RMA.

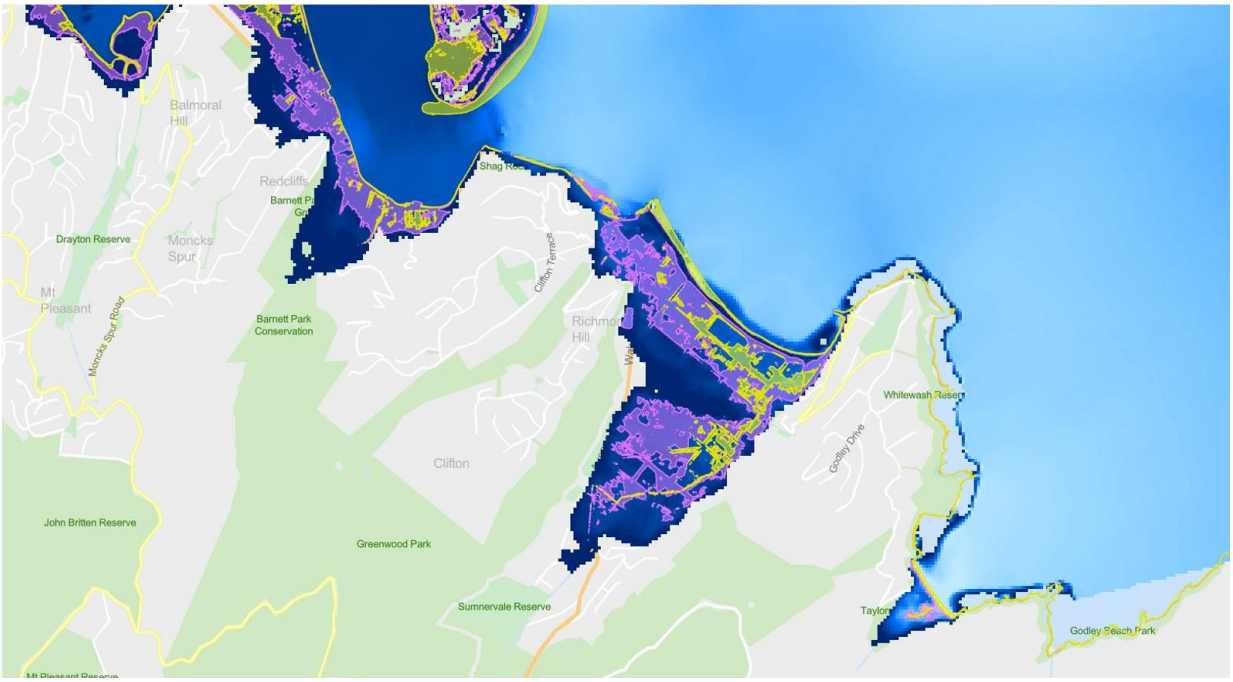
Appendix 1 Tsunami Inundation Area

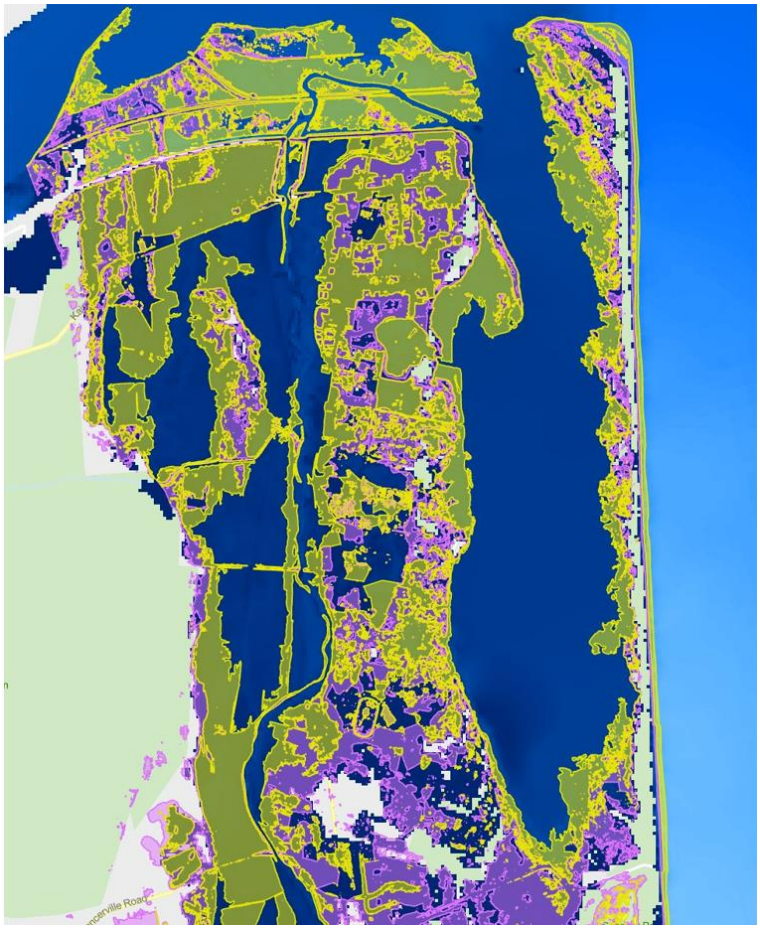


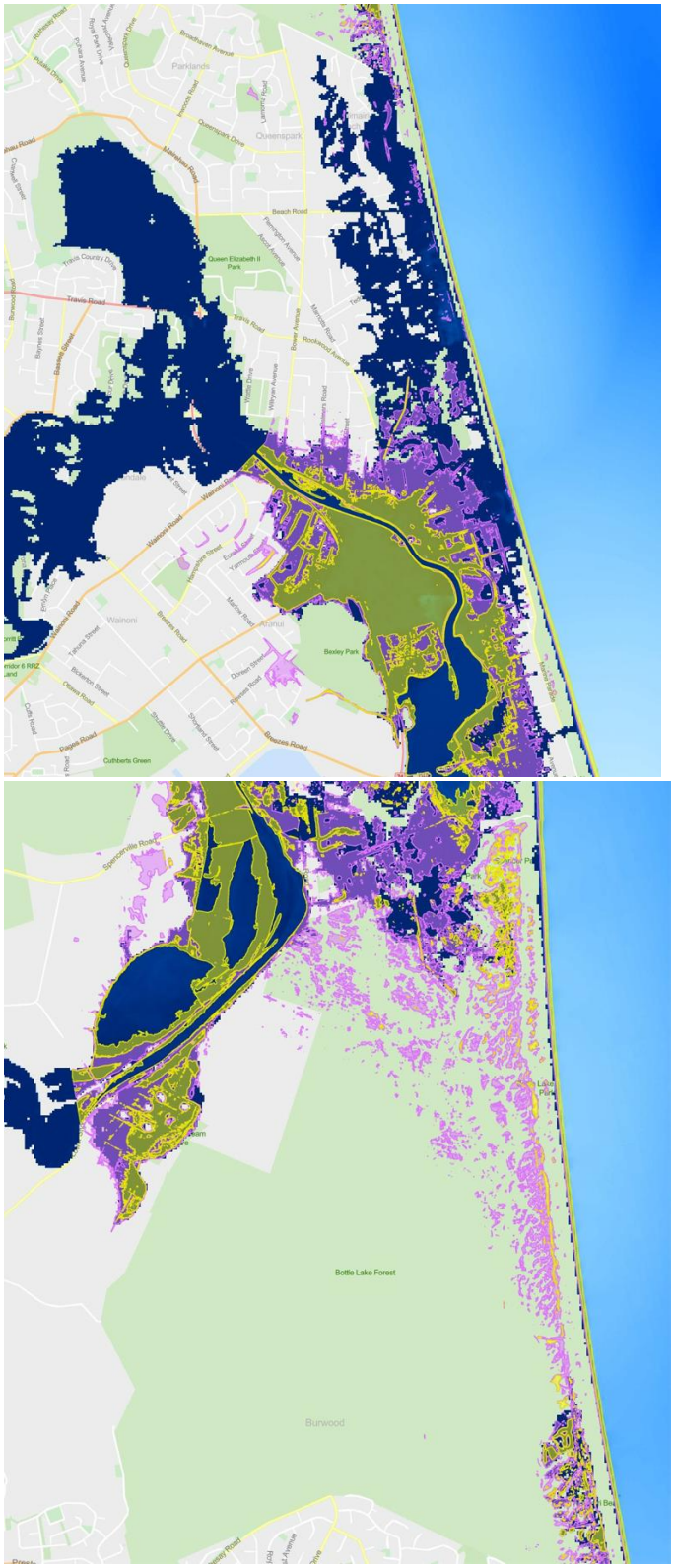
Appendix 2 Residential Unit Overlay Map

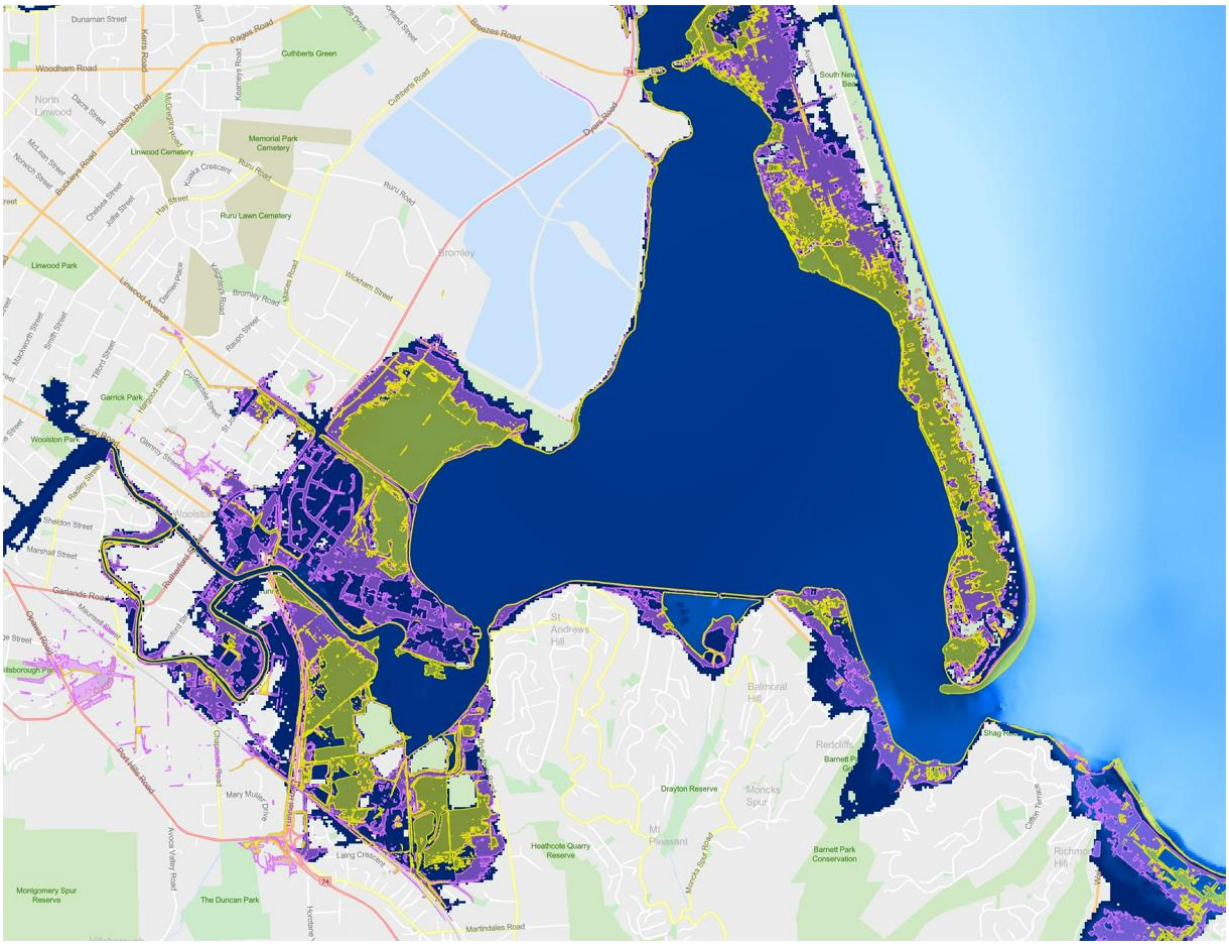


Appendix 3 Tsunami Inundation Area and Coastal Inundation Area Concurrence






Parklands
Queenspark
Beach Road
Travis Road
Wainoni
Bexley Park
Cuthberts Green
Bottle Lake Forest
Burwood


Dunaman Street
Pages Road
Cuthberts Green
Woodham Road
North Linwood
Linwood Cemetery
Memorial Park Cemetery
Ruru Lawn Cemetery
Linwood Park
Garrick Park
Bromley
Ruru Road
Wickham Street
Bromley Road
Breezes Road
Cuthberts Road
Drake Road
South New Brighton
St Andrews Hill
Balmoral Hill
Redcliffs
Barnett Park Conservation
Drayton Reserve
Monacks Spur
Mt Pleasant
Heathcote Quarry Reserve
Montgomery Spur Reserve
The Duncan Park
Martindales Road
Richmond Hill