Notice of Meeting:
An ordinary meeting of the Christchurch City Council will be held on:

Date: Thursday 14 February 2019
Time: 9.30am
Venue: Council Chambers, Civic Offices, 53 Hereford Street, Christchurch

Membership
Chairperson
Mayor Lianne Dalziel
Deputy Chairperson
Deputy Mayor Andrew Turner
Members
Councillor Vicki Buck
Councillor Jimmy Chen
Councillor Phil Clearwater
Councillor Pauline Cotter
Councillor Mike Davidson
Councillor David East
Councillor Anne Galloway
Councillor Jamie Gough
Councillor Yani Johanson
Councillor Aaron Keown
Councillor Glenn Livingstone
Councillor Raf Manji
Councillor Tim Scandrett
Councillor Deon Swiggs
Councillor Sara Templeton

Note: The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. If you require further information relating to any reports, please contact the person named on the report.

Strategic Framework
The Council’s Vision – Christchurch is a city of opportunity for all.
Open to new ideas, new people and new ways of doing things – a city where anything is possible.

Whiria ngā whenu o ngā papa
Honoa ki te maurua tāukiuki
Bind together the strands of each mat
And join together with the seams of respect
and reciprocity.
The partnership with Papatipu Rūnanga
reflects mutual understanding and respect,
and a goal of improving the economic,
cultural, environmental and social
wellbeing for all.

Overarching Principle
Partnership - Our people are our taonga
- to be treasured and
encouraged. By working
 together we can create
a city that uses their
skill and talent, where
we can all participate,
and be valued.

Supporting Principles
Accountability
Affordability
Agility
Equity
Innovation

Community Outcomes
What we want to achieve together as our city evolves

Strong communities
Strong sense of community
Active participation in civic life
Safe and healthy communities
Celebration of our identity through arts,
culture, heritage and sport
Valuing the voices of children and young people

Liveable city
Vibrant and thriving central city, suburban and rural centres
A well connected and accessible city
Sufficient supply of, and access to, a range of housing
21st century garden city we are proud to live in

Healthy environment
Healthy waterways
High quality drinking water
Unique landscapes and indigenous biodiversity are valued
Sustainable use of resources

Prosperous economy
Great place for people, business and investment
An inclusive, equitable economy with broad-
base prosperity for all
A productive, adaptive and resilient economic base
Modern and robust city infrastructure and community facilities

Strategic Priorities
Our focus for improvement over the next three years and beyond

Enabling active citizenship and connected communities
Maximising opportunities to develop a vibrant,
prosperous and sustainable 21st century city

Climate change leadership
Informed and proactive approaches to natural hazard risks
Increasing active, public
and shared transport
opportunities and use
Safe and sustainable water supply and improved waterways
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1. **Apologies**  
At the close of the agenda no apologies had been received.

2. **Declarations of Interest**  
Members are reminded of the need to be vigilant and to stand aside from decision making when a conflict arises between their role as an elected representative and any private or other external interest they might have.

3. **Public Participation**
   3.1 **Public Forum**  
   A period of up to 30 minutes is available for people to speak for up to five minutes on any issue that is not the subject of a separate hearings process.

   3.2 **Deputations by Appointment**  
   Deputations may be heard on a matter or matters covered by a report on this agenda and approved by the Chairperson.
   
   There were no deputations by appointment at the time the agenda was prepared

4. **Presentation of Petitions**
   4.1 Councillor Galloway will present a petition of 431 submissions regarding an extension of the opening hours for the Halswell pool for 2019-2020 season.

   *Petition summary and background: There is a demand for the Halswell pool to be open earlier in the day.*

   *Action petitioned for: Extension of the opening hours for the Halswell pool for 2019-2020 season.*
5. Te Pātaka o Rākaihautū/Banks Peninsula Community Board Report to Council

Reference: 18/1351478
Presenter(s): Pam Richardson, Community Board Chairperson, Joan Blatchford, Community Governance Manager, Penelope Goldstone, Community Governance Manager

1. Purpose of Report
The purpose of this report is to provide the Council with an overview of Part A matters requiring a Council decision and of initiatives and issues considered by the Community Board.

2. Community Board Recommendations
That the Council:
1. Receive the Te Pātaka o Rākaihautū/Banks Peninsula Community Board report for December 2018.

3. Community Board Decisions Under Delegation
The Te Pātaka o Rākaihautū/Banks Peninsula Community Board held a meeting on 17 December 2018. Decisions made under delegation were:

- Traffic Calming Around Onuku Marae
  Onuku Rūnanga requested traffic calming around Onuku Marae as some vehicles in the area drive at high speeds. This is of particular concern when events are held at the Marae, and when children are playing in a nearby stream. The Board approved two speed humps on Onuku Road near Onuku Marae to support safe and appropriate speeds.

- More Room on Roads in Rāpaki
  Rāpaki is a popular destination, in particular during the summer and when Te Hapū o Ngāti Wheke holds events. As the settlement’s roads are generally too narrow for vehicles to park and still leave room for passing vehicles, Te Hapū o Ngāti Wheke requested No Stopping restrictions. The Board decided to prohibit vehicles from stopping in parts of Rāpaki and to approve a give way control.

- Community Funding Matters
  The Board approved a grant of $2,648 from its 2018/19 Discretionary Response Fund to Governors Bay Community Association towards the Governors Bay Fete and Music Festival.

- Cass Bay Reserves Management Committee
  The Board approved two new Committee members.

- Meeting Schedule
  The Board adopted its meeting schedule for February to September 2019.

- Recess Committee
  The Board appointed a Recess Committee for the holiday period.
4. **Part A Recommendations to Council**

The following reports presenting Part A recommendations from the Board are included in this agenda for Council consideration:

4.1 Akaroa Community Health Centre Funding Request

The Board’s consideration and recommendation of the Akaroa Community Health Centre Funding Request Report was considered by the Finance and Performance Committee of the Whole, on 7 February 2019.

5. **Significant Council Projects in the Board Area**

**Port Hills Management Plan**

5.1 Staff have started initial planning for the Port Hills Management Plan. Staff will next brief Councillors and affected Community Boards to introduce this important project to them. Discussion with key stakeholders is expected to start by mid-2019.

**Duvauchelle Wastewater Project**

5.1 Deep well injection is not an option for this project. The proposed ponds will be an issue for the location of the A&P Show, and the golf course may require reorganisation.

**Little River Drainage Work**

5.1 A capital project is underway to address stormwater, drainage and flooding concerns around the village. The Little River Wairewa Community Trust made a detailed submission to the Christchurch City Council and Environment Canterbury Long Term Plans for this issue. The Council has allocated $825,000.

6. **Significant Community Issues, Events and Projects in the Board Area**

**Public Forum, Deputations and Correspondence**

6.1 **Proposal for Multi Sports Body in Akaroa**

6.1.1 Jan Whitehead spoke to the Board regarding the Akaroa Tennis and Netball courts and a proposal to re-establish a multi sports body to redevelop the croquet, tennis and netball area in Akaroa to better fit the needs of the Clubs and the greater Banks Peninsula community. The Board agreed to pass the information circulated by Ms Whitehead to staff for comment.

6.2 **Impact of Cruise Ships in Akaroa**

6.2.1 Victoria Andrews spoke to the Board regarding the Council’s Marine, River and Lake Facilities Bylaw. She tabled a number of questions relating to how cruise ship visits to Akaroa fit with the bylaw, including how the Council decided that only one cruise ship per day will access Lyttelton’s new terminal yet Akaroa must accept two to four ships per day with its inadequate infrastructure. The Board requested that staff provide a response.

6.2.2 Mike Norris spoke to the Board about the untidy state of Akaroa, its lack of appropriate public toilets and the state of the traffic management signage associated with the cruise ship visits. He asked the Board several questions around these issues including why the Council has not placed the toilets in a more suitable location. The Board agreed to pass these questions to staff for reply.

6.3 **Friends of Akaroa Museum**

6.3.1 David Miller, President of the Friends of Akaroa Museum (FOAM), spoke to the Board regarding the activities of FOAM over the past year. He also spoke about the upcoming
review of the Akaroa Museum Advisory Committee, saying that FOAM members were unanimous in their support of retaining the Committee.

6.4 **Funding Request for Akaroa Community Health Centre**

6.4.1 Paul de Latour and Gordon Bloxall, on behalf of the Akaroa Community Health Trust, spoke to the Board regarding the Akaroa Community Health Centre Funding Request report (refer to the report in this agenda). They asked that the Council consult with the community on a suggested rates levy to help fund the Akaroa Community Health Centre, and indicated that the Trust preferred the levy to be a fixed charge levied over a four year period.

6.4.2 Craig Hastie spoke to the Board regarding the Akaroa Community Health Centre Funding Request report. He voiced his opposition to a proposed rates levy to help fund the Centre and asked that the Board decline the proposal.

6.4.3 Allison Craw spoke on behalf of the Guardians of Akaroa Hospital regarding the Akaroa Community Health Centre Funding Request report. She said the Guardians fully supported the request from the Akaroa Community Health Trust for a rates levy to help fund the Centre.

**Committee and Working Party Matters**

6.5 **Reserve Management Committees**

6.5.1 The Board received minutes from three Reserve Management Committee meetings:

- Robinsons Bay Reserve Management Committee – 5 November 2018
- Lyttelton Reserves Management Committee – 18 November 2018
- Cass Bay Reserves Management Committee – 6 December 2018

6.5.2 The Board requested that staff investigate options for the Cass Bay community to have limited access to the Steadfast land while the Port Hills Management Plan is under development and discuss options for a track linking the Summit Road to the Cass Bay / Governors Bay area.

6.5.3 The Board requested that staff provide advice on options for preventing people from developing pirate tracks on Council reserves.

6.5.4 $130,000 has been allocated in FY2018/19 for capital works for Banks Peninsula in the Long Term Plan in response to the submissions made by Reserve Management Committees. Staff have collaborated to allocate this funding equitably with regard to the submissions made by these Committees.

6.6 **Akaroa Museum Advisory Committee**

6.6.1 The Board received minutes from the Akaroa Museum Advisory Committee meeting held on 28 November 2018.

6.7 **Head to Head Walkway Working Party**

6.7.1 The Board received notes from the Head to Head Walkway Working Party meeting held on 19 November 2018. Progress continues with the Walkway, which will be a continuous track around Lyttelton Harbour from Awaroa/Godley Head to Te Piaka/Adderley Head.

6.7.2 The Diamond Harbour community is partnering with the Council to construct and maintain a section of the walkway. A team of enthusiastic volunteers are working closely with Council Rangers on this project.

6.8 **Akaroa Issues Working Party**

6.8.1 The Board approved the appointment of a new member to the Working Party.
6.8.2 The Board asked staff to review a previous decision regarding a shower at the Akaroa Beach, in light of the increase to water quantity in Akaroa and an offer from the Lions Club to fund the project.

6.8.3 The Board requested that staff arrange for the long grass in all unmown public areas of Akaroa to urgently be cut, including the picnic area in Childrens Bay, the grounds of Yew Cottage and the track on L’Aube Hill up to the French Cemetery.

6.8.4 The Board sought reassurance from staff that both the temporary toilets, and the sanitary bins in all toilets in Akaroa, would be fully operational over the upcoming holiday period.

**Briefings**

6.9 My Council and Snap, Send, Solve

6.9.1 The Board received a briefing from staff on My Council and Snap, Send, Solve, which are systems used by the public to report issues to the Council. The Board asked if it could receive a report on the number of requests for service received from Banks Peninsula.

**7. Progress Report Against the Community Board Plan**

7.1 The Community Board Plan for 2017/19 is available at the following link:

7.2 The next six monthly progress report will be reported to the Board at its 4 March 2019 meeting.

**8. Community Board Matters of Interest**

8.1 Review of Parks and Road Maintenance Contracts

8.1.1 The Board has recently been given an undertaking that Community Boards would be involved in the review of the Parks Maintenance Contract and the Road Maintenance Contract. The Board requested that staff liaise with the Board at an early stage in those processes.

**Attachments**

There are no attachments to this report.

**Signatories**

| Authors | Joan Blatchford - Manager Community Governance, Banks Peninsula/Lyttelton  
Penelope Goldstone - Manager Community Governance, Banks Peninsula/Akaroa |
|---|---|
| Approved By | Penelope Goldstone - Manager Community Governance, Banks Peninsula/Akaroa  
Joan Blatchford - Manager Community Governance, Banks Peninsula/Lyttelton  
Matthew McIntock - Manager Community Governance Team  
John Filsell - Head of Community Support, Governance and Partnerships |
6. Waitai/Coastal-Burwood Community Board Report to Council

Reference: 18/1346912
Presenter(s): Kim Money, Chairperson Waitai/Coastal-Burwood Community Board

1. Purpose of Report

The purpose of this report is to provide the Council with an overview of Part A matters requiring a Council decision and of initiatives and issues considered by the Community Board.

2. Community Board Recommendations

That the Council:


3. Community Board Decisions Under Delegation

The Waitai/Coastal-Burwood Community Board held a meeting on 3 December. Decisions made under delegation were, the Board:

- Approved 18 new road names in the Prestons Park Subdivision.
- Approved the installation of a soccer goal in Aston Reserve by the Northshore Residents’ Association subject to the Association confirming some specific construction details and meeting Council installation requirements.
- Approved a grant of $1,000 from its 2018/19 Discretionary Response Fund to The Burwood Daycare for the Elderly towards its Community Fair/Anniversary Celebration.
- Adopted a board meeting schedule from 4 February to 2 December 2019 with meetings generally being held on the first and third Mondays, with Public Forums at the first Monday.
- Approved a grant of up to $500 from its 2018/19 Discretionary Response Fund towards the cost of decorating the New Brighton Clock Tower for the 2018/19 holiday season.
- Appointed a Recess Committee comprising the Board Chairperson or Deputy Chairperson and any two Board members available, to be authorised to exercise the delegated powers of the Coastal-Burwood Community Board for the period following its ordinary meeting on 3 December 2018 up until the Board resumes normal business on 4 February 2019.

4. Part A Recommendations to Council

There were no Part A recommendations.

5. Significant Council Projects in the Board Area

5.1 Christchurch Hot Pools

The land for the hot pools is currently being prepared in the area between the Beachside Playground and the North Ramp carpark and has an estimated 12 month build time.
6. **Significant Community Issues, Events and Projects in the Board Area**

6.1 **Aston Reserve soccer Goals**

The Community Board approved the installation of a soccer goal in Aston Reserve. This project is led by Northshore Residents’ Association, following request from parents and children in the area for an additional soccer goal. It will be placed opposite the existing goal post in the reserve to create a small pitch for recreational games.

6.2 **Bexley Park Reserve – Toilet Block**

In response to concerns raised to Board members about the toilets at Bexley Park Reserve, the Coastal-Burwood Community Board and Council staff, along with representatives of Velocity Karts and NAC BMX, attended a site visit to Bexley Park. Staff advised the solar panels and piping which provide power supply to the toilets, were removed following an act of vandalism.

Staff provided an update on the toilet block repairs that were in progress as well as the other projects at the Reserve that will be initiated in the coming months.

6.3 **The Duck Down to the River - Riverside Festival**

The Duck Down to the River - Riverside Festival is scheduled for Sunday 24 March at Kerrs Reach, Avonside Drive. This event is being developed and organised in partnership with community groups in Burwood, Avondale and Dallington suburbs. The event will offer a range of activities for local residents to enjoy on the river bank and on the river itself including kayaking, a duck race, giant games, inflatables, food, music and local community information stalls. The event is part of a project that received funding from the Community Resilience Partnership Fund.
6.4  **Kite day New Brighton 2019**

Deep South Kite day was held on the 26 January on New Brighton beach. Kite-makers from around New Zealand took part in the popular family-style event. Members of the public were encouraged to create and decorate their own kite for the day.

![Kite day New Brighton 2019](image)

6.5  **Burwood, Avondale and Dallington Initiatives**

The Dallington Family Movie Night was held on Friday 25 January. The event started with a petting zoo, pony rides and entertainment. Residents brought along their own picnics and dinner. In spite of a cold wind there were a good number of residents in attendance and the event was well organised and hosted by the Dallington Community Trust.

![Dallington Family Movie Night](image)

6.6  **New Brighton Clock Tower Festive Decorations**

On 3 December 2018, the Board approved funding towards the cost of decorating the New Brighton Clock Tower for the 2018/19 holiday season. Festive wrapping was installed by Grace Vineyard Church Beach campus helpers. Grace Vineyard Church also contributed the majority of the cost. The wrapping has been warmly received by residents.

![New Brighton Clock Tower](image)
6.7 Common Ground

Common Ground is a collaboration of South Brighton community organisations and mobile food operators to activate the empty section at the South Brighton roundabout as a community gathering space for the South Brighton and Southshore communities. It provides a place for eating, meeting, learning, performing, sharing, growing food, for markets and exhibitions, and for sharing food and produce. The project is designed to enable and enhance resilience and well-being for these communities who still have no permanent place to gather together, and who remain without the local facilities and businesses that were lost after the 2011 earthquake.

The Board recently approved Discretionary Response Funding, to Sustain South Brighton towards the Project. In addition, contractors, have provided free labour, materials and equipment use to transform and fence the empty space.
6.8 **New Brighton South of the Pier Re: Activate Works**

The mural was completed last year and the first stage of the basketball court works have been completed (new asphalt and installation of a new basketball tower). The artwork on that surface is scheduled to be applied early February after the Coast to Coast event.

6.9 **I love New Brighton 2019 – Waitangi Day**

I love New Brighton is a local event run by local people, to celebrate all they love about New Brighton while giving local groups the opportunity to showcase their groups. The event was held at Thomson Park on Waitangi Day 6 February 2019. There were bouncy castles, Zorb balls, live bands, a sports zone, food stalls, a market, large games, information stalls, face painting, free barbeque, free parking and more.
6.10 **Infrastructure projects underway**

6.10.1 **Robin Playground, Burwood - Play Space Renewal**
This project has been initiated with the funding starting in financial year 2020 and construction programmed in financial year 2021.

6.10.2 **Travis Wetland Boardwalk Extension**
This project is to address the current issue with the existing boardwalk and paths that are prone to flooding. The project is currently in the early design/investigation stages with the construction planned for Financial Year 2020.

6.10.3 **Travis Wetland Driveway Resurface**
This project is to repair the damage to the existing asphalt driveway and car park. This project is currently in the design and cost estimating stage, however construction is currently planned for completion mid May 2019.

6.10.4 **Donnell Sports Park Project**
This project is to remediate the earthquake damage to the tennis & basketball courts and provide a new toilet, and is currently at the stage of processing the Resource Consent. The construction is currently planned for completion the last week of May 2019.

6.10.5 **Thomson park renewal project**
This project is to upgrade Thomson Park by way of a new car park, landscaping and Exeloo toilet. The project is currently at the stage of processing the Resource Consent. The construction is currently planned for completion mid June 2019. The exeloo is now in place.

6.10.6 **South New Brighton Reserves Development**
A project to develop South New Brighton Reserves has been initiated. Staff have met with the Community Board and received confirmation to progress with designing the new pump track in South New Brighton Park, Bridge St (south) new picnic area and landscaping and Blighs Garden picnic area and natural play. The project has 3 years of funding available for this initial phase of development.

7. **Progress Report Against the Community Board Plan**

7.1 The Board approved the Coastal-Burwood Community Board Plan for 2017-19 on 16 October 2017. This Plan, can be found at the following link: https://www.ccc.govt.nz/assets/Documents/The-Council/Community-Boards/Coastal-Burwood-Community-Board-Plan-2017-19.pdf

7.2 The Board’s ongoing decisions are being included as measures against the Outcomes and Priorities contained in the 2017 – 2019 Community Board Plan.

8. **Community Board Matters of Interest**

8.1 The Board received a public forum from a representative of the Wainoni-Avonside Community Services Trust, supported by the Chair of the Dallington Residents’ Association, regarding psycho-social well-being issues that some of the Trust’s clients are presenting. The Board was also updated regarding the building used by the Trust which is in poor condition and now has limited use. Consequently, the Trust is looking at possibilities to move elsewhere.

8.2 The Board provided feedback to Council on Regenerate Christchurch’s Ōtākaro Avon River Corridor Draft Regeneration Plan.
8.3 At the Board’s meeting on 3 December 2018, the Board noted the intent to request that the Council prioritise funding for a shared three suburb (Burwood-Avondale-Dallington) Community Centre from the Capital Acceleration Fund ‘Residential Red Zone Seed Funding’. The Board considers this a legacy project that is of critical importance to these three communities- Burwood, Avondale and Dallington. Staff have advised that following a Regeneration Plan being approved and the governance body/arrangements established for this area, priorities for implementation (i.e. which projects go first) could be discussed. The Board is aware of the work underway by both the Burwood-Avondale-Dallington Group who are carrying out a feasibility for a shared suburb community centre, as well as the work being undertaken by Council staff to develop a Community Facilities Network Plan.

Attachments
There are no attachments for this report.

Signatories

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<tr>
<th>Authors</th>
<th>Ann Furlong - Support Officer</th>
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<td>Jo Wells - Manager Community</td>
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<td>Peter Croucher - Community</td>
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<td>John Filsell - Head of</td>
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<td>Community Support, Governance</td>
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1. Purpose of Report
The purpose of this report is to provide the Council with an overview of Part A matters requiring a Council decision and of initiatives and issues considered by the Community Board.

2. Community Board Recommendations
That the Council:

3. Community Board Decisions Under Delegation
The Waimāero/Fendalton-Waimairi-Harewood Community Board held a meeting on 10 December 2018. Decisions made under delegation were:

- Normans Road/Hartley Avenue - Proposed No Stopping Restrictions - the Board resolved to approve no stopping restrictions on the north side of the intersection of Normans Road and Hartley Avenue.
- Rugby Street - Proposed No Stopping Restrictions - the Board approved no stopping restrictions on Rugby Street south west of its intersection with Papanui Road.
- Springbank Street - Proposed No Stopping Restrictions - the Board approved no stopping restrictions in Springbank Street near its intersections with Sevenoaks Drive.
- Fendalton-Waimairi-Harewood 2018-19 Youth Development Fund - the Board approved grants totalling $2,400 to eight recipients to participate in sporting and cultural events in Wellington, Rotorua, Gold Coast, and New York City and Orland.
- Waimāero/Fendalton-Waimairi-Harewood Community Board Meeting Schedule 2019 - the Board approved its meeting schedule for 2019 with meetings generally being held on the first and third Mondays.
- Waimāero/Fendalton-Waimairi-Harewood Community Board - Recess Committee - the Board appointed a Recess Committee, comprising the Chairperson or Deputy Chairperson and a minimum of two other Board members available to exercise the delegated powers of the Board for the period following its 10 December 2018 meeting until normal business resumes on 4 February 2019.

4. Part A Recommendations to Council
The following reports presenting Part A recommendations from the Board are included in this agenda for Council consideration:

4.1 Avonhead Park Cemetery
5. Significant Council Projects in the Board Area

5.1 Bishopdale Skate Park Renewal

At the recent Bishopdale Skate Jam event, Council engagement staff were on site to ask Skate Park users what they would like to see when the Bishopdale Skate Park renewal project is undertaken. This information, together with other feedback gathered early in the New Year, will be used by the project team to create a design that will be formally consulted on.

5.2 Breens Road/Harewood Road/Gardiners Road Intersection

Council staff are currently working on the draft consultation document for the Breens Road/Harewood Road/Gardiners Road Intersection.

Two options for addressing and improving the safety of the intersection will be put to the community for its feedback.

6. Significant Community Issues, Events and Projects in the Board Area

6.1.1 Walk ‘n Talk

The Fendalton Walk ‘n Talk group held their Christmas Break-Up on Thursday, 13 December 2018.

The group is strongly supported weekly with up to 50 walkers, including the group’s original member Pat, who’s in her 90's and still regularly attends.
6.2 Culture Galore

The annual Culture Galore event will be held on Saturday, 23 February 2019 from 12 noon until 4pm at Ray Blank Park, Maidstone Road.

This very popular event, which is jointly funded by the Waimāero/Fendalton-Waimairi-Harewood and Halswell-Hornby-Riccarton Community Boards, celebrates the diversity of cultures in our city through performances and food.

6.3 Community Pride Garden Awards

Judging has begun for this year’s Community Pride Garden Awards 2019 (19 January to 10 February 2019), with Judges from the Christchurch Beautifying Association selecting award-winning gardens that are visible from the street.

Judges take into account effort, overall tidiness and impact of the garden on the street. There is no competition and all gardens meeting the standard are awarded a certificate. A notification card will be left in award recipients letterboxes and they have until 14 February 2019 to return their completed card to us.

Certificates and trophies will be presented in March at the Fendalton-Waimairi-Harewood Community Board awards ceremony.

6.4 Waterways

A number of issues regarding waterways in the Board’s area have been raised with Board members. These include flooding issues in the Waimairi Stream due to the build-up of silt and weed and an issue with the Ilam Stream stream bed at the Colina Street culvert.

Staff have investigated the issues on an individual basis and where appropriate work has been undertaken to resolve.

7. Progress Report Against the Community Board Plan

7.1 The Board received an update against the Waimāero/Fendalton-Waimairi-Harewood Community Board Plan at its meeting on 4 February 2019.

The next update will be provided to the Board in May 2019.
Attachments
There are no attachments to this report.

Signatories

<table>
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<tr>
<th>Authors</th>
<th>Maryanne Lomax - Manager Community Governance, Fendalton-Waimairi-Harewood</th>
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<tr>
<td></td>
<td>Lisa Gregory - Community Recreation Advisor</td>
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<td>Margaret Henderson - Community Board Advisor</td>
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<td>Bronwyn Frost - Support Officer</td>
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<td>Approved By</td>
<td>John Filsell - Head of Community Support, Governance and Partnerships</td>
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8. Waipuna/Halswell-Hornby-Riccarton Community Board Report to Council

Reference: 19/53995
Presenter(s): Mike Mora, Chairperson
Matthew Pratt, Community Governance Manager

1. Purpose of Report
The purpose of this report is to provide the Council with an overview of Part A matters requiring a Council decision and of initiatives and issues considered by the Community Board.

2. Community Board Recommendation
That the Council:

3. Community Board Decisions Under Delegation
The Waipuna/Halswell-Hornby-Riccarton Community Board held an extraordinary meeting on 5 December 2018 and ordinary meetings on 11 December 2018 and 29 January 2019.

Decisions made under delegation were:

- Approval of road names for the Copper Ridge subdivision in Halswell.
- Allocations of 2018-19 Discretionary Response Funding to several local organisations.
- Allocations of 2018-19 Youth Development Funding to local recipients.
- Adoption of the dates, time and venues of the Board’s Ordinary Meetings for the period January to September 2019 inclusive.

A recommendation from the Extraordinary Board Meeting held on 5 December 2018 regarding the site location for the Hornby Library, Customer Services and South West Leisure Facility was presented to and resolved on by the Council on 13 December 2018.

4. Part A Recommendations to Council
The following reports presenting Part A recommendations from the Board are included separately in this agenda for the Council’s consideration:
4.1 Halswell Junction Road – Legalisation of Land Acquired for Road
4.2 Halswell Swimming Pool – Operating Hours

5. Significant Community Issues, Events and Projects in the Board Area
5.1 Kennedys Bush Neighbourhood Association
The Kennedys Bush Neighbourhood Association continues to meet for up to three times a year with a focus on local community building. The group held a Christmas Party in the small park on Kennedys Bush Road on 16 December 2018.
5.2 Local Events

The Halswell Skate Jam was held on Wednesday 16 January 2019 at Opouira/Knights Stream Park from 12 noon to 3pm.

The event jointly marked the openings of the new skate park at the Halswell Domain in December 2018, and the Opouira/Knight Stream Skate Park in use since July 2018.
6. Progress Report Against the Community Board Plan

6.1 The Board’s ongoing decisions are being included as measures against the Outcomes and Priorities contained in the Board’s 2017-2019 Community Board Plan.

6.2 This information update for the December 2018 quarter was reported on and received by the Board at its meeting on 11 December 2018.

Attachments

There are no attachments to this report.

Signatories

| Authors                      | Cindy Sheppard - Governance Support Officer  
|                             | Peter Dow - Community Governance Manager    
|                             | Marie Byrne - Community Development Advisor  
|                             | Karla Gunby - Community Development Advisor  
|                             | Noela Letufuga - Support Officer            
|                             | Emily Toase - Community Recreation Advisor   
|                             | Matthew Pratt - Manager Community Governance, Halswell-Hornby-Riccarton |

| Approved By                 | Matthew McLintock - Manager Community Governance Team  
|                             | John Filsell - Head of Community Support, Governance and Partnerships |
9. Waikura/Linwood-Central-Heathcote Community Board Report to Council

Reference: 19/17258

Presenter(s): Sally Buck, Chairperson
Arohanui Grace, Community Governance Manager

1. Purpose of Report
The purpose of this report is to provide the Council with an overview of Part A matters requiring a Council decision and of initiatives and issues considered by the Community Board.

2. Community Board Recommendations

That the Council:

1. Receive the Community Board report for December 2018.

3. Community Board Decisions Under Delegation
The Linwood-Central-Heathcote Community Board held a meeting on 3 December 2018. Decisions made under delegation were:

- Parking Restrictions in:
  - Francella Street, Bromley
  - Forth Street, Richmond
  - Francella Street, Bromley – Give Way and Stop Control.
  - Barbadoes Street near Nova Place
  - Cannon Hill Crescent, Mt Pleasant

- St Johns Street and Linwood Avenue Intersection, Bromley – Safety Improvements.
- Riccarton Avenue – Christchurch Hospital Emergency Vehicle Access.

The Board made an additional request for staff to investigate options for replacement bus stops in the vicinity of Hagley Oval.

- The Board approved 26 Nayland Street to be the location for a skate park in the Bays Area subject to 20/24 Nayland Street being transferred from Crown ownership to Council ownership. The Board noted that there will be further discussion with the community through the next phase of community engagement on the future use of the balance of land at 20/24 Nayland Street.

- The Board approved a lease of an area of Old School Reserve to the Scout Association of New Zealand and recommend to the Council to sell Mount Pleasant Sea Scout building located at Old School Reserve (172 Major Hornbrook Road) to ‘The Scout Association of New Zealand’ for the nominal sum of $1, noting the group will refurbish the building.

- The Board approved the Coastal Pathway Shared Pathway resolutions. The Board requested additional information on how the shared pathway is working and whether there is a need for speed limits or other measures to be implemented to manage potential conflicts.

- The Board have laid on the table Discretionary Response Funding applications until the February Board meeting pending a discussion of funding matters at a Board workshop in January 2019.

- The Board approved the Board’s meeting schedule from February to September 2019.
4. **Part A Recommendations to Council**

The following report presenting Part A recommendations from the Board are included in this agenda for Council consideration:

4.1 Mt. Pleasant Sea Scouts Building - Gift & New Lease.

4.2 Christchurch Northern Corridor Downstream Effects Mitigation Plan (Draft)

5. **Significant Council Projects in the Board Area**

**Linwood Pool – Preview of the pool layout with the community**

5.1.1 On Saturday 8 December from 1 pm to 4 pm at Linwood Park, the community were invited to view the layout of the new Linwood Pool and to comment on some future changes to improve Linwood Park.

5.1.2 The plans were also available online for comment for those who were unable to attend the community day [https://ccc.govt.nz/the-council/consultations-and-submissions/haveyoursay/show/203](https://ccc.govt.nz/the-council/consultations-and-submissions/haveyoursay/show/203)

5.1.3 A Newsline Story was also available on 10 December 2018 and provided further information on the draft layout [https://ccc.govt.nz/news-and-events/newsline/show/3247](https://ccc.govt.nz/news-and-events/newsline/show/3247)

5.1.4 There were around 300 people who came along to the community day, this included a lot of local families and some of the local sporting groups.

5.1.5 A specific area was set up at the event for people to come along and view large plans along the fenced area of the tennis courts and this also included draft plans of improvements to the rest of Linwood Park. The design team were also present at the community day, so it provided a good opportunity for them to get some direct community feedback and to explain each design element.

5.1.6 Feedback from those who attended the community day was very positive and people were really happy with the sketches. The less positive comments related to requests for items such as a gym, wave pool and hydro slide which were well outside the project budget for this facility and could be provided for more appropriately at other Council facilities. Council also received 17 online submissions.

5.1.7 The development plans for Linwood Park have a limited amount of funding, so these will need to be worked on in more detail before they are ready to go out for more formal consultation. The timings for the pool and park will not quite run together now, but it was helpful to get some initial feedback on the park at the community day. This information will be incorporated in the landscape plan when it is ready to go out.
5.1.8 The project team are continuing to engage directly with some of the key stakeholders on this project.

5.1.9 The gifting of Te Reo name for the facility has been requested via Council’s Ngai Tahu partnership team, the name will feed into the cultural design input that Matapopore have been engaged to provide.

5.1.10 Geotechnical investigations and analysis has been completed and while results were variable they have confirmed ground improvement will be required. Given the potential significance of this aspect, further investigations will be undertaken to gather additional data to inform the design.

5.1.11 The next steps for this project will involve commencing and completing the concept design. Community feedback on the draft layout will be incorporated into the concept design as it progresses, where appropriate. This plan will then be presented to the Linwood-Central-Heathcote Community Board for approval sometime in May 2019. Construction is then due to commence in 2020.

5.2 A process for ongoing communication with the community is being developed.

6. Significant Community Issues, Events and Projects in the Board Area

Public Forum

6.1 Kath Preston, member of Safer Sumner Group, updated the Board on the group’s Crime Camera Project. She advised that the group has a shortfall in funding.

6.2 Local resident Geoffrey King spoke to the Board regarding his concerns about the odour being emitted from the Living Earth Organics Processing Plant (OPP). Mr King expressed his frustration about the time it is taking to have the matter dealt with. He also mentioned that there is odour from the nearby Metro Refuse Station and queried whether it is being operated in compliance with resource consent conditions.

Community Update, Events and Projects in the Board Area

6.3 Linwood Locals Exhibition - The recent Linwood Locals exhibition has received excellent community feedback. The photographic and narrative exhibition show-cased twelve ‘everyday’ people who do significant work to help make Greater Linwood a connected and supportive community in which to live and thrive.

There is potential to consider running the exhibition again in 2019. It is useful to note that one of the key findings in the Greater Linwood Older Adults research project is to ‘Celebrate Older People’ by recording and sharing heritage stories of long-term residents, giving awards to older volunteers, and acknowledging the many local services that are provided by older adults for older adults.

6.4 Community Board Edible Garden Awards 2019 - The inaugural Linwood-Central-Heathcote Edible Garden Awards applications are closing on 8 February 2019. The award ceremony is to be held on Thursday 7 March 2019.

7. Progress Report Against the Community Board Plan

7.1 The Community Board will consider progress against the Community Board Plan at a workshop in January 2019.

Attachments

There are no attachments to this report.
## Signatories

<table>
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<tr>
<th>Authors</th>
<th>Liz Beaven - Community Board Advisor</th>
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<tbody>
<tr>
<td></td>
<td>Amanda Black - Support Officer</td>
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<td>Bruce Coleman - Community Development Advisor</td>
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<td></td>
<td>Sol Smith - Community Development Advisor</td>
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<td>Diana Saxton - Community Recreation Advisor</td>
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<td>Tracey Waho-Blayney - Support Officer</td>
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<td>Approved By</td>
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<td>Matthew McLintock - Manager Community Governance Team</td>
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<td>John Filsell - Head of Community Support, Governance and Partnerships</td>
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10. Waipapa/Papanui-Innes Community Board Report to Council

Reference: 19/58459
Presenter(s): Ali Jones, Chairperson

1. Purpose of Report
The purpose of this report is to provide the Council with an overview of Part A matters requiring a Council decision and of initiatives and issues considered by the Community Board.

2. Community Board Recommendations
That the Council:


3. Community Board Decisions Under Delegation
The Waipapa/Papanui-Innes Community Board held meetings on 7 December 2018 and 25 January 2019. Decisions made under delegation were:

- Approved the granting of a lease to the Belfast School Board of Trustees for the Belfast Pool.
- Supported the installation of a modular pump track at 10 Shirley Road (the Shirley Community Reserve and former site of the Shirley Community Centre) with a request that the Parks Team explore alternative funding with a view to actioning the project within this financial year.
- Approved the installation of No Stopping Restrictions on Fenchurch Street at its intersection with Northcote Road.
- Proceed with purchasing and planning the contents of a new time capsule to be placed under a foundation stone for the replacement St Albans Community Centre to be opened 100 years from the completion of the rebuild (planned for 2020). The Board also made the decision to rebury the previous deposit under the original foundation stone (dated 1920) to be incorporated into the new building.
- Adopted the schedule of Waipapa/Papanui-Innes Community Board meetings up to September 2019.
- Recommended that the Council receive the Christchurch Northern Corridor Downstream Effects Mitigation Plan (Draft) (refer Section 4.1 of this report)
- Approved the following grants:
  - $3,000 from its 2018/19 Discretionary Response Fund to the Delta Community Support Trust towards Community Advocacy.
  - $1,399 from its 2018/19 Discretionary Response Fund to The Santa Claus Workshop Charitable Trust towards the purchase of a scroll saw.
  - $210 from its 2018/19 Positive Youth Development Fund to Team Lhotshampa towards the costs of Anil Gurung, Bibak Magar and Nabin Bhattarai participating in the Tenzing Hillary Cup Inter-Nepalese Football Tournament in Auckland.
4. **Part A Recommendations to Council**

The following reports presenting Part A recommendations from the Board are included in this agenda for Council consideration:

4.1 **Christchurch Northern Corridor Downstream Effects Mitigation Plan (Draft)**

The Board’s recommendation for the Christchurch Northern Corridor Downstream Effects Mitigation Plan (Draft) report will be considered by the Council at its meeting on 14 February 2018.

5. **Significant Council Projects in the Board Area**

**Infrastructure Projects Underway**

5.1 **Paddington Playground Renewal and Basketball Hoop**

Project Phase: Initiate/Investigation and Scheme Design

Currently in investigative and planning stage.

5.2 **Sabina Playground - Play Space Renewal**

Project Phase: Initiate

Project funding starting in FY20 with construction programmed in FY21.

5.3 **Redwood Plunket Building Repair**

Project Phase: Execute/Construction

All construction works have been completed.

5.4 **Westminster Park field upgrades**

Project Phase: On Hold/Programme Planning (concept)

Surface and drainage upgrade to improve the quality and usage of the front field in the park. Currently on hold pending the Parks Unit confirming the sports turf renewal priority and programme.

5.5 **St Albans Park - Pavilion/Toilets**

Project Phase: Execute/Defects Liability

The project is the replacement changing rooms/toilet facility for the previous earthquake damaged pavilion. The construction is completed with the public toilets now open. The balance of the facility will be in use once the fields are completed.

5.6 **St Albans Community Centre**

Project Phase: Execute/Investigation and Scheme Design

The Project is currently in the Design and Consenting phase.

5.7 **Belfast Cemetery Extension**

Project Phase: Execute/Construction

The project is for the development of the extension to Belfast Cemetery. Including a comprehensive consent for all works associated with the development.

The works included within the consent are all the new roads, paths, lawns, drainage, landscape, monumental beams and alterations to the toilet water and sewer system.

Approximately 500 new plots have been established in the extension works to date.
5.8 St Albans Park Sport Turf Renewal

Project Phase: Execute/Construction

The renewal and upgrading of the turf surface to mitigate the frequent flooding of the park. Increase the available time the park can be used for the allocated sports, particularly in winter. All the base construction, drainage, irrigation and sand slitting works are completed with the sand carpet surface to begin.

5.9 Papanui Domain Playground Renewal

Project Phase: Execute/Defects Liability

Construction completed in early 2018. Currently nearing the end of the defects liability period.

Other Partnerships with the Community and Organisations

5.10 Belfast Community Network (BCN) – Garden

BCN have had some issues this year with their vegetable garden so staff have worked with our partners and have been able to supply BCN with four veggie boxes which are to be planted out with veggies next week. These veggies supply local whanau and the BCN “Simply Lunch” group.

There is a lot of work to do but BCN volunteers are up for the challenge and are very grateful.

5.11 Papanui Bush – Bridgestone Reserve

Staff met with Papanui High School, the local Rotary chapter and the Papanui Heritage group about the mural and the proposed notice board. Staff are also working internally on Papanui heritage items that need enhancement if they are to be presented in a notice board.

Due to the prior commitments of all the groups involved, the enhancement element of this project is taking longer than expected. Papanui High envision that they will be able to have students working on a mural in Terms one and two 2019.

5.12 Edgeware Village Beautification Project

The Edgeware Village Beautification Project was carried out by the local community on Saturday 1 December. Staff attended along with volunteers from the Community Focus Trust, SARA and New Horizons Rotary.

There were approximately 30 volunteers in total primarily from the Community Focus Trust. SARA organised the plants for the project as well as their placement for the best effect, and Community Focus Trust provided the volunteers to carry out the project showing how effective community collaboration can be for implementing projects.

This event was a major success and the results can be seen in the photos below.
6. **Significant Community Issues, Events and Projects in the Board Area**

**Events Report Back**

6.1 **Papanui/Shirley Joint Interagency Networks End of Year Celebration**

The end of year interagency meeting was a great success with our local organisations coming along to the Chapel Street Centre on 13 November to listen to each other’s organisational achievements for the year.

There were 30 organisations represented at the meeting. The Board’s Deputy Chair, Emma Norrish, thanked the community for their efforts and Councillor Davidson spoke regarding the Annual Plan 2019/20.

6.2 **Belfast Community Network (BCN) – Simply Christmas Lunch**

Staff volunteered at the Simply Christmas Lunch in the Park (6 December) which also kicked off the BCN “Slice of Summer” events.

Between 50 and 60 mainly elderly people enjoyed a lovely Christmas dinner which was held in a marquee on Sheldon Park. Countdown staff, who also supported the Simply Lunch programme during the year with vouchers and Kai, again were out in force volunteering, serving as well as providing Christmas cakes and goodies. Hellers also supported this event with one of their best hams at a reduced cost, and sausages, and the Rotary Club of Belfast/Kaiapoi provided beautiful new potatoes.

The Belfast School Kapa Haka group also performed and Christmas carols wafted across the lawn.
6.3 MacFarlane Park Community Garden Opening

Staff attended the MacFarlane Park Community Garden Opening (5 December). Setting it up was a joint venture between Ian Dunbar (SCT), Just Dirt Trust, local Community Volunteers, C.C.C. Parks Unit, MacFarlane Park KidsFirst Kindergarten and local businesses who donated the following; Bunnings (plants), Living Earth (soil) (through Just Dirt Trust), Mitre 10 (shed), Edgeware Mowers and Chainsaws (mower, cash), Waghorn Builders (cash), TradeStaff (cash), Goodson Electrical (cash), Brian Perry Civil (fruit trees - $1000 worth), and Council Parks Unit (compost and delivery).

The event attracted between 30-40 people including a group of children from MacFarlane Park KidsFirst Kindergarten.

Speeches were made by Ian Dunbar (SCT) who thanked all the sponsors, Lorraine Stewart from Head Office KidsFirst, Helen O’Connell from MacFarlane Park KidsFirst, City Councillor and Community Board member Pauline Cotter and Graeme Mitchell Chair of the Shirley Community Trust.
Following the speeches a Doyenne Du Comice pear tree was planted by Councillor Cotter and children from the Kidsfirst Kindergarten and the ribbon was cut by the inaugural Community Gardener of the week, Eli Huffam from Kidsfirst. People lingered after the ceremony to chat over morning tea for quite a while, and were keen to be more involved and very supportive of seeing this community garden grow into the future.

6.4 Te Puna Oraka

Staff attended three events held at Te Puna Oraka on 11 December. Firstly, the community fare-welled Marge Reedy who has been the community worker at the Hub for the last eight years where she has exerted a major influence on the area by working 1-1 with whānau in the local community. Marge leaves to study full time next year for a Social Work degree.

Secondly, Te Puna Oraka celebrated the launch of the Community Pantry which was kindly built by a local dad on site. The pantry provides the wider community the opportunity to donate food which can be accessed by anyone in need.

Thirdly, there was also the presentation of a mural for the Te Puna Oraka building created by art students at Mairehau High School. This collaboration between the preschool and Mairehau High School was born out of an initial conversation held at Children’s Day which explored ways for the High School students to collaborate and connect with the local community.

6.5 Northcote Breakfast Club

On Wednesday 12 December 2018 local staff volunteered at the final Breakfast Club held at Northcote School. Other volunteers included Housing New Zealand staff, Rotary members, North City members and local residents.

It felt as though the whole school roll was fed an exceptional breakfast of hot Milo’s Pancakes, fruit salad and cream, hash browns, bacon, toast, scrambled eggs, spaghetti, beans and sausages.

The Breakfast Club was initiated by Joss Buttriss (Belfast Community Network), now supported by Damien Ardell (Papanui Baptist Freedom Trust) and is driven by two main local volunteers (Angie and Charlotte) whose involvement has developed the Breakfast into a community-led project which provides opportunity for local people to become involved, give of their time, gain experience and connect with others.
Attachments
There are no attachments to this report.

Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Elizabeth Hovell - Community Board Advisor</th>
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<tbody>
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</table>
11. Waihoro/Spreydon-Cashmere Community Board Report to Council

Reference: 19/770
Presenter(s): Karolin Potter, Community Board Chairperson
Melanie Coker, Community Board Deputy Chairperson

1. Purpose of Report
The purpose of this report is to provide the Council with an overview of Part A matters requiring a Council decision and of initiatives and issues considered by the Community Board.

2. Community Board Recommendations
That the Council:


3. Community Board Decisions Under Delegation
The Waihoro/Spreydon-Cashmere Community Board held a meeting on 7 December 2018. Decisions made under delegation were:

- The Board adopted its 2019 Meeting Schedule and continued the current pattern of generally meeting on the first Tuesday of each month at 5pm and the third Friday of each month at 8am.
- The Board appointed a Recess Committee comprising a minimum of any two Board members available, to be authorised to exercise the delegated powers of the Board for the period following the Board’s final scheduled meeting for the year on 7 December 2018 until its next ordinary meeting on 5 February 2019.
- The Board approved no stopping of vehicles restrictions in part of Maryhill Avenue.
- The Board approved no stopping of vehicles restrictions in parts of Holliss Avenue.
- The Board approved no stopping of vehicles restrictions in parts of Centaurus Road and Lascelles Street.
- The Board approved P3 parking restrictions in part of Rowley Avenue on school days from 8:15am to 9:15am and from 14:30pm to 15:30pm.
- The Board approved no stopping of vehicles restrictions in part of Dyers Pass Road and Overdale Drive.
- The Board approved the installation of a Stop Control against Overdale Drive at its intersection with Dyers Pass Road.
- The Board approved that double no passing lines be installed along the centreline of Dyers Pass Road, commencing at its intersection with Cracroft Terrace and extending westerly then southerly for 232 metres, with advance warning lines installed along the centreline of Dyers Pass Road, commencing at its intersection with Cracroft Terrace and extending easterly for 60 metres and commencing at a point 232 metres west from its intersection with Cracroft Terrace and extending southerly for 60 metres.
4. **Part A Recommendations to Council**

   There were no Part A recommendations from the Board to the Council in December 2018 or January 2019.

5. **Significant Council Projects in the Board Area**

   5.1 **Manuka Cottage building**

   The Addington community development project, Addington Community House, known as “Manuka Cottage” has operated in Addington with the support of the Spreydon/Heathcote Community Board since the 1990s. It was noted at the group’s recent AGM that the cottage activities mobilise over 91 voluntary roles and nearly 5,800 voluntary hours in the local community. As a result of the earthquakes the Cottage was required to re-locate from its premises and has been in temporary accommodation since.

   Due to the importance of this community development project for the support of a highly vulnerable population group Manuka Cottage was the first community development project to benefit from the Spreydon/Heathcote Community Board bids to the Capital Endowment Fund for property purchase in 2012. A site on Cornelius O’Connor Reserve was identified as the site for development of a new Council owned cottage style community centre. Consultation was undertaken with positive feedback to the proposal being received.

   Project Management staff are managing the development in consultation with a steering group comprising staff, members of the Spreydon-Cashmere Community Board and representatives of Addington Community House. Although it was hoped that the development would be complete and the building ready for occupation in 2018 contracting delays occurred. A contract for the construction of Manuka Cottage is, however, now in place.

   Detailed design development and satisfaction of building consent requirements will be commenced in January 2019 with the consent expected to be granted by the end of February/early March 2019. Removal of trees and playground from the site will occur around late February.

   5.2 **Quarryman’s Trail Cycleway**

   Work is under way on the final stage of Quarryman’s Trail cycle route between Halswell and the central city. The first 4.6 kilometre section – from Moorhouse Avenue to Victors Road was opened in September. The final section stretches from Victors Road to Te Hapua: Halswell Centre.

   The work will involve 3.8km of off-road cycleway and two new sets of traffic lights at the Henderson Road/Sparks Road intersection, as well as a mid-block crossing in Sparks Road at Milns Reserve.

   Street lighting will also be upgraded and a 60 kilometre per hour speed limit in parts of Sparks Road is also proposed.

6. **Significant Community Issues, Events and Projects in the Board Area**

   6.1 **Hoon Hay Flooding Issues**

   Residents in the vicinity of Copenhagen Place/Marion Street and Weir Place, Hoon Hay have expressed concerned about an increase in localised flooding in their streets since the 2011 earthquakes.

   At a residents meeting on 9 December 2017 to discuss the issues with land drainage staff it was agreed that staff would investigate the matters raised and provide feedback.
A memorandum explaining the investigations undertaken and commenting on measures already underway or which may be taken to alleviate the flooding was subsequently prepared by the Land Drainage Unit and distributed to residents.

The Board invited residents to a follow up meeting on 6 December with Land drainage staff in attendance to discuss the information provided. The meeting was well attended and the information and explanations provided were positively received by residents.

6.2 Beckenham Primary School

Beckenham Primary School has been working with Council staff to develop greenspaces in the school grounds near the Heathcote River. Pupils have been involved in projects to enhance outdoor spaces in and around the school.

The Board recently supported an initiative that saw approximately 30 pupils involved in painting a mural on the wall of the toilet block by Beckenham Ponds. The Board made a grant from its “off the Ground” fund towards the cost of paint and other supplies. There was a celebration of the mural on 13 December 2018 attended by Board members.

In addition the Board had a presentation from year 2 and 3 pupils of the school at its meeting on 7 December 2018. The children spoke about their concerns about rubbish being dropped in and around the Beckenham area and getting in the waterway. The children would like to see signs put up throughout the area advising people not to drop rubbish and encouraging them to pick up rubbish that they see lying around. They have made drawings showing the problems that rubbish causes for the waterway and its inhabitants. The group also showed a short video highlighting the problem.

7. Progress Report Against the Community Board Plan

7.1 Work continues on the priorities identified at the Board’s latest review of progress on the Community Board Plan. This review informed the Board’s initial input to development of the next Annual Plan.

8. Community Board Matters of Interest

8.1 Community Board End of Year Network Function

The Board held its annual end of year network function on December 2018. The event was attended by invited individuals and representatives of groups that the Board has worked with over the preceding year. The occasion was an opportunity for Board members, staff and community members to come together in a friendly and relaxed atmosphere to celebrate the community work being done in Spreydon-Cashmere.

The event went well and will be followed up in early 2019 by a Board hosted event for local community groups to “meet and greet” and learn about what each are doing and share experiences and ideas going forward.

Attachments

There are no attachments to this report.
**Signatories**

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<thead>
<tr>
<th>Author</th>
<th>Faye Collins - Community Board Advisor</th>
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<tbody>
<tr>
<td>Approved By</td>
<td>Christopher Turner-Bullock - Manager Community Governance, Spreydon-Cashmere</td>
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<td></td>
<td>Matthew McLintock - Manager Community Governance Team</td>
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<td>John Filsell - Head of Community Support, Governance and Partnerships</td>
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12. Avonhead Park Cemetery

Reference: 18/1333999

Presenter(s): Eric Banks, Senior Network Planner, Parks

1. Fendalton-Waimairi-Harewood Community Board Consideration

The Board considered the information provided in the deputation from Anthony Wright and in the correspondence received from Monica Renwick and the Avonhead Community Group and Friends of Avonhead Cemetery.

Board members acknowledged Monica Renwick for raising the headstone issue at the Avonhead Park Cemetery but noted that in accordance with the current Cemeteries Handbook, the internment requirements for the lawn section of the Avonhead Park Cemetery will remain unchanged.

The Board expressed concerns over a decline in the maintenance of the Avonhead Park Cemetery and for this to be raised with the Council through the Annual Plan process.

The Board also decided to recommend to the Council that it consult on a possible name change for Avonhead Park Cemetery to become Avonhead Memorial Cemetery.

2. Staff Recommendations

That the Waimāero/Fendalton-Waimairi-Harewood Community Board:

1. Receive the information contained in this report.
2. Agree not to recommend to the Council that it consult on a change of name for Avonhead Park Cemetery.

3. Fendalton-Waimairi-Harewood Community Board Decisions Under Delegation

Part B

The Waimāero/Fendalton-Waimairi-Harewood Community Board decided to:

1. Receive the information contained in the staff report on the Avonhead Park Cemetery.
2. Note that in accordance with the current Cemeteries Handbook, the internment requirements for the lawn section of the Avonhead Park Cemetery will remain unchanged.
4. Fendalton-Waimairi-Harewood Community Board Recommendation to Council

Part A

That the Council:

3. Consult on a change of name from Avonhead Park Cemetery to Avonhead Memorial Cemetery.

Aaron Campbell requested that his vote against resolution 3. above, be recorded.

Attachments

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<td>B</td>
<td>Attachment 2 Avonhead Cemetery frontage</td>
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Avonhead Park Cemetery

Reference: 18/990037
Presenter(s): Eric Banks,

1. Purpose and Origin of Report

Purpose of Report
1.1 The purpose of this report to provide information on the issues requested by the Waimāero/Fendalton-Waimairi-Harewood Community Board and to recommend no further action is undertaken on a proposed name change for Avonhead Park Cemetery.

Origin of Report
1.2 This report is being provided to fulfil Waimāero/Fendalton-Waimairi-Harewood Community Board meeting of 3 September 2018, agenda item 15.1 Part B:
   1.2.1 The Board requested that staff provide information regarding the possible installation of headstones in the lawn section of Avonhead Park Cemetery and that this information be included in the previously requested report on the options and costs related to changing the Cemetery façade and for consultation on a name change, that is to be presented to the Board at its December 2018 meeting.

2. Significance

2.1 The decision in this report is of low significance in relation to the Christchurch City Council’s Significance and Engagement Policy.
   2.1.1 The level of significance was determined by the significance matrix.
   2.1.2 The community engagement and consultation outlined in this report reflect the assessment.

3. Staff Recommendations

That the Waimāero/Fendalton-Waimairi-Harewood Community Board:
   1. Receive the information contained in this report.
   2. Agree not to recommend to the Council that it consult on a change of name for Avonhead Park Cemetery.

4. Key Points

4.1 This report supports the Council’s Long Term Plan (2018 - 2028):
   4.1.1 Activity: Parks & Foreshore
      - Level of Service: 6.0.3.0 Overall customer satisfaction with the presentation of the City’s Parks - Community Parks presentation: resident satisfaction = 70 %

4.2 Issues associated with a proposed change to the lawn area of the cemetery.
   4.2.1 Families have purchased with the expectation the lawn cemetery style and operation will be retained.
   4.2.2 Plots are laid end to end which determines the operation of the area.
4.2.3 Above ground plaques or headstones would prevent access by the digger.

4.2.4 Any alteration of the layout to accommodate above ground plots would reduce the capacity significantly.

4.2.5 Requests have been received by both those seeking above ground plaques and those wanting the status quo.

4.3 Information on the cemetery entrance.

4.3.1 The decision to make changes to the entrance are a staff delegation.

4.3.2 Potential options for Community Board comment have been provided.

4.4 Retain the name of Avonhead Park Cemetery – Advantages and Disadvantages (Preferred option)

4.4.1 The advantages of this option include:

- No funding required to update physical signage.
- Community are already aware of and use the current name of Avonhead Park Cemetery.
- Retaining the current name lessens confusion that there is no memorial at this cemetery.
- No need to alter Cemeteries Bylaw, Handbook and Masterplan which have recently been reviewed and adopted by the Council.

4.4.2 The disadvantages of this option include:

- Does not fulfil the request made by the Friends of Avonhead Cemetery to change the name of the Cemetery to Avonhead Memorial Cemetery to reflect the February 2011 Christchurch Earthquake Internment Site.

5. Context/Background

Community requests

5.1 Lawn area

- The Waimaero / Fendalton-Waimairi-Harewood Community Board has received or is aware of requests from members of the community who wish to be able to install above ground plaques or headstones in the lawn area of the cemetery.
- Issues have been raised in relation to plaques being difficult to locate, being covered in grass and sinking.

5.2 Cemetery entrance

- The Friends of Avonhead Cemetery Trust have suggested the entrance to the cemetery requires upgrading.

5.3 Cemetery name

- The Friends of Avonhead Cemetery Trust have suggested the name of the cemetery should be changed.
6. Lawn Area of Avonhead Park Cemetery

Background

6.1 When the Cemetery was developed in the late 1970s and early 1980s it was proposed that there would be a complete absence of memorials in the Cemetery, this decision by the Waimairi County Council took seven years. The cemetery was designed without visible grave markers to give the cemetery a park like appearance. Instead of headstones, metal tags were installed to identify each individual plot. No memorial was allowed, instead a small plaque could be added to the memorial wall by the records room.

6.2 This scheme received mixed reviews from the community.

6.3 The Council resolved at its meeting on 21 September 1992:

6.3.1 That the original concept of Avonhead Park Cemetery be changed to allow memorials in the Cemetery;

6.3.2 That Section 18IV of the Waimairi District Bylaw 1983, No. 1, be altered to allow the erection of memorials in Avonhead Park Cemetery and that special order procedures be commenced at the December Council meeting; and

6.3.3 That the section of Cemetery already developed in the landscaped style be retained and that no memorials be permitted in this area.

6.4 In 1993 additional areas in the Cemetery were created allowing for upright memorials.

6.5 At its November 1996 meeting the Parks and Recreation Committee considered a request from the families of those persons interred in the 'no memorial' area of Avonhead Park Cemetery for some form of individual headstone memorial.

6.6 The Committee resolved that following consultation, design and plans for a small form of memorial within the 'no memorial' area be brought back to the Committee.

6.7 Of those that replied to the consultation 41.8 percent wanted no memorials. A preference for headstones was 58.2% and of those 21.5 percent wanted a larger headstone and 36.7% wanted a smaller headstone.

6.8 There was strong opposition to headstones, even in-ground memorials. It appeared that many family members of those interred in the lawn area still supported the original concept and wanted it retained.

6.9 The issue was then reported to the August 1997 Parks and Recreation Committee meeting.

6.10 The Committee deferred consideration of the staff report and appointed a sub-committee comprising the Chairman and four Councillors to consider the options.

6.11 The sub-committee were sympathetic to the concerns of those families seeking a change to the policy. They were also appreciative of the aesthetically pleasing and tranquil setting created by the lawns and no memorial environment.

6.12 After considering all points of view and noting that the majority of respondents were supportive of a change to existing policy of no memorials, the sub-committee unanimously agreed that as a compromise, a small flat ground level headstone measuring 200x290mm should be permitted in the landscaped section of Avonhead Park Cemetery.

6.13 On 11 February 1998 a report to the Parks and Recreation Committee considered the type and size of the proposed memorials.

6.14 Following this, the Avonhead Park Cemetery sub-committee recommended to the Parks and Recreation Committee on 13 May 1998, the following:
6.14.1 “That members, having reviewed their earlier recommendation in light of the Monumental Masons association’s comments, are still of the unanimous belief that the compromise proposed is the best solution and meets the wishes of the majority of respondents to the survey of next of kin. Permitting small in-ground memorials in the landscaped section of the Cemetery will ensure the present open and tranquil setting is preserved and at the same time allow next of kin to place a small memorial on their family member’s grave.”

6.14.2 Recommendation:

- 1. That in-ground memorials be permitted in the section of Avonhead Park Cemetery, subject to:
  - a) Memorials not exceeding 200x290mm in size.
  - b) No flowers placed on graves
  - c) Next of kin accepting responsibility for the edge maintenance of memorials.
- 2. That the Waimairi District Bylaw be amended to permit the installation of small, in-ground memorials in the section of Avonhead Park Cemetery in which memorials are not currently permitted.
- 3. That the Council commence the Special Order proceedings at its May 1998 meeting, necessary to give effect to the above change.

6.15 Since then, the Council has continued to receive correspondence from both those requesting and those objecting to installing headstones in the lawn area of Avonhead Park Cemetery.

Discussion

6.16 The following is intended to provide the requested information by illustrating the nature of the lawn area, how it operates and the implications of suggested changes. Attachment One illustrates these points.

6.17 The fundamental observable difference between the lawn area at Avonhead Park Cemetery, the remainder of the cemetery and other Council cemeteries relates to the lawn character. The lawn character is that of a park like setting with the absence of headstones. A brief assessment of the character of the lawn area has been provided by the Council landscape architect on the title page of Attachment One. This park like character of the lawn area with no headstones was the intention for the cemetery when it was designed prior to opening in 1983.

6.18 When Avonhead Park Cemetery was developed extensive tree planting was undertaken with trees planted in close proximity to encourage rapid growth and a mature park like setting. Trees are very important in the lawn area in particular, many people have chosen plots in this area due to the large numbers of mature trees. In many cases families identify their plot locations using the trees.

6.19 Sheets 2 and 3 of Attachment One illustrate the manner in which the lawn area is laid out. Because the intention of the lawn area was for no headstones or plaques there was no need to leave a gap between the plots for access. This layout maximises the number of usable plots in the area.

6.20 Once Council approval for in-ground plaques was given there needed to be a way to manage interments and undertake maintenance. Once a burial has taken place the soil will slump for a long time afterwards, especially immediately after a burial. This is particularly prevalent at Avonhead Cemetery because of the nature of the soil (see Sheet 3).

6.21 Because original layout of the lawn area incorporated no memorials there are no gaps between plots (See sheet 2) to allow for plaques to be installed. Due to the location of the metal tags,
plaque are laid on the adjacent plot (see Sheet 2). This ensures the plaque will not become buried with the slumping of the newly dug plot.

6.22 Depending on the order of burials, the plaque may still be subject to slumping if the adjacent plot where the plaque is located has an interment at a later date.

6.23 As each plot is dug for an interment, or second interment, if there is a plaque on the plot, where possible, the plaque will be left in place however if the plot needs to be dug longer than the standard 2.4 metres or if there is excessive slumping of the soil under the plaque, it will be removed and reinstated when the interment is complete (see details on sheet 2).

6.24 One reason plaques are required to be installed just below the surface is to allow for mowing of the lawn area. The mower can safely pass over the plaque without damaging the plaque (or the mower). The second reason is to permit access for a digger to dig the plot. At present the digger can traverse over other plots in the area to the plot required to be dug. This is essential as there are so many trees within the lawn area.

6.25 If plaques were permitted to be installed above ground, the cost of maintenance would increase significantly for mowing and plots may need to be dug by hand as there would be insufficient room for a digger. Hand digging of plots is more difficult and more costly and normally only undertaken where there are access issues such as some older cemetery sites where the site slope, access and proximity to other plots is an issue.

6.26 Headstones or raised plaques would require a base to support them. The extra bulk and weight of the base would contribute to, and be more susceptible to, slumping. In cases where the headstone (and base) was required to be removed for an adjacent burial, other issues of responsibility for the removal, cost and greater disturbance of the soil would result.

6.27 It is likely that a raised plaque / headstone would require a base which was larger than the space available between the end of the digging area of the plot and the top end plot to the foot end, otherwise instability would result in an unstable headstone. This would then also cover the area set aside for the identifying tag.

6.28 In order to avoid the above issues, a section of the unused area of the lawn could potentially be redesigned to that of a standard cemetery by separating the plots, in a similar fashion to that depicted in Sheet 4. This would however result in a major loss of capacity (from 316 currently available plots in this section of the lawn area down to approximately 61 plots), a cost to implement, and further investigation to confirm particularly as there is a comprehensive irrigation system in the area.

6.29 Given the status quo, responsibility for maintaining the edge of plaques lies with the owner of the plot. This was a condition of the Council decision to allow plaques as a compromise in 1998. Possibilities for improving the visibility of plaques could potentially include Council spraying the edges and adding a base course underneath each plaque and keeping it topped up to support the plaques. This would be an additional maintenance cost to Council however and would require further investigation.

6.30 It is also worth noting that the specification for plots in each cemetery is incorporated into the Cemeteries Handbook. At the time of writing the existing Handbook specifies below surface plaques only for the lawn area. The recent review of the Cemeteries Bylaw and Handbook has been completed and is subject to approval by Council on 22 November 2018. During the consultation period no submissions were received requesting a change of this specification. The specification in the draft Handbook therefore remains unchanged at requiring plaques to be installed at 20mm below the surface.

6.31 In order for any potential change in the rules and operation of the lawn area to take place a number of requisites would need to take place: plot owners / families of plot owners in the lawn area should be located and canvassed for their opinion about the proposal, a proposal to Council
7. Name of Avonhead Park Cemetery

Background

7.1 The Friends of Avonhead Cemetery Trust provided a deputation to the Waimāero/Fendalton-Waimairi-Harewood Community Board on 10 April 2017. One of the issues the Trust raised was their desire to change the name of Avonhead Park Cemetery to Avonhead Memorial Cemetery to reflect its wider significance as the internment site of the unidentified victims of the 22 February 2011 Christchurch earthquake.

7.2 Staff responded to the request by email on 4 July 2017 and provided a memo to the Community Board on the 2 November 2017. The email and memo outlined the procedure for changing the name of the Cemetery and issues to take into consideration. The processes and issues are outlined below:

7.2.1 Naming of Reserves and Facilities Policy 1993/Section 7 Burial and Cremation Act 1964.

- The procedure for changing the name of the Cemetery would involve consultation, a report to the Community Board, and a recommendation to Council. (Council has not delegated the power under section 7 of the Burial and Cremation Act re naming of cemeteries. There is power to change the name of a cemetery but Council must also get the approval of the Minister of Health.)

- No submissions requesting the name of Avonhead Park Cemetery to be changed were received during the extensive consultation for the draft Cemeteries Master Plan 2013 or during the 2018 review of the Cemeteries Bylaw and Cemeteries Handbook.

7.2.2 Origin of the current name

- Avonhead Park Cemetery was named to reflect the park like setting of the landscaped trees, lawns and gardens. It also reflects its position adjacent to Avonhead Park and the shared connections with it. At the time of planning the new cemetery in 1979 the Council’s intention was for the lawn to also function as a park, hence the name, Avonhead Park Cemetery. This was proposed as far back as 1976. It was described as a parkland cemetery at the time of opening.

7.2.3 Earthquake Interment Site.

- The interment site at Avonhead Park Cemetery for the unidentified victims of the 22 February 2011 Christchurch Earthquake is not a memorial site. The site is required to inter the human remains of the unidentified victims as required under the Burial and Cremation Act 1964.

- The Interment Site for the Unidentified Victims of the 22 February 2011 Earthquake was considered and approved by Council at 9 June 2011 meeting. This report specifically noted that the Earthquake Interment Site is not a memorial.

7.2.4 Other cemeteries

- Memorial Park Cemetery is another example of a relatively modern Cemetery with a name designed to reflect its park like style. The word “memorial” in the name refers to memorialising the deceased by using an upright headstone on each plot, not to a specific memorial.

- Nearby Ruru Lawn Cemetery likewise reflects the type of Cemetery layout in its name. The Ballantyne’s Fire Memorial (1947) is part of the Ruru Lawn Cemetery. It is both the interment site and the memorial, however, it is the only memorial for
Ballantynes fire victims in the city, whereas the Interment Site at Avonhead Park Cemetery, is as the name says, an interment site for the four unfound victims and not a memorial for all earthquake victims. The outer area was added at a request by families not as a statutory requirement. At Ruru Lawn Cemetery, the Ballantynes Fire Memorial is not reflected in the name of the Cemetery. It is just one of the features of the site.

- There is also Diamond Harbour Memorial Gardens Cemetery. The word “memorial” in the name refers to memorialising the deceased by using an upright headstone on each plot, not to a specific memorial.

- It is possible the greater the number of cemeteries with “memorial” as part of the name, the more confusion could be created. ‘Memorial’ is generally referred to a style of cemetery with upright headstones.

7.3 This information was then presented to the Waimāero/Fendalton-Waimairi-Harewood Community Board at a seminar on 6 August 2018. At the seminar it was also discussed that if the name of the Cemetery were to change this would also need funding identified for the physical signage alterations. No funding has been allocated for this.

### Option 1 – Retain the current name of Avonhead Park Cemetery (preferred)

7.4 Option description

7.4.1 Retain the current name of Avonhead Park Cemetery.

7.5 Significance

7.5.1 The level of significance of this option is consistent with section 2 of this report.

7.5.2 Engagement requirements for this level of significance are limited to those specifically affected. Engagement requirements for this option would be limited to informing the Friends of Avonhead Cemetery Trust.

7.6 Impact on Mana Whenua

7.6.1 This option does not involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does not specifically impact Ngāi Tahu, their culture and traditions.

7.7 Community Views and Preferences

7.7.1 Friends of Avonhead Cemetery, are specifically affected by this option.

7.7.2 There were no submissions received on a name change for the cemetery during the recent consultation on the Cemeteries Bylaw and Handbook review.

7.8 Alignment with Council Plans and Policies

7.8.1 This option is consistent with Council’s Plans and Policies.

7.8.2 The Naming of Reserves and Facilities Policy 1993 outlines:

7.8.3 “3. For existing reserves, whether previously formally or informally named, and through common usage are accepted by the community, generally these names shall be retained. Where changes are to be sought, the procedures as outlined for the new reserves shall be as followed.

4. Reserves having local or major status, naming proposals, including options shall in the first instance be referred to the appropriate Community Board. To the extent deemed necessary, proposals will then be referred to the community for comment prior to formal adoption and recommendation, to the Council.”

7.9 Financial Implications
7.9.1 Cost of implementation – No cost to implement decision.
7.9.2 Maintenance/Ongoing Costs – none.
7.9.3 Funding Source – Not applicable.

7.10 Legal Implications
7.10.1 This report has been reviewed and approved by the Legal Services Unit. There are no legal considerations in relation to retaining the current name.

7.11 Risks and Mitigations
7.11.1 There are minimal, if any risks as the name of the Cemetery complies with the Council Policy Register: Naming of Reserves and Facilities 1993.

7.12 Implementation
7.12.1 Implementation dependencies – No known implementation dependencies.
7.12.2 Implementation timeframe – Not applicable as the current name is being retained.

7.13 Option Summary – Advantages and Disadvantages
7.13.1 Advantages:
- No funding required to update physical signage.
- Community are already aware of and use the current name of Avonhead Park Cemetery.
- Retaining the current name lessens confusion that there is no memorial at this cemetery.
- No need to alter Cemeteries Bylaw, Handbook and Masterplan which have recently been reviewed and adopted by the Council.

7.13.2 Disadvantages:
- Does not fulfil the request made by the Friends of Avonhead Cemetery to change the name of the Cemetery to Avonhead Memorial Cemetery to reflect the February 2011 Christchurch earthquake internment site.

Option 2 – Recommend to Council that it consult with the community on an alternative name for the Cemetery
7.14 Option description
7.14.1 There should be consultation with the community but as the Council has not delegated the power to change the name of a cemetery, the Board would need to recommend the name change to Council first, so the Council can decide if it wants to pursue a name change and carry out consultation.

7.15 Significance
7.15.1 The level of significance of this option is consistent with section 2 of this report.
7.15.2 Engagement requirements for this level of significance are limited to those specifically affected. Engagement requirements are also subject to the Naming of Reserves and Facilities Policy 1993. Given interments of individuals originating from all areas of the city, public consultation with a recommendation to council for public consultation is recommended as appropriate. A decision to change the name of a cemetery is made under section 7 of the Burial and Cremation Act, and requires the Minister’s approval, so it is likely the Minister will want to know the result of Council consultation about a name change.
7.16 Impact on Mana Whenua

7.16.1 This option does not involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does not specifically impact Ngāi Tahu, their culture and traditions.

7.17 Community Views and Preferences

7.17.1 Friends of Avonhead Cemetery, the local community and the families of those who are interred are specifically affected by this option. Other than the Friends of Avonhead Cemetery, their views are yet to be ascertained.

7.17.2 There were no submissions received on a name change for the cemetery during the recent consultation on the Cemeteries Bylaw and Handbook review.

7.18 Alignment with Council Plans and Policies

7.18.1 This option is consistent with Council’s Plans and Policies

7.18.2 The Naming of Reserves and Facilities Policy 2013 outlines:

“4. Reserves having local or major status, naming proposals, including options shall in the first instance be referred to the appropriate Community Board. To the extent deemed necessary, proposals will then be referred to the community for comment prior to formal adoption and recommendation, to the Council.”

7.19 Financial Implications

7.19.1 Cost of implementation – To consult with the community to determine a preferred name for the Cemetery would require approximately 40 hours of associated staff time to consult on a name change. Implementation of physical signage if the name of the Cemetery is changed would be required.


7.19.3 Funding Source – No funding has been set aside in the Council’s Long Term Plan.

7.20 Legal Implications

7.20.1 This report has been reviewed and approved by the Legal Services Unit

7.20.2 The legal considerations in relation to changing the current name concern the power in section 7 of the Burial and Cremation Act 1964 to change the name of a cemetery. The Council is the decision-maker (the Council has not delegated this power), and Ministerial approval is required to change the name.

7.20.3 The legal consideration is <enter text>

7.21 Risks and Mitigations

7.21.1 There is a risk that changing the name, particularly incorporating the word “memorial” may offend families of those interred in the earthquake interment site (or potentially others as well).

7.21.2 Residual risk rating: The residual rating of the risk after the below treatment is implemented will be Medium.

7.21.3 There is no mitigation possible given the reason for the suggested change to include the word “memorial” is to reflect the view of the Friends of Avonhead Cemetery Trust that the earthquake interment site is a memorial.

7.21.4 There is a risk that changing the name to include the word “memorial” could result in confusion with the existing Memorial Park Cemetery.
7.21.5 Residual risk rating: The residual rating of the risk after the below treatment is implemented will be Medium.

7.21.6 Staff would need to be wary of the potential confusion and double check the correct cemetery was being discussed, an interment was required at which cemetery, etc.

7.22 Implementation

7.22.1 Implementation is subject to the consultation and reporting process described above.

7.22.2 Implementation timeframe - compiling a list of stakeholders, contacting the stakeholders, consultation and reporting would take approximately 6 months. Contacting the families of those interred could be quite time consuming. Installation of signage (and update of websites etc) would be dependent on the allocation of budget in line with a decision on signage priorities.

7.23 Option Summary – Advantages and Disadvantages

7.23.1 Advantages:

- The Friends of Avonhead Cemetery Trust would approve. No other advantages are apparent.

7.23.2 Disadvantages:

- If an alternative name is approved for the Cemetery funding would be required to update physical signage. No funding has been allocated in the Councils 2018-2028 Long Term Plan for this.
- If an alternative name is approved for the Cemetery it would require amending Council records, web-site and documents as they were due for renewal such as the Ceremonies Handbook and Masterplan.

8. Entrance of Avonhead Park Cemetery

Background

8.1 The Friends of Avonhead Cemetery Trust provided a deputation to the Waimāero/Fendalton-Waimairi-Harewood Community Board on 10 April 2017. One of the issues the Trust raised was their desire to upgrade the Cemetery entrance on Hawthornden Road.

8.2 Staff responded to the request by email on 4 July 2017 and providing a memo to the Community Board on the 2 November 2017. The email and memo outlined the procedure for refurbishing the entrance, in that a landscape plan would need to be developed and consulted on then a report to the Community Board seeking to approve the landscape plan. There is currently no funding allocated in the LTP to investigate, design, consult or implement any changes to the entrance of the Cemetery.

8.3 In the interim, staff organised for the entrance walls to be cleaned. This was seen as the first logical step rather than resurfacing or painting as this could attract tagging would require more frequent maintenance.

8.4 Subsequently, legal advice has been provided which states that the delegation for works such as fences and the like (section 8(a) Burial and Cremation Act 1964) is to staff. Part A - Section 6 of the Council Delegations register states that all of the responsibilities, duties and powers of the Burial and Cremation Act 1964 are delegated to staff, except naming of cemeteries under section 7, making of bylaws under section 16, erecting a crematorium under sections 38 and 39, and the making of bylaws under section 40. Works to alter the entrance to the cemetery is therefore not a matter for a Community Board decision.

8.5 This section is therefore excluded from the options section of the report. Some options have however been prepared. See Attachment 2. The Community Board’s views are welcomed on
each option and will be taken into account when a decision is made to alter, repair or otherwise maintain the entrance. Any significant changes to the entrance would be consulted on and the Community Board informed. Note that the 3rd option on Sheet 2 would require engineering advice to determine the structural requirements of the wall. Also, the cost of the first option shown on the attachment indicates “nil” but there would be a maintenance cost associated with these activities.

8.6 Currently the entrance walls appear to be in good condition. Recent cleaning of the walls and planting has improved the appearance of the entrance. It is envisaged the current appearance will be maintained as a minimum option. There is no specific budget allocation for entrance enhancement in the current LTP and any future allocation would be subject to an assessment of overall cemetery development priorities.

8.7 The Cemeteries Master Plan 2013 lists planning and/or management proposals. The planning and management proposals do not constitute a commitment on the Council to implement, rather only indicating the Council’s willingness to progress further investigation into the planning and management proposals. One of the actions listed was to enhance the entrance, including signage and modifications to the concrete entrance wall. This was rated as a low priority.

8.8 One associated issue of alleged confusion among motorists confusing the cemetery for Avonhead Park could potentially be improved with the raising of the lettering as shown in the second option. Another option could be to improve the entrance signage for the park by making it more prominent and trim the adjacent vegetation.

Attachments

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Confirmation of Statutory Compliance

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:

(i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and

(ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council’s significance and engagement policy.
## Signatories

| Authors                  | Sarah Blows - Parks Planner  |
|                         | Eric Banks - Senior Network Planner Parks |
| Approved By             | Kate Russell - Acting Head of Parks  |
|                         | Mary Richardson - General Manager Citizen and Community |
The lawn area at Avonhead Park Cemetery has important landscape values and qualities for the Christchurch community, especially for the families of loved ones who have been laid to rest there. These families have chosen this type of cemetery because of its specific character. The combination of open lawn interspersed with groups of trees provides the distinctive character typical of a ‘lawn garden’ cemetery, which is devoid of clutter, such as headstones and tributes usually associated with a memorial cemetery. The lawn area at Avonhead Park Cemetery is unique to Christchurch being the only type of burial ground amongst the 26 cemeteries operated by the Christchurch City Council.
Unlike most other Council cemeteries, plots within the lawn area are laid out side by side, head to foot with no space between. Each plot is marked with a metal tag located 10-15mm under the lawn.

The plot is opened to the dimensions 920mm x 2400mm. In some cases if the casket is longer, the plaque from the adjacent plot will need to be temporarily removed. If the plaque is larger than 290mm x 200mm the adjacent plot may not be able to be opened without moving the plaque.

As per the Christchurch City Council Cemeteries Handbook, plaque requirements (if wanted):
- Granite or Bronze Plaque
- 290mm x 200mm maximum
- Laid flat 20mm below ground level
  (To allow mowers to cross without damaging)

Original Plan Size: A3
Issue: 1  13/1/2018
L3177201 Sheet 2 of 4
As per the Christchurch City Council Cemeteries Handbook, a white cross or temporary marker is permitted for one year following an interment.

The temporary marker must be removed once a permanent plaque is installed.

The Christchurch City Council Cemeteries Handbook states that plaques are to be installed 20mm below surface level. This is to protect the plaques during mowing and to ensure the area can be mowed.

Maintenance can be difficult when features, such as temporary markers and floral tributes, are still left on a plot. Then the cemetery can appear unkept as maintenance cannot be completed properly. This would also apply to any plaque or monument above ground level.

Due to the layout of the plots within the lawn area, and the location of trees, the Sextons need to gain access across the top of existing plots to prepare the plots; this increases the capacity of the lawn area significantly.

Due to soil type and location of the cemetery, slumping can be more noticeable than other cemeteries and plots need to be topped up regularly.

Plaque is not visible.
AVONHEAD PARK CEMETERY
STANDARD BURIAL AREA EXAMPLES
**Note:**

1. The entrance concrete wall has been recently cleaned.
2. The wall is low maintenance and has not been covered with graffiti.
3. The left side of the wall (height and plantings) help screen the adjacent Orion sub-station.
4. The walls are the same design / era as the toilets and records room within the cemetery.
5. As per the 2013 Christchurch City Council Cemetery Master Plan, planting has been undertaken to improve the entrance and driveway into the cemetery in recent years.

**AVONHEAD PARK CEMETERY FRONitage**

**EXISTING SITUATION**

*Photos taken 5th November 2018*
## AVONHEAD PARK CEMETERY FRONTAGE OPTIONS

<table>
<thead>
<tr>
<th>OPTION 1: DO NOTHING</th>
<th>OPTION 2: LEAVE ENTRANCE WALLS AND REPLACE LETTERING</th>
<th>OPTION 3: REDUCE HEIGHT OF EXISTING CONCRETE WALLS AND FACE WITH STONE</th>
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<tbody>
<tr>
<td><strong>APPROXIMATE COST</strong></td>
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<td>NIL</td>
<td>$15,000 - $20,000 (Depending on scope of work)</td>
<td>$50,000 - $100,000 (Depending on scope of work)</td>
</tr>
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</table>

- **Retain the existing entrance and continue with standard maintenance including:**
  - Replacing any missing plants.
  - Sandblasting the wall as required.
  - Undertake any enhancement or repairs to existing text on wall.

- **Retain the existing concrete walls:**
  - Remove existing cemetery name and replace with a more appropriate lettering or use a similar style to the Avonhead Park entrance adjacent.

- **Reduce height of the existing concrete walls:**
  - Face with stone.
  - New wood entrance gates.

Note: Further investigations or feasibility would need to be undertaken.
13. Halswell Junction Road - Legalisation of Land Acquired for Road

Reference: 18/1326851
Presenter(s): Justin Sims, Property Consultant

1. Halswell-Hornby-Riccarton Community Board Recommendation to Council

Original Staff Recommendation accepted without change

Part A

That the Council:

1. Delegate to the Chief Executive, the power to apply to the Minister of Lands for the land identified in the table below and in Attachments A to D of the agenda report, excluding the area of the railway siding easement (identified as Lot C, l and J DP482703), to be declared as road under section 114 of the Public Works Act 1981, and to give the written consent of the Council under section 114(2)(h) of that Act; and

2. That the Chief Executive Officer may sub-delegate this power.

<table>
<thead>
<tr>
<th>Legal Description</th>
<th>Certificate of Title Reference</th>
<th>Area</th>
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<tbody>
<tr>
<td>Lot 6 DP 482703</td>
<td>681014</td>
<td>612 sq. m</td>
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<tr>
<td>Lot 1 DP 80136</td>
<td>CB45D/927</td>
<td>2,134 sq. m</td>
</tr>
<tr>
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<td>Part 679400</td>
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<td>Part 679402 and 679403</td>
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<td>501 and 502 on Scheme Plan</td>
<td>Part CB34A/131</td>
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<tr>
<td>Lot 601 DP 472402</td>
<td>644190</td>
<td>15,664 sq. m</td>
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Attachments

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<thead>
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<th>No.</th>
<th>Report Title</th>
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<tbody>
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<td>Halswell Junction Road - Legalisation of Land Acquired for Road</td>
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<td>Lot 1 and 6 - Aerial</td>
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<td>B</td>
<td>Proposed Land to be Acquired - Sec 1, 2 and 3 - Plan</td>
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<td>C</td>
<td>Lot 502 - Plan</td>
<td>74</td>
</tr>
<tr>
<td>D</td>
<td>Lot 601 - Plan</td>
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</table>
1. Purpose and Origin of Report

Purpose of Report
1.1 The purpose of this report is for the Waipuna/Halswell-Hornby-Riccarton Community Board to recommend to the Council to delegate to the Chief Executive Officer, the power to apply for, and consent to, land for the Halswell Junction Road realignment being declared road under section 114 of the Public Works Act 1981.

Origin of Report
1.2 This report is staff generated following the acquisition, or agreement to acquire, various parcels of land relating to the Halswell Junction Road diversion project which need to be legalised as road.

2. Significance

2.1 The decisions in this report are of low significance in relation to the Christchurch City Council’s Significance and Engagement Policy because the new road can still be used by the public whether it is legalised as road or not. A decision not to legalise the road therefore has no significant effect on users of the road.

2.1.1 The level of significance was determined in accordance with the significance and engagement matrix.

2.1.2 The community engagement and consultation outlined in this report reflect the assessment.

3. Staff Recommendations

That the Waipuna/Halswell-Hornby-Riccarton Community Board recommend that the Council:

1. Delegate to the Chief Executive Officer the power to apply to the Minister of Lands for the land identified in the table below and in Attachments A to D of the agenda report, excluding the area of the railway siding easement (identified as Lot C, I and J DP482703), to be declared as road under section 114 of the Public Works Act 1981, and to give the written consent of the Council under section 114(2)(h) of that Act; and

2. That the Chief Executive Officer may sub-delegate this power

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4. Key Points

4.1 This report supports the Council’s Long Term Plan (2018 - 2028):

4.1.1 Activity: Strategic Planning and Policy

- Level of Service: 17.0.11.2 A strategic vision for transport to guide the planning and delivery of transport programmes - All pertinent projects in the 2018 LTP are aligned with the Council’s business cases.

4.2 This report only has one option as there is no reason not to declare land acquired for a road improvement project to be legalised as road where it is practical and economically viable to do so. If this option is not supported then the land remains held in fee simple for road purposes:

- Option – Declare the land as road

4.3 Option Summary - Advantages and Disadvantages

4.3.1 The advantages of this option include:

- The land will be legalised as road.
- It is in line with best practice.
- Administration of the road will be undertaken in accordance with the rest of the road network, such as parking enforcement.

4.3.2 The disadvantages of this option include:

- None identified

5. Context/Background

Background

5.1 The Council has a project to realign Halswell Junction Road which will provide both safety and logistical benefits to the community and to the Waterloo Business Park (which is still in the process of being constructed) providing a safer more direct route for heavy goods vehicles to the new industrial/commercial areas.

5.2 The Council at its meeting on 9 October 2014 approved the acquisition and declaration as road of a number of land parcels to enable this diversion which was to include a new rail crossing.
The land covered in this report formed the area shaded blue on the plan below.

5.3 The area shaded green on the plan above was subsequently bought under staff delegation to complete what was thought, at the pre-detailed design stage, to be all the land required for the project.

5.4 As the design of the new road has progressed, other land parcels were identified as being required to complete the road realignment, some of which to accommodate a new traffic island that KiwiRail demanded close to the crossing and some to enable the better delivery of the project.

5.5 The Council has subsequently entered into sale and purchase agreements to acquire all the additional land required, shaded yellow on the plan above and identified as Lot 501 and 502 on the attached plan.

5.6 All land required for the project should therefore be legalised as road so it can be administered in accordance with the rest of the road network.

5.7 A railway siding easement running parallel to the railway crosses part of the land for the project, delineated in pink on the plan above, and due to the number of benefited properties to this easement the resultant cost and difficulty surrendering this, the intention is not to legalise this part as road.

5.8 Additionally, as part of the development of Waterloo Business Park, Waterloo Rd was relocated into the development and the original Waterloo Rd was stopped and swapped with the developer as part of the transaction.
5.9 The majority of the new Waterloo Rd was vested in Council as road as part of the sub-division but one parcel identified as Lot 601 DP 472402 was transferred to Council rather than being vested on deposit of the plan. This parcel also therefore needs to be declared road.

5.10 Attachment A-D shows the various land parcels that need to be declared road as referred to above.
6. Option 1 – Declare as road, land acquired for Halswell Junction Road

Option Description
6.1 Declare as road, those land parcels acquired for the Halswell Junction Road realignment.

Significance
6.2 The level of significance of this option is low consistent with section 2 of this report.
6.3 There are no engagement requirements for this level of significance as the users of the road would not be affected by a change in its legal status.

Impact on Mana Whenua
6.4 This option does not involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does not specifically impact Ngāi Tahu, their culture and traditions.

Community Views and Preferences
6.5 The decision to legalise land as road has no material effect on users of the road and therefore the community is not specifically affected by this option.

Alignment with Council Plans and Policies
6.6 This option is consistent with the Council’s Plans and Policies.

Financial Implications
6.7 Cost of Implementation – the cost to declare the land as road is minimal
6.8 Maintenance/Ongoing Costs – covered by maintenance of the road network
6.9 Funding source – road maintenance budgets

Legal Implications
6.10 There is a legal context, issue or implication relevant to this decision. The procedure to declare land as road has been used on many occasions and is set out in the Public Works Act 1981.
6.11 The process under section 114 requires the Council to apply to the Minister of Lands, and the Minister of Lands, by notice in the Gazette, to declare the land to be road.
6.12 Under section 114(2) of the Public Works Act 1981, part of the process involves the Council providing written consent to the Minister of Lands to the land becoming road.

Risks and Mitigations
6.13 There are no risks with declaring the land as road.

Implementation
6.14 Implementation dependencies - obtaining Council approval
6.15 Implementation timeframe – six months

Option Summary - Advantages and Disadvantages
6.16 The advantages of this option include:

- The land will be legalised as road.
- It is in line with best practice.
- Administration of the road will be undertaken in accordance with the rest of the road network, such as parking enforcement.

6.17 The disadvantages of this option include:

- None identified
Attachments

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Confirmation of Statutory Compliance

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).
(a) This report contains:
   (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
   (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.
(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Justin Sims - Property Consultant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved By</td>
<td>Angus Smith - Manager Property Consultancy</td>
</tr>
<tr>
<td></td>
<td>Bruce Rendall - Head of Facilities, Property &amp; Planning</td>
</tr>
<tr>
<td></td>
<td>Richard Osborne - Head of Transport</td>
</tr>
<tr>
<td></td>
<td>David Adamson - General Manager City Services</td>
</tr>
</tbody>
</table>
Proposed Subdivision of Lots 2 DP 56491 and Lot 500 DP 502977
Waterloo Road, Waterloo Business Park
14. Notice of Motion - Halswell Swimming Pool Operating Hours

Reference: 19/95450
Presenter(s): Mike Mora, Chairperson

1. Halswell-Hornby-Riccarton Community Board Consideration

Debbie Mora moved:

That the Waipuna/Halswell-Hornby-Riccarton Community Board ask the Council to seek advice from the Chief Executive on a proposal for extending the operating hours for the summer months of the Halswell Swimming Pool.

With the agreement of the mover, and a majority of the members present, the motion was altered as recorded below.

2. Halswell-Hornby-Riccarton Community Board Recommendation to Council

Part A

1. That the Council seek advice from the Chief Executive on a proposal for extending the operating hours for the summer months of the Halswell Swimming Pool, including investigating the possibility of funding from Waipuna/Halswell-Hornby-Riccarton Community Board sources in the 2019/2020 financial year should operational expenses not be met by the Annual Plan.

Attachments

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<tbody>
<tr>
<td>A</td>
<td>Staff Memorandum - Halswell Swimming Pool</td>
<td>79</td>
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</tbody>
</table>
Notice of Motion - Halswell Swimming Pool Operating Hours

Reference: 19/50223
Presenter(s): Peter Dow

Pursuant to Section 22 of Christchurch City Council’s Standing Orders, the following Notice of Motion is submitted by Debbie Mora:

1. That the Waipuna/Halswell-Hornby-Riccarton Community Board ask the Council to seek advice from the Chief Executive on a proposal for extending the operating hours for the summer months of the Halswell Swimming Pool.

1. Recommendation to Waipuna/Halswell-Hornby-Riccarton Community Board

That the Waipuna/Halswell-Hornby-Riccarton Community Board decide to:

1. Accept for consideration, the Notice of Motion from Debbie Mora regarding the extension of operating hours of the Halswell Swimming Pool.

Attachments

There are no attachments to this report.
Memorandum

Date: 25 January 2019
From: Nigel Cox, Head Recreation, Sport and Events
To: Waipuna/Halswell-Hornby-Riccarton Community Board
Matthew Pratt – Community Governance Manager (Halswell-Hornby-Riccarton)
Mary Richardson – General Manager Citizens and Community
Matt McIntock – Manager Community Governance Team
Cc: Rowan Foley – Aquatics Manager
Peter Dow – Community Board Advisor
Subject: Operating Hours at Te Hapua (Halswell) Summer Pool
Reference: 19/79065

1. Purpose of this Memo

1.1 To provide information on the operating hours at the Christchurch City Council Outdoor Summer Pools to inform the Waipuna/Halswell-Hornby-Riccarton Community Board discussion on the following Notice of Motion:

“That the Waipuna/Halswell-Hornby-Riccarton Community Board ask the Council to seek advice from the Chief Executive on a proposal for extending the operating hours for the Summer months of the Halswell Swimming pool”.

2. Current Operating Hours

2.1 The Outdoor Summer Pool operating times are based on sufficient demand from people wanting to swim. At the end of each season recommendations on opening hours are made using the headcounts recorded every 30 minutes (attached), operational costs and ability to attract staffing resources.

During the 2017/18 summer season Pioneer Recreation & Sport Centre was closed for maintenance so the opening hours at Te Hapua and Waltham outdoor summer pools were extended to 6am-8pm Monday to Friday and 7am – 8pm weekends.

At the end of the 2017/18 season staff reviewed the participation numbers to help inform the operating hours for the 2018/19 season. At Te Hapua between December 2017 and Feb 2018 the average count of people in the main pool before 10am was between 1.6 – 2.6 people. The largest count before 10am for the whole summer was 13 people.

2.2 2018/19 Outdoor Summer Pool Operating Hours

- **Te Hapua and Waltham**, season starts 17 November 2018 and finishes 31 March 2019. The pools are open 11.30am- 7pm, Monday to Sunday.

- **Norman Kirk Memorial Summer Pool**, season starts 17 November 2018 and finishes 3 February 2019. The pool is open from 11.30am- 7pm, Monday to Sunday.

  Note: Norman Kirk Memorial Pool operates a volunteer key holder system which operates from 17 November 2018 to 3 March 2019.

- **Templeton Summer Pool**, season starts 1 December 2018 and finishes 24 February 2019.
Item No.: 14

3. Considerations to extend the Operating Hours

3.1 The cost to open Te Hāpua at 7am instead of 11.30am every day during the season (133 Days) would be approximately $35,000 in lifeguard staff costs.

3.2 To staff the extended operating hours with lifeguards and a senior lifeguard supervisor the additional hours would need to be sufficient per day to attract new staff. Existing fulltime staff already work an 8.5 hour shift (includes a 30 minute lunch break) so extending opening hours slightly is not simply a case of extending existing staffing shifts.

3.3 Pioneer Recreation and Sport Centre is the closest public swimming pool 6.2km away from Te Hāpua. Pioneer Recreation and Sport Centres opening hours are: 5.30am – 9.30pm Monday to Friday and 7am-8pm Weekends and public holidays.

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Signatories

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<thead>
<tr>
<th>Authors</th>
<th>Nigel Cox - Acting Head of Recreation &amp; Sports</th>
<th>Rowan Foley - Manager Aquatics</th>
</tr>
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<tbody>
<tr>
<td>Approved By</td>
<td>Mary Richardson - General Manager Citizen and Community</td>
<td></td>
</tr>
</tbody>
</table>
15. Mt. Pleasant Sea Scouts Building - Gift & New Lease

Reference: 19/34467
Presenter(s): Luke Rees-Thomas, Property Consultant

1. Linwood-Central-Heathcote Community Board Decisions Under Delegation

   Original staff recommendations accepted without change

   Part C

   That the Waikura/Linwood-Central-Heathcote Community Board:

   1. Note that at time of writing the staff report no submissions on the proposed lease of an area of Old School Reserve (172 Major Hornbrook Road) to the Scout Association of New Zealand had been received as a result of the public notification process undertaken under Sections 119-120 of the Reserves Act 1977.

   2. Request that in the event that if any objections are receive on the proposed lease of an area of Old School Reserve (172 Major Hornbrook Road) to the Scout Association of New Zealand are received and cannot be satisfied, staff follow the procedure under the Reserves Act 1977 to convene a Reserves Act Hearings Panel to consider any such objections and make a recommendation to the Council for a decision,

   3. Resolve in the event that there are no objections to the proposed lease that cannot be satisfied, to approve the grant a lease of an area of approximately 260 square metres, of Old School Reserve (172 Major Hornbrook Road, being the land encompassing the Mt Pleasant sea Scout building footprint) to ‘The Scout Association of New Zealand’ for a term up to 33 years, and:

      a. recommend that the Chief Executive in her capacity as delegate of the Minister of Conservation’s Delegation, gives consent to the lease in accordance with 54(1) (b) of the Reserves Act 1977.

      b. Authorise the Property Consultancy Manager to manage and conclude all issues, processes and documentation associated with the lease of the property.

   4. Note that approval of the ground lease to ‘The Scout Association of New Zealand’ is consistent with Council policy (“to publicly tender properties for sale or lease unless there is a clear reason for doing otherwise”), as there are clear reasons for doing so, being:

      a. The group has had long tenure at the site.

      b. The group’s activity offers a unique local benefit.

      c. The group has made a financial contribution towards a refurbishment of the building and

      d. Should the Council sell the building currently on the site to the group, ‘The Scout Association of New Zealand’ will be the logical Lessee of the land.
2. Linwood-Central-Heathcote Community Board Recommendation to Council

Original staff recommendations accepted without change

Part A

That the Council:

5. Receive and consider the results from the public notification process tabled at the meeting as required under Section 78 of the Local Government Act 2002, as related to the transfer of the building located at Old School Reserve (172 Major Hornbrook Road):
   a. Unless the results of the public notification process give cause to determine otherwise, sell the Mount Pleasant Sea Scout building located at Old School Reserve (172 Major Hornbrook Road) to ‘The Scout Association of New Zealand’ for the nominal sum of $1, noting the group will refurbish the building including an investment of $120,000 + GST.
   b. Authorise the Property Consultancy Manager to manage and conclude all issues, processes and documentation associated with the transfer of the property.

6. Note that to authorise the sale of the building to ‘The Scout Association of New Zealand’ is consistent with policy “to publicly tender properties for sale or lease unless there is a clear reason for doing otherwise”, as there are clear reasons for doing so, being:
   a. The group’s long tenure at the site
   b. The group’s unique local benefit offered by their activity
   c. The group’s financial contribution towards a refurbishment of the building and
   d. Should the Council sell the building to the group, ‘The Scout Association of New Zealand’ will be the only logical Lessee within the granting of a new ground lease.

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<td>Mt. Pleasant Sea Scouts Building - Gift &amp; New Lease</td>
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<td>A</td>
<td>Building &amp; Site Photos</td>
<td>96</td>
</tr>
<tr>
<td>B</td>
<td>Group Proposal</td>
<td>99</td>
</tr>
<tr>
<td>C</td>
<td>Group Financial Statement</td>
<td>106</td>
</tr>
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</table>
1. Purpose and Origin of Report

Purpose of Report
1.1 The purpose of this report is for the Linwood-Central-Heathcote Community Board to:

1.1.1 Recommend to Council, that the building located at Old School Reserve which is currently occupied by the Mount Pleasant Sea Scout Group, be transferred to ‘The Scout Association of New Zealand’ for a nominal sum of $1.

1.1.2 Should the building be gifted, the Community Board approve the granting of a new ground lease to ‘The Scout Association of New Zealand’, over land encompassing the building footprint for a period of up to 33 years.

1.1.3 Note the commitment of the Scouts group to refurbish the building once the transfer and new lease has been implemented.

Origin of Report
1.2 This report is staff generated and originates from a discussion with the Lessee around a necessary refurbishment of the building. Subsequently, a request for transfer of building ownership was tabled by the Lessee. The granting of a new ground lease is necessary to enable future occupation on the reserve.

2. Significance

2.1 The decisions in this report are of low significance in relation to the Christchurch City Council’s Significance and Engagement Policy.

2.1.1 The level of significance was determined by the relatively low level of public specifically affected by these decisions e.g. group membership and users of the public reserve. There is no change proposed which would affect public access to the reserve.

2.1.2 The community engagement and consultation outlined in this report reflect the assessment.

3. Staff Recommendations

That the Waikura/Linwood-Central-Heathcote Community Board:

1. Note that at time of writing the staff report no submissions on the proposed lease of an area of Old School Reserve (172 Major Hornbrook Road) to the Scout Association of New Zealand had been received as a result of the public notification process undertaken under Sections 119-120 of the Reserves Act 1977.

2. Request that in the event that if any objections are receive on the proposed lease of an area of Old School Reserve (172 Major Hornbrook Road) to the Scout Association of New Zealand are received and cannot be satisfied, staff follow the procedure under the Reserves Act 1977 to convene a Reserves Act Hearings Panel to consider any such objections and make a recommendation to the Council for a decision,

3. Resolve in the event that there are no objections to the proposed lease that cannot be satisfied, to approve the grant a lease of an area of approximately 260 square metres, of Old School
Reserve (172 Major Hornbrook Road, being the land encompassing the Mt Pleasant sea Scout building footprint) to ‘The Scout Association of New Zealand’ for a term up to 33 years, and:

a. recommend that the Chief Executive in her capacity as delegate of the Minister of Conservation's Delegation, gives consent to the lease in accordance with 54(1) (b) of the Reserves Act 1977.

b. Authorise the Property Consultancy Manager to manage and conclude all issues, processes and documentation associated with the lease of the property.

4. Note that approval of the ground lease to ‘The Scout Association of New Zealand’ is consistent with Council policy (“to publicly tender properties for sale or lease unless there is a clear reason for doing otherwise”), as there are clear reasons for doing so, being:

a. The group has had long tenure at the site.

b. The group’s activity offers a unique local benefit.

c. The group has made a financial contribution towards a refurbishment of the building and

d. Should the Council sell the building currently on the site to the group, ‘The Scout Association of New Zealand’ will be the logical Lessee of the land.

That the Waikura/Linwood-Central-Heathcote Community Board recommend to the Council to:

5. Receive and consider the results from the public notification process tabled at the meeting as required under Section 78 of the Local Government Act 2002, as related to the transfer of the building located at Old School Reserve (172 Major Hornbrook Road):

a. Unless the results of the public notification process give cause to determine otherwise, sell the Mount Pleasant Sea Scout building located at Old School Reserve (172 Major Hornbrook Road) to ‘The Scout Association of New Zealand’ for the nominal sum of $1, noting the group will refurbish the building including an investment of $120,000 + GST.

b. Authorise the Property Consultancy Manager to manage and conclude all issues, processes and documentation associated with the transfer of the property.

6. Note that to authorise the sale of the building to ‘The Scout Association of New Zealand’ are consistent with policy (“to publicly tender properties for sale or lease unless there is a clear reason for doing otherwise”), as there are clear reasons for doing so, being:

a. The group’s long tenure at the site

b. The group’s unique local benefit offered by their activity

c. The group’s financial contribution towards a refurbishment of the building and

d. Should the Council sell the building to the group, ‘The Scout Association of New Zealand’ will be the only logical Lessee within the granting of a new ground lease.

4. Key Points

4.1 This report supports the Council’s Long Term Plan (2018 - 2028):

4.1.1 Activity: Community Development and Facilities

- Level of Service: 4.1.27.2 Community development projects are provided, supported and promoted - Community Board plans are developed and implemented.

4.2 The following feasible options have been considered:

- Option 1 – Approve building gift and new lease (preferred option)
- Option 2 – Decline building gift and only grant new lease
• Option 3 - Decline both building gift and new lease

4.3 Option Summary - Advantages and Disadvantages (Preferred Option)

4.3.1 The advantages of this option include:

- The building will be transferred to an established community group with a long history at the site.
- The building will receive a much needed refurbishment and the appearance of the reserve will be enhanced.
- The group’s membership and local community will benefit in the form of an upgraded facility.
- The group will be able to provide a better offering to their members which may increase numbers as a result.
- The Council will be relieved of any further maintenance obligations over the building.

4.3.2 The disadvantages of this option include:

- The Council will relinquish ownership rights and control over the asset.
- Under the proposed arrangement, the Council will only receive a nominal sum for the transfer.
- Under existing policies, the new lease will only generate a minor income for the Council.

5. Context/Background

Mount Pleasant Sea Scouts Group

5.1 The Mount Pleasant Sea Scouts operate under the umbrella of Scouts New Zealand and are the only Scout group servicing the Redcliffs and Mount Pleasant area. This group holds a long history dating back 70 years and offers a comprehensive Sea Scout programme for youth, boys and girls aged 6-19.

5.2 The group utilises 2 buildings in the area, a concrete double garage on Scott’s Park (owned by the group, which houses their fleet) and their main scout hall on Old School Reserve, Mount Pleasant which is leased from the Council and the subject of this report. The Scouts group have occupied this particular building for 49 years.

5.3 As a result of the Canterbury earthquakes, the group incurred a reduction in membership numbers, however these numbers have since steadily replenished and future growth looks promising. The group currently has 67 youth members, comprising of 23 Cubs, 33 Scouts and 11 Venturers. There is a waiting list to join these sections of 21.

5.4 More information is available on the group’s website - https://sites.google.com/site/mtpleasantseascouts/Home

Land and Building Details

5.5 The building in question is located within Old School Reserve, Mount Pleasant. This land is classified as Recreation Reserve and defined as Lot 28-29 DP 3416 within Computer Freehold Register 651489. Access is gained via Major Hornbrook Rd, the building shares an open access carpark along with a Council public toilet block. The land is administered by the Council in accordance with the Reserves Act 1977.

Shown in image below:
5.6 The original building was developed in the 1940’s with the structure consisting of a concrete ring foundation, timber frame, weatherboard cladding and iron roof. A garage extension was added comprising of concrete block and similar roof materials. The total building floor area is noted as approximately 216m². Please refer to photos within Attachment A.

5.7 The building suffered minor cosmetic damage during the Canterbury Earthquake events. A scope of repair works was completed on the building by City Care to a total of $5,096 + GST. There is no evidence of a Detailed Engineering Assessment being completed on the main Scout building.

5.8 The Council holds an internal book value for the building at $35,000 (valued 30 June 2018). A market valuation has recently been sourced which places a value of $60,000 on the building/improvements in its current state. It is not feasible to transfer the reserve land within the building footprint therefore this component has not been included in the market valuation report.

5.9 The building is now in a dilapidated condition and in dire need of refurbishment. Many weatherboards are rotten and require replacement, the roof leaks and requires replacement and the interior requires a full repaint. The Tenant has managed to maintain continuation of their programmes despite the building condition however there are now areas which could force vacancy if not attended to in the near future.

5.10 The small storage shed to the west is also in a dilapidated condition. The Scouts group own this structure and have indicated this may be past its ‘used by date’ and may be demolished.

Proposal and Gift of Building

5.11 The Sea Scouts approached Council in 2017 and initiated discussions on the process (and financial implications) for upgrading the building to a fit for purpose state. Council staff indicated they would support a recommendation to the Community Board that a new lease could be granted over the building in order to allow the repairs to be undertaken. On this basis,
the Mount Pleasant Sea Scouts sought estimates for the necessary repairs and then applied to Scouts NZ for funding. These details are included within the group’s proposal as Attachment B.

5.12 Scouts NZ have agreed to fund a building capital investment on behalf of the Mount Pleasant Sea Scouts group to a total of $120,000 + GST. However approval for this funding is conditional upon the Sea Scouts group negotiating a greater level of tenure, rather than a lease.

5.13 The option of Council transferring the building to the group was then raised with staff. A nominal transfer sum has been proposed and rationalised on the basis of the group being a not for profit organisation that solely exists to service the community.

5.14 The parks unit (as operational asset owner within the Council) hold no objection to the transfer proposal as this structure would be consistent with other sports clubs that own buildings located on reserve land.

5.15 The proposal solely includes the existing building improvements that are occupied by the Sea Scouts group. No new developments are proposed and no reduction of public access to the reserve will be incurred.

5.16 Should the Council elect to transfer the building to the Sea Scouts, the Council would be relieved of building insurance and renewal costs. Council staff would also ensure the group’s commitment to refurbish the building (as scheduled in Attachment B) is captured as a contractual obligation within the new lease.

5.17 When considering the decision to sell the building, the Council must take into account the views of any affected parties, this process is further explained within the report.

New Lease

5.18 The Mt Pleasant Scouts Group have occupied the building at Old School Reserve by way of perpetual licence since 1969. This tenure is ongoing however is not satisfactory when referencing the current occupation and usage. As mentioned above, Scouts NZ also require a higher level of certainty over the space before committing to the financial outlay for a building upgrade.

5.19 Should the Council agree to sell the improvements to the Group, a new ground lease will be required covering the building footprint, being approximately 260m² in area (including an additional area for the garage ramp and car parking).

5.20 Staff have included Option 2 within this report, which provides for the Community Board to grant a new lease over the building if the transfer of building ownership is not palatable but wish to support the group’s continued occupation.

5.21 The Council has adopted a policy in setting rents to sports groups that own their own buildings on parks or reserves. If the building was owned by the group, the expected annual rental would be approximately $225 per annum plus GST based on the building footprint size. For comparison, an approximate commercial rental of the space has been valued at $10,400 + GST per annum (gross).

5.22 There is currently no rental policy set for determining rents to sports groups and organisations occupying Council-owned buildings. To set rentals for these types of occupations, a market valuation is undertaken and then discussed with the internal Council asset owner and based on the lessee’s ability to pay rent.

5.23 The Club has limited income earning capacity and relies on donations, fundraising and levies to meet their operational costs. For the financial year ending September 2018 the Club had a net surplus of $695.47, this was a reduction from the year ending 2017 being $759.68. A copy of the financial statement is appended to this report in Attachment C. These financial statements confirm that the Club is not in a position to pay a market rental for the building.
5.24 The purposed term of 33 years is the maximum term permissible under the Reserves Act and is in keeping with similar sports clubs of a recreational nature.

**Community Board Delegations**

5.25 The Community Board does not hold a delegation to dispose of property including land or buildings. Such decision would be made by the Council.

5.26 The Council has granted Community Boards the delegated authority to grant leases on Recreation Reserves in accordance with Section 54 of the Reserves Act 1977.

5.27 Section 54(1)(b) of the Reserves Act 1977 makes provision for the administering body to grant leases to any voluntary organisations for any stands, pavilions, gymnasiums, other buildings or structures already on the reserve subject to the provisions set out in Schedule 1 of that Act relating to leases of recreation reserves provided that a lease granted with the prior consent of the Minister of Conservation given on the grounds that it is considered to be in the public interest for sports, games or public recreation not directly associated with outdoor recreation.

The structure in question is an existing building and the recreational activities and training undertaken by the group fits within the intention of this section of the Reserves Act.

5.28 As there is no approved reserve management plan for Old School Reserve, the administering body (the Council) must give notice in accordance with sections 119 and 120 of the Reserves Act 1977 of the intention to grant a lease with any objections and submissions to be heard by a hearings panel. This delegation excludes the hearing and determining of submissions or objections; such panel would be convened by the Council.

**Minister of Conservation Delegation**

5.29 On 12 June 2013, the Minister of Conservation delegated to all territorial authorities powers, functions and duties where the territorial authority is the administering body of the relevant reserve. The Council has sub-delegated that power to the Chief Executive.

5.30 In exercising the Minister’s delegation, the administering body (i.e. the Council) must give consideration to those matters previously applied by the Minister, for example ensuring that:

- The land has been correctly identified;
- The necessary statutory processes have been followed;
- The functions and purposes of the Reserves Act have been taken into account in respect to the classification and purpose of the reserve as required under section 40 of the Act;
- The administering body has considered submissions and objections from affected parties and that, on the basis of the evidence, the decision is a reasonable one;
- Pursuant to the requirements of section 4 of the Conservation Act 1987, the administering body has consulted with and considered the views of tangata whenua or has in some other way been able to make an informed decision.
- Council officers have publically notified the Council’s intentions to consider granting the group a lease for up to 33 years.

5.31 Council officers are satisfied that the proposed lease will comply with the Minister’s requirements.

**Legal Considerations - Dealing Unilaterally**

5.32 There are a number of matters that need to be considered when contemplating unilateral dealings to sell the building and grant a new lease.

5.33 First and foremost, the Council must consider and meet the requirements of Section 14 of the Local Government Act 2002 (LGA), in particular:
• (1)(a) Conduct its business in an open, transparent, and democratically accountable manner,
• (1)(f) Undertake any commercial transactions in accordance with sound business practices.
• (1)(g) Ensure prudent stewardship and the efficient and effective use of its resources in the interests of its district or region, including planning effectively for the future management of its assets.

5.34 Secondly, the Council must also ensure that it complies with its relevant policies. In this instance there are two adopted policies recorded:

Property – Disposal of Council Property

“That the Council’s policy of publically tendering properties for sale unless there is a clear reason for doing otherwise be confirmed as applying to all areas of the City with the exception of the area in which the (interim) Central City Board is active in pursuit of Council revitalisation goals”.
(Adopted 16 December 2000)

Property – Leasing Council Property

“Where the Council recognises there is only one logical lessee for a public property, the Council will unilaterally deal with that lessee.”
This includes facilities linked to contracts including but not limited to buildings on parks and reserves and not for profit organisations. (Adopted December 2015).

5.35 The clear reason(s) to deal unilaterally regarding a sale of the building is; the long tenure of the group, the unique local benefit offered by their activity and their financial contribution to a refurbishment.

5.36 Subsequently, should the Council elect to sell the building to the group, they will be the only logical Lessee within the granting of a new lease. This is a clear reason to deal unilaterally regarding a new lease.

5.37 Staff are of the view that the group’s proposal benefits the community and outweighs any benefits that may be realised from an open tender process.

Legal Considerations – Public Views and Preferences

5.38 There are a number of relevant legal considerations when making a decision about the proposal received and the future use of the property - Decision Making sections 76 – 82 LGA:

• Section 76 provides that “Every decision made by a local authority must be made in accordance with such of the provisions of sections 77, 78, 80, 81 and 82 as are applicable”. In summary those sections provide:

• Section 77 a local authority must, in the course of the decision-making process, seek to identify all reasonably practicable options for the achievement of the objective of a decision and in doing so assess the options in terms of their advantages and disadvantages.

• Section 78 the views and preferences of persons likely to be affected by, or to have an interest in, the matter must be considered.

• Section 79 provides that in considering how to achieve compliance with sections 77 and 78 they must consider the significance of the matter in accordance with its Significance and Engagement Policy.

• Section 80 sets out the matters that need to be clearly identified when making a decision that is inconsistent i.e. the inconsistency, reason for it and any intention of the local authority to amend the policy or plan to accommodate the decision.

• Section 81 provides contributions to decision making by Maori.
• Section 82 sets out the principles of consultation.

5.39 Section 78 does not require the Council to undertake a consultation process in itself but the Council must have some way of identifying the views and preferences of interested and affected persons. Therefore in this instance, staff have advertised the intention to transfer the building and grant a new lease in The Press newspaper (5 November and 7 November). Staff have also completed a mail drop to houses in the immediate area and contacted the Mount Pleasant Residents Association for comment. The public have until 30 November to provide feedback on the proposed actions, the results of which will be presented to the Community Board and Council at the time this report is considered.

5.40 Section 97 LGA provides that if the Council is proposing to transfer the control of a “strategic asset” to or from the Council, the Council must not make that decision, unless:

• The decision is explicitly provided for in its LTP; and
• The proposal to provide for the decision was included in a consultation documents in accordance with section 93E.

5.41 The Significance and Engagement Policy sets out the list of “strategic assets”. In particular, the Policy lists as “strategic assets”, community facilities as follows:

Community Facilities
(i) Christchurch Town Hall;
(j) Christchurch Art Gallery and its permanent collection;
(k) all land and buildings comprising the Council’s social housing portfolio;
(l) all public library facilities;
(m) all parks and reserves owned by or administered by the Council;
(n) all public swimming pools;
(o) all waterfront land and facilities owned or operated by the Council, including wharves, jetties, slipways, breakwaters and seawalls;
(p) cemeteries and listed heritage buildings and structures.

“All” or “its” means the asset as a whole.

5.42 Where a “strategic asset” is a network or has many components, decisions may be made in respect of individual components within the network without those components being regarded as strategic, unless such decisions are considered to significantly alter the level of service provided by the Council.

5.43 Paragraph 5.27 (m) uses the word “all”, and it suggests that parks and reserves are treated separately.

5.44 The disposal of this building is not considered a strategic asset as the Council will be maintaining ownership of the land. The decision to dispose of the building would not be considered to significantly alter the level of service provided by the Council.

6. Option 1 - Approve building gift and new lease (preferred)

Option Description
6.1 The Community Board recommends that Council agree to transfer the building to the Group for a nominal Sum. The Group will refurbish the building including an investment of $120,000 + GST.

6.2 The Community Board will grant the Group a new ground lease over the building footprint for a term up to 33 years including renewals, subject to Council agreeing to gift the building.

Significance
6.3 The level of significance of this option is low and consistent with section 2 of this report.
6.4 Engagement requirements for this level of significance are being met via standard public consultation processes. Specifically, advertisements in The Press as outlined within the body of this report.

**Impact on Mana Whenua**

6.5 This option does not involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does not specifically impact Ngāi Tahu, their culture and traditions.

**Community Views and Preferences**

6.6 The Mount Pleasant Sea Scouts group and users of the public reserve are specifically affected by this option due to the change in ownership. However no reduction in access to the reserve is being incurred and the building appearance will be improved by refurbishment. Their views have been considered via the necessary consultation processes required under Section 78 of the Local Government Act.

**Alignment with Council Plans and Policies**

6.7 This option is consistent with Council’s Plans and Policies

**Financial Implications**

6.8 Cost of Implementation – Staff time to process transfer and new lease.
6.9 Maintenance / Ongoing Costs – Lease management.
6.10 Funding source – Existing budgets.

**Legal Implications**

6.11 There is a legal context, issue or implication relevant to this decision
6.12 This report has not been reviewed and approved by the Legal Services Unit
6.13 The legal consideration is the legal documentation required to effect the transfer and new lease.

**Risks and Mitigations**

6.14 There is a risk that the group does not proceed with the building refurbishment after transfer. This may result in a park building becoming further dilapidated. Therefore the Council will include the refurbishment as a contractual requirement within the new lease.

**Implementation**

6.15 Implementation dependencies - Council decision and then processing of documentation.
6.16 Implementation timeframe – 2 months from Council decision.

**Option Summary - Advantages and Disadvantages**

6.17 The advantages of this option include:
- The building will be transferred to an established community group with a long history at the site.
- The building will receive a much needed refurbishment and the appearance of the reserve will be enhanced.
- The group’s membership and local community will benefit in the form of an upgraded facility.
- The group will be able to provide a better offering to their members which may increase numbers as a result.
- The Council will be relieved of any further maintenance obligations over the building.

6.18 The disadvantages of this option include:
The Council will relinquish ownership rights and control over the asset.

- Under the proposed arrangement, the Council will only receive a nominal sum for the transfer.
- Under existing policies, the new lease will only generate a minor income for the Council.

7. Option 2 - Decline building gift and only grant new lease

Option Description
7.1 The Community Board recommends that Council does not transfer the building to the group.
7.2 The Community Board elects to grant the group a new lease over the building for a term up to 33 years including renewals.
7.3 This option will record the Community Board’s preference to retain a park asset whilst still providing future occupation rights for the historical Lessee.
7.4 The group are unlikely to lead a refurbishment of the building and a request may come for Council to contribute this project.

Significance
7.5 The level of significance of this option is low and consistent with section 2 of this report.
7.6 Engagement requirements for this level of significance are being met via standard public consultation processes. Specifically, advertisements in The Press as outlined within the body of this report.

Impact on Mana Whenua
7.7 This option does not involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does not specifically impact Ngāi Tahu, their culture and traditions.

Community Views and Preferences
7.8 The Mount Pleasant Sea Scouts group and users of the public reserve are specifically affected by this option due to the granting of a new lease. No reduction in access to the reserve is being incurred. Their views have been considered via the necessary consultation processes required under Section 78 of the Local Government Act.

Alignment with Council Plans and Policies
7.9 This option is consistent with Council’s Plans and Policies.

Financial Implications
7.10 Cost of Implementation – Staff time to process new lease. Potential contribution towards building refurbishment.
7.11 Maintenance / Ongoing Costs – Continued building renewals costs, lease management.
7.12 Funding source – Existing budgets.

Legal Implications
7.13 There is a legal context, issue or implication relevant to this decision.
7.14 This report has not been reviewed and approved by the Legal Services Unit.
7.15 The legal consideration is the drafting of new lease documentation.

Risks and Mitigations
7.16 There is a risk that the Scout building will continue to deteriorate which may result in the structure not being fit for purpose. The group are required to maintain the premises under a
lease, however this is limited to fair wear and tear with the building owner being responsible for renewals.

**Implementation**

7.17 Implementation dependencies - Council decision and then processing of documentation.

7.18 Implementation timeframe - 2 months from Council decision.

**Option Summary - Advantages and Disadvantages**

7.19 The advantages of this option include:
- The group will be granted secure tenure to remain in occupancy via a long term lease.
- The Council will continue to receive the current rental income.

7.20 The disadvantages of this option include:
- The group will not proceed with a refurbishment of the building. The Council has no budget available for this work and even if this was sourced, the Council’s rental policy would not allow for any increase as calculation is based on floor area.
- As the building is not being refurbished, the group will limited in their ability to provide suitable facilities and recruit new members.
- The appearance of the reserve will not be enhanced.

**8. Option 3 - Decline both building gift and new lease**

**Option Description**

8.1 The Community Board recommends that Council does not transfer the building to the Group. No refurbishment of the building will take place.

8.2 The Community Board elects not to grant the Group a new lease over the building. The group may remain in occupation on a holding over basis under their existing lease agreement. The group may provide one months’ notice to vacate at any time.

8.3 Selecting this option will not address any of the core issues outlined within the report. This may result in the group seeking alternative accommodation, leaving the Council with a substantial cost to make the building fit for further occupation.

**Significance**

8.4 The level of significance of this option is low and consistent with section 2 of this report.

8.5 Engagement requirements for this level of significance are being met via standard public consultation processes. Specifically, advertisements in The Press as outlined within the body of this report.

**Impact on Mana Whenua**

8.6 This option does not involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does not specifically impact Ngāi Tahu, their culture and traditions.

**Community Views and Preferences**

8.7 The Mount Pleasant Sea Scouts group and users of the public reserve are specifically affected by this option as the outstanding issues are not being addressed. No reduction in access to the reserve is being incurred however the building may continue to deteriorate. Their views have been considered via the necessary consultation processes required under Section 78 of the Local Government Act.
Alignment with Council Plans and Policies
8.8 This option is consistent with Council’s Plans and Policies.

Financial Implications
8.9 Cost of Implementation – Likely nil as no action being taken. However if the tenants vacates then the Council will incur cost to upgrade or demolish the building.
8.10 Maintenance / Ongoing Costs – Building renewals costs as per current.
8.11 Funding source – Existing budgets.

Legal Implications
8.12 There is not a legal context, issue or implication relevant to this decision.
8.13 This report has not been reviewed and approved by the Legal Services Unit.

Risks and Mitigations
8.14 There is a risk that the group may elect to vacate the building and the structure will continue to fall into disrepair.

Implementation
8.15 Implementation dependencies - No action being taken under this option.

Option Summary - Advantages and Disadvantages
8.16 The advantages of this option include:
   - The Council can take time to reassess any other uses for the building and reserve. However this could be at the expense of the existing tenant who holds a 49 year history at the site.
8.17 The disadvantages of this option include:
   - The building will not receive a much needed refurbishment.
   - The Council will not be considering and supporting the group’s history at the site.
   - The Group will not receive any certainty around their future occupation and may need to consider other options.
   - If the Group vacates the premises, the Council will incur cost upgrading the building and time to source a new occupant.

Attachments

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<tr>
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<tr>
<td>A</td>
<td>Building &amp; Site Photos</td>
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<tr>
<td>B</td>
<td>Group Proposal</td>
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<td>C</td>
<td>Group Financial Statement</td>
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Confirmation of Statutory Compliance
Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).
(a) This report contains:
   (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
(ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council’s significance and engagement policy.

Signatories

<table>
<thead>
<tr>
<th>Authors</th>
<th>Authors</th>
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<tbody>
<tr>
<td>Luke Rees-Thomas - Property Consultant</td>
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<tr>
<td>Russel Wedge - Team Leader Parks Policy &amp; Advisory</td>
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<tr>
<td>Angus Smith - Manager Property Consultancy</td>
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<td>Bruce Rendall - Head of Facilities, Property &amp; Planning</td>
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<tr>
<td>Kate Russell - Acting Head of Parks</td>
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<tr>
<td>Mary Richardson - General Manager Citizen and Community</td>
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Mount Pleasant
Sea Scout Group

Christchurch City Council
Ferrymead Community Board

7th November 2018

Letter of support for the transfer of the Old School Building in Old School Reserve, Mt Pleasant, to the Mount Pleasant Sea Scout Group and arrange a 33 year lease on the footprint land.

The Mount Pleasant Sea Scout Group has occupied the old school building at 172 Major Hornbrook Road, Mt Pleasant since November 1969, 49 years of it’s 70 year history.

The Group currently has 67 youth members, comprising 23 Cubs, 33 Scouts and 11 Venturers. There is a waiting list to join these sections of 21. We are currently limited to the numbers we can take due to the number of leaders we have at present but we are considering opening a second Scout Troop next year. We are the only Scout Group in Sumner, Redcliffs, Mt Pleasant and Heathcote, and also draw members from further afield who are attracted by the water activities we undertake.

We are still looking for a replacement Kea Leader which will then enable us to reopen our Kea section for the 5 to 7’s.

The original lease for the building was a rolling annual one which also required us to carry out maintenance as necessary. Following the earthquake, the Sumner Scout Group merged with Mt Pleasant due to lack of leadership. Their building and land in Tufto St was Red Zoned after the Quake and CERA eventually paid out $40,000 dollars. This money, although arguably belonging to the merged Groups, was taken by Scouting New Zealand, and we have been fighting them since to get sufficient back to undertake repairs, maintenance and improvements to the building.

They have now agreed to allow us to spend 120,000 plus GST on this work providing that we can arrange a long enough lease to ensure we get value from this money. We feel this is best achieved by us owning the building, thus relieving the council of any costs for its upkeep in the future, and having a 33 year lease on the building footprint.

Keas – Cubs – Scouts – Venturers
Meet at -
Mt. Pleasant Sea Scout Ship
Old School Reserve
Major Hornbrook Road
Mt Pleasant, Christchurch
Mount Pleasant Sea Scout Group

The maintenance and improvements we have Scouts NZ’s approval to spend the money on are-

- Replace leaking roof
- Repaint whole building inside and out
- Replace bad weather boards
- Install inside toilet
- Install new kitchen

The Mount Pleasant Sea Scout Group has a strong committee determined to keep Scouts available to the youth of our area and having a well appointed and maintained building will assist greatly in this aim. The inside toilet will be a huge improvement and make the building more suitable for our younger sections than at present.

We hope you will give this request your approval.

Yours faithfully

Roger Horton
Group Leader
Mt Pleasant Sea Scout Group
021 051 6160 / mtpscouts@gmail.com
Mount Pleasant Sea Scout Group
Application for access to funds.

Mount Pleasant Sea Scout Group is the only Scout Group servicing the Sumner, Redcliffs and Mt Pleasant suburbs of Christchurch. The Group was very hard hit by the earthquake, when eastern hill suburbs were very badly affected, resulting in a drop in membership from 74 down to 45 youth members. There has been steady growth since then, however, due to families moving back into their repaired houses and our merger with the Sumner Group, who had been displaced from their building due to rock fall hazards. Current youth numbers are now back into the 70’s. Growth is expected to continue as the hill suburbs are slowly repaired.

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Currently 50% of our youth members are from the Sumner / Redcliffs communities.

The Mt Pleasant Group has two buildings, a concrete block double garage on Scott’s Park on the Heathcote / Avon Estuary, which houses most of the group’s fleet of 3 Scout Standard Cutters, 2 Sunbursts, a 4.8 metre patrol boat and 9 kayaks and other dinghies.

The main scout hall is at Old School Reserve on Mt Pleasant hill. This building is the old Mt Pleasant primary school and is owned by the Christchurch City Council and situated on council land. Mt Pleasant Scout Group is the sole occupant of this building and is responsible for the building maintenance under the terms of the lease. We have occupied the building for more than 40 years of the Groups 63 year’s history.

Necessary repair work to buildings

The Scout Hall is now in need of a lot of expensive maintenance which we have been putting off for many years due to funding being needed for operational needs. The building requires a re-paint both inside and out and replacement of the iron roof which is now leaking. This historic building now looks shabby and run down and is not giving scouting the good name it deserves. The hall does not have an indoor toilet and the kitchen area is too small and badly in need of an upgrade. We propose installing a toilet and shower in the location of the current kitchen and installing a new kitchen in a different part of the building. The Council are agreeable to the roof and painting but require drawings of the other improvements before giving their blessing.
The Boat shed is too small to house all the Groups equipment which, apart from the vessels mentioned above, include a Toyota Land Cruiser and double axle gear trailer. We therefore propose seeking resource consent to add an extension to the boat shed to make it double its present size and able to store all the Groups boating equipment. The addition of a shower, changing room and toilet is also important as this facility is a long way from the Scout Hall. Before the consent can be obtained we will require engineering drawings which will cost to produce.

**Equipment repair and replacement**

The double axle gear trailer will not obtain a new warrant of fitness due to extensive rust and we propose replacing it with a new one.

We also need to replace our tents and are looking at purchasing 6 frame tents of good quality that will last us for the next 20 years.

All 3 of our Scout Standard Cutters are in need of a refit. 143 requires additional buoyancy to bring it up to modern safety standards as well as a repaint. The centre plate also needs removing from the hull and replacement as it is rusting badly. 169 and 158 need some hull repairs and a repaint. These expensive assets of the Group must be maintained in a safe and repaired condition to ensure our youth are safe and the boats do not deteriorate.

Sea Scouting in Canterbury is struggling to safely run regattas for the 4 local Sea Scout Groups as Mt Pleasant is the only Group who have a patrol boat. This vessel is also used as support for other Regional activities such as the Kon Tiki raft race. We are proposing that Mt Pleasant replaces our existing RIB with a new one and gives our existing vessel to Lyttelton Sea Scout Group.

Lyttelton Sea Scout Group is a flourishing Group in the Lyttelton Township. They have 3 scout standard cutters and 2 sunbursts and do most of their sailing on the Lyttelton Harbour. They do not currently have a patrol boat which is putting their youth members at risk and limiting the areas they can sail in. By providing Lyttelton with a patrol boat, the Region will have access to two patrol boats for scouting events and it will address the serious safety issues with Lyttelton Sea Scouts.

The equipment store at the Scout hall has hazardous shelving that is close to collapse and cannot be used for heavy items. Good quality metal shelving is now essential.

**Costing of projects**

All projects would be managed by the Mt Pleasant Committee who have members well qualified to do this. We have already obtained quotes for some projects but others are approximations from credible sources in the trades, where quotes cannot be obtained before engineering drawings and resource consents have been obtained. Quotes would be obtained for all work or purchases before proceeding.

We propose funding these projects from the proceeds from the Government purchase following the red zoning of the old Sumner Scout Den and land of $640,000.
Council
14 February 2019

PAPER TO THE
NATIONAL EXECUTIVE COMMITTEE

MOUNT PLEASANT SEA SCOUT GROUP

Memo:          Joshua Tabor, Chief Executive
From:          Roger Horton, Group Leader, Mount Pleasant Sea Scout Group
Subject:       Business Case for Capital Expenditure at the Mount Pleasant Sea Scout Group Hall
Date:          August 2017

1. PROPOSAL

This paper proposes that the NEC approves Capital Expenditure of $120,000+GST for the upgrade of the Mount Pleasant Sea Scout Group Hall.

2. EXECUTIVE SUMMARY

The Mount Pleasant Sea Scout Group Hall is in poor condition and not fit for purpose. This proposal is seeking funds of $120,000+GST from the NEC to be used for the upgrade of the Hall.

3. BACKGROUND TO MOUNT PLEASANT SEA SCOUT GROUP

The Mount Pleasant Sea Scout Group was established some 63 years ago and have occupied their current building for over 40 years.

The building is located on Mount Pleasant Hill, it is the old Mt Pleasant Primary School, the building and land is owned by the Christchurch City Council. Also on the site is a children’s play park, public toilets and car parking.

The Mount Pleasant Sea Scout Group is the only Scout Group servicing the Sumner, Redcliffs and Mt Pleasant suburbs of Christchurch. Currently there are 50 members.

The following works are proposed;

1. Replace roofing. $27,393
2. Exterior painting. $20,508
3. Wet area shower and toilet. $40,539 (includes plans and consent)
4. Kitchen $11,350
5. Update electrical $11,000
6. Sand and varnish floors $ 7,181
7. Interior painting $18,940
8. Shelving for store room $ 1,000 (TBC)

Total $137,911 (includes GST)

The project will be managed by the Mt Pleasant Sea Scout Group Committee who have members that are well qualified to do this.

__________________________________________________________

BUSINESS CASE TEMPLATES FOR GROUPS/ENTITIES      AUGUST 2017

__________________________________________________________

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PAPER TO THE
NATIONAL EXECUTIVE COMMITTEE

The above prices are based on quotes already obtained and others are estimates as drawings need to be completed before a quote can be obtained. No work would proceed without a quote been received first.

4. CONSULTATION

This project is supported by the Group Leader and Committee, Zone Leader and Regional Development Manager.

The Christchurch City Council are also in full support.

5. CURRENT CONDITION OF SCOUT HALL

Currently the Hall is in a very original and dated condition. The roof has rusted and is leaking, the exterior needs repainting, there is no indoor toilet or shower facilities, the kitchen surfaces are in poor condition making infection control difficult and the interior of the building looks shabby and run down.

6. FINANCIAL IMPLICATIONS

Once the project is completed and the building is brought up to a good standard the Mount Pleasant Sea Scout Group Committee will prepare a 10 year maintenance plan which will allow for both short term and long term maintenance planning, the group will open a separate bank account named 'maintenance fund' and each year contribute the amount proposed on the maintenance plan. This fund will only be used for building maintenance.

BUSINESS CASE TEMPLATES FOR GROUPS/ENTITIES

AUGUST 2017
7. POTENTIAL RISKS

<table>
<thead>
<tr>
<th>Risk</th>
<th>Likelihood</th>
<th>Consequence</th>
<th>Risk Management Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delay in getting the Christchurch City Council to issue lease documents.</td>
<td>Moderate</td>
<td>Delay in applying for the Building Consent and delay in starting building.</td>
<td>The Council have already been approached and have confirmed they will issue another lease, however the time frame for this is unknown.</td>
</tr>
<tr>
<td>Failure to get Building Consent.</td>
<td>Rare</td>
<td>Project could not go ahead or would need to be altered.</td>
<td>Follow correct procedures to obtain the Building Consent.</td>
</tr>
<tr>
<td>Project to come in over budgeted cost</td>
<td>Moderate</td>
<td>Project could not be completed or additional funds will be needed.</td>
<td>Obtain fixed pricing before starting. Allow for a 5% contingency fund.</td>
</tr>
</tbody>
</table>

8. ALTERNATIVES

There are no other cost effective alternatives available.

9. CONSENTS

A building consent is to be obtained from the Christchurch City Council.

An Asbestos Refurbishment Survey is to be obtained before any works start and if asbestos is identified within the area to be renovated it will be removed by a suitably qualified and licenced contractor as per Scouts Asbestos Management Plan.

10. ALIGNMENT TO BETTER PREPARED

This project aligns with the Scouts Better Prepared Strategy. The proposed upgrade will allow for growth, higher quality programs and ensure the safety of all members.

11. RULE BOOK IMPLICATIONS

There are no Rule Book implications arising from this Business Case.

12. GENDER AND DISABILITY IMPLICATIONS

The Mount Pleasant Sea Scout Group are committed to providing equal opportunities and welcome membership to all.
## Profit & Loss

Scouting NZ - Mt Pleasant Scout Group
For The Year Ended 30 Sep 2018

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Donations</td>
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<tr>
<td>Fundraising for Jamboree</td>
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<tr>
<td>Levies</td>
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<td>Marquee Hire</td>
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<td>$543.83</td>
<td>$362.59</td>
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<tr>
<td><strong>Total Income</strong></td>
<td>$18,660.34</td>
<td>$35,156.44</td>
<td>$12,831.62</td>
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<tr>
<td><strong>Less Cost of Sales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities expenses (Jamboree)</td>
<td>$0.00</td>
<td>$22,232.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Total Cost of Sales</strong></td>
<td>$0.00</td>
<td>$22,232.00</td>
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</tr>
<tr>
<td><strong>Gross Profit</strong></td>
<td>$18,660.34</td>
<td>$12,902.96</td>
<td>$12,831.62</td>
</tr>
<tr>
<td><strong>Plus Other Income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest Received</td>
<td>$448.81</td>
<td>$544.11</td>
<td>$639.49</td>
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<tr>
<td>Other Income</td>
<td>$0.00</td>
<td>$152.23</td>
<td>$6.00</td>
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<tr>
<td><strong>Total Other Income</strong></td>
<td>$448.81</td>
<td>$696.34</td>
<td>$645.49</td>
</tr>
<tr>
<td><strong>Less Operating Expenses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration Expenses</td>
<td>$715.65</td>
<td>$20.95</td>
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<tr>
<td>Badges, scarves &amp; knives</td>
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<td>$1,595.17</td>
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<tr>
<td>Fuel &amp; RUC</td>
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<td>Gas</td>
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<tr>
<td>General Expenses</td>
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<td>$428.44</td>
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<tr>
<td>Group Leader Funds</td>
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<tr>
<td>Insurance</td>
<td>$2,237.73</td>
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<td>Levies - Scout Assn</td>
<td>$6,227.61</td>
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<td>Levies - Zone</td>
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<td>Maintenance - Den</td>
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<td>Maintenance - Equipment</td>
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<td>Maintenance - Vehicles</td>
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<td>Membership and Subscriptions</td>
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<td>$52.17</td>
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<td>Power</td>
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<td>Small Equipment Purchases</td>
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<tr>
<td>Travel (National)</td>
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<td>Xero Fees</td>
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<td><strong>Total Operating Expenses</strong></td>
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<td><strong>Operating Profit / Loss</strong></td>
<td>$1,092.36</td>
<td>$1,084.17</td>
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</table>

**Non-operating Expenses**

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Expenses - Cubs</td>
<td>$374.76</td>
<td>$151.70</td>
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<td>Annual Expenses - Keas</td>
<td>$10.00</td>
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<tr>
<td>Annual Expenses - Scouts</td>
<td>$12.13</td>
<td>$172.79</td>
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<td><strong>Total Non-operating Expenses</strong></td>
<td>$396.90</td>
<td>$324.49</td>
<td>$1,320.55</td>
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<tr>
<td><strong>Surplus / Deficit</strong></td>
<td>$695.47</td>
<td>$759.68</td>
<td>$2,660.14</td>
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## Balance Sheet

**Scouting NZ - Mt Pleasant Scout Group**  
**As at 30 September 2018**

### Assets

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank</td>
<td>$182.44</td>
<td>$54.90</td>
<td>$135.29</td>
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<tr>
<td>Westpac - Cube Account</td>
<td>$3,745.74</td>
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<tr>
<td>Westpac - Group Cheque Account</td>
<td>$502.97</td>
<td>$365.31</td>
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<td>Westpac - Group Leader Account</td>
<td>$5,639.31</td>
<td>$5,034.28</td>
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<tr>
<td>Westpac - On Line Saver</td>
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<tr>
<td>Westpac - Scouts Account</td>
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<td>$13,382.54</td>
<td>$17,847.58</td>
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<tr>
<td>Westpac - Term Investment</td>
<td>$21.39</td>
<td>$21.39</td>
<td>$431.39</td>
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<td>Westpac - Ventures Account</td>
<td>$24,490.26</td>
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<tr>
<td><strong>Total Bank</strong></td>
<td><strong>$24,490.26</strong></td>
<td><strong>$22,772.46</strong></td>
<td><strong>$25,919.97</strong></td>
</tr>
<tr>
<td>Current Assets</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Accounts Receivable</td>
<td>$134.64</td>
<td>$329.37</td>
<td>$0.00</td>
</tr>
<tr>
<td>Debtors - Levies</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td><strong>$134.64</strong></td>
<td><strong>$329.37</strong></td>
<td><strong>$0.00</strong></td>
</tr>
<tr>
<td>Fixed Assets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant &amp; Equipment</td>
<td>$210,607.75</td>
<td>$210,607.75</td>
<td>$207,247.87</td>
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<tr>
<td><strong>Total Fixed Assets</strong></td>
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<td><strong>$210,607.75</strong></td>
<td><strong>$207,247.87</strong></td>
</tr>
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<td><strong>Total Assets</strong></td>
<td><strong>$235,232.65</strong></td>
<td><strong>$233,709.80</strong></td>
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### Liabilities

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Liabilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>$1,895.76</td>
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<tr>
<td>GST Received</td>
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<td>Jamboree Deposits Held</td>
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<tr>
<td>Levies paid in advance</td>
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<tr>
<td><strong>Total Current Liabilities</strong></td>
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<td><strong>Total Liabilities</strong></td>
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<td><strong>Net Assets</strong></td>
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<td><strong>$232,554.79</strong></td>
<td><strong>$231,794.89</strong></td>
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</table>

### Equity

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Year Earnings</td>
<td>$695.47</td>
<td>$705.68</td>
<td>-$2,660.14</td>
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<tr>
<td>Retained Earnings</td>
<td>$232,554.57</td>
<td>$231,794.89</td>
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<td><strong>Total Equity</strong></td>
<td><strong>$233,250.04</strong></td>
<td><strong>$232,554.79</strong></td>
<td><strong>$231,794.89</strong></td>
</tr>
</tbody>
</table>
16. Christchurch Northern Corridor Downstream Effects Mitigation Plan (Draft)

Reference: 19/117250
Presenter(s): Andy Richards, Project Manager - Transport

1. Staff Recommendations

That the Waikura/Linwood-Central-Heathcote Community Board recommend to Council to:

1. Receive the Draft Downstream Effects Management Plan for staff to commence engagement with the community on the recommendations contained within the draft plan.

2. Linwood-Central-Heathcote Community Board Recommendation to Council

Part A

That the Council:

1. Receive the Draft Downstream Effects Management Plan for staff to commence engagement with the community on the recommendations contained within the draft plan.

Attachments

<table>
<thead>
<tr>
<th>No.</th>
<th>Report Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Christchurch Northern Corridor Downstream Effects Mitigation Plan (Draft)</td>
<td>110</td>
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<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Downstream Effects Management Plan Draft</td>
<td>112</td>
</tr>
</tbody>
</table>
1. **Purpose and Origin of Report**

   **Purpose of Report**
   1.1 The purpose of this report is to request the Waikura/Linwood-Central-Heathcote Community Board recommend to Council the endorsement of the Draft Downstream Effects Management Plan and for staff to undertake consultation on the recommendations contained within the plan.

   **Origin of Report**
   1.2 This report is staff generated following initial engagement with the community and completion of a draft plan suitable for consultation.
   1.3 This report was presented to the Waipapa/Papanui-Innes Community Board on 25 January 2019 and they resolved:

   “That the Waipapa/Papanui-Innes Community Board:
   That the Council:
   2. Receives the Draft Downstream Effects Management Plan for staff to commence engagement with the community on the recommendations contained within the plan.”

2. **Significance**

   2.1 The decision in this report is of high significance in relation to the Christchurch City Council’s Significance and Engagement Policy.

   2.1.1 The level of significance was determined by the number of people affected, both directly and indirectly, and the high level of community interest. This preparation of the Downstream Effects Management Plan is also a condition of an Environment Court ruling in 2016.

3. **Staff Recommendations**

   That the Waikura/Linwood-Central-Heathcote Community Board recommend to Council to:

   1. Receive the Draft Downstream Effects Management Plan for staff to commence engagement with the community on the recommendations contained within the draft plan.

4. **Key Points**

   4.1 Under the conditions for the relevant Consent Order, Christchurch City Council is required to:

   4.1.1 Address the downstream effects relating to traffic arising from the operation of the Christchurch Northern Corridor.

   4.1.2 Engage an Independent Traffic Expert to recommend appropriate traffic mitigation measures in the form of a Management Plan

   4.1.3 Engage with affected owners and occupiers (as identified in the Plan) and specified persons/groups regarding the Independents Expert’s recommendations
4.1.4 Carry out ongoing monitoring and identify the anticipated future increase in traffic as a result of the Christchurch Northern Corridor.

4.1.5 Carry out any recommended traffic mitigation measures if traffic volumes are anticipated to increase by over 30% on any street. Council will need to implement mitigation measures as soon as reasonably practicable and in accordance with the timeframes required by the Consent.

4.2 At the request of the Independent Traffic Expert Council staff have completed a first phase of community engagement to understand community concerns about expected increased traffic growth and potential traffic mitigation measures. The findings from this engagement have fed into the attached draft Downstream Effects Mitigation Plan that has been prepared by the Independent Traffic Expert.

Attachments

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Downstream Effects Management Plan Draft</td>
<td></td>
</tr>
</tbody>
</table>

Confirmation of Statutory Compliance

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:

(i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and

(ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council’s significance and engagement policy.

Signatories

<table>
<thead>
<tr>
<th>Authors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Andy Richards - Project Manager</td>
<td>Ann Campbell - Senior Engagement Advisor</td>
</tr>
<tr>
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CHRISTCHURCH NORTHERN CORRIDOR DOWNSTREAM EFFECTS MANAGEMENT PLAN (DEMP)

PREPARED FOR CHRISTCHURCH CITY COUNCIL
October 2018

Stantec
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REVISION SCHEDULE

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Abbreviations

AC  Access to Commercial Centres
AP  Access to Parks
AS  Access to Schools
CAST  Christchurch Assignment and Simulation Traffic
CBD  Central Business District
CnC  Christchurch Northern Corridor
CPTED  Crime Prevention Through Environmental Design
CSU  Cranford Street Upgrade
CTSP  Christchurch Transport Strategic Plan
DEMP  Downstream Effects Management Plan
ECan  Environment Canterbury
HOV  High Occupancy Vehicle
LILO  Left In and Left Out
MCA  Multi Criteria Analysis
MR  Major Roads
NAE  Northern Arterial Extension
NoR  Notice of Requirement
ONRC  One Network Road Classification
QEII  Queen Elizabeth II Drive (State Highway 74)
SANF  Safety Audit and Network Functionality
SC  Safer Cycling routes
SSCA  Safe Speed Community Areas
TC  Traffic Calming
V/C  Volume over road Capacity
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Executive Summary

Introduction
This Plan recommends a programme of work to reduce the downstream effects of the Christchurch Northern Corridor (CNC). It has been compiled to comply with the Notice of Requirement (NoR) ruling for the CNC, an independent traffic expert to develop a Downstream Effects Management Plan (the Plan). Where possible, it has been formulated to be consistent with national, regional, and local transport policy and to address transport concerns raised by stakeholders and the public during consultation. To minimise the impact of improvements on private land, the Plan has focused as far as possible on remedial treatments that can occur within the existing road reserve.

The Plan supports further travel demand management initiatives in northern Christchurch and beyond, to reduce the volume of vehicles with single occupants entering the urban road network. However, the focus of the Plan, as specified in the NoR decision, is to mitigate the impacts of the additional traffic that will enter the local network at Cranford Street. Even if travel demand management measures reduce future traffic volumes, it is expected that most of the additional traffic as estimated from the transport models will still impact on this network and require various interventions.

Issue Identification
As specified in the NoR, the key focus of the Plan is to identify the preferred vehicle access routes for the additional traffic from the CNC, including trucks, that will occur on the downstream road network. To manage this traffic so that it uses the preferred routes and mitigate where possible adverse effects of the additional traffic, especially on local streets. A transport model has been used to assess the routes drivers are likely to take travelling from the CNC into the city centre in 2021 (opening year) and 2031 (design year). This modelling indicates that the preferred traffic routes, the arterials and collector streets, do not have adequate capacity to accommodate all the additional traffic (including trucks) and, without intervention, there would be a lot of rat-running traffic in local streets. The NoR specifies that when the rat-running traffic volumes on these local streets are 30% or greater than what would have been expected had the CNC not been built, then intervention is required to avoid, remedy, or mitigate these effects. The modelling shows that many local streets trigger this 30% increase, especially in 2031, if there is no intervention.

Whether on the main routes or local streets, the additional traffic from the CNC will adversely impact other road users, and specifically pedestrians and cyclists that use the roads affected. Of particular concern is how this traffic will impact on safety and access of less able pedestrians, such as school children, elderly, and those with a disability. The additional traffic will in some cases impact on local residents’ ability to safely access various community facilities (e.g., schools, parks, and commercial centres) and their own properties by walking, cycling, and driving/parking. The Plan has considered how these impacts might be avoided, remedied, or mitigated. In most cases, localised studies have been recommended to look at these matters and develop suitable interventions.

Option Development
Based on an understanding of the likely transport impacts of the additional CNC traffic, two option development stages were undertaken. The first stage of the option development focused on options that would encourage the additional vehicles from the CNC to primarily use arterial and collector routes, and not use local streets. The second stage then considered how the increased safety and access requirements of different road users can be improved on streets with additional traffic flows.

Stage 1: Major Route and Traffic Calming Upgrades
During the first stage of option development both arterial/collector upgrades and traffic calming actions were developed to keep the extra traffic from the CNC on the main routes. In the first assessment, we considered arterial/collector and traffic calming measures on their own. Then, considering several options that looked at a combination of arterial upgrades and traffic calming measures, the arterial/collector road improvements were developed to address capacity constraints that were identified along these routes: both midblock and at intersections, using local experience and the transport modelling. The traffic calming measures were developed for local streets that are expected to have a significant amount of rat-running traffic (defined as greater than 30% increase in traffic) with or without arterial/collector upgrades. The full list of major upgrades considered are presented below.
• Do Nothing – this results in rat-running on a lot of local streets
• Option 1. Traffic Calming Only
• Option 2. Arterial Upgrades Only. This included three-laning of Barbadoes Street and Madras (Forfar) Street, Cranford Street Clearways and Berwick Street / Warrington Street capacity improvements.
• Option 3 (a). Traffic Calming and Arterial Upgrades. Arterial upgrades as per Option 2 except clearways on Barbadoes Street and Madras (Forfar) Street instead of permanent three-laning.
• Option 3 (b). Traffic Calming and Arterial Upgrades. Arterial upgrades as per Option 2, so permanent three-laning of Barbadoes and Madras (Forfar) Streets.
• Option 3 (c). Traffic Calming and Arterial Upgrades. Arterial upgrades as per Option 2 except extension of Barbadoes / Madras one-ways to Warrington Street.
• Option 4 (a). Traffic Calming and Clearways on Cranford / Sherborne Streets from Innes Road to Bealey Avenue.
• Option 4 (b). Traffic Calming and permanent four-laning on Cranford / Sherborne Street (option included to allow comparison of options with a more major upgrade of arterial roads).
• Option 5. Traffic Calming plus combined Arterial Options (Options 3(a) and 4(a)).

The analysis of these options was undertaken using the CAST (Christchurch Assignment and Simulation Traffic) transport model. This model indicated how successful the options were in keeping traffic on the main routes and discouraging rat-running in local streets.

A multi-criteria analysis (MCA) workshop was then undertaken of each option to determine the best performing options. This involved a number of transport specialists and an urban designer. The MCA looked at a number of factors, including impact on safety of different road users, whether the options met the objectives of the MoT, journey time benefits, timeframe to implement, construction costs, impacts on local businesses, social and amenity impacts, and environmental impacts. The workshop participants, including the independent traffic expert, agreed the criterion and the weighting of each criterion and discussed and assessed the various options. The highest weighting went on community impacts (the last three criteria above). Journey time benefits only had a 10% weighting. The best performing options in order were 3 (c), 4(a) and 3 (a).

All three options have very similar upgrades on Cranford Street north of Berwick Street and along Berwick Street and Warrington Streets. They differ in the improvements south of Berwick Street on Cranford/Sherborne Streets, Forfar/Madras Streets and Barbadoes Street. Hence the Plan recommends that the improvements along Berwick and Warrington Streets and Cranford Street north are progressed to scheme design and the three options south of Berwick Street are further investigated and presented to the community for input before deciding on a preferred southern option (see Table 1 below). In addition to infrastructure changes, education, and enforcement aspects of the improvements, especially the peak period clearways, needs to be investigated and implemented.

A list of routes that are expected to require traffic calming has also been developed, based on the transport modelling. Careful monitoring of traffic volumes on local streets is required between 2020 and 2031 to assess the benefits of traffic calming measures and any streets that are adversely impacted by rat-running traffic as a result of drivers selecting alternative rat-running routes. Nine safe speed community areas are also proposed in the wider St Albans network to discourage rat-running.

**Stage 2: Safe Access to Community Facilities**

During the second option development phase, the impacts the additional traffic would have on all road users was considered, specifically those who live in or near the impacted road network and their ability to safely access various destinations within the local road network. The project has been split up into:

1. Safe access to School
2. Safer Cycling
3. Access to Parks
4. Access to Commercial Centres
Most of the issues raised by the public and stakeholders fit into one of these categories. One specific matter that does not is safe access into properties on arterial and collector roads with peak period clearways, like Cranford Street. The identification of issues with access and possible solutions to improve access will need to be assessed as part of the implementation of the clearways.

The key issues in terms of safe access to schools is access across Cranford Street for children walking to and from St Albans School. The children primarily use the Cranford Street / Westminster Street signalised intersection to access the school, but some also use the Berwick Street / Cranford Street signalised intersection. Due to several close (crash) misses, the school currently employs a cross warden at the Cranford Street / Westminster Street intersection to help children cross the road. With the proposed upgrades of this intersection (also Berwick Street / Cranford Street) the potential for a crash will increase if no safety improvements are made. As an interim measure it is proposed to lower the speed limit to 40km/h from north of Westminster Street to south of Berwick Street during school start and finish times, install a textured surface at the Westminster Street intersection and look at changes to the signals before the CNC opens. Further improvements need to be investigated and implemented within 3 years of the CNC opening.

The introduction of peak period clearways along Cranford Street down to Berwick Street and possibly other clearways further south makes such routes less safe for cycling, especially during the peak periods. It is not possible to rectify this without widening the road designation and purchasing additional land. Hence the recommended option is to direct cyclists onto other routes. The general increase in traffic across the network will also make it less safe to cycle on a number of other roads (e.g. Edgewater Road) without improved cycle facilities. To encourage local people to cycle and to direct them to use the Papanui Parallel cycleway (a separated north-south cycle path) on Rutherford Street, Trafalgar Street, and Colombo Street, it is proposed to develop three east-west secondary cycle routes (along McFaddens Road, Westminster / Courtenay Streets and Edgewater Road). These will be feeder routes to the Papanui Parallel and will be a combination of on-road cycle lanes and off-road paths. It is also proposed that a secondary north-south cycle route be provided on the eastern side of Cranford Street to link cyclists that have origins and destinations on the eastern side of the main route to the city centre and St Albans Park.

The additional traffic generated by the CNC will also increase traffic volumes around St Albans Park, and to a lesser degree around Malvern Park. The three main roads around St Albans Park: Barbados Street, Farlar Street and Warrington Street, will have increased traffic flows making it more difficult to access the Park. The proposed traffic signals at Farlar Street / Warrington Street and Barbados Street / Warrington Street and the proposed new north-south cycleway to the east of Cranford Street will improve access to the north of the park. However, there are still challenges for pedestrians wanting to cross Farlar Street and Barbados Street further south. There have been a number of vulnerable road user crashes at the northern end of Barbados Street and the additional traffic from the CNC will exacerbate existing access issues. Hence, a study is proposed to look at access and safety issues for St Albans Park (and Malvern Park) and develop options to make access safer.

Local residents also need to have safe access to their local (shopping and eating) commercial centres. Christchurch City Council are keen to see local centres become more vibrant and for locals to walk and cycle to these centres. Access to these centres by vehicle, along with parking, is also needed for some trips, especially those made by less able-bodied residents. A neighbourhood improvement plan has already been developed for the Edgewater Village and so a new plan for that centre is not proposed, although improvement options for cycling and walking along Edgewater Road will need to be integrated into that plan. It is recommended that transport studies be undertaken for the four local activity centres impacted by the CNC traffic: the Westminster Street / Cranford Street, Warrington Street / Barbados Street, Edgewater Street / Barbados Street and Rutherford Street activity centres. Corridor assessments along Edgewater Road and Westminster / Courtenay Streets are also required to look at enhancing access and amenity for pedestrians of all abilities. The improvements that are recommended in these studies should be implemented to offset the access and safety consequences of the additional traffic.

The key outcomes that are desired from all the proposed studies and improvements is a network of roads that are safer and ‘healthier’, even with the increased traffic volumes. Hence it is important that all designs go through a road safety and healthy streets review in order to maximise the benefits of such improvements. With respect to safety, in addition to traditional safety audits, it is recommended that all designs are assessed using the Austroads safe system assessment framework which targets crash risk that could lead to serious injury and fatal crashes. To achieve healthier streets, it is recommended that all street upgrades are assessed using the Healthy Streets framework that has been developed by Transport for London.
The Downstream Effects Management Plan

Table 1 shows a summary of the studies and improvement options that are proposed to avoid, remedy, or mitigate the impacts of the CNC. This is based on analysis and review of the transport issues using modelling and experience. A key element of the Plan is the ongoing monitoring of the transport flows (including pedestrian and cycle volumes), vehicles speeds, and environmental impacts (vehicle emissions, noise and vibration). Of particular importance will be how traffic flows through the downstream road network in the years following the opening of the CNC. While arterial and collector upgrades and traffic calming measures will be introduced to encourage drivers to use the major roads, it is highly likely that some drivers will choose to use local streets as rat-runs, and that they may behave in ways not predicted by the transport models. Hence the monitoring will identify issues that may require other changes to the road network such as traffic calming of additional streets and upgrades of signalised intersections. The monitoring is expected to have the greatest impact on the composition of the Stage 3 projects.

While ideally some of the Stage 2 projects are undertaken before the CNC opens, there is limited time to make all the changes and hence the most crucial changes to prevent excessive congestion and rat-running have been prioritised in Stage 1 (to be in place ideally before CNC opens), with other projects delayed. The impact of this maybe adverse transport effects in the short-term. Hence it is important that Council acts quickly to address the worst of any adverse transport effects (e.g. high levels of rat-running) once the CNC opens. We would recommend rapid implementation of projects, where this is practical, and other temporary measures to address the effects that are identified in the monitoring.

Table 1 – Lists of improvement projects and studies categorised by Stage (note some projects appear in two or more stages as they consist of more detailed studies and the implementation of improvements)

<table>
<thead>
<tr>
<th>Stage 1 – Projects and studies to be undertaken before the CNC opens</th>
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<tr>
<td>Major Road (MR) Upgrades:</td>
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<tr>
<td>MR1 (Cranford Street Clearways) – Peak Period Clearways along Cranford Street from Innes Road to Berwick Street.</td>
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<tr>
<td>MR2 (Westminster/Cranford Intersection) – Upgrades to Westminster Street/Cranford Street Intersections.</td>
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<tr>
<td>MR3 (Berwick/Warrington Upgrades) – Upgrading of Berwick Street/Cranford Street signalised intersection and signalisation of the Forfar Street/Warrington Street and Barbaras Street/Warrington Street intersections.</td>
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<td>MR4 (South Berwick Upgrades) – Downstream of Berwick Street arterial upgrade option that comes out of the scoping study.</td>
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<tr>
<td>MR5 (HOV lanes on Cranford-Sherborne) – Investigate extending the southern HOV (High occupancy vehicle) lanes on the CNC through to Beahey Avenue and installing a northbound HOV lane.</td>
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<td>Safe System Community Areas (SSCA):</td>
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<td>SSCA 1 to 9 – Introduce nine 30km/h (or 40km/h) reduced speed limit areas through the downstream local road network.</td>
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<td>Traffic Calming (TC) Measures:</td>
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<td>Introduce traffic calming on TC1 – Mersey Street (Innes to Forfar), TC2 – Knowles Street, TC 3 – Weston Street, TC 4 – McFaddens Road, TC7 – Malvern Street (Lillo) and TC8 – Dee Street (Lillo).</td>
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<td>Safe Access to Schools (AS):</td>
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<tr>
<td>AS1 – Safe Access Across Cranford Street – This study will look at a range of options, including a new mid-block signalised crossing across Cranford Street near the English Park Carpark entrance.</td>
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<tr>
<td>AS2 – Interim Improvements on Cranford Street – As an interim measure it is suggested that as part of MR1 (Cranford Clearways) and MR2 (Westminster Street/Cranford Street Intersection) a 40km/h speed limit be introduced during school arrival and departure time on Cranford Street from approximately 50m north of Westminster Street to 50m south of Berwick Street, a coloured surfacing be installed at the Westminster Street/Cranford Street intersection, and left turning red arrows be used as protection for crossing pedestrians.</td>
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Safe Cycling Routes (SC):

SC1 (Cycle Wayfinding Signage) – Development of and implementation of a wayfinding signage plan that directs cyclists at the northern end of Cranford Street (at McFaddens Road) and southern end of Cranford Street to safer cycling routes.

SC2 (McFaddens Road Secondary Cycle Corridor) – Undertake a route study of a cycling route both west (towards the Papuanui Parade) and east (towards new north south route) on McFaddens Road.

SC3 (Westminster/ Courtenay Secondary Cycle Corridor) – Undertake a route study of a cycling route both west and east of Cranford Street.

SC4 (Edgware Road Secondary Cycle Corridor) – Undertake a route study of a cycling route both west and east of Cranford Street.

SC5 (North-South Secondary Cycle Corridor) – Undertake a route study of an alternative north-south cycle route through traffic calmed streets to the east of Cranford Street.

Stage 2 – Projects and Studies that need to be undertaken within three years of CNC opening

Traffic Calming (TC) Measures:

Introduce traffic calming on TC9 – Roosevelt Street, TC12 – Caledonian Street, TC13 – Edgware Road (Village), TC14 – Manchester Street and TC15 – Westminster Street / Courtenay Street, where expected increases in traffic volumes are validated by the monitoring data.

Safe Access to Schools (AS):

AS1 – Safe Access Across Cranford Street – Implement any options identified in this study such as a new mid-block signalised crossing across Cranford Street near the English Park Carpark entrance.

Safe Cycling Routes (SC):

SC2 (McFaddens Road Secondary Cycle Corridor) – Construct a secondary cycling route both west (towards the Papuanui Parade) and east (towards new north south route) on McFaddens Road.

SC3 (Westminster/ Courtenay Secondary Cycle Corridor) – Construct a secondary cycling route both west and east of Cranford Street.

SC4 (Edgware Road Secondary Cycle Corridor) – Construct a secondary cycling route both west and east of Cranford Street.

Access to Parks (AP):

AP1 (St Albans Park Access Plan) – Development of a plan that will look at access to the park by pedestrians (of different abilities), cyclists, and motorists.

AP2 (Malvern/ Rugby Park Access Plan) – Development of a plan that will look at access to the park by pedestrians (of different abilities), cyclists, and motorists.

Access to Commercial Centres (AC):

AC1 – Westminster/ Cranford Local Activity Centre Transport Study. Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC2 – Barbadoes/ Warrington Local Activity Centre Transport Study. Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC3 – Barbadoes/ Edgware Local Activity Centre Transport Study. Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC3 – Ruland Street Local Activity Centre Transport Study. Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC4 – Westminster/ Courtenay Corridor Study (Rulfand to Fofar) – Undertake this study which will focus on safe access by pedestrians along the route and crossing the route especially for vulnerable road users.

AC5 – Edgware Corridor Study (Springfield to Barbadoes) – Undertake this study which will focus on safe access by pedestrians along the route and crossing the route especially for vulnerable road users.

Stage 3 – Projects that could be undertaken any time between the opening of the CNC and 2031
Monitoring

Ongoing monitoring of traffic, pedestrians, and cycle volumes, crashes and vehicles speeds, emissions, noise, and vibration on major roads and some local streets is to occur annually, or when required more often, after the CNC opens to validate the plans and projects already identified in this document, and through the various studies that are specified.

It is expected that additional interventions will be required to avoid, remedy, or mitigate the effects of the additional CNC traffic, including the impact of trucks, that is identified in this monitoring. In terms of local streets, intervention is required if the traffic volumes increase by 30% above what might have been expected on the route if the CNC had not been built, in terms of other interventions (e.g. arterial upgrades) this will be the result of congestion or safety concerns with respect to all road users. Some improvement may also not be required (e.g. if local road traffic does not increase by 30%, as predicted by the modelling). Consultation on all proposed changes will be undertaken.

An indication of Stage 3 improvement projects is provided below. This list will need to be reviewed and where necessary revised once the actual impacts of the CNC traffic is known from the monitoring.

Traffic Calming (TC) Measures:

Introduce traffic calming only where monitoring indicates high levels of rat-running are occurring (may include additional streets): TC = S McFadden Road, Knowles Street, Weston Street (east Cranford), TC6 = Jameson Street, TC10 = Forfar Street, TC11 = Flockton Street, TC14 = Severn Street, TC17 = Thames Street, TC 18 = Aylesford Street, TC19 = Kensington Avenue, TC 20 – Philpotts Road and TC 21- Francis Street.

Safe Cycling Routes (SC):

SC5 (North-South Secondary Cycle Corridor) – Construct an alternative north-south cycle route through traffic calmed streets to the east of Cranford Street.

Access to Parks (AP):

AP1 (St Albans Park Access Plan) – Implementation of the access plan as required to address access issues.

AP2 (Malvern/Rugby Park Access Plan) – Implementation of the access plan as required to address access issues.

Access to Commercial Centres (AC):

AC1 – Westminster/Cranford Local Activity Centre Transport Study. Implement study recommendations
AC2 – Barbadoes/Warrington Local Activity Centre Transport Study. Implement study recommendations.
AC3 – Barbadoes/Edge ware Local Activity Centre Transport Study. Implement study recommendations.
AC3 – Rutland Street Local Activity Centre Transport Study. Implement study recommendations.
AC4 – Westminster/Courtenay Corridor Study (Rutland to Forfar) – Implement study recommendations.
AC5 – Edgeware Corridor Study (Springfield to Barbadoes) – Implement study recommendations.
1. Introduction and Background

Planning for a new arterial route from the Christchurch CBD (Four Avenues) to the northern suburbs of Christchurch and beyond has been ongoing for many decades. Over the last decade a preferred route has been identified and designed for the northern section of this route. This preferred route is called the Christchurch Northern Corridor (CNC) which, at the time of this report, is under construction with a planned completion date of mid-2020. The CNC will increase traffic volumes on the urban road network south of the project. The Downstream Effects Management Plan (the Plan) considers the impact of this additional traffic and what changes are required to the network to minimise the impact of this additional traffic travelling from the CNC through to the CBD. The Plan has been compiled to satisfy the requirements of the Notice of Requirement (NOR) ruling for the CNC (Appendix A). The rest of this introduction provides background and history of the CNC (decades of transport planning on a northern route) that helps set the context of the Plan.

1.1 Christchurch Northern Corridor and Requirement for a Downstream Effects Management Plan

The Christchurch Northern Corridor (CNC) project is an alliance project currently being undertaken by the New Zealand Transport Agency (NZ Transport Agency), and Christchurch City Council. As part of this project a new four-lane motorway will connect SH1 from just south of the Waimakariri Bridge with Cranford Street about 500m north of the McFaddens Road / Cranford Street Intersection (see Figure 1-1). The project also includes new pedestrian and cycle facilities.

![Image of Christchurch Northern Corridor]

Figure 1-1: Christchurch Northern Corridor (Source: https://www.nztas.govt.nz/assets/projects/christchurch-northern-corridor/CNC-MAP-Poster.pdf)

A section of Cranford Street (the southern end of the CNC) will also increase from a two-lane road to four-lanes with a median. As part of this project the Innes Road / Cranford Street intersection will also be subject to works to enlarge its capacity. A representation of these changes, including active mode provisions, are shown in Appendix B.

In July 2015 Independent Hearings Commissioners heard the designation case for the CNC. The designation was approved subject to a number of conditions. A major concern raised by submitters was the downstream effects of the CNC, especially on local roads within St Albans and adjoining suburbs. To address this concern a condition was added that required Christchurch City Council to engage a suitably qualified independent traffic expert who would produce a Downstream* Effects Management Plan. Dr Shane Turner of Stantec was appointed to this role.

The Plan is the outcome of investigations on likely downstream effects of the CNC and recommends works that could be undertaken to address those effects. Given the uncertainty around the effects, which are

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1 Refer to Section 4.1.2.1
2 Information on this project can be found at https://www.nztas.govt.nz/projects/christchurch-motorways/christchurch-northern-corridor/
3 https://www.nztas.govt.nz/projects/christchurch-motorways/christchurch-northern-corridor/maps/1
4 Downstream as defined by the Notice of Requirement means south of the Innes Road / Cranford Street intersection. For the purposes of the DSM it “south” of the CNC has been interpreted as including local and collector roads between Innes and McFaddens due to the interconnectivity of the local road network.
based on land use estimates and expected driver behaviour, a key aspect of the Plan is the monitoring of transport effects once the CNC opens, and comparing these with conditions prior to the CNC (minus expected network growth without the CNC). However, given the increase in traffic volume from day 1 some improvements do need to be in place before the CNC is opened (expected to be in 2020).

1.2 History of the Christchurch Northern Arterial (now CNC)

Various traffic corridor plans have been conceived in planning for Christchurch since the 1950s. In 1962 the Christchurch Regional Planning Authority proposed the Northern Arterial Concept Route: roughly following the path of the current Northern Arterial however extending further south through St Alans. During the 2nd review of the plans the corridor was changed so that new arterial would extend to Bealey Avenue where it would connect with the one-way pair: Barbadoes and Madras Street. In 1989 the Northern Arterial Designation was narrowed in width at the Redwood/Belfast portion. Later, the St Alans portion of the designation was removed from the Christchurch City District Scheme. The following excerpt is taken from Christchurch City Centre – 40 years of Change, and it explains some of the reasons why the network has been developed the way it has in Northern Christchurch:

"During the 1980s...the Christchurch City Council made successive reductions to the proposed road network in suburban areas. These changes were in response to a combination of other factors including: slower population growth, economic downturn – less central employment, limited funding based on benefit/cost ratios, community acceptance of greater congestion, increasing opposition from affected residents, councillor opposition in the 70s and 80s. Subsequently in the agreed 1989 regional plan the road network and hierarchy of roads were generally retained but the motorways were deferred still further on the assumption that the arterial “at-grade” road network would suffice. This policy, together with the reliance on benefit/cost for national funding, supported the ongoing construction of major arterial all-purpose roads in the suburbs.” (Christchurch City Centre – 40 Years of Change, Traffic, Planning – 1959–1999, Malcolm Douglass, Christchurch City Council, 2000 (p11)).

Clearly, there has been much discussion and investigation on the north–south transport connections in Northern Christchurch for at least the last 50–60 years. During that time larger motorway connections (passing through urban Christchurch) have been considered, planned, and eventually withdrawn. The history of these decisions has been important in the preparation of the Plan as it is not intended to re-litigate or reconsider past discarded options, or options of a similar nature and scale, which have shown to be out of favour.

Given the history and strong views of the local community, the Plan is focused on using existing roads to carry the additional traffic associated with the CNC. It also seeks to minimise the impact of any upgrades on private property and especially building structures within the urban area. Hence wherever possible the focus is on remaining within current road reserves.

An important part of the Plan is understanding the impact that the additional CNC traffic could have on the local community, and how this can be avoided, remedied or mitigated. This includes minimising the impact of the additional CNC traffic on safe access to parks, schools, businesses and housing. It is also important that the future transport network supports transport choice, and in particular walking, cycling, and public transport. A legacy of the Plan should also be improvements in amenity and urban design to streets within the community.

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2. Report Structure

The report begins (Section 3) by summing up the various national, regional, and local transport planning strategies that have been agreed and outlines the current road network and operating conditions for different road users, including any existing road safety issues.

The report then outlines the purpose and objectives of the study and the methodology that has been adopted to undertake the transport assessment (Section 4). It also specifies the 'balanced' transport planning approach that we have attempted to undertake that looks to minimise the impact of the additional traffic on local streets, but also provide for, and encourages, greater use of other transport modes, or at the very least, higher occupancy rates in motor vehicles.

Section 5 discusses the transport modelling that has been undertaken to understand the likely impacts of the additional traffic from CNC (currently expected to open in mid-2020) on the downstream road network in 2021 (represents opening year) and 2031 (design year) if no changes are made. The modelling assesses the impacts of the CNC against what is expected in terms of traffic growth on the wider network if the CNC was not built.

The consultation undertaken with stakeholders and the public is summarised in Section 6. Wherever possible the concerns raised by the public and various organisations have been addressed in the option development. However, not all issues raised can be addressed, as many fall outside the scope of this assessment, or are in conflict with other issues and options raised.

The option development phase is presented in Section 7. The first iteration of the option development focused on the local streets that had greater than a 30% increase in traffic and also capacity constraints on the urban arterials/collector network. The focus of this level being to minimise the number of local streets impacted by a combination of arterials/collector road upgrades (the corridor) and local road traffic calming and speed limit reductions (the stick). The second iteration of the option development looks at options to minimise the impact of the additional traffic on safe access to schools, safe cycling through the network, access to parks, and access to local and neighbourhood activity/community centres.

Section 8 and 9 present the recommended downstream improvement plan. It highlights improvements that need to be undertaken before the opening of the CNC to address impacts associated with the sudden increase in traffic as a result of the CNC opening. It then outlines improvements that should be undertaken shortly after the opening and through to approximately ten years after the opening (up to design year 2031). The Plan has a strong monitoring focus to assess the impact of traffic growth between opening and 2031. The timing of upgrades beyond the opening will be tied to the impacts observed in the monitoring. Some upgrade projects may be delayed, and other projects brought forward depending on the monitoring outcomes, and new projects may be identified based on traffic effects not predicted in the modelling (e.g. local street realignment).
3. Background Review

This section outlines briefly the key national, regional, and local transport strategies that have been agreed by various organisations for transport planning activities within Christchurch. It then provides an overview of the existing transport network and how this operates. This includes bus and cycling routes, and road safety issues. There are a number of existing transport issues on the current road network but only some of these issues will be impacted by the CNC traffic, and need to be addressed in the Plan. More information on these issues is presented in Section 6.

3.1 National, Regional, and Local Strategies

Various national, regional, and local strategies exist which have guided the direction of the Plan. Their respective relevance to the Plan is that the options need to be conscious of, and aim to satisfy (where possible), the relevant objectives contained in those strategies.

3.1.1 National

The latest Government Policy Statement has four strategic directions: Safety, Access, Environment, and Value for Money. These strategic directions were considered during option conception and in the application of the multi-criteria analysis.

The Safer Journeys Strategy (2010-2020) guides how safety concerns will be addressed in New Zealand over the period 2010-2020*. It outlines the Safe System approach which recognises the vulnerability of road users, and the four pillars of safe roads and roadides, safe speeds, safe vehicles, and safe road use, under which safety is to be addressed. In urban areas the safety of pedestrians (especially vulnerable pedestrians: young; and elderly) and cyclists needs to be considered alongside vehicle safety.

3.1.2 Regional

The Regional Land Transport Plan (2015-2025) outlines five regional objectives: 1) A land transport network that addresses current and future transport demand, 2) A land transport system that is increasing free from death and serious injury, 3) The Canterbury earthquakes recovery is supported, 4) The land transport network is resilient and supports long term sustainability, and 5) Investment in land transport infrastructure and services is efficient.

In addressing the downstream effects, the formation of the Plan has been particularly conscious of regional objectives 1, 2, and 5, as well as long-term sustainability mentioned in objective 4. Resilience was considered as a priority due to the various routes available in Christchurch should, for example, Christchurch becomes temporarily unavailable. It should be noted, however, that any implementation of works must also be conscious of earthquake recovery projects when they occur.

3.1.3 Local

The Christchurch Transport Strategic Plan (CTSP) has four goals: 1) Improve access and choice; 2) Create safe, healthy, and liveable communities; 3) Support economic vitality, and 4) Create opportunities for environmental enhancements. The Plan seeks to align with the CTSP, namely to use the existing road network more efficiently. Therefore, the Plan has concentrated on low impact, at grade, treatments.

The Long-term Plan (LTP) sets out Christchurch City Council’s funding priorities for transport over the next 10 years (2018-2028). Their commitment to the CNC is outlined there, along with other key projects such as Accessible City, Major Cycle Routes, a local cycle network (connecting to major cycle routes), pedestrian improvements plan, and Public Transport Infrastructure. Achieving mode shift (including better mode choices) is one of the level of service targets for the active transport in the LTP. Indicative funding has also been allocated in the LTP for Downstream Effects Management Plan projects in the period 2018/19 to 2023/24.

* https://www.safepolys.govt.nz/
3.2 Local Network Conditions & Description

This section of the report provides an overview of the existing down-stream urban transport network south of the CNC.

3.2.1 Route and Road User Hierarchy

Streets vary significantly in function. Some are used only for through movements (for example a motorway), while others are mainly used for access (a cul-de-sac). In response to this, the road network is categorised into hierarchy which enables planning and decisions to be made, some of which have wide effects. The route hierarchy in the vicinity of Cranford Street (which is relevant here) is presented in Figure 3.1 from Christchurch City Council’s District Plan. A similar hierarchy is given in the CISP.

![Figure 3.1: Road Hierarchy (source: http://www.ccc.govt.nz/images/DistrictPlanImages/ChchPkt23Transport/Operative/OperativeFig7.17a.jpg (note: some street names added))](attachment:A)

A key objective of the Plan is to keep the majority of vehicles on principal routes (arterials, distributors, and collectors).

Cranford Street from the connection of the CNC to Innes Road is a major arterial, south from there it becomes a minor arterial primarily as it moves through community centres like Westminster Street / Cranford Street, and Edgeware Village. Innes Road and Berwick Street / Warrington Street are also classified as minor arterials. Collector roads in the vicinity of Cranford Street include McFaddens Road, Rutford Street, Westminster Street / Courtenay Street / St Albans Street, Madras Street, and Barbados Street.

Based on this hierarchy the bulk of the north-south traffic from the CNC should be accommodated on Cranford, Berwick, Warrington, Madras, Barbados, and Sheelbome Streets. While Rutford Street and Springfield Road are also collectors, Rutford Street now forms part of a major cycle route and hence it is desirable to keep traffic volumes on Rutford Street at lower levels.

NZ Transport Agency’s One Network Road Classification (ONRC) system also classifies Christchurch’s urban roads. This system shows Madras Street and Barbados Street on an equivalent hierarchy to

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9 Definitions of the respective road hierarchies can be found in the Council’s District Plan
Cranford Street and Sherborne Street (arterials\textsuperscript{11}), and also highlights the importance of Farfar Street, which is classified as a primary collector under the ONRC. Based on ONRC categories the study has assessed using Madras and Barbadoses for carrying additional north—south traffic and Farfar Street carrying more traffic than the majority of local streets in the area.

### 3.2.2 Active Modes and Public Transport

Christchurch City Council have been active in promoting active and public transport modes in the northern suburbs of Christchurch, by identifying and installing infrastructure to support these travel options. Christchurch City Council and Environment Canterbury (ECan) are planning to do more upgrades, and promotion, to support greater use of these modes. We support further initiatives to move people out of cars and into other transport modes.

Christchurch City Council are currently investing in the development of separated cycleways\textsuperscript{12} as part of their Major Cycle Route (MCR) project, which will eventually deliver 13 major cycleways. The Paparua Parallel Cycleway was one of the first to be constructed, and its alignment through the subject area can been seen in Figure 3.2. Further cycleways are planned in the wider area including; the Northern Line, and the cycle trail along the CNC, as well as a network of secondary cycle routes connecting to the major cycleway network\textsuperscript{13}. The CNC cycle trail will eventually allow cyclists to travel from the Waimairi District to the Paparua Parallel and into the city. The CNC also includes a cycle track to the east along QEII Drive. Limited work has been undertaken to date around key secondary cycle route linkages to the Paparua Parallel. We do see the development of such routes being important as traffic volumes grow in this network.

Christchurch City Council have a project to create a link between the CNC and the Paparua Parallel, called the Grassmere Link. Council have allocated funding for this project in the 2020 to 2024 financial years. This project will be delivered as part of the CNC.

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\textsuperscript{11} ONRC divides New Zealand’s roads into categories based on how busy they are, whether they connect to important destinations, or are the only route available. Within this arterial is broadly defined as ‘link regionally significant places and industries’ (Source: [https://www.nzta.govt.nz/assets/Good-Efficiency-Group/docs/ONRCUrgentGuide.pdf](https://www.nzta.govt.nz/assets/Good-Efficiency-Group/docs/ONRCUrgentGuide.pdf))

\textsuperscript{12} [https://www.ccc.govt.nz/assets/Documents/Transport/Cycling/maps/Paparua-Parallel-Cycleway.pdf](https://www.ccc.govt.nz/assets/Documents/Transport/Cycling/maps/Paparua-Parallel-Cycleway.pdf)

Bus routes in the vicinity of Cranford Street are shown in Figure 3.3. The Orange Line bus route is located on Cranford Street. From the Christchurch Northern Corridor connection, the Orange Line continues down Cranford Street as far as Edgeware Road where it moves across to Colombo Street. Other nearby bus routes include '44 Shirley', '100 Wigram/The Palms', the Orbiter which turns right from Innes Road (east) onto Cranford Street under the new route, and the Blue Line which connects Rangiora to Christchurch City Centre via Papanui Road.

ECan has plans to increase the frequency of bus services on the Orange Line on Cranford Street. Further bus priority measures are currently being investigated on Main North Road leading into Papanui Road. One benefit of the CNC is that it is expected to reduce traffic volumes on Main North Road and Papanui Road allowing better bus priority on this corridor.

ECan and NZ Transport Agency have also previously investigated Park and Ride facilities in northern Christchurch. Any facility needs to be located so that it benefits from the bus priority improvements on Main North Road and Papanui Road.

We support citywide initiatives that encourage more trips by bike, public transport, or walking. We also support initiatives to encourage car pooling, including HOV lanes.

### 3.2.3 Existing Traffic Conditions and Crash Analysis

Traffic crash data is available for the network south of the CNC but there are limited traffic counts available for the existing road network. The traffic counts that are available are shown in Appendix C. As part of the monitoring a lot more (baseline) traffic counts are being collected before the CNC opens.

The crash history shows that generally the majority of crashes (in the period 2012-2016) in the downstream network have occurred on higher volume roads such as Cranford Street, Innes Road, and Hills Road. In general, the data aligns with what would be expected relative to a typical network hierarchy; high volumes on arterials and collectors, and a relationship between traffic flow and crash incidence.

Of the death and serious injuries that have occurred during the 2012-2016 timeframe, the majority have involved turning or crossing traffic mainly at intersections. Hence particular attention needs to be given to the design of intersections as traffic volumes increase.

Pedestrian crashes have occurred east of Cranford Street on Innes Road (near school crossing), and also around Edgeware Village and near St Alabans Park. In total there were 11 pedestrian crashes (including one mobility) that occurred in the study area in the period 2012-2016. Of these, two pedestrians were minors, and three were older than 65. The crashes resulted in two Deaths or Serious Injuries (DSI) (only 8% of the DSI) which is lower than the national average of 10%.

There were three recorded bicyclist DSI in the study area (12.5% of the DSI), which is higher than the national average of 6.2% for 2016. Such rates are typical of Christchurch where cycle numbers are higher. Cyclist crashes have generally occurred south of Westminster Street. Cranford Street has experienced a higher amount of motorcycle crashes than most other nearby streets.

Speed has also been a factor. Cranford Street performed relatively well compared with other major roads, except around the Westminster Street / Cranford Street intersection, and immediately south of the Berwick Street / Cranford Street intersection. Locations where speeds were a bigger factor include Barbadoes Street between Edgeware Road and Warrington Street, and Flockton Street. This may be a result of the current wide lanes on those roads and the unsignalised Barbadoes/ Warrington intersection.

More detail on current crash patterns is provided in Appendix C. The pre-CNC crash data will form an important baseline for monitoring the crash impacts on the network following the opening of the CNC.

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4. Purpose of the Plan

4.1 CNC Notice of Requirement (NoR)

The primary purpose of the Plan, as specified in the NoR, is to identify downstream effects (from the southern end of the NAE/CSU) of the CNC and develop a plan that addresses those effects. This requires identifying what needs to happen before the CNC has opened and what level of monitoring and interventions are required to mitigate adverse effects between 2020 (opening year) and 2031 (design year).

4.1.1 NoR Objectives

The objectives of the investigation, as stated in the Notice of Requirement (NoR), into the downstream effects are:

(a) To identify preferred vehicle access routes, particularly for trucks, between the end of the Christchurch Northern Corridor and the Central City (that is between the end of the NAE/CSU and the City centre); and
(b) To identify strategies to keep vehicles on preferred vehicle access routes; and
(c) To discourage vehicles away from public transport routes and walking or cycling routes such as Main North Road / Papanui Road and Ruitland Street corridors respectively.

These objectives are limited in scope and are motor vehicle centric. While objective 3 may consider other modes, it does not cover improved infrastructure over the network for other modes to offset the additional traffic volumes. To be consistent with the various national, regional, and local transport strategies it is important that the Plan developed considers a number of other transport planning matters (e.g., safe access to schools), and especially the impacts of the additional CNC traffic on walking, cycling, and public transport on the downstream road network. Hence the Plan includes improvements that extend beyond these objectives.

4.1.2 NoR Effects Management

The NoR also states that: This Management Plan is to ensure downstream effects are appropriately managed and to:

(a) Assess the existence, nature, and extent of any increased traffic on streets adjacent to, or adjoining, Cranford Street attributable to the NAE/CSU that might cause or contribute to a loss of service to any of these streets for up to 10 years after the opening date of the NAE/CSU;
(b) Implement measures to avoid, remedy or mitigate such effects, where these are more than minor, in a timely and cost-effective manner and where appropriate and practicable; and
(c) Monitor the efficacy of the measures for an appropriate period and implement further remedial action if this is necessary and appropriate.

Here we have taken a broader view on the measures that need to be undertaken to avoid, remedy, or mitigate the traffic effects. It not just being a matter of keeping the traffic on main roads and discouraging them from using local streets and routes currently prioritised for public transport (Main North Road) and cycling (Ruitland Street); but also mitigating the effects on other modes of the increased traffic. For example, the large increase in traffic on Cranford Street will impact 1) on safety of school children crossing the corridor to access St Albans School, 2) cyclists who use Cranford Street and 3) pedestrians and drivers who want to access the Westminister/Cranford local activity centre. Measures to mitigate these three risks have been considered in the Plan.

4.1.2.1 30% Traffic Growth Threshold

It was stipulated in the NoR that in order to be considered for treatment a street must have experienced in excess of 30% increase on the traffic volume that preceded the CNC. Additionally, underlying traffic growth was not to be included. It was also made clear that in the event of a street exceeding the threshold that works did not necessarily need to be undertaken to reduce the traffic volume.

14 NAE refers to ‘Northern Arterial Extension’ (the connection between SH74 and Cranford Street), CSU refers to ‘Cranford Street Upgrade’, both form part of the greater Christchurch Northern Corridor (CNC) project.
This requirement is significantly more complex than it appears. Initially, when the CNC is completed and connected to the existing network, it will be relatively simple to deduce where a 30% increase has occurred exclusive of non-CNC related growth. The complexity of accurately making this calculation will concatenate the longer time passes from 2021.

While this threshold seems relevant for local streets, which carry modest volumes, the same cannot be said of arterial roads and some collector streets. Many of the arterials, and especially some of the intersections, would experience congestion well before they get a 30% increase in traffic. If changes are not made to the arterials to remove severe congestion, then it will be difficult to mitigate the 30% growth in traffic on some local streets. Hence our approach with arterials has been to look at where congestion is expected to occur and look at options to reduce congestion where this does reduce the number of local streets impacted by more than 30% additional traffic.

4.1.2.2 Monitoring the Threshold

The streets that are expected to get a 30% increase in traffic by 2031 or may get an increase (based on local knowledge) will be monitored from 2020 through to 2031. Baseline data for these streets is being collected in 2018. There are some challenges in monitoring local streets as the 30% growth threshold is the additional growth that has occurred beyond what might have been expected from natural traffic growth without the CNC.

There are many societal events which affect the number of trips undertaken on a network, land use changes, economic changes, and political changes to name a few. Given time, changes will occur, and these will need to be updated in a base model. There are also many specific changes that will occur on the network which will also need to be updated within the base model. These changes are relatively simple to take care of in a model. However, a much more difficult undertaking is to uncouple changes made to the downstream network in response to the CNC; changes which affect the traffic volume on various streets (increases and decreases) which may not have been undertaken had the CNC not been constructed, or at least not within the set time span outlined in the NoR. Over time it will become increasingly difficult to separate the impact of these downstream treatments and the CNC itself in terms of their consequence to the network’s performance. Section 8.1 discusses the monitoring method that we suggest being used to monitor traffic volume increases.

It is also proposed to monitor the vehicle emission, noise, and vibration impacts of the additional traffic on arterials and collector routes. This monitoring is in response to concerns raised by the community.

4.2 Methodology

The NoR set the framework for the appointment and methodology of the Plan. Prior to the operating of the CNC, Christchurch City Council were to appoint a suitably qualified independent traffic engineering expert to investigate and design an appropriate methodology. To avoid doubt the NoR stated what was expected to be included in the methodology. The following headings outline the methodology we have adopted to respond to the various elements expected by the NoR.

4.2.1 Identify Affected Streets, specifically those by CNC

Streets affected by the CNC were primarily identified using the CAST Saturn Model. The model outputs highlighted midblock locations that exceeded the 30% growth requirement of the NoR in the AM Peak, PM Peak, and all day. A model was used as the network size is too great to attempt to conceptualise the impact only through the experience of individuals. Notwithstanding, models are limited in their ability to reflect dynamic human choices due to the many variables, and varying importance of variables, that can influence trip distribution; therefore, the streets identified in the model were subjected to community consultation, expert knowledge of the network (and network management in general) and with other experts during the workshop.

The monitoring of streets between 2020 and 2031 will identify the actual streets impacted by the CNC by more than 30%, which may or may not align with that shown in the modelling. The local streets affected by the CNC (from modelling and local knowledge) if any arterial upgrades occur are shown in Section 5.4. The local streets expected to be impacted under the two arterial upgrade options are shown in Section 7.2.4.

4.2.2 Assess Current Vehicle Usage and Service

Various sources were available to assess the baseline traffic volumes for the Plan. The primary source is the CAST transport model. These estimates are included in Appendix D1 and a small number of manual counts (Appendix C). Before the CNC is opened, traffic counts will be collected at over 50 locations in the road network to establish baseline traffic volumes which will be used as part of the ongoing monitoring of each
street in relation to the impact of the CNC. Monitoring screens have been developed and are presented in Appendix E. We are recommending ongoing annual or biannual monitoring of the streets that are expected to carry most of the additional traffic, while other streets only need to be monitored if adverse effects are reported (e.g., increase in rat-running or speeding). These counts will include the proportion of heavy vehicles. Separate baseline intersection counts will also collect pedestrian and bicycle traffic volumes.

4.2.3 Consideration of the Effects of Increased Traffic Flows
The effects on all transport modes as a result of the increased CNC traffic flows have been assessed based on community issues raised during consultation, expert knowledge of the network, and advice from transport engineers and an urban designer during three issue and option development workshops. These methods are limited insofar that they require a reliance on the predicted affected streets from the CASt model, the monitoring programme is therefore required to help ascertain and confirm exactly where and to what level the transport effects actually manifest. This may identify that streets not shown in the transport modelling are impacted.

4.2.4 Recommendation of Appropriate Mitigation Measures
At this stage a workshop process was undertaken with other experts. The feedback from the community consultation was used extensively during this phase to help identify potential problems on the network and also as a gauge on community response to options. This information was then used to identify a range of options that best addressed the issues. A multi-criteria analysis framework was developed and agreed upon, and the options were rated against different pre-agreed outcome measurements. The results were triangulated against local expert knowledge.

Once the type and scope of the arterial upgrades were settled upon a second iteration of mitigation measures took place which concentrated on measures that could mitigate the effects on access to schools, parks, commercial centres, and cycling in light of the arterial upgrades.

This process identified issues and options that need to be addressed before the CNC opens and depending on monitoring outcomes following the CNC opening, up to 2031.

4.2.5 Recommendation of Further Remedial Steps
While the Plan outlines the issues and upgrade options that may need to be actioned in the few years following the opening of the CNC and through to 2031, what needs to be done will depend on the outcome of transport monitoring. It is possible that new issues arise as a result of the CNC that are not reflected in the transport modelling undertaken or in the crash history. The routes expected to be affected may not be affected as predicted and thus not need to be upgraded. Through the ten years following the CNC opening, Christchurch City Council will need to regularly monitor traffic flows, crash records, and environmental impacts (emissions, noise, and vibration) and intervene to address such issues, to mitigate the ongoing effects of the CNC.

4.3 Balanced Transport Planning Approach
Wherever possible, we have taken a balanced transport planning approach to the development of the Plan that looks to mitigate the impact of the additional traffic on arterial roads and local streets and other transport modes with minimal impact on private property.

As cities grow they are faced with growth in land transport trips. It is not suitable to accommodate all such trips in single occupancy vehicles. NZ Transport Agency and Christchurch City Council have actively looked to provide transport options for these trips in Northern Christchurch 13. This includes the provision and promotion of bus, cycle, and car-pooling initiatives, along with infrastructure upgrades to ease congestion and reduce the proportion of people in single occupancy vehicles. We are supportive of more investment and promotion in this area, but are conscious that such initiatives, particularly in the short term, will have limited impact on the number of vehicles that will enter Crabtree Street when the CNC opens.

To achieve a balanced transport planning outcome, which encourages use of other transport options, we have not considered options that provide an expressway (e.g., permanent four-lane route) through St Albans to the City Centre via widening the road reserve of current arterials or on a new arterial alignment. Only a small number of people who participated in the consultation favoured such an approach. The support for a balanced approach to transport planning and the promotion of alternative transport modes

and car pooling was promoted by many stakeholders and the general public in the consultation. This is consistent with the findings of a number of consultation processes managed by Christchurch City Council citywide (e.g., Share an Idea campaign) in northern Christchurch. Hence, in our view highly car-centric options south of the CNC would not be acceptable to the majority of the local community and therefore are not being promoted.

However, the CNC is currently being constructed, and it is clear from the transport modelling that this will significantly increase vehicle flows on Cranford Street (south of Innes) in 2020 and through to 2031. While one option is to do nothing and allow congestion to occur, there are consequences of severe congestion that are undesirable to the community in terms of pollution and road safety. Hence, to address severe congestion and discourage use of local streets by commuter traffic, a measured plan of arterial upgrades and traffic calming of local and collector roads is proposed. Wherever possible the upgrades are being achieved within the current road reserve. Given this constraint, there will still be congestion on the arterial/collector roads, especially at the Berwick Street/Cranford Street and Westminister Street/Cranford Street intersections as traffic volumes grow towards 2031.

The Plan also includes a number of transport improvements that are expected to encourage more walking and cycling in the community. Where possible this includes mitigating the adverse impacts of the additional CNC traffic. While this is not possible on all routes, this is a degree offset with other transport improvements in the local road network e.g., improved bicycle routes running parallel with and crossing Cranford Street.

The Plan gives limited attention to travel demand management measures to move people out of cars, other than improving transport facilities to support use of other transport modes (e.g., walking and cycling). Travel demand management is typically an intervention considered strategically for a wide area; such as the Greater Christchurch urban area or the northern part of Christchurch and Waimakariri District. Any demand management interventions specific to this project would shift or create issues across the network if not coordinated with other projects. Therefore, the Plan does not closely look at hard or mode shift interventions or other wider demand management strategies for improving congestion. Such measures include improvements to bus services, possible HOV lanes on Cranford and Sherburne Streets, schemes that promote carpooling, and implementing park and ride (and park and bike) facilities.

Another key aspect of the project scope is that only problems that arise directly and significantly as a result of the CNC are being addressed as part of this project. All other network issues are to be addressed via other funding arms of the relevant transport authority. The NotI outlined that a 30% increase of vehicle movements as top of those expected to have occurred if the CNC had not been constructed are to be addressed in the Plan. Hence transport impacts created by general traffic growth in Northern Christchurch, and not by the CNC, will not necessarily be addressed by the Plan.

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18 Measures such as price tolling, or land zoning changes.
5. Transport Modelling

Transport modelling forms an important part of the analysis that informs problem identification and option analysis. Modelling has been used as the effects of the project are yet to be experienced, and in many instances will be significant enough to warrant treatment prior to the opening of the CNC. For example, this is likely to be the case on arterial routes and at busy intersections where a sudden influx of traffic will make upgrades after the CNC more disruptive.

The important outputs required from the modelling were to estimate which local roads were likely to experience a 30% increase of traffic volume (either during the morning or evening peak, or daily) on top of what would have been expected at the same point of time in a scenario where the CNC was not constructed.

Therefore, the transport modellers were requested to model:\n
   a) The downstream network in 2021 and 2031 without the CNC
   b) The downstream network in 2021 and 2031 with the CNC
   c) The downstream network in 2021 and 2031 with the CNC and various downstream treatment packages (as outlined below)

These were to be modelled during the weekday AM Peak and PM Peak, and all [week] day.

No modelling of weekend traffic flows was undertaken as there is no current CAST weekend model. Weekend traffic volumes peaks can be relatively high but are not tidal like weekday peaks, so do not generally cause the same level of congestion, it will be important to monitor traffic volumes after CNC opens in the weekends to identify any capacity issues during the weekends.

The 2021 model represents the open year of the CNC (currently expected to open in September 2020). The 2031 model represents the design year. The expected effects beyond 2031 have not been assessed in this report as per the requirements of the NoR.

Modelling was undertaken for this study by Jacobs (a modelling consultant). This modelling included the road changes associated with the Papanui Parallel cycleway that makes Rutherford Street and Trafalgar Street less attractive for through traffic. The model also assumed the latest version on the CNC design, including a third motorway lane southbound on the Waimakariri River and southbound HOV lanes south of this extending to north of the QEII Drive interchange. The most recent land-use forecasts (at the time the modelling commenced) for northern Christchurch and the Waimakariri District were used in the modelling. A summary of the modelling undertaken by Jacobs has been prepared for Christchurch City Council.

5.1 Limitations of Modelling

Modelling a network requires a series of assumptions to estimate trip patterns. These include assumptions relating to land use, population, and the propensity of people to choose particular modes given the attraction of trip generators. All of these (and others not mentioned here) have varying degrees of certainty. The assumptions can become erroneous following events such as policy changes, land developments, and economic changes. They can also be erroneous in how they predict the movements of vehicles which are controlled by individual humans who can (and do) employ dynamic decision making, rather than decisions made with rigid logic.

Models, like CAST, do not highlight the effects of intersection delay well. In this instance, given the amount and complexity of the network with many intersections (varying significantly in delay), intersection delay will be a factor in where drivers decide to make their trips in reality.

Christchurch has a grid like network (owing to primarily to its topography), where drivers have many route choices. In such circumstances larger models (as is the case here) may struggle to replicate actual behaviour due to “all or nothing assignment” by the modelling algorithms. These issues become more pronounced when assessing the effects on local streets. It is fair (at least relatively) to assume drivers will use direct arterial routes if the level of service is acceptable to the driver. When the arterial becomes less desirable, exactly which local streets, and to what magnitude, will be affected is more difficult to estimate using transport modelling.
Underlying assumptions, such as traffic growth, will also likely change in response to changes in land use and different levels of land-use growth. Indeed land-use projections regularly change in response to market forces and planning rules.

As such, as discussed in Sections 4.1.2.1, and 4.1.2.2, the model will be more accurate in 2021 than in 2031, therefore monitoring to track growth following 2021 is critical to validating the model findings.

Nonetheless, even with the limitations, modelling is the best tool we have to estimate what may occur in the future.

5.2 Expected Transport Impacts Caused by CNC Traffic

In order to understand impacts caused by the CNC, it is important to first understand what level of growth on roads in Northern Christchurch would have occurred if the CNC had not been built. The pattern of travel would be impacted by the ability of the transport network to accommodate additional traffic. The modelling then considers how the CNC will concentrate traffic where it links to the arterial network at QEII Drive and Cranford Street. The pattern of travel is then influenced by the future road networks ability to accommodate this traffic. Upgrades to roads will influence which roads the traffic will use. This includes both capacity upgrades on arterials/collectors and at intersections and discouraging traffic through using traffic calming. Even small changes will impact on the routes drivers take to travel through Northern Christchurch.

5.2.1 Expected Traffic Growth Without CNC

Initial modelling has been undertaken (using CAST (Saturn) model) to identify the level and location of expected network traffic growth and traffic congestion if CNC had not been built, refer to Figure 5-1. Note that “V/C” stands for volume over road capacity.

Areas of the network in excess of 80% experience congestion, as traffic volumes approach capacity (V/C > 1) and unstable flow conditions occur. This results in slower moving vehicles and smaller, and less frequent, gaps for vehicles to enter traffic flow from side streets. This in turn results in queuing on side streets, and risk taking when selecting gaps to enter.

Marshland Road and Main North Road are two important arterial routes in Northern Christchurch, and without the CNC additional congestion would have occurred on these routes by 2021 and be worse in 2031 due to growth in traffic flows from Northern Christchurch suburbs and Waimakariri District (dark red and red sections). But, as the maps shows, there are other congestion areas further south on Cranford Street and Hills Road, Barbados Street, especially closer to the intersection with Bealey Avenue, is also affected. All of these areas have been circled on the maps.
5.2.2 Additional Traffic Growth Across Local Network as a Result Of CNC

Modelling has been undertaken to assess the growth of traffic in the network overall and around the southern end of the CNC following the completion of the CNC (less the underlying expected growth if CNC had not been built). Streets (arterials, collectors, and local streets) that are likely to have an increase of 30% more traffic in peak periods by 2031 compared to 2021 without the CNC have been highlighted in the following figures. Figure 5.2 shows the larger picture and how traffic will divert from Marshland Road, Main North Road and Johns Road (blue lines) to the CNC and downstream routes (red lines).
Figure 5.2: Major changes in traffic volumes as a result of CNC (compared with no CNC) in 2031

At a more localised level the impact of CNC on traffic volumes in the AM Peak, PM Peak, and all day in 2021 and 2031 are shown in Figure 5.3 to 5.8. Those streets which are expected to have a greater than 30% increase in traffic are shown in Black (arterials) and orange (local roads).
These figures show a significant number of local streets are expected to have at least a 30% increase in traffic volumes due to rat-running traffic. The effect is more pronounced in 2031, although the majority of streets are also impacted in 2020/21. If no arterial/collector upgrades progress, then a lot of streets need to be traffic calmed before the CNC opens. However, with the level of congestion expected on Cranford Street it will be challenging to design and construct traffic calming that deters rat-runners.

5.3 Modelling of Improvement Options

The initial modelling excluded any change to downstream routes and intersections. This was done subsequent to options being developed and is presented in the following sections, and Appendix D.

5.4 Impacts of Additional Traffic

The main impacts of the additional traffic are road safety, access to shops, parks, school and housing, air pollution, pavement deterioration, and amenity (urban design).

There is a known relationship between traffic volume and crash risk. This means streets with an increase in traffic volume (particularly if not treated) tend to experience more crashes if not treated. Deferring vehicles, especially heavy vehicles away from local streets (for example by traffic calming) and onto better designed arterial routes will reduce the safety impact of the CNC traffic. Lower operating speeds (<40km/h, or even 30km/h) on local roads will also reduce both the number and severity of crashes. On arterial and some collector (distributor) streets where traffic volumes will increase significantly, a combination of route upgrades and temporary speed limit reductions (for example school zones) can be used to address crash risk. As traffic volumes increase, the headway between vehicles decreases and consequently the ability for drivers to enter and exit the traffic flow (via accesses, or intersections) reduces.

Road pavement tends to wear out faster with higher traffic volumes; however, this is more dependent on the relative volume of heavy vehicles, rather than necessarily the total traffic volume.

The Plan looks to address as many of these impacts of the CNC traffic as possible, acknowledging that some issues cannot be easily addressed. The intention of the Plan being to minimise rather than fully eliminate the effects of the additional traffic volumes as a result of the CNC.
6. Community and Stakeholder Concerns

6.1 Purpose and Outcomes of Early Community Engagement

Consultation with the public and key stakeholders has and will continue to be an important part of the development and advancement of the Plan. The St Albans community, in particular, have been very active in expressing their views on the various northern arterial scenarios that have been presented by Christchurch City Council and the Crown over the last 50 plus years, including the Christchurch Northern Corridor (CNC). The major concern expressed during consultation on the CNC, is how the additional traffic from the arterial will impact on the St Albans and surrounding communities, and how this can be mitigated. Concerns that were expressed at the CNC NoR hearing led to the requirement to produce a DEMP (the Plan).

In order to involve the public and key stakeholder in the process as required by the NoR and Christchurch City Council’s own internal processes, a consultation strategy was developed by Christchurch City Council. The first step of the strategy focused on capturing all the issues and concerns of the general public, key stakeholders, and politicians (community board and Christchurch City Council). In order to achieve an independent perspective (from Christchurch City Council) on the issues and concerns, the independent expert participated in the majority of the consultation meetings.

Subsequent phases will involve consultation on the Plan and each of the improvement projects within the Plan. The NoR has some specific requirements around consultation which are stated below. Most of these matters apply to consultation on the options that are developed in the Plan.

4.5. Where traffic calming work is recommended, Christchurch City Council will consult with:
4.5.1. Residents of the streets where traffic calming measures are proposed to be taken:
4.5.2. Canterbury District Health Board;
4.5.3. Mairehau Primary School, Our Lady of Fatima School27, Paparoa Street Primary School, St Albans Catholic Primary School, and St Albans School;
4.5.4. St Albans Residents Association and Mairehau Community Trust; and
4.5.5. Cyclists through Spokes;
4.6. Consultation shall include the distribution of a newsletter including feedback form prior to the review.

Section 5 of the NoR also provided guidance on the process for consultation prior to implementation of the Plan.

5.2 Owners and occupiers of properties on streets identified by the independent traffic expert as requiring mitigation measures shall be:
5.2.1 Advised of the recommendations of the independent traffic expert under clause 3, including proposed mitigation measures; within 30 working days following the provision of the recommendation to Christchurch City Council;
5.2.2 Provided a period of 20 working days to comment on the proposed mitigation measures; and
5.2.3 Advised by Christchurch City Council of the final mitigation measures to be implemented, at least 20 working days prior to commencement of any works.

The initial phase of stakeholder and public consultation was focused on identifying all the existing and potential future transport issues associated with the CNC traffic on the downstream transport network. To

27 Now known as St Francis of Assisi School
help the public in assessing the potential effects of the CNC transport modelling outputs of the likely impacts of the CNC were provided. More specifically, this identified the streets that are expected to have more than 30% additional (tail-running) traffic in 2031. In order for the public to consider how changes to the arterial and collector roads may reduce the amount of traffic using local streets, the benefits of a potential arterial upgrade options were provided. This preliminary option included clearways on Cranford Street, upgrades to three intersections on Berwick and Warrington Street and three in-laning of Madras/Forfar and Barbadoes Streets from Bealey Avenue to Warrington Street in the higher flow direction.

The initial consultation process consisted of the following steps:

1. One-on-one meetings with 20 key stakeholders, which included the parties specified in the MoR (e.g., the local schools) and other stakeholders such as shop owners expected to be impacted.
2. Four public open days attended by 123 members of the community at which plans were presented of the impacted area and a potential arterial upgrade option.
3. Distribution of a newsletter to approximately 12,000 households and businesses in the affected road network (Appendix F). This included a submission form. Over 400 submissions were received from the community.
4. Several meetings with the Panani-Ikinis community board and Initial Teacher Education (ITE) Council committee to discuss the process being used in consultation and the issues identified in the transport modelling.
5. A half day consultation hearing of submissions from stakeholder and the public that was chaired by the community board.

The feedback from the public and stakeholders was compiled into common themes for consideration at future stages of the project. The key topics raised from consultation are as follows:[1](Christchurch City Council have prepared a report that provides more detail on each submission):

**Clearway comments (mostly Cranford Street, but also in general)**

| Take the clearway through to Bealey Avenue | Ongoing monitoring/policing | Loss of parking |
| Pedestrian safety – upgrades required and design concerns | Improved facilities for public transport / park and ride | Provision of safe cycling facilities |
| Access to English Park | Impact on Cranford Street properties | Impact on businesses |
| Impact on side streets | Impact on driveway safety | Consider HOV lanes |

**Intersection changes comments**

| Parking concerns | Impact on businesses | Leave as is and monitor traffic impact first |
| Forti Street roundabout doesn’t need to change, and safety concerns | Impact on St Albans Park | Pedestrian safety – both concern for increasing pedestrian risk and also support for changes |
| Cycling safety – both concern for increasing cyclist risk and also support for changes | Barbadoes / Warrington needs lights | Berwick Street – pinchpoint and congestion |

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[1] The Council summary of submissions can be found here:

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Three Lanes – Madras Street and Barbadoes Street

- Prefer clearway
- Leave as is and monitor
- Improve public transport options
- Impact on residents

- Traffic light phasing
- Two new sets of lights could cause short cutting through side streets
- Flockton Street issue – will vehicle and bus manoeuvres be possible due to proximity to traffic signals

- Prefer clearway
- Loss of parking undesirable
- Bus blocking inside lane during clearway operation

- Leave as is and monitor
- Pedestrian safety
- Impact on businesses

- Improve public transport options
- Cyclist safety
- Impact on St Albans Park users

- Impact on residents
- Increase in truck movements undesirable – vibration and noise
- Continuation of the one-way system all the way through

Cranford / Westminster, Cranford / Berwick, Madras / Edgware, and Barbadoes / Edgware

- Safety – driver behaviour and vehicle speed concerns, pedestrian safety (especially children), and also desire to leave as is
- Turning arrows or separate turning lanes
- Lower the speed

- Leave intersection(s) as is
- Have red light camera at intersection
- Pedestrian and cyclist focus

- Parking – provision for shops/businesses and increase P15 to P30
- Impact on businesses and residents
- Widen road – do not narrow

The feedback from consultation provided good insight into the community’s thoughts and concerns on the project. The results were considered during the issue and options workshops which led into option development, and the multi-criteria analysis of different options. Refer to Section 7.2.4 and 7.4 for discussion on how the consultation outputs informed option analysis.

Many of the issues with the options can be mitigated, or possibly resolved, during the later design phases of this project, however others may be more challenging. On-going dialogue and consultation will therefore be crucial to try to achieve the best upgrade options for the community.

As per the requirements of Section 5.2 of the NoR, and Christchurch City Council’s own processes, further consultation will occur on the Plan and each of the projects that are recommended in the Plan. This phase of consultation will inherently be more detail specific on the individual treatment selection (say speed platform vs carriageway narrowing); however, it is important that the resultant decisions remain holistic to the network. A treatment decision on one street may result in a significant impact on another; perhaps even acting as a catalyst for another street exceeding the 30% threshold. Consequently, decisions cannot be made in isolation, or without consideration of their wider impact. The monitoring regime will be an important part of monitoring the impacts of various interventions and identifying any knock-on effects of such changes to other parts of the transport network.

6.2 Changes in Transport Modelling

Since the initial transport modelling was undertaken, that informed the consultation material, further modelling has been undertaken of the downstream effects. The latest transport modelling has changed some of the streets that are expected to be impacted by greater than 30% traffic in 2031 and also looked...
at the impacts in 2021. One major change to the modelling that impacts on routes impacted downstream is the proposed layout of the Innes Road/Cranford Street intersection, which is being upgraded as part of the CNC project. Other changes that have been made include restricting a number of side-roads on major routes to left-in and left-out (LILC). For example, Malvern Street and Dee Street intersections on Cranford Street. These network changes have impacted on traffic flows on Mersey Street (which now carries more traffic) and Malvern Street (which carries less traffic).

6.3 Changes to the Plan following second round of Engagement

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7. Issues and Option Development

This section of the report outlines the expected transport issues that will result from the CNC, along with associated improvement options (as identified during the stakeholder and public consultation), transport modelling, and review of the network by the independent expert. The Plan presents various options that have been developed to avoid, remedy or mitigate the expected transport issues and fulfill the objectives stated in the NoR conditions. In many cases it also recommends further studies to look at option development. As with any area-wide transport plan, it is also important that the options are as consistent as possible with the objectives of local, regional, and national strategies. As outlined in the CDP and the national Government Policy Statement (GPS) on transport, road safety, and access for all road users is a high priority.

Section 7.1 outlines the issue and option development process that has been adopted for the Plan. Given the focus on keeping upgrades within the existing road reserve wherever possible (e.g. not looking at any new arterials or major arterial upgrades), there are a limited number of options available for increasing road capacity and mitigating the impact of the additional traffic on various road users (e.g. cyclists and pedestrians) and the local community.

7.1 Issues and Option Development Process

The first step in developing options was to clearly set out all of the issues that may be experienced on the network following the opening of the CNC. These included existing issues that may be exacerbated, and new issues. Compiling the issues was done by using the data available on the network (such as crash data), outputs from the model (such as where congestion might occur), feedback from the public, and expert knowledge of the network. A knowledge of the issues (or at least likely issues) was important so that the subsequent options considered would be focused on addressing these issues.

The option development has been separated into two development stages. Stage One involved developing options to encourage the additional traffic that will come down the CNC, when it opens and through to 2031, to stay primarily on the arterials and collector routes and off the local streets. This can be achieved by using a combined “carrot” and “stick” approach. The carrot being to upgrade some of the arterial and main collector routes. The stick being to traffic calms a number of local streets to push traffic back onto the arterial and collector routes. In addition to the traffic calming, up to 9 “safe speed community areas (SSCA)” are proposed in the study area to deter rat-running traffic on local streets and to reduce the risk of serious and fatal crashes from any traffic.

We acknowledge that the community wants to also see travel demand management measures that reduce the volume of vehicles coming down the CNC and into the St Albans road network. We have suggested that Christchurch City Council and NZ Transport Agency investigate measures that encourage alternative modes and more car-pooling. While such measures would reduce traffic volumes, the impact on traffic queues coming off the CNC, at least initially, is likely to be relatively small (effective measures might result in up to 10% reduction in traffic volumes) and so the focus of this study has been dealing with a significant increase in traffic through the network when the CNC opens and out to 2031.

The second development stage focused on improvements that need to be made on several roads to mitigate the impact of the additional traffic from the CNC on all road users and the community. Of particular importance is a network of roads that supports and promotes use of transport options other than the single occupancy motor vehicle, which retains or improves access to key community facilities (parks, schools, and shops) and, where possible, addresses the safety impacts of the additional traffic. The second stage of option development includes projects in the following four categories:

- Safe Access to Schools
- Safe Cycling Routes
- Access to Parks
- Access to Commercial Centres

Two overarching principles are promoted in the development of the options; delivering healthier streets and a safer (transport) system. With the growing understanding that streets have a vital role to play in developing vibrant and healthy communities, the Plan includes a requirement to develop street improvements that lead to healthier streets wherever possible. We propose doing baseline (before treatment) and design assessments of each impacted route using the Healthy Streets Framework developed by Transport for London (see Guide to the Healthy Streets Indicators). The ten key healthy street indicators are shown in Figure 7-1 below. Preference should be given to options that lead to more healthy

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streets or, where this is not possible due to increasing traffic volumes, that minimise the impact on the health of a street.

In terms of improving road safety and moving towards a safer transport system the Austroads safe system assessment framework should be used. In addition to safety auditing, to evaluate all infrastructure improvement options, the safe system framework breaks the risk of fatal and serious injury crashes into three components: exposure, likelihood, and severity. The exposure is typically the volume of transport users (pedestrians, cyclists, and motorists) on the street. With the increase in traffic volumes on many routes in the network as a result of the CNC, the crash risk will increase if no improvements are made. To compensate for this increase in crash risk we propose that both the ‘likelihood’ and ‘severity’ of crashes must go down. To achieve a reduction in ‘likelihood’ the facilities for road users, especially pedestrians and cyclists, in urban areas must improve. For example, the introduction of traffic signals, the greater use of pedestrians crossing aids (islands) and shorter crossing distances, and introduction of cycle lanes and paths. Crash severity is influenced by operating speeds which are related to speed limits and road design. Hence improvements that reduce operating speeds and lower speed limits reduces crash severity. In this network this will be achieved on local roads through introduction of the safe speed areas.

The Plan does not include many changes to support public transport, although it does support further investigation of improvement options that benefits public transport (i.e., HOV lanes). While this may be the case, one of the key outcomes of the CNC is to reduce traffic on Main North Road and Papanui Road which is the key public transport corridor for Northern Christchurch. In terms of the study area, the needs of public transport should be considered in the more detailed designs, including location of bus stops, bus shelters, and reducing delays on routes, especially at traffic signals.

The next five sections talk in more detail about the issues and options in the Plan.
7.2 Arterial/Collector Capacity Issues

7.2.1 Context

One of the main issues identified for the arterial and collector roads was that they would be under greater strain (in terms of vehicle flows) than before the CNC during peak periods. When a road becomes severely congested vehicle movements slow and gap selection becomes more difficult and dangerous leading to greater queuing on local streets. It also becomes more dangerous to cross the road especially before vehicle speeds drop due to congestion. To a degree, arterial/collector congestion is to be expected, especially during peak hours. However, the modelling outputs indicate that congestion will rise (especially during weekday peak hours) to a point where drivers will be more likely to choose to use local roads impacting on safety and amenity in primarily residential areas. Therefore, the issue identified was that the key arterial roads will likely be unable to cater for the increased vehicle demands, resulting in a redistribution of movements to local roads. The key arterial and collector capacity constraints have been identified for the current network in the transport modelling (during weekday peak periods) and are as follows (noting that an extensive number of plots have been used to identify these issues):

1. The merge south of the Cranford Street / Innes Road intersection when the CNC opens. Two through lanes north and through the intersection became one lane southbound. The modelling in the AM peak indicates that the V/C (expected volume/traffic capacity) ratio in 2021 would be 0.97 and in 2031 would be 0.98 (noting that anything over 0.8 is poor and will lead to disruptive traffic flows). Modelling indicates a lot of rat-running, especially onto Mersey Street if this matter is not addressed.

2. The through lane capacity at the Westminster Street / Cranford Street intersection. The current intersection has a shared through and right lane and through and left lane with a short merge lane, especially northbound (due to parking for the shops). With right turning demand there is effectively only a single through lane at the intersection, which severely constrains the capacity of intersection in both north and southbound directions. Queues already form heading northbound in PM peak period.

3. Northbound and southbound through lane capacity at the Berwick Street / Cranford Street intersection. Currently only one through lane and a short right turn lane is provided heading north through the intersection. With CNC flows, the northbound through movement has a V/C of 0.85 in 2021. There is currently one through and one short left turn lane heading southbound. With CNC flows and the clearways on Cranford to Berwick the V/C is 0.91 in 2021. Both constraints would cause peak period delays.

4. Right turn capacity. Turning right from Berwick Street into Cranford Street, The single right turn lane is a major capacity constraint for traffic heading north on Madras Street/Forfar Street wishing to turn into Cranford Street. The impact of this constraint in isolation is difficult to assess given upstream capacity constraints. Option modelling has shown that with a double right turn in 2021, this route will have a V/C 0.74. From this we can imply that a single right turn will have a much poorer V/C.

5. The single lane Forfar Street / Warrington Street roundabout is also a capacity constraint. In 2021 the North bound Forfar Street approach will be 0.81 in the PM Peak and this deteriorates further in 2031, the impact of this has been assessed using the option modelling because of upstream capacity constraints. The option modelling includes traffic signals with a double left turn from Forfar Street into Berwick Street. This movement has a V/C of 0.62 in the PM Peak. A single left, as provided with the roundabout, would have a V/C well over 0.8. In the AM Peak the single through lane V/C from Berwick Street into Warrington Street at a signalised intersection would be 0.87. This indicates that two through lanes (or both a through and through and right turn lane) are required which can not be accommodated at the current roundabout. In addition, roundabouts often experience safety problems when they operate near capacity due to risk taking as drivers pick smaller gaps. We expect crash numbers to increase if roundabout is not upgraded.

6. Capacity constraints at Barbadoes Street / Warrington Street priority T-intersection. Right turn movements out of Barbadoes Street will become increasingly difficult due to increased traffic volumes during peak periods. At the priority intersection the V/C for the right turn out of Barbadoes Street is 0.82 in the evening peak in 2021. We have already observed considerable delays for this movement in the evening peak, in the absence of CNC traffic.

7. Edgeware Road Intersections at Cranford Street / Sherborne Street, Madras Street, and Barbadoes Street can only effectively accommodate a single through lane, like Westminster Street / Cranford Street, due to right turners sharing the lane with through vehicles, and short shared left and through lanes.
8. Southbound capacity constraint at Barbados Street /Bealey Avenue intersection. The single lane through movement on the mid-block approach to the intersection (there are two through lanes at the intersection itself) already causes congestion in the AM Peak, which the models predict to increase going forward, especially if more traffic from the CNC is pushed down this route.

9. Northbound capacity constraint at Madras Street /Bealey Avenue intersection. In the PM Peak the two through lanes have to merge quickly on the exit of the intersection due to a short merge to accommodate kerbside parking. This creates safety issues for motor vehicles and especially cyclists as the motor vehicles are often travelling at higher speeds having come off the one-way system with traffic signal coordination.

10. Southbound capacity constraint at the Sherborne Street /Bealey Avenue intersection. The single lane right-turn at this intersection into Bealey Avenue and single through lane approach up Sherborne Street causes queuing especially in the AM Peak, mainly to right turners but also to left turners. The modelling indicates VC of 0.91 in 2021 and 0.93 in 2031 for right turn into Bealey Avenue if this intersection is not upgraded.

11. While the Innes Road /Cranford Street intersection is being upgraded as part of the CNC we are aware that the left turn from the west into Cranford Street has a short lane and hence drivers travelling north on Rutland Street may choose to travel through on Rutland Street and use Knowles Street, Westcon Street, or McCaddens Road to access Cranford Street instead of Innes.

12. The installation of traffic signals at St Albans Street /Rutland Street intersection and limited right turn phase time from Rutland Street into Innes Road at the St Albans Street /Rutland Street intersection as part of the cycleway upgrade has reduced the traffic volumes on this route (a gold outcome given cycle safety considerations), and also the influenced how drivers heading north access Cranford Street, as in 11.

Arterial upgrades typically involve increasing the capacity of transport corridors to attract trips from local roads to arterials and collectors during peak flow periods. The idea is that if arterials/collector routes have adequate capacity then drivers are less inclined to use local roads which tend to be designed more for accessing adjacent residential land uses rather than for movement of vehicles.

There is a range of ways in which the capacity of a road can be increased, such as physically creating more capacity (more lanes) at intersections and mid-blocks. Time controlled additional capacity is another treatment such as ‘clearways’ where part of the carriageway can be used as an additional lane during heavier traffic flows but returns to parking at other times of the day, so it can be used for other purposes i.e., parking. Applying right turning bars at intersections can also increase road capacity.

Other treatments are also possible which increase the productivity of a corridor (number of people carried in each lane). Improvements of this kind can be in the form of high occupancy vehicle lanes (HOV) and bus lanes. HOV lanes require vehicles using those lanes to have a minimum number of people (typically two or three per vehicle) over time allowing more people to pass through the existing corridor. Buses can use HOV lanes, as can electric vehicles and bicycles. Bus-only lanes tend to be used on high frequency bus routes. HOV lanes are an option for clearways in the study area while bus-only lanes are not recommended due to the relatively low frequency of buses. A study would be required to confirm that HOV lanes can operate along the proposed clearways.

Bealey Avenue, as a key arterial, forms a southern boundary of this project. Bealey Avenue runs approximately west to east and provides connection with the one-way pair box, and four avenues. There are several arterials and collectors located south of the CNC and north of Bealey Avenue that will carry additional traffic from the CNC. The key ones being Cranford Street, Sherborne Street, Berwick/Warrington Street, Barbados Street, Madras Street, and the Innes, Rutland/Springfield corridor. The extent to which each street will carry the extra traffic depends on the capacity that is added to these streets at intersections and to mid-block. Early on in the study, modelling was undertaken to assess whether improvements to the GEI Drive/Innes roundabout, Innes Road, and Hills Road might move some of the traffic expected down Cranford Street onto Hills Road. The modelling indicated that even with higher cost improvements along this route very few drivers would divert to the Hills Road route.

As with all capacity improvement projects, there is a risk that adding capacity can simply shift the location of congestion; for example, by relieving pressure at one location traffic will flow freely until encountering the next congestion. However, if there is too much congestion on arterial roads then drivers will be more inclined to 'red-slip' in this gap and hence the Plan, therefore balances these issues by providing some additional arterial capacity, while calming local streets. While capacity is being added to arterial and collector roads there will still be some peak period congestion. The actual traffic effects after CNC is opened will be monitored to see whether more arterial capacity, and/or local road traffic calming is required.
7.2.2 North of Berwick Street Issues and Options

North of Berwick Street there are only two existing arterial and collector route options available to drivers coming down from the CNC. One option is the Rutland Street / Springfield Street corridor. As discussed previously, with the improvement made to the corridor as part of the Papanui Parallel separated cycleway (on Rutland Street), and being less direct, this corridor is less attractive than the main route option of Cranford Street.

The spill of extra traffic between the routes is approximately 550vpd (vehicles per day) on Rutland Street and 4,100vpd on Cranford Street south of Innes Road when the CNC opens in 2020 (without any improvements). This increases to around 900vpd on Rutland Street and 5,000vpd on Cranford Street by 2031. While there is an increase in traffic on Rutland Street, it is minimal given the total increase in traffic from CNC and will have minimal adverse effects on the Papanui Parallel cycleway. Further details on traffic volumes on various routes are provided in Appendix D2.

As identified earlier, the main issues on this route are the capacity constraints as traffic heads south in the morning and north in the evening, via one single through lane south of Innes Road. The other constraint is right turning vehicles blocking the through lane at side roads and at the English Park carpark. While this will occur at other accessways along the route, the intersections and the carpark are the major traffic generators of right turning movements. Other issues, such as the safety of school children crossing Cranford Street, are covered in later sections.

While no changes are proposed to Rutland Street, additional capacity is required on Cranford Street from Innes Road to Berwick Street to accommodate the increase in traffic from the CNC. The two main options that can be accommodated in the current road reserve are four-laning and peak period clearways. The latter is preferred because it allows parking on Cranford Street near the Westminster Street / Cranford Street local commercial centre outside peak periods. Changes are also proposed at the Westminster Street / Cranford Street intersection (see Figure 7.2). Right turn bans will apply at this intersection during peak periods, to provide two through lanes. Given the increased traffic volumes through the intersection, to accommodate cyclists (via cycle lane) and to address safety concerns with drivers hitting the signal pole (westbound) along Westminster Street. Widening of the western approach is proposed (more on this later). Right turn bans will be installed permanently at the Dee Street and Malvern Street approaches on both sides of Cranford Street using throat islands. We also propose that the English Park carpark access be redesigned and right turns in and out of this carpark be banned.
7.2.3 South of Berwick Street Issues and Options

South of Berwick Street there are three routes that can carry the additional traffic from the CNC through to Bealey Avenue, being Cranford Street/Sherborne Street, Forfar Street/Madras Street, and Barbadoes. The extent to which each route carries this additional traffic depends on the capacity improvements undertaken to address the constraints listed above. The key capacity issues are at the nine intersections in the network that are on these routes intersecting with Berwick Street/Warrington Street, Edgeware Road, and Bealey Avenue. The key intersection constraints are along Berwick and Warrington streets. The issues being lack of right turn capacity (from a single right turn lane) from Berwick into Cranford, and the capacity and safety of the Forfar Street/Warrington Street roundabout and Barbadoes Street/Warrington Street priority-controlled intersection with the increase in traffic volumes. The other six intersections capacity issues can be addressed by banning right turn and/or adding approach lane capacity.

In terms of a continuous route connecting Cranford Street (clearway) and Bealey Avenue, there are two main options with several sub-options for one of the options proposed. Both options involve upgrading the Cranford Street/Berwick Street, Forfar Street/Warrington Street, and Barbadoes Street/Warrington Street intersections along with some capacity improvements to Berwick and Warrington Streets to provide approach-lane capacity. Option A involves adding clearways to Cranford and Sherborne Streets and Option B involves upgrading the capacity of Barbadoes and Madras/Forfar Streets (two sub-options being clearways or extending one-ways). In addition, there are a number of intersection upgrades required. More on each of these options and analysis is given later on in this report.
7.2.4 Local Streets Affected by Traffic following Arterials Improvements

Transport modelling was undertaken to assess how effective the arterial upgrades would be in reducing the number of local streets that have a greater than 30% increase in traffic in 2021 and 2031. This analysis effectively repeated that undertaken early on in the study for no network changes (as presented in section 5.4) but this time including the two arterial upgrade options. Both options looked at the clearaway from Innes Road to Berwick Street, improvements to the Cranford Street / Westminster Street intersections and upgrades to capacity along Berwick and Warrington Streets. The two options south of Berwick were A (Cranford/Sherborne clearways) and B (Madras Street /Fortar Street and Barbadoes Street clearways) as shown in Figure 7-3.

Figures 7-4 to 7-9 show the local streets that will trigger the 30% increase in AM Peak, PM Peak and all-day in 2021 and 2031 for Option A. Figures 7-10 to 7-15 show the same plots but for Option B. These figures were produced using the change flow maps from the transport modelling, as presented in Appendix D4. These figures show the streets that are expected to trigger a 30% increase in traffic compared with what might have occurred if the CNC had not been built.
Figure 7-4: Streets expected to be affected by more than 30% in AM Peak, 2021, Option A
Figure 7-5: Streets expected to be affected by more than 30% in AM Peak, 2031, Option A
Figure 7-6: Streets expected to be affected by more than 30% in PM Peak, 2021, Option A
Figure 7-7: Streets expected to be affected by more than 30% in PM Peak, 2031, Option A
Figure 7-8: Streets expected to be affected by more than 30% all day, 2021, Option A
Figure 7-9: Streets expected to be affected by more than 30% all day, 2031, Option A

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Care needs to be taken in interpreting these plots as there is considerable uncertainty in how much these streets will be impacted by the CNC traffic, due to the limitation in transport modelling. What it does indicate is streets that need to be treated before the opening of the CNC or shortly after. For the other streets (those not impacted by additional traffic in 2021), the traffic monitoring will identify the actual increase and determine whether traffic calming changes are required to these streets.

The outcome of this analysis informs the streets that are likely to need traffic calming when the CNC is opened or shortly after (e.g. Mersey Street). These are streets that are shown to be impacted in most scenarios, and those that can be monitored and treated at a later date (e.g. Forth Street). Figures 7-9 show the additional rat-running streets south of Berwick Street, including Edgeware Road, Manchester Street, and Caledonian Road (the last two are wide local streets) that are impacted by Option A, extending clearways down Sherborne Street. A detailed list of streets that need to be (or may need to be) treated are provided in Chapter B. Details on the types of traffic calming that should be provided, along with supporting speed limit restrictions, are provided in Section 7.5. Specific traffic calming treatments need to be developed and discussed with affected parties and the public for each street.

7.3 Options Considered to Address Issues

During the first stage (iteration) of option development, the study team looked at project options that used a combination of traffic calming of local streets and capacity upgrades of arterial and collector routes to attract the extra vehicles from the CNC to the arterial and collector routes. The intention of each of the options is to encourage the additional CNC traffic to use the preferred arterial and collector roads and reduce rat-running on local roads. The Stage 1 options were compiled following consultation with stakeholders and the public. The consultation feedback was used at this stage to ensure the options considered were fairly representative.

As already discussed, additional options were developed as comments from the public and stakeholders were received. This included greater use of clearways, rather than permanent traffic calming, the option of extending the Barbados Street / Madras Street one-way system north to Warrington Street, and using clearways down the Cranford Street / Sherborne Street corridor south of Berwick Street. The full list of options was discussed and evaluated during several issue and option workshops and meetings.

The main options considered in Stage 1 are summarised as follows (see Appendix C for option diagrams):

- **Do Nothing** – this results in rat-running in a lot of local streets.
- **Option 1: Traffic Calming Only**
- **Option 2: Arterial Upgrades Only**. The option used was three-laning of Barbados Street and Madras (Forth) Street, Cranford Street clearways and Berwick Street / Warrington Street (capacity improvements).
- **Option 3 (a): Traffic Calming and Arterial Upgrades**, Arterial upgrades as in Option 2 except clearways on Barbados Street and Madras (Forth) Street instead of permanent three-laning.
- **Option 3 (b): Traffic Calming and Arterial Upgrades**, Arterial upgrades as in Option 2, so permanent three-laning of Barbados and Madras (Forth) Streets.
- **Option 3 (c): Traffic Calming and Arterial Upgrades**, Arterial upgrades as in Option 2 except extension of Barbados Street / Madras Street one-ways to Warrington Street.
- **Option 4 (a): Traffic Calming and Clearways on Cranford Street / Sherborne Street from inner Road to Bealey Avenue plus Berwick Street and Warrington Street Improvements**.
- **Option 4 (b) Traffic Calming and permanent four-laning on Cranford Street / Sherborne Street (option included to allow comparison of options with a more major upgrade of arterial roads)**
- **Option 5: Traffic Calming plus combined Arterial Options of all three routes (Options 3(a) and 4(a))**.

Most of the options include right turn bars at intersections, including traffic signals (e.g. Cranford Street / Westminster Street). The traffic signal right turn bars only operate when the clearways are operating.

Some of the stakeholders have also suggested use of high occupancy vehicle (HOV) clearway lanes. These lanes encourage people to car-pool and/or use the bus. Currently HOV lanes are proposed on part of the CNC in southbound direction but ending before the GEI interchange. This project has not looked at HOV lanes in detail as such lanes need to be considered over the full corridor, including the CNC. We would support Christchurch City Council and NZ Transport Agency undertaking an HOV lane study of the northern corridor (Waimakariri Bridge to Bealey Avenue) and looking at whether the clearways on...
Cranford Street and other routes can be HOV lanes, as such an option should reduce the number of single occupancy vehicles coming from the north, which is consistent with a number of transport strategies, including the CTSP.

### 7.4 Multi-Criteria Analysis of Options

Before commencing the MCA assessment, an MCA facilitator developed a number of criteria for evaluating the options based on previous assessments of this type he had undertaken and based on the strategic transport documents that were relevant for this study area. During the first issues and options workshop the criterion and weightings for each criterion were discussed and agreed. The attendees at the workshops were selected by the Independent Expert to cover various transport and other relevant disciplines, including urban design. The attendees intentionally wanted limited weighting placed on journey time and more on community impacts to reflect the outcomes from the consultation, which wanted a focus on community impacts.

During the second and third workshops, participants gave ratings to the various options listed above. This involved robust discussion over each of the ratings. Feedback from the consultation process was used during discussion (such as exactly where safety or environmental concerns were) which allowed for more specific rating analysis. The ratings of each option (considering the positive and negative consequences) are compared with the transport network in 2020 immediately before the CNC becomes operational; the baseline option. Hence, the sum of rankings for all options do have a negative value as they include CNC traffic, while the baseline option does not. To provide a relative score between the options each option has been compared with the do-nothing option and, in this case, most of the options have a positive score. The results of the MCA are presented in Table 7.1.
### Table 7-1: Multi-Criteria Analysis Results

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The MCA indicates that option 3(c), which involves extending the one-way pair of Madras (Forfar) Street and Barbadoes Street, along with clearways on Cranford Street to Berwick and capacity upgrades including new signals on Warrington Street and traffic calming of local streets has the best overall (score) ranking.

However, two other options also rank relatively well being option 3(a) which is similar to option 3(c) but has clearways on Madras (Farfra) Street and Barbadoes Street rather than converting them to one-way streets. The other high ranked option is 4(a) which includes clearways on Cranford Street /Sherborne Street through to Bealey Avenues with traffic signals at Forfar Street /Warrington and Barbadoes Street /Warrington Street. While option 3(b) also has a similar scoring overall it did score more poorly in terms of ‘main considerations’, with permanent three-laning impacting more on business and residential kerb-side car parking. Given that additional capacity is only required in peak periods, the peak period clearway option 3(a) is preferable as a two-way configuration, and so it has not been carried forward.

Option 5 provides both sets of upgrades. It is unlikely by 2031 that both upgrade Options 3(c) and 4(a) will be required. Indeed, capacity constraints on Cranford Street north of Berwick Street will limit need for all upgrades. Hence this option is not preferred.

#### 7.4.1 Preferred Option Discussion

Option 3(a) includes upgrades to Berwick Street and Warrington Street, as does Option 3(c). However, instead of extending the one-way streets it proposes peak period clearways on Madras (Farfra) Street and...
Barbadoes Streets south of Warrington Street. A key reason this option is not scoring as well as the one-way extension is the additional lane during peak periods would impact the following: 1) Kerbside parking (for business and residents), 2) Difficulty accommodating cycle facilities (due to clearways), and 3) Much wider crossing distance across Forfar Street and Barbadoes Street to St Albans Park. The main negatives with the one-way extension is extra travel distance for some trips to Madras Street and Barbadoes Street businesses and residents (this is minimal in this case due to the grid network of roads), and a potential increase in speeds if road does not get suitable narrowing.

Option 4(a) includes extending clearways further south on Cranford Street and along Sherborne Street. This option has slightly better travel time savings compared to Options 3(a) and 3(c). But, as can be seen in the MCA analysis, travel time has a relatively low weighting overall (at 10%) compared to many other matters assessed. Negative impacts include poor provision for cyclists when clearway is in operation, right turn ban at Berwick Street from Cranford Street, additional traffic through Edgeware Village, and removal of parking on Sherborne Street from Bealey Avenue to Purchase Street permanently as part of upgrading the Bealey Avenue/Sherborne Street intersection. The main advantage of this option is that change will not need to be made to most of Madras (Forfar) Street and Barbadoes Street. However, this is also a negative as these routes, especially Madras (Forfar) Street, will experience traffic growth which will impact on safe access to St Albans Park as there will be additional traffic that pedestrians have to give way to.

4.4.2 Development of a Preferred Option

All three options would provide the additional traffic capacity required to minimise rat-running on local streets. All three include peak period clearways on Cranford Street to Berwick Street and improvements to the Westminster Street / Cranford Street and Berwick Street / Cranford Street intersections. The modelling indicates that Madras Street would have significant additional traffic using it with all three options and that the Warrington Street / Forfar Street intersection needs to be signalised, along with associated upgrades to Berwick and Warrington Streets. We would also highly recommend upgrading the Barbadoes Street Warrington Street intersection, which already experiences considerable delays and has safety concerns, especially for crossing pedestrians and buses.

For the three highest ranking options, the capacity upgrades required on Berwick Street / Warrington Street and north of Berwick Street / Cranford clearways are very similar and hence these elements of the options are included as part of the proposed Plan (some differences in intersection layouts at new traffic signals). However, south of Berwick Street there are three options, with one, Sherborne Street clearways, appearing to be quite different to the other two that utilise Barbadoes Street and Madras Street to carry the additional CNC traffic. However, all three routes, Sherborne Street / Cranford Street, Madras Street / Forfar Street, and Barbadoes Street already have a role in distributing traffic from Cranford North to Bealey Avenue and further south, and vice versa. Drivers tend to choose the route that best positions them to use Bealey Avenue and access the two sets of one-way pairs (Madras Street / Barbadoes Street and Durham Street / Monmouth Street), depending on their destination (or origin). Drivers will still have both choices following the opening of the CNC but will distribute themselves depending on the level of congestion on each route.

Modelling to date on this study has been undertaken with the CAST model. This model is useful for looking at preferred route choice at a network level. In our view it is not sensitive enough to assess the more detailed operation of the road network at an intersection and individual road link level. We are also conscious that the stakeholders and the public are keen to see more detail on what each upgrade option would look like, and the detailed effects. These effects include removal of parking outside residences and business, rat-running through several local routes, such as Edgeware Road through the village. Hence the Plan suggests all three options are progressed to a scoping study. This scoping study would look in more detail at the design of each route and the nine main intersections from Warrington Street to Bealey Avenue, involve more detailed modelling of each option to look at how the options might be staged (e.g. where are clearways required in 2020, compared with 2033), and seek further community and stakeholder input on the proposed upgrades. It is possible that the preferred option may involve some upgrades to all three routes.

In all three cases the upgrades would connect into the Berwick Street / Warrington Street capacity improvements which we suggest progresses to detail design and construction ideally ahead of the CNC opening.
7.5 Traffic Calming and Safe Speed Community Areas

7.5.1 Development of Traffic Calming Measures

Local streets have a primary function of providing access to adjoining land-use and lack some of the safe design features of arterial and, to a lesser degree, collector routes. While many of the streets in the St Albans area are narrow or have been narrowed to reduce vehicle speeds, there are a number of local streets in the study area that are very wide and may affect fast moving rat-running traffic, including larger trucks. Speeding issues if not treated, can increase the risk of crashes involving serious injuries and deaths. A range of treatments exist which can limit, dissuade, or mitigate vehicle movements through parts of the transport network where these movements are less desired, or unexpected. Most of these treatments are categorised as ‘traffic calming’ and should also reduce vehicle speeds and discourage access by larger vehicles (except on bus routes). Treatments typically include:

- **Vertical deflection** – wattle profile speed humps, raised platforms (mid-block and intersection), raised pavements, and wombat crossings (raised pedestrian crossings).
- **Horizontal deflection** – lane narrowing/kerb extensions, slow points, centre bister islands, driveway links, median treatments, and roundabouts.
- **Disvension devices** – full road closure, half road closure, diagonal road closure, modified T-intersection, left-in/left-out islands.
- **Signs, line marking, and other treatments** – speed limit signs and indication devices, prohibited traffic movement signs, one-way street signs, give-way signs, stop signs, shared zones, school zones, threshold treatments, tactile surface treatments, bicycle facilities, and bus facilities.

The traffic calming measures range in severity. Some completely close off available movements, such as converting a street that had multiple vehicle entries to a cul-de-sac. A treatment such as this would remove all through movements from the street. Other treatments are less severe, allowing for full access but reducing vehicle speeds and making the street less comfortable to negotiate. In the Plan we have generally selected less severe traffic calming measures to start, as these are typically more acceptable to the public prior to high levels of rat-running being observed on streets.

If traffic monitoring indicates this is not effective, more severe traffic calming, such as banning movements or partially, or fully closing streets, may be necessary. While there is a focus on the less severe traffic calming to start, there are some obvious more severe traffic calming measures (e.g., restricting arms of intersections to entry or exit only) that could be made for relatively low cost, compared to traffic calming an entire street. Such options should be discussed with local residents and it supported progressed.

Another beneficial side effect of traffic calming is that it can improve the level of service for cyclists and pedestrians. This can be achieved by treatments such as kerb protrusions that reduce the crossing distance for pedestrians, or by reducing speeds so cyclists feel more comfortable cycling in the traffic lane.

The Plan identifies the streets that are expected to have a greater than 30% increase in traffic volumes as a result of the CVC in the AM or PM peak periods (in some cases in both) or all day by 2031. The modelling indicates some of these streets may need to be treated before or shortly after the CVC opens. The monitoring programme will pick up changes in traffic volumes and speeds and indicate which streets need to traffic calmed later on; between 2021 and 2031.

7.5.2 Safe Speed Community Areas (SSCA)

In addition to physical changes to streets it is proposed to create up to 9 safe speed (community) areas either side of Cranford and Sherborne Streets as shown in Figure 7-16.

In addition to reducing travel speeds on local streets and reducing crash risk, the SSCA also signal to drivers that they are entering lower volume and lower speed streets where they should be more alert as children and elderly people may be on or crossing the road; hence the reason for including “safe” in the signage. Ideally SSCA should have a 30km/h speed limit, as that is the “safe speed” where collisions with pedestrians and cyclists have a very low likelihood of causing fatal or severe injuries.

We recommend that all traffic calmed local streets be designed to operate at around 30km/h. However, some of the streets within these areas will remain untreated and so a 40km/h speed limit may be more appropriate until such time as all of the streets in an area are treated and have operating speeds between

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Adapted from Austroads Guide to Traffic Management Port 8 Local Area Traffic Management, p121

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30 and 40km/h. The 40km/h speed limit is also more consistent with what has already been applied to other residential streets in the city. In either case, a drop in the speed limit and the associated signage is expected to reduce the number of crashes and the severity of any crashes which do occur.

Note that it is not essential to lower the speeds in area 2B, as these are not through routes, although as part of the changes we would strongly recommend these routes have lower speed limits.

![Image](image-url)  
**Figure 7-16: Safe Speed (Community) Areas**

### 7.6 2nd Stage of Option Development

The additional CNC traffic coming into Cranford Street causes a number of transport, social, and environment effects on the downstream (primarily St Albans) community. The proposed arterial/collector street upgrades (and associated traffic calming and speed management) address some of these effects, but do not address others, and in some cases create new traffic effects. The Stage 2 option development needs to consider these other effects. We have divided these other issues and associated improvement options into five categories:

1. Safe access to schools,
2. Safer cycle facilities,
3. Access to parks,
4. Access to commercial activity centres, and
5. Other effects.

The other effects include issues like access to properties along the arterial routes.

Few infrastructure improvement options are proposed at this stage. Instead a number of studies are proposed to look at the specific impacts of the additional traffic on each focus area and how these impacts can be mitigated. These studies are included in the Plan. An outcome of these studies will be a number of improvement options, some of which need to be implemented soon after the CNC is opened.
and others which can be made later in ten-year monitoring period (known as the commissioning period). The ongoing monitoring may also indicate that additional improvement options are required in these categories to address specific issues. As mentioned earlier, the healthy streets and the safe system framework methods are proposed, alongside traditional safety auditing, to maximise the safety and amenity benefits of route and intersection upgrades.

The next few sections outline some of the issues that need to be addressed by these improvement options.

### 7.6.1 Safe Access to Schools

Increased traffic volumes in the area will impact on safe access to key destinations in the local area, and specifically schools, parks, and commercial activity centres, and especially for those walking to these locations. Of particular concerns is access to these locations by the young (e.g. school children), elderly (which there are increasing numbers of), and those with disabilities, such as those with a mobility or visual impairment. Increased risk of crashes is a direct result of the additional traffic from the CNC, especially on arterial and collector roads. Hence improvements need to be made including infrastructure improvements and speed limit changes.

There are a number of primary schools in the study area and consideration needs to be given to how the additional traffic from the CNC may impact on the safety of school children that are walking around the network and especially crossing the road. Typically, it is older primary school children (year 5 and 6) that are walking unaccompanied by adults. There may also be a small number of primary school pupils that cycle to school. While there are also a number of preschools in the area, children of this age will in almost all cases be accompanied by an adult.

The main school impacted by the CNC downstream traffic is St Alans Primary School. Some of the school children need to cross Cranford Street to walk to the school. Children also cross Westminster Street (west of Cranford) and Courtenay Street. While signalled intersection crossings are provided at the Westminster Street and Berwick Street intersections, there have been a number of near misses, particularly at the former, between crossing children and turning traffic (particularly turning when the signal has gone red, often due to traffic congestion and no turning arrow). St Alans School currently employs a cross guard at this intersection before and after school to guide pupils across the road. Traffic calming has already been introduced on Westminster Street and on both sides of Courtenay Street, including a pedestrian refuge and road narrowing, to slow down traffic and aid crossing of the route by school children.

The additional traffic on Cranford Street, as a result of the CNC, will increase the risk of crashes involving pedestrians, including school children, if no changes are made. There are several improvements that can be made on Cranford Street to address this safety risk including a temporary speed limit before and after the school north of Westminster to south of Berwick, putting the Westminster Street / Cranford Street intersection on a platform or using a textured surface, and introducing smarter signals phasing as part of widening the western approach of the intersection. The latter being part of a proposed upgrade of Westminster Street and Courtenay Street to improve amenity and accommodate cycling infrastructure. Banning of right turns into Westminster Street in the AM peak (and PM commuter peak) will also reducing the risk of turning crashes involving pedestrians crossing Westminster Street. Additional enforcement be it a red light monitoring camera, or increased Police presence, is also recommended.

Another option that should be considered is a mid-block crossing outside the English (ASB) Park carpark approximately midway between the two intersections (Berwick and Westminster). An at-grade mid-block crossing would have the advantage of no turning movements. As raised by submitters, a grade separated crossing (sub-way or overbridge) would remove the conflict with vehicles altogether. However, there are a number of issues with such an option, with the key issue being the lack of room to accommodate the overbridge within the current road reserve. It would be difficult based on the number of daily users to justify the cost of such a structure and there are major visual impacts associated with installing an overbridge in this location.

The banning of right turn vehicles from Cranford Street into Westminster Street in the morning peak will also help reduce this risk.

Another safety issue identified during the consultation was the school crossings on Innes Road outside Malereau Primary School and Our Lady of Fatima School. While there are zebra crossings outside each school, many drivers are not stopping, especially at the Malereau Primary School crossings. A signalised crossing would be more effective, perhaps located at the Malereau school crossing. Although the traffic volumes on Innes Road are not expected to increase significantly (and not above 30%) when the CNC is

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24 Now known as St Francis of Assisi School
opened we would strongly recommend Christchurch City Council signalise one of the crossings as part of its safer routes to school programme.

There are also incidents on Rutland Street outside St Albans Catholic School between school children and cyclists on the cycleway. Christchurch City Council have been looking into these issues as part of the major cycleway programme and hence the Plan does not consider this matter further, other than raising it as an issue that needs to be monitored going forward. It is possible that the increased traffic flows on Rutland Street as a result of the CNC may impact on the safety of crossing school children. Options to address any concerns may need to be considered as a Stage 3 project.

It is important that through the ‘safe routes to school programme’ that there is additional education of pupils, teachers, and parents, especially associated with safe crossing behaviour in and around each school, leading up to the opening of the CNC.

7.6.2 Safer Cycle Facilities

A key impact of the additional CNC traffic and the need for peak period clearways on Cranford Street and other routes is a deterioration in the facilities provided for cyclists on these routes. Not only is there additional traffic on the clearway routes, there is not adequate room to provide cycle lanes or adequate room for cyclists when clearaways are in use. The 3.7m wide kerbside lane is not adequate for a truck or bus to safely pass a cyclist. When parking is occurring in the clearway lanes, then cyclists have some space between the parked car and main traffic lane. Such a facility is only suitable for confident cyclists and not the new cyclists that Christchurch City Council want to encourage into cycling. It is also a poorer option than the cycle paths that are provided down the CNC and on Cranford Street down to McFaddens Road.

The option of a shared path on the bend is not considered suitable due to safety concerns associated with backing vehicles from residential properties. Because of issues associated with visibility from backing vehicles, narrowing the bend and widening the carriageway to accommodate cycle lanes is also not considered a safe option.

With the Papakura Parallel nearby and with the provision of additional infrastructure and suitable wayfinding (at each end of clearway sections), the majority of cyclists can be accommodated on alternative routes. Some cyclists will choose to cycle on Cranford Street anyway, mostly the confident cyclists that will use the space when available or cycle in the traffic lane. Others with origins of destinations on routes like Cranford Street will most likely ride on the footpath or cycle in the traffic. If the Government do pass a law allowing footpath cycling like some Australian States and other counties, then we would recommend that Christchurch City Council consider applying this to these routes. With footpath riding, speeds are tempered by the width of the footpath (as compared with allowing a footpath cyclist on this route as a shared path) and the users who are typically less confident or younger riders.

To provide suitable facilities for cyclists coming from the north (to and from the city) and the local community we are recommending investigation of one further north-south cycleway and at least three east-west cycle links to the Papakura Parallel and the new north-south cycleway, which needs to be on the eastern side of Cranford Street. The need for the new north-south route, especially north of Westminster Street, is that the deviation to the Papakura Parallel will be too great for some cyclist’s trips, especially from cyclists that originate from Mahorau, which is to the east of Cranford Street. Wayfinding needs to be provided at the McFaddens Road/Cranford Street intersection to the north, in the south, cyclists heading north from the city should be encouraged to use the Colombo Street cycleway or the Manchester Street cycle lanes.

The new north-south link should start on the eastern side of Cranford Street at the McFaddens Road / Cranford Street intersection, the preferred route needs to go through a routes selection process and Safety Audit and Network Functionality (SANF) assessment (see Appendix H for details). One potential route that utilises streets that need to be traffic calmed, is shown in figure 7.17. The route follows McFaddens Road, Jameson Street, Sennet Street, Farje Street, then alongside Madras Street and through St Albans Park, Allard Street, Pocke Street, Purchas Street, and then onto Manchester Street. The route would be a combination of quiet streets and shared paths. Suitable crossings would need to be provided across Innes Road, Westminster Street, and Edgeware Road.

The key east-west links are McFaddens Street, Westminster/Courtenay Street and Edgeware Road. The McFaddens Road cycle connection would be considered as part of the traffic calming of this route on both sides of Cranford Street. The Westminster Street/Courtenay Street and Edgeware Road cycle facilities would be included in two corridor studies that are recommended for these routes, with the extent of these studies shown in purple in Figure 7.17. This will be a combination of on-road cycle lanes and shared facilities. Extension of the Manchester Street cycle lanes from Bealey Avenue to Edgeware Road is also recommended.
7.6.3 Safe Access to Parks

The additional traffic from the CNE will potentially impact on traffic flows around at least two of the parks, St Albans Park and to a lesser degree Malvern/Rugby Park. Given St Albans Park is surrounded by three main roads that are likely to have an increased traffic volume, being Warrington Street, Barbados Street, and Farfar (Madras) Street, it is the most affected by additional traffic. Current pedestrian (and cycle) access to the park is not ideal with the wide carriageway on Farfar Street and Barbados Street, and a roundabout and only pedestrian crossing aids at Farfar/Warrington and Barbados Street/Warrington Street respectively. Cycle access to the north is provided by these main roads. With the relatively lower traffic volume, the impact on access and safety has been limited. With the increased traffic it will be difficult in peak periods to access the park.

The installation of traffic signals at Farfar Street/Warrington Street and Barbados Street/Warrington Street as part of the major road improvement (MR3) will improve access and safety considerably to pedestrians and cyclists even with the increasing traffic volumes. The new north-south cycle facility (SC3) in conjunction with east-west links (SC3 and SC4) will also improve cycle access to this park. The remaining issues are mid-block crossings across Farfar Street/Madras Street and Barbados Street. The new design of these routes needs to consider how both routes can be narrowed alongside the park so that pedestrians have shorter crossing distance and speeds are managed to lower levels. This is particularly an issue for the mobility impaired and also caregivers with prams.

In terms of Malvern Park, rat running traffic on Roosevelt and Malvern Streets would impact on access to the park. Traffic calming measures will be required to manage traffic volumes and speeds around the park. Access across Innes Road to Malvern Park will also become more difficult due increasing traffic volumes. There is an alleyway provided between Innes Road and Knowles Street/Weston Street which includes a refuge island on Innes Road. With increased traffic flows on Innes Road, the mid-block crossing will be more difficult.
7.6.4 Safe Access to Commercial Centres

There are a number of commercial centres that are likely to be impacted by the downstream traffic generated from the CNC, this includes the Edgeware Village Neighbourhood Centre and four local commercial centres, being Westminster/Cranford shops, Barbadoes/Warington shops, Barbadoes/Edgeware shops, and the Rutland Street shops.

Recent changes on Rutland Street have provided improved access to these shops by bicycle (Papanui Parallel) and pedestrians (crossing aids). Parking has also been considered in the new design. However, there are concerns from businesses that there is not enough short-term parking nearby. This is a matter that needs to be monitored by Christchurch City Council and addressed as needed.

The Edgeware Village has been the subject of several recent studies, including the Edgeware Village masterplan. This has resulted in improved north-south cycle facilities (Papanui Parallel) and a signalised pedestrian crossing at Edgeware Road. Modelling indicates that traffic volumes may increase on Edgeware Road, both to west (and east) of Cranford Street and on Cranford Street/Sherbourn Street. This is likely to impact on cycle access to the village and the Papanui Parallel, especially from the east. The corridor plan recommended for Edgeware Road (in Figure 7-17) should consider how cyclists can move through the Village east to west and vice-versa. Any option development through the village needs to be developed in conjunction with refinement of the Edgeware Village masterplan.

The centre most impacted by the extra CNC traffic is the Cranford Street/Westminster Street local centre. Since the earthquakes this centre has become more vibrant with several new businesses setting up in this area. The current pedestrian and cycle connections around the centre are not good, although there is a signalised intersection to get across Cranford Street. With Christchurch City Council wanting to promote walking and cycling, and encourage people to use these local centres, in addition to the increasing traffic through the centre we recommend that a plan be prepared for the centre in conjunction with the corridor study of Westminster (and Courtenay) Streets. The plan should look at cycle and pedestrian linkages to the centre. This will require widening of the western approach to the traffic signals and new footpaths. The plan should also consider parking requirements and options to provide additional parking, especially off-road parking.

The Warington Street/Barbadoes Street local centre also has relatively poor pedestrian and cycle facilities. Access to the north will be improved with the proposed traffic signals. A plan should also be prepared that looks at opportunities to improve pedestrian facilities, especially to the park/west side of Barbadoes Street. The study should also look at parking requirements, as parking demand is high from residents and the café customers who are not able to use the off-road car-park, with the clearway option impacting on parking availability. Special consideration needs to be given to the Audiology business on west side of Barbadoes Street (sensitive to noise, including construction) and also the location of the bus stop outside the café (can this be moved to allow short stay parking for the café?).

The Barbadoes Street/Edgeware Street local centre has poor cycle facilities but reasonable pedestrian access via the traffic signals. Again, a plan should be prepared for this centre. Cycle facilities should be provided on Edgeware Road as part of the Edgeware corridor study. Parking requirements should be considered given the potential for the clearway to limit parking in the morning peak period.
8. Recommendations (Management Plan)

The overall downstream effects plan will be implemented over approximately a 10-year period. Some network changes need to be in place before the CNC is opened in mid-2020 due to the expected jump in traffic volumes on Cranford Street from traffic diverting from other routes. While the focus is on routes that are expected to be impacted by traffic growth of 30% or more by 2031 as result of the CNC, the timing of upgrades is dependent on a number of factors, such as increased crash risk, overall increase in rat-running, level of congestion on arterial roads and impacts of construction after CNC opens.

The following sections outline the recommended improvements and further studies that are proposed to avoid, remedy and mitigate the traffic impacts of the CNC on the downstream road network. This builds on the option development process discussed above. First, we discuss the staging of the upgrades and monitoring requirements before presenting the options across the seven option (and study) categories.

8.1 Monitoring and Project Staging

8.1.1 Introduction

The Plan presented in this report is based on traffic modelling, which is based on land-use projections and drivers’ behaviours. There is no certainty of how much traffic will use the CNC and downstream roads, especially by 2031. However, there is an expectation that there will be an initial increase in traffic due to drivers diverting to the CNC from Marshlands Road and Main North Road, and hence the Plan looks to address the impact of this increase and then monitoring will be used to confirm transport impacts between 2021 and 2031 and what needs to be addressed.

Some parts of the network may be initially more sensitive to the impact of the CNC than others, and once drivers become more accustomed to the new layout, driving behaviour will become more obvious. We are particularly conscious that drivers’ rat-running behaviours are difficult to predict using a transport model and so we expect some behaviour to be different to what has been modelled.

The capacity interventions, particularly on Cranford Street and Berwick Street, appear more pressing than others, and do need to be in place before the CNC becomes operational. There were some suggestions during consultation that no works should be undertaken prior to the CNC opening, and to see how the network performs. This approach has merit on parts of the network, however if universally adopted it is likely to result in major traffic impacts on a large number of (rat-running) routes after the CNC is opened and severe congestion on arterial roads. Making changes following the opening of the CNC may also be very disruptive on commuters and the community once the network is already heavily congested.

8.1.2 Proposed Monitoring

As previously stated, the Plan is focused on parts of the network that experience a 30% increase in vehicles (minus underlying traffic growth). In order to ascertain whether a part of the network has exceeded the 30% threshold, the simplest approach would be interpolate between the growth expected on 2021 and 2031 with the volume recording of any given time. However, there are a number of limitations in using this approach as outlined below.

There are many societal events which affect the number of trips undertaken on a network: land-use changes, economic changes, and political changes to name a few. Given time, changes will occur, and these will need to be updated in a base model. There are also many specific changes that will occur on the network which will also need to be updated within the base model. These changes are relatively simple to take care of in a model. However, a much more difficult undertaking is to uncouple changes made to the downstream network in response to the CNC; changes which affect the traffic volume on various streets (increases and decreases) which may not have been undertaken had the CNC not been constructed, or at least not within the set timeframe outlined in the NoR. One example of this is the provision of additional capacity on (any) arterial corridor in order to relieve traffic from local streets. Any expansion of capacity on the network will likely illicit a redistribution of vehicle movements, but the net effect may on balance be the most desirable. Consequently, there may be scenarios where Christchurch City Council are best to increase the traffic flow on some arterial or collector roads (perhaps even in excess of the 30% threshold). Over time it will become increasingly difficult to separate the impact of these downstream treatments and the CNC itself in terms of their consequence to the network’s performance.

The easiest method, therefore, is to gather baseline data from the monitoring sites, and apply an assumed base growth rate on the network to these streets as representing growth that would have occurred if the CNC was not built. Then traffic volumes can be monitored and, when a site increases beyond a 30% growth above this standard level of growth, the next step of investigation can begin. In our view, a 30%
downstream wide blanket threshold is a relatively blunt approach to network management of this magnitude. It fails to acknowledge fundamental network differences, and the interrelationship between hierarchy elements. Networks vary in where it can, and cannot, accommodate growth, or indeed what exactly might be considered acceptable or unacceptable growth. The relationship between effects of traffic, and volume of traffic, is also not strictly linear. Some effects respond differently to the volume of traffic, and effects also vary depending by road environment.

A time unit for the traffic volume increase was not stipulated in the NoR (for example 30% increase on the number of vehicles per day). The tidal nature of the commuter flow in Northern Christchurch means that the greatest effects is usually experienced during the morning peak, and to a lesser extent the evening peak. Therefore, for the purposes of the Plan, the assumed time unit for the 30% threshold includes the daily count, AM peak count, or the PM peak count.

A decision tree conceptualisation of the process outlined in the NoR is shown below:

![Decision Tree](image)

**Figure 8-1: Decision Tree for NoR Monitoring of Traffic Volumes**

The monitoring programme will involve the collection of daily traffic volumes and vehicle speeds (over a minimum of three 24-hour days — normally seven days). The baseline data (pre-CNC) is being collected in 2018 at over 50 sites/streets in the downstream road network. The locations of the counts are shown on the screen lines in Appendix B. Following the opening of the CNC, Christchurch City Council will typically collect counts annually or biennially on the routes that are most likely to be impacted by rat-running traffic, as indicated by the transport modelling. A number of the streets included in the baseline counts are not expected to be impacted, but counts are being collected in case rat-running does occur so there can be a comparison made of traffic conditions before the CNC opened. For these streets, and also the regularly monitored streets out of sequence, special counts may be collected if rat-running does appear to be an issue. It may also be necessary to monitor adjoining streets after traffic calming is applied if traffic just diverts across to these other streets.

It is also proposed to monitor the vehicle emission, noise, and vibration impacts of the additional traffic on the main roads (arterials and collector routes). This monitoring is in response to concerns raised by the community. Baseline data will be collected along with annual or biennial measurements through to 2031. The arterial sites being monitored include:

- Cranford Street north of McFaddens Street
Council 14 February 2019

- Cranford Street north of Berwick Street
- Berwick Street immediately east of Cranford Street
- Madras Street north of Edgeware Road
- Barbadoes Street north of Edgeware Road

The intention being to collect air pollution levels using detectors installed at each of these locations, so data can be extracted whenever required through to at least the end of 2031. Christchurch City Council will investigate suitable technology for this monitoring.

Noise and vibration measurements will also be collected at sites along these routes. The monitoring will consider those most affected by vibration and noise (houses and businesses close to the vibration and noise source), and the impact on houses and businesses along each section of road. The source of noise and vibration will be identified using video (CCTV) cameras. Based on the monitoring, Christchurch City Council will consider whether there are suitable options to address any adverse effects found by this monitoring.

8.1.3 Staging of Improvements

The proposed improvements and associated studies have been grouped into three time periods. Stage 1 upgrades are those upgrades that need to be in place before the CNC is opened, to address severe traffic congestion and excessive rat-running in local streets. Stage 2 upgrades are those improvements that will reduce other traffic effects of the CNC opening traffic flows, including additional traffic calming schemes, safe cycling, and safe access to schools, parks, and commercial areas. These improvements should be implemented within three years of the opening of the CNC. It is recommended that the studies into the issues and options for these upgrades commence before the CNC opens. While these improvements should ideally also be in place before the CNC opens, it is acknowledged that it will take time to develop and implement these options. Stage 3 upgrades are those improvements that the modelling indicates will be required between 2021 and 2031. This includes traffic calming and some additional safe cycling improvements. The timing of these upgrades will depend on the outcomes from the monitoring.

8.2 Proposed Improvement Options

This section outlines the various improvement options and associated studies that are recommended to address the expected impacts of the CNC traffic that will flow into the downstream road network. The options have been split into Stage 1, 2, and 3 depending on when the upgrades should be implemented. The improvements options have been grouped into the following categories:

1. Major Roads (MR Options)
2. Traffic Calming (TC Options) and Safe Speed Community Areas (SSCA Options)
3. Safe Access to Schools (AS Options)
4. Safe Cycling Routes (SC Options)
5. Access to Parks (AP Options)
6. Access to Commercial Centres (AC Options)

Each of the options are presented in the following sections and have been developed in line with the processes outlined previously.

8.2.1 Major Roads (MR Options)

All of the major road upgrade options need to be in place before the CNC opens. So, all options are in Stage 1.

The major road options have been separated into those north and south of Berwick Street, and on Berwick Street / Warrington Street. The options proposed north of Berwick Street include the following:

**MR1 (Cranford Clearways)** – Peak Period Clearways along Cranford Street – To extend from Innes Road through to Berwick Street. To include right turn restrictions at Dee Street and Malvern Street and at English Park Carpark. This option will also include a study of the accesses along the route and how drivers will be able to manoeuvre in and out of each driveway (the same to be applied to other clearway options further south). A plan will also need to be produced on how to enforce the clearways.

Attachment A Item 16
MK2 (Westminster/Cranford Intersection) – Upgrades to Westminster Street / Cranford Street Intersection.

This is to include banning right turns into Westminster Street in peak period, widening of the western approach and include cycle lanes on Westminster Street. It should also include other changes to improve safety for crossing school children as discussed later on.

Along Berwick Street and Warrington Street the following option is proposed. This should be undertaken as a single option given the close proximity of the intersections and associated road widening between each.

MK3 (Berwick/Warrington Upgrades) – Upgrading of Berwick Street / Cranford Street Intersection to include double right turn into Cranford Street and signalisation of the Forfar Street / Warrington Street and Barbados Street Warrington Street Intersections, plus any road widening between these intersections.

Simulation modelling will be required to assess what extra lanes are required.

South of Berwick Street there are several upgrade options possible on the three arterial/collector routes (as specified earlier, i.e. options 3(a), 3(c) or 4(a)) and a scoping study needs to be undertaken, using a simulation model to develop these options further and determine what needs to be in place by 2021 and then through to 2031. Consideration needs to be given to high kerbside parking developments on Madras Street and Barbados Street due to medium density developments in this area. In the development of options a parking survey needs to be undertaken as part of the scoping study. The access requirements of the proposed S1 Alabah Shopping Centre on Madras Street also need to be considered in option development. It is suggested up to three options should then go to the public for feedback before finalising the option. This may delay the project construction until after the CNC opens, but, ideally these changes are made before the CNC opens. The MR 1, 2, and 3 options above are the more critical projects that need to be in place when the CNC opens.

MK4 (South Berwick Upgrades) – Preferred downstream of Berwick Street arterial upgrade option that comes out of the scoping study of Options 3(a), 3(c) and 4(a) and any sub-options of these.

We also strongly recommend that Christchurch City Council work with NZ Transport Agency to do a study extending the High Occupancy Vehicle (HOV) lanes on the CNC in the southbound direction from north of QEII down through the arterial road network and along Cranford and Sherborne Streets. In addition, an HOV lane could be provided northbound from Bealey Avenue through to the CNC roundabout on Cranford Street. The use of HOV lanes would promote car-pooling and bus use, and reduce the number of single occupancy vehicles, which is a desirable travel demand management outcome. The HOV lanes would utilise the extra lane created by the peak period clearways. This study is specified below as MK5 and the HOV lanes, if suitable, should ideally be implemented as a Stage 1 improvement, but could also be implemented as a Stage 2 improvement.

MK5 (HOV lanes on Cranford Sherborne) – Investigate with the NZ Transport Agency extending the southern HOV lanes on the CNC through to Bealey Avenue and installing a northbound HOV lane.

No other major road upgrade options are proposed.

8.2.2 Local Roads: Traffic Calming of Local Streets (TC Options) and Safe Speed Community Areas (SSCA Options)

As mentioned in Section 7.5, it is proposed that nine safe speed community areas (SSCA 1 to 9) are introduced in the downstream road network making up most of the local streets. A speed limit of 30km/h is recommended, but a 40km/h speed limit is also an option. The location of these areas on each side of Cranford Street and Sherborne Street are shown in Figure 8-1 and listed below.

- SSCA1 – Ranger Street
- SSCA2 – Knowles Street
- SSCA3 – Thames Street
- SSCA4 – Roosevelt Street
- SSCA5 – Flockton Street
- SSCA6 – Trafalgar Street
- SSCA7 – Osley Ave
- SSCA8 – Caledonian Road
- SSCA9 – Bishop Street
It is recommended that the SSCA areas all be in place before the opening of the CNC, as a deterrent for rat-running. It is recommended over time that all the streets in these areas are traffic calmed so that the reduced speed limit is self-explaining on each street.

The modelling has identified the streets that are likely to require traffic calming through to 2031. As specified previously, some of these streets need to be traffic calmed in Stage 1 or 2, while others can wait until the CNC opens and following monitoring (Stage 3 options). It is also possible the monitoring will identify rat-running streets not identified in the transport modelling. Table 8.1 shows the streets that are expected to have an increase in traffic volumes through to 2031 even with the arterial upgrades and the proposed staging of these options, based on the expected timing of rat-running on these routes. Potential rat-running routes west of Rutford Street have been excluded from assessment (Christchurch City Council will monitor and treat these routes if required separate from the Plan).

Table 8.1: Traffic Calming Routes and Their Staging

<table>
<thead>
<tr>
<th>Street</th>
<th>Start and Finish</th>
<th>Staging</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC1 - Mersey Street</td>
<td>Innes Road to Berwick Street</td>
<td>Stage 1</td>
</tr>
<tr>
<td>TC2 - Knowles street</td>
<td>Rutland Street to Cranford Street</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC3 – Weston Street</td>
<td>Rutland Street to Cranford Street</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC4 – McFaddens Street</td>
<td>Rutland Street to Cranford Street</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC5 – McFaddens Street</td>
<td>Cranford Street to Rangiora Street</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC6 – Jamieson Street</td>
<td>McFaddens Street to Innes Road</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC7 – Malvern Street</td>
<td>Rutland Street to Cranford Street</td>
<td>Stage 1*</td>
</tr>
<tr>
<td>TC8 – Dee Street</td>
<td>Roosevelt Street to Cranford Street</td>
<td>Stage 1*</td>
</tr>
<tr>
<td>TC9 – Roosevelt Street</td>
<td>Innes Road to Westminster Street</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC10 – Forfar Street</td>
<td>Westminster Street to Warrington Street</td>
<td>Stage 3</td>
</tr>
<tr>
<td>TC11 – Flockton Street</td>
<td>Westminster Street to Warrington Street</td>
<td>Stage 3</td>
</tr>
<tr>
<td>TC12 – Caledonian Road</td>
<td>Bealey Avenue to Edgeware Road</td>
<td>Stage 3</td>
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<tr>
<td>TC13 – Edgeware Road</td>
<td>Caledonian Road to Manchester Street</td>
<td>Stage 3</td>
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<tr>
<td>TC14 – Manchester Street</td>
<td>Bealey Avenue to Edgeware Road</td>
<td>Stage 3</td>
</tr>
</tbody>
</table>

* As part of the Cranford Street Clearways Project (MR1) these streets will become left-in and left-out only which effectively works as traffic calming.

8.2.3 Safe Access to Schools (AS)

The main school impacted by the CNC downstream traffic is St Alba’s Primary School. Some of the school children need to cross Cranford Street to walk to the school. Given the range of options that are possible to address this risk it is recommended that a study be undertaken to identify the preferred option(s). This study is to be undertaken as part of the Stage 1 improvements and implemented as a Stage 2 Improvement.

AS1 – Safe Access across Cranford Street – This study will look at a range of options, including a new mid-block signalised crossing across Cranford Street near the English Park Carpark entrance.

AS2 – Interim improvements on Cranford Street - As an interim measure it is suggested that, as part of MR1 (Cranford Clearways) and MR2 (Westminster/Cranford intersection), a 40km/hr speed limit be introduced during school arrival and departure time on Cranford Street from north of Westminster Street, a coloured surfacing be installed at the Westminster Street/Cranford Street intersection, and left turning red arrows be
used as protection for crossing pedestrians. As with MIR1 and MIR2 these changes should be undertaken as a Stage 1 improvement.

8.2.4 Safer Cycling Routes (SC Options)

One of the new transport effects of the CUC is that there will be poor facilities for cyclists on Cranford Street, especially when the carriageway is in operation. Given the future traffic volumes down Cranford Street, this is not ideal. A number of options to provide better cyclist facilities on Cranford Street were investigated (e.g. shared pedestrian and cyclist path) and none are suitable within the current road reserve. Widening the road reserve would be expensive and very intrusive for those who live on the street. Hence the preferred option is to accommodate cyclists on alternative routes. While the Papamoa Parallel does provide an alternative route, this is not considered sufficient on its own to redirect cyclists and accommodate all diverted and local area cyclists and hence other network changes are proposed. Hence, we propose a number of studies to identify suitable secondary cycle routes and look at wayfinding signage.

We would strongly recommend that Christchurch City Council use the SAI process to refine the options (as specified in Appendix H). The preferred eastern north-south route should also be selected using a multi-criteria analysis of different potential routes (as also specified in Appendix H).

The proposed five cycle facility upgrades are as follows:

SC1 (Cycle Wayfinding Signage) - Development of a wayfinding signage plan that directs cyclists at the northern end of Cranford Street (at McFaddens Road) and southern end of Cranford Street to safer cycling routes. This should be a Stage 1 improvement and coincide with introduction of the peak period clearways.

SC2 (McFaddens Road Secondary Cycle Corridor) - Development of a safe cycling route both west (towards the Papamoa Parallel) and east (towards new north south route) on McFaddens Road of ideally slow streets or off-road routes. Route study to occur in Stage 1 and be implemented in Stage 2.

SC3 (Westminster/ Courtenay Secondary Cycle Corridor) - Development of a safe cycling route both west and east of Cranford Street. May consist of on-road and off-road cycling facilities, or just on-road facilities. Route study to occur in Stage 1 and be implemented in Stage 2.

SC4 (Edgewater Road Secondary Cycle Corridor) - Development of a safe cycling route both west and east of Cranford Street. To consist of mainly on-road cycling facilities. Route study to occur in Stage 1 and be implemented in Stage 2.

SC5 (North-South Secondary Cycle Corridor) - Development of an alternative north-south cycle route through traffic calmed streets to the east of Cranford Street. To consist of bicycle greenways and off-road routes. A key cycle linkage to St Albans Park from the north and south. Route study to occur in Stage 1 and be implemented in Stage 3.

These Westminster Street/Courtenay Street and Edgewater Road corridors are also key access routes for pedestrians to the Westminster Street/Cranford Street local activity centre and the Edgewater Village, as specified in section 8.2.6.

8.2.5 Access to Parks (AP Options)

Two studies are proposed to look at safe access to these parks and what improvements could be made to improve safety around the parks.

AP1 (St Albans Park Access Plan) - This plan will look at access to the park by pedestrians (of different abilities), cyclists, and motorists. It will consider carparking requirements, given the proposed upgrades to Forfar Street and Barbadoes Street, and parking requirements of cyclists. The study should occur during Stage 2 and any recommendations be implemented during Stage 3.

AP2 (Malvern/Rugby Park Access Plan) - This plan will look at access to the park by pedestrians (of different abilities), cyclists, and motorists. It will consider car parking requirements of Malvern Park and also what traffic calming may be required to reduce traffic speeds on Malvern Street and Rosedale Street to create safer crossing places. The study should occur during Stage 2 and any recommendations be implemented during Stage 3.

8.2.6 Access to Commercial (Activity) Centres (AC options)

It is recommended that four activity centre transport studies and two corridor studies be undertaken during Stage 2 and implemented during Stage 3 of the process, as outlined below. With a development plan having already been prepared for the Edgewater Village it not proposed to do a further study of that
centre. There are some overlaps between these studies and the safer cycling route studies, so this will need careful coordination to get the best outcomes.

**AC1 – Westminster/Cranford Local Activity Centre Transport Study.** This study will consider safe access to this activity centre by pedestrians, cyclists, and motorists. It will consider amenity improvements that can be made to the centre. A key focus will be on improving access along Westminster Street and Courtenay Street in the associated corridor study and across the intersection as part of MR2.

**AC2 – Barbadoes/Warrington Local Activity Centre Transport Study.** This study will consider safe access to this activity centre by pedestrians, cyclists, and motorists. It will consider amenity improvements that can be made to the centre. A key change at this location will be the installation of traffic signals at the Barbadoes Street/Warrington Street intersection to improve walking access to the north. High kerbside parking demands and the noise sensitive audiology centre are key matters that need to be considered.

**AC3 – Barbadoes/Edgware Local Activity Centre Transport Study.** This study will consider safe access to this activity centre by pedestrians, cyclists, and motorists. It will consider amenity improvements that can be made to the centre.

**AC4 – Rutland Street Local Activity Centre Transport Study.** This study will consider safe access to this activity centre by pedestrians, cyclists, and motorists. It will consider amenity improvements that can be made to the centre. Given that there have been several changes outside these shops with the new cycleways, major changes are not likely to be required at this activity centre.

**AC4 – Westminster/Courtenay Corridor Study (Rutland to Fortar).** This study will be a companion study to the cycle corridor study (SC3) but focus on safe access by pedestrians along the route and crossing the route, especially for vulnerable road users.

**AC5 – Edgware Corridor Study (Springfield to Barbadoes).** This study will be a companion study to the cycle corridor study (SC4) but focus on safe access by pedestrians along the route and crossing the route especially for vulnerable road users.
9. Summary

Table 9-1 summarises the improvements and studies that are proposed before the CNC opens (Stage 1 improvements and studies) and those options that should be implemented within three years of the opening (Stage 2 - less critical but expected to be actioned early in the ten-year monitoring period). Given the big increase in traffic volumes on Cranford Street expected when the CNC opens some work needs to be undertaken before it opens to avoid excessive congestion and rat-running in the downstream network.

While some of the Stage 2 projects should ideally be in place before the CNC opens there is limited time to progress all the studies and projects identified before it opens and hence the more crucial projects have been prioritised in Stage 1 and the rest moved to Stage 2. Some of the Stage 2 projects, especially some of the traffic calming, may also not be required, depending on the monitoring results. The impact of delaying some projects to Stage 2 (up to three years after the CNC opens) is that there may be adverse transport effects in the short term; Council will need to prioritise the wast of these transport effects, as identified in the monitoring, for early intervention, including rapid implementation projects where practical.

Other projects, those in Stage 3, can be implemented after the CNC opens, the traffic monitoring will show the actual transport impacts of the CNC and allow the projects developed in Stage 3 (and studies and projects in Stage 2) to be refined and changes made to the streets treated and options implemented in response to the observed traffic volumes, and other outcomes (e.g. increase in crash risk).

Table 9-1: Lists of improvement projects and studies categorised by Stage (note some projects appear in two or more stages consisting of the studies and the implementation of improvements)

<table>
<thead>
<tr>
<th>Stage 1 – Projects and studies to be undertaken before the CNC opens</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major Road (MR) Upgrades:</strong></td>
</tr>
<tr>
<td>MR1 (Cranford Street Clearways) – Peak Period Clearways along Cranford Street from Innes Road to Berwick Street.</td>
</tr>
<tr>
<td>MR2 (Westminster/Cranford Intersection) – Upgrades to Westminster Street /Cranford Street Intersections.</td>
</tr>
<tr>
<td>MR3 (Berwick/Warrington Upgrades) – Upgrading at Berwick Street /Cranford Street signalled intersection and signalisation of the Forfar Street /Warrington Street and Barabasdes Street /Warrington Street intersections.</td>
</tr>
<tr>
<td>MR4 (South Berwick Upgrades) – Downstream of Berwick Street arterial upgrade option that comes out of the scoping study.</td>
</tr>
<tr>
<td>MR5 (HOV lanes on Cranford-Sherborne) – Investigate extending the southern HOV (High occupancy vehicle) lanes on the CNC through to Bealey Avenue and installing a northbound HOV lane.</td>
</tr>
</tbody>
</table>

**Safe System Community Areas (SSCA):**

SSCA 1 to 9 – Introduce nine 30km/h (or 40km/h) reduced speed limit areas through the downstream local road network.

**Traffic Calming (TC) Measures:**

Introduce traffic calming on TC1 – Mersey Street (Innes Road to Forfar Street), TC2 – Knowles Street, TC 3 – Weston Street, TC 4 – McFaddens Road, TC7 – Malvern Street (LILO) and TC8 – Dee Street (LILO)

**Safe Access to Schools (SAS):**

AS1 – Safe Access Across Cranford Street – This study will look at a range of options, including a new mid-block signalised crossing across Cranford Street near the English Park Carpark entrance.

AS2 – Interim Improvements on Cranford Street – As an interim measure it is suggested that as part of MR1 (Cranford Clearways) and MR2 (Westminster/Cranford Intersection) a 40km/h speed limit be introduced during school arrival and departure time on Cranford Street from approximately 50m north of Westminster Street to 50m south of Berwick Street, a coloured surfacing be installed at the Westminster/Cranford Intersection, and left turning red arrows be used as protection for crossing pedestrians.
### Safe Cycling Routes (SC):

**SC1 (Cycle Wayfinding Signage)** – Development of and implementation of a wayfinding signage plan that directs cyclists at the northern end of Cranford Street (at McFaddens Road) and southern end of Cranford Street to safer cycling routes.

**SC2 (McFaddens Road Secondary Cycle Corridor)** – Undertake a route study of a cycling route both west (towards the Papanui Parallel) and east (towards new north south route) on McFaddens Road.

**SC3 (Westminster/Courtenay Secondary Cycle Corridor)** – Undertake a route study of a cycling route both west and east of Cranford Street.

**SC4 (Edgware Road Secondary Cycle Corridor)** – Undertake a route study of a cycling route both west and east of Cranford Street.

**SC5 (North-South Secondary Cycle Corridor)** – Undertake a route study of an alternative north-south cycle route through traffic calmed streets to the east of Cranford Street.

### Stage 2 – Projects and Studies that need to be undertaken within three years of CNC opening

**Traffic Calming (TC) Measures:**

Introduce traffic calming on TC9 – Roosevelt Street, TC12 – Caledonian Street, TC13 – Edgware Road (Village), TC14 – Manchester Street and TC18 – Westminster Street / Courtenay Street, where expected increases in traffic volumes are validated by the monitoring data.

**Safe Access to Schools (AS):**

**AS1 – Safe Access Across Cranford Street** – Implement any options identified in this study such as a new mid-block signalised crossing across Cranford Street near the English Park Carpark entrance.

**Safe Cycling Routes (SC):**

**SC2 (McFaddens Road Secondary Cycle Corridor)** – Construct a secondary cycling route both west (towards the Papanui Parallel) and east (towards new north south route) on McFaddens Road.

**SC3 (Westminster/Courtenay Secondary Cycle Corridor)** – Construct a secondary cycling route both west and east of Cranford Street.

**SC4 (Edgware Road Secondary Cycle Corridor)** – Construct a secondary cycling route both west and east of Cranford Street.

### Access to Parks (AP):

**AP1 (St Albans Park Access Plan)** – Development of a plan that will look at access to the park by pedestrians (of different abilities), cyclists, and motorists.

**AP2 (Malvern/Rugby Park Access Plan)** – Development of a plan that will look at access to the park by pedestrians (of different abilities), cyclists, and motorists.

### Access To Commercial Centres (AC):

**AC1 – Westminster/Cranford Local Activity Centre Transport Study** – Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

**AC2 – Barbadoes/Warington Local Activity Centre Transport Study** – Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

**AC3 – Barbadoes/Edgware Local Activity Centre Transport Study** – Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

**AC3 – Ruffland Street Local Activity Centre Transport Study** – Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

**AC4 – Westminster/Courtenay Corridor Study (Ruffland to Forfar)** – Undertake this study which will focus on safe access by pedestrians along the route and crossing the route especially for vulnerable road users.

**AC5 – Edgware Corridor Study (Springfield to Barbadoes)** – Undertake this study which will focus on safe access by pedestrians along the route and crossing the route especially for vulnerable road users.

### Stage 3 – Projects that could be undertaken any time between the opening of the CNC and 2031
Monitoring

Ongoing monitoring of traffic, pedestrians and cycle volumes, crashes and vehicles speeds, emissions, noise and vibration on major roads and some local streets is to occur annually, or when required more often, after the CNC opens to validate the plans and projects already identified in this document, and through the various studies that are specified.

It is expected that additional interventions will be required to avoid, remedy or mitigate the effects of the additional CNC traffic, including the impact of trucks, that is identified in this monitoring. In terms of local streets, intervention is required if the traffic volumes increase by 30% above what might have been expected on the route if the CNC had not been built. In terms of other interventions (e.g. arterial upgrades) this will be the result of congestion or safety concerns with respect to all road users. Some improvement may also not be required (e.g. if local road traffic does not increase by 30%, as predicted by the modelling). Consultation on all proposed changes will be undertaken.

An indication of Stage 3 improvement projects is provided below. This list will need to be reviewed and where necessary revised once the actual impacts of the CNC traffic is known from the monitoring.

Traffic Calming (TC) Measures:
Introduce traffic calming only where monitoring indicates high levels of rat-running are occurring (may include additional streets): TC = 5 McFadden, Knowles, Weston (east Cranford), TC6 = Jamieson, TC10 = Forfar Street, TC11 = Foxton Street, TC14 = Severn Street, TC17 = Thames Street, TC 18 = Aylesford Street, TC19 = Kensington Avenue, TC 20 = Philipps Road and TC 21 - Francis Street.

Safe Cycling Routes (SCS):
SC5 (North-South Secondary Cycle Corridor) - Construct an alternative north-south cycle route through traffic calmed streets to the east of Cranford Street.

Access to Parks (AP):
AP1 (St Albans Park Access Plan) – Implementation of the access plan as required to address access issues.
AP2 (Malvern/Rugby Park Access Plan) – Implementation of the access plan as required to address access issues.

Access to Commercial Centres (AC):
AC1 – Westminster/Cranford Local Activity Centre Transport Study – Implement study recommendations
AC2 – Barbadoes/Warrington Local Activity Centre Transport Study – Implement study recommendations
AC3 – Barbadoes/Edgeware Local Activity Centre Transport Study – Implement study recommendations
AC4 – Rutland Street Local Activity Centre Transport Study – Implement study recommendations
AC5 – Edgeware Corridor Study (Springfield to Barbadoes) – Implement study recommendations
Appendix A  Downstream Effects and Property Traffic Management Plan

1. Introduction and Purpose

1.1. Christchurch City Council (Council) lodged an application for a Notice of Requirement (NoR) for the Northern Arterial Extension and Cranford Street Upgrade (NAE/CSU) in October 2013. As part of that application, on 3 November 2014, the Council lodged a report, Northern Arterial Extension and Cranford Street Upgrade Transport Assessment Addendum (TAA).

1.2. The TAA reported on the Christchurch Northern Corridor and included an assessment that, at the city end of that corridor, more traffic is expected to use Cranford Street than would be the case without the Project. The principal reason for this anticipated increase in use is re-routing traffic within the Christchurch Northern Corridor to benefit from the improved travel conditions provided by the NZ Transport Agency’s Northern Arterial and the Council’s NAE/CSU.

1.3. While the project, and the full Christchurch Northern Corridor is considered by the Council to be necessary to deliver a wide range of outcomes for the urban form, shape and growth for northern Christchurch and Waimakariri District, additional traffic may have potential adverse effects on residences and businesses in the immediate area around the southern end of the NAE/CSU (referred to as “downstream effects” in this Management Plan). In particular, more vehicles may travel on adjacent or nearby roads which were not the subject of any improvement or upgrading as part of the NoR application.

1.4. The modelling used for the NoR predicts what will happen at 2031 so long as the modeled assumptions are borne out. The TAA recommends continued investigation of the downstream effects of the Christchurch Northern Corridor (i.e., NAE/CSU) with the following objectives:

(a) To identify preferred vehicle access routes, particularly for trucks, between the end of the Christchurch Northern Corridor and the Central City (that is between the end of the NAE/CSU and the City centre); and
(b) To identify strategies to keep vehicles on preferred vehicle access routes; and
(c) To discourage vehicles away from public transport routes and walking or cycling routes such as the Main North Road / Paparangi Road and Rutland Street corridors respectively.

1.5. This Management Plan is to ensure downstream effects are appropriately managed and to:

(a) Assess the existence, nature and extent of any increased traffic on streets adjacent to, or adjoining Cranford Street attributable to the NAE/CSU that might cause or contribute to a loss of service to any of these streets for up to 10 years after the opening date of the NAE/CSU,
(b) Implement measures to avoid, remedy or mitigate such effects, where these are more than minor, in a timely and cost-effective manner and where appropriate and practicable; and
(c) Monitor the efficacy of the measures for an appropriate period and implement further remedial action, if this is necessary and appropriate.

1.6. Some traffic increase can be expected if development to the north of Christchurch continues to grow or exceeds present expectations, whether or not the NAE/CSU project proceeds. For the avoidance of doubt, this Management Plan is to identify any adverse traffic effects that arise between the commissioning date of the NAE/CSU (expected to be approximately 2021) and up to ten years after that opening date (referred to in this Management Plan as the “Commissioning Period”). If any adverse effects are identified, a response to appropriately-manage these adverse effects, within this Commissioning Period will be considered and implemented.

1.7. The precise areas to be covered under this Management Plan will be established as part of the methodology referred to below. The methodology will assess the existence, nature and extent of any increased traffic attributable to the NAE/CSU on a number of streets at the southern end of the NAE/CSU including, but not limited to Mersey Street, Mulvaven Street, Roosevelt Street, Severn Street, Dare Street, Weston Road, Knowles Street and McFaddens Road [potentially adversely affected streets].
1.8. For the avoidance of doubt, while these listed streets are described as potentially adversely affected streets, this Management Plan is not confined to those streets, nor does it mean all of these listed streets will be adversely affected.

2. Appointment and Methodology

2.1. Prior to operating the NAE/CSU the Council will appoint an independent expert who is a suitably qualified traffic engineer to investigate and design an appropriate methodology to identify the potential impacts (if any) on those streets at the end of the Christchurch Northern Corridor which may be potentially affected as a result of the operation of the NAE/CSU.

2.2. That methodology is to apply commonly accepted professional standards to assess traffic-related effects and, for the avoidance of doubt, will include procedures to:

(a) Identify and confirm all streets adjacent to or adjoining Cranford Street affected by the operation of the NAE/CSU;

(b) Assess the current level of vehicle usage and service of each of the potentially adversely affected streets in proximity to the southern end of the NAE/CSU;

(c) Include modelling where appropriate to identify the anticipated future increase in the use of potentially affected streets that may be caused by, or attributable to, the operation of the NAE/CSU;

(d) Consider the extent of and effects (if any) arising from such growth in traffic flows, on those potentially affected streets that are reasonably attributable to the operation of the NAE/CSU;

(e) Recommend appropriate mitigation measures (where an increase in traffic-related effects within potentially adversely affected streets, is caused by or contributed to by the NAE/CSU) to Council and, where required, the local community board (if the community board holds the requisite delegation for Council for any of the traffic calming works required) as soon as practicable, and institute monitoring procedures to verify the outcome of the mitigation measures; and

(f) Recommend further remedial steps to Council and, where required, the local community board (if the community board holds the requisite delegation for Council for any of the traffic calming works required) under 3.1 below if monitoring confirms a continued increase in adverse traffic-related effects on the affected streets that is more than minor.

2.3 Any appropriate mitigation measures may be delivered on an iterative basis that is by first assessing the efficacy of an initial stage of mitigation measures before undertaking a further stage or stages of mitigation measures.

2.4 Where monitoring is required that monitoring must be completed within six months from the completion of the mitigation works.

2.5 The independent expert will support and where necessary, assist Council with consultation and/or the communication required as part of this management plan.
3. Recommendation to Council

3.1. The independent traffic expert recommendation to Council must include appropriate remedial steps to be taken to avoid, remedy or mitigate any increase in adverse traffic-related effects where such effects are more than minor, identified under the methodology as being caused by or attributable to the operation of the NAE/CSU. This may include but is not limited to:

(a) Measures to improve the operation of Cranford Street and Sherborne Street, including capacity measures such as peak hour clearways;
(b) The introduction of speed restrictions in some or all affected streets;
(c) The introduction of chicanes in some or all affected streets;
(d) The introduction of speed bumps in some or all affected streets;
(e) Any other suitable traffic calming mechanisms, including those identified within the Council’s Infrastructure Design Standard.

3.2 The remedial steps may include a programmed series of measures to be delivered over time, with the intention that any recommended remedial steps must be taken as soon as reasonably practicable after that recommendation is made. All remedial steps must be completed within the Commissioning Period.

4. Work to be Carried Out by Council

4.1. If the independent traffic expert determines that the increase in traffic to be experienced prior to the expiry of the Commissioning Period that is caused by or attributable to the operation of the NAE/CSU, is likely to raise or has raised the level of vehicle movements on any of the potentially affected streets by more than 30 per cent above the traffic level that would have occurred without the operation of the NAE/CSU then measures to improve the operation of Cranford Street and Sherborne Street and/or calming work will be undertaken by the Council as recommended.

4.2. Any calming work may be undertaken iteratively, (that is by first assessing the efficacy of an initial stage of calming work before undertaking a further stage or stages of calming work). In such a situation the monitoring previously undertaken must be repeated within six months of each stage of calming work being completed. This further monitoring is to assess whether further or other calming work is needed.

4.3. For the avoidance of doubt no calming work will need to be investigated or carried out unless the NAE/CSU has raised the level of vehicle movements by more than 30 per cent above the traffic level that would have occurred without the operation of the NAE/CSU. Further, the purpose of any calming work undertaken is to mitigate (effects from) any increased traffic movement to an acceptable level but does not mean a requirement to reduce traffic movements or their effects to the levels occurring prior to the opening date of the NAE/CSU.

4.4. The desired outcome of this Management Plan is to, within the Commissioning Period, avoid, remedy or mitigate downstream traffic effects, such that they are no more than minor. The Council shall take all practicable steps to ensure any works reasonably-necessary to achieve this outcome are completed within that time.

4.5. Where traffic calming work is recommended Council will consult with:

4.5.1. Residents of the streets where traffic calming measures are proposed to be taken:
4.5.2. Canterbury District Health Board;
4.5.3. Mairehau Primary School, Our Lady of Fatima School, Paparoa Street Primary School, St Albans Catholic Primary School and St Albans School;
4.5.4. St Albans Residents Association and Mairehau Community Trust; and
4.5.5. Cyclists through Spokes;
4.6. Consultation shall include the distribution of a newsletter including feedback form prior to the review.
5. Communication with Residents

5.1. Prior to operating the NAE/CSU, the Council shall prepare and implement a Communication Plan that sets out procedures detailing how the public and stakeholders will be communicated with throughout the Commissioning Period. As a minimum, the Communication Plan shall include:

5.1.1. Details of a public liaison person including contact details;

5.1.2. Methods to inform and to communicate details to property owners and occupiers within potentially affected streets of the recommendations from the independent traffic expert and any proposed mitigation measures to be carried out by Council;

5.1.3. Methods to deal with any concerns raised by property owners or occupiers; and

5.1.4. Monitoring and review procedures for the Communication Plan;

5.2 Owners and occupiers of properties on streets identified by the independent traffic expert as requiring mitigation measures shall be:

5.2.1 Advised of the recommendations of the independent traffic expert under clause 3, including proposed mitigation measures, within 30 working days following the provision of the recommendation to the Council;

5.2.2 Provided a period of 20 working days to comment on the proposed mitigation measures; and

5.2.3 Advised by Council of the final mitigation measures to be implemented, at least 20 workings days prior to commencement of any works.
Appendix B
Details

Cranford Street (north of Innes Road)
Figure 8-1: Cranford Street Changes (Source: https://www.nzta.govt.nz/assets/projects/christchurch-northern-corridor/CNC-Project-Update-Cranford-Street-August-2017.pdf)
Appendix C  Existing Traffic Flow and Crash Record

There is currently in excess of 20,000 vehicles per day on Cranford Street north of Berwick Street [2017]. Warrington Street (2013) and Berwick Street (2016) have traffic counts of 10,790 and 12,326 vehicles per day respectively. Madras Street and Barbadoes Street have traffic counts of 8,274 and 8,191 vehicles per day (in 2016), the counts presented here are reasonably recent. Older counts are also available however become less useful over time.

Crash Record

Given the large area impacted by traffic from the CNC we have referred to aggregated crash maps from Urban KiwiRAP (New Zealand Road Assessment Programme). Urban KiwiRAP uses estimate death and serious injury equivalents along with distance [risk per kilometre for collective risk]. It is a useful tool to examine safety risks comparative to the rest of the transport network, including other cities in New Zealand. Sections with high and medium-high risk are the key areas of focus.

An interrogation of Urban KiwiRAP data highlighted corridors that currently experience high numbers of crashes: either by kilometre (collective risk), or by number of vehicles (personal risk) in the study area.

Figure C-1: Collector Risk Map  [Source: https://roadsafetyrisk.co.nz/maps/collective-risk/]  Figure C-2: Death and Serious Injury by Movement Type [2013-2017]

The Collective Crash Risk in the vicinity of Cranford Street for 2012-2016 is shown in Figure C-2 (note the maps have been filtered so that only the High and Medium-High risk corridors are shown). The streets with the highest risk that relate most directly to the potential downstream effects are Cranford Street (to Edgware Road), Innes Road, and Madras Street. It is typical that the highest volume routes have the greatest concentration of crashes, and so this is to be expected.

For the period 2012-2016 there are few routes in the study area with a high Personal Risk (this is the risk per vehicle going down each street). The only routes that have medium-high crash risks are Malvern Street, Westminster Street (west of Cranford) and Edgeware Road through and either side of the Edgeware village. Improvements to these routes should consider local safety risks.

25 the highest collective risks are often located on streets with the higher traffic volumes
26 Note that the maps present a risk that aggregates the crash history over the length of the road section selected, and that these sections have not been created to only constitute streets directly affected by CNC. For example, the Madras Street section length extends from Warrington Road to Gloucester Street.
Figure C-3 shows the existing incidence of crashes and DSI within the project area. The majority of DSI crashes involved turning or crossing traffic mainly at intersections. Hence particular attention needs to be given to the design of intersections.

Crash heat maps for the period of 2012-2016 period are shown in Figures C-3 to C-6.

Figure C-3: Pedestrian [Source: https://roadsafetytoolkit.co.nz/maps/heat-maps#:43.502430456148537,172.6360973361706.15]

Figure C-4: Cyclist [Source: https://roadsafetytoolkit.co.nz/maps/heat-maps#:43.502430456148537,172.6360973361706.15]

Figure C-5: Motorcyclist [Source: https://roadsafetytoolkit.co.nz/maps/heat-maps#:43.502430456148537,172.6360973361706.15]

Figure C-6: Speed [Source: https://roadsafetytoolkit.co.nz/maps/heat-maps#:43.502430456148537,172.6360973361706.15]

In terms of vulnerable users Cranford Street has experienced a higher amount of motorcycle crashes than most other nearby streets.

Pedestrian crashes have occurred east of Cranford Street on Innes Road (near school crossing), and also around Edgewater Village and near St Albans Park. In total there were 11 pedestrian (including one mobility) crashes that occurred in the study area in the period of 2013-2017. Of these 2 were minors, and 3 were older than 65. The crashes resulted in 2 DSI (8% of the DSI) which is lower than the national average 27 for 2016 (10%).

There were 3 recorded cyclist DSI in the study area (12.5% of the DSI), which is higher than the national average of 6.2% for 2016. Cyclist crashes have generally occurred south of Westminster Street.

Figure 1 shows crashes that had speed as a main factor. Cranford Street performed relatively well compared with other major roads, except around the Westminster Street / Cranford Street intersection, and immediately south of the Berwick Street / Cranford Street intersection. Locations were speeds was a bigger factor include Barbadoes Street between Edgeware Road and Warrington Street, and Flockton Street. This may be a result of the current wide lanes on these roads and the unsignalised Barbadoes/Warrington intersection.

The pre-CNC crash data will form an important part of monitoring the crash effects of the CNC.

Table C-1: Selection of Existing Vehicle Counts (source: http://ccc.interpret.co.nz/trafficcount/)

<table>
<thead>
<tr>
<th>Location</th>
<th>AADT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berwick Street (East of Cranford)</td>
<td>12,326 (2014)</td>
</tr>
<tr>
<td>Cranford Street (North of Berwick)</td>
<td>20,596 (2017)</td>
</tr>
<tr>
<td>Warrington Street (East of Forfar)</td>
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Appendix D  Jacobs Modelling (D1 to D4)

The figures in this appendix are to be viewed with the understanding that traffic modelling has certain limitations. In particular, the predicted changes to low volume roads have more ambiguity due to there being a multitude of route choices.

Further, there are streets that appear in these modelling plots as affected that we do not necessarily believe that effects will occur. This is resultant from a limitation of the modelling tools that they show effects well away from the major network changes. We have made this judgement based on expert knowledge of the network, and monitoring will pick up any wider effects that are significant.
D.1  Do Nothing Change Flow Plots
Year 2021: Hourly Traffic Volume Difference (PCUs) - with/without CNC
CNC03 vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2021: Daily Traffic Volume Difference - with/without CNC
CNC03 vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC03 vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC03 vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2031: Daily Traffic Volume Difference - with/without CNC
CNC03 vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
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*Note: Some streets have been excluded due to data availability or lack of impact on the analysis.
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**Council**  
14 February 2019

### Table 1

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| **Mayfield Avenue**  
**(Not in High St)** |
| No street name | No | No | No | No |
| **Total** | No | No | No | No |
| **Total** | 5,520 | 4,038 | 9,558 | 9,337 |

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D.3 V/C Ratios and Delay for Key Intersections
Year 2021: Volume/Capacity Ratio - Option CNC03
(V/C less than 60% are not shown on the plot)
Year 2031: Volume/Capacity Ratio - Option CNC03
(V/C less than 60% are not shown on the plot)
Year 2021: Volume/Capacity Ratio - Option CNC03
(V/C less than 60% are not shown on the plot)
Year 2031: Volume/Capacity Ratio - Option CNC03
(V/C less than 60% are not shown on the plot)
Figure 1: Barbadoes / Warrington Intersection, 2021 PM peak CNC03

Figure 2: Barbadoes / Warrington Intersection, 2031 PM peak CNC03
Figure 3: Bealey / Shorborne Intersection, 2021 AM peak CNC03

Figure 4: Bealey / Shorborne Intersection, 2031 AM peak CNC03
Figure 5: Berwick / Cranford intersection, 2021 AM peak CNC04e

Figure 6: Berwick / Cranford intersection, 2021 PM peak CNC04e
Figure 7: Forfar / Warrington intersection, 2021 AM peak CNC04e

Figure 8: Forfar / Warrington intersection, 2031 AM peak CNC04e
D.4 Change Flow Plots with Arterial Upgrades
Year 2021: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC04e vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2021: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC04e vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2021: Daily Traffic Volume Difference - with/without CNC
CNC04e vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC04e vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Legend
PM Change
- Between 0% to 20% increase
- Between 20% to 30% increase
- Between 30% to 40% increase
- More than 40% increase

Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC
CNC04e vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2031: Daily Traffic Volume Difference - with/without CNC
CNC04e vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
Legend
AM Change
- Between 0% to 20% increase
- Between 20% to 30% increase
- Between 30% to 40% increase
- More than 40% increase

Year 2021: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC04g vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2021: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC04g vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2021: Daily Traffic Volume Difference - with/without CNC
CNC04g vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC04g vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC04g vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2031: Daily Traffic Volume Difference - with/without CNC
CNC04g vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
Appendix E  Monitoring Screens
Appendix F  Consultation Leaflet
Item 16

Attachment A

HAVE YOUR SAY
Proposed changes to Cranford Street and the surrounding area

Why we need to make changes
We are preparing a concept for Cranford Street and the surrounding area to coincide with the renewal of the Christchurch Central Area. We've listened to feedback from the community and stakeholders to help inform the development of Cranford Street.

Why are we consulting?
Cranford Street is a key artery into the city centre and serves as a main route for cyclists and pedestrians. We are proposing changes to Cranford Street to improve the flow and safety for all users. The modifications include pedestrian crossings, new cycle lanes, and road closures to reduce traffic congestion.

Timeline
- Consultation
- Briefing effects
- Improvement assessment
- Consultation on individual projects
- Consultation on supported projects
- Open to submissions

Drop-in sessions
Come and talk to staff about the proposal

Monday 14 May 2018
Anytime between 9am - 7pm
Cranford Street, Christchurch

Wednesday 16 May 2018
Anytime between 9am - 7pm
Cranford Street, Christchurch

Open until Monday 3 June 2018
www.govt.nz/changesway

Engagement Team
- [Name]
- [Name]
- [Name]
- [Name]
- [Name]

For more information, please contact [Contact Information]

Item No.: 16

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Appendix G  Options Diagrams
Do Nothing (yellow streets & arterials affected) = Option 1 - traffic calming only (all yellow streets)
Option 5 - Traffic Calming + Arterial Upgrade + Cranford/Sherbourne Clearways

- Cranford/Sherbourne Upgrade
- Cranford Upgrade
- State Highway Upgrade
- Schools/Medics (Parked) Upgrade
- Traffic Calmed Streets

Schools
Shops
Intersection Closure
Appendix H  Cycle Route MCA and Safety and Network Functionality Assessments

Multi Criteria Analysis – SANF Application to Cycle Route Identification

Identification, evaluation and selection of a preferred cycle route requires an objective transparent process that can withstand peer review, public scrutiny and permit informed decisions by elected members. This is achieved through a Multi Criteria Analysis (MCA) tool and Safety Audit and Network Functionality (SANF) process.

The purpose of an analysis is to select a preferred route from a number of identified on and off-road route options using a Multi Criteria Analysis (MCA) tool. The MCA assessment process is presented in the July 2016 version of Council’s “Cycle Design Guidelines Part B: Design Principles Best Practice Guide”.

Route Identification and MCA Assessment

The assessment process involves a site and desktop review of streets within the Route Corridor (an area connecting the start and end points) with streets being linked to form possible routes. Possible facility types are identified, based on cross sectional width, traffic volumes and constraints and are presented on a plan overlaying the land use types.

A shortlist of Route Options is identified from the possible routes, based on logical links to key connections/attractors and available roads within the corridor.

The Route Options are scored in an MCA assessment by a diverse team of people. This assessment scores each option against the following criteria: safety, directness, coherence, attractiveness, comfort, crime prevention through environmental design (CPTED), business impact (i.e. change in access and loss of on-street parking), residence impact (i.e. reduction in on-street parking), operational and network impacts (i.e. changes to the street layout, reduced road width, potential delay to other road users, additional signalised intersections), ease of construction and costs, land purchase/easements and consents. The results are reviewed using sensitivity testing (applying 70% weighting to the broad categories of cyclist criteria, impacts and costs) to confirm the best route option.

SANF Assessment

A SANF assessment involves an independent team of diverse people undertaking a holistic review of the route identification and MCA assessment outcomes to determine whether sufficient analysis has been completed to reach the conclusions and recommendations. A supportive SANF assessment provides transparency and confidence to decision makers that the analysis and impacts on affected parties has been adequately considered. A SANF demonstrates to the public that independent peer reviews have been undertaken.
17. Christchurch Northern Corridor Downstream Effects Mitigation Plan (Draft)

Reference: 19/85481
Presenter(s): Andy Richards, Project Manager Transport

1. Staff Recommendations

That the Waipapa/Papanui-Innes Community Board recommends to Council to:

1. Endorse the Draft Downstream Effects Management Plan for staff to undertake consultation on the recommendations contained within the plan.

2. Board Comment

The Community Board are aware that the draft Downstream Effects Management Plan is a base from which to work with the community on solutions to the traffic flows from the Christchurch Northern Corridor. As such, the Board looks forward to comments from the community as per the Environment Court ruling processes and until the Community has had their say on the document the Community Board decided to only receive the report at this time.

3. Papanui-Innes Community Board Decisions Under Delegation

Part C

That the Waipapa/Papanui-Innes Community Board:


4. Papanui-Innes Community Board Recommendation to Council

Part A

That the Council:

1. Receives the Draft Downstream Effects Management Plan for staff to commence engagement with the community on the recommendations contained within the plan.

Attachments

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</table>
1. Purpose and Origin of Report

Purpose of Report
1.1 The purpose of this report is to request the Waipapa/Papanui-Innes Community Board recommend to Council the endorsement of the Draft Downstream Effects Management Plan and for staff to undertake consultation on the recommendations contained within the plan.

Origin of Report
1.2 This report is staff generated following initial engagement with the community and completion of a draft plan suitable for consultation.

2. Significance

2.1 The decision in this report is of high significance in relation to the Christchurch City Council’s Significance and Engagement Policy.

2.1.1 The level of significance was determined by the number of people affected, both directly and indirectly, and the high level of community interest. This preparation of the Downstream Effects Management Plan is also a condition of an Environment Court ruling in 2016.

3. Staff Recommendations

That the Waipapa/Papanui-Innes Community Board recommend to Council to:

1. Endorse the Draft Downstream Effects Management Plan for staff to undertake consultation on the recommendations contained within the plan.

4. Key Points

4.1 Under the conditions for the relevant Consent Order, Christchurch City Council is required to:

4.1.1 Address the downstream effects relating to traffic arising from the operation of the Christchurch Northern Corridor.

4.1.2 Engage an Independent Traffic Expert to recommend appropriate traffic mitigation measures in the form of a Management Plan

4.1.3 Engage with affected owners and occupiers (as identified in the Plan) and specified persons/groups regarding the Independents Expert’s recommendations

4.1.4 Carry out ongoing monitoring and identify the anticipated future increase in traffic as a result of the Christchurch Northern Corridor.

4.1.5 Carry out any recommended traffic mitigation measures if traffic volumes are anticipated to increase by over 30% on any street. Council will need to implement mitigation measures as soon as reasonably practicable and in accordance with the timeframes required by the Consent.

4.2 At the request of the Independent Traffic Expert Council staff have completed a first phase of community engagement to understand community concerns about expected increased traffic growth and potential traffic mitigation measures. The findings from this engagement have fed
into the attached draft Downstream Effects Mitigation Plan that has been prepared by the Independent Traffic Expert.

Attachments

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Confirmation of Statutory Compliance

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:
   (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
   (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council’s significance and engagement policy.

Signatories

<table>
<thead>
<tr>
<th>Authors</th>
<th>Lynette Ellis - Manager Planning and Delivery Transport</th>
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<tr>
<td>Andy Richards - Project Manager</td>
<td>Richard Osborne - Head of Transport</td>
</tr>
<tr>
<td>Ann Campbell - Senior Engagement Advisor</td>
<td>David Adamson - General Manager City Services</td>
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<td>Sharon O’Neill - Team Leader Project Management Transport</td>
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Approved By

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<tr>
<th>Lynette Ellis - Manager Planning and Delivery Transport</th>
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<td>Richard Osborne - Head of Transport</td>
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<td>David Adamson - General Manager City Services</td>
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CHRISTCHURCH NORTHERN CORRIDOR
DOWNSTREAM EFFECTS MANAGEMENT PLAN (DEMP)

PREPARED FOR  CHRISTCHURCH CITY COUNCIL
October 2018

Stantec
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This disclaimer shall apply notwithstanding that the report may be made available to other persons for an application for permission or approval to fulfil a legal requirement.

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REVISION SCHEDULE

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<th>Reviewed by</th>
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Abbreviations

AC  Access to Commercial Centres
AP  Access to Parks
AS  Access to Schools
CAST  Christchurch Assignment and Simulation Traffic
CBD  Central Business District
CNC  Christchurch Northern Corridor
CPTED  Crime Prevention Through Environmental Design
CSU  Cranford Street Upgrade
CTSP  Christchurch Transport Strategic Plan
DEMP  Downstream Effects Management Plan
ECan  Environment Canterbury
HOV  High Occupancy Vehicle
LILO  Left-In and Left-Out
MCA  Multi Criteria Analysis
MR  Major Roads
NAE  Northern Arterial Extension
NoR  Notice of Requirement
ONRC  One Network Road Classification
QEI  Queen Elizabeth II Drive (State Highway 74)
SANF  Safety Audit and Network Functionality
SC  Safer Cycling routes
SSCA  Safe Speed Community Areas
TC  Traffic Calming
V/C  Volume over road Capacity
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Appendix C  Existing Traffic Flow and Crash Record
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Executive Summary

Introduction

This Plan recommends a programme of work to reduce the downstream effects of the Christchurch Northern Corridor (CNC). It has been compiled to comply with the Notice of Requirement (NoR) ruling for the CNC for an independent traffic expert to develop a Downstream Effects Management Plan (the Plan). Where possible, it has been formulated to be consistent with national, regional, and local transport policy and to address transport concerns raised by stakeholders and the public during consultation. To minimise the impact of improvements on private land, the Plan has focused as far as possible on remedial treatments that can occur within the existing road reserve.

The Plan supports further travel demand management initiatives in northern Christchurch and beyond, to reduce the volume of vehicles with single occupants entering the urban road network. However, the focus of the Plan, as specified in the NoR, is to mitigate the impacts of the additional traffic that will enter the local network at Cranford Street. Even if travel demand management measures reduce future traffic volumes, it is expected that most of the additional traffic as estimated from the transport models will still impact on this network and require various interventions.

Issue Identification

As specified in the NoR, the key focus of the Plan is to identify the preferred vehicle access routes for the additional traffic from the CNC, including trucks, that will occur on the downstream road network. To manage this traffic so that it uses the preferred routes and mitigate where possible adverse effects of the additional traffic, especially on local streets. A transport model has been used to assess the routes drivers are likely to take travelling from the CNC into the city centre in 2021 (opening year) and 2031 (design year). This modelling indicates that the preferred traffic routes, the arterials and collector streets, do not have adequate capacity to accommodate all the additional traffic (including trucks) and, without intervention, there would be a lot of rat-running traffic in local streets. The NoR specifies that when the rat-running traffic volumes on these local streets are 30% or greater than what would have been expected had the CNC not been built, then intervention is required to avoid, remedy, or mitigate these effects. The modelling shows that many local streets trigger this 30% increase, especially in 2031, if there is no intervention.

Whether on the main routes or local streets, the additional traffic from the CNC will adversely impact other road users, and specifically pedestrians and cyclists that use the roads affected. Of particular concern is how this traffic will impact on safety and access of less able pedestrians, such as school children, elderly, and those with a disability. The additional traffic will in some cases impact on local residents’ ability to safely access various community facilities (e.g., schools, parks, and commercial centres) and their own properties by walking, cycling, and driving/parking. The Plan has considered how these impacts might be avoided, remedied, or mitigated. In most cases, localised studies have been recommended to look at these matters and develop suitable interventions.

Option Development

Based on an understanding of the likely transport impacts of the additional CNC traffic, two option development stages were undertaken. The first stage of the option development focused on options that would encourage the additional vehicles from the CNC to primarily use arterial and collector routes, and not use local streets. The second stage then considers how the increased safety and access requirements of different road users can be improved on streets with additional traffic flows.

Stage 1: Major Route and Traffic Calming Upgrades

During the first stage of option development both arterial/collector upgrades and traffic calming actions were developed to keep the extra traffic from the CNC on the main routes. In the first assessment we considered arterial/collector and traffic calming measures on their own. We then considered several options that looked at a combination of arterial upgrades and traffic calming measures. The arterial/collector road improvements were developed to address capacity constraints that were identified along these routes: both midblock and at intersections, using local experience and the transport modelling. The traffic calming measures were developed for local streets that are expected to have a significant amount of rat-running traffic (defined as greater than 30% increase in traffic) with or without arterial/collector upgrades. The full list of major upgrades considered are presented below.
- Do Nothing – this results in rat-running on a lot of local streets
- Option 1: Traffic Calming Only
- Option 2: Arterial Upgrades Only; This included three-laning of Barbados Street and Madras (Forfar) Street, Cranford Street Clearways and Berwick Street / Warrington Street capacity improvements
- Option 3 (a): Traffic Calming and Arterial Upgrades. Arterial upgrades as per Option 2 except clearways on Barbados Street and Madras (Forfar) Street instead of permanent three-laning
- Option 3 (b): Traffic Calming and Arterial Upgrades. Arterial upgrades as per Option 2, so permanent three-laning of Barbados and Madras (Forfar) Streets
- Option 3 (c): Traffic Calming and Arterial Upgrades. Arterial upgrades as per Option 2 except extension of Barbados / Madras one-ways to Warrington Street.
- Option 4 (a): Traffic Calming and Clearways on Cranford / Sherborne Streets from Innes Road to Bealey Avenue
- Option 4 (b): Traffic Calming and permanent four-laning on Cranford / Sherborne Street (option included to allow comparison of options with a more major upgrade of arterial roads)
- Option 5: Traffic Calming plus combined Arterial Options (Options 3(a) and 4(a))

The analysis of these options was undertaken using the CAST (Christchurch Assignment and Simulation Traffic) transport model. This model indicated how successful the options were in keeping traffic on the main routes and discouraging rat-running in local streets.

A multi-criteria analysis (MCA) workshop was then undertaken of each option to determine the best performing options. This involved a number of transport specialists and an urban designer. The MCA looked at a number of factors, including impact on safety of different road users, whether the options met the objectives of the NoK, journey time benefits, timeframe to implement, construction costs, impacts on local businesses, social and amenity impacts, and environmental impacts. The workshop participants, including the independent traffic expert, agreed the criterion and the weighting of each criterion and discussed and assessed the various options. The highest weighting went on community impacts (the last three criteria above). Journey time benefits only had a 10% weighting. The best performing options in order were 3 (c), 4(a) and 3 (a).

All three options have very similar upgrades on Cranford Street north of Berwick Street and along Berwick Street and Warrington Streets. They differ in the improvements south of Berwick Street on Cranford/Sherbore Streets, Forfar/Madras Streets and Barbados Street. Hence the Plan recommends that the improvements along Berwick and Warrington Streets and Cranford Street north are progressed to scheme design and the three options south of Berwick Street are further investigated and presented to the community for input before deciding on a preferred southern option (see Table 1 below). In addition to infrastructure changes, education, and enforcement aspects of the improvements, especially the peak period clearways, needs to be investigated and implemented.

A list of routes that are expected to require traffic calming has also been developed, based on the transport modelling. Careful monitoring of traffic volumes on local streets is required between 2020 and 2031 to assess the benefits of traffic calming measures and any streets that are adversely impacted by rat-running traffic. As a result of drivers selecting alternative rat-running routes, nine safe speed community areas are also proposed in the wider St Albans network to discourage rat-running.

**Stage 2: Safe Access to Community Facilities**

During the second option development phase, the impacts the additional traffic would have on all road users was considered, specifically those who live in or near the impacted road network and their ability to safely access various destinations within the local road network. The project has been split up into:

1. Safe access to School
2. Safer Cycling
3. Access to Parks
4. Access to Commercial Centres
Most of the issues raised by the public and stakeholders fit into one of these categories. One specific matter that does not is safe access into properties on arterial and collector roads with peak period clearways, like Cranford Street. The identification of issues with access and possible solutions to improve access will need to be assessed as part of the implementation of the clearways.

The key issues in terms of safe access to schools is access across Cranford Street for children walking to and from St Albans School. The children primarily use the Cranford Street /Westminster Street signalised intersection to access the school, but some also use the Berwick Street/Cranford Street signalised intersection. Due to several close (crash) issues, the school currently employs a cross warden at the Cranford Street /Westminster Street intersection to help children cross the road. With the proposed upgrades of this intersection (also Berwick Street /Cranford Street) the potential for a crash will increase if no safety improvements are made. As an interim measure it is proposed to lower the speed limit to 40km/h from north of Westminster Street to south of Berwick Street during school start and finish times, install a textured surface at the Westminster Street intersection and look at changes to the signals before the CNC opens. Further improvements need to be investigated and implemented within 3 years of the CNC opening.

The introduction of peak period clearways along Cranford Street down to Berwick Street and possibly other clearways further south makes such routes less safe for cycling, especially during the peak periods. It is not possible to rectify this without widening the road designation and purchasing additional land. Hence the recommended option is to direct cyclists onto other routes. The general increase in traffic across the network will also make it less safe to cycle on a number of other roads (e.g. Edgware Road) without improved cycle facilities. To encourage local people to cycle and to direct them to use the Papamoa Parallel cycleway (a separated north-south cycle path) on Rutland Street, Trafalgar Street, and Colombo Street, it is proposed to develop three east-west secondary cycle routes (along McFaddens Road, Westminster /Courtenay Streets and Edgware Road). These will be feeder routes to the Papamoa Parallel and will be a combination of on-road cycle lanes and off-road paths. It is also proposed that a secondary north-south cycle route be provided on the eastern side of Cranford Street to link cyclists that have origins and destinations on the eastern side of the main route to the city centre and St Albans Park.

The additional traffic generated by the CNC will also increase traffic volumes around St Albans Park, and to a lesser degree around Malvern Park. The three main roads around St Albans Park: Farfar Street and Warrington Street will have increased traffic flows making it more difficult to access the Park. The proposed traffic signals at Farfar Street /Warrington Street and Barbadoes Street /Warrington Street and the proposed new north-south cycleway to the east of Cranford Street will improve access to the north of the Park. However, there are still challenges for pedestrians wanting to cross Farfar Street and Barbadoes Street further south. There have been a number of vulnerable road user crashes at the northern end of Barbadoes Street and the additional traffic from the CNC will exacerbate existing access issues. Hence, a study is proposed to look at access and safety issues for St Albans Park (and Malvern Park) and develop options to make access safer.

Local residents also need to have safe access to their local (shopping and eating) commercial centres. Christchurch City Council are keen to see local centres become more vibrant and for locals to walk and cycle to these centres. Access to these centres by vehicle, along with parking, is also required for some trips, especially those made by less able-bodied residents. A neighbourhood improvement plan has already been developed for the Edgware Village and so a new plan for that centre is not proposed, although improvement options for cycling and walking along Edgware Road will need to be integrated into that plan. It is recommended that transport studies are undertaken for the four local activity centres impacted by the CNC traffic: the Westminster Street /Cranford Street, Warrington Street /Barbadoes Street, Edgware Street /Barbadoes Street and Rutland Street activity centres. Corridor assessments along Edgware Road and Westminster/Courtenay Streets are also required to look at enhancing access and amenity for pedestrians of all abilities. The improvements that are recommended in these studies should be implemented to offset the access and safety consequences of the additional traffic.

The key outcomes that are desired from all the proposed studies and improvements is a network of roads that are safer and ‘healthier’, even with the increased traffic volumes. Hence it is important that all designs go through a road safety and healthy streets review in order to maximise the benefits of such improvements. With respect to safety, in addition to traditional safety audits, it is recommended that all designs are assessed using the Austroads safe system assessment framework which targets crashes and their consequences. To achieve healthier streets, it is recommended that all street upgrades are assessed using the Healthy Streets framework that has been developed by Transport for London.
The Downstream Effects Management Plan

Table 1 shows a summary of the studies and improvement options that are proposed to avoid, remedy, or mitigate the impacts of the CNC. This is based on analysis and review of the transport issues using modelling and experience. A key element of the Plan is the ongoing monitoring of the transport flows (including pedestrian and cycle volumes), vehicle speeds, and environmental impacts (vehicle emissions, noise and vibration). Of particular importance will be how traffic flows through the downstream road network in the years following the opening of the CNC. While arterial and collector upgrades and traffic calming measures will be introduced to encourage drivers to use the major roads, it is highly likely that some drivers will choose to use local streets as rat runs, and that they may behave in ways not predicted by the transport models. Hence the monitoring will identify issues that may require other changes to the road network such as traffic calming of additional streets and upgrades of signalised intersections. The monitoring is expected to have the greatest impact on the composition of the Stage 3 projects.

While ideally some of the Stage 2 projects are undertaken before the CNC opens, there is limited time to make all the changes and hence the most crucial changes to prevent excessive congestion and rat running have been prioritised in Stage 1 (to be in place ideally before CNC opens), with other projects delayed. The impact of this may be adverse transport effects in the short-term. Hence it is important that Councils act quickly to address the worst of any adverse transport effects (e.g., high levels of rat running) once the CNC opens. We would recommend rapid implementation of projects that is practical, and any other temporary measures to address the effects that are identified in the monitoring.

Table 1 – Lists of improvement projects and studies categorised by Stage (note some projects appear in two or more stages as they consist of more detailed studies and the implementation of improvements)

<table>
<thead>
<tr>
<th>Stage 1 – Projects and studies to be undertaken before the CNC opens</th>
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<tbody>
<tr>
<td><strong>Major Road (MR) Upgrades:</strong></td>
</tr>
<tr>
<td>MR1 (Cranford Street Clearways) – Peak Period Clearways along Cranford Street from Innes Road to Berwick Street.</td>
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<tr>
<td>MR2 (Westminster/Cranford Intersection) – Upgrades to Westminster Street/Cranford Street Intersections.</td>
</tr>
<tr>
<td>MR3 (Berwick/Warrington Upgrades) – Upgrading of Berwick Street/Cranford Street signalled intersection and signalisation of the Forfar Street/Warrington Street and Birkenhead Street/Warrington Street intersections.</td>
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<tr>
<td>MR4 (South Berwick Upgrades) – Downstream of Berwick Street arterial upgrade option that comes out of the scoping study.</td>
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<tr>
<td>MR5 (HOV lanes on Cranford-Sherborne) – Investigate extending the southern HOV (High occupancy vehicle) lanes on the CNC through to Bealey Avenue and installing a northbound HOV lane.</td>
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<tr>
<td><strong>Safe System Community Areas (SSCA):</strong></td>
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<tr>
<td>SSCA 1 to 9 – Introduce nine 30km/h (or 40km/h) reduced speed limit areas through the downstream local road network.</td>
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<td><strong>Traffic Calming (TC) Measures:</strong></td>
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<tr>
<td>Introduce traffic calming on TC1 – Mersey Street (Innes to Forfar), TC2 – Knowles Street, TC3 – Weston Street, TC4 – McCaffetds Road, TC7 – Malvern Street (LILIO) and TC8 – Dee Street (LILIO).</td>
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<tr>
<td><strong>Safe Access to Schools (AS):</strong></td>
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<tr>
<td>AS1 – Safe Access Across Cranford Street – This study will look at a range of options, including a new mid-block signalled crossing across Cranford Street near the English Park Carpark entrance.</td>
</tr>
<tr>
<td>AS2 – Interim Improvements on Cranford Street – As an interim measure it is suggested that as part of MR1 (Cranford Clearways) and MR2 (Westminster Street/Cranford Street Intersection) a 40km/h speed limit be introduced during school arrival and departure time on Cranford Street from approximately 50m north of Westminster Street to 50m south of Berwick Street, a coloured surfacing be installed at the Westminster Street/Cranford Street Intersection, and left turning red arrows be used as protection for crossing pedestrians.</td>
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**Safe Cycling Routes (SC):**

SC1 (Cycle Wayfinding Signage) – Development of and implementation of a wayfinding signage plan that directs cyclists at the northern end of Cranford Street (at McFaddens Road) and southern end of Cranford Street to safer cycling routes.

SC2 (McFaddens Road Secondary Cycle Corridor) – Undertake a route study of a cycling route both west (towards the Papamoa Peninsula) and east (towards new north south route) on McFaddens Road.

SC3 (Westminster/Courtenay Secondary Cycle Corridor) – Undertake a route study of a cycling route both west and east of Cranford Street.

SC4 (Edgeware Road Secondary Cycle Corridor) – Undertake a route study of a cycling route both west and east of Cranford Street.

SC5 (North-South Secondary Cycle Corridor) – Undertake a route study of an alternative north-south cycle route through traffic calmed streets to the east of Cranford Street.

**Stage 2 – Projects and Studies that need to be undertaken within three years of CNC opening:**

**Traffic Calming (TC) Measures:**

Introduce traffic calming on TC9 – Roosevelt Street, TC12 - Caledonian Street, TC13 - Edgeware Road (Village), TC14 – Manchester Street and TC15 – Westminster Street / Courtenay Street, where expected increases in traffic volumes are validated by the monitoring data.

**Safe Access to Schools (AS):**

AS1 – Safe Access Across Cranford Street – Implement any options identified in this study such as a new mid-block signalised crossing across Cranford Street near the English Park Carpark entrance.

**Safe Cycling Routes (SC):**

SC2 (McFaddens Road Secondary Cycle Corridor) – Construct a secondary cycling route both west (towards the Papamoa Peninsula) and east (towards new north south route) on McFaddens Road.

SC3 (Westminster/Courtenay Secondary Cycle Corridor) – Construct a secondary cycling route both west and east of Cranford Street.

SC4 (Edgeware Road Secondary Cycle Corridor) – Construct a secondary cycling route both west and east of Cranford Street.

**Access to Parks (AP):**

AP1 (St Albans Park Access Plan) – Development of a plan that will look at access to the park by pedestrians (of different abilities), cyclists, and motorists.

AP2 (Malvern/Rugby Park Access Plan) – Development of a plan that will look at access to the park by pedestrians (of different abilities), cyclists, and motorists.

**Access to Commercial Centres (AC):**

AC1 – Westminster/Cranford Local Activity Centre Transport Study – Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC2 – Barbadoes/Warington Local Activity Centre Transport Study – Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC3 – Barbadoes/Edgeware Local Activity Centre Transport Study – Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC4 – Castletown Local Activity Centre Transport Study – Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC5 – Westminster/Courtenay Corridor Study (Rutland to Forfar) – Undertake this study which will focus on safe access by pedestrians along the route and crossing the route especially for vulnerable road users.

AC6 – Edgeware Corridor Study (Springfield to Barbadoes) – Undertake this study which will focus on safe access by pedestrians along the route and crossing the route especially for vulnerable road users.

**Stage 3 – Projects that could be undertaken any time between the opening of the CNC and 2031**
Monitoring

Ongoing monitoring of traffic, pedestrians, and cycle volumes, crashes and vehicles speeds, emissions, noise, and vibration on major roads and some local streets is to occur annually, or when required more often, after the CNC opens to validate the plans and projects already identified in this document, and through the various studies that are specified.

It is expected that additional interventions will be required to avoid, remedy, or mitigate the effects of the additional CNC traffic, including the impact of trucks, that is identified in this monitoring. In terms of local streets, intervention is required if the traffic volumes increase by 30% above what might have been expected on the route if the CNC had not been built, in terms of other interventions [e.g. arterial upgrades] this will be the result of congestion or safety concerns with respect to all road users. Some improvement may also not be required [e.g. if local road traffic does not increase by 30%, as predicted by the modelling]. Consultation on all proposed changes will be undertaken.

An indication of Stage 3 improvement projects is provided below. This list will need to be reviewed and where necessary revised once the actual impacts of the CNC traffic is known from the monitoring.

Traffic Calming (TC) Measures:

Introduce traffic calming only where monitoring indicates high levels of rat-running are occurring [may include additional streets]: TC 5 McFadden Road, Knowles Street, Weston Street (east Cranford), TC6 Jameson Street, TC10 Forsay Street, TC11 Flockton Street, TC14 Severn Street, TC17 Thames Street, TC 18 Aylesthorpe Street, TC19 Kensington Avenue, TC 20 Philpotts Road and TC 21 Francis Street.

Safe Cycling Routes (SC):

SC5 North-South Secondary Cycle Corridor - Construct an alternative north-south cycle route through traffic calmed streets to the east of Cranford Street.

Access To Parks (AP):

AP1 (St Albans Park Access Plan) - Implementation of the access plan as required to address access issues.

AP2 (Malvern/Rugby Park Access Plan) - Implementation of the access plan as required to address access issues.

Access To Commercial Centres (AC):

AC1 - Westminster/Cranford Local Activity Centre Transport Study. Implement study recommendations
AC2 - Barbadoes/Warrington Local Activity Centre Transport Study. Implement study recommendations.
AC3 - Barbadoes/Edgeware Local Activity Centre Transport Study. Implement study recommendations
AC3 - Rutland Street Local Activity Centre Transport Study. Implement study recommendations
AC4 - Westminster/Courtmenay Corridor Study (Rutland to Forfar) - Implement study recommendations.
AC5 - Edgeware Corridor Study (Springfield to Barbadoes) - Implement study recommendations
1. Introduction and Background

Planning for a new arterial route from the Christchurch CBD (Four Avenues) to the northern suburbs of Christchurch and beyond has been ongoing for many decades. Over the last decade a preferred route has been identified and designed for the northern section of this route. This preferred route is called the Christchurch Northern Corridor (CNC) which, at the time of this report, is under construction with a planned completion date of mid-2020. The CNC will increase traffic volumes on the urban road network south of the project. The Downstream Effects Management Plan (the Plan) considers the impact of this additional traffic and what changes are required to the network to minimise the impact of this additional traffic travelling from the CNC through to the CBD. The Plan has been compiled to satisfy the requirements of the Notice of Requirement (NoR) ruling for the CNC (Appendix A). The rest of this introduction provides background and history of the CNC (decades of transport planning on a northern route), that helps set the context of the Plan.

1.1 Christchurch Northern Corridor and Requirement for a Downstream Effects Management Plan

The Christchurch Northern Corridor (CNC) project is an alliance project currently being undertaken by the New Zealand Transport Agency (NZ Transport Agency), and Christchurch City Council. As part of this project a new four-lane motorway will connect SH1 from just south of the Waimakariri Bridge with Cranford Street about 300m north of the McFaddens Road / Cranford Street Intersection (see Figure 1-1). The project also includes new pedestrian and cycle facilities.1

![Figure 1-1: Christchurch Northern Corridor](https://www.nzta.govt.nz/assets/projects/christchurch-northern-corridor/CNC-Map-LakeOhau.pdf)

A section of Cranford Street (the southern end of the CNC) will also increase from a two-lane road to four-lanes with a median. As part of the project the Innes Road / Cranford Street intersection will also be subject to works to enlarge its capacity. A representation of these changes, including active mode provisions, are shown in Appendix B.

In July 2015 Independent Hearing Commissioners heard the designation case for the CNC. The designation was approved subject to a number of conditions. A major concern raised by submitters was the downstream effects of the CNC, especially on local roads within St Albans and adjoining suburbs. To address this concern a condition was added that required Christchurch City Council to engage a suitably qualified independent traffic expert who would produce a Downstream* Effects Management Plan. Dr Shane Turner of Stantos was appointed to this role.

The Plan is the outcome of investigations on likely downstream effects of the CNC and recommends works that could be undertaken to address those effects. Given the uncertainty around the effects, which are

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1 Refer to Section 4.1.2.1
2 Information on this project can be found at https://www.nzta.govt.nz/projects/christchurch-motorways/christchurch-northern-corridor/
3 https://www.nzta.govt.nz/projects/christchurch-motorways/christchurch-northern-corridor/topics/1
4 Downstream as defined by the Notice of Requirement means south of the Innes Road / Cranford Street intersection. For the purposes of the DEMP, “south” of the CNC has been interpreted as including local and collector roads between Innes and McFaddens due to the interconnectivity of the local road network.
based on land use estimates and expected driver behaviour, a key aspect of the Plan is the monitoring of transport effects once the CNC opens, and comparing these with conditions prior to the CNC (minus expected network growth without the CNC). However, given the increase in traffic volumes from day 1 some improvements do need to be in place before the CNC is opened (expected to be in 2020).

1.2 History of the Christchurch Northern Arterial (now CNC)

Various traffic corridor plans have been conceived in planning for Christchurch since the 1950s. In 1962 the Christchurch Regional Planning Authority proposed the Northern Arterial Concept Route; roughly following the path of the current Northern Arterial however extending further south through St Alabans. During the 2nd review of the plans the corridor was changed so that new arterial would extend to Bexley Avenue where it would connect with the one-way pair: Barbadoes and Madras Street. In 1989 the Northern Arterial Designation was narrowed in width at the Redwood/Belfast portion. Later, the St Alabans portion of the designation was removed from the Christchurch City District Scheme. The following excerpt is taken from Christchurch City Centre – 40 years of Change, and it explains some of the reasons why the network has been developed the way it has in Northern Christchurch:

“During the 1980s... the Christchurch City Council made successive reductions to the proposed road network in suburban areas. These changes were in response to a combination of other factors including: slower population growth, economic downturn – less central employment, limited funding based on benefit/cost ratios, community acceptance of greater congestion, increasing opposition from affected residents, councillor opposition in the 70s and 80s. Subsequently in the agreed 1989 regional plan the road network and hierarchy of roads were generally retained but the motorways were deferred still further on the assumption that the arterial “at-grade” road network would suffice. This policy, together with the reliance on benefit/cost for national funding, supported the ongoing construction of major arterial all-purpose roads in the suburbs.”

(Central Christchurch Centre – 40 Years of Change, Traffic, Planning – 1959-1999, Malcolm Douglass, Christchurch City Council, 2000 (p11)).

Clearly, there has been much discussion and investigation on the north- south transport connections in Northern Christchurch for at least the last 50 – 60 years. During that time larger motorway connections (passing through urban Christchurch) have been considered, planned, and eventually withdrawn. The history of these decisions has been important in the preparation of the Plan as it is not intended to re-litigate or reconsider past discarded options, or options of a similar nature and scale, which have shown to be out of favour.

Given the history and strong views of the local community, the Plan is focused on using existing roads to carry the additional traffic associated with the CNC. It also seeks to minimise the impact of any upgrades on private property and especially building structures within the urban area. Hence wherever possible the focus is on remaining within current road reserves.

An important part of the Plan is understanding the impact that the additional CNC traffic could have on the local community, and how this can be avoided, remedied or mitigated. This includes minimising the impact of the additional CNC traffic on safe access to parks, schools, businesses and housing. It is also important that the future transport network supports transport choice, and in particular walking, cycling, and public transport. A legacy of the Plan should also be improvements in amenity and urban design to streets within the community.

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2. Report Structure

The report begins (Section 3) by summarising the various national, regional, and local transport planning strategies that have been agreed and outlines the current road network and operating conditions for different road users, including any existing road safety issues.

The report then outlines the purpose and objectives of the study and the methodology that has been adopted to undertake the transport assessment (Section 4). It also specifies the ‘balanced’ transport planning approach that we have attempted to undertake that looks to minimise the impact of the additional traffic on local streets, but also provide for, and encourages, greater use of other transport modes, or at the very least, higher occupancy rates in motor vehicles.

Section 5 discusses the transport modelling that has been undertaken to understand the likely impacts of the additional traffic from CNC (currently expected to open in mid-2020) on the downstream road network in 2021 (represents opening year) and 2031 (design year) if no changes are made. The modelling assesses the impacts of the CNC against what is expected in terms of traffic growth on the wider network if the CNC was not built.

The consultation undertaken with stakeholders and the public is summarised in Section 6. Wherever possible the concerns raised by the public and various organisations have been addressed in the option development. However, not all issues raised can be addressed, as many fall outside the scope of this assessment, or are in conflict with other issues and options raised.

The option development phase is presented in Section 7. The first iteration of the option development focused on the local streets that had greater than a 30% increase in traffic and also capacity constraints on the urban arterial/collector network. The focus at this level being to minimise the number of local streets impacted by a combination of arterial/collector road upgrades (the corridor) and local road traffic calming and speed limit reductions (the stick). The second iteration of the option development looks at options to minimise the impact of the additional traffic on safe access to schools, safe cycling through the network, access to parks, and access to local and neighborhood activity/community centres.

Section 8 and 9 present the recommended downstream improvement plan. It highlights improvements that need to be undertaken before the opening of the CNC to address impacts associated with the sudden increase in traffic as a result of the CNC opening. It then outlines improvements that should be undertaken shortly after the opening and through to approximately ten years after the opening (up to design year 2031). The Plan has a strong monitoring focus to assess the impact of traffic growth between opening and 2031. The timing of upgrades beyond the opening will be tied to the impacts observed in the monitoring. Some upgrade projects may be delayed, and other projects brought forward depending on the monitoring outcomes, and new projects may be identified based on traffic effects not predicted in the modelling (e.g., local street rail running).
3. Background Review
This section outlines briefly the key national, regional, and local transport strategies that have been agreed by various organisations for transport planning activities within Christchurch. It then provides an overview of the existing transport network and how this operates. This includes bus and cycling routes, and road safety issues. There are a number of existing transport issues on the current road network but only some of these issues will be impacted by the CNC traffic, and need to be addressed in the Plan. More information on these issues is presented in Section 6.

3.1 National, Regional, and Local Strategies
Various national, regional, and local strategies exist which have guided the direction of the Plan. Their respective relevance to the Plan is that the options need to be considered of, and aim to satisfy (where possible), the relevant objectives contained in those strategies.

3.1.1 National
The latest Government Policy Statement has four strategic directions: Safety, Access, Environment, and Value for Money; these strategic directions were considered during option conception and in the application of the multi-criteria analysis.

The Safer Journeys Strategy (2010-2020) guides how safety concerns will be addressed in New Zealand over the period 2010-2020. It outlines the Safe System approach which recognizes the vulnerability of road users, and the four pillars of safe roads and roadsides, safe speeds, safe vehicles, and safe road use, under which safety is to be addressed. In urban areas the safety of pedestrians (especially vulnerable pedestrians: young, elderly) and cyclists needs to be considered alongside vehicle safety.

3.1.2 Regional
The Regional Land Transport Plan (2015-2025) outlines five regional objectives: 1) A land transport network that addresses current future transport demand, 2) A land transport system that is increasingly free from death and serious injury, 3) The Canterbury earthquake recovery is supported, 4) The land transport network is resilient and supports long-term sustainability, and 5) Investment in land transport infrastructure and services is efficient.

In addressing the downstream effects, the formation of the Plan has been particularly conscious of regional objectives 1), 2), and 5), as well as long-term sustainability mentioned in objective 4. Resilience was considered as a priority due to the various routes available in Christchurch should, for example, Cranford Street becomes temporarily unavailable. It should be noted, however, that any implementation of works must also be conscious of earthquake recovery projects when they occur.

3.1.3 Local
The Christchurch Transport Strategic Plan (CTSP) has four goals: 1) Improve access and choice, 2) Create safe, healthy, and liveable communities, 3) Support economic vitality, and 4) Create opportunities for environmental enhancements. The Plan seeks to align with the CTSP; namely to use the existing road network more efficiently. Therefore, the Plan has concentrated on low impact, at grade, treatments.

The Long-Term Plan (LTP) sets out Christchurch City Council’s funding priorities for transport over the next 10 years (2018-2028). Their commitment to the CNC is outlined there, along with other key projects such as Accessible City, Major Cycle Routes, a local cycle network (connecting to major cycle routes), pedestrian improvements plan, and Public Transport Infrastructure. Achieving mode shift (including better mode choices) is one of the level of service targets for the active transport in the LTP. Indicative funding has also been allocated in the LTP for Down-stream Effects Management Plan projects in the period 2018/19 to 2023/24.

7 http://www.safepjourneys.govt.nz/
3.2 Local Network Conditions & Description

This section of the report provides an overview of the existing down-streams urban transport network south of the CNC.

3.2.1 Route and Road User Hierarchy

Streets vary significantly in function. Some are used only for through movements (for example a motorway), while others are mainly used for access (a cul-de-sac). In response to this, the road network is categorised into hierarchy which enables planning and decisions to be made, some of which have wide effects. The route hierarchy in the vicinity of Cranford Street (which is relevant here) is presented in Figure 3.1 from Christchurch City Council’s District Plan. A similar hierarchy is given in the CSSP.

![Figure 3.1: Road Hierarchy Daoes](http://www.geogrid-districtplan.co.nz/Images/Images/Chapter2Transport/Operative/OperativeFig7.17a.jpg (note: some street names added))

A key objective of the Plan is to keep the majority of vehicles on principal routes (arterials, distributors, and collectors).

Cranford Street from the connection of the CNC to Innes Road is a major arterial, south from there it becomes a minor arterial, primarily as it moves through community centres like Westminster Street / Cranford Street, and Edgeware Village, Innes Road and Berwick Street / Warrington Street are also classified as minor arterials. Collector roads in the vicinity of Cranford Street include McFaddens Road, Rutland Street, Westminster Street / Courtenay Street / St Albans Street, Madras Street, and Barbadoes Street.

Based on this hierarchy the bulk of the north-south traffic from the CNC should be accommodated on Cranford, Berwick, Warrington, Madras, Barbadoes, and Shubborne Streets. While Rutland Street and Springfield Road are also collectors, Rutland Street now forms part of a major cycle route and hence it is desirable to keep traffic volumes on Rutland Street at lower levels.

NZ Transport Agency’s One Network Road Classification (ONRC) system also classifies Christchurch’s urban roads. This system shows Madras Street and Barbadoes Street on an equivalent hierarchy to

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9 Definitions of the respective road hierarchies can be found in the Council’s District Plan.

Crandon Street and Sherborne Street (arterials11), and also highlights the importance of Forfar Street, which is classified as a primary collector under the ONRC. Based on ONRC categories the study has assessed using Madras and Barbadoes for carrying additional north—south traffic and Forfar Street carrying more traffic than the majority of local streets in the area.

### 3.2.2 Active Modes and Public Transport

Christchurch City Council have been active in promoting active and public transport modes in the northern suburbs of Christchurch, by identifying and installing infrastructure to support these travel options. Christchurch City Council and Environment Canterbury (ECan) are planning to do more upgrades, and promotion, to support greater use of these modes. We support further initiatives to move people out of cars and into other transport modes.

Christchurch City Council are currently investing in the development of separated cycleways12 as part of their Major Cycle Route (MCR) project, which will eventually deliver 13 major cycleways. The Papanui Parallel Cycleway was one of the first to be constructed, and its alignment through the subject area can be seen in Figure 3-2. Further cycleways are planned in the wider area including; the Northern Line, and the cycle trail along the CNC, as well as a network of secondary cycle routes connecting to the major cycleway network.13 The CNC cycle trail will eventually allow cyclists to travel from the Waimakariri District to the Papanui Parallel and into the city. The CNC also includes a cycle track to the east along QEII Drive.

Limited work has been undertaken to date around key secondary cycle route linkages to the Papanui Parallel. We do see the development of such routes being important as traffic volumes grow in this network.

Christchurch City Council have a project to create a link between the CNC and the Papanui Parallel, called the Grassmere Link. Council have allocated funding for this project in the 2020 to 2024 financial years. This project will be delivered as part of the CNC.

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11 ONRC divides New Zealand’s roads into categories based on how busy they are, whether they connect to important destinations, or are the only route available. Within this arterial is broadly defined as “link regionally significant places and industries” (Source: https://www.nzta.govt.nz/assets/Good-Driving-Guides/Docs/ONRC/Freewayguide.pdf)


13 https://www.ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies/Plans/Long-Term-Plan/draft2016/service-plans/Long-Term-Plan-2016-20draft-Service-Plan-Active-Travel2.pdf
Bus routes in the vicinity of Cranford Street are shown in Figure 3.2. The Orange Line bus route is located on Cranford Street. From the Christchurch Northern Corridor connection, the Orange Line continues down Cranford Street as far as Edgeware Road where it moves across to Colombo Street. Other nearby bus routes include ‘44 Shirley’, ‘100 Wigram/The Palms’, the Orbiter which turns right from Linnes Road (east) onto Cranford Street under the new route, and the Blue Line which connects Rangiora to Christchurch City Centre via Papanui Road.

EC can have plans to increase the frequency of bus services (on the Orange Line) on Cranford Street. Further bus priority measures are currently being investigated on Main North Road leading into Papanui Road. One benefit of the CNC is that it is expected to reduce traffic volumes on Main North Road and Papanui Road allowing better bus priority on this corridor.

EC can and NZ Transport Agency have also previously investigated Park N’Ride facilities in northern Christchurch. Any facility needs to be located so that it benefits from the bus priority improvements on Main North Road and Papanui Road.

We support citywide initiatives that encourage more trips by bike, public transport, or walking. We also support initiatives to encourage car-pooling, including HOV lanes.

### 3.2.3 Existing Traffic Conditions and Crash Analysis

Historical crash data is available for the network south of the CNC but there are limited traffic counts available for the existing road network. The traffic counts that are available are shown in Appendix A. As part of the monitoring a lot more (baseline) traffic counts are being collected before the CNC opens.

The crash history shows that generally the majority of crashes (in the period 2012-2016) in the downstream network have occurred on higher volume roads such as Cranford Street, Linnes Road, and Hills Road. In general, the data aligns with what would be expected relative to a typical network hierarchy: high volumes on arterials and collectors, and a relationship between traffic flow and crash incidence.

Of the death and serious injuries that have occurred during the 2012-2016 timespan, the majority have involved turning or crossing traffic mainly at intersections. Hence particular attention needs to be given to the design of intersections as traffic volumes increase.

Pedestrian crashes have occurred east of Cranford Street on Linnes Road (near school crossing), and also around Edgeware Village and near St Albans Park. In total there were 11 pedestrian (including one mobility) crashes that occurred in the study area in the period of 2012-2016. Of these, two pedestrians were minor, and three were older than 65. The crashes resulted in two Deaths or Serious Injuries (DSI) (only 8% of the DSI which is lower than the national average for 2016 (10%)).

There were three recorded bicyclist DSI in the study area (12.5% of the DSI), which is higher than the national average of 6.2% for 2016. But fairly typical of Christchurch where cycle numbers are higher. Cyclist crashes have generally occurred south of Westminster Street. Cranford Street has experienced a higher amount of motorcycle crashes than most other nearby streets.

Speed has also been a factor. Cranford Street performed relatively well compared with other major roads, except around the Westminster Street / Cranford Street intersection, and immediately south of the Berwick Street / Cranford Street intersection. Locations where speeds were a bigger factor include Barbadoes Street between Edgeware Road and Warrington Street, and Flockton Street. This may be a result of the current wide lanes on these roads and the unsignalled Barbadoes/Warrington intersection.

More detail on current crash patterns is provided in Appendix A. The pre-CNC crash data will form an important baseline for monitoring the crash impacts on the network following the opening of the CNC.

4. Purpose of the Plan

4.1 CNC Notice of Requirement (NoR)

The primary purpose of the Plan, as specified in the NOR, is to identify downstream effects (from the southern end of the NAE/CSU) of the CNC and develop a plan that addresses these effects. This requires identifying what needs to happen before the CNC has opened and what level of monitoring and interventions are required to mitigate adverse effects between 2020 (opening year) and 2031 (design year).

4.1.1 NoR Objectives

The objectives of the investigation, as stated in the Notice of Requirement (NoR), into the downstream effects are:

(a) To identify preferred vehicle access routes, particularly for trucks, between the end of the Christchurch Northern Corridor and the Central City (that is between the end of the NAE/CSU and the City centre); and
(b) To identify strategies to keep vehicles on preferred vehicle access routes; and
(c) To discourage vehicles away from public transport routes and walking or cycling routes such as Main North Road / Papanui Road and Rutland Street corridors respectively.

These objectives are limited in scope and are motor vehicle centric. While objective 3 may consider other modes, it does not cover improved infrastructure over the network for other modes to offset the additional traffic volumes. To be consistent with the various national, regional, and local transport strategies it is important that the Plan developed considers a number of other transport planning matters (e.g. safe access to schools); and especially the impacts of the additional CNC traffic on walking, cycling, and public transport on the downstream road network. Hence the Plan includes improvements that extend beyond these objectives.

4.1.2 NoR Effects Management

The NoR also states that: This Management Plan is to ensure downstream effects are appropriately managed and to:

(a) Assess the existence, nature, and extent of any increased traffic on streets adjacent to, or adjoining, Cranford Street attributable to the NAE/CSU that might cause or contribute to a loss of service to any of these streets for up to 10 years after the opening date of the NAE/CSU;
(b) Implement measures to avoid, remedy or mitigate such effects, where these are more than minor, in a timely and cost-effective manner and where appropriate and practicable; and
(c) Monitor the efficacy of the measures for an appropriate period and implement further remedial action if this is necessary and appropriate.

Here we have taken a broader view on the measures that need to be undertaken to avoid, remedy, or mitigate the traffic effects. It not just being a matter of keeping the traffic on main roads and discouraging them from using local streets and routes currently prioritised for public transport (Main North Road) and cycling (Rutland Street), but also mitigating the effects on other modes of the increased traffic. For example, the large increase in traffic on Cranford Street will impact 1) on safety of school children crossing the corridor to access St Albans School, 2) cyclists who use Cranford Street and 3) pedestrians and drivers who want to access the Westlington/Cranford local activity centre. Measures to mitigate these three risks have been considered in the Plan.

4.1.2.1 30% Traffic Growth Threshold

It was stipulated in the NoR that in order to be considered for treatment a street must have experienced in excess of 30% increase on the traffic volume that preceded the CNC. Additionally, underlying traffic growth was not to be included. It was also made clear that in the event of a street exceeding the threshold that works did not necessarily need to be undertaken to reduce the traffic volume.

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14 NAE refers to ‘Northern Arterial Extension’ (the connection between SH74 and Cranford Street). CSU refers to ‘Cranford Street Upgrade’. Both form part of the greater Christchurch Northern Corridor (CNC) project.
This requirement is significantly more complex than it appears. Initially, when the CNC is completed and connected to the existing network, it will be relatively simple to deduce where a 30% increase has occurred exclusive of non-CNC related growth. The complexity of accurately making this calculation will exacerbate the longer time passes from 2021.

While this threshold seems relevant for local streets, which carry modest volumes, the same cannot be said of arterial roads and some collector streets. Many of the arterials, and especially some of the intersections, would experience congestion well before they get a 30% increase in traffic. If changes are not made to the arterials to remove severe congestion, then it will be difficult to mitigate the 30% growth in traffic on some local streets. Hence our approach with arterials has been to look at where congestion is expected to occur and look at options to reduce congestion where this does reduce the number of local streets impacted by more than 30% additional traffic.

4.1.2.2 Monitoring the Threshold

The streets that are expected to get a 30% increase in traffic by 2031 or may get an increase (based on local knowledge) will be monitored from 2020 through to 2031. Baseline data for those streets is being collected in 2018. There are some challenges in monitoring local streets as the 30% growth threshold is the additional growth that has occurred beyond what might have been expected from natural traffic growth without the CNC.

There are many societal events which affect the number of trips undertaken on a network, land use changes, economic changes, and political changes to name a few. Given time, changes will occur, and these will need to be updated in a base model. There are also many specific changes that will occur on the network which will also need to be updated within the base model. These changes are relatively simple to take care of in a model. However, a much more difficult undertaking is to decouple changes to the downstream network in response to the CNC, changes which affect the traffic volume on various streets (increases and decreases) which may not have been undertaken had the CNC not been constructed, or at least not within the set timespan identified in the NoR. Over time it will become increasingly difficult to separate the impact of these downstream treatments and the CNC itself in terms of their consequence to the network’s performance. Section 8.1 discusses the monitoring method that we suggest being used to monitor traffic volume increases.

It is also proposed to monitor the vehicle emission, noise, and vibration impacts of the additional traffic on arterials and collector routes. This monitoring is in response to concerns raised by the community.

4.2 Methodology

The NoR set out the framework for the appointment and methodology of the Plan. Prior to the operating of the CNC, Christchurch City Council were to appoint a suitably qualified independent traffic engineering expert to investigate and design an appropriate methodology. To avoid doubt the NoR stated what was expected to be included in the methodology. The following headings outline the methodology we have adopted to respond to the various elements expected by the NoR.

4.2.1 Identify Affected Streets, specifically those by CNC

Streets affected by the CNC were primarily identified using the CAST Saturn Model. The model outputs highlighted midblock locations that exceeded the 30% growth requirement of the NoR in the AM Peak, PM Peak, and all day. A model was used as the network size is too great to attempt to conceptualise the impact only through the experience of individuals. Notwithstanding, models are limited in their ability to reflect dynamic human choices due to the many variables, and varying importance of variables, that can influence trip distribution. Therefore, the streets identified in the model were subjected to community consultation, expert knowledge of the network (and network management in general), and other experts during the workshop.

The monitoring of streets between 2020 and 2031 will identify the actual streets impacted by the CNC by more than 30%, which may or may not align with that shown in the modelling. The local streets affected by the CNC (from modelling and local knowledge) if any arterial upgrades occur are shown in Section 5.4. The local streets expected to be impacted under the arterial upgrade options are shown in Section 7.2.4.

4.2.2 Assess Current Vehicle Usage and Service

Various sources were available to assess the baseline traffic volumes for the Plan. The primary source is the CAST transport model. These estimates are included in Appendix D1 and a small number of manual counts (Appendix C). Before the CNC is opened, traffic counts will be collected at over 50 locations in the road network to establish baseline traffic volumes which will be used as part of the ongoing monitoring of each
street in relation to the impact of the CNC. Monitoring screens have been developed and are presented in Appendix E. We are recommending ongoing annual or biannual monitoring of the streets that are expected to carry most of the additional traffic, while other streets only need to be monitored if adverse effects are reported (e.g., increase in rat-running or speeding). These counts will include the proportion of heavy vehicles. Separate baseline intersection counts will also collect pedestrian and bicycle traffic volumes.

4.2.3 Consideration of the Effects of Increased Traffic Flows

The effects on all transport modes as a result of the increased CNC traffic flows have been assessed based on community issues raised during consultation, expert knowledge of the network, and advice from transport engineers and an urban designer during three issue and option development workshops. These methods are limited insofar that they require a reliance on the predicted affected streets from the CAST model. The monitoring programme is therefore required to help ascertain and confirm exactly where and to what level the transport effects actually manifest. This may identify that streets not shown in the transport modelling are impacted.

4.2.4 Recommendation of Appropriate Mitigation Measures

At this stage a workshop process was undertaken with other experts. The feedback from the community consultation was used extensively during this phase to help identify potential problems on the network and also as a gauge on community response to options. This information was then used to identify a range of options that best addressed the issues. A multi-criteria analysis framework was developed and agreed upon, and the options were rated against different pre-agreed outcome measurements. The results were triangulated against local expert knowledge.

Once the type and scope of the arterial upgrades were settled upon a second iteration of mitigation measures took place which concentrated on measures that could mitigate the effects on access to schools, parks, commercial centres, and cycling in light of the arterial upgrades.

This process identified issues and options that need to be addressed before the CNC opens and depending on monitoring outcomes following the CNC opening, up to 2031.

4.2.5 Recommendation of Further Remedial Steps

While the Plan outlines the issues and upgrade options that may need to be actioned in the few years following the opening of the CNC and through to 2031, what needs to be done will depend on the outcome of transport monitoring. It is possible that new issues arise as a result of the CNC that are not reflected in the transport modelling undertaken or in the crash history. The routes expected to be affected may not be affected as predicted and thus not need to be upgraded, through the ten years following the CNC opening. Christchurch City Council will need to regularly monitor traffic flows, crash records, and environmental impacts (emissions, noise, and vibration) and intervene to address such issues, to mitigate the ongoing effects of the CNC.

4.3 Balanced Transport Planning Approach

Wherever possible, we have taken a balanced transport planning approach to the development of the Plan that looks to mitigate the impact of the additional traffic on arterial roads and local streets and other transport modes with minimal impact on private property.

As cities grow they are faced with growth in land transport trips. It is not suitable to accommodate all such trips in single occupancy vehicles. NZ Transport Agency and Christchurch City Council have actively looked to provide transport options for these trips in Northern Christchurch 17. This includes the provision and promotion of bus, cycle, and car-pooling initiatives, along with infrastructure upgrades to ease congestion and reduce the proportion of people in single occupancy vehicles. We are supportive of more investment and promotion in this area, but are conscious that such initiatives, particularly in the short term, will have limited impact on the number of vehicles that will enter Cranford Street when the CNC opens.

To achieve a balanced transport planning outcome, which encourages use of other transport options, we have not considered options that provide an expressway (e.g., permanent four-lane route) through St Albans to the City Centre via widening the road reserve of current arterials or on a new arterial alignment. Only a small number of people who participated in the consultation favoured such an approach. The support for a balanced approach to transport planning and the promotion of alternative transport modes

and car-pooling was promoted by many stakeholders and the general public in the consultation. This is consistent with the findings of a number of consultation processes managed by Christchurch City Council citywide (e.g. Share an idea campaign) in northern Christchurch. Hence, in our view highly car-centric options south of the CNC would not be acceptable to the majority of the local community and therefore are not being promoted.

However, the CNC is currently being constructed, and it is clear from the transport modelling that this will significantly increase vehicle flows on Cranford Street (south of Innes) in 2020 and through to 2031. While one option is to do nothing and allow congestion to occur, there are consequences of severe congestion that are undesirable to the community in terms of pollution and road safety. Hence, to address severe congestion and discourage use of local streets by commuter traffic, a measured plan of arterial upgrades and traffic calming of local and collector roads is proposed. Wherever possible the upgrades are being achieved within the current road reserve. Given this constraint, there will still be congestion on the arterial/collector roads, especially at the Berwick Street/Cranford Street and Westminister Street/Cranford Street intersections as traffic volumes grow towards 2031.

The Plan also includes a number of transport improvements that are expected to encourage more walking and cycling in the community. Where possible this includes mitigating the adverse impacts of the additional CNC traffic. While this is not possible on all routes, this is to a degree offset with other transport improvements in the local road network e.g. improved bicycle routes running parallel with and crossing Cranford Street.

The Plan gives limited attention to travel demand management measures to move people out of cars, other than improving transport facilities to support use of other transport modes (e.g. walking and cycling). Travel demand management is typically an intervention considered strategically for a wide area; such as the Greater Christchurch urban area or the northern part of Christchurch and Waimakariri District. Any demand management interventions specific to this project would shift or create issues across the network if not coordinated with other projects. Therefore, the Plan does not closely look at hard\(^{18}\) and soft\(^{19}\) mode shift interventions or other wider demand management strategies for treating issues in traffic volumes. We do strongly support Christchurch City Council’s investigations and plans to introduce more travel demand management measures in Northern Christchurch that focus on reducing congestion and traffic in single occupancy vehicles on the Northern Corridor. Such measures include improvements to bus services, possible HOV lanes on Cranford and Shirborne Streets, schemes that promote carpooling, and implementing park and ride (and park and bike) facilities.

Another key aspect of the project scope is that only problems that arise directly and significantly as a result of the CNC are being addressed as part of this project. All other network issues are to be addressed via other funding arms of the relevant transport authority. The NCR outlined that a 30% increase of vehicle movements on top of those expected to have occurred if the CNC had not been constructed are to be addressed in the Plan, hence transport impacts created by general traffic growth in Northern Christchurch, and not by the CNC, will not necessarily be addressed by the Plan.

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\(^{18}\) Measures such as price tolling, or land zoning changes.

5. Transport Modelling

Transport modelling forms an important part of the analysis that informs problem identification and option analysis. Modelling has been used as the effects of the project are yet to be experienced, and in many instances will be significant enough to warrant treatment prior to the opening of the CNC. For example, this is likely to be the case on arterial routes and at busy intersections where a sudden influx of traffic will make upgrades after the CNC more disruptive.

The important outputs required from the modelling were to estimate which local roads were likely to experience a 30% increase in traffic volume (either during the morning or evening peak, or daily) on top of what would have been expected at the same point of time in a scenario where the CNC was not constructed.

Therefore, the transport modellers were requested to model:

a) The downstream network in 2021 and 2031 without the CNC
b) The downstream network in 2021 and 2031 with the CNC
c) The downstream network in 2021 and 2031 with the CNC and various downstream treatment packages (as outlined below)

These were to be modelled during the weekday AM Peak and PM Peak, and all (week) day.

No modelling of weekend traffic flows was undertaken as there is no current CAST weekend model. Weekend traffic volumes peaks can be relatively high but are not tidal like weekday peaks, so do not generally cause the same level of congestion. It will be important to monitor traffic volumes after CNC opens in the weekends to identify any capacity issues during the weekends.

The 2021 model represents the open year of the CNC (currently expected to open in September 2020). The 2031 model represents the design year. The expected effects beyond 2031 have not been assessed in this report as per the requirements of the NoR.

Modelling was undertaken for this study by Jacobs (a modelling consultant). This modelling included the road changes associated with the Rapanui Parallel cycleway that makes Rolleston Street and Tristram Street less attractive for through traffic. The model also assumed the latest version on the CNC design, including a third motorway lane southbound on the Waimakariri River and southbound HOV lanes south of this extending to north of the QEII Drive interchange. The most recent land-use forecasts (at the time the model was commenced) for northern Christchurch and the Waimakariri District were used in the modelling. A summary of the modelling undertaken by Jacobs has been prepared for Christchurch City Council.

5.1 Limitations of Modelling

Modelling a network requires a series of assumptions to estimate trip patterns. These include assumptions relating to land use, population, and the propensity of people to choose particular modes given the attraction of trip generators. All of these (and others not mentioned here) have varying degrees of certainty. The assumptions can become erroneous following events such as policy changes, land development, and economic changes. They can also be erroneous in how they predict the movements of vehicles which are controlled by individual humans who can (and do) employ dynamic decision making, rather than decisions made with rigid logic.

Models, like CAST, do not highlight the effects of intersection delay well. In this instance, given the amount and complexity of the network with many intersections (varying significantly in delay), intersection delay will be a factor in where drivers decide to make their trips in reality.

Christchurch has a grid like network (owing to primarily to its topography), where drivers have many route choices. In such circumstance larger models (as is the case here) may struggle to replicate actual behaviour due to “all or nothing assignment” by the modelling algorithms. These issues become more pronounced when assessing the effects on local streets, it is fair (at least relatively) to assume drivers will use direct arterial routes if the level of service is acceptable to the driver. When the arterial becomes less desirable, exactly which local streets, and to what magnitude, will be affected is more difficult to estimate using transport modelling.

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More details available in Appendix D
Underlying assumptions, such as traffic growth, will also likely change in response to changes in land use and different levels of land-use growth, indeed land-use projections regularly change in response to market forces and planning rules.

As such, as discussed in Sections 4.1.2.1, and 4.1.2.2, the model will be more accurate in 2021 than in 2031, therefore monitoring to track growth following 2021 is critical to validating the model findings.

Nonetheless, even with the limitations, modelling is the best tool we have to estimate what may occur in the future.

5.2 Expected Transport Impacts Caused by CNC Traffic

In order to understand impacts caused by the CNC, it is important to first understand what level of growth on roads in Northern Christchurch would have occurred if the CNC had not been built. The pattern of travel would be impacted by the ability of the transport network to accommodate additional traffic. The modelling then considers how the CNC will concentrate traffic where it links to the arterial network at QEII Drive and Cranford Street. The pattern of travel is then influenced by the future road networks ability to accommodate this traffic. Upgrades to roads will influence which roads the traffic will use. This includes both capacity upgrades on arterials/collectors and at intersections and discouraging traffic through using traffic calming. Even small changes will impact on the routes drivers take to travel through Northern Christchurch.

5.2.1 Expected Traffic Growth Without CNC

Initial modelling has been undertaken (using CAST (Saturn) model) to identify the level and location of expected network traffic growth and traffic congestion if CNC had not been built, refer to Figure 5-1. Note that “V/C” stands for volume over road capacity.

Areas of the network in excess of 80% experience congestion, as traffic volumes approach capacity (V/C = 1) and unstable flow conditions occur. This results in slower moving vehicles and smaller, and less frequent, gaps for vehicles to enter traffic flow from side streets. This in turn results in queuing on side streets, and risk taking when selecting gaps to enter.

Marshland Road and Main North Road are two important arterial routes in Northern Christchurch, and without the CNC additional congestion would have occurred on these routes by 2021 and be worse in 2031 due to growth in traffic flows from Northern Christchurch suburbs and Waimakariri District (dark red and red sections). But, as the map shows, there are other congestion areas further south on Cranford Street and Hills Road, Barbados Street, especially closer to the intersection with Bealey Avenue, is also affected. All of these areas have been circled on the maps.
5.2.2 Additional Traffic Growth Across Local Network as a Result Of CNC

Modelling has been undertaken to assess the growth of traffic in the network overall and around the southern end of the CNC following the completion of the CNC (less the underlying expected growth if CNC had not been built), streets (arterials, collectors, and local streets) that are likely to have an increase of 30% more traffic in peak periods by 2031 compared to 2021 without the CNC have been highlighted in the following figures. Figure 5.2 shows the larger picture and how traffic will divert from Marshland Road, Main North Road and Johns Road (blue lines) to the CNC and downstream routes (red lines).
Figure 5.2: Major changes in traffic volumes as a result of CNC (compared with no CNC) in 2031

At a more localised level the impact of CNC on traffic volumes in the AM Peak, PM Peak, and all day in 2021 and 2031 are shown in Figure 5.3 to 5.8. Those streets which are expected to have a greater than 30% increase in traffic are shown in Black (arterials) and orange (local roads).
These figures show a significant number of local streets are expected to have at least a 30% increase in traffic volumes due to rat-running traffic. The effect is more pronounced in 2031, although the majority of streets are also impacted in 2020/21. If no arterial/collector upgrades progress, then a lot of streets need to be traffic calmed before the CNG opens. However, with the level of congestion expected on Cranford Street it will be challenging to design and construct traffic calming that deters rat-runners.

5.3 Modelling of Improvement Options

The initial modelling excluded any change to downstream routes and intersections. This was done subsequent to options being developed and is presented in the following sections, and Appendix D.

5.4 Impacts of Additional Traffic

The main impacts of the additional traffic are road safety, access to shops, parks, school and housing, air pollution, pavement deterioration, and amenity (urban design).

There is a known relationship between traffic volume and crash risk. This means streets with an increase in traffic volume (particularly if not treated) tend to experience more crashes if not treated. Deferring vehicles, especially heavy vehicles away from local streets (for example by traffic calking) and onto better designed arterial routes will reduce the safety impact of the CNG traffic. Lower operating speeds (<40km/h, or even 30km/h) on local roads will also reduce both the number and severity of crashes. On arterial and some collector (distributor) streets where traffic volumes will increase significantly, a combination of route upgrades and temporary speed limit reductions (for example school zones) can be used to address crash risk. As traffic volumes increase, the headway between vehicles decreases and consequently the ability for drivers to enter and exit the traffic flow (via accesses, or intersections) reduces.

Road pavement tends to wear out faster with higher traffic volumes; however, this is more dependent on the relative volume of heavy vehicles, rather than necessarily the total traffic volume.

The Plan looks to address as many of these impacts of the CNG traffic as possible, acknowledging that some issues cannot be easily addressed. The intention of the Plan being to minimise rather than fully eliminate the effects of the additional traffic volumes as a result of the CNG.
6. Community and Stakeholder Concerns

6.1 Purpose and Outcomes of Early Community Engagement

Consultation with the public and key stakeholders has and will continue to be an important part of the development and advancement of the Plan. The St Albans community, in particular, have been very active in expressing their views on the various northern arterial scenarios that have been presented by Christchurch City Council and the Crown over the last 50 plus years, including the Christchurch Northern Corridor (CNC). The major concern expressed during consultation on the CNC, is how the additional traffic from the arterial will impact on the St Albans and surrounding communities, and how this can be mitigated. Concerns that were expressed at the CNC NoR hearing led to the requirement to produce a DEMP (the Plan).

In order to involve the public and key stakeholder in the process as required by the NoR and Christchurch City Council’s own internal processes, a consultation strategy was developed by Christchurch City Council. The first step of the strategy focused on capturing all the issues and concerns of the general public, key stakeholders, and politicians (community board and Christchurch City Council). In order to achieve an independent perspective (from Christchurch City Council) on the issues and concerns, the independent expert participated in the majority of the consultation meetings.

Subsequent phases will involve consultation on the Plan and each of the improvement projects within the Plan. The NoR has some specific requirements around consultation which are stated below. Most of these matters apply to consultation on the options that are developed in the Plan.

4.5. Where traffic calming work is recommended, Christchurch City Council will consult with:

4.5.1. Residents of the streets where traffic calming measures are proposed to be taken;

4.5.2. Canterbury District Health Board;

4.5.3. Mainehau Primary School, Our Lady of Fatima School27, Paparoa Street Primary School, St Albans Catholic Primary School, and St Albans School;

4.5.4. St Albans Residents Association and Mainehau Community Trust; and

4.5.5. Cyclists through Spokes;

4.6. Consultation shall include the distribution of a newsletter including feedback form prior to the review.

Section 5 of the NoR also provided guidance on the process for consultation prior to implementation of the Plan.

5.2 Owners and occupiers of properties on streets identified by the independent traffic expert as requiring mitigation measures shall be:

5.2.1 Advised of the recommendations of the independent traffic expert under clause 3, including proposed mitigation measures, within 30 working days following the provision of the recommendation to Christchurch City Council;

5.2.2 Provided a period of 20 working days to comment on the proposed mitigation measures; and

5.2.3 Advised by Christchurch City Council of the final mitigation measures to be implemented, at least 20 working days prior to commencement of any works.

The initial phase of stakeholder and public consultation was focused on identifying all the existing and potential future transport issues associated with the CNC traffic on the downstream transport network. To

27 Now known as St Francis of Assisi School
help the public in assessing the potential effects of the CNC. Transport modelling outputs of the likely impacts of the CNC were provided. More specifically, this included the streets that are expected to have more than 30% additional (tail-running) traffic in 2031. In order for the public to consider how changes to the arterial and collector roads may reduce the amount of traffic using local streets, the benefits of a potential arterial upgrade options were provided. This preliminary option included clearways on Cranford Street, upgrades to three intersections on Berwick and Warrington Street and three laning of Madras/Forfar and Barbadoes Streets from Bealey Avenue to Warrington Street in the higher flow direction.

The initial consultation process consisted of the following steps:

1. One-on-one meetings with 20 key stakeholders, which included the parties specified in the NoR (e.g. the local schools) and other stakeholders such as shop owners expected to be impacted.
2. Four public open days attended by 123 members of the community at which plans were presented of the impacted area and a potential arterial upgrade option.
3. Distribution of a newsletter to approximately 12,000 households and businesses in the affected road network (Appendix F). This included a submission form. Over 400 submissions were received from the community.
4. Several meetings with the Papanui-Innes community board and Initial Teacher Education (ITE) Council committee to discuss the process being used in consultation and the issues identified in the transport modelling.
5. A half day consultation hearing of submissions from stakeholder and the public that was chaired by the community board.

The feedback from the public and stakeholders was compiled into common themes for consideration at future stages of the project. The key topics raised from consultation are as follows:

### Clearway comments (mostly Cranford Street, but also in general)

| Take the clearway through to Bealey Avenue | Ongoing monitoring/policing | Loss of parking |
| Pedestrian safety – upgrades required and design concerns | Improved facilities for public transport / park and ride | Provision of safe cycling facilities |
| Access to English Park | Impact on Cranford Street properties | Impact on businesses |
| Impact on side streets | Impact on driveway safety | Consider HOV lanes |

### Intersection changes comments

| Parking concerns | Impact on businesses | Leave as is and monitor traffic impact first |
| Fortin Street roundabout doesn’t need to change, and safety concerns | Impact on St Albans Park | Pedestrian safety – both concern for increasing pedestrian risk and also support for changes |
| Cycling safety – both concern for increasing cyclist risk and also support for changes | Barbadoes / Warrington needs lights | Berwick Street – pinchpoint and congestion |

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The Council summary of submissions can be found here: 
### Council
14 February 2019

#### Council

**Item No.:** 17

**Attachment A**

<table>
<thead>
<tr>
<th>Traffic light phasing</th>
<th>Two new sets of lights could cause short cutting through side streets</th>
<th>Flockton Street issue – will vehicle and bus maneuvers be possible due to proximity to traffic signals</th>
</tr>
</thead>
</table>

### Three Lanes – Madras Street and Barbadoes Street

<table>
<thead>
<tr>
<th>Prefer clearway</th>
<th>Loss of parking undesirable</th>
<th>Bus blocking inside lane during clearway operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leave as is and monitor</td>
<td>Pedestrian safety</td>
<td>Impact on businesses</td>
</tr>
<tr>
<td>Improve public transport options</td>
<td>Cyclist safety</td>
<td>Impact on St Albans Park users</td>
</tr>
<tr>
<td>Impact on residents</td>
<td>Increase in truck movements undesirable – vibration and noise</td>
<td>Continuation of the one-way system all the way through</td>
</tr>
</tbody>
</table>

### Cranford / Westminster, Cranford / Berwick, Madras / Edgeware, and Barbadoes / Edgeware

<table>
<thead>
<tr>
<th>Safety – driver behaviour and vehicle speed concerns, pedestrian safety (especially children), and also desire to leave as is.</th>
<th>Turning arrows or separate turning lanes</th>
<th>Lower the speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leave intersection(s) as is</td>
<td>Have red light camera at intersection</td>
<td>Pedestrian and cycle focus</td>
</tr>
<tr>
<td>Parking – provision for shops/businesses and increase P15 to P30.</td>
<td>Impact on businesses and residents</td>
<td>Widen road – do not narrow</td>
</tr>
</tbody>
</table>

The feedback from consultation provided good insight into the community’s thoughts and concerns on the project. The results were considered during the issue and options workshops which led into option development, and the multi-criteria analysis of different options. Refer to Section 7.2.4 and 7.4 for discussion on how the consultation outputs informed option analysis.

Many of the issues with the options can be mitigated or possibly resolved, during the later design phases of this project, however others may be more challenging. On-going dialogue and consultation will therefore be crucial to try to achieve the best upgrade options for the community.

As per the requirements of Section 5.2 of the NoR, and Christchurch City Council’s own processes, further consultation will occur on the Plan and each of the projects that are recommended in the Plan. This phase of consultation will inherently be more detail specific on the individual treatment selection (say speed platform vs carriageway narrowing); however, it is important that the resultant decisions remain holistic to the network. A treatment decision on one street may result in a significant impact on another; perhaps even acting as a catalyst for another street exceeding the 30% threshold. Consequently, decisions cannot be made in isolation, or without consideration of their wider impact. The monitoring regime will be an important part of monitoring the impacts of various interventions and identifying any knock-on effects of such changes to other parts of the transport network.

### 6.2 Changes in Transport Modelling

Since the initial transport modelling was undertaken, that informed the consultation material, further modelling has been undertaken of the downstream effects. The latest transport modelling has changed some of the streets that are expected to be impacted by greater than 30% traffic in 2031 and also looked...
at the impacts in 2021. One major change to the modelling that impacts on routes impacted downstream is the proposed layout of the Innes Road/Cranford Street intersection, which is being upgraded as part of the CNC project. Other changes that have been made include restricting a number of side-roads on major routes to left-in and left-out (ULC). For example, Malvern Street and Dee Street intersections on Cranford Street. These network changes have impacted on traffic flows on Mersey Street (which now carries more traffic) and Malvern Street (which carries less traffic).

6.3 Changes to the Plan following second round of Engagement

*Intentionally left blank until report is FINALISED*
7. Issues and Option Development

This section of the report outlines the expected transport issues that will result from the CNC, along with associated improvement options (as identified during the stakeholder and public consultation), transport modelling, and review of the network by the independent expert. The Plan presents various options that have been developed to avoid, remedy or mitigate the expected transport issues and fulfill the objectives stated in the NOC. In many cases it also recommends further studies to look at option development. As with any area-wide transport plan, it is also important that the options are as consistent as possible with the objectives of local, regional, and national strategies. As outlined in the CDP and the national Government Policy Statement (GPS) on transport, road safety, and access for all road users is a high priority.

Section 7.1 outlines the issue and option development process that has been adopted for the Plan. Given the focus on keeping upgrades within the existing road reserve wherever possible (e.g., not looking at any new arterials or major arterial upgrades), there are a limited number of options available for increasing road capacity and mitigating the impact of the additional traffic on various road users (e.g., cyclists and pedestrians) and the local community.

7.1 Issues and Option Development Process

The first step in developing options was to clearly set out all of the issues that may be experienced on the network following the opening of the CNC. These included existing issues that may be exacerbated, and new issues. Compiling the issues was done by using the data available on the network (such as crash data), outputs from the model (such as where congestion might occur), feedback from the public, and expert knowledge of the network. A knowledge of the issues (or at least likely issues) was important so that the subsequent options considered would be focused on addressing these issues.

The option development has been separated into two development stages. Stage One involved developing options to encourage the additional traffic that will come down the CNC, when it opens and through to 2031, to stay primarily on the arterials and collector routes and off the local streets. This can be achieved by using a combined “carrot” and “stick” approach. The carrot being to upgrade some of the arterial and main collector routes. The stick being to traffic calm a number of local streets to push traffic back onto the arterial and collector routes. In addition to the traffic calming, up to 9 “safe speed community areas” (SSCA) are proposed in the study area to deter rat-running traffic on local streets and to reduce the risk of serious and fatal crashes from any traffic.

We acknowledge that the community wants to also see travel demand management measures that reduce the volume of vehicles coming down the CNC and into the St Albans road network. We have suggested that Christchurch City Council and NZ Transport Agency investigate measures that encourage alternative modes and more car-pooling. While such measures would reduce traffic volumes, the impact on traffic queues coming off the CNC, at least initially, is likely to be relatively small (effective measures might result in up to 10% reduction in traffic volumes) and so the focus of this study has been dealing with a significant increase in traffic through the network when the CNC opens and out to 2031.

The second development stage focused on improvements that need to be made on several roads to mitigate the impact of the additional traffic from the CNC on all road users and the community. Of particular importance is a network of roads that supports and promotes use of transport options other than the single occupancy motor vehicle, which retains or improves access to key community facilities (parks, schools, and shops) and, where possible, addresses the safety impacts of the additional traffic. The second stage of option development includes projects in the following four categories:

- Safe Access to Schools
- Safe Cycling Routes
- Access to Parks
- Access to Commercial Centres

Two overarching principles are promoted in the development of the options: delivering healthier streets and a safer (transport) system. With the growing understanding that streets have a vital role to play in developing vibrant and healthy communities, the Plan includes a requirement to develop street improvements that lead to healthier streets wherever possible. We propose doing baseline (before treatment) and design assessments of each impacted route using the Healthy Streets Framework developed by Transport for London (see Guide to the Healthy Streets Indicators). The ten key healthy street indicators are shown in Figure 7.1 below. Preference should be given to options that lead to more healthy...
streets or, where this is not possible due to increasing traffic volumes, that minimise the impact on the health of a street.

Figure 7.1: Healthy Street Framework

In terms of improving road safety and moving towards a safer transport system the Austroads safe system assessment framework should be used. In addition to safety auditing, to evaluate all infrastructure improvement options, the safe system framework breaks the risk of fatal and serious injury crashes into three components: exposure, likelihood, and severity. The exposure is typically the volume of transport users (pedestrians, cyclists, and motorists) on the street. With the increase in traffic volumes on many routes in the network as a result of the CNC, the crash risk will increase if no improvements are made. To compensate for this increase in crash risk we propose that both the ‘likelihood’ and ‘severity’ of crashes must go down. To achieve a reduction in ‘likelihood’ the facilities for road users, especially pedestrians and cyclists, in urban areas must improve. For example, the introduction of traffic signals, the greater use of pedestrian crossing aids (islands) and shorter crossing distances, and introduction of cycle lanes and paths. Crash severity is influenced by operating speeds which are related to speed limits and road design. Hence improvements that reduce operating speeds and lower speed limits reduces crash severity. In this network this will be achieved on local roads through introduction of the safe speed areas.

The Plan does not include many changes to support public transport, although it does support further investigation of improvement options that benefits public transport (i.e., HOV lanes). While this may be the case, one of the key outcomes of the CNC is to reduce traffic on Main North Road and Papanui Road, which is the key public transport corridor for Northern Christchurch. In terms of the study area, the needs of public transport should be considered in the more detailed designs, including location of bus stops, bus shelters, and reducing delays on routes, especially at traffic signals.

The next five sections talk in more detail about the issues and options in the Plan.
7.2 Arterial/Collector Capacity Issues

7.2.1 Context

One of the main issues identified for the arterial and collector roads was that they would be under greater strain (in terms of vehicle flows) than before the CNC during peak periods. When a road becomes severely congested vehicle movements slow and gap selection becomes more difficult and dangerous leading to greater queuing on local streets. It also becomes more dangerous to cross the road; especially before vehicle speeds drop due to congestion. To a degree, arterial/collector congestion is to be expected, especially during peak hours. However, the modelling outputs indicate that congestion will rise (especially during weekday peak hours) to a point where drivers will be more likely to choose to use local roads impacting on safety and amenity in primary residential areas. Therefore, the issue identified was that the key arterial roads will likely be unable to cater for the increased vehicle demands, resulting in a redistribution of movements to local roads. The key arterial and collector capacity constraints have been identified for the current network in the transport modelling (during weekday peak periods) and are as follows (noting that an extensive number of plots have been used to identify these issues):

1. The merge south of the Cranford Street / Innes Road intersection when the CNC opens. Two through lanes north and through the intersection become one lane southbound. The modelling in the AM Peak indicates that the V/C (expected volume to road capacity) ratio in 2021 would be 0.97 and in 2031 would be 0.98 (noting that anything over 0.8 is poor and will lead to disruptive traffic flows). Modelling indicates a lot of rat-running, especially onto Mersey Street if this matter is not addressed.

2. The through lane capacity at the Westminster Street / Cranford Street intersection. The current intersection has a shared through and right lane and through and left lane with a short merge lane, especially northbound (due to parking for the shops). With right turning demand there is effectively only a single through lane at the intersection, which severely constrains the capacity of intersection in both north and southbound directions. Queues already form heading northbound in PM Peak period.

3. Northbound and southbound through lane capacity at the Berwick Street / Cranford Street intersection. Currently only one through lane and a short right turn lane is provided heading north through the intersection. With CNC flows, the northbound through movement has a V/C of 0.85 in 2021. There is currently one through and one short left turn lane heading southbound. With CNC flows and the clearways on Cranford to Berwick the V/C is 0.91 in 2021. Both constraints would cause peak period delays.

4. Right turn capacity turning right from Berwick Street into Cranford Street. The single right turn lane is a major capacity constraint for traffic heading north on Madras Street / Forfar Street wishing to turn into Cranford Street. The impact of this constraint in isolation is difficult to assess given upstream capacity constraints. Option modeling has shown that with a double right turn in 2021, this route will have a V/C of 0.74. From this we can imply that a single right turn will have a much poorer V/C.

5. The single lane Forfar Street / Warrington Street roundabout is also a capacity constraint. In 2021 the North bound Forfar Street approach will be 0.81 in the PM Peak and this deteriorates further in 2031. The impact of this has again been assessed using the option modeling because of upstream capacity constraints. The option modeling includes traffic signals with a double left turn from Forfar Street into Berwick Street. This movement has a V/C of 0.62 in the PM Peak. A single left, as provided with the roundabout, would have a V/C well above 0.8. In the AM Peak the single through lane V/C from Berwick Street into Warrington Street at a signalised intersection would be 0.87. This indicates that two through lanes (for both a through and through and right turn lane) are required which cannot be accommodated at the current roundabout. In addition, roundabouts often experience safety problems when they operate near capacity due to risk taking as drivers pick smaller gaps. We expect crash numbers to increase if roundabout is not upgraded.

6. Capacity constraints at Barbadoes Street / Warrington Street priority T-intersection. Right turn movements out of Barbadoes Street will become increasingly difficult due to increased traffic volumes during peak periods. At the priority intersection the V/C for the right turn out of Barbadoes Street is 0.82 in the evening peak in 2021. We have already observed considerable delays for this movement in the evening peak, in the absence of CNC traffic.

7. Edgware Road Intersections at Cranford Street / Sherborne Street, Madras Street, and Barbadoes Street can only effectively accommodate a single through lane, like Westminster Street / Cranford Street, due to right turners sharing the lane with through vehicles, and short shared left and through lanes.
8. Southbound capacity constraint at Barbados Street / Bealey Avenue intersection. The single lane through movement on the mid-block approach to the intersection (there are two through lanes at the intersection itself) already causes congestion in the AM Peak, which the models predict to increase going forward, especially if more traffic from the CNC is pushed down this route.

9. Northbound capacity constraint at Madras Street / Bealey Avenue intersection. In the PM Peak the two through lanes have to merge quickly on the exit of the intersection due to a short merge to accommodate kerbside parking. This creates safety issues for motor vehicles and especially cyclists as the motor vehicles are often travelling at higher speeds having come off the one-way system with traffic signal coordination.

10. Southbound capacity constraint at the Sherborne Street / Bealey Avenue intersection. The single lane right-turn at this intersection into Bealey Avenue and single through lane approach up Sherborne Street causes queuing especially in the AM Peak, mainly to right turners but also to left turners. The modelling shows W/C of 0.9 in 2021 and 0.95 in 2031 for right turn into Bealey Avenue if this intersection is not upgraded.

11. While the Innes Road / Cranford Street intersection is being upgraded as part of the CNC we are aware that the left turn from the west into Cranford Street has only a short lane and hence drivers travelling north on Rulland Street may choose to travel through on Rulland Street and use Knowles Street, Weston Street, or McFaddens Road to access Cranford Street instead of Innes.

12. The installation of traffic signals at St Albans Street / Rulland Street intersection and limited right turn phase time from Rulland Street into Innes Road at the St Albans Street / Rulland Street intersection as part of the cycleway upgrade has reduced the traffic volumes on this route (a gold outcome given cycle safety considerations), and also the encouraged flow drivers heading north access Cranford Street, as in 11.

Arterial upgrades typically involve increasing the capacity of transport corridors to attract trips from local roads to arterials and collectors during peak flow periods. The idea is that if arterials/collector routes have adequate capacity then drivers are less inclined to use local roads which tend to be designed for accessing adjacent residential land uses rather than for movement of vehicles.

There is a range of ways in which the capacity of a road can be increased, such as physically creating more capacity (more lanes) at intersections and mid-blocks. Time controlled additional capacity is another treatment such as ‘cycleways’ where part of the carriageway can be used as an additional lane during heavier traffic flows but returns to parking at other times of the day, so it can be used for other purposes i.e., parking. Applying right-turning bars at intersections can also increase road capacity.

Other treatments are also possible which increase the productivity of a corridor (number of people carried in each lane). Improvements of this kind can be in the form of high occupancy vehicle lanes (HOV) and bus lanes. HOV lanes require vehicles using those lanes to have a minimum number of people (typically two or three per vehicle) which over time allows more people to pass through the existing corridor. Buses can use HOV lanes, as can electric vehicles and bicycles. Bus-only lanes tend to be used on high frequency bus routes. HOV lanes are an option for cycleways in the study area while bus-only lanes are not recommended due to the relatively low frequency of buses. A study would be required to confirm that HOV lanes can operate along the proposed cycleways.

Bealey Avenue, as a key arterial, forms a southern boundary of this project. Bealey Avenue runs approximately west to east and provides connections with the one-way pair box and four avenues. There are several arterials and collectors located south of the CNC and north of Bealey Avenue that will carry additional traffic from the CNC. The key ones being Cranford Street, Sherborne Street, Berwick/Warrington Street, Barbados Street, Madras Street, and the Innes, Rulland/Springfield corridor. The extent to which each street will carry the extra traffic depends on the capacity that is added to these streets at intersections and to midblock. Early on in the study, modelling was undertaken to assess whether improvements to the G EI Drive/Innes roundabout, Innes Road, and Hills Road might move some of the traffic expected down Cranford Street onto Hills Road. The modelling indicated that even with higher cost improvements along this route very few drivers would divert to the Hills Road route.

As with all capacity improvement projects, there is a risk that adding capacity can simply shift the location of congestion: for example, by relieving pressure at one location traffic will flow freely until encountering the next constriction. However, if there is too much congestion on arterial roads then drivers will be more inclined to ‘grid search’ the city, hence the Plan, therefore balances these issues by providing some additional arterial capacity, while calming local streets. While capacity is being added to arterial and collector roads there will still be some peak period congestion. The actual traffic effects after CNC is opened will be monitored to see whether more arterial capacity, and/or local road traffic calming is required.
7.2.2 North of Berwick Street Issues and Options

North of Berwick Street there are only two existing arterial and collector route options available to drivers coming down from the CNC. One option is the Rutland Street / Springfield Street corridor. As discussed previously, with the improvement made to the corridor as part of the Papanui Parallel separated cycleway [on Rutland Street], and being less direct, this corridor is less attractive than the main route option of Crawford Street.

The split of extra traffic between the routes is approximately 550 vpd (vehicles per day) on Rutland Street and 4,100 vpd on Crawford Street south of Innes Road when the CNC opens in 2020 (without any improvements). This increases to around 900 vpd on Rutland Street and 5,000 vpd on Crawford Street by 2031. While there is an increase in traffic on Rutland Street, it is minimal given the total increase in traffic from CNC and will have minimal adverse effects on the Papanui Parallel cycleway. Further details on traffic volumes on various routes are provided in Appendix D2.

As identified earlier, the main issues on this route are the capacity constraints as traffic heads south in the morning and north in the evening, via one single through lane south of Innes Road. The other constraint is right turning vehicles blocking the through lane at side roads and at the English Park carpark. While this will occur at other accessways along the route, the intersections and the carpark are the major traffic generators of right turning movements. Other issues, such as the safety of school children crossing Crawford Street, are covered in later sections.

While no changes are proposed to Rutland Street, additional capacity is required on Crawford Street from Innes Road to Berwick Street to accommodate the increase in traffic from the CNC. The two main options that can be accommodated in the current road reserve are four-laning and peak period clearways. The latter is preferred because it allows parking on Crawford Street near the Westminster Street / Crawford Street local commercial centre outside peak periods. Changes are also proposed at the Westminster Street / Crawford Street intersection (see Figure 7.2). Right turn bans will apply at this intersection during peak periods, to provide two through lanes. Given the increased traffic volumes through the intersection, to accommodate cyclists (via cycle lanes) and to address safety concerns with drivers hitting the signal pole (westbound) along Westminster Street, widening of the western approach is proposed (more on this later). Right turn bans will be installed permanently at the Dee Street and Malvern Street approaches on both sides of Crawford Street using throat islands. We also propose that the English Park carpark access be redesigned and right turns in and out of this carpark be banned.
7.2.3 South of Berwick Street Issues and Options

South of Berwick Street there are three routes that can carry the additional traffic from the CNC through to Bealey Avenue, being Cranford Street/Sherborne Street, Forfar Street/Madras Street, and Barbadoes. The extent to which each route carries this additional traffic depends on the capacity improvements undertaken to address the constraints listed above. The key capacity issues are at the nine interections in the network that are on these routes intersecting with Berwick Street/Warrington Street, Edgware Road, and Bealey Avenue. The key intersection constraints are along Berwick and Warrington streets. These issues being lack of right turn capacity (from a single right turn lane) from Berwick into Cranford, and the capacity and safety of the Forfar Street/Warrington Street roundabout and Barbadoes Street/Warrington Street priority-controlled intersection with the increase in traffic volumes. The other six intersections capacity issues can be addressed by banning right turn and/or adding approach lane capacity.

In terms of a continuous route connecting Cranford Street (clearway) and Bealey Avenue, there are two main options with several sub-options for one of the options proposed. Both options involve upgrading the Cranford Street /Berwick Street, Forfar Street /Warrington Street, and Barbadoes Street /Warrington Street intersections along with some capacity improvements to Berwick and Warrington Streets to provide approach-lane capacity. Option A involves adding clearways to Cranford and Sherborne Streets and Option B involves upgrading the capacity of Barbadoes and Madras/Forfar Streets (two sub-options being clearways or extending one-ways). In addition, there are a number of intersection upgrades required. More on each of these options and analysis is given later on in this report.
7.2.4 Local Streets Affected by Traffic following Arterials Improvements

Transport modelling was undertaken to assess how effective the arterial upgrades would be in reducing the number of local streets that have a greater than 30% increase in traffic in 2021 and 2031. This analysis effectively repeated that undertaken early on in the study for no network changes (as presented in section 5.4) but this time including the two arterial upgrade options. Both options looked at the clearway from Innes Road to Berwick Street, improvements to the Cranford Street / Westminster Street intersections and upgrades to capacity along Berwick and Warrington Streets. The two options south of Berwick were A (Cranford/Sherborne clearways) and B (Madras Street /Fortar Street and Barbadoes Street clearways) as shown in Figure 7-3.

Figures 7-4 to 7-9 show the local streets that will trigger the 30% increase in AM Peak, PM Peak and all-day in 2021 and 2031 for Option A. Figures 7-10 to 7-15 show the same plots but for Option B. These figures were produced using the change flow maps from the transport modelling, as presented in Appendix D4. These figures show the streets that are expected to trigger a 30% increase in traffic compared with what might have occurred if the CNC had not been built.
Care needs to be taken in interpreting these plots as there is considerable uncertainty in how much these streets will be impacted by the CNC traffic, due to the limitation in transport modelling. What it does indicate is streets that need to be treated before the opening of the CNC or shortly after. For the other streets (those not impacted by additional traffic in 2021), the traffic monitoring will identify the actual increase and determine whether traffic calming changes are required to these streets.

The outcome of this analysis informs the streets that are likely to need traffic calming when the CNC is opened or shortly after (e.g. Mersy Street). These are streets that are shown to be impacted in most scenarios, and those that can be monitored and treated at a later date (e.g. - Forst Street). Figures 7-9 show the additional rat-running streets south of Berwick Street, including Edgeware Road, Manchester Street, and Caledonian Road (the last two are wide local streets) that are impacted by Option A, extending clearways down Sherborne Street. A detailed list of streets that need to be (or may need to be) treated are provided in Chapter 8. Details on the types of traffic calming that should be provided, along with supporting speed limit restrictions, are provided in Section 7.5. Specific traffic calming treatments need to be developed and discussed with affected parties and the public for each street.

### 7.3 Options Considered to Address Issues

During the first stage (iteration) of option development, the study team looked at project options that used a combination of traffic calming of local streets and capacity upgrades of arterial and collector routes to attract the extra vehicles from the CNC to the arterial and collector routes. The intention of each of the options is to encourage the additional CNC traffic to use the preferred arterial and collector roads and reduce rat-running on local roads. The Stage 1 options were compiled following consultation with stakeholders and the public. The consultation feedback was used at this stage to ensure the options considered were fairly representative.

As already discussed, additional options were developed as comments from the public and stakeholders were received. This included greater use of clearways, rather than permanent three-laning, the option of extending the Barbadoes Street / Madras Street one-way system north to Warrington Street, and using clearways down the Cranford Street / Sherborne Street corridor south of Berwick Street. The full list of options was discussed and evaluated during several issue and option workshops and meetings.

The main options considered in Stage 1 are summarised as follows (see Appendix C for option diagrams).

- **Do Nothing** – this results in rat-running in a lot of local streets.
- **Option 1. Traffic Calming Only**.
- **Option 2. Arterial Upgrades Only**. The option used was three-laning of Barbadoes Street and Madras (Forst) Street, Cranford Street Clearways and Berwick Street / Warrington Street capacity improvements.
- **Option 3 (a). Traffic Calming and Arterial Upgrades. Arterial upgrades as in Option 2 except clearways on Barbadoes Street and Madras (Forst) Street instead of permanent three-laning**.
- **Option 3 (b). Traffic Calming and Arterial Upgrades. Arterial upgrades as in Option 2, so permanent three-laning of Barbadoes and Madras (Forst) Streets**.
- **Option 3 (c). Traffic Calming and Arterial Upgrades. Arterial upgrades as in Option 2 except extension of Barbadoes Street / Madras Street one-ways to Warrington Street**.
- **Option 4 (a). Traffic Calming and Clearways on Cranford Street / Sherborne Street from inner road to Beasley Avenue plus Berwick Street and Warrington Street Improvements**.
- **Option 4 (b) Traffic Calming and permanent four-laning on Cranford Street / Sherborne Street (option included to allow comparison of options with a more major upgrade of arterial roads)**
- **Option 5. Traffic Calming plus combined Arterial Options of all three routes (Options 3(a) and 4(a)).**

Most of the options include right turn bans at intersections, including traffic signals (e.g. Cranford Street / Westminster Street). The traffic signal right turn bans only operate when the clearways are operating. Some of the stakeholders have also suggested use of high occupancy vehicle (HOV) clearway lanes. These lanes encourage people to car-pool and/or use the bus. Currently HOV lanes are proposed on part of the CNC; in southbound direction but ending before the GBE interchange. This project has not looked at HOV lanes in detail as such lanes need to be considered over the full corridor, including the CNC. We would support Christchurch City Council and NZ Transport Agency undertaking a HOV lane study of the northern corridor (Waimakariri Bridge to Beasley Avenue) and looking at whether the clearways on...
Cranford Street and other routes can be HOV lanes, as such an option should reduce the number of single occupancy vehicles coming from the north, which is consistent with a number of transport strategies, including the CTSP.

### 7.4 Multi-Criteria Analysis of Options

Before commencing the MCA assessment, an MCA facilitator developed a number of criteria for evaluating the options based on previous assessments of this type he had undertaken and based on the strategic transport documents that were relevant for this study area. During the first issues and options workshop the criterion and weightings for each criterion were discussed and agreed. The attendees at the workshops were selected by the Independent Expert to cover various transport and other relevant disciplines, including urban design. The attendees intentionally wanted limited weighting placed on journey time and more on community impacts to reflect the outcomes from the consultation, which wanted a focus on community impacts.

During the second and third workshops, participants gave ratings to the various options listed above. This involved robust discussion over each of the ratings. Feedback from the consultation process was used during discussion (such as exactly where safety or environmental concerns were) which allowed for more specific rating analysis. The ratings of each option (considering the positive and negative consequences) are compared with the transport network in 2020 immediately before the CNC becomes operational, the baseline option. Hence, the sum of rankings for all options do have a negative value as they include CNC traffic, while the baseline option does not. To provide a relative score between the options each option has been compared with the do-nothing option and, in this case, most of the options have a positive score. The results of the MCA are presented in Table 7.1.
### Table 7-1: Multi-Criteria Analysis Results

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<th>Criteria</th>
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<td>Keep vehicles on preferred vehicle access routes</td>
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The MCA indicates that option 3(c), which involves extending the one-way pair of Madras (Fofar) Street and Barbadoes Street, along with clearways on Cranford Street to Berwick and capacity upgrades including new signals on Warrington Street and traffic calming of local streets has the best overall (score) ranking.

However, two other options also rank relatively well being option 3(a) which is similar to option 3(c) but has clearways on Madras (Fofar) Street and Barbadoes Street rather than converting them to one-way streets. The other high ranked option is 4(a) which includes clearways on Cranford Street /Sherborne Street through to Bredley Avenues with traffic signals at Fofar Street /Warrington and Barbadoes Street /Warrington Street. While option 3(b) also has a similar scoring overall it did score more poorly in terms of ‘main considerations’, with permanent three-laning impacting more on business and residential kerb-side car parking. Given that additional capacity is only required in peak periods, the peak period clearway option 3(a) is preferable as a two-way configuration, and so it has not been carried forward.

Option 5 provides both sets of upgrades. It is unlikely by 2031 that both upgrade Options 3(c) and 4(a) will be required. Indeed, capacity constraints on Cranford Street north of Berwick Street will limit need for all upgrades. Hence this option is not preferred.

#### 7.4.1 Preferred Option Discussion

Option 3(a) includes upgrades to Berwick Street and Warrington Street, as does Option 3(c). However, instead of extending the one-way streets it proposes peak period clearways on Madras (Fofar) Street and...
Barbadoes Streets south of Warrington Street. A key reason this option is not scoring as well as the one-way extension is the additional lane during peak periods would impact on the following: 1) Kerbside parking for business and residents, 2) Difficulty accommodating cycle facilities (due to clearways), and 3) Much wider crossing distance across Farfar Street and Barbadoes Street to St Albans Park. The main negatives with the one-way extension is extra travel distance for some trips to Madras Street and Barbadoes Street businesses and residents (this is minimal in this case due to the grid network of roads), and a potential increase in speeds if road does not get suitable narrowing.

Option 4(a) includes extending clearways further south on Cranford Street and along Sherborne Street. This option has slightly better travel time savings compared to Options 3(a) and 3(c). But, as can be seen in the MCA analysis, travel time has a relatively low weighting overall [at 10%] compared to many other matters assessed. Negative impacts include poor provision for cyclists when clearway is in operation, right turn ban at Berwick Street (from Cranford Street), additional traffic through Edgeware Village, and removal of parking on Sherborne Street from Bealey Avenue to Purchase Street permanently as part of upgrading the Bealey Avenue/Sherborne Street intersection. The main advantage of this option is that change will not need to be made to most of Madras (Farfar) Street and Barbadoes Street. However, this is also a negative as these routes, especially Madras (Farfar) Street, will experience traffic growth which will impact on safe access to St Albans Park as there will be additional traffic that pedestrians have to give-way to.

7.4.2 Development of a Preferred Option

All three options would provide the additional traffic capacity required to minimise rat-running on local streets. All three include peak period clearways on Cranford Street to Berwick Street and improvements to the Westminster Street/Cranford Street and Berwick Street/Cranford Street intersections. The modelling indicates that Madras Street would have significant additional traffic using it with all three options and that the Warrington Street/Farfar Street intersection need to be signalised, along with associated upgrades to Berwick and Warrington Streets. We would also highly recommend upgrading the Barbadoes Street Warrington Street intersection, which already experiences considerable delays and has safety concerns, especially for crossing pedestrians and buses.

For the three highest ranking options, the capacity upgrades required on Berwick Street/Warrington Street and north of Berwick Street/Cranford clearways are very similar and hence these elements of the options are included as part of the proposed plan. Some differences in intersection layouts at new traffic signals. However, south of Berwick Street there are three options, with one, Sherborne Street clearways, appearing to be quite different to the other two that utilise Barbadoes Street and Madras Street to carry the additional CNC traffic. However, all three routes, Sherborne Street/Cranford Street, Madras Street/Farfar Street, and Barbadoes Street already have a role in distributing traffic from Cranford North to Bealey Avenue and further south, and vice versa. Drivers tend to choose the route that best positions them to use Bealey Avenue and access the two sets of one-way pairs (Madras Street/Barbadoes Street and Durham Street/Montreal Street), depending on their destination (or origin). Drivers will still have both choices following the opening of the CNC but will distribute themselves depending on the level of congestion on each route.

Modelling to date on this study has been undertaken with the CAST model. This model is useful for looking at preferred route choice at a network level. In our view it is not sensitive enough to assess the more detailed operation of the road network at an intersection and individual road link level. We are also conscious that the stakeholders and the public are keen to see more detail on what each upgrade option would look like, and the detailed effects. These effects include removal of parking outside residences and business, rat-running through several local routes, such as Edgeware Road through the village, Hence the Plan suggests all three options are progressed to a scoping study. This scoping study would look in more detail at the design of each route and the nine main intersections from Warrington Street to Bealey Avenue, involve more detailed modelling of each option to look at how the options might be staged (e.g. where are clearways required in 2020, compared with 2031), and seek further community and stakeholder input on the proposed upgrades. It is possible that the preferred option may involve some upgrades to all three routes.

In all three cases the upgrades would connect into the Berwick Street/Warrington Street capacity improvements which we suggest progresses to detail design and construction ideally ahead of the CNC opening.

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7.5 Traffic Calming and Safe Speed Community Areas

7.5.1 Development of Traffic Calming Measures

Local streets have a primary function of providing access to adjoining land-use and lack some of the safe design features of arterial and, to a lesser degree, collector routes. While many of the streets in the St Albans area are narrow or have been narrowed to reduce vehicle speeds, there are a number of local streets in the study area that are very wide and may attract fast moving rat-running traffic, including larger trucks. Speeding issues if not treated, can increase the risk of crashes involving serious injuries and deaths. A range of treatments exist which can limit, dissuade, or mitigate vehicle movements through parts of the transport network where these movements are less desired, or unexpected. Most of these treatments are categorised as ‘traffic calming’ and should also reduce vehicle speeds and discourage access by larger vehicles (except on bus routes). Treatments typically include:

- **Vertical deflection** - walls, profiled speed humps, raised platforms (mid-block and intersection), raised pavements, and wombat crossings (raised pedestrian crossings).
- **Horizontal deflection** - lane narrowing/kerb extensions, slow points, centre belier islands, driveway links, median treatments, and roundabouts.
- **Diversion devices** - full road closure, half road closure, diagonal road closure, modified T-intersection, left-in/left out islands.
- **Signs, line marking, and other treatments** - speed limit signs and indication devices, prohibited traffic movement signs, one-way street signs, give-way signs, stop signs, shared zones, school zones, threshold treatments, tactile surface treatments, bicycle facilities, and bus facilities.

The traffic calming measures range in severity. Some completely close off available movements, such as converting a street that had multiple vehicle entries to a cul-de-sac. A treatment such as this would remove all through movements from the street. Other treatments are less severe, allowing for full access but reducing vehicle speeds and making the street less comfortable to negotiate. In the Plan we have generally selected less severe traffic calming measures to start, as these are typically more acceptable to the public prior to high levels of rat-running being observed on streets.

If traffic monitoring indicates this is not effective, more severe traffic calming, such as banning movements or partially, or fully closing streets, may be necessary. While there is a focus on the less severe traffic calming to start, there are some obvious more severe traffic calming measures (e.g., restricting arms of intersections to entry or exit only) that could be made for relatively low cost, compared to traffic calming an entire street. Such options should be discussed with local residents and be supported progressed.

Another beneficial side effect of traffic calming streets is that it can improve the level of service for cyclists and pedestrians. This can be achieved by treatments such as kerb protrusions that reduce the crossing distance for pedestrians, or by reducing speeds so cyclists feel more comfortable cycling in the traffic lane.

The Plan identifies the streets that are expected to have a greater than 30% increase in traffic volumes as a result of the CTC in the AM or PM peak periods (in some cases in both) or all day by 2031. The modelling indicates some of these streets may need to be treated before or shortly after the CNC opens. The monitoring programme will pick up changes in traffic volumes and speeds and indicate which streets need to traffic calmed later on; between 2021 and 2031.

7.5.2 Safe Speed Community Areas (SSCA)

In addition to physical changes to streets it is proposed to create up to 9 safe speed (community) areas either side of Cranford and Sherborne Streets as shown in Figure 7-16.

In addition to reducing travel speeds on local streets and reducing crash risk, the SSCA also signal to drivers that they are entering lower volume and lower speed streets where they should be more aware as children and elderly people may be on or crossing the road; hence the reason for including ‘safe’ in the signage. Ideally SSCA should have a 30km/h speed limit, as that is the ‘safe speed’ where collisions with pedestrians and cyclists have a very low likelihood of causing fatal or severe injuries.

We recommend that all traffic calmed local streets be designed to operate at around 30km/h. However, some of the streets within these areas will remain untreated and so a 40km/h speed limit may be more appropriate until such time as all the streets in an area are treated and have operating speeds between

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20 Adapted from Austroads Guide to Traffic Management Part 8 Local Area Traffic Management, p121
30 and 40km/h. The 40km/h speed limit is also more consistent with what has already been applied to other residential streets in the city. In either case, a drop in the speed limit and the associated signage is expected to reduce the number of crashes and the severity of any crashes which do occur.

Note that it is not essential to lower the speeds in area 2B, as these are not through routes, although as part of the changes we would strongly recommend these routes have lower speed limits.

![Figure 7-16: Safe Speed (Community) Areas](image)

### 7.6 2nd Stage of Option Development

The additional CNC traffic coming into Cranford Street causes a number of transport, social, and environment effects on the downstream (primarily St Albans) community. The proposed arterial/collector street upgrades (and associated traffic calming and speed management) address some of these effects, but do not address others, and in some cases create new traffic effects. The Stage 2 option development needs to consider these other effects. We have divided these other issues and associated improvement options into five categories:

- 1) Safe access to schools,
- 2) Safer cycle facilities,
- 3) Access to parks,
- 4) Access to commercial activity centres, and
- 5) Other effects.

The other effects include issues like access to properties along the arterial routes.

Few infrastructure improvement options are proposed at this stage, instead a number of studies are proposed to look at the specific impacts of the additional traffic on each focus area and how these impacts can be mitigated. These studies are included in the Plan. An outcome of these studies will be a number of improvement options, some of which need to be implemented soon after the CNC is opened.
and others which can be made later in ten-year monitoring period (known as the commissioning period). The ongoing monitoring may also indicate that additional improvement options are required in these categories to address specific issues. As mentioned earlier, the healthy streets and the safe system framework methods are proposed, alongside traditional safety auditing, to maximise the safety and amenity benefits of route and intersection upgrades.

The next few sections outline some of the issues that need to be addressed by these improvement options.

### 7.6.1 Safe Access to Schools

Increased traffic volumes in the area will impact on safe access to key destinations in the local area, and specifically schools, parks, and commercial activity centres, and especially for those walking to these locations. Of particular concern is access to these locations by the young (e.g. school children), elderly (which there are increasing numbers of), and those with disabilities, such as those with a mobility or visual impairment. Increased risk of crashes is a direct result of the additional traffic from the CNC, especially on arterial and collector roads. Hence improvements need to be made including infrastructure improvements and speed limit changes.

There are a number of primary schools in the study area and consideration needs to be given to how the additional traffic from the CNC may impact on the safety of school children that are walking around the network and especially crossing the road. Typically, it is older primary school children (years 5 and 6) that are walking unaccompanied by adults. There may also be a small number of primary school pupils that cycle to school. While there are also a number of preschools in the area, children of this age will in almost all cases be accompanied by an adult.

The main school impacted by the CNC downstream traffic is St Albans Primary School. Some of the school children need to cross Cranford Street to walk to the school. Children also cross Westminster Street (west of Cranford) and Courtenay Street. While signalised intersection crossings are provided at the Westminster Street and Berwick Street intersections, there have been a number of rear ends, particularly at the former, between crossing children and turning traffic (typically turning when the signal has gone red, often due to traffic congestion and no turning arrow). St Albans School currently employs a cross-guard at this intersection before and after school to guide pupils across the road. Traffic calming has already been introduced on Westminster Street both sides of Courtenay Street, including a pedestrian refuge and road narrowing, to slow down traffic and aid crossing of the route by school children.

The additional traffic on Cranford Street, as a result of the CNC, will increase the risk of crashes involving pedestrians, including school children, if no changes are made. There are several improvements that can be made on Cranford Street to address the safety risk including a temporary speed limit before and after the school north of Westminster to south of Berwick, putting the Westminster Street / Cranford Street intersection on a platform or using a textured surface, and introducing smarter signals phasing as part of widening the western approach of the intersection, the latter being part of a proposed upgrade of Westminster Street and Courtenay Street to improve amenity and accommodate cycling infrastructure. Banning of right turns into Westminster Street in the AM peak (and PM commuter peak) will also reducing the risk of turning crashes involving pedestrians crossing Westminster Street. Additional enforcement be it a red light monitoring camera, or increased Police presence, is also recommended.

Another option that should be considered is a mid-block crossing outside the English (ASB) Park carpark, approximately midway between the two intersections (Berwick and Westminster). An at-grade mid-block crossing would have the advantage of no turning movements. As raised by submissions, a grade separated crossing (sub-way or overbridge) would remove the conflict with vehicles altogether. However, there are a number of issues with such an option, with the key issue being the lack of room to accommodate the overbridge within the current road reserve. It would be difficult based on the number of daily users to justify the cost of such a structure and there are major visual impacts associated with installing an overbridge in this location.

The banning of right turn vehicles from Cranford Street into Westminster Street in the morning peak will also help reduce this risk.

Another safety issue identified during the consultation was the school crossings on Innes Road outside Mairehau Primary School and Our Lady of Fatima School. While there are zebra crossings outside each school, many drivers are not stopping, especially at the Mairehau Primary School crossing. A signalised crossing would be more effective, perhaps located at the Mairehau school crossing. Although the traffic volumes on Innes Road are not expected to increase significantly (and not above 30%) when the CNC is

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24 Now known as St Francis of Assisi School
opened we would strongly recommend Christchurch City Council signalise one of the crossings as part of its safer routes to school programme.

There are also incidents on Rutland Street outside St Albans Catholic School between school children and cyclists on the cycleway. Christchurch City Council have been looking into these issues as part of the major cycleway programme and hence the Plan does not consider this matter further, other than raising it as an issue that needs to be monitored going forward. It is possible that the increased traffic flows on Rutland Street as a result of the CNC may impact on the safety of crossing school children. Options to address any concerns may need to be considered as a Stage 3 project.

It is important that through the ‘safe routes to school programme’ that there is additional education of pupils, teachers, and parents, especially associated with safe crossing behaviour in and around each school, leading up to the opening of the CNC.

7.6.2 Safer Cycle Facilities

A key impact of the additional CNC traffic and the need for peak period clearways on Cranford Street and other routes is a deterioration in the facilities provided for cyclists on these routes. Not only is there additional traffic on the clearway routes, there is not adequate room to provide cycle lanes or adequate room for cyclists when clearways are in use. The 3.7m wide kerb side lane is not adequate for a truck or bus to safely pass a cyclist. When parking is occurring in the clearway lanes then cyclists have some space between the parked car and main traffic lane. Such a facility is only suitable for confident cyclists and not the new cyclists that Christchurch City Council want to encourage into cycling. It is also a poorer option than the cycle paths that are provided down the CNC and on Cranford Street down to McFaddens Road. The option of a shared path on the berm is not considered suitable due to safety concerns associated with backing vehicles from residential properties. Because of issues associated with visibility from backing vehicles, narrowing the berm and widening the carriageway to accommodate cycle lanes is also not considered a safe option.

With the Papouli Parallel nearby and with the provision of additional infrastructure and suitable wayfinding (at each end of clearway sections), the majority of cyclists can be accommodated on alternative routes. Some cyclists will choose to cycle on Cranford Street anyway, mostly the confident cyclists that will use the space when available or cycle in the traffic lane. Others with origins of destinations on routes like Cranford Street will most likely ride on the footpath or cycle in the traffic, if the Government do pass a law allowing footpath cycling like some Australian States and other countries, then we would recommend that Christchurch City Council consider applying this to these routes. With footpath riding, speeds are tempered by the width of the footpath (as compared with allowing a footpath cyclist on this route as a shared path) and the users who are typically less confident or younger riders.

To provide suitable facilities for cyclists coming from the north (to and from the city) and the local community we are recommending investigation of one further north south cycleway and at least three east-west cycle links to the Papouli Parallel and the new north south cycleway, which needs to be on the eastern side of Cranford Street. The need for the new north south route, especially north of Westminster Street is that the deviation to the Papouli Parallel will be too great for some cyclist’s trips, especially from cyclists that originate from Maristav, which is to the east of Cranford Street. Wayfinding needs to be provided at the McFaddens Road/Cranford Street intersection to the north, in the south, cyclists heading north from the city should be encouraged to use the Colombo Street cycleway or the Manchester Street cycle lanes.

The new north south link should start on the eastern side of Cranford Street at the McFaddens Road / Cranford Street intersection, the preferred route needs to go through a routes selection process and Safety Audit and Network Functionally (SANF) assessment (see Appendix H for details). One potential route that utilises sheets that need to be traffic calmed, is shown in Figure 7-17. The route follows McFaddens Road, Jameson Street, Severn Street, Farlie Street, then alongside Madras Street and through St Albans Park, Allard Street, Packe Street, Purchas Street, and then onto Manchester Street. The route would be a combination of quiet streets and shared paths. Suitable crossings would need to be provided across Innes Road, Westminster Street, and Edgeware Road.

The key east-west links are McFaddens Street, Westminster/Courtenay Street and Edgeware Road. The McFaddens Road cycle connection would be considered as part of the traffic calming of this route on both sides of Cranford Street, the Westminster Street/Courtenay Street and Edgeware Road cycle facilities would be included in two corridor studies that are recommended for these routes, with the extent of these studies shown in Purple in Figure 7-17. This will be a combination of on-road cycle lanes and shared facilities. Extension of the Manchester Street cycle lanes from Bealey Avenue to Edgeware Road is also recommended.
7.6.3 Safe Access to Parks

The additional traffic from the CNC will potentially impact on traffic flows around at least two of the parks, St Albans Park and to a lesser degree Malvern/Rugby Park. Given St Albans Park is surrounded by three main routes that are likely to have an increased traffic volume, being Warrington Street, Barbadoes Street, and Farfar (Madras) Street, it is the most affected by additional traffic. Current pedestrian (and cycle) access to the park is not ideal with the wide carriageway on Farfar Street and Barbadoes Street, and a roundabout and only pedestrian crossing aids at Farfar/ Warrington and Barbadoes Street/Warrington Street respectively. Cycle access to the north is provided by these main roads. With the relatively lower traffic volumes the impact on access and safety has been limited. With the increased traffic it will be difficult in peak periods to access the park.

The installation of traffic signals at Farfar Street/Warrington Street and Barbadoes Street/Warrington Street as part of the major road improvement (MR3) will improve access and safety considerably to pedestrians and cyclists even with the increasing traffic volumes. The new north-south cycle facility (SC3) in conjunction with east-west links (SC3 and SC4) will also improve cycle access to the park. The remaining issues are mid-block crossings across Farfar Street/Madras Street and Barbadoes Street. The new design of these routes needs to consider how both routes can be narrowed alongside the park so that pedestrians have shorter crossing distance and speeds are managed to lower levels. This is particularly an issue for the mobility impaired and also caregivers with prams.

In terms of Malvern Park, rat running traffic on Roosevelt and Malvern Streets would impact on access to the park. Traffic calming measures will be required to manage traffic volumes and speeds around the park. Access across Innes Road to Malvern Park will also become more difficult due to increasing traffic volumes. There is an alleyway provided between Innes Road and Knowles Street/Weston Street which includes a refuge island on Innes Road. With increased traffic flows on Innes Road, the mid-block crossing will be more difficult.
7.6.4 Safe Access to Commercial Centres

There are a number of commercial centres that are likely to be impacted by the downstream traffic generated from the CNC, this includes the Edgeware Village Neighbourhood Centre and four local commercial centres, being Westminster/Cranford shops, Barbados/Warington shops, Barbados/Edgeware shops, and the Rutland Street shops.

Recent changes on Rutland Street have provided improved access to these shops by bicycle (Papanui Parallel) and pedestrians (crossing aids). Parking has also been considered in the new design. However, there are concerns from businesses that there is not enough short-term parking nearby. This is a matter that needs to be monitored by Christchurch City Council and addressed as needed.

The Edgeware Village has been the subject of several recent studies, including the Edgeware Village masterplan. This has resulted in improved north-south cycle facilities (Papanui Parallel) and a signalled pedestrian crossing of Edgeware Road. Modelling indicates that traffic volumes may increase on Edgeware Road, both to west (and east) of Cranford Street and on Cranford Street/Sherborne Street. This is likely to impact on cycle access to the village and the Papanui Parallel, especially from the east. The corridor plan recommended for Edgeware Road (in Figure 7-17) should consider how cyclists can move through the Village east to west and vice-versa. Any option development through the village needs to be developed in conjunction with refinement of the Edgeware Village masterplan.

The centre most impacted by the extra CNC traffic is the Cranford Street Westminster Street local centre. Since the earthquakes this centre has become more vibrant with several new businesses setting up in this area. The current pedestrian and cycle connections around the centre are not good, although there is a signalled intersection to get across Cranford Street. With Christchurch City Council wanting to promote walking and cycling, and encourage people to use these local centres, in addition to the increasing traffic through the centre we recommend that a plan be prepared for the centre in conjunction with the corridor study of Westminster (and Courtenay) Streets. The plan should look at cycle and pedestrian linkages to the centre. This will require widening of the western approach to the traffic signals and new footpaths. The plan should also consider parking requirements and options to provide additional parking, especially off-road parking.

The Warington Street Barbados Street local centre also has relatively poor pedestrian and cycle facilities. Access to the north will be improved with the proposed traffic signals. A plan should also be prepared that looks at opportunities to improve pedestrian facilities, especially to the park/west side of Barbados Street. The study should also look at parking requirements, as parking demand is high from residents and the café customers who are not able to use the off-road car-park, with the clearway option impacting on parking availability. Special consideration needs to be given to the Audiology business on west side of Barbados Street (sensitive to noise, including construction) and also the location of the bus stop outside the café (can this be moved to allow short stay parking for the café).

The Barbados Street Edgeware Street local centre has poor cycle facilities but reasonable pedestrian access via the traffic signals. Again, a plan should be prepared for this centre. Cycle facilities should be provided on Edgeware Road as part of the Edgeware corridor study. Parking requirements should be considered given the potential for the clearway to limit parking in the morning peak period.
8. Recommendations (Management Plan)

The overall downstream traffic plan will be implemented over approximately a 10-year period. Some network changes need to be in place before the CNC is opened in mid-2020 due to the expected jump in traffic volumes on Cranford Street from traffic diverting from other routes. While the focus is on routes that are expected to be impacted by traffic growth of 30% or more by 2031 as a result of the CNC, the timing of upgrades is dependent on a number of factors, such as increased crash risk, overall increase in rat-running, level of congestion on arterial roads and impacts of construction after CNC opens.

The following sections outline the recommended improvements and further studies that are proposed to avoid, remedy and mitigate the traffic impacts of the CNC on the downstream road network. This builds on the option development process discussed above. First, we discuss the staging of the upgrades and monitoring requirements before presenting the options across the seven option (and study) categories.

8.1 Monitoring and Project Staging

8.1.1 Introduction

The Plan presented in this report is based on traffic modelling, which is based on land use projections and drivers’ behaviour. There is no certainty of how much traffic will use the CNC and downstream roads, especially by 2031. However, there is an expectation that there will be an initial increase in traffic due to drivers diverting to the CNC from Marshlands Road and Main North Road, and hence the Plan looks to address the impact of this increase and then monitoring will be used to confirm transport impacts between 2021 and 2031 and what needs to be addressed.

Some parts of the network may be initially more sensitive to the impact of the CNC than others, and once drivers become more accustomed to the new layout, driving behaviour will become more obvious. We are particularly conscious that drivers’ rat-running behaviours are difficult to predict using a transport model and so expect some behaviour to be different to what has been modelled.

The capacity interventions, particularly on Cranford Street and Berwick Street, appear more pressing than others, and do need to be in place before the CNC becomes operational. There were some suggestions during consultation that no works should be undertaken prior to the CNC opening, and to see how the network performs. This approach has merit on parts of the network, however if universally adopted it is likely to result in major traffic impacts on a large number of rat-running routes after the CNC is opened and severe congestion on arterial roads. Making changes following the opening of the CNC may also be very disruptive to commuters and the community once the network is already heavily congested.

8.1.2 Proposed Monitoring

As previously stated, the Plan is focused on parts of the network that experience a 30% increase in vehicles (minus underlying traffic growth). In order to ascertain whether a part of the network has exceeded the 30% threshold, the simplest approach would be interpolate between the growth expected on 2021 and 2031 with the volume recording at any given time. However, there are a number of limitations in using this approach as outlined below.

There are many societal events which affect the number of trips undertaken on a network: land-use changes, economic changes, and political changes to name a few. Given time, changes will occur, and these will need to be updated in the base model. There are also many specific changes that will occur on the network which will also need to be updated within the base model. These changes are relatively simple to take care of in a model. However, a much more difficult undertaking is to uncoupon changes made to the downstream network in response to the CNC; changes which affect the traffic volume on various streets (increases and decreases) which may not have been undertaken had the CNC not been constructed, or at least not within the set timeframe outlined in the NoR. One example of this is the provision of additional capacity on (any) arterial corridor in order to relieve traffic from local streets. Any expansion of capacity on the network will likely illicit a redistribution of vehicle movements, but the net effect may on balance be the most desirable. Consequently, there may be scenarios where Christchurch City Council are best to increase the traffic flow on some arterial or collector roads (perhaps even in excess of the 30% threshold). Over time it will become increasingly difficult to separate the impact of these downstream treatments and the CNC itself in terms of their consequence to the network’s performance.

The easiest method, therefore, is to gather baseline data from the monitoring sites, and apply an assumed base growth rate on the network to these streets as representing growth that would have occurred if the CNC was not built. Then traffic volumes can be monitored and, when a site increases beyond a 30% growth above this standard level of growth, the next step of investigation can begin. In our view, a 30%
downstream wide blanket threshold is a relatively blunt approach to network management of this magnitude. It fails to acknowledge fundamental network differences, and the interrelationship between hierarchy elements. Networks vary in where it can, and cannot, accommodate growth, or indeed what exactly might be considered acceptable or unacceptable growth. The relationship between effects of traffic, and volume of traffic, is also not strictly linear. Some effects respond differently to the volume of traffic, and effects also vary depending by road environment.

A time unit for the traffic volume increase was not stipulated in the NoR (for example 30% increase on the number of vehicles per day). The tidal nature of the commuter flow in Northern Christchurch means that the greatest effects is usually experienced during the morning peak, and to a lesser extent the evening peak. Therefore, for the purposes of the Plan, the assumed time unit for the 30% threshold includes the daily count, AM peak count, or the PM peak count.

A decision tree conceptualisation of the process outlined in the NoR is shown below:

![Decision Tree for NoR Monitoring of Traffic Volumes](image)

**Figure 8.1: Decision Tree for NoR Monitoring of Traffic Volumes**

The monitoring programme will involve the collection of daily traffic volumes and vehicle speeds (over a minimum of three 24hr days – normally seven days). The baseline data (pre-CNC) is being collected in 2018 at over 50 sites/streets in the downstream road network. The locations of the counts are shown on the screen lines in Appendix E. Following the opening of the CNC, Christchurch City Council will typically collect counts annually or biennially on the routes that are most likely to impacted by rat-running traffic, as indicated by the transport modelling. A number of the streets included in the baseline counts are not expected to be impacted; but counts are being collected in case rat-running does occur so there can be a comparison made of traffic conditions before the CNC opened. For these streets, and also the regularly monitored streets out of sequence, special counts may be collected if rat-running does appear to be an issue. It may also be necessary to monitor adjoining streets after traffic calming is applied if traffic just diverts across to these other streets.

It is also proposed to monitor the vehicle emission, noise, and vibration impacts of the additional traffic on the main roads (arterials and collector routes). This monitoring is in response to concerns raised by the community. Baseline data will be collected along with annual or biennial measurements through to 2031. The arterial sites being monitored include:

- Cranford Street north of McFaddens Street
• Cranford Street north of Berwick Street
• Berwick Street immediately east of Cranford Street
• Madras Street north of Edgeware Road
• Barbados Street north of Edgeware Road

The intention being to collect air pollution levels using detectors installed at each of these locations, so data can be extracted whenever required through to at least the end of 2031. Christchurch City Council will investigate suitable technology for this monitoring.

Noise and vibration measurements will also be collected at sites along these routes. The monitoring will consider those most effected by vibration and noise (houses and businesses close to the vibration and noise source), and the typical impact on houses and businesses along each section of road. The source of noise and vibration will be identified using video (CCTV) cameras. Based on the monitoring, Christchurch City Council will consider whether there are suitable options to address any adverse effects found by this monitoring.

8.1.3 Staging of Improvements

The proposed improvements and associated studies have been grouped into three time periods: Stage 1 upgrades are those upgrades that need to be in place before the CNC is opened, to address severe traffic congestion and excessive rat-running in local streets; Stage 2 upgrades are those improvements that will reduce other traffic effects of the CNC opening traffic flows, including additional traffic calming schemes, safe cycling, and safe access to schools, parks, and commercial areas. These improvements should be implemented within three years of the opening of the CNC. It is recommended that the studies into the issues and options for these upgrades commence before the CNC opens. While these improvements should ideally also be in place before the CNC opens, it is acknowledged that it will take time to develop and implement these options. Stage 3 upgrades are those improvements that the modelling indicates will be required between 2021 and 2031. This includes traffic calming and some additional safe cycling improvements. The timing of these upgrades will depend on the outcomes from the monitoring.

8.2 Proposed Improvement Options

This section outlines the various improvement options and associated studies that are recommended to address the expected impacts of the CNC traffic that will flow into the downstream road network. The options have been split into Stage 1, 2, and 3 depending on when the upgrades should be implemented. The improvements options have been grouped into the following categories:

1. Major Roads (MR Options)
2. Traffic Calming (TC Options) and Safe Speed Community Areas (SSCA Options)
3. Safe Access to Schools (AS Options)
4. Safe Cycling Routes (SC Options)
5. Access to Parks (AP Options)
6. Access to Commercial Centres (AC Options)

Each of the options are presented in the following sections and have been developed in-line with the processes outlined previously.

8.2.1 Major Roads (MR Options)

All of the major road upgrade options need to be in place before the CNC opens. So, all options are in Stage 1.

The major road options have been separated into those north and south of Berwick Street, and on Berwick Street/Warington Street. The options proposed north of Berwick Street include the following:

MR1 (Cranford Clearways) – Peak Period Clearways along Cranford Street – To extend from Innes Road through to Berwick Street. To include right turn restrictions at Dee Street and Malvern Street and at English Park Carpark. This option will also include a study of the accesses along the route and how drivers will be able to manoeuvre in and out of each driveway (the same to be applied to other clearway options further south). A plan will also need to be produced on how to enforce the clearways.
MK2 (Westminster/Cranford Intersection) – Upgrades to Westminster Street /Cranford Street Intersection. This is to include banning right turns into Westminster Street in peak period, widening of the western approach and include cycle lanes on Westminster Street. It should also include other changes to improve safety for crossing school children as discussed later on.

Along Berwick Street and Warrington Street the following option is proposed. This should be undertaken as a single option given the close proximity of the intersections and associated road widening between each.

MK3 (Berwick/Warrington Upgrades) – Upgrading of Berwick Street /Cranford Street Intersection to include double right turn into Cranford Street and signalisation of the Forfar Street /Warrington Street and Barbados Street Warrington Street Intersections, plus any road widening between these intersections. Simulation modeling will be required to assess what extra lanes are required.

South of Berwick Street there are several upgrade options possible on the three arterial/collector routes (as specified earlier, i.e. options 3(a), 3(c) or 4(a)) and a scoping study needs to be undertaken, using a simulation model to develop these options further and determine what needs to be in place by 2021 and then through to 2031. Consideration needs to be given to high kerbside parking designs on Madras Street and Barbados Street due to medium density developments in this area in the development of options. A parking survey needs to be undertaken as part of the scoping study. The access requirements of the proposed St Albans Shopping Centre on Madras Street also need to be considered in option development. It is suggested up to three options should then go to the public for feedback before finalising the option. This may delay the project construction until after the CNC opens, but, ideally these changes are made before the CNC opens. The MR 1, 2, and 3 options above are the more critical projects that need to be in place when the CNC opens.

MK4 (South Berwick Upgrades) – Preferred downstream of Berwick Street arterial upgrade option that comes out of the scoping study of Options 3(a), 3(c) and 4(a) and any sub-options of these.

We also strongly recommend that Christchurch City Council work with NZ Transport Agency to do a study extending the High Occupancy Vehicle (HOV) lanes on the CNC in the southbound direction from north of QEII down through the arterial road network and along Cranford and Sherborne Streets. In addition, an HOV lane could be provided northbound from Bealey Avenue through to the CNC roundabout on Cranford Street. The use of HOV lanes would promote car-pooling and bus use, and reduce the number of single occupancy vehicles, which is a desirable travel demand management outcome. The HOV lanes would utilise the extra lane created by the peak period clearways. This study is specified below as MK5 and the HOV lanes, if suitable, should ideally be implemented as a Stage 1 improvement, but could also be implemented as a Stage 2 improvement.

MK5 (HOV lanes on Cranford Sherborne) – Investigate with the NZ Transport Agency extending the southern HOV lanes on the CNC through to Bealey Avenue and installing a northbound HOV lane.

No other major road upgrade options are proposed.

8.2.2 Local Roads: Traffic Calming of Local Streets (TC Options) and Safe Speed Community Areas (SSCA Options)

As mentioned in Section 7.5, it is proposed that nine safe speed community areas (SSCA 1 to 9) are introduced in the downstream road network making up most of the local streets. A speed limit of 30km/h is recommended, but a 40km/h speed limit is also an option. The location of these areas on each side of Cranford Street and Sherborne Street are shown in Figure 8-1 and listed below.

- SSCA1 – Ranger Street
- SSCA2 – Knowles Street
- SSCA3 – Thames Street
- SSCA4 – Roosevelt Street
- SSCA5 – Flockton Street
- SSCA6 – Trafalgar Street
- SSCA7 – Osley Ave
- SSCA8 – Caledonian Road
- SSCA9 – Bishop Street
It is recommended that the SSCA areas all be in place before the opening of the CNC, as a deterrent for rat-running. It is recommended over time that all the streets in these areas are traffic calmed so that the reduced speed limit is self-explaining on each street.

The modelling has identified the streets that are likely to require traffic calming through to 2031. As specified previously, some of these streets need to be traffic calmed in Stage 1 or 2, while others can wait until the CNC opens and following monitoring (Stage 3 options). It is also possible the monitoring will identify rat-running streets not identified in the transport modelling. Table 8.1 shows the streets that are expected to have an increase in traffic volumes through to 2031 even with the arterial upgrades and the proposed staging of these options, based on the expected timing of rat-running on these routes. Potential rat-running routes west of Rutland Street have been excluded from assessment (Christchurch City Council will monitor and treat these routes if required separate from the Plan).

Table 8.1: Traffic Calming Routes and Their Staging

<table>
<thead>
<tr>
<th>Street</th>
<th>Start and Finish</th>
<th>Staging</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC1 - Mersey Street</td>
<td>Innes Road to Berwick Street</td>
<td>Stage 1</td>
</tr>
<tr>
<td>TC2 - Knowles street</td>
<td>Rutland Street to Cranford Street</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC3 – Weston Street</td>
<td>Rutland Street to Cranford Street</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC4 – McFaddens Street</td>
<td>Rutland Street to Cranford Street</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC5 – McFaddens Street</td>
<td>Cranford Street to Ranger Street</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC6 – Jameson Street</td>
<td>McFaddens Street to Innes Road</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC7 – Malvern Street</td>
<td>Rutland Street to Cranford Street</td>
<td>Stage 1*</td>
</tr>
<tr>
<td>TC8 – Dee Street</td>
<td>Roosevelt Street to Cranford Street</td>
<td>Stage 1*</td>
</tr>
<tr>
<td>TC9 – Roosevelt Street</td>
<td>Innes Road to Westminster Street</td>
<td>Stage 2</td>
</tr>
<tr>
<td>TC10 – Forfar Street</td>
<td>Westminster Street to Warrington Street</td>
<td>Stage 3</td>
</tr>
<tr>
<td>TC11 – Flockton Street</td>
<td>Westminster Street to Warrington Street</td>
<td>Stage 3</td>
</tr>
<tr>
<td>TC12 – Caledonian Road</td>
<td>Bealey Avenue to Edgware Road</td>
<td>Stage 3</td>
</tr>
<tr>
<td>TC13 – Edgware Road</td>
<td>Caledonian Road to Manchester Street</td>
<td>Stage 3</td>
</tr>
<tr>
<td>TC 14 – Manchester Street</td>
<td>Bealey Avenue to Edgware Road</td>
<td>Stage 3</td>
</tr>
</tbody>
</table>

* As part of the Cranford Street Clearways Project (MR1) these streets will become left-in and left-out only which effectively works as traffic calming.

8.2.3 Safe Access to Schools (AS)

The main school impacted by the CNC downstream traffic is St Albans Primary School. Some of the school children need to cross Cranford Street to walk to the school. Given the range of options that are possible to address this risk it is recommended that a study be undertaken to identity the preferred option(s). This study is to be undertaken as part of the Stage 1 improvements and implemented as a Stage 2 improvement.

AS1 – Safe Access across Cranford Street – This study will look at a range of options, including a new mid-block signalised crossing across Cranford Street near the English Park Carpark entrance.

AS2 – Interim Improvements on Cranford Street - As an interim measure it is suggested that, as part of MR1 (Cranford Clearways) and MR2 (Westminster/Cranford Intersection), a 40km/h speed limit be introduced during school arrival and departure time on Cranford Street from north of Westminster Street; a coloured surfacing be installed at the Westminster Street/Cranford Street Intersection, and left turning red arrows be
used as protection for crossing pedestrians. As with MR1 and MR2 these changes should be undertaken as a Stage 1 improvement.

8.2.4 Safer Cycling Routes (SC Options)

One of the new transport effects of the CTC is that there will be poor facilities for cyclists on Cranford Street, especially when the clearway is in operation. Given the future traffic volumes down Cranford Street, this is not ideal. A number of options to provide better cyclist facilities on Cranford Street were investigated (e.g., shared pedestrian and cyclist path) and none are suitable within the current road reserve. Widening the road reserve would be expensive and very intrusive for those who live on the street. Hence the preferred option is to accommodate cyclists on alternative routes. While the Papamoa Parallel does provide an alternative route, this is not considered sufficient on its own to redirect cyclists and accommodate all diverted and local area cyclists and hence other network changes are proposed. Hence, we propose a number of studies to identify suitable secondary cycle routes and look at wayfinding signage.

We would strongly recommend that Christchurch City Council use the SANF process to refine the options (as specified in Appendix H). The preferred eastern north-south route should also be selected using a multi-criteria analysis of different potential routes (as also specified in Appendix H).

The proposed five cycle facility upgrades are as follows:

- **SC1 (Cycle Wayfinding Signage)** - Development of a wayfinding signage plan that directs cyclists at the northern end of Cranford Street (at McFaddens Road) and southern end of Cranford Street to safer cycling routes. This should be a Stage 1 improvement and coincide with introduction of the peak period clearways.

- **SC2 (McFaddens Road Secondary Cycle Corridor)** - Development of a safe cycling route both west (towards the Papamoa Parallel) and east (towards new north south route) on McFaddens Road of ideally slow streets or off-road routes. Route study to occur in Stage 1 and be implemented in Stage 2.

- **SC3 (Westminster/Courtenay Secondary Cycle Corridor)** - Development of a safe cycling route both west and east of Cranford Street. May consist of on-road and off-road cycling facilities, or just on-road facilities. Route study to occur in Stage 1 and be implemented in Stage 2.

- **SC4 (Edgeware Road Secondary Cycle Corridor)** - Development of a safe cycling route both west and east of Cranford Street. To consist of mainly on-road cycling facilities. Route study to occur in Stage 1 and be implemented in Stage 2.

- **SC5 (North-South Secondary Cycle Corridor)** - Development of an alternative north-south cycle route through traffic calmed streets to the east of Cranford Street. To consist of bicycle greenways and off-road routes. A key cycle linkage to St Albans Park from the north and south. Route study to occur in Stage 1 and be implemented in Stage 3.

These Westminster Street / Courtenay Street and Edgeware Road corridors are also key access routes for pedestrians to the Westminster Street / Cranford Street local activity centre and the Edgeware Village, as specified in section 8.2.6.

8.2.5 Access to Parks (AP Options)

Two studies are proposed to look at safe access to these parks and what improvements could be made to improve safety around the parks.

- **AP1 (St Albans Park Access Plan)** - This plan will look at access to the park by pedestrians (of different abilities), cyclists, and motorists. It will consider car parking requirements, given the proposed upgrades to Forfar Street and Barbadoes Street, and parking requirements of cyclists. The study should occur during Stage 2 and any recommendations be implemented during Stage 3.

- **AP2 (Malvern/Rugby Park Access Plan)** - This plan will look at access to the park by pedestrians (of different abilities), cyclists, and motorists. It will consider car parking requirements of Malvern Park and also what traffic calming may be required to reduce traffic speeds on Malvern Street and Roosevelt Street to create safer crossing places. The study should occur during Stage 2 and any recommendations be implemented during Stage 3.

8.2.6 Access to Commercial (Activity) Centres (AC options)

It is recommended that four activity centre transport studies and two corridor studies be undertaken during Stage 2 and implemented during Stage 3 of the process, as outlined below. With a development plan having already been prepared for the Edgeware village it not proposed to do a further study of that
centre. There are some overlaps between these studies and the safer cycling route studies, so this will need careful coordination to get the best outcomes.

**AC1 – Westminster/Cranford Local Activity Centre Transport Study.** This study will consider safe access to this activity centre by pedestrians, cyclists, and motorists. It will consider amenity improvements that can be made to the centre. A key focus will be on improving access along Westminster Street and Courtenay Street in the associated corridor study and across the intersection as part of MR2.

**AC2 – Barbadoes/Warrington Local Activity Centre Transport Study.** This study will consider safe access to this activity centre by pedestrians, cyclists, and motorists. It will consider amenity improvements that can be made to the centre. A key change at this location will be the installation of traffic signals at the Barbadoes Street/Warrington Street intersection to improve walking access to the north. High kerbside parking demands and the noise sensitive audiology centre are key matters that need to be considered.

**AC3 – Barbadoes/Edgware Local Activity Centre Transport Study.** This study will consider safe access to this activity centre by pedestrians, cyclists, and motorists. It will consider amenity improvements that can be made to the centre.

**AC4 – Ruitland Street Local Activity Centre Transport Study.** This study will consider safe access to this activity centre by pedestrians, cyclists, and motorists. It will consider amenity improvements that can be made to the centre. Given that there have been several changes outside these shops with the new cycleways, major changes are not likely to be required at this activity centre.

**AC4 – Westminster/Courtenay Corridor Study (Ruitland to Fort) –** This study will be a companion study to the cycle corridor study (SC3) but focus on safe access by pedestrians along the route and crossing the route, especially for vulnerable road users.

**AC5 – Edgware Corridor Study (Springfield to Barbadoes) –** This study will be a companion study to the cycle corridor study (SC4) but focus on safe access by pedestrians along the route and crossing the route especially for vulnerable road users.
9. Summary

Table 9-1 summarises the improvements and studies that are proposed before the CNC opens (Stage 1 improvements and studies) and those options that should be implemented within three years of the opening (Stage 2 – less critical but expected to be actioned early in the ten-year monitoring period). Given the big increase in traffic volumes on Cranford Street expected when the CNC opens some work needs to be undertaken before it opens to avoid excessive congestion and rat running in the down-stream network.

While some of the Stage 2 projects should ideally be in place before the CNC opens there is limited time to progress all the studies and projects identified before it opens and hence the more crucial projects have been prioritised in Stage 1 and the rest moved to Stage 2. Some of the Stage 2 projects, especially some of the traffic calming, may also not be required, depending on the monitoring results. The impact of delaying some projects to Stage 2 (up to three years after the CNC opens) is that there may be adverse transport effects in the short term; Council will need to prioritise the worst of these transport effects, as identified in the monitoring, for early intervention, including rapid implementation projects where practical.

Other projects, those in Stage 3, can be implemented after the CNC opens, the traffic monitoring will show the actual transport impacts of the CNC and allow the projects developed in Stage 3 (and studies and projects in Stage 2) to be refined and changes made to the streets treated and options implemented in response to the observed traffic volumes, and other outcomes (e.g. increase in crash risk).

Table 9-1: Lists of improvement projects and studies categorised by Stage (note some projects appear in two or more stages consisting of the studies and the implementation of improvements)

<table>
<thead>
<tr>
<th>Stage 1 – Projects and studies to be undertaken before the CNC opens</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Major Road (MR) Upgrades:</strong></td>
</tr>
<tr>
<td>MR1 (Cranford Street Clearways) – Peak Period Clearways along Cranford Street from Innes Road to Berwick Street.</td>
</tr>
<tr>
<td>MR2 (Westminster/Cranford Intersection) – Upgrades to Westminster Street/Cranford Street Intersections.</td>
</tr>
<tr>
<td>MR3 (Berwick/Warrington Upgrades) – Upgrading of Berwick Street /Cranford Street signalised intersection and signalisation of the Forfar Street/Warrington Street and Birkabees Street/Warrington Street intersections.</td>
</tr>
<tr>
<td>MR4 (South Berwick Upgrades) – Downstream of Berwick Street arterial upgrade option that comes out of the scoping study.</td>
</tr>
<tr>
<td>MR5 (HOV lanes on Cranford-Sherborne) – Investigate extending the southern HOV (High occupancy vehicle) lanes on the CNC through to Bealey Avenue and installing a northbound HOV lane.</td>
</tr>
</tbody>
</table>

**Safe System Community Areas (SSCA):**

SSCA 1 to 9 – Introduce nine 30km/h (or 40km/h) reduced speed limit areas through the downstream local roads network.

**Traffic Calming (TC) Measures:**

Introduce traffic calming on TC1 – Mersey Street (Innes Road to Forfar Street), TC2 – Knowles Street, TC 3 – Westlow Street, TC 4 – McFaddens Road, TC7 – Malvern Street (Ulo) and TC8 – Dee Street (Ulo)

**Safe Access to Schools (AS):**

AS1 – Safe Access Across Cranford Street – This study will look at a range of options, including a new mid-block signalised crossing across Cranford Street near the English Park Carpark entrance.

AS2 – Interim Improvements on Cranford Street – As an interim measure it is suggested that as part of MR1 (Cranford Clearways) and MR2 (Westminster/Cranford Intersection) a 40km/h speed limit be introduced during school arrival and departure time on Cranford Street from approximately 50m north of Westminster Street to 50m south of Berwick Street, a coloured surfacing be installed at the Westminster/Cranford Intersection, and left turning red arrows be used as protection for crossing pedestrians.
**Safe Cycling Routes (SC):**

SC1 (Cycle Wayfinding Signage) – Development of and implementation of a wayfinding signage plan that directs cyclists at the northern end of Cranford Street (at McFaddens Road) and southern end of Cranford Street to safer cycling routes.

SC2 (McFaddens Street Secondary Cycle Corridor) – Undertake a route study of a cycling route both west (towards the Papamui Parallel) and east (towards new north south route) on McFaddens Road.

SC3 (Westminster/Courtenay Secondary Cycle Corridor) – Undertake a route study of a cycling route both west and east of Cranford Street.

SC4 (Edgware Road Secondary Cycle Corridor) – Undertake a route study of a cycling route both west and east of Cranford Street.

SC5 (North-South Secondary Cycle Corridor) – Undertake a route study at an alternative north-south cycle route through traffic calmed streets to the east of Cranford Street.

**Stage 2 – Projects and Studies that need to be undertaken within three years of CNC opening**

**Traffic Calming (TC) Measures:**

Introduce traffic calming on TC9 – Roosevelt Street, TC12 - Caledonian Street, TC13 - Edgware Road (Village), TC14 – Manchester Street and TC15 – Westminster Street / Courtenay Street, where expected increases in traffic volumes are validated by the monitoring data.

**Safe Access to Schools (AS):**

AS1 – Safe Access Across Cranford Street – Implement any options identified in this study such as a new mid-block signalised crossing across Cranford Street near the English Park Carpark entrance.

**Safe Cycling Routes (SC):**

SC2 (McFaddens Road Secondary Cycle Corridor) – Construct a secondary cycling route both west (towards the Papamui Parallel) and east (towards new north south route) on McFaddens Road.

SC3 (Westminster/Courtenay Secondary Cycle Corridor) – Construct a secondary cycling route both west and east of Cranford Street.

SC4 (Edgware Road Secondary Cycle Corridor) – Construct a secondary cycling route both west and east of Cranford Street.

**Access to Parks (AP):**

AP1 (St Albans Park Access Plan) – Development of a plan that will look at access to the park by pedestrians (of different abilities), cyclists, and motorists.

AP2 (Malvern/Rugby Park Access Plan) – Development of a plan that will look at access to the park by pedestrians (of different abilities), cyclists, and motorists.

**Access to Commercial Centres (AC):**

AC1 – Westminster/Cranford Local Activity Centre Transport Study. Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC2 – Barbadoes/Warington Local Activity Centre Transport Study. Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC3 – Barbadoes/Edgware Local Activity Centre Transport Study. Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC3 – Rulfand Street Local Activity Centre Transport Study. Undertake study that will consider safe access to this activity centre by pedestrians, cyclists, and motorists.

AC4 – Westminster/Courtenay Corridor Study (Rulfand to Forfar) – Undertake this study which will focus on safe access by pedestrians along the route and crossing the route especially for vulnerable road users.

AC5 – Edgware Corridor Study (Springfield to Barbadoes) – Undertake this study which will focus on safe access by pedestrians along the route and crossing the route especially for vulnerable road users.

**Stage 3 – Projects that could be undertaken any time between the opening of the CNC and 2031**
Monitoring

Ongoing monitoring of traffic, pedestrians and cycle volumes, crashes and vehicles speeds, emissions, noise and vibration on major roads and some local streets is to occur annually, or when required more often, after the CNC opens to validate the plans and projects already identified in this document, and through the various studies that are specified.

It is expected that additional interventions will be required to avoid, remedy or mitigate the effects of the additional CNC traffic, including the impact of trucks, that is identified in this monitoring. In terms of local streets, intervention is required if the traffic volumes increase by 30% above what might have been expected on the route if the CNC had not been built. In terms of other interventions (e.g. arterial upgrades) this will be the result of congestion or safety concerns with respect to all road users. Some improvement may also not be required (e.g. if local road traffic does not increase by 30%, as predicted by the modelling). Consultation on all proposed changes will be undertaken.

An indication of Stage 3 improvement projects is provided below. This list will need to be reviewed and where necessary revised once the actual impacts of the CNC traffic is known from the monitoring.

**Traffic Calming (TC) Measures:**

Introduce traffic calming only where monitoring indicates high levels of rat-running are occurring (may include additional streets): TC = 5 McFadden, Knowles, Weston (east Cranford), TC6 – Jamieson, TC10 – Forfar Street, TC11 – Flackton Street, TC14 – Severn Street, TC17 – Thames Street, TC 18 – Aylesford Street, TC19 – Kensington Avenue, TC 20 – Phipps Road and TC 21 – Francis Street.

**Safe Cycling Routes (SC):**

SCS (North-South Secondary Cycle Corridor) – Construct an alternative north-south cycle route through traffic calmed streets to the east of Cranford Street.

**Access to Parks (AP):**

AP1 (St Albans Park Access Plan) – Implementation of the access plan as required to address access issues.

AP2 (Malvern/Rugby Park Access Plan) – Implementation of the access plan as required to address access issues.

**Access to Commercial Centres (AC):**

AC1 – Westminster/Cranford Local Activity Centre Transport Study. Implement study recommendations

AC2 – Barbadoes/Warrington Local Activity Centre Transport Study. Implement study recommendations.

AC3 – Barbadoes/Edgeware Local Activity Centre Transport Study. Implement study recommendations.

AC4 – Rutland Street Local Activity Centre Transport Study. Implement study recommendations.

AC5 – Edgeware Corridor Study (Springfield to Barbadoes) – Implement study recommendations.
Appendix A  Downstream Effects and Property Traffic Management Plan

1. Introduction and Purpose

1.1. Christchurch City Council (Council) lodged an application for a Notice of Requirement (NoR) for the Northern Arterial Extension and Cranford Street Upgrade (NAE/CSU) in October 2013. As part of that application, on 3 November 2014, the Council lodged a report: Northern Arterial Extension and Cranford Street Upgrade Transport Assessment Addendum (TAA).

1.2. The TAA reported on the Christchurch Northern Corridor and included an assessment that, at the city end of that corridor, more traffic is expected to use Cranford Street than would be the case without the Project. The principal reason for this anticipated increase in use is re-routing traffic within the Christchurch Northern Corridor to benefit from the improved travel conditions provided by the NZ Transport Agency’s Northern Arterial, and the Council’s NAE/CSU.

1.3. While the project, and the full Christchurch Northern Corridor is considered by the Council to be necessary to deliver a wide range of outcomes for the urban form, shape and growth for northern Christchurch and Waimakariri District, additional traffic may have potential adverse effects on residences and businesses in the immediate area around the southern end of the NAE/CSU (referred to as "downstream effects" in this Management Plan). In particular, more vehicles may travel on adjacent or nearby roads which were not the subject of any improvement or upgrading as part of the NoR application.

1.4. The modelling used for the NoR predicts what will happen at 2031 so long as the modeled assumptions are borne out. The TAA recommends continued investigation of the downstream effects of the Christchurch Northern Corridor (ie, NAE/CSU) with the following objectives:

(a) To identify preferred vehicle access routes, particularly for trucks, between the end of the Christchurch Northern Corridor and the Central City (that is between the end of the NAE/CSU and the City centre); and
(b) To identify strategies to keep vehicles on preferred vehicle access routes; and
(c) To discourage vehicles away from public transport routes and walking or cycling routes such as the Main North Road / Paparua Road and Rolleston Street corridors respectively.

1.5. This Management Plan is to ensure downstream effects are appropriately managed and to:

(a) Assess the existence, nature and extent of any increased traffic on streets adjacent to, or adjoining Cranford Street attributable to the NAE/CSU that might cause or contribute to a loss of service to any of these streets for up to 10 years after the opening date of the NAE/CSU;
(b) Implement measures to avoid, remedy or mitigate such effects, where these are more than minor, in a timely and cost-effective manner and where appropriate and practicable; and
(c) Monitor the efficacy of the measures for an appropriate period and implement further remedial action, if this is necessary and appropriate.

1.6. Some traffic increases can be expected if development to the north of Christchurch continues to grow or exceeds present expectations, whether or not the NAE/CSU project proceeds. For the avoidance of doubt, this Management Plan is to identify any adverse traffic effects that arise between the commissioning date of the NAE/CSU (expected to be approximately 2021) and up to ten years after that opening date (referred to in this Management Plan as the "Commissioning Period"). If any adverse effects are identified, a response to appropriately-manage these adverse effects, within this Commissioning Period will be considered and implemented.

1.7. The precise areas to be covered under this Management Plan will be established as part of the methodology referred to below. The methodology will assess the existence, nature and extent of any increased traffic attributable to the NAE/CSU on a number of streets at the southern end of the NAE/CSU including, but not limited to: Mersey Street, Mdveen Street, Roosevelt Street, Severn Street, Dee Street, Weston Road, Knowles Street and McFaddens Road (potentially adversely affected streets).
1.8. For the avoidance of doubt, while these listed streets are described as potentially adversely affected streets, this Management Plan is not confined to those streets, nor does it mean all of these listed streets will be adversely affected.

2. Appointment and Methodology

2.1. Prior to operating the NAE/CSU the Council will appoint an independent expert who is a suitably qualified traffic engineer to investigate and design an appropriate methodology to identify the potential impacts (if any) on those streets at the end of the Christchurch Northern Corridor which may be potentially affected as a result of the operation of the NAE/CSU.

2.2. That methodology is to apply commonly accepted professional standards to assess traffic-related effects and, for the avoidance of doubt, will include procedures to:

[a] Identify and confirm all streets adjacent to or adjoining Cranford Street affected by the operation of the NAE/CSU;

[b] Assess the current level of vehicle usage and service of each of the potentially adversely affected streets in proximity to the southern end of the NAE/CSU;

[c] Include modelling where appropriate to identify the anticipated future increase in the use of potentially affected streets that may be caused by, or attributable to, the operation of the NAE/CSU;

[d] Consider the extent of and effects (if any) arising from such growth in traffic flows, on those potentially affected streets that are reasonably attributable to the operation of the NAE/CSU;

[e] Recommend appropriate mitigation measures (where an increase in traffic-related effects within potentially adversely affected streets, is caused by or contributed to by the NAE/CSU) to Council and, where required, the local community board (if the community board holds the requisite delegation for Council for any of the traffic calming works required) as soon as practicable, and institute monitoring procedures to verify the outcome of the mitigation measures; and

[f] Recommend further remedial steps to Council and, where required, the local community board (if the community board holds the requisite delegation for Council for any of the traffic calming works required) (under 3.1 below) if monitoring confirms a continued increase in adverse traffic-related effects on the affected streets that is more than minor.

2.3 Any appropriate mitigation measures may be delivered on an iterative basis that is by first assessing the efficacy of an initial stage of mitigation measures before undertaking a further stage or stages of mitigation measures.

2.4 Where monitoring is required that monitoring must be completed within six months from the completion of the mitigation works.

2.6 The independent expert will support and where necessary, assist Council with consultation and/or the communication required as part of this management Plan.
3. Recommendation to Council

3.1. The independent traffic expert recommendation to Council must include appropriate remedial steps to be taken to avoid, remedy or mitigate any increase in adverse traffic-related effects where such effects are more than minor, identified under the methodology as being caused by or attributable to the operation of the NAE/CSU. This may include but is not limited to:

(a) Measures to improve the operation of Cranford Street and Sherborne Street, including capacity measures such as peak hour clearways;
(b) The introduction of speed restrictions in some or all affected streets;
(c) The introduction of chicanes in some or all affected streets;
(d) The introduction of speed bumps in some or all affected streets;
(e) Any other suitable traffic calming mechanisms, including those identified within the Council’s Infrastructure Design Standard.

3.2 The remedial steps may include a programmed series of measures to be delivered over time, with the intention that any recommended remedial steps must be taken as soon as reasonably practicable after that recommendation is made. All remedial steps must be completed within the Commissioning Period.

4. Work to be Carried Out by Council

4.1. If the independent traffic expert determines that the increase in traffic to be experienced prior to the expiry of the Commissioning Period that is caused by or attributable to the operation of the NAE/CSU, is likely to raise or has raised the level of vehicle movements on any of the potentially affected streets by more than 30 per cent above the traffic level that would have occurred without the operation of the NAE/CSU then measures to improve the operation of Cranford Street and Sherborne Street and/or calming work will be undertaken by the Council as recommended.

4.2. Any calming work may be undertaken iteratively. (that is by first assessing the efficacy of an initial stage of calming work before undertaking a further stage or stages of calming work). In such a situation the monitoring previously undertaken must be repeated within six months of each stage of calming work being completed. This further monitoring is to assess whether further or other calming work is needed.

4.3. For the avoidance of doubt no calming work will need to be investigated or carried out unless the NAE/CSU has raised the level of vehicle movements by more than 30 per cent above the traffic level that would have occurred without the operation of the NAE/CSU. Further, the purpose of any calming work undertaken is to mitigate (effects from) any increased traffic movement to an acceptable level but does not mean a requirement to reduce traffic movements or their effects to the levels occurring prior to the opening date of the NAE/CSU.

4.4. The desired outcome of this Management Plan is to, within the Commissioning Period, avoid, remedy or mitigate downstream traffic effects, such that they are no more than minor. The Council shall take all practicable steps to ensure any works reasonably-necessary to achieve this outcome are completed within that time.

4.5. Where traffic calming work is recommended Council will consult with:

4.5.1. Residents of the streets where traffic calming measures are proposed to be taken;
4.5.2. Canterbury District Health Board;
4.5.3. Mairehau Primary School, Our Lady of Fatima School, Paparoa Street Primary School, St Albans Catholic Primary School and St Albans School;
4.5.4. St Albans Residents Association and Mairehau Community Trust; and
4.5.5. Cyclists through Spokes;
4.6. Consultation shall include the distribution of a newsletter including feedback form prior to the review.
5. Communication with Residents

5.1. Prior to operating the NAE/CSU, the Council shall prepare and implement a Communication Plan that sets out procedures detailing how the public and stakeholders will be communicated with throughout the Commissioning Period. As a minimum, the Communication Plan shall include:

5.1.1. Details of a public liaison person including contact details;

5.1.2. Methods to inform and communicate details to property owners and occupiers within potentially affected streets of the recommendations from the independent traffic expert and any proposed mitigation measures to be carried out by Council;

5.1.3. Methods to deal with any concerns raised by property owners or occupiers; and

5.1.4. Monitoring and review procedures for the Communication Plan;

5.2 Owners and occupiers of properties on streets identified by the independent traffic expert as requiring mitigation measures shall be:

5.2.1 Advised of the recommendations of the independent traffic expert under clause 3, including proposed mitigation measures, within 30 working days following the provision of the recommendation to the Council;

5.2.2 Provided a period of 20 working days to comment on the proposed mitigation measures; and

5.2.3 Advised by Council of the final mitigation measures to be implemented, at least 20 working days prior to commencement of any works.
Appendix B  
Details  

Cranford Street (north of Innes Road)
Figure B.1: Cranford Street Changes (Source: https://www.nzta.govt.nz/assets/projects/christchurch-northern-corridor/CNC-Project-Update-Cranford-Street-August-2017.pdf)
Appendix C  Existing Traffic Flow and Crash Record

There is currently in excess of 20,000 vehicles per day on Cranford Street north of Berwick Street (2017). Warrington Street (2013) and Berwick Street (2014) have traffic counts of 10,795 and 12,328 vehicles per day respectively. Madras Street and Barbadoes Street have traffic counts of 8,274 and 8,191 vehicles per day (in 2016), the counts presented here are reasonably recent. Older counts are also available however become less useful over time.

Crash Record

Given the large area impacted by traffic from the CNC we have referred to aggregated crash maps from Urban KiwiRAP (New Zealand Road Assessment Programme). Urban KiwiRAP uses estimate death and serious injury equivalents along with distance (risk per kilometre for collective risk). It is a useful tool to examine safety risks comparative to the rest of the transport network, including other cities in New Zealand. Sections with high and medium-high risk are the key areas of focus.

An interrogation of Urban KiwiRAP data highlighted corridors that currently experience high numbers of crashes, either by kilometre (collective risk), or by number of vehicles (personal risk) in the study area.

Figure C-1: Collector Risk Map (Source: https://roadsafetyrisk.co.nz/maps/collective-risk/Cantbrbury)

The Collective Crash Risk25 in the vicinity of Cranford Street for 2012-2016 is shown in Figure C-2 (note the maps have been filtered so that only the High and Medium-High risk corridors are shown). The streets with the highest risk26 that relate most directly to the potential downstream effects are Cranford Street (to Edgeware Road), Innes Road, and Madras Street. It is typical that the highest volume routes have the greatest concentration of crashes, and so this is to be expected.

For the period 2012-2016 there are few routes in the study area with a high Personal Risk (this is the risk per vehicle going down each street). The only routes that have medium-high crash risks are Malvern Street, Westminster Street (west of Cranford) and Edgeware Road through and either side of the Edgeware village. Improvements to these routes should consider local safety risks.

25 The highest collective risks are often located on streets with the higher traffic volumes
26 Note that the maps present a risk that aggregates the crash history over the length of the road section selected, and that these sections have not been created to only constitute streets directly affected by CNC. For example, the Madras Street section length extends from Warrington Road to Gloucester Street.
Figure C-2 shows the existing incidence of crashes and DSI within the project area. The majority of DSI crashes involved turning or crossing traffic mainly at intersections. Hence particular attention needs to be given to the design of intersections.

Crash heat maps for the period of 2012-2016 period are shown in figures C-3 to C-6.

Figure C-3: Pedestrian [Source: https://roadsafety.co.nz/maps/heat-maps-43-5024956148537-172-6360273361206_15]

Figure C-4: Cyclist [Source: https://roadsafety.co.nz/maps/heat-maps-43-5024956148537-172-6360273361204_15]

Figure C-5: Motorcyclist [Source: https://roadsafety.co.nz/maps/heat-maps-43-5024956148537-172-6360273361206_12]

Figure C-6: Speed [Source: https://roadsafety.co.nz/maps/heat-maps-43-5024956148537-172-6360273361204_15]

In terms of vulnerable users Cranford Street has experienced a higher amount of motorcycle crashes than most other nearby streets.

Pedestrian crashes have occurred east of Cranford Street on Innes Road (near school crossing), and also around Edgware Village and near St Albans Park. In total there were 11 pedestrian (including one mobility) crashes that occurred in the study area in the period of 2013-2017. Of these 2 were minors, and 3 were older than 65. The crashes resulted in 2 DSI (8% of the DSI) which is lower than the national average for 2016 (10%).

There were 3 recorded cyclist DSIs in the study area (12.5% of the DSIs), which is higher than the national average of 6.2% for 2016. Cyclist crashes have generally occurred south of Westminster Street.

Figure 1 shows crashes that had speed as a main factor. Cranford Street performed relatively well compared with other major roads, except around the Westminster Street / Cranford Street intersection, and immediately south of the Berwick Street / Cranford Street intersection. Locations were speeds was a bigger factor include Barbadoes Street between Edgeware Road and Warrington Street, and Flockton Street. This may be a result of the current wide lanes on these roads and the unsignalised Barbadoes/Warrington intersection.

The pre-CNC crash data will form an important part of monitoring the crash effects of the CNC.

Table C-1: Selection of Existing Vehicle Counts (source: http://ccc.interpret.co.nz/trafficcounts/)

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Appendix D  Jacobs Modelling (D1 to D4)

The figures in this appendix are to be viewed with the understanding that traffic modelling has certain limitations. In particular, the predicted changes to low volume roads have more ambiguity due to there being a multitude of route choices.

Further, there are streets that appear in these modelling plots as affected that we do not necessarily believe that effects will occur. This is resultant from a limitation of the modelling tools that they show effects well away from the major network changes. We have made this judgement based on expert knowledge of the network, and monitoring will pick-up any wider effects that are significant.
D.1  Do Nothing Change Flow Plots
Year 2021: Hourly Traffic Volume Difference (PCUs) - with/without CNC
CNC03 vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2021: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC03 vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2021: Daily Traffic Volume Difference - with/without CNC
CNC03 vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC03 vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC03 vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2031: Daily Traffic Volume Difference - with/without CNC
CNC03 vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
D.2 Traffic Volumes
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### Notes

- All numbers in thousands.
- No connection was noted.
- On one side, not monitored.
| Item No.: 17 | 14 February 2019 | 320 | Attachment A | 83 |

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**Attachment A**

**Item No.: 17**

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**Item No.: 17**

**Page 87**

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**Item No.: 17**

**Page 324**
D.3 V/C Ratios and Delay for Key Intersections
Attachment A

Item 17

Legend
AM VC - With CNC
- 60% to 70%
- 70% to 80%
- 80% to 90%
- Over 90%

Year 2021: Volume/Capacity Ratio - Option CNC03
(V/C less than 60% are not shown on the plot)
Year 2031: Volume/Capacity Ratio - Option CNC03
(V/C less than 60% are not shown on the plot)
Year 2021: Volume/Capacity Ratio - Option CNC03
(V/C less than 60% are not shown on the plot)
Year 2031: Volume/Capacity Ratio - Option CNC03
(V/C less than 60% are not shown on the plot)
Item No.: 17

Figure 1: Barbadoes / Warrington Intersection, 2021 PM peak CNC03

Figure 2: Barbadoes / Warrington Intersection, 2031 PM peak CNC03
Figure 3: Bealey / Shorbome Intersection, 2021 AM peak CNC03

Figure 4: Bealey / Shorbome Intersection, 2031 AM peak CNC03
Figure 5: Berwick / Cranford intersection, 2021 AM peak CNC04e

Figure 6: Berwick / Cranford intersection, 2021 PM peak CNC04e
Figure 7: Forfar / Warrington intersection, 2021 AM peak CNC04e

Figure 8: Forfar / Warrington intersection, 2031 AM peak CNC04e
D.4 Change Flow Plots with Arterial Upgrades
Year 2021: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC04e vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Legend
PM Change
- Between 0% to 20% increase
- Between 20% to 30% increase
- Between 30% to 40% increase
- More than 40% increase

Year 2021: Hourly Traffic Volume Difference (PCUs) - with/without CNC
CNC04e vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2021: Daily Traffic Volume Difference - with/without CNC
CNC04e vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC
CNC04e vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC
CNC04e vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2031: Daily Traffic Volume Difference - with/without CNC
CNC04e vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
Year 2021: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC04g vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2021: Hourly Traffic Volume Difference (PCUs) - with/without CNC CNC04g vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2021: Daily Traffic Volume Difference - with/without CNC
CNC04g vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC
CNC04g vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2031: Hourly Traffic Volume Difference (PCUs) - with/without CNC
CNC04g vs NoCNC03 (Differences less than 50 pcu/h are not shown on the plot)
Year 2031: Daily Traffic Volume Difference - with/without CNC
CNC04g vs NoCNC03 (Differences less than 500 vpd are not shown on the plot)
Appendix E  Monitoring Screens

Contains data sourced from the LINZ Data Service licensed for reuse under CC BY 4.0.

Before and after CNC, frequent monitoring
Before and after CNC, less frequent monitoring
Only before CNC initially

Priority sites
Appendix F  Consultation Leaflet
Parents and children have told us that limiting the speed limit on Cranford Street will make it a safer environment for children to cycle and make it easier for children to be more active and get more exercise. A speed limit of 30km/h has been suggested to reduce the risk of road accidents and improve the quality of the street for all road users. The street is lined up with houses and we would like to reduce the speed limit from 60km/h to 30km/h. If the current speed limit is 60km/h, the speed limit is likely to be 40km/h on Cranford Street. The proposed speed limit of 30km/h will reduce the risk of road accidents and make the street safer for children to cycle. We would like to know your thoughts on the proposed changes to Cranford Street and the surrounding area.

**Drop-in sessions**

Come and talk to staff about the proposal

**Timeline**

**Consultation**

- Remove 12km/h speed limit on Cranford Street
- Engage with the community on the proposed changes
- Consider the feedback received from the community

**Engagement Team**

- Council Staff
- Community Engagement Team
- Traffic and Transport Team
- Participate in open space events

**Why we need to make changes**

We are proposing changes to Cranford Street and the surrounding area to improve the safety of children who cycle on Cranford Street. We are proposing changes to Cranford Street to improve the safety of children who cycle on Cranford Street. The proposed changes will improve the safety of children who cycle on Cranford Street. The proposed changes will improve the safety of children who cycle on Cranford Street.

**Why are we consulting?**

We are consulting on the proposed changes to Cranford Street and the surrounding area to improve the safety of children who cycle on Cranford Street. We are consulting on the proposed changes to Cranford Street and the surrounding area to improve the safety of children who cycle on Cranford Street. We are consulting on the proposed changes to Cranford Street and the surrounding area to improve the safety of children who cycle on Cranford Street.

**Contact us**

If you have any questions or comments about the proposed changes to Cranford Street and the surrounding area, please contact us at traffic@christchurch.gov.nz or call us on 03 365 5000.
Appendix G  Options Diagrams
Option 4a & 4b - Traffic Calming = (a) Clearway (b) 4-lane Crawford/Sherbourne
Appendix H  Cycle Route MCA and Safety and Network Functionality Assessments

Multi Criteria Analysis – SANF Application to Cycle Route Identification

Identification, evaluation and selection of a preferred cycle route requires an objective transparent process that can withstand peer review, public scrutiny and permit informed decisions by elected members. This is achieved through a Multi Criteria Analysis (MCA) tool and Safety Audit and Network Functionality (SANF) process.

The purpose of an analysis is to select a preferred route from a number of identified on and off-road route options using a Multi Criteria Analysis (MCA) tool. The MCA assessment process is presented in the July 2016 version of Council’s “Cycle Design Guidelines Part B: Design Principles Best Practice Guide”.

Route Identification and MCA Assessment

The assessment process involves a site and desktop review of streets within the Route Corridor (an area connecting the start and end points) with streets being linked to form possible routes. Possible facility types are identified, based on cross sectional width, traffic volumes and constraints and are presented on a plan overlaying the land use types.

A shortlist of Route Options is identified from the possible routes, based on logical links to key connections/attractors and available roads within the corridor.

The Route Options are scored in an MCA assessment by a diverse team of people. This assessment scores each option against the following criteria: Safety, Directness, Coherence, Attractiveness, Comfort, Crime Prevention Through Environmental Design (CPTED), Business impact (i.e. change in access and loss of on-street parking), Residence impact (i.e. reduction in on-street parking), operational and network impacts (i.e. changes to the street layout, reduced road width, potential delay to other road users, additional signalised intersections), ease of construction and costs, land purchase/easements and consents. The results are reviewed using sensitivity testing (applying 70% weighting to the broad categories of cyclist criteria: impacts and costs) to confirm the best route option.

SANF Assessment

A SANF assessment involves an independent team of diverse people undertaking a holistic review of the route identification and MCA assessment outcomes to determine whether sufficient analysis has been completed to reach the conclusions and recommendations. A supportive SANF assessment provides transparency and confidence to decision makers that the analysis and impacts on affected parties has been adequately considered. A SANF demonstrates to the public that independent peer reviews have been undertaken.
18. District Licensing Committee member resignation and recruitment process.

Reference: 19/74800
Presenter(s): Megan Pearce, Hearings and Council Support Manager

1. Purpose of Report
   1.1 The purpose of this report is for the Council to be informed of the resignation of a member of the District Licensing Committee (DLC) and to approve recruitment for replacement membership.

2. Staff Recommendations
   That the Council:
   1. Receive Mr Lawn’s resignation as Chair and List Member from the District Licensing Committee.
   2. Approve that Council officers commence a recruitment process to appoint a replacement Chair and List Member on the District Licensing Committee.
   3. Extend the period of Mr David Blackwell’s temporary appointment as Chair of the District Licensing Committee to cover the recruitment period and until a replacement member can commence duties.
   4. Delegate to the Hearings and Council Support Manager the responsibility to undertake the recruitment process and to report to Council for the appointment of the successful candidate/s.

3. Resignation
   3.1 At its meeting of 13 September 2018, the Council approved a six month leave of absence request from DLC Chair and List Member Al Lawn. Mr Lawn’s leave was to allow him to continue with the Ashburton Regional Control Centre’s response to the Mycoplasma Bovis outbreak. Mr Lawn was to return to his DLC duties mid-March.
   3.2 In Mr Lawn’s absence, List Member David Blackwell was temporarily approved as Chair and appointed as Commissioner to cover the period of the vacancy.
   3.3 On 20 January 2019, Mr Lawn tendered his resignation from the DLC in order to take up other opportunities. There is now a vacancy within the DLC for a Chair and List Member (as a Chair holds both roles).

4. Recruitment Process
   4.1 It is recommended that four Chairs and an additional three List Members is an appropriate number of members for the DLC (this was the state prior to the leave of absence). There needs to be adequate membership to cover non-availability and any issues arising from conflict of interest. It is therefore recommended that a full recruitment process be undertaken to appoint a replacement Chair and List Member.
   4.2 There are currently three incumbent List Members who may wish to be considered for the Chair role. Should it occur that one of these applicants be successful in obtaining the role of Chair there would be a subsequent vacancy of a list member. It is therefore recommended that recruitment be undertaken in such a way as to allow appointment of a List Member should a vacancy arise noting that a full open recruitment process is being undertaken with no
predetermined outcome. Once the recruitment process is complete, a recommendation of appointment will be reported to Council for approval.

4.3 Under section 192 of the Sale and Supply of Alcohol Act (SSAA), the Council must establish, maintain and publish a list of persons approved to be members of the Council’s DLC. Persons on the list must have experience relevant to alcohol licensing matters i.e. experiences which include knowledge of alcohol licensing, experience in legal and regulatory alcohol environments and knowledge of the SSAA (there are some eligibility disqualifications that apply).

Attachments
There are no attachments to this report.

Signatories

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<th>Megan Pearce - Hearings and Council Support Manager</th>
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<td>Approved By</td>
<td>John Filsell - Head of Community Support, Governance and Partnerships</td>
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<td>Mary Richardson - General Manager Citizen and Community</td>
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19. 2018/19 Metropolitan Discretionary Response Fund

**Reference:** 19/80069  
**Presenter(s):** Gray Watson (Manager Community Partnerships & Planning)

1. **Purpose and Origin of Report**

   **Purpose of Report**
   1.1 The purpose of this report is for the Council to consider an application for funding from the 2018/19 Discretionary Response Fund from the organisation listed below.

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<td>New Water Treatment System</td>
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   **Origin of Report**
   1.2 This report is staff generated as a result of applications being received.

2. **Significance**

   2.1 The decision in this report is of low significance in relation to the Christchurch City Council’s Significance and Engagement Policy.

   2.1.1 The level of significance was determined by the number of people affected and/or with an interest.

   2.1.2 Due to the assessment of low significance, no further community engagement and consultation is required.

3. **Staff Recommendations**

   That the Council:

   1. Declines a grant from the 2018/19 Metropolitan Discretionary Response Fund to Living Springs towards a new water treatment system.

4. **Key Points**

   4.1 At the time of writing, the balance of the Discretionary Response Fund is as detailed below.

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</table>

   4.2 Based on the current Discretionary Response Fund criteria, the application listed above is eligible for funding.

   4.3 The attached Decision Matrix provides detailed information for the application. This includes organisational details, project details, financial information and a staff assessment.
Item 19

Attachments

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<td>A</td>
<td>2018-19 Metropolitan Discretionary Response Fund Living Springs Decision Matrix February 2019</td>
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Confirmation of Statutory Compliance

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:
   (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
   (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council’s significance and engagement policy.

Signatories

| Authors | Nicola Thompson - Community Funding Advisor
          | Bryony Armstrong - Community Funding Advisor |
|---------|-------------------------------------------------|
| Approved By | John Filsell - Head of Community Support, Governance and Partnerships
                | Mary Richardson - General Manager Citizen and Community |
## 2018/19 DRF METROPOLITAN DECISION MATRIX

### Organisation Name
- **Living Springs**

### Name and Description
- **New Water Treatment System**
  - Living Springs is an event and outdoor education centre situated in Governors Bay, Lyttelton. They provide recreational and adventure based programmes, predominantly for children and young people from the wider Christchurch community. To meet District Health regulations a new up-to-date water treatment system is now required.
  - A contribution towards the cost of this new water treatment system is being requested.

### Funding History
- **2018/19 - $2,000 (Environmental Project Coordinator)**
- **SDF Metropolitan**
- **2015/16 - $5130 (Swimming Pool Heat Pump) SDF Metropolitan**
- **2015/16 - $1,500 (Springboard Leadership Training)**
- **SDF Metropolitan**

### Other Sources of Funding
- $25,000 received from Southern Trust

### Request Budget
- **Total Cost**
  - $200,000
- **Requested Amount**
  - $50,000

### Percentage Requested
- **25%**

### Staff Recommendation
- That the Council declines the application from the Living Springs Trust for a new water treatment system.

### Priority
- **3**

### Organisation Details:
- **Service Base:** 218 Bamfords Road, Alandale
- **Legal Status:** Charitable Trust
- **Established:** 15/05/1973
- **Staff - Paid:** 15
- **Volunteers:** 8
- **Annual Volunteer Hours:** 13,000
- **Participated:** 12,000
- **Target Groups:** Children/Youth
- **Networks:** Volunteering Canterbury, EONZ (Education in the Outdoors NZ), BAA, Canterbury Employment Chamber of Commerce, Lyttelton Harbour Business Association.

### Organisation Description/Objectives:
Living Springs Trust is an organisation that provides facilities and programmes for schools, community groups and other organisations, to hold events and camps. As well as a valued facility, Living Springs also runs and subsidises community holiday programmes and helps fundraise to bring low-decile schools to camp.

Living Springs involves a large scale environmental project with a mission of formally designing an eco-system with an emphasis on environmental education which would include the 5000 school children who visit each year.

### Alignment with Council Strategies and Board Objectives
- **Strengthening Communities Strategy**

### How Much Will The Project Do? (Measures)
- Living Springs have invested $80,000 towards this project. This covers the preliminary preparation work required prior to the main contractor coming onsite to install the system.

### How Will Participants Be Better Off?
- Participants will be better off by having access to water which meets New Zealand Drinking Water Standards. Therefore, participants will enjoy high-quality drinking water without the risk of exposure to contaminants.

### Staff Appraisal
Living Springs Trust provides a facility that accommodates and hosts large groups at camp, predominantly school children and community groups. The camp is located on 420 hectares of native bush and rural farmland that spans from the crater rim to the foresteves of Lyttelton Harbour, and offers many opportunities to engage with nature. The camp was built in the 1970s and now accommodates over 12,000 people to camp each year, of which 5,000 are school children.

Living Springs provides a wide range of benefits to the community through their holiday camps, school camps, community and church camps, youth camps, corporate events and weddings. The camps offer the opportunity to connect with nature, participate in activities and make connections with others. Living Springs was built on Christian foundations and aims to foster positive relationships and a strong sense of community. Campers are encouraged to try new activities and expand their comfort zones, all within a safe and structured environment.

Another way Living Springs plays an important role in the community is through land management decisions and the focus of creating a healthy bio diverse ecosystem in the area. Half of the land area is now retired from grazing and returned to a natural state of revegetation with the addition of over 13,000 native trees being planted.

The camp operates on spring water which is distributed not only through the camping facilities and buildings, but also supplies six private residential properties located on Bamfords Road.

Living Springs Trust have been a major supporter of Living Springs about their need for a new system with up-to-date water treatment capacity in 2015. For the last two years Living Springs have investigated options for a robust and comprehensive water treatment system. They state that their chosen design will provide them with an efficient, future-proofed system. The cost of the new system is $230,000. The group are requesting a contribution of $50,000 from Council towards this new system.

The Ministry of Health Drinking-water Subsidy Scheme, which for nine years provided funding to eligible community drinking-water suppliers, has been replaced. The new system is therefore not yet approved and not yet available.

Living Springs have been given a deadline of 2020 to ensure that their water supply meets the NZ Drinking Water Standards. These standards are not new but are now being enforced as a result of the 2018 Hawkes Bay event which highlighted interest and risk in private supplies that are poorly managed and maintained.

To date Living Springs have supplied the six properties on Bamfords Road with ‘raw’, untreated water. However, once the new system is in place there will be an agreement in place stating that Living Springs will supply potable water to their boundary. Properties signing this agreement will be expected to pay an annual maintenance fee. Living Springs, as the main user, will fund the initial upgrade of the water supply.

Christchurch City Council is only responsible for the water supplies it owns. This does not include private supplies not owned by the Council. Members of Council’s Water Planning Team have discussed their proposal for a new water treatment system with Living Springs and have explained that Council has no role in sourcing private supplies and would not contribute financially. It was explained that Council would only get involved in private supplies at the behest of the Ministry of Health if there was a dire risk to public health. It is therefore recommended not to fund.

Across Banks Peninsula there are a number of other small community schemes which supply water to more than 25 people for 60 days a year including Maraes and schools and many of these may also be required to update their water treatment system to meet NZ Standards. Council needs to be conscious of setting a precedent around funding private water schemes.

It is also important to note that the amount requested ($50,000) significantly exceeds the amount remaining available for distribution from this fund.
20. Chief Executive's Report - December 2018 and January 2019

Reference: 19/58230
Presenter(s): Karleen Edwards, Chief Executive

1. Purpose of Report
   1.1 This Chief Executive's Report provides a summary of the Council’s organisational performance for December 2018 and January 2019.

2. Recommendation to Council
   That the Council:
   1. Receive the report.

Attachments

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Signatories

Author: Jo Daly - Council Secretary
Chief Executive’s Foreword

The city has experienced a fantastic summer so far. Staff are back following well-earned breaks, and are already delivering on what will be another busy year.

Lime scooters

The Lime scooters have introduced another colourful element across the city, as well as generating a huge amount of interest and debate. Lime has been operating its electric scooters in Christchurch on a trial basis since October 2018. During the first three months of the trial more than 400,000 scooter trips were undertaken, with more than 100,000 people taking at least one ride. As part of assessing the trial, we conducted an online survey to find out what people thought about the shared scooters and to gather information about how they were being used. About 8000 people took part in the survey. Council staff are preparing a report for the next meeting of the Infrastructure, Transport and Environment Committee on 13 February. Other information gathered during the trial will also form part of the report.

Riccarton Road upgrade

Work is due to begin in February to replace and upgrade damaged underground pipes on the busy section of Riccarton Road between Harakeke Street and Matipo Street. As well as the pipe works, the road will be rebuilt to accommodate bus priority measures. A tree-planted median strip will be added between Clarence and Matipo streets. Fulton Hogan has been contracted to do the work, which is expected to be completed by December 2020. A series of drop-in sessions were held this month to provide Riccarton residents and businesses with information about the planned works and to provide them with an opportunity to talk to us about what is involved and the staging of the project, to meet the contractor and to share their ideas on how we can minimise the disruption while the work is done.

Fire risk

The hot summer conditions have increased the fire risk across greater Christchurch and fire restrictions are now in place. This means that anyone wanting to light a fire outside in the Christchurch City area, including Banks Peninsula, or in the Selwyn, Hurunui and Waimakariri districts needed to obtain a permit from Fire and Emergency New Zealand (FENZ). FENZ is responsible for fire season status, permits, assessment of fire risk on private properties, education and responding to incidents. The Council has a responsibility as a landowner to maintain its properties to fire risk. Staff have met with FENZ to discuss the conditions in the city, ways our organisations can work together better to educate the community about fire risk, and communications channels. FENZ has distributed educational material to homeowners and is circulating weekly updates on the fire risk in the region. We have published stories on Newsline, and these have been shared via other channels. There is also a banner on the front page of the website that directs people to these updates.
Water Supply Improvement Programme Update

Through our Water Supply Improvement Programme we've now upgraded 38 wells out of a total of 140. Twelve pump stations, supplying around 25 per cent of the city's drinking water, are currently chlorine free. Our data shows average water use is tracking well below the summer averages for the past two years. If that keeps up, we will be able to continue with the well remediation work as planned. By the end of May we plan to have completed interim upgrades on 19 wells and raised another 41 above ground, bringing the total number of secure wells to 98. Those wells collectively provide more than 60 per cent of the city's water supply. Staff are continuing to investigate options to further accelerate the works, and alter operational settings to lessen the use of chlorinated water. We're still asking Christchurch residents to save water this summer, because we can only work on upgrading wells when we can take them out of service. The less water we use, the faster we can upgrade our wells, and the sooner we can stop chlorinating. It all adds up, and we really appreciate people's efforts to date.

As part of our water conservation campaign, we urged the community to advise us of any leaks or other water issues. The community has certainly responded, and we and our contractors have been very busy responding.

Town Hall

The Town Hall is on track to open on February 23, with public open days planned for 23 and 24 February.

In preparation for the re-opening, tuning and revoicing of the grand Rieger organ was completed, this month, marking another milestone in the venue’s restoration programme. The facility is being completed in stages, with the first areas – the Douglas Lilburn Auditorium, foyer, Avon Room (the former Boaters Restaurant) and Limes Room – to be finished next month.

Postal services

Christchurch City Council’s Papanui Service Centre has been offering postal services since the beginning of February. The Council has been working with NZ Post to ensure residents in the Papanui area continue to have easy access to postal services and an agreement has been reached that will see postal services provided at the service centre from 1 February. Bill paying services are anticipated to be included from the end of April. We are pleased to be able to offer the community continuing local access to these facilities.

Strategic Priorities and Annual Plan

A key focus is continuing to report our progress in implementing actions supporting Council’s Strategic Priorities. These priorities are the six areas of Council’s operations where the elected members asked us to increase our attention or change our approach as part of our Strategic Framework. Councillors were presented with a progress update in September last year and are provided with updates every six months.

The draft 2019/20 Annual Plan came to Council on 12 February. Staff have completed a large amount of work on their budget and financial reviews in particular, and we are pleased with the progress we made to date. We are on track to meet our statutory deadlines.
Strategy and Transformation

Strategic Policy

Fish on Drains Project

The fish on drains project is giving effect to the Council’s strategic priority to ensure safe and sustainable water supply and improved waterways.

To raise greater awareness of where storm water ends up, fish are starting to be placed beside some of the roadside drains in high foot traffic areas, around the city. The idea is that people will see the fish and be reminded that the drain is connected to a waterway. Three different fish designs are being used, kokopu, eel, and snapper.

We will run an awareness campaign, using Snap-Send-Solve, and will carry out a survey after a few months to determine if public awareness has been raised.

Submissions Update

Three submissions were made in January:
- Ministry of Civil Defence’s ‘NZ Fly-in Team’ proposal (staff submission)
- Heritage New Zealand’s review of the heritage value of Knox Church (staff submission)
- Maritime New Zealand’s ‘Maritime Levy and Funding’ review (Banks Peninsula Community Board).

Urban regeneration, design and heritage

Updates on grants made from the Innovation and Sustainability Fund and Enliven Places Projects Fund are as follows:

Innovation and Sustainability Fund

Pop Lab

$10,000 - Fab City Aotearoa Trust

Showcasing a new type of craft in the Arts Centre, this project will run over the 2018/19 summer ‘maker workshops’ using digital technologies and 3D printing. The Pop Lab is a temporary shop-front displaying the range of products that can be made in their hands-on maker workshops. This project aims to move away from a consumer economy, to a producer economy where people can design, customise, make, repair and recycle their own household items - a practical demonstration of the circular economy.

https://www.artscentre.org.nz/events/pop-lab-installation-and-fabrication-lab/

Enliven Places Projects Fund

Plain Sight

$14,830 - Revolution 3D

Development of a free smartphone app that will augment 30 street art murals in central Christchurch, creating an additional layer of interest in the city. The app will also include walking tours and points of interest and will be available for download in February 2019.
A rough cut example of augmented street art: https://drive.google.com/file/d/1ptZsyqXjMY7LidbFYbOaWiLnt5otAR/view

**Urban Regeneration**

Two community-designed pop-up gardens have been installed in Cathedral Square:

- Time to Heal was designed by Avonhead School and features healing plants and a tranquil seating area.

![Image of Time to Heal garden](image1.png)

- Noodlescapes was designed by GEDES studio and features colourful pool noodles and native plantings. A third and final garden will be delivered in early February.

![Image of Noodlescapes](image2.png)

Another addition to Cathedral Square has been games, tables and chairs outside Tūranga, in Library Plaza.

A mural at the rear of Distinction Hotel, along the laneway connecting Cathedral Square and Hereford Street, was completed at the end of January.

Citizens and Community

**Capital Delivery**

**Canterbury Multi Use Arena**

- The Project is currently in the planning phase in collaboration with DPMC, LINZ, the Treasury and Otākaro.
- Core confirmations to date include confirmation of site, inclusion of a full roof and multi-use capability.
- The Technical Team is modelling various concepts, including orientation and bowl configurations to provide cost estimates for the Investment Case.
- Onsite geotechnical testing is complete and contamination testing is underway in association with LINZ.
- Stakeholder engagement forums/workshops are underway.

**Christchurch Town Hall**

- Auditorium, entrance foyer, Victoria, Avon & Limes Rooms are almost complete with final finishes, removal of protections and cleaning underway.
- The Rieger Organ refurbishment has been completed.
Kilmore Street has been upgraded to Accessible City Standards and the main entrance to the Town Hall is almost complete. External works to the west and south of the building continue. Opening events are planned for the 23 and 24 February.

Lancaster Park Demolition & Deconstruction
- Work will start in early February to remove the final two stands. This is estimated to take 10-12 months.
- Planning underway to transport concrete waste to the Lyttelton Port Company reclaim site.
- A live time-lapse camera stream is available online at: https://broadcastmedia.tv/timelapse/.

Linwood Pool
- Signage promoting the project, including contact details, has been erected on site.
- The pre-design/briefing phrase has been completed and initial site plans/spatial layout sketches produced. The sketches have been shared with the Community Board and the wider community. Feedback was overwhelmingly positive and will be incorporated into the concept design.
- Geotechnical investigations and analysis has been completed. Further investigations will be undertaken shortly to gather additional information.
- A request for the gift of a Te Reo name for the facility has been made and this will feed into the cultural design input which Matapopore have been engaged to provide.

Metro Sports Facility
- Ground remediation using stone columns continues with 1,400 of the approximately 7,200 columns installed.
- Sheet pile testing was carried out prior to Christmas. (Interlocking sheets of steel which allow dewatering and excavation to be carried out so underground services and pool tank can be safely installed)
- Tenders received by Otakaro from potential main works contractors. We are waiting for confirmation from Otakaro that the contract has been awarded.

Ngā Puna Wai
- Construction of the Ngā Puna Wai Sports Hub is gathering momentum with athletics track (including infield facilities) and hockey turfs now fully operational.
- The Canterbury Primary Schools Athletics Final day was successfully held on 5 December 2018 with 1700 children participating. This is the largest event on site to date.
- The first of the International Hockey matches was held on 8 February 2019. Construction is now advancing on both the Tennis and Rugby League facilities.
Old Municipal Chambers
- Cyclical maintenance of the building is ongoing to prevent further deterioration.
- Currently this is addressing critical interim repairs to inhibit the degradation of the structure.

Performing Arts Precinct
A report will be provided to Council in March 2019 detailing a feasibility study for a new Court Theatre within the Precinct.

The Square & Surrounds
- The project team is currently scoping the works, estimating associated costs and drafting designs commencing with the South-east corner.

- The concept design for this area will be tabled for consideration, through the Infrastructure Transport & Environment Committee in March 2019, before proceeding to Council.
- Construction work for South-east corner targeted to commence at the end of June 2019, during the low (shoulder) tourist season.

Community Support, Governance & Partnerships

Burwood, Avondale, Dallington Family Movies
The Community Governance Team have been supporting the Burwood, Avondale and Dallington Associations to plan family movie events and activities for each suburb. The intention is to reconnect their communities after the earthquakes and red zoning.

Strengthening Communities Fund
The Council’s Strengthening Communities Fund will be open for applications Monday 4 March and close at midnight Tuesday 9 April 2019. The purpose of this fund is to support community-focused organisations whose projects contribute to the strengthening of community wellbeing.

More information available at CCC Strengthening Communities Fund.

A collaborative project sorting firewood in Shirley supported by the Papakuraines Community Boards Strengthening Communities Fund.

Customer Services

Citizens Enquiry Volume
November saw our highest total interaction volumes for the financial year to date (49,410 calls and emails), as well as high transactional volumes (13,067 transactions, while there were only 5,144 transactions in October).

Overall interaction volume for December was lower than preceding months (35,503 calls and emails), in line with typical seasonal fluctuations.
Libraries

The popularity of Tūranga continued through the Christmas period. There were a total of 246,000 visits to Tūranga from its opening in October through to the end of January.

Kā Huru Manu Exhibition in Southbase Gallery, Tūranga

Kā Huru Manu (the Ngāi Tahu Cultural Mapping Project) Exhibition opened in the Southbase Gallery on level 2 of Tūranga on 26 January 2019. It was followed by a presentation led by Sir Tipene O'Regan explaining the history of the exhibition.

The exhibition runs until 28 April 2019 and complements the interactive online Ngāi Tahu Atlas Kā Huru Manu, which has been compiled by Ngāi Tahu over the past decade and was launched in 2017. The Atlas features over 1200 traditional Māori place names in Te Waipounamu (the South Island).

Exhibition content includes reproductions of six hand drawn maps of the Canterbury region some of which date back to the 1890s. Each map is accompanied by an iPad visitors can use to engage with information from the Atlas, and exhibition material to learn about their history and the people who produced them. Unique artefacts will also be on display including original 19th century correspondence loaned from other collecting institutions, on show for the first time.

Two special sessions on selected places of local Māori significance have been scheduled at Tūranga: Ka Haro te Kahu (Sunday 27 January) and Ka Haea te Ata on 24 February, as well as a programme to engage local students with the exhibition content over the first school term.

Story-time session celebrating all of New Zealand's official languages

Before Christmas, Rochelle Paki from Ngā Ratonga Māori who delivers Ngā Pakiwaitara – Bilingual story-times in Tūranga on Tuesdays, was accompanied by a sign language interpreter alongside her during her story-times delivery. The result was an amazing story-time session delivered in te reo Māori, English, and NZ sign language, all three of New Zealand’s official languages.

Tūranga Makerspace

The use of the sewing machines at Makerspace is growing daily. Customers are truly delighted when they discover they are allowed to use the machines for free and the space is a true community collaborative, which is what Makerspace is all about. Competent users are able to swap their library card for a sewing kit.

Popularity is growing for the ‘Open Sewing’ time on Monday evenings from 6-8pm with many excited sewing newbies, tourists and old hands joining the space.

Parks

‘Award Winning’ Port Hills Regional Parks Rangers Team

The Port Hills Ranger Team (pictured below) have just been awarded the prestigious ‘The Sign of the Packhorse’ Community Award by the local Cashmere/Port Hills Community & Business Association. It acknowledges “the Christchurch City Council Park Rangers who are based on Victoria Park and working tirelessly on the Port Hills”.

Events

Free buses from Sparks

Sparks is one of the biggest events on the Summer Times calendar, usually attracting crowds of between 55,000 and 65,000 people. This year, the event also coincides with the popular Night Noodle Market in North Hagley Park, and with a one-day cricket international between the Black Caps and Bangladesh at Hagley Oval.

As part of a trial with ECAN, we are promoting free buses home from the SPARKS this year. Twenty-eight buses have been booked, which will cater for approximately 1700 passengers. Route maps will be provided, and “Bus Gurus” will be on site to direct people to the right buses.

Vbase

Phil Collins concert

Vbase hosted Phil Collins on 4 February. With an audience of over 23,000 at the Christchurch Stadium, it was a stunning evening listening to an extremely talented and iconic artist.

The Black Clash

On Friday 25 January staff hosted over 7,500 people at Hagley Pavilion for The Black Clash cricket match. With some stand-out New Zealand rugby and cricket players playing on both teams raising money for Cystic Fibrosis New Zealand, there was true sense of community and focus on family entertainment.

An extremely successful event, it is hopeful that Vbase can host this event again in the years to come.

International Cricket

With the 2018/2019 International cricket season in full swing, Vbase is looking forward to hosting further Black Cap games at Hagley Oval. The next match is set for Saturday 16 February with the Black Caps playing against Bangladesh.

Consenting and Compliance

Building consenting

Code Compliance Certificates

November: 337 processed, 98.8% within statutory timeframe (20 working days)

December – 282 processed, 99.2% within statutory timeframe.

We have a KPI of achieving 95% of our processing decisions within 19 working days. For the current financial year to date, we are tracking at 98.7%.

There was the usual seasonal spike of Certificates of Public Use in November/December. This was planned for and didn’t affect timeframes.

Building Consents

November – 402 decisions made, 97% within statutory timeframes

December – 311 decisions made, 97.9% within statutory timeframe

We have a KPI of achieving 95% of our processing decisions within 19 working days. For the current financial year to date, we are tracking at 95.2%
Overall in 2018, 3939 building consent decisions were made, compared with 5767 in 2018. This drop was forecasted, and we have resourced the Unit appropriately.

Eco-Design

The Eco Design Service workload was consistent throughout November and December.

The service was involved with a number of pre-applications meetings and had a first publication in the BRANZ Build magazine, 2018 December Edition: https://www.buildmagazine.org.nz/articles/show/window-selection-balancing-act

Smart Series 4, published in December 2018, featured an article about our Eco Design Advisor’s own eco-friendly home, which also promoted the Council’s eco design service.

Regulatory Performance

Freedom Camping Season

The freedom camping season continues with enforcement and monitoring taking place throughout the Christchurch and Banks Peninsula area, seven days a week.

For the period of November and December, a total of 56 freedom camping infringements were issued where in breach of the Freedom Camping Bylaw. Of the 56 infringements, 33 were issued in the Akaroa township. Numbers for January are being finalised, and will be available next month.

The reasonably low number of infringements issued over these busy months demonstrates the effectiveness of our continued public education campaigns about freedom camping in our area.

Abandoned/Vacant properties

For Nov/Dec 2018 the Compliance and Investigations and/or the Environmental Health team have received 10 reports of nuisance associated with vacant properties across the City. A summary of these complaints is provided below.

Vacant Building: Four vacant building complaints were received over the reporting period. Upon investigation none were determined to be dangerous and no Section 124 notices under the Building Act were issued.

Vermin: Five complaints relating to vermin on vacant properties were received. No rodents were sighted at the time of our site visits and no health nuisances have been detected. All complaints have been resolved.

Litter: One complaint was received which was investigated with no health nuisance concerns or Litter Act breaches identified.

Resource Consents

Application numbers remain relatively consistent and 99 percent of the applications processed in December 2018 were within the 20 days statutory timeframe.

City Services

Project Management

Rawhiti water supply zone pressure reduction trial

We are trialling a reduction in pressure in the Rawhiti water supply zone to establish whether it will result in less water leakage, less damage, and fewer breakages to our reticulation network.

The first step in the pressure reduction trial in the Rawhiti water supply zone started on 24 October. Pressure was reduced by 5 kPa (kilopascal) to 67 kPa. Lessons learned will be implemented before the next 5 kPa reduction is implemented. No complaints have been received that relate directly to the drop in pressure.
Duvauchelle water treatment plant

The second stage of the Duvauchelle water treatment pilot plant is complete. Water with a turbidity of up to 7 NTU (i.e. the upper limit of the turbidity that the existing treatment plant can treat) has run through the two treatment trains in the pilot plant. The data will be analysed to check if the media filters in the pilot plant are better than the main plant.

Lyttelton Harbour Wastewater Pipeline Scheme

McConnell Dowell (MDC, who are carrying out work package #2) have completed the launch of the 5.2km Governors Bay submarine pipeline which passed its hydrostatic test successfully. Burial of the pipeline in the harbour is now complete.

Land Drainage Planning

Comprehensive Storm water Network Discharge Consent (CSNDC) application –

The Hearing commenced on 5 November, and was adjourned on 15 November. A minute was issued by the Chair of the Hearing Panel on 21 November, requesting further information or evidence from CCC on Storm water quantity matters. These matters relate to submissions made to the hearing. Staff are currently forming their response, which will require more time than currently provided under the statutory timeline. In accordance with RMA provisions, CCC staff have requested that the hearing be suspended to early February 2019 to provide sufficient time to address the matters raised by the Hearing Panel and submitters. The hearing will likely close in late February 2019 with a decision possible in March.

The Council continues to engage with ECAN, submitters and their experts on progressing application matters.

Solid Waste

Transwaste has formally advised the closure of Burwood Resource Recovery Park, for receiving earthquake related material, will take place on 20 December 2019. The facility will remain open and has resource consent to receive capping and landscaping material until 31 December 2021.

A successful Open Day was held at the EcoSort Recycling facility on 8 December 2018. A record attendance of 655 residents over three hours, who were keen to learn more about our recycling services. The feedback has been encouraging as residents found the event both informative and fun.

As of 14 January, 394,206 wheelie bins have been fitted with RFID tags representing a completion rate of 83.2% and on target for the three year project completion. A total of 6,407 additional bins have been removed from circulation.

Kerbside collections went well over Christmas and New Year with no issues raised regarding the change in collection days, due to our proactive communications.
Stormwater and Land Drainage

No. 1 Drain, Shirley
The main contract for repairs and improvements to the waterway is now complete. Practical completion is imminent. The floating treatment wetland tender will be let in the coming months.

Wastewater Treatment Plant

Midges Control Program
The midges control program for the 2018/19 season is well underway. The mechanical disturbance (dragging chains through the sediment at the bottom of the ponds to disrupt the early aquatic stage of the midges lifecycle), is now a routine job, every 10 days. The twice weekly sampling of the 30 midge traps is continuing, and shows an approximate 30% reduction in midge numbers.

December and January has also seen some 3,000 of the 3,900 native plants for the vegetation barrier been planted. The bouts of wet weather have helped establish the plants.

Reticulation and Maintenance

Water supply improvement programme
The well head upgrade works are continuing across the city. We are about to commence further water conservation campaigns in the central zone with an extensive letter box drop of pamphlets with water saving ideas. This is the zone where we have the least additional capacity and a large number of wells to upgrade.

The continuing hot weather and high levels of demand for water have required a number of previously isolated wells to be returned to service. This has meant the re-introduction of chlorine at five pump stations (two in the Central zone, two in Northwest and one in Rawhiti) through January and February.

Work has begun on the review and update of the Water Safety Plans to meet the requirements of the new Framework from the Ministry of Health, as confirmed in December 2018. Six new plans will be delivered over the next six to eight months.

A water shut-off notification system is about to be launched. This will allow anyone to receive a notification when water has been turned off in their area. At this stage this is only for unplanned shut-offs, however in time it will also include planned outages.

Water leaks
An increasing number of water jobs (mainly related to leaks) were logged over the last few months.
This is in part due to our own promotion of water conservation, and a higher public awareness of leaks.

The contractor still has a significant number of jobs to be completed, but work is prioritised on a day-to-day basis.
We encourage elected members and residents to raise requests for service relating to leaks through our Contact Centre (03 941 8999) or by using Snap Send Solve.
21. Resolution to Exclude the Public


I move that the public be excluded from the following parts of the proceedings of this meeting, namely items listed overleaf.

Reason for passing this resolution: good reason to withhold exists under section 7.
Specific grounds under section 48(1) for the passing of this resolution: Section 48(1)(a)

Note

Section 48(4) of the Local Government Official Information and Meetings Act 1987 provides as follows:

“(4) Every resolution to exclude the public shall be put at a time when the meeting is open to the public, and the text of that resolution (or copies thereof):
(a) Shall be available to any member of the public who is present; and
(b) Shall form part of the minutes of the local authority.”

This resolution is made in reliance on Section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public are as follows:
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>GENERAL SUBJECT OF EACH MATTER TO BE CONSIDERED</th>
<th>SECTION</th>
<th>SUBCLAUSE AND REASON UNDER THE ACT</th>
<th>PLAIN ENGLISH REASON</th>
<th>WHEN REPORTS CAN BE RELEASED</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>EARLHAM STREET OPTIONS</td>
<td>S7(2)(A), S7(2)(B)(II), S7(2)(G), S7(2)(I)</td>
<td>PROTECTION OF PRIVACY OF NATURAL PERSONS, PREJUDICE COMMERCIAL POSITION, MAINTAIN LEGAL PROFESSIONAL PRIVILEGE, CONDUCT NEGOTIATIONS</td>
<td>THIS REPORT INCLUDES OPTIONS THAT COULD ADVERSELY AFFECT PROPERTY NEGOTIATIONS.</td>
<td>ON THE CHIEF EXECUTIVE BEING SATISFIED THERE ARE NO LONGER ANY GROUNDS IN THE LGOIMA FOR WITHHOLDING THE INFORMATION. ANY SUBSEQUENT RELEASE WOULD BE SUBJECT TO THE REMOVAL OF PERSONAL INFORMATION.</td>
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