

Revised Draft Cranford Regeneration Plan

Proponent: Christchurch City Council

June 2017



Purpose of this document

This draft Cranford Regeneration Plan has been prepared in accordance with the Outline – Proposed Cranford Regeneration Plan.

The document has incorporated changes as appropriate in response to public comments made in response to the Draft Plan that was notified on 30 March 2017. Subject to any further changes to be made either from the 'Section 29' Parties, or those who made comments, the Draft Plan will be presented to the Christchurch City Council. If approved, it will then be submitted to Regenerate Christchurch for review under Section 36 of the Greater Christchurch Regeneration Act.

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Executive Summary

The Christchurch City Council has prepared a draft Cranford Regeneration Plan for the regeneration of approximately 125 hectares of land in Papanui/St Albans that is currently zoned Rural Urban Fringe. The draft Plan Area is an anomalous rural open space within northern Christchurch being surrounded on all sides by planned or existing urban development, and in close proximity to social infrastructure, the Papanui/Northlands centre, and strategic transport infrastructure. A large part of the draft Plan area comprises the Cranford Basin - a major natural ponding and stormwater management area that is critical to reducing the flood risk to urban Christchurch (Pūharakekenui/Styx and Avon River/ Ōtākaro River Catchments), and which is planned to be transformed over the next decade into a multi-purpose forested wetland.

The Council has investigated development options for the draft Plan area, with a focus on land that is outside of the flood ponding area. Whilst land within the Cranford Basin itself is not appropriate for urban development, some land at the edges is considered by the Council to be suitable for housing. Technical investigations reveal that there are some limitations for development due to peaty soils, natural flood ponding areas, artesian springs and seeps. These challenges can however be addressed with careful management at the time of development, and at the same time provide opportunities for a unique residential environment and enhancement of natural water features. The proposed residential areas will support local schools and community facilities and other amenities, are well serviced by public transport options, and their development will provide improved connectivity for walking/cycling and open space networks for both new and existing communities.

The draft Cranford Regeneration Plan proposes to enable residential development through removing the Projected Infrastructure Boundary, making other amendments to Map A in Chapter 6 of the Canterbury Regional Policy Statement, and inserting appropriate residential zoning provisions, including an Outline Development Plan, into the Christchurch District Plan. There are also other supporting commitments to assist landowners in expediting and facilitating urban residential development on the land; and to fund the recreational opportunities, walking and cycle connections and other public amenities within the stormwater management area. These initiatives are directed towards achieving the long term (30 year) integrated vision for the regeneration of the area.

The Plan also signals future potential zoning changes for the remaining land. These include possible additional residential zones in the vicinity of Winters Road, and zoning of the Cranford Basin stormwater facility to Open Space (Natural) to recognise its ecological, cultural and recreational potential. These potential changes are not being sought through Ministerial Direction and if they are to proceed, will be undertaken using normal RMA processes.

If developed in accordance with the draft Cranford Regeneration Plan, the Cranford Basin stormwater management area will be surrounded by innovative and low impact residential development in conjunction with the enhancement of natural water features, open space networks and walking/cycling connections, all of which will contribute to the recovery and regeneration of Papanui/St Albans and Greater Christchurch.

1 Regeneration vision, goals and scope of the draft Regeneration Plan

The Outline approved by the Minister sets out the purpose, objective and scope of the draft Plan. These have been incorporated, and elaborated on, into the vision and goals. The overall vision for the draft Plan area, is that by 2030, the Cranford Basin stormwater management area will be surrounded by innovative and low impact residential development in conjunction with the enhancement of natural water features, open space networks and walking/cycling connections, all of which will contribute to the recovery and regeneration of Papanui/St Albans and Greater Christchurch.

The vision will be achieved by incorporating the following outcomes:

1. A multi-purpose, naturalised, storm water management facility bordered by innovative housing developments, integrated into the surrounding existing urban area and public infrastructure using principles of low impact urban design¹;
2. A multi modal movement network serving the area and linking into the surrounding neighbourhoods and strategic transport network;
3. New development that recognises and responds to the natural hazard risks and specific geotechnical conditions of the land;
4. Recognition and enhancement of ecological and Ngāi Tūāhuriri/ Ngāi Tahu values through sensitively designed development that provides a positive contribution to Cranford Basin and the local water environment; and
5. Urban residential development that sets a high benchmark for the long term rejuvenation of adjoining neighbourhoods

As a first step towards achieving this vision, the following goals have been set for the Area's regeneration, management and use.

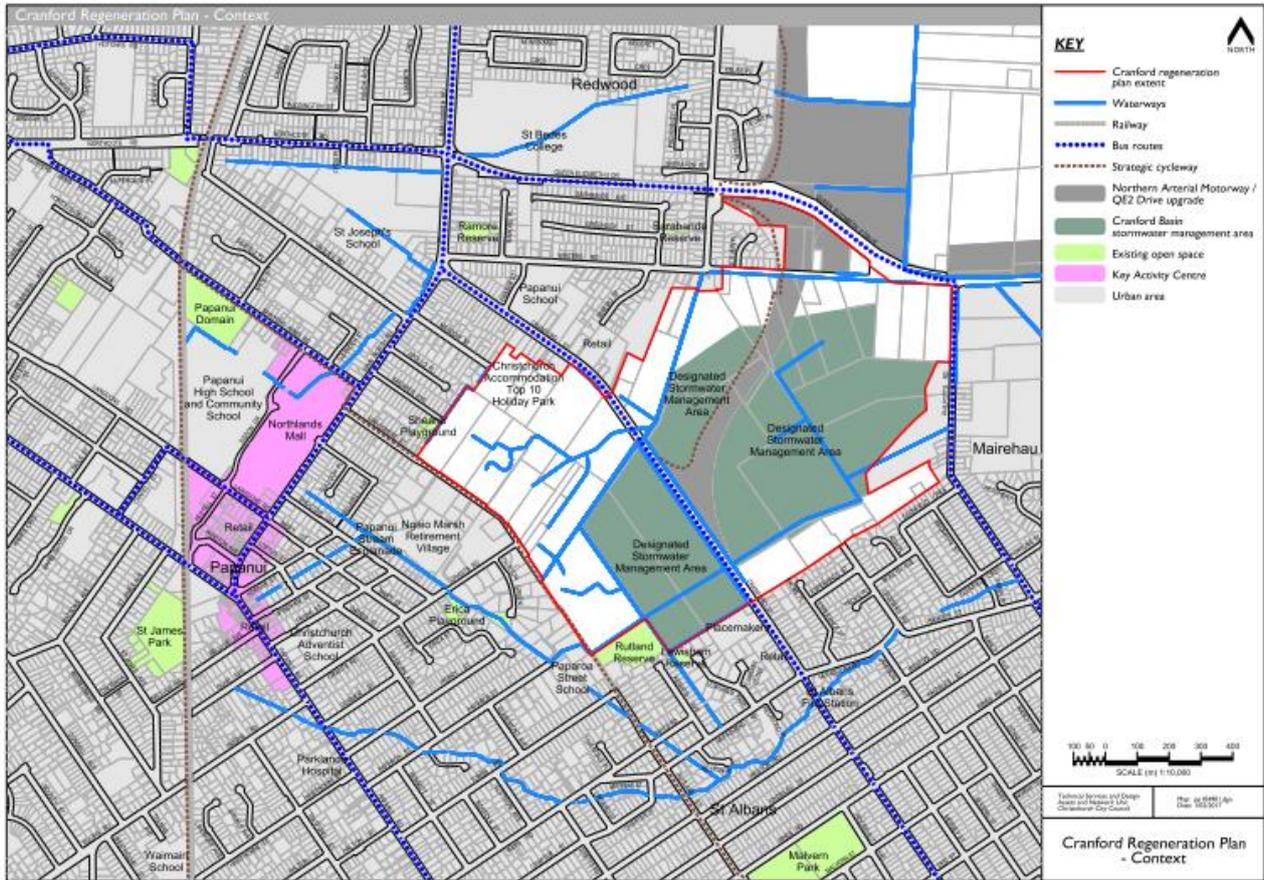
- Goal 1:** Residential development, in appropriate areas, that provides for a choice of housing types, sizes and densities to provide for a range of housing needs and help meet the household growth targets for Greater Christchurch.
- Goal 2:** Residential development that promotes sustainability through innovative architecture, low impact ('exemplar') urban design and integration with adjoining residential areas.
- Goal 3:** Integration of new residential areas with infrastructure (including the proposed Northern Arterial Extension, public transport, and water and waste networks), walking/cycling networks, and future planned enhancements for Cranford Basin as a major stormwater management facility and public open space asset.
- Goal 4:** Development that is designed and located to avoid, recognise or respond to risks from natural hazards and the specific geotechnical conditions of the land.
- Goal 5:** Development that provides for and, where possible, enhances ecological values, particularly in-stream values.
- Goal 6:** Development that enhances, provides for and protects Ngāi Tūāhuriri/ Ngāi Tahu values, including through low impact built development that is sensitive to the geo-hydrological features of the draft Plan Area and surrounding environment.
- Goal 7:** Support the development of the draft Plan area in an efficient and timely manner.

¹ 'An integrating framework for site and catchment-based design that recognises the value of natural processes and the role they can play in providing multiple outcomes for urban development', Low Impact Urban Design and Development: The Big Picture, Marjorie van Roon and Henri van Roon Landcare Research Science Series No. 37, Maanaki Whenua Press.

Goal 8: Long term enhancement of Cranford Basin as a major storm water management facility and public open space asset.

The geographic extent of the draft Plan Area is shown in Figure 1. The entire area is wholly within the *Christchurch District*.

Figure 1. The draft Cranford Regeneration Plan area and surrounding features and facilities



2 Why a Regeneration Plan?

Assessments undertaken by the Council³ have indicated that the rural productive potential of the land has diminished to the point where rural activities are no longer economically viable and that residential development on land outside the Cranford Basin stormwater facility will provide economic and social regeneration benefits to the City compared to other urban uses such as retailing or industry.

Development of the area in accordance with the above goals will contribute towards regeneration by providing for a range of housing types and densities within close proximity of the Papanui/Northlands Key Activity Centre, community infrastructure and sustainable transport options (see Figure 1). These new housing areas will be integrated into a multi-purpose urban stormwater management facility that will be designed to enhance the area's ecology, and provide additional recreation opportunities for the local and wider community.

² As defined by the Greater Christchurch Regeneration Act 2016.

³ Refer to the Supporting document, Part 9.

The resource value of the Cranford Basin stormwater management area and its regeneration potential can be enhanced and diversified through its potential integration with existing and proposed open space linkages, its passive recreation potential, and enhancement of natural water features in the area.

Land that is not required for stormwater management is located close to existing established residential neighbourhoods, providing opportunities for new well integrated residential development, consolidating the urban form, and providing housing in an area where there is evident market demand. A further benefit of facilitating the urbanisation of areas adjacent to Cranford Basin in advance of the Basin's development as a stormwater management facility, is that this will also ensure its design and function is fit for purpose over the longer term

The Canterbury Regional Policy Statement (CRPS) and the Christchurch District Plan (CDP) are currently a barrier to achieving this regeneration. The CRPS provides that urban development can only happen within existing urban areas or identified greenfield priority areas as shown on Map A of the CRPS. The draft Plan area is not identified as existing urban area nor a Greenfield Priority Area on Map A – refer to Figure 2 - and therefore cannot be zoned for urban activities, including an appropriate residential zone, in the CDP. The CDP currently zones the area as Rural Urban Fringe.

A regeneration plan provides a focused and expedited process for achieving the regeneration objectives while enabling the draft Plan area to be rezoned in a co-ordinated way. A regeneration plan is preferable to other legal methods to enable changed use of the area because:

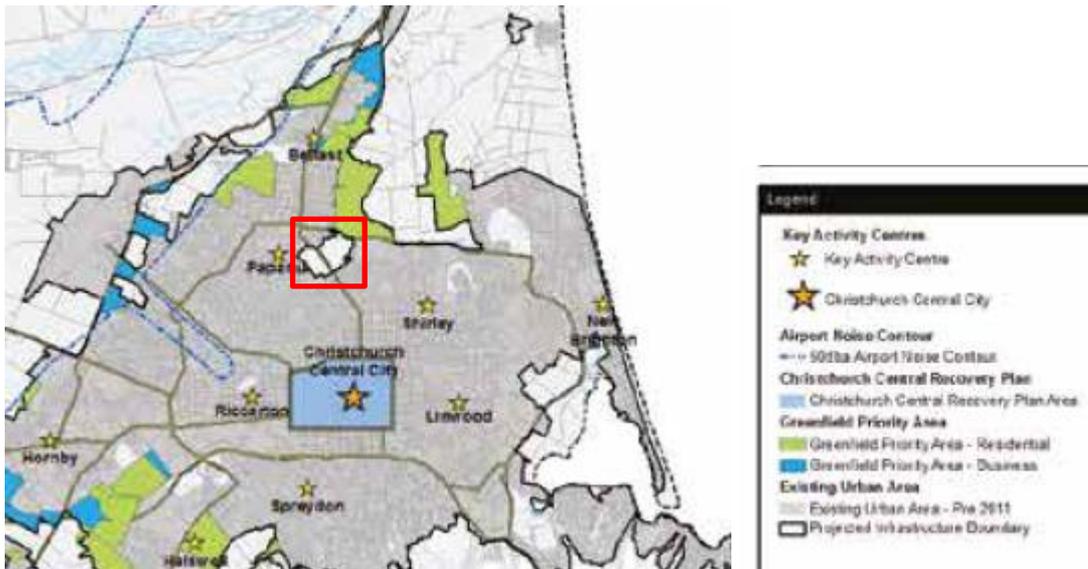
- a Council initiated Resource Management Act (RMA) plan change process cannot be notified until after 30 June 2021⁴.
- the regeneration plan process enables co-ordinated changes to be made to all relevant statutory documents at once;
- the regeneration plan process enables more community input into the draft plan development and decision making process than section 71 of the Greater Christchurch Regeneration Act 2016 (the Act); and
- a resource consent process is less likely to achieve integrated and efficient residential development, will be inconsistent with both the CRPS and the CDP, and may be subject to appeals.

Not proceeding now would mean that residential development in this area could be delayed until circa 2025 to 2030, or even later. This is because Schedule 7 of the Act extends the Canterbury Earthquake (Christchurch Replacement District Plan) Order 2014 to 30 June 2021. Even if Council did want to promulgate a plan change at this stage, the proposal would not give effect to the current CRPS, as it is outside the Projected Infrastructure Boundary, and would not be giving effect to Policy 6.3.1(4) in particular. The CRPS review, starting around 2020 is unlikely to be operative until 2023 at the earliest depending on appeals. Council is therefore unlikely to be in a position to notify a plan change to rezone rural land before 2024-25. Taking into account the time needed to obtain the necessary consents, develop the subdivision and build houses, future residents are unlikely to be arriving until nearly 2030. The Regeneration Plan brings this forward by 8-10 years.

Given this land resource is being inefficiently used as rural, the area's locational advantages over other residential *greenfields areas, and opportunities for holistic and integrated land use planning with the Cranford Basin, not progressing with the draft Regeneration Plan results in an opportunity cost for the local area and Greater Christchurch.

⁴ Schedule 7 of the Greater Christchurch Regeneration Act 2016 extends the Canterbury Earthquake (Christchurch Replacement District Plan) Order 2014 to 30 June 2021.

Figure 2: Portion of the current Canterbury Regional Policy Statement Map A that covers the draft Plan Area



Moreover, enabling residential development in accordance with the Plan’s goals will be a catalyst for urban renewal, set a new benchmark for urban housing design, and support the long term enhancement of community facilities and open space. There is a further description in Part 6 of this Plan as to how this draft Plan achieves the regeneration purpose of the Act.

The expedited process is anticipated to result in bringing forward direct economic, social, cultural and environmental benefits to the local area and indirectly to the central city and Greater Christchurch. The residential component is not likely to adversely impact on committed and proposed housing projects in the Central City (and recovery of the Central City)⁵.

3 Effect of the Regeneration Plan

The final Cranford Regeneration Plan, if approved by the Minister supporting Greater Christchurch Regeneration, will be a statutory document with legal weight under the Act. All amendments to documents and instruments directed by the Regeneration Plan will have effect once the final Plan is gazetted. Any person exercising powers or performing functions under the RMA must not make a decision or recommendation under the RMA relating to all or part of greater Christchurch that is inconsistent with the final Plan. The Cranford Regeneration Plan is intended to be in effect until 2021, or a longer period if the Act is extended (but the provisions carry on). Details of the changes being sought are set out in Section 8 of this Plan and Appendices 1 and 2.

4 Process for developing the draft regeneration plan and public engagement

The draft Plan has been developed in collaboration with the Council’s statutory partners and directly affected land owners. The process steps undertaken to date and those required next are summarised below.

⁵ Further information on this matter is contained in the Supporting Document.

<p><i>Step 1: Research and Methodology.</i></p>	<p>The draft Plan has been developed following investigation of options for lifting the planning restrictions that are preventing urban residential development around the edges of the Cranford Basin stormwater management area.</p> <p>This step has also assessed whether a change to urban land uses in this area achieves the regeneration purpose of the Act.</p> <p>Technical investigations of the land use capabilities and constraints, have been undertaken to inform more detailed planning, in particular for those areas considered more appropriate for residential development. The full assessments can be found in the supporting documentation.</p> <p>The knowledge gained from investigations led to a systems based planning methodology founded on principles of water management, hazard avoidance (and mitigation), and low impact urban design for the draft Plan area.</p>
<p><i>Step 2 Informal land owner engagement (Aug-Sept 2016)</i></p>	<p>Informal public engagement was undertaken with landowners as part of the investigating options for residential development in the draft Plan area. Engagement has included individual and group meetings with landowners and in the Grassmere Street and Croziers Road blocks (refer to block areas in Figure 3), and in the land that is to remain as rural. The results of this engagement helped to identify land owner aspirations, site constraints, and land use options.</p>
<p><i>Step 3 Options for proposed residential area (Sept-Dec 2016)</i></p>	<p>This step involved looking at the site specific opportunities and constraints of those areas considered to be appropriate for urban development within the context of a long term vision for the draft Plan area. Further liaison with landowners led to feedback on draft concept plans for the proposed residential areas (draft Outline Development Plans). An Outline was approved by the Minister on 23 December 2016.</p>
<p><i>Step 4 Create the draft Plan (Dec 2016 – Feb 2017)</i></p>	<p>The draft Cranford Regeneration Plan was drafted, including proposed changes to the CRPS and the CDP. This step included responding to comments from statutory parties provided to the Outline for the draft Cranford Regeneration Plan.</p>
<p><i>Step 5 Seek the views of specified parties (Feb-Mar) 2017</i></p>	<p>A draft Plan was circulated to the Parties on 2 February with a close off date for final comments by 17 March. Several meetings were held with the Parties as a group, and individually. Informal engagement began with local interest groups and the Community Board was briefed.</p>
<p><i>Step 6: Amend the draft Plan following feedback</i></p>	<p>In response to the feedback received from the parties specified in the Act, the draft Plan was amended and a concise summary of views prepared. There was communication with landowners most affected during the development of the Outline Development Plan and zoning proposals. Further engagement was held with local interest groups and an item included in a local newsletter delivered to all households in the local area drawing attention to the Outline and the draft Plan. Key stakeholders in the area were also been engaged. Information on the Plan was available at a drop-in session on the Northern Arterial and Cranford Basin storm water facility on 28 March.</p>
<p><i>Step 7: Public notification of the draft Plan and feedback</i></p>	<p>An engagement plan was prepared which provided for two drop-in sessions as well as information on how to make enquiries on the draft Plan and lodge comments. Engagement took place over April. Over 120 responses were received and these were summarised and put into a table along with officers' responses to the matters</p>

	<p>raised. A summary table of the key issues was also prepared which included officers' responses to each of those issues.</p> <p>Those who submitted on the draft Plan have been advised by email or letter that the summary tables are available for inspection on the Council website, and are invited to a 'forum' where they can make further comment on matters raised in the officers' responses.</p>
<p><i>Step 8: Finalise and submit the draft Plan to Regenerate Christchurch</i></p>	<p>Following consideration of matters raised at the forum the Draft Plan will be finalised making any appropriate changes, and presented to the Council. If the Council is satisfied with the Draft Plan it will be submitted to Regenerate Christchurch for review.</p>

5 Description of the draft Plan area

The area subject to the draft Plan includes that land as shown in Figure 1, being approximately 125 hectares of low lying rural zoned land located in the northern suburbs of Christchurch in close proximity to business areas in Papanui. The draft Plan area is bounded by QEII Drive to the north, Philpotts Road and Mairehau to the east, Grassmere Street and Papanui to the west and St Albans to the south east. Cranford Street bisects the draft Plan Area.

The Area is surrounded by existing or proposed urban development and is close to community amenities. Papanui High School is located next to the Northlands Mall, with Papanui Primary School to the north-west and Paparoa Primary School to the south. The Top 10 Holiday Park (included in the Regeneration Plan area) is located off Cranford Street and the business areas on Cranford Street and Northlands Mall on Papanui Road are in close proximity (as shown in Figure 2).

The landscape is characteristics of a peri –urban area with open areas arranged in a loose grid pattern of cropped fields and pasture, transected by rural fences, shelterbelts, open drains and wood lined drains with an urban backdrop. The dominating feature of the Area, and contributor to the rural landscape, is the Cranford Basin, which will change in future with the Northern Arterial extension cutting through the northern part of the Basin. Residential and farm buildings are located at the edges of the draft Plan area.

At the time of European colonisation, Cranford Basin was a low lying wetland site dominated by raupo and tussock swamp, toi toi flax and grass and broken ground and surface water. Ngāi Tahu and before them Ngāti Mamoe and Waitaha had settlements among, and gathered resources from, the network of springs, waterways, swamps, grasses and podocarp forests in the Christchurch area.

Since European settlement the Basin and surrounds have been drained and used for grazing and intensive cultivation of peaty soils for market gardening. The low lying nature of the area and the high groundwater tables have necessitated extensive draining and pumping to maintain the productivity of the Area. Council has implemented stormwater works within the wider area, such as the Upper Dudley Creek diversion, to reduce flood risks to the existing urban area. The bearing capacity of the soil is very low and it is sensitive to lowering of groundwater levels. Historically the floor of Basin has subsided at an average rate of approximately 20 mm per annum due to shrinkage of the peaty soil. Cranford Basin and surrounds has become increasingly unsuitable for horticultural use as ground levels due to frequent inundation and reverse sensitivity issues with residential neighbours.

The potential for residential development in the draft Plan area has been explored a number of times through submissions to the Proposed Canterbury Regional Policy Statement and the former Christchurch City Plan. However, due to the presence of several site specific infrastructure constraints urban development has never eventuated. These constraints have now been removed. The Council now owns the majority of land within the Cranford Basin and significant upgrades are planned over the long term to improve the flood management and stormwater management functions of the Cranford Basin. Other major infrastructure projects within the local area include the Northern Arterial Extension (currently under construction and scheduled for completion in 2021)

and a strategic cycleway planned to run alongside the Northern Arterial Extension with a future connection to the Papanui Parallel Major Cycleway, which runs along Grassmere Street. The extent of the stormwater management designation along with the Northern Arterial Extension are shown on Figure 1, which also illustrates key bus routes and the strategic cycleway network.

6 Achieving the regeneration goals and technical considerations

6.1 Spatial areas for consideration of urban residential development

An underlying question is how much modification can the natural environment of the draft Plan area sustain? The appropriateness of urban residential development and its contribution to regeneration opportunities was assessed having regard to the natural and physical resources across the whole Plan area. The draft Plan area was then divided into four distinct spatial areas based on the knowledge Council had on these areas. Figure 3 depicts the overall regeneration and development vision for Cranford however is not part of the statutory directions for this Regeneration Plan. The statutory directions are contained within Appendix 1 and 2 of this Plan.

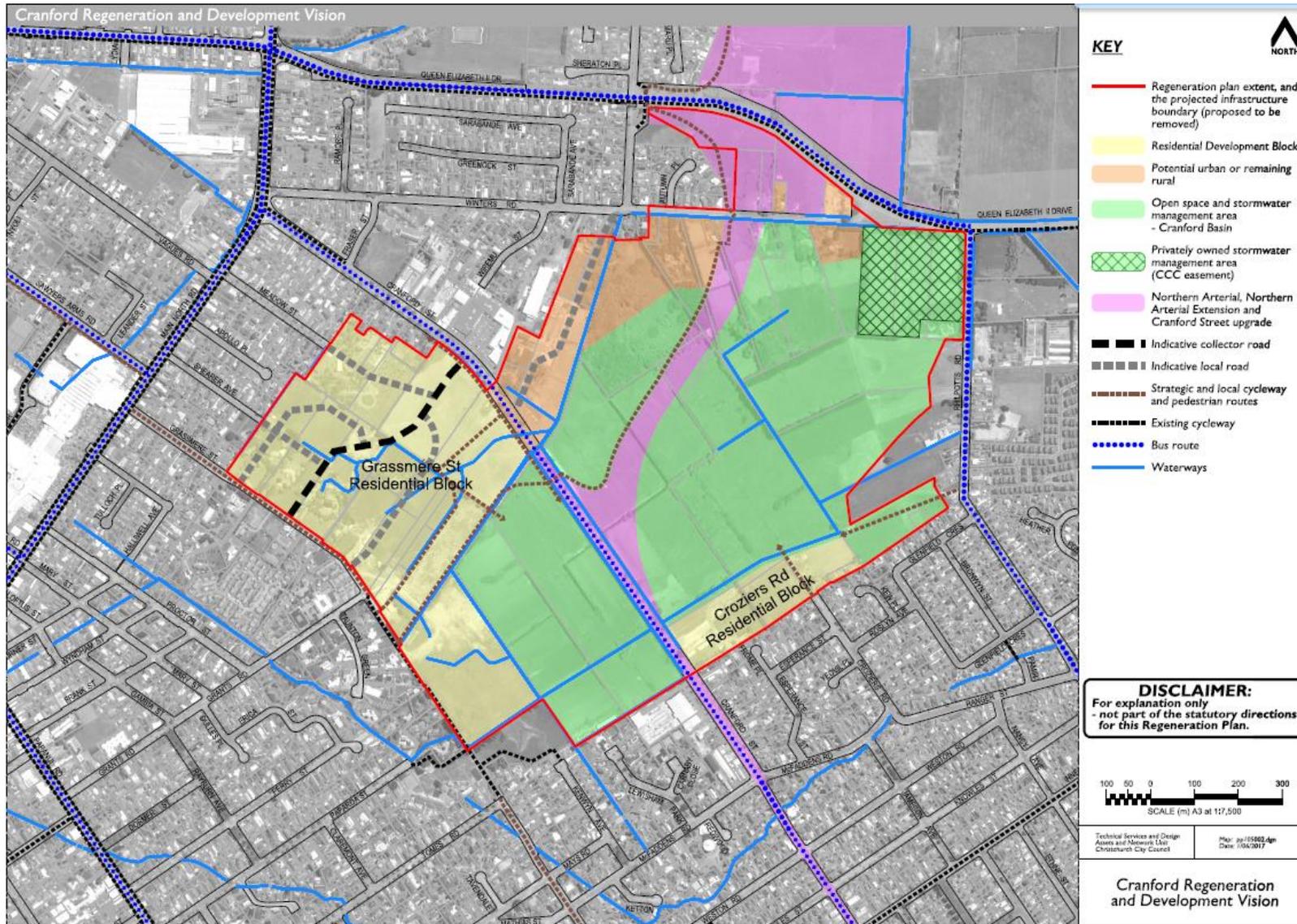
- ❖ **Residential Regeneration Grassmere Street and Croziers Road blocks – Greatest potential for urban development.** For the Grassmere Street and Croziers Road blocks a more detailed assessment of appropriate urban residential development based on various land use scenarios was considered, starting with previous work undertaken as part of the Replacement District Plan. The scenarios were tested against the following criteria in addition to that outlined above:
 - Integration with adjoining urban residential development and social infrastructure, in particular open space, walking and cycling connections;
 - The feasibility and potential capacity having particular regard to ground conditions and other hazards;
 - Ability to achieve household growth and intensification objectives and policies (CRPS and CDP); and
 - Coordinated and timely development.
- ❖ **Rural – Limited potential for urban development.** Parts of this area have some potential for urban development in the longer term once planned infrastructure projects and current land purchase negotiations are completed. It is therefore considered appropriate that the present urban development restriction on the Winters Road block is removed to enable this as a consideration in the future. It is acknowledged that this is likely to occur in the longer term as to date, current landowner interest for its urbanisation has been low. The focus of on-going negotiations with landowners has been principally on resolving the boundaries of the Cranford Basin stormwater management area. For these reasons no detailed technical assessments have been undertaken for this area.
- ❖ **Cranford Basin – No potential for urban development but valued for natural and cultural values and for public infrastructure serving urban development.** The Cranford Basin stormwater management area is the largest feature in the draft Plan area. Urban development is neither appropriate nor possible within this area due to the stormwater and flood management functions it provides to the wider urban area. It will in the coming years be systematically transformed into a multi-purpose facility for stormwater quality treatment, flood attenuation, ecological restoration and passive recreation.

As part of preparing this draft Regeneration Plan, the Council has undertaken extensive investigations and technical assessments⁶. These assessments were undertaken to determine the appropriateness of options for urban residential development within the draft Plan area and whether the regeneration purpose of the Act would

⁶ 'Background information & planning assessment - an integrated approach to sustainable regeneration'

be upheld. The technical reports cover a range of matters including geotechnical and flooding hazards, potential land remediation and foundation design, infrastructure capacity, traffic effects and provision, and planning considerations. Some technical reports apply to the whole of the draft Plan area, while more detailed reports have been prepared for specific parts of the draft Plan area that have the greatest potential for considering urban residential development. The relevant technical information and detailed planning assessment are available as part of the supporting documentation.

Figure 3. Cranford Regeneration and Development Vision



6.2 Goal 1:

Residential development, in appropriate areas, that provides for a choice of housing types, sizes and densities to provide for a range of housing needs and help meet the household growth targets for Greater Christchurch. *Enabling urban residential development in the draft Plan area will contribute towards achieving household growth targets and support the on-going commercial viability of local commercial and community facilities and services.*

Consideration applies to whole of the draft Plan area

Providing additional residential land in the Papanui area will support the on-going growth and viability of the Papanui area. Future new residents will be well-supported by existing facilities and services including extensive retail and commercial facilities, health facilities, a Council Service Centre and Library, and government services such as Child, Youth and Family, Housing NZ, Work and Income, Police, and the Graham Condon Memorial Pool.

Consideration applies to specific parts of the draft Plan area

Grassmere Street and Croziers Road residential blocks:

These proposed residential blocks have never been developed for urban residential purposes and therefore are classified as a greenfield area. At a city-wide level Christchurch does not have a shortage of greenfield land, with greenfield priority areas identified in the CRPS recently rezoned through the CDP review process. The Council's vacant land register currently has 2250 hectares shown as vacant zoned residential land, of which around 1400 hectares is on the flat area of Christchurch, which is where most of the demand is. However as the Grassmere Street block is so closely located to an existing and well-established Key Activity Centre, it will have a local area benefit. There is limited availability of land for new residential development within the Papanui area, which is currently only in the form of infill or replacement of existing dwellings.

Through the recent Christchurch Replacement District Plan, the Independent Hearings Panel came to the view *'that the extent of Residential Medium Density (RMD) zoning [in the Notified Plan] at ... Papanui (Northlands) may not give adequate effect to the CRPS or properly respond to other Higher Order Documents. Quite apart from that, the evidence satisfies us that intensification is important for ensuring that the CRDP gives effect to the RMA's sustainable management purpose.... the evidence demonstrates to us that there is a growing demand for smaller, more affordable, housing in Christchurch, as we set out later in this decision. In that sense, enabling more intensification goes to enabling people and communities to provide for their wellbeing ...'*⁷

The potential for residential medium density development in the Grassmere Street block fills a gap that resulted in the decision by the Independent Hearings Panel to decline to up-zone land to the south of the Papanui/Northlands Key Activity Centre because of potential historic heritage values.

Whilst the area is in close proximity to major transport networks thus making it accessible to the Central City and other Key Activity Centres, the new neighbourhoods are

⁷ Decision 10 page 45.

unlikely to directly compete with the Central City residential market and impede Central City intensification targets. The overall impact or competition with development of other residential land will largely depend on what housing typologies (forms) are offered to the market.

The Croziers Road block will provide up to 60 additional residential units, extending the existing adjoining residential area up to the Cranford Basin stormwater management area. This block is only a minor extension of the existing residential area, but is consistent with urban settlement objectives and policies and offers an additional choice of housing.

6.3 Goal 2:

Residential development that promotes sustainability through innovative architecture, low impact exemplar urban design and integration with surrounding communities.

Considerations applying to specific parts of the draft Plan area

The draft East Papanui Outline Development Plan (ODP), proposed to be contained within the CDP, will ensure residential development is well integrated with the surrounding residential neighbourhoods. Key features of the ODP include an important connection between the strategic cycleway planned along the Northern Arterial Extension and the Papanui Parallel cycleway which is currently being constructed along Grassmere Street. Public open space connections are planned along a naturalised waterway network that will connect existing neighbourhoods through to Cranford Basin. A new local park is also planned alongside the naturalised waterway network that will serve both future and existing residents.

6.4 Goal 3:

Integration of new residential areas with infrastructure (including the proposed Northern Arterial Extension, public transport, and water and waste networks), walking/cycling networks, and future planned enhancements for Cranford Basin as a major stormwater management facility and public open space asset.

6.4.1 Transportation network

The transport network in the draft Plan area provides key connections within the city's transportation network and has the advantage of significant planned infrastructure investment in the area with the strategic cycle routes and Northern Arterial extension.

Consideration applies to whole of the draft Plan area

The area is well serviced by public passenger transport with large parts being within 500 metres of a bus route. Development of the new neighbourhoods proposed in the draft Plan, are ideally located to create excellent connections to the Council's strategic cycleway network, currently being constructed along Grassmere Street and planned to run alongside the Northern Arterial extension. In the absence of new

Consideration applies to specific parts of the draft Plan area

Grassmere Street residential block:

- Providing both north-south and east-west connections will ensure integration of the area and greatest connection with the existing residential areas. This will increase traffic using the existing local roads which could create amenity effects for some residents.

neighbourhoods, such connections would be difficult to achieve.

Traffic modelling based on a number of land use scenarios was undertaken to assess potential capacity issues to the year 2021 (pre-Northern Arterial and extension) and 2031 (with Northern Arterial and extension). The scenarios included residential development of 200, 750 and 1500 households, and limited industrial and commercial development on Cranford Street. A scenario based on 370 households was also tested based on the potential within the Grassmere Street block.

Residential development was the preferred land use in terms of traffic effects as it does not distribute heavy vehicles through the residential area. With the level of service improvements to the network as a result of the Northern Arterial extension, in the longer term the impact on the road network is minor, but with potential for some increase in delays in minor road approaches to Papanui Road and Main North Road.

Prior to the construction of the Northern Arterial projects there is limited capacity to provide access to Cranford Street.

Due to the private ownership of the land and its rural zoning, there has been limited opportunities for development of cycling routes in the area to date. The development of the Papanui Parallel major cycleway in Grassmere Street and a shared path along the Northern Arterial Extension provides for additional opportunities to connect to these cycle routes.

- The additional traffic will not create safety or efficiency issues on the wider network, although prior to the completion of the Northern Arterial projects capacity is limited.
- The land conditions and location of springs will constrain the location of links in the transport network.
- The Papanui Parallel major cycleway needs to be protected by limiting vehicle access points onto Grassmere Street.
- The Northern Arterial extension will impact on any access onto Cranford Street. The road access will need to be controlled by either signals or a roundabout.

Croziers Road residential block:

- Traffic generation from the Croziers Road block will be unnoticeable on a network wide basis, although there may be amenity effects for local residents with additional traffic in the area.
- Access for additional residential units onto Cranford Street needs to be restricted due to changes to the form of Cranford Street to accommodate the Northern Arterial Extension. Cranford Street will increase from two to four lanes with a median barrier. The preference is for all traffic to utilise Croziers Road and/or a right of way to Frome Place.
- The provision of a pedestrian/cycle connection into the adjoining Cranford Basin stormwater management area would enhance connectivity from St Albans

6.4.2 Capacity and provision of infrastructure

The draft Plan area is surrounded by existing urban development and has access to existing infrastructure or planned improvements.

Consideration applies to whole of draft Plan area

Overall, new neighbourhoods developed in the draft Plan area will support on-going investment in the wider Papanui/St Albans area and viability of public and private investment into the local area and infrastructure networks.

Existing infrastructure and planned improvements to this infrastructure, will provide sufficient capacity to manage the demands from the proposed new development. Some additional local improvements may be required and will be at the developer's cost at the time of subdivision.

Consideration applies to specific parts of the draft Plan area

Grassmere Street residential block :

- Stormwater will need to be discharged to land, separate from natural water ways
- There are wastewater capacity constraints downstream. The area will therefore need to be serviced by a smart pressure sewer network monitored and controlled by Council. This will be provided at the developer's cost at the time of subdivision. There are otherwise no infrastructure constraints to development.
- The Central water supply zone has sufficient capacity providing water supply mains are constructed through the Grassmere Street block, to connect Grassmere Street, Shearer Avenue and Cranford Street.

A replacement for the earthquake damaged Averill water supply pump station with a capacity of 360-400 m³/hour will be needed before the proposed Saint Albans water

supply zone is created. However, this does not impede development.

- A new centrally located neighbourhood park will need to be provided within the Grassmere Street block.

Croziers Road residential block:

- There are wastewater capacity constraints downstream. The area will need to be serviced by a smart pressure sewer network monitored and controlled by Council. This will be provided at the developer's cost at the time of subdivision and building consent. There are otherwise no infrastructure constraints to development.
- The Croziers Road block is located in the Central water supply zone which has sufficient capacity. Water supply connections will need to be made to the water supply mains on Cranford Street, Frome Street and Croziers Road. A replacement for the Averill water supply pump station would need to be constructed beforehand to accommodate the growth in this area.

6.5 Goal 4:

Development is designed and located to avoid recognise or respond to risks from natural hazards and the specific geotechnical conditions of the land.

6.5.1 Geo-hydrological features

The Cranford Basin plays a key role in flood and stormwater management in the city. It connects the Pūharakekenui/Styx and Avon River/Ōtākaro catchments, and, along with adjoining drainage infrastructure, has the ability to direct flows either North or South. The area contains important water features, including a number of natural artesian springs, flood ponding areas and man-made drains. These features are a constraint to development, limiting where it can occur and underpinning the conditions around such development to manage effects. However they also present an opportunity particularly with the development of the Cranford Basin stormwater management area.

Consideration applies to whole of draft Plan area

The Pūharakekenui/Styx River Catchment is managed to Council's six values – ecology, drainage, culture, heritage, landscape and recreation⁸. The Cranford Basin has been identified as having opportunities for development as a multi-purpose stormwater management facility.

The surface water management approach applies to the draft Plan area and includes:

- Urban development should be developed so as not to reduce flow or life supporting capacity of waterbodies in and around the draft Plan area. These water bodies can be identified and safeguarded at the time of subdivision.

Considerations applies to specific parts of the draft Plan area

Grassmere Street residential block: Detailed investigations of the Grassmere Street block concluded:

- The area identified along Grassmere Street, contains numerous springs and seeps that require careful management. Additional springs might be identified during the development process.
- Low lying areas have seepage areas where water is ponded in shallow depressions and does not flow into the drainage network. These areas are suited to wetland restoration and/or stormwater treatment.
- It is imperative to ensure that the drainage network is sufficient to maintain groundwater at appropriate level
- There may be potential for further ground settlement due to increased drainage and/or consolidation effects if groundwater is lowered and/or filling undertaken on top of compressible soils when determining drainage pathways and levels.

⁸ Pūharakekenui/Styx River Catchment Management Plan – Tauaki Wai Pataua/Vision and Values

- Naturalisation of the drains to improve ecological habitats both in-aquatic and terrestrial areas.
- Protection of springs by maintaining a generous setback for buildings and earthworks, monitoring spring flow
- Improved water quality through treatment of discharges prior to entering the waterways

A number of artesian springs have been identified in the draft Plan area. These occur where a confining layer is located above a water-bearing aquifer (such as the Riccarton Gravels) with a hydraulic head greater than ground level. This pressurised groundwater forms natural pathways through weak points in the confining layer, and discharges to the surface as spring vents. The flow and distribution of these springs varies depending on the amount and frequency of water inflow, water pressures in the aquifer and form of the outlet from the spring vent.

- Need to consider design of excavations and piles bearing in mind the level of artesian pressures, as water pressure may rise within excavations and around piles
- It is important to identify the potential impacts on spring fed springs.

Croziers Road residential block:

- No springs have been found

6.5.2 Risk of natural hazards

The draft Plan area is susceptible to the effects of subsoil liquefaction and flooding and flood ponding, particularly in the Cranford Basin stormwater management area. Shallow peats pose a potential hazard to built infrastructure and potentially residential development, through primary and secondary consolidation (settlement) and also play an important role in the shallow geo-hydrology. These natural hazards have been identified in the CDP and include a high flood hazard and flood ponding management areas over parts of the Cranford Basin that generally coincide with but not confined to, the designated stormwater area. The draft Plan area is also within the District Plan's Liquefaction Management Area.

Consideration applies to whole of the draft Plan area

Extensive parts of the draft Plan area are known to be underlain by wetland derived deposits comprising soft silts, organic silts and peat. From the investigations available from the Environment Canterbury well database and the New Zealand Geotechnical Database, the area has been determined to comprise a surficial alluvium, underlain by swamp derived deposits and liquefiable sand.

A large part of the draft Plan area is identified as high flood hazard and flood ponding area, based around the Cranford Basin. The largest natural water feature is the stormwater management function of the Cranford Basin. This area is designated in the CDP to recognise the function and allow future improvements to be undertaken.

New subdivision, use and development is required to be avoided in areas where the risks of natural hazards to people, property and infrastructure are assessed as being unacceptable. Otherwise risks need to be appropriately mitigated.

The main geotechnical challenges include earthquake induced liquefaction resulting in settlement and possibly lateral spreading as well as settlement from the consolidation of the fine, organic rich sediment which is referred to as consolidation. Studies by GHD and Beca have

Consideration applies to specific parts of the draft Plan area

Grassmere Street residential block:

- The southern portion of the Grassmere Street block is located within the flood management area which requires building minimum floor levels.
- Geotechnical reports for the area along Grassmere Street, indicate that the area has not had any surface expression of liquefaction or lateral spreading identified since the Canterbury Earthquake Sequence commenced in September 2010.
- Liquefaction-induced subsidence is not considered to pose a major geotechnical constraint for future development at the site given appropriate foundation design. However compressive loading of organic-rich soils in the top 3m may result in consolidation and potentially non-uniform settlement. This can be addressed with appropriate design.

Croziers Road residential block:

- The part of the Croziers Road block located towards Cranford Street is within both the flood management and flood ponding management area.
- Geotechnical reports for this block indicate that any geotechnical issues can be addressed at the subdivision consent stage.

indicated that the area is a mix of TC2 and TC3 land equivalent. These conditions (both the liquefaction and consolidation) can be regarded as a geotechnical challenge and can be countered with a suitable mitigation technique. Specific specialist foundation design will have to be obtained. Techniques may be a combination of rafted foundations, piling and/or removal of the organic material.

6.5.3 Land contamination

Consideration applies to whole of draft Plan area

There is potential for land contamination in the Cranford Basin due to its historic and existing use for pastoral, horticultural and market gardening purposes since at least 1940. Detailed investigations will need to be undertaken as part of any subdivision consent process including any areas of uncontrolled fill.

6.6 Goal 5:

Development that provides for and where possible enhances the ecological enhancement of in-stream values

Consideration applies to whole of draft Plan area

No areas of significant indigenous vegetation or remnant of original vegetation cover have been identified in the draft Plan area. Indigenous freshwater fish species, including short fin eel/tuna, longfin eel/tuna, inanga and upland bully, have been observed in the waterways. The longfin eel is considered to be at risk, by the Department of Conservation.

Opportunities for enhancement of indigenous biodiversity can be provided for with urban residential development through the stormwater areas, protection of springs and naturalised waterways. This will improve habitats for existing species and may enable the future introduction of other indigenous species to the waterways.

A key contributor to enhancement of ecological values, will be the future Council planting and restoration programme proposed for the Cranford Basin stormwater management area which will have positive benefits for ecological values particularly in respect of bird habitat.

6.7 Goal 6:

Development that enhances, recognises and protects Ngāi Tūāhuriri/ Ngāi Tahu values through low impact built development that is sensitive to the geo-hydrological features of the draft Plan area and surrounding environment.

Tūāhuriri Rūnunga are the kaitiaki with responsibility to protect the cultural landscape in their takiwā. The waterways, including puna/springs, and taonga species found within the waterways located in the draft Plan area are valued.

Consideration applies to whole of the draft Plan area

The wider Pūharakekenui/Styx and Avon River/Ötākaro river catchments have traditionally been a significant source of mahinga kai. While no archaeological sites or silent files areas have been identified, it is likely the draft Plan area would

have been used for mahinga kai and other cultural purposes⁹. Potential impacts of urban development in the draft Plan area that are priorities for Tūāhuriri Rūnanga include:

- increased pressure on the wastewater network that may lead to effects on waterbodies;
- protecting or enhancing puna/springs;
- elimination of direct stormwater discharges into waterbodies, including Waikākāriki/Horseshoe Lake and the Avon River/ Ōtākaro/ River Catchment;
- addressing land contamination which can have an impact on human and taonga species;
- ensuring developments and the Council are committed to carrying out infrastructure requirements for any future residential development.

Other effects are to be avoided on wāhi taonga or wāhi tapu, protecting health or abundance of taonga species including mahinga kai, and enhancing native plant species which create native habitats for taonga species.

These values are reflected in the vision and values for the Pūharakekenui/Styx and Avon River/ Ōtākaro river catchment management plans.

6.8 Goal 7:

Support the development of the draft Plan area in an efficient and timely manner.

The coordination of development is important to ensuring integrated and well-designed urban development. Timely development will facilitate regeneration opportunities.

Consideration applies to whole of the draft Plan area

The draft Plan area is positioned to take advantage of integrated and co-ordinated development, directly adjacent to the existing urban area. There are efficiencies in stormwater management and connectivity in designing the form and layout of the proposed residential areas alongside the planning and development of the Cranford Basin Stormwater facility. Notwithstanding this, development is not impeded by the timing for development of the facility.

Multiple landowners with different development goals and timeframes can compromise coordination of development. This can be overcome by tools such as Outline Development Plans, development contributions for infrastructure provision, and Council working with landowners to ensure integrated coordinated development.

Timing of development is also dependent on the market and complexity of the development, including mitigation works for ground conditions. Delays in infrastructure can also create timing issues.

Consideration applies to specific parts of the draft Plan area

Grassmere Street residential block:

- There are a number of landowners in the Grassmere Street block, most of whom have expressed a willingness to develop their land in a timely manner. The size of this block, its close proximity to community facilities and the Papanui/Northlands District Centre lends itself to development through an ODP. This will co-ordinate development of multiple sites and facilitate integration as it is planned for the whole of the Grassmere Street block.
- The construction of the Northern Arterial extension may limit capacity on Cranford Street which may impose staging of development in this block to minimise impacts.

Croziers Road residential block :

- There are two landowners with development potential in the Croziers Road block, which will enable development to be readily coordinated and integrated.

⁹ Cultural Impact Assessment for Cranford Basin – Proposed rezoning for urban activities, Prepared by Tipa & Associates on behalf of Te Ngāi Tūāhuriri Rūnanga, August 2016

6.8.1 Strategic framework necessary to facilitate urban residential development - Canterbury Regional Policy Statement (CRPS)

The CRPS, Chapter 6 “Recovery and Rebuilding of Greater Christchurch”, is the strategic statutory document which determines the overall urban form and direction of development in greater Christchurch. Inserted through the Land Use Recovery Plan in 2013, it contains the relevant objectives, policies and methods for managing growth. The RMA requires the Council to give effect to the urban form identified in Chapter 6 of the CRPS, including Map A. Map A identifies the location and extent of urban development in Greater Christchurch to support recovery, rebuilding and planning for future growth and infrastructure delivery. Unless an area has been identified as being within the Projected Infrastructure Boundary, and is an existing urban area or greenfield priority area on Map A, urban activities, including residential development, cannot be zoned or provided for in the District Plan.

The area subject to the draft Plan is not identified as being within the Projected Infrastructure Boundary on Map A. To facilitate urban residential development it is proposed to amend Map A the CRPS as follows:

- to include the full extent of the draft Plan area within the Projected Infrastructure Boundary;
- identify the extent of the Grassmere Street and Croziers Road residential blocks as a Greenfield Priority Area and
- identify the remaining areas as ‘existing urban area’. This will allow the remaining rural area to be rezoned¹⁰ in the future if considered appropriate without the need to change the CRPS.
- Amend the Map legend to read ‘Existing Urban Area’ (i.e. delete the words ‘Pre 2011’)

The full assessment of the options in relation to the CRPS can be found in the planning assessment in the supporting documentation¹¹.

6.8.2 Grassmere Street and Crozier Road blocks as a residential regeneration areas

Proposed future land use – The Grassmere Street block comprises approximately 33 hectares of land, owned by several landowners. The size and complex subsurface nature of the area makes it appropriate for coordinated comprehensive development through a Residential New Neighbourhood zoning under the CDP. The Residential New Neighbourhood Zone (RNNZ) provisions together with an ODP developed for this and the Croziers Road block, provide the flexibility in design, layout and densities essential for integrating development into such a complex natural environment. Other residential zones (Residential Suburban, Residential Medium Density and Residential Large Lot) were considered. However these zones are less likely to achieve Goals 1 and 2, and overall may result in a lower density development in areas well suited to medium density development. As compared to the RNNZ, these alternative zoning options do not require a particular household yield be achieved and therefore may not maximise the regeneration opportunities and locational benefits the site offers.

The Croziers Road block comprises approximately 4.7 hectares of land, currently owned by four landowners, including two existing developed residential properties accessed from Kew Place, and utilised for rural and residential purposes. These sites adjoin the current urban boundary with frontage to Cranford Street and Croziers Road. It is proposed that this block also be rezoned to Residential New Neighbourhood Zone (RNN). Whilst other residential zones were considered, including Residential Suburban Density Transition Zone (RSDT), Residential Large Lot Zone (RLL) and Residential Suburban (RS) zones, the most appropriate zoning

¹⁰ As shown in Figure 4.

¹¹ Draft Cranford Regeneration Plan Supporting Document -Background information & planning assessment (Not part of the Cranford Regeneration Plan).

was considered to be RNN zone as it would facilitate an urban form and pattern more consistent with achieving quality regeneration outcomes. The RNN zone provisions provide for a greater range of housing typologies than the RS or RLL zones, and provide better integration with the Outline Development Plan requirements than the RSDT Zone. A minimum net density of 15 households per hectare is required.

Both the Grassmere Street and Croziers Road block are proposed to be subject to an ODP, titled as the “East Papanui Outline Development Plan”. The development of an ODP is required by the CRPS Chapter 6, Policy 6.3.3 – Development in accordance with outline development plans. The East Papanui ODP includes development requirements for a mix of densities (in some areas to a yield of 30 households per hectare), integration with adjoining roads, walking and cycling connection, all in a manner that addresses the constraints of the site and ensures integration and coordinated development between landowners. The underlying purpose of the East Papanui ODP is to ensure land development is managed to exemplar standards. As well as the District Plan provisions, information and design guidance is available to facilitate environmentally sensitive and quality design outcomes¹². Council officers will be proactively engaging with designers and developers on methods to achieve the desired design outcomes.

Due to potential adverse effects on hydrogeology, and potential adverse effects on the local traffic network, a maximum of 425 household units has been set for the East Papanui ODP area between Cranford Street and Grassmere Street, including provision for 105 houses in the long term future if the Top 10 Holiday Park vacates its current site. There is also a specific standard limiting the maximum household yield from the Crozier block (referred to as Area 5 on the East Papanui ODP) to 60 households, only six of which are able to gain access from Cranford Street.

Comprehensive, coordinated and timely development - To enable a focused and expedited regeneration process the East Papanui ODP is proposed to form part of the Christchurch District Plan to manage land-use and subdivision activities. The East Papanui ODP does not specify timeframes for development, however it will limit the number of residential units to be established until the completion of the Northern Corridor (expected in mid-2020) to manage impacts on the surrounding road network. It also provides the framework and certainty for the long term development of the multi-purpose wetland. An additional standard is proposed to apply to the East Papanui ODP area, requiring land use and subdivision consents to be processed together as a restricted discretionary activity.

Geotechnical – In preparing the East Papanui ODP particular regard has been had to the potential effects of the land conditions on built infrastructure. The ODP includes specific geotechnical development requirements be met. More detailed geotechnical investigations are required at the subdivision consenting stage, to determine with more precision appropriate areas for development, and the subdivision design needed to address the geotechnical constraints. It is expected that the design constraints may result in residential clusters at different densities rather than a traditional subdivision layout. Specific foundation design and ground improvement works will also be required at the time of subdivision consent.

Stormwater and groundwater management - To assist with surface and ground water management, the East Papanui ODP narrative and supporting ‘Water Environment Plan’ identifies all known relevant natural water features. Protection of springs in the Grassmere Street block will be achieved through a setback of 30m for any earthworks, building, fencing or paving. Naturalisation of waterways is required as part of the development along with separation of treated stormwater from spring water and spring fed waterways. A Geo-hydrological Management Plan is required to be prepared for the Grassmere Street block prior to commencement of subdivision. This is to demonstrate how subdivision and building development will be managed to maintain spring and seepage flows, and groundwater levels at an appropriate level. It will also identify how the land development will achieve the protection and where possible enhancement of ecological and cultural values, which addresses a key concern of Tūāhuriri/Ngai Tahu. Stormwater from the development will discharge to land within the ODP area for first flush treatment before being discharged to the area identified on the ODP as

¹² Christchurch City Council design guides of relevance include “Creating New Neighbourhoods”, “Exploring New Housing Choices for changing lifestyle” and “Building Multi-unit Housing”.

“Designated Stormwater Management Area”. The development of Council’s Cranford Basin stormwater facility will not impede the development within the ODP boundary.

Improved connectivity, well-being and resilience of surrounding communities -The RNN zone provisions provide for different housing typologies including detached dwellings, one and two bedroom dwellings and potentially apartments, thereby ensuring there will be a wide range of housing typologies, sizes and densities. Development will be low impact, and sensitively designed to maintain and enhance the natural water features. In addition to open space opportunities that will be provided by the naturalisation and enhancement of existing waterways, a new centrally located reserve of around 4000m² will be provided within the Grassmere Street block. While this will mainly serve local residents in Grassmere Street area, it will also extend the network of open spaces in the surrounding existing neighbourhoods, including a strong connection to Cranford Basin.

Walking and cycling connections are proposed through the East Papanui ODP area, to the Papanui Parallel cycleway, adjoining streets, facilities, and eventually to the Northern Arterial Extension and Cranford Basin, being developed as a major open space and stormwater management area. Currently there is limited ability to provide such a high level of connectivity. The development will also enable a section of the strategic cycleway to be aligned with residential development thereby achieving better natural surveillance and safer environment for cyclists.

6.8.3 Areas to retain existing rural zoning

It is proposed that the remaining areas are included within the Projected Infrastructure Boundary on Map 6 of the CRPS but they retain their rural zoning as there is insufficient information at this stage to determine the future direction of this area. The stormwater and roading designations in and around the Cranford Basin are in place to enable works to commence on these projects. Land purchase negotiations have not been fully completed which means that a final boundary with adjoining landowners cannot be established at this point in time. Once the final remaining land extent has been confirmed, it will enable consideration of future land use options, including rezoning to an appropriate Open Space zone as the area will have recreational and ecological benefits. For the time being the current rural zoning does not impede the intended works.

6.9 Goal 8:

Long term enhancement of Cranford Basin as a major storm water management facility and public open space asset.

Consideration applies to part of the draft Plan area

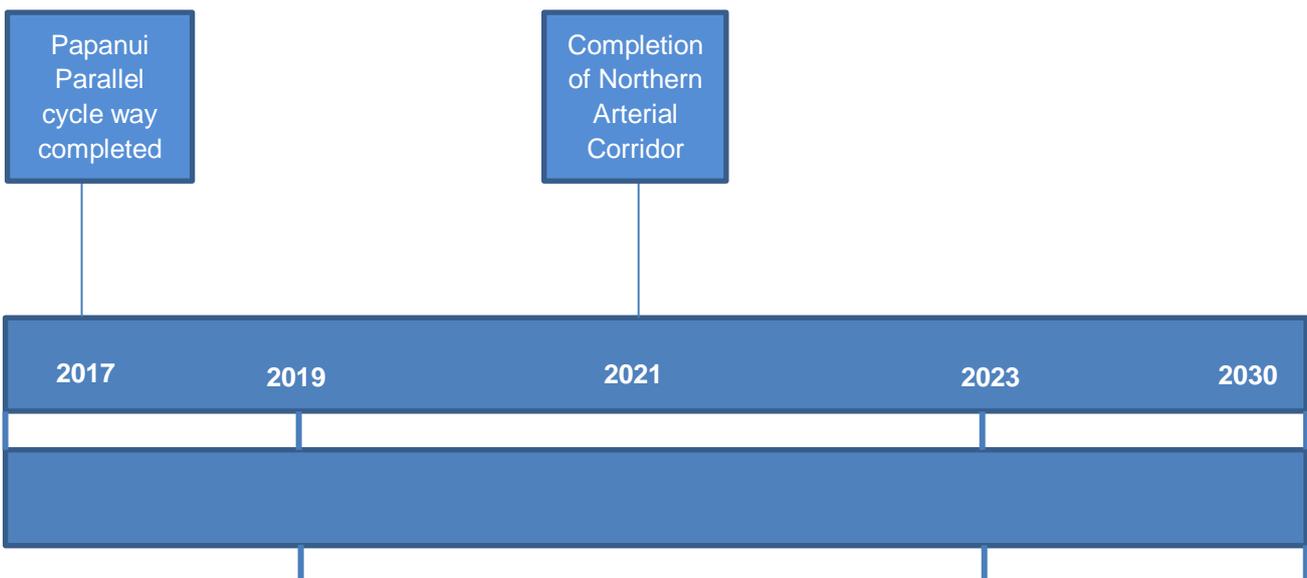
An important component of the Regeneration Plan is creating a multi-purpose naturalised storm water management facility bordered by innovative housing developments, integrated into the surrounding existing urban area. The Council is considering an extensive planting programme to create a forested area which will have benefits for ecological values, particularly in respect of bird habitat, cultural values and recreation and amenity values. This is a long term project for the Council beginning from 2017 with the construction of bunds and trial plantings. Funding for the construction of the Cranford Stormwater Basin is provided for in the Council’s Long Term Plan but achieving the multi-purpose aspects of this Goal, and the timing and rate of progress for this transformation, will be dependent on further funding being made available through the Long Term Plan and other public and private sources. While important for the management of stormwater across the wider catchment, the development of the Council facility is not necessary to enable residential activity on adjoining land.

Figure 4: Schematic diagram of how the Cranford Basin may be developed over the next ten – fifteen years



7 Anticipated timeframes for development

Development of all of the Plan area would be staged over 2-12-plus years. The intent is that development of the Grassmere and Croziers land will commence immediately after approval is given although there is currently no provisions or agreements to guarantee this. The remaining area will be developed as key infrastructure projects are completed and, in regard to the Cranford Basin storm water and open space facility, as funding under the LTP and Annual Plans allows as shown in the following chart.





Not proceeding now would mean that residential development in this area could be delayed until approximately 2025 to 2030, or even later. This is because Schedule 7 of the Greater Christchurch Regeneration Act 2016 extends the Canterbury Earthquake (Christchurch Replacement District Plan) Order 2014 to 30 June 2021. Even if Council did want to promulgate a plan change at this stage, the proposal would not give effect to the current CRPS, as it is outside the Projected Infrastructure Boundary. While the CRPS could be reviewed by around 2023 (assuming no appeals), Council is unlikely to promote a plan change at this stage with a review of the CDP probably being initiated around this time. Depending on the legislative process at this time, this will likely take several years to complete. If the land were rezoned as part of this process, the landowners would then take at least three to five years to procure the necessary resource consents, undertake land development, and subdivision works and construct and sell the houses.

8 Implementation

8.1 Statutory Directions - amendments to resource management documents

The use and development of land in the draft Plan area is managed by the provisions of the CRPS and the CDP, prepared under the RMA. Under section 61 of the Act, this Regeneration Plan may direct the Canterbury Regional Council and the Christchurch City Council to make amendments to those documents. In order to facilitate regeneration by enabling residential development at the edges of the draft Plan area it is necessary to amend the current planning framework in the CRPS and the CDP. This section contains the amendments to the CRPS and the CDP directed by this Regeneration Plan.

8.1.1 Canterbury Regional Policy Statement

The draft Plan directs that amendments be made to the CRPS in the manner set out in Appendix 1. These amendments remove the Projected Infrastructure Boundary from the Cranford Basin stormwater management area, and surrounding existing rural area on Map A. It also amends Map A to show the extent of the proposed new Greenfield Priority Area's and the remaining extent of the draft Regeneration Plan as 'existing urban area'. The map key will be amended accordingly. These amendments allow the area to be considered for urban activities through the CDP.

Action 1: Regeneration framework – Canterbury Regional Policy Statement	
Canterbury Regional Council is directed, pursuant to section 61 of the Greater Christchurch Regeneration Act 2016, to amend Map A of the Canterbury Regional Policy Statement in accordance with Appendix 1	To be completed within two weeks of Gazettal of this Regeneration Plan

8.1.2 Christchurch District Plan

The draft Plan directs amendments to be made to the CDP in the manner set out in Appendix 2. These amendments enable residential development to be considered within the Grassmere Street and Croziers Road blocks, through rezoning the land as Residential New Neighbourhood. The subdivision provisions for this Zone, including the East Papanui ODP, are contained in Chapter 8 of the District Plan.

The land use provisions for the Croziers Road block are contained within Chapter 14 of the District Plan. It is proposed that land use and subdivision activities within the Croziers block are a controlled activity and that land use and subdivision consent be processed together. In terms of the Grassmere Street block, it is proposed that land use and subdivision activities are a restricted discretionary activity and that land use and subdivision consent be processed together. The relevant provisions for the Grassmere Street block are therefore largely contained under Chapter 8, although the built form standards in the Residential New Neighbourhood Zone in Chapter 14 will also apply.

The East Papanui ODP applies to both the Grassmere Street and Croziers Road blocks and is key to guiding the development and achieving the goals of the draft Plan. Where a development departs from the ODP the activity status will be restricted discretionary, although this status does not alter for the Grassmere Street block, where development from the outset is a restricted discretionary activity.

Action 2: Regeneration framework – Christchurch District Plan	
Christchurch City Council is directed, pursuant to Section 61 of the Greater Christchurch Regeneration Act 2016, to amend the provisions of the Christchurch District Plan in accordance with Appendix 2.	To be completed within two weeks of Gazettal of this Regeneration Plan

8.2 Supporting commitments

This section describes the agreements and commitments reached by parties during development of the draft Plan to facilitate development to achieve the vision and goals. They are neither statutory requirements nor requirements directed by the draft Plan.

8.2.1 Facilitation of landowners to achieve coordination and timing of development and infrastructure provision

The Grassmere Street and Croziers Road blocks have multiple landowners and a number of constraints that need to be addressed through sensitively designed development. The ODP provides the framework to address these constraints but does not on its own require development. To further facilitate coordination and sensitively designed residential development, the Council has committed to working with landowners to ensure development is coordinated to achieve the ODP and vision of this Plan. This could take the form of regular liaison with landowners, individually or as a group, or running a charrette to enable landowners/developers to look at more detailed design of the area and how it looks. There is potential to involve Ngāi Tūāhuriri/ Ngāi Tahu in these conversations with landowners. This commitment will address one of the concerns of Ngāi Tūāhuriri/ Ngāi Tahu in terms of developers having guidance when delivering solutions for infrastructure and ground constraints. This commitment is intended to support Goal 4.

8.2.2 Funding options

Christchurch City Council uses development contributions as the primary method of funding growth-related infrastructure outside a development footprint. This approach reduces the funding required from existing residents via rates to fund infrastructure for growth that primarily benefits the owners or occupiers of growth developments. Infrastructure required within a development footprint is required to be provided by the developer as a condition of resource consent.

The amount charged for a development contribution for a residential development is based on the cost of providing infrastructure to service growth by activity and catchment. In the case of the Cranford development(s),

under the current development contributions policy, the charge would be approximately \$34,000 per additional residential lot.

In situations where the Council and developer agree to an alternative approach to infrastructure provision, this can be undertaken either through a contract agreement (e.g. the Council requests the developer to provide an asset to higher standard or capacity than would normally be required and agrees to pay the developer the difference in cost).

Cost share schemes involve the Council funding all or part of critical infrastructure needed for development (such as urban surface water management schemes) and recovering the money at subdivision stage. It is a useful tool where there is fragmented landownership preventing that infrastructure from being established and was common practice in Christchurch prior to using development contributions. It comes with the risk that subdivision may be delayed (e.g. due to market conditions), and the Council does not recover the funding as quickly as anticipated. Nevertheless this tool is something that could be considered for initiating development in the Cranford area.

Another approach is for the Council and the developer to agree to enter into a private development agreement (PDA) (see section 3.2 of the Council's development contributions policy for details). A PDA is an agreement, between a developer and the Council that provides for the developer to provide land and/ or infrastructure in lieu of cash development contributions. Alternatively, land or works may be deferred, reallocated or used as compensation for additional demand placed on infrastructure resulting from development.

8.2.3 Expediting development

It is essential that the Plan is given effect to immediately to be in accordance with the purpose of the Act. The Council has funding to, over time, develop the Cranford Basin into a multi-purpose wetland, however there is currently no instrument to ensure the housing development also proceeds expeditiously. Consideration has been given to bonds, sunset clauses on development rights, or other measures to incentivise developers to develop quickly. The preferred option is for the Council to enter an MOU (Memorandum of Understanding) that commits the developers to delivering a percentage of the potential housing by the end of 2020.

8.2.4 Advice from the Canterbury Regional Council

The Council will seek advice or information from Environment Canterbury (Canterbury Regional Council) on natural hazards, groundwater, hydrology, and stormwater management in relation to applications for subdivision and land use consent, and on the scope of the Geo-hydrological Management Plans referred to in 8.6.31D.6 (f).

8.2.5 Stormwater discharge into Horseshoe Lake.

Ngāi Tahu has made it clear that proposed housing development does not provide for the improved cultural well-being of Ngāi Tahu through its relationship with Horseshoe Lake. It is opposing the stormwater that will be generated from the development discharging, through the Dudley Creek diversion, into that culturally significant water body.

Currently there are no other practical options. However, there have been preliminary investigations into whether an alternative outfall can be found as part of the regeneration plan for the Ōtākaro/Avon river corridor. While there are no commitments in the LTP or other Council document the Council is willing to work with Ngāi Tahu and its other statutory partners towards finding an agreed solution as part of the Ōtākaro/Avon River Corridor Regeneration Plan process.

9 Monitoring

The statutory directions in this Plan direct amendments to the CRPS and the CDP necessary to facilitate and expedite urban residential development in the Cranford Basin, in accordance with the purposes of the Greater

Christchurch Regeneration Act 2016, and to achieve the objective of the Regeneration Plan. Under section 35 of the RMA, every local authority has a duty to monitor the efficiency and effectiveness of policies, rules or other methods in its policy statement or its plan and the exercise of resource consents that have effect in its region or district. The provisions inserted into the CRPS and the CDP by the Regeneration Plan will be subject to these requirements. The exercise of any resource consents granted under these provisions will also be monitored. The Council will report every six months to the Urban Development Strategy Partnership Committee on progress with the implementation of the Regeneration Plan.

Appendix 1: Proposed amendments to the Canterbury Regional Policy Statement, Chapter 6 Recovery and rebuilding of Greater Christchurch

1. Amend Map A Greenfield Priority Areas in Chapter 6 Recovery and Rebuilding of Greater Christchurch as shown on the map below to include the following changes:
 - Remove the Projected Infrastructure Boundary from the full extent of the area of the draft Cranford Regeneration Plan;
 - Identify the extent of the Grassmere Street and Croziers Road blocks as a Greenfield Priority Area;
 - Identify the remaining areas of the draft Cranford Regeneration Plan as 'Existing Urban Area'; and
 - Amend the Map A legend to delete the words "Pre-2011".



Appendix 2: Proposed amendments to the Christchurch District Plan

1. Amend Chapter 8 Subdivision, development and earthworks as follows:

i. Insert [shown as **bold and underlined**] the following matters of control under Rule 8.5.1.2 Controlled activities C5 as follows:

<p>C5</p>	<p><u>Subdivision</u> in any area subject to an <u>outline development plan</u> or development plan, except as otherwise specified in Rules <u>8.5.1.2</u>, <u>8.5.1.3</u>, <u>8.5.1.4</u>, <u>8.5.1.5</u> and <u>8.5.1.6</u>.</p>	<p>a. Activity standards in <u>Rules 8.6.1 – 8.6.12</u>.</p> <p>b. The <u>subdivision</u> shall be undertaken in accordance with the relevant <u>outline development plan</u> or development plan, except that:</p> <p>i. in relation to any <u>outline development plan</u> in a Residential New Neighbourhood Zone, the activity shall meet the activity standard in <u>Rule 8.6.11(a)</u>;</p> <p>ii. in relation to any <u>outline development plan</u> contained in <u>Chapter 15</u> or <u>Chapter 16</u>, compliance is only required with the <u>key structuring elements</u> for that <u>outline development plan</u> area as described in the relevant chapter.</p> <p>c. In the Industrial Park Zone (Awatea), disposal of wastewater shall be via the <u>Council</u> reticulated sanitary sewage disposal system.</p> <p>d. For <u>subdivision</u> in areas marked as controlled on the Awatea Outline Development Plan – Tangata whenua layer diagram in <u>Appendix 8.10.14</u>, a cultural assessment shall be provided.</p> <p>e. For <u>subdivision</u> in the Industrial General Zone (North Belfast), activity standards in <u>Rule 8.6.14</u>.</p>	<p>a. <u>Rule 8.7.4</u>; and</p> <p>b. where relevant for industrial zones, <u>Rule 8.7.5</u> (except that in the Industrial General Zone (North Belfast), <u>Rule 8.7.4.1 (r)</u> and <u>Rule 8.7.4.6 (a)-(i) & (k)</u> shall not apply).</p> <p>c. In addition, in areas marked as controlled on the Awatea Outline Development Plan – Tangata whenua layer diagram in <u>Appendix 8.10.14</u>:</p> <p>i. matters arising from consultation undertaken with tangata whenua representatives in the design phase of the <u>subdivision</u> and preparation of the cultural assessment</p> <p>ii. the means of incorporating the findings of the cultural impact assessment in the design and implementation of the <u>subdivision</u>.</p> <p><u>d. In addition to the matters above, the following shall also apply within Area 5 in Appendix 8.10.31 East Papanui Outline Development Plan</u></p> <p><u>i. The matters set out in Appendix 8.10.31.C;</u></p> <p><u>ii. Whether the development is exemplary, including whether it:</u></p> <p><u>a. Provides for neighbourhood design that supports the principles of universal access;</u></p> <p><u>b. Demonstrates diversity in building and unit typology as well as providing for affordable housing; and</u></p> <p><u>c. Demonstrates innovation in the neighbourhood layout.</u></p>
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iii. Insert a new provision [shown as **bold and underline**] under Rule 8.5.1.3 Restricted discretionary activities, as follows:

	Activity	Relevant standards	Matters of discretion for the purpose of imposing conditions	Matters of discretion for the purpose of granting or declining consent and imposing conditions,
<u>RD2</u>	<p>a. Subdivision in any zone that does not meet any one or more of the relevant standards in:</p> <p>i. Rule 8.5.1.2 C5, C6 or C8; or ii. Rule 8.5.1.3 RD7;</p> <p>except as otherwise specified in Rules 8.5.1.3, 8.5.1.4 or 8.5.1.5.</p> <p>b. For subdivision in the Residential New Neighbourhood Zone that does not meet Rule 8.6.11.a outline development plan or Rule 8.6.11.b Residential net density, Rule 8.4.1.1.a.i. does not apply.</p> <p>c. In the instance of non-compliance with RD2 b., written approvals and either limited or public notification may apply.</p>	Nil	<p>a. Rule 8.7.4; and,</p> <p>b. where relevant, Rules 8.7.5 – 8.7.11 (except that in the Industrial General Zone (North Belfast), Rule 8.7.4.1 (r) and Rule 8.7.4.6 (a)-(i) & (k) shall not apply).</p> <p><u>In addition to the matters above, the following shall also apply to Area 5 in Appendix 8.10.31 East Papanui Outline Development Plan:</u></p> <p><u>c. The matters set out in Appendix 8.10.31.C</u></p>	<p>---</p> <p><u>h. In addition to the matters above, within Area 5 in Appendix 8.10.31 East Papanui Outline Development Plan:</u></p> <p><u>i. Whether the development is exemplary, including whether it:</u></p> <p><u>a. Provides for neighbourhood design that supports the principles of universal access;</u></p> <p><u>b. Demonstrates diversity in building and unit typology as well as providing for affordable housing; and</u></p> <p><u>c. Demonstrates innovation in the neighbourhood layout.</u></p>
<u>RD17</u>	<p><u>Within Areas 1, 2, 3, and 4 in Appendix 8.10.31 East Papanui Outline Development Plan:</u></p> <p><u>a. subdivision and land use activities, other than the following activities provided for by Rule 14.12.1.1 (to which Rule 14.12 shall continue to apply):</u></p> <p><u>a. P5 (Home occupation);</u></p> <p><u>c. P6 (Care of non-resident children);</u></p>	<p>a. <u>The subdivision and land use consent application shall be processed together.</u></p> <p>b. <u>The joint subdivision and land consent application shall be accompanied by a Neighbourhood Plan which shall cover a minimum area of 4ha and address the</u></p>	<p>a. <u>Rule 8.7.4 and</u></p> <p>b. <u>The matters set out in Appendix 8.10.31.C</u></p>	<p><u>a. Rule 8.8.15.1(a) to Rule 8.8.15.13 except Rule 8.8.15.7 and Rule 8.8.15.12.</u></p> <p><u>b. Whether the development is exemplary, including whether it:</u></p> <p><u>i. Provides for neighbourhood design that supports the principles of universal access</u></p> <p><u>ii. Results in Lifemark 3© as a minimum standard for residential buildings or is of a proven equivalent</u></p>

	<p><u>d. P7 (Bed and breakfast);</u> <u>e. P17 (Temporary lifting or moving of earthquake damaged buildings);</u> <u>f. P19 (Market gardens, community gardens and garden allotments); and</u> <u>g. P21 (limited to rural productive activities, other than new buildings or additions to existing buildings, which are permitted activities in the Rural Urban Fringe Zone) – Rule 17.5.1.1).</u></p>	<p><u>matters set out at Rule 8.6.13.</u></p> <p><u>c. The joint subdivision and land use consent application shall be for a developable area of at least 6,000m² within the 4ha Neighbourhood Plan area.</u></p> <p><u>d. The joint subdivision and land use consent application shall be in accordance with the development requirements set out in Appendix 8.10.31.D.</u></p> <p><u>e. The built form standards in Rules 14.12.2.1 to 14.12.2.17.</u></p> <p><u>f. The comprehensive subdivision and land use consent application shall contain 3 or more of the following building typologies:</u></p> <p><u>i. Standalone House;</u></p> <p><u>ii. Duplex;</u></p> <p><u>iii. Terrace;</u></p> <p><u>iv. Apartment;</u></p> <p><u>With no single typology making up more than two thirds of the total number of residential units.</u></p>		<p><u>iii. Results in Homestar 6© as a minimum standard for residential buildings or is of a proven equivalent</u></p> <p><u>iv. Demonstrates diversity in building and unit typology as well as providing for affordable housing</u></p> <p><u>v. Demonstrates innovation in the neighbourhood layout, building design and technologies utilised.</u></p> <p><u>c. In addition to the matters above:</u></p> <p><u>i. For Retirement villages: Rule 14.15.9;</u></p> <p><u>ii. For Comprehensive Residential Development: Rule 14.15.36.</u></p>
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iv. Insert a new provision [shown as bold and underline] under Rule 8.5.1.4 Discretionary activities, as follows:

	Activity
	...
D7	<u>Within Areas 1, 2, 3, and 4 of the East Papanui Outline Development Plan in Appendix 8.10.31, subdivision and land use activities under Rule 8.5.1.3 RD17:</u> <u>i. that do not comply with one or more of the relevant Standards listed in Rule 8.5.1.3 RD17; or</u> <u>ii. that are not otherwise listed as restricted discretionary or discretionary activities.</u>

v. Amend the heading for the following matter of discretion:

“8.8.15 Residential New Neighbourhood (~~North Halswell~~) Zone Outline Development Plans – North Halswell (Meadowlands Exemplar Overlay) and East Papanui.

vi. Insert a new appendix containing the narrative and plans for the East Papanui Outline Development Plan as Appendix 8.10.31 East Papanui Outline Development Plan as follows:

Appendix 8.10.31 East Papanui Outline Development Plan

8.10.31.A CONTEXT

The area comprises approximately 38 hectares of land bounded by Cranford Street, the Cranford Basin and Grassmere Street, and existing suburban residential and lifestyle properties. The latter incorporate large-scale tree planting, which contributes to the landscape quality of the area. It also includes 4.7 ha of land bounded by the stormwater basin in the vicinity of Croziers Road and Cranford Street. It is located close to the Papanui Key Activity Centre (KAC), other business areas and community infrastructure. There are several established transport links between the Cranford Basin and the Central City, including Cranford Street, the Northern Arterial, and the strategic cycleway network. The area is well serviced by public passenger transport, with the majority of the land being within 500 metres of a bus route. There are several schools and recreation facilities located nearby and the area is well served by parks and playgrounds.

The rural area adjoining the proposed development area was historically a major wetland/raupo swamp, but over the last 100 years has been drained and farmed, particularly for horticultural activities suited to the peat soil conditions. The area is characterised by both peaty and liquefiable soils and a number of artesian springs. The City Council has acquired this land and plans to develop it over the long term for stormwater management and public open space purposes.

8.10.31. B GUIDANCE

Guidance on the means to achieve the development requirements and form and design elements is provided within the Christchurch City Council’s Creating New Neighbourhood Design Guide.

8.10.31. C DEVELOPMENT FORM AND DESIGN

The following design elements and features are relevant considerations in exercising control over the matters in Rules Rule 8.5.1.2 Controlled activities C5 Rule 14.12.1.2 C1, C2, C4, C7; in exercising discretion over the matters set out under Rule 8.5.1.3 Restricted discretionary activities RD2, RD17 and all restricted discretionary activities in Rule 14.12.1.3; and for assessment under Rule 8.5.1.4 Discretionary activity D7.

1. New development will form an extension of the existing suburban residential areas. Subdivision designs will be required to demonstrate how the new development area achieves direct physical connections with the established residential areas.
2. New subdivision and development will avoid adverse effects on, and enhance, a naturalised waterway network and springs, and the strategic cycleway network.

3. Subdivision and development of some areas will be constrained due to the geotechnical and geo-hydrological conditions of the land (presence of springs and seeps), and limitations on the filling of flood prone areas. Further investigations will be required to refine the extent of areas subject to constraints (including the identification of TC2 and TC3 land). Subdivision designs and development will need to respond to these constraints with appropriate design and remediation. It is expected that as a consequence of these and the required density, that the subdivision pattern will result in comprehensively designed residential clusters, at different densities.
4. Subdivision and development of land within Area 5 is to maintain the flood storage capacity of the Cranford Basin as a natural floodplain, as defined by the Flood Ponding Management Area.
5. The subdivision design and development is to give consideration to the creation of view shafts and linkages to the Council's planned Cranford Basin facility. This could be achieved through the positioning of reserves, alignment of roads, footpaths and cycleway connections, and consideration to where future high density development may be located.
6. An open and attractive interface should be created between the edge of new residential areas and Cranford Basin. Where private property boundaries back onto a publicly accessible open area, appropriate boundary planting or fencing and generous building set backs are required.
7. Consideration must be given in the subdivision design and development as to how the interface between existing suburban residential development in Area 3 to the north-west of the ODP area and new higher density development will be managed to offset any adverse effects in respect to privacy, outlook and development form.
8. Consideration should be given to recognising and enhancing the ecological, historical and tangata whenua values of the area, in association with the naturalised waterway network (being the upper tributaries of the Styx River).
9. Consideration should be given to how archaeological sites are to be managed and works undertaken in a manner that reduces the risk of damage to sites;
10. The subdivision design and development should ensure the retention of existing specimen trees and groupings of these, which contribute to the landscape quality, amenity and identity of the area.
11. Any foundation or ground improvement works, including preloading of land, shall be designed so that any adverse effects will be appropriately managed. Adverse effects include depressurisation or contamination of aquifers, establishment of pathways for groundwater to migrate to the surface, and changes to established seeps and springs as they relate to works on the sites and adjoining sites. The effect of ground improvement works on hydrogeology shall be assessed. These effects should also be considered under the design seismic events.
12. The presence of waterways, including a naturalised waterway network, and the effects of lateral spread shall be taken into account in any subdivision and development and appropriate mitigation undertaken.
13. The design, construction and maintenance of subdivision and development (including foundations and pre-loading) shall take into account the effects of settlement, including the effects on adjoining properties. Settlement due to the following shall be considered:
 - (i) immediate soil compression, soil consolidation and long term secondary or creep effects;
 - (ii) any imposed loads from foundations or filling;
 - (iii) reduced loads from extraction, if any, causing rebound; and
 - (iv) seismic or post seismic events including foundation ratcheting, ground liquefaction and potential ground settlement due to volumetric reductions of soil caused by the ejection of liquefied soil to the ground surface.

8.10.31. D DEVELOPMENT REQUIREMENTS

The development requirements for the purposes of Rule 8.5.1.2 Controlled activities C5 and Rule 8.5.1.3 Restricted discretionary activities RD17, are described below and shown on the accompanying plans.

1. INTEGRATION

There are multiple land owners within this ODP area and a number of existing properties. Subdivision designs and development are to demonstrate a good level of connectivity between different land ownership areas through the inclusion of road, open space and pedestrian, cycleway and visual linkages in accordance with the ODP.

- DENSITY VARIATIONS AND HOUSEHOLD YIELDS

- a. Area 1– A minimum net density of 30 lots or households per hectare shall be achieved within this area given its close proximity to the Papanui/Northlands Key Activity Centre. Where an existing residential unit (as at 1 August 2017) is to be retained, a maximum site area of 2000m², that includes the residential unit, can be excluded from the 30 lots or households per hectare required density
- b. Part of Area 3 is time constrained because of the existence of the holiday park (as at 1 August 2017) but there is an opportunity for this area to be developed for residential purposes in the medium to long term at residential suburban densities to minimise traffic effects on Meadow Street. That part of Area 3 occupied by a holiday park is to be developed at densities anticipated for a Residential Suburban Zone in the event that the land is proposed for residential development. Rule 8.6.11.b density exceptions shall apply to this part of Area 3.
- c. Rule 8.6.11.b. density exemptions shall apply to Area 4 due to geotechnical constraints, limitations on the filling of land, and the need to protect existing springs and waterways.
- d. Area 5 is constrained due to access restrictions from Cranford Street and the presence of a Flood Ponding Management Area. There shall be no more than 60 residential units within Area 5. Rule 8.6.11.b. density exemptions shall apply to Area 5.
- e. There shall be no more than 320 residential units within Areas 1 – 4 of the East Papanui ODP boundary as defined on the ODP, excluding that part of Area 3 occupied by a holiday park (as at 1 August 2017).
- f. There shall be no more than 105 residential units within that part of Area 3 occupied by a holiday park (as at 1 August 2017).

- OPEN SPACE, RECREATION AND COMMUNITY FACILITIES

- a. Land for recreational (additional local parks) and conservation use shall be provided as a part of the naturalised waterway network and stormwater management facilities.
- b. To provide for new residents within the ODP area, provision shall be made for a Neighbourhood Park of between 3,000 – 4,000 m² in the location defined on the ODP as “Local Park”, which is accessible and has playground equipment, seating and landscaping.
- c. There shall be landscaping and/or fencing on lots adjoining the proposed extension of the cycleway from the Northern Arterial Extension to Grassmere Street, as identified on the Outline Development Plan in Appendix 8.10.31D as “Required Interface Treatment”. Any fencing shall be to a maximum height of 1.2 metres, or shall be at least 80% open if exceeding 1.2 metres.

- ACCESS AND TRANSPORT

- a. There shall be a fully interconnected local road network that achieves a high level of accessibility for walking, cycling and public transport that utilises the transport and open space network as defined on the ODP.
- b. There shall be a collector road from Cranford Street to Grassmere Street in accordance with the District Plan and Infrastructure Design Standards as part of any subdivision within the area identified for the collector road. There shall be no more than 99 residential units in Areas 1 – 4 prior to completion of a Collector road from Cranford Street to Grassmere Street.
- c. There shall be no access to Cranford Street until the Christchurch Northern Corridor is operational except for Area 5.
- d. The intersection of Cranford Street/and the collector road is to be designed to provide a Level of Service D (as defined in Highway Capacity Manual 2010) or better for right turning vehicles from the collector road onto Cranford Street during the peak hour ‘Peak hour’ is defined as those hours between 7.00am and 9.00am and 3pm and 7pm on a weekday.

- e. Shearer Avenue shall be extended to connect to the Cranford Street to Grassmere Street collector road in conjunction with subdivision of Area 1.
- f. An extension of the Northern Arterial strategic cycleway along the eastern boundary of the ODP area shall be provided through to Grassmere Street in conjunction with subdivision of the adjoining land.
- g. There shall be no more than four road access points onto Grassmere Street, to protect the functioning, safety and amenity of the Papanui Parallel major cycle route.
- h. Grassmere Street to be widened on the north-east side to enable the construction of the Papanui Parallel cycleway.
- i. Within Area 5 there shall be no more than six residential units with direct vehicle access from Cranford Street. Vehicle access shall be limited to one access from Cranford Street in the location of the existing access.
- j. There shall be no more than two residential units with direct vehicle access from Frome Place.
- k. Other than those provided for in k. and i. above, all residential units within Area 5 shall be accessed and egressed from Croziers Road.

- GROUND CONDITIONS

- a. Any ground settlement, and any consequent effects on adjacent properties, shall be within accepted MBIE Earthquake geotechnical engineering practice guidelines.
- b. In the design, construction and maintenance of development, it shall be demonstrated that the following standards are complied with as are relevant to each area.

A. Area 5 shall meet all of the requirements in clauses (i) to (v) below.

B. Areas 1 – 4 shall meet clauses (iv) and (vi) below.

- (i) The minimum requirements for site investigation density of the MBIE Guidelines for the geotechnical investigation and assessment of subdivisions in the Canterbury Region are complied with;
- (ii) A Liquefaction assessment of the site has been completed in accordance with MBIE guidelines;
- (iii) A preliminary estimate has been completed of the 'non-development' ground subsidence due to seismic effects and/or secondary (creep) settlement, which could be expected over the design life of the subdivision, including an assessment of differential settlement;
- (iv) The area has been classified according to the liquefaction and secondary settlement assessment, either as a whole or as micro-zones if variable subsidence is predicted;
- (v) A preliminary estimate has been completed of the induced settlements both on the site of the proposed subdivision and adjoining properties over the design life of the subdivision, where ground levels need to be raised by filling. This is to include an assessment of differential settlement;
- (vi) An assessment of effects has been undertaken of the cumulative settlements determined in (iii) and (v) on the development infrastructure for the areas determined under clause (iv) and any downstream effects.

- c. Any subdivision and use of land that is deemed to be potentially contaminated is subject to rules under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health. Further investigations will be required to determine whether soils are potentially contaminated.

- STORMWATER, GROUNDWATER AND FLOODING

- a. No earthworks, building and subdivision development, fencing or paving shall occur within 30m of any existing spring (excluding seeps) nor within 10m of a waterway except for the purpose of naturalising a waterway in accordance with clause 6(d). The East Papanui Outline Development Plan and Water Environment Plan in Appendix 8.10.31 provides guidance on the location of springs and seeps as identified and mapped in September 2016. The ODP Water Environment Plan should be used as a baseline for identifying these features, however any additional springs that may be identified subsequently shall comply with the rule above.

- b. The outflow from springs indicated on the ODP Water Environment plan shall be conveyed to the Tysons Stream (which is a tributary of the Styx River) at Cranford Street via a re-formed non-linear network of channels of natural appearance.
- c. No investigation, dewatering, drainage or construction may reduce the outflow from springs or the quality of spring water.
- d. Naturalisation of waterways is to be completed as part of any subdivision and development and waterways shall act as a flow conduit for springs and groundwater seepage. Naturalisation of the waterways shall include the following:
 - Planting of riparian areas with indigenous species to provide shading;
 - Enabling fish passage including the removal or modification of structures as required; and
 - Integration of waterways with the adjoining Cranford stormwater management area.
- e. Any subdivision or development shall not result in an overall lowering or raising of the groundwater level.
- f. A Geo-hydrological Management Plan shall be prepared and submitted as part of the first application for subdivision and land use activity within Areas 1 – 4 and shall relate to all of Areas 1 – 4 at least. A Geo-hydrological Plan shall be prepared and submitted as part of the first application for subdivision or land use activity (whichever is the earlier) within Area 5 for all of Area 5, unless Area 5 has already been included within a Geo-hydrological Management Plan prepared and submitted for the whole of the ODP area.

The Geo-hydrological Management Plan is required to demonstrate how subdivision and-development will

- i. maintain spring and seepage flows, and not result in the lowering or raising of groundwater levels;
- ii. protect, and where possible enhance ecological and cultural value;
- iii. achieve an integrated approach in managing effects on flooding and groundwater with the wider Cranford Basin proposed stormwater facility;
- iv. address effects on artesian conditions of the Springston Formation Lower Alluvium or the lower Confined Aquifer One associated with the Riccarton Formation.

In addressing the points above, the Geo-hydrological Management Plan shall describe its purpose, the principles of the plan, mitigation and control measures, as well as including an investigation and monitoring plan, and reporting and review procedures. For further requirements, refer to appendix 8.10.31E.

Any Geo-hydrological Management Plan shall be independently reviewed and endorsed by a suitably qualified expert in geo-hydrology prior to submission to the Council.

- g. Any required filling of land shall include the installation of subsurface groundwater drainage treatment, including permeable aggregate drainage blankets and subsoil drains, to divert groundwater to an identified waterway.
- h. Provision shall be made for flood attenuation and treatment of the stormwater first flush (25mm)-on-site to meet the mitigation standards of the operative Stormwater Management Plan for the catchment and the operative stormwater discharge consent.
- i. Any stormwater discharge from Areas 1-5 shall be to the Council's Stormwater Management Area as identified on the ODP Water Environment Plan in Appendix 8.10.31.
- j. There shall be no mixing of stormwater with spring water, such that there will be separation of stormwater from spring heads and spring fed waterways.
- k. Stormwater may not be discharged from the site at a rate in excess of pre-development runoff in events up to the 50 year average recurrence interval.
- l. Subdivision and development must allow for, and may not unduly impede, the eastward passage of overland flood water from Papanui toward the Cranford Basin defined on the Water Environment Plan in Appendix 8.10.31 as "Flood Water Flow Path – Indicative".
- m. Any subdivision or development within that part of Area 5 identified as a Flood Ponding Management Area or High Flood Hazard Management Area shall maintain the existing capacity of that area as a ponding area unless compensatory storage is provided elsewhere on the same site (Also refer to rules in Chapter 5 Natural Hazards).

- WATER AND WASTEWATER

- a. Any subdivision and development shall be serviced by a pressure sewer system with control panels on each pump which allow the Council to monitor and control the pumps.

- **STAGING**
- a. Area 1 shall be the priority development area for medium density residential development given its proximity to the KAC. Development in Areas 2, 3 and 4 shall not be of a scale and intensity that will preclude the ability to develop Area 1 to the minimum 30hh/ha required within the limit prescribed by clauses 2(e) and (f) of 425 residential units for Areas 1 - 4 of the ODP area.

8.10.31.E REQUIREMENTS FOR A GEOHYDROLOGICAL PLAN

This section provides a framework for development of a geo-hydrological management plan for the Residential New Neighbourhood Zone (East Papanui). This framework shall be used as the basis for a detailed geo-hydrological management plan submitted as part of the first consent applications for subdivision or land use activity in this area, in accordance with Appendix 8.10.31.D.6.f.

Prior to submitting the Geo-hydrological management plan to the Council in accordance with Appendix 8.10.31.D 6(f), a draft of the plan shall be provided to Environment Canterbury and Christchurch City Council for their review and comment.

Purpose of the Plan

The primary purpose of the geo-hydrological management plan is to:

- ensure that groundwater levels and spring and stream flow volumes and quality are not adversely effected by land development;
- maximise the resilience of the development to changes in the location of springs and seepages that could occur as a result of future earthquake activity; and
- avoid, remedy and mitigate the potential effects associated with development over compressible ground (e.g. peat deposits)

Principals of Geo-hydrological management in the East Papanui Outline Development Plan area (Appendix 8.10.31)

The founding principles of the management plan shall include, but not be limited to the following:

- Flow rates in springs and streams, which drain from the Cranford Basin area shall be monitored for a sufficiently long period to establish natural seasonal variability under a range of climatic conditions. Depending on the availability of existing monitoring data and climatic conditions at the time of monitoring, this may mean that more than one year of monitoring is required.
- The depth to and seasonal water level range of artesian groundwater shall be established through site investigation and monitoring prior to any development work.
- There shall be no of drawdown of the water table associated with any temporary or permanent excavations at the site, other than within sheet-piled enclosures to any depth below the average seasonal low groundwater level unless it can be demonstrated that this will not cause land subsidence or affect spring fed stream flows.
- Special control measures will be required for excavation or piling at locations and depths where artesian groundwater is likely to be encountered so that the risk of artesian water leakage or contamination is avoided.
- The site development design shall consider and accommodate, as far as practically possible, the potential for spring and seepage locations to change as a result of future earthquake activity.
- The design of drainage infrastructure at the site shall account for the potential for ground settlement and subsidence.

Mitigation and control measures

The geo-hydrological management plan shall define a set of mitigation and control measures that will be employed to minimise the potential for adverse effects during and post-development of the site. These measures shall include, but not be limited to the following:

1. Set-back distances from springs and streams;
2. Site drainage design mitigation and control measures;
3. Foundation design mitigation and control measures;
4. Underground service design mitigation and control measures, including provision to avoid creation of preferential flow pathways for groundwater;
5. Mechanisms to manage the effects of development over or in the vicinity of peat deposits, including the following provisions:
 - a. Ensure that consideration is given to how the possible changing water content of the peat in the area of the site over time (e.g. with climate change) will affect ground levels, as the peat shrinks and swells with drying out/soakage;

- b. Consider how increasing the non-permeable surface area will affect water content of peat and consequent shrinkage;
- c. Where buildings are proposed to sit directly on the peat, ensure that sufficient time is allowed for preloading of peat to pre-compact the ground;
- d. Ensure that the effects of loading by buildings on both peaty ground and the groundwater are considered in an integrated fashion. For example, if there is subsidence of the ground, consider where groundwater will sit with respect to the new ground surface;
- e. If buildings on peat are piled, they must be designed appropriately to account for possible subsidence under the building due to dewatering of the peat;
- f. In-ground infrastructure is designed to be resilient to differential subsidence, and account must be taken of groundwater levels and the possibility of, for example, floating manholes;
- g. If peat is removed, account must be taken of the different soakage properties of the peat versus the replacement ground with regard to stormwater management.
- h. Consideration of whether compaction of the ground due to development could reduce groundwater flow rates to local springs and streams.

Investigation and monitoring plan

The geo-hydrological management plan shall include a detailed site investigation and monitoring plan. The investigation and monitoring plan shall set out:

- The purpose and principles of the monitoring and investigation programme;
- The proposed site investigation method and details; and
- The location and frequency of groundwater level and spring and stream flow and water quality monitoring.

The Council anticipates that the site investigation will include:

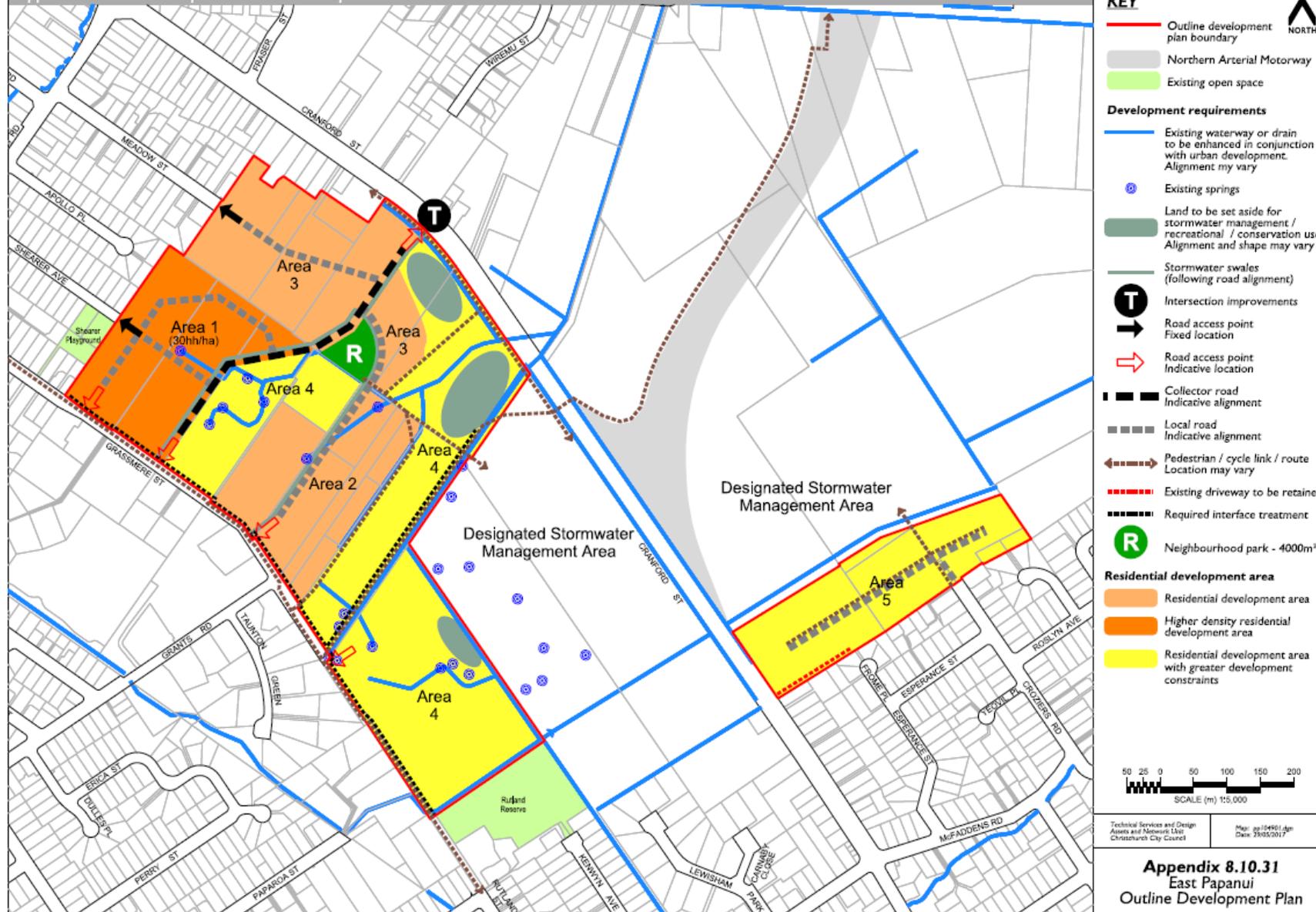
- A detailed investigation of the variability in depth to artesian groundwater at the site (e.g. using CPT coupled with pore water pressure logging, undertaken using best practice techniques to ensure that reliable data is obtained); and
- Installation of piezometers coupled with a sufficient period of water level monitoring to encapsulate a representative range of climatic conditions.

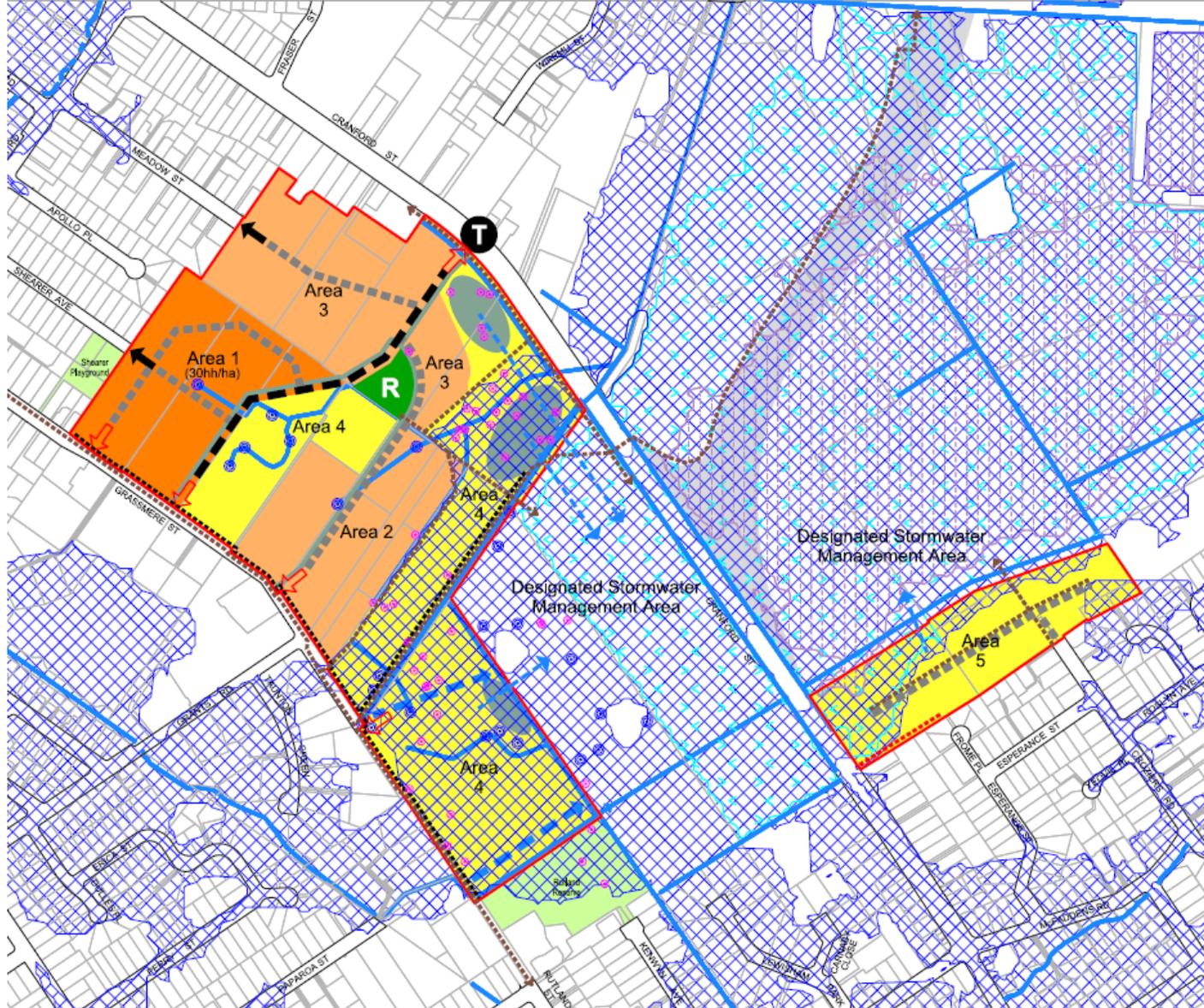
Reporting and review procedure

The plan shall set out a schedule for reporting and provision of information to Environment Canterbury and Christchurch City Council for review and comment. Details of reporting on and management of unforeseen issues (e.g. interception of significant groundwater inflows) during the site development shall also be defined.

OUTLINE DEVELOPMENT PLANS

Insert the following Outline Development Plans into Appendix 8.10.31 of the District Plan





KEY

- Outline development plan boundary
- Northern Arterial Motorway
- Existing open space

Development requirements

- Existing waterway or drain to be enhanced in conjunction with urban development. Alignment may vary
- Flood Management Area
- Flood Ponding Management Area
- High Flood Hazard Management Area
- Existing spring location
- Existing seep location
- Stormwater discharge to Designated Stormwater Management Area
- Flood water flow path - indicative
- Land to be set aside for stormwater management / recreational / conservation use. Alignment and shape may vary
- Stormwater swales (following road alignment)
- Intersection improvements
- Road access point Fixed location
- Road access point Indicative location
- Collector road Indicative alignment
- Local road Indicative alignment
- Pedestrian / cycle link / route Location may vary
- Existing driveway to be retained
- Required interface treatment
- Neighbourhood park - 4000m²

Residential development area

- Residential development area
- Higher density residential development area
- Residential development area with greater development constraints

50 25 0 50 100 150 200
SCALE (m) 1:5,000

Technical Services and Design
Assets and Networks Unit
Christchurch City Council

Map: 104961.dwg
Date: 29/05/2017

Appendix 8.10.31
East Papanui
Outline Development Plan
- Water Environment

2. Amend Chapter 14 Residential as follows:

i. Amend clause (j) of 14.3:

j. The Residential New Neighbourhood Zone rules in 14.12 do not apply to the Meadowlands Exemplar Overlay in the Residential New Neighbourhood (North Halswell) Zone shown on Planning Map 45. The rules relevant to Meadowlands Exemplar Overlay are contained in Chapter 8, see [Rules 8.5.1.3 RD15, 8.5.1.4 D5 and 8.5.1.5 NC8](#). **The Residential New Neighbourhood Zone rules in 14.12 do not apply to Areas 1 – 4 in the Residential New Neighbourhood (East Papanui) Zone shown on Planning Maps 24 and 25, other than where specified in Rule 8.5. The rules relevant to Areas 1 - 4 of the East Papanui Outline Development Plan area in Appendix 8.10.31 are contained in Chapter 8, see Rules 8.5.1.3 RD17 and RD18, 8.5.1.4 D7. The rules in 14.12 of this chapter do apply to Area 5 of the East Papanui Outline Development Plan area in Appendix 8.10.31, in addition to the rules in Chapter 8.**

ii. Insert a new controlled activity rule as follows:

14.12.1.2 Controlled activities

Activity	The matters over which the Council reserves its control:
<p><u>C7</u> Any activity listed in Rule 14.12.1.1 that meets all applicable built form standards in Rule 14.12.2 and is located within Area 5 in Appendix 8.10.31 East Papanui Outline Development Plan, other than the following activities:</p> <ul style="list-style-type: none"> <u>a. P5 (Home occupation);</u> <u>c. P6 (Care of non-resident children);</u> <u>d. P7 (Bed and breakfast);</u> <u>e. P17 (Temporary lifting or moving of earthquake damaged buildings);</u> <u>f. P19 (Market gardens, community gardens and garden allotments); and</u> <u>g. P21 (limited to rural productive activities, other than new buildings or additions to existing buildings, which are permitted activities in the Rural Urban Fringe Zone) – Rule 17.5.1.1).</u> 	<p><u>As they relate to the activity and associated development:</u></p> <ul style="list-style-type: none"> a. <u>Residential Design Principles – Rule 14.15.1;</u> b. <u>The matters set out in Appendix 8.10.31.C;</u> c. <u>Whether the development is exemplary including whether it:</u> <ul style="list-style-type: none"> A. <u>provides for neighbourhood design that supports the principles of universal access; and</u> B. <u>Results in Lifemark 3© as a minimum standard for residential buildings or is of a proven equivalent; and</u> C. <u>Results in Homestar 6© as a minimum standard for residential buildings or is of a proven equivalent; and</u> D. <u>demonstrates diversity in building and unit typology as well as providing for affordable housing and</u> E. <u>Demonstrates innovation in the neighbourhood layout, building design and technologies utilised.</u>

iii. Amend the controlled activity rules as follows:

14.12.1.2 Controlled activities

Activity		The matters over which the Council reserves its control:
C1	Retirement villages that meet all applicable built form standards in Rule 14.12.2	a. Retirement villages - Rule 14.15.9 b. <u>Within Area 5 in Appendix 8.10.31 East Papanui Outline Development Plan, Retirement villages shall also be subject to matters of control b. and c. specified under Rule 14.12.1.2 C7.</u>
C2	Comprehensive residential development that meet all applicable built form standards in Rule 14.12.2	c. Comprehensive residential development in the Residential New Neighbourhood Zone - Rule 14.15.36 d. <u>Within Area 5 in Appendix 8.10.31 East Papanui Outline Development Plan, Comprehensive residential development shall also be subject to matters of control b. and c. specified under Rule 14.12.1.2 C7.</u>
C3
C4	Residential units (including any sleep-outs) containing more than six bedrooms in total.	a. Scale of activity – Rule 14.15.5 b. Traffic generation and access safety – Rule 14.15.6 b. <u>Within Area 5 in Appendix 8.10.31 East Papanui Outline Development Plan, the activity shall also be subject to the matters of control specified under Rule 14.12.1.2 C7.</u>

iv. Amend the restricted discretionary rules as follows:

14.12.1.3 Restricted discretionary activities

...

c. Within Area 5 in Appendix 8.10.31 East Papanui Outline Development Plan, any restricted discretionary activity shall also be subject to the matters of discretion specified under Rule 14.12.1.2 C7 (matters of control to be treated as matters of discretion).

v. Amend the following built form standard:

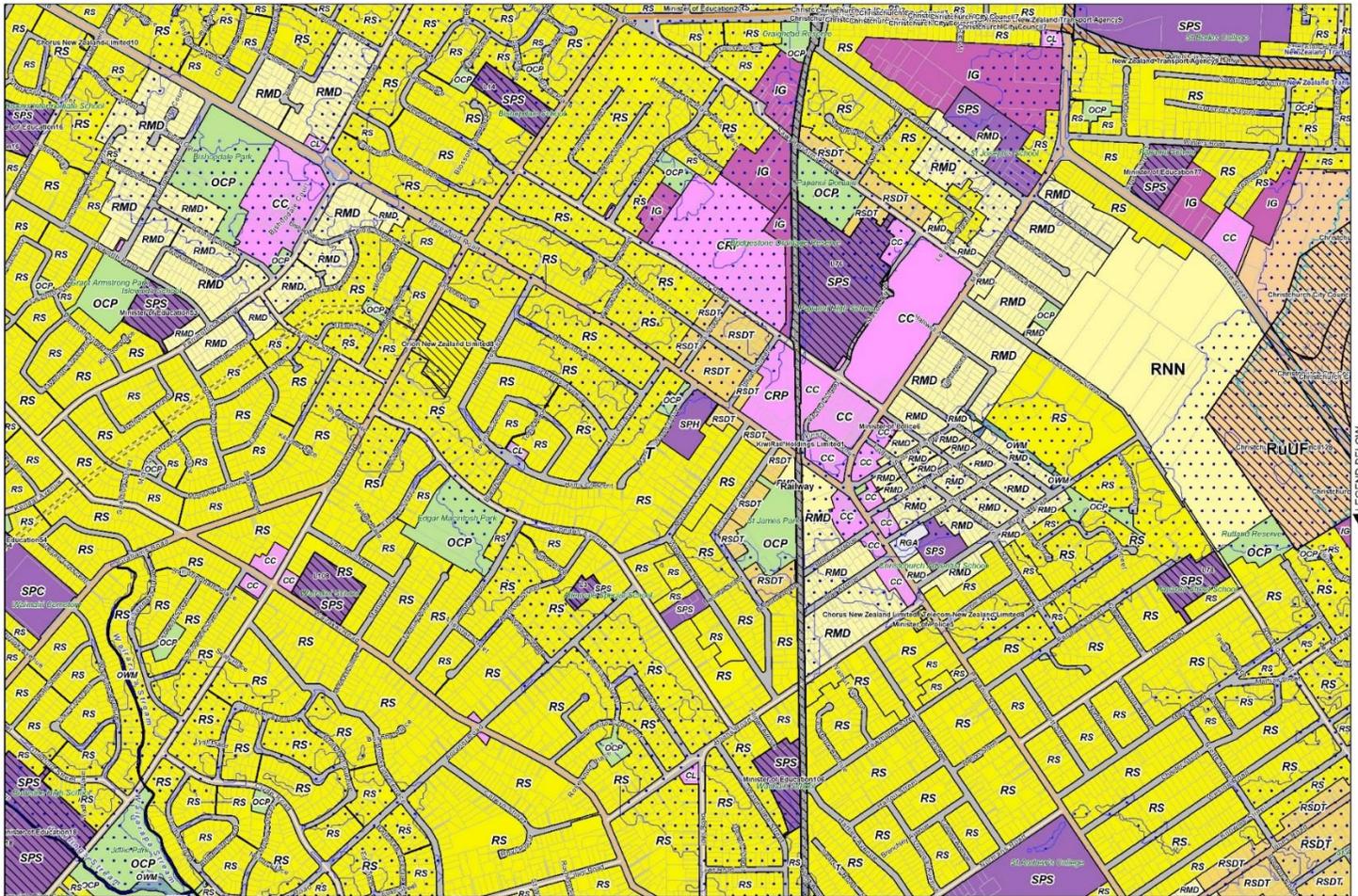
14.12.2.1 Building height

	Applicable to	Standard
i.	All buildings except as specified below.	8 metres
ii.	Comprehensive residential development on any site that meets Rule 14.12.3.17, except where a different maximum height is specified in the areas in (4) or (5) below <u>and within Area 5 in the East Papanui Outline Development Plan area (Appendix 8.10.31).</u>	11 metres

iii.	Retirement villages, except where a different maximum height is specified in in (4) or (5) below and within Area 5 in the East Papanui Outline Development Plan area (Appendix 8.10.31)..	11 metres
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vi. **Planning maps**

- ii. Amend planning maps 24 and 25 as follows:

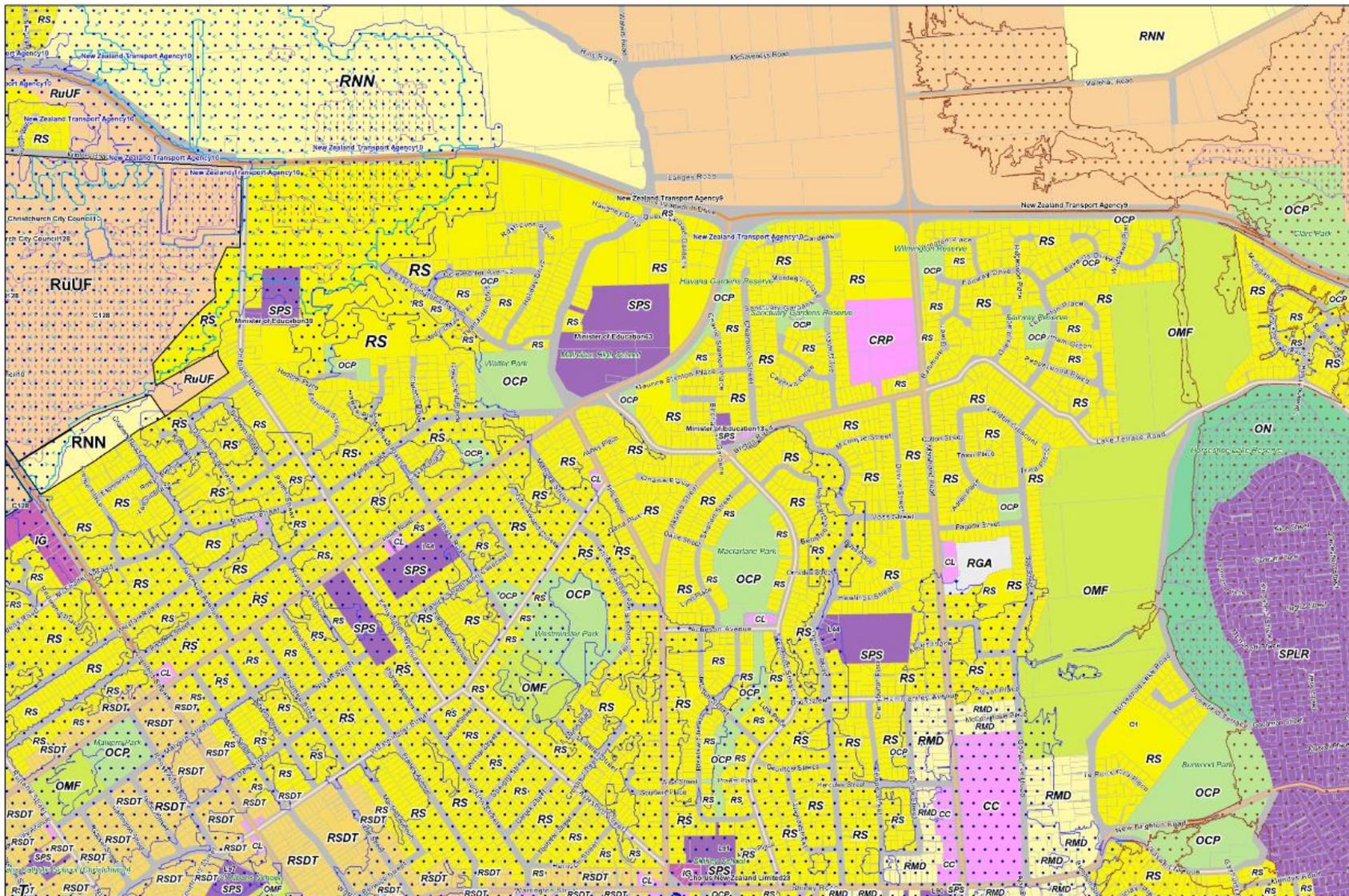


LEGEND BELOW

17	18	19
23	24	25
30	31	32

Proposed Amended Planning Map 24





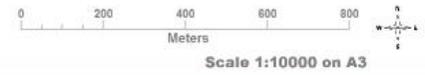
LEGEND BELOW

Christchurch Replacement District Plan

Christchurch City Council

18	19	20
24	25	26
31	32	33

Proposed Amended Planning Map 25



Appendix 3: Technical Reports

A supporting statement entitled 'Background Information & Planning Assessment provides the rationale and assessments behind this draft Plan (this document doesn't form part of this Regeneration Plan). It also lists the technical reports that were commissioned as part of preparing the Plan and evidence and other documents including Section 32 reports prepared in response to submissions seeking rezoning of land around the Cranford Basin. All of this information is available on request from the Council or, in the case of evidence, from the Independent Hearings Panel website at <http://www.chchplan.ihp.govt.nz/hearing/cranford-basin/>.