Waimāero
Fendalton-Waimairi-Harewood Community Board
EXTRAORDINARY AGENDA

Notice of Meeting:
An Extraordinary meeting of the Waimāero/Fendalton-Waimairi-Harewood Community Board will be held on:

Date: Saturday 17 August 2019
Time: 9am
Venue: Boardroom, Fendalton Service Centre, Corner Jeffreys and Clyde Roads, Fendalton

Membership
Chairperson
Deputy Chairperson
Members
Sam MacDonald
David Cartwright
Aaron Campbell
Linda Chen
James Gough
Aaron Keown
Raf Manji
Shirish Paranjape
Bridget Williams

12 August 2019
Maryanne Lomax
Manager Community Governance, Fendalton-Waimairi-Harewood
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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.

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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 mau rua 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
Collaboration
Prudent Financial
Management
Stewardship
Wellbeing and
resilience
Trust

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-
based 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. **Deputations by Appointment**

   3.1 **Harewood Road/Gardiners Road/Breens Road Intersection Improvements**
   
   Connie Christensen will address the Board on behalf of Go Cycle Christchurch, in relation to the Harewood Road/Gardiners Road/Breens Road Intersection Improvements report (Item 5 refers.)

   3.2 **Harewood Road /Gardiners Road/Breens Road Intersection Improvements**
   
   Vince Eicholtz, local resident, will address the Board in relation to the Harewood Road/Gardiners Road/Breens Road Intersection Improvements report. (Item 5 refers.)

   3.3 **Harewood Road/Gardiners Road/Breens Road Intersection Improvements**
   
   Simon Britten, local resident, will address the Board in relation to the Harewood Road/Gardiners Road/Breens Road Intersection Improvements report. (Item 5 refers.)

   3.4 **Harewood Road/Gardiners Road/Breens Road Intersection Improvements**
   
   Glenda Hicks, local resident, will address the Board in relation to the Harewood Road/Gardiners Road/Breens Road Intersection Improvements report. (Item 5 refers.)

   3.5 **Harewood Road/Gardiners Road/Breens Road Intersection Improvements**
   
   Merav Benaia, local resident will address the Board in relation to the Harewood Road/Gardiners Road/Breens Road Intersection Improvements report. (Item 5 refers.)

   3.6 **Harewood Road/Gardiners Road/Breens Road Intersection Improvements**
   
   Richard and Ros Huppert, local residents, will address the Board in relation to the Harewood Road/Gardiners Road/Breens Road Intersection Improvements report. (Item 5 refers.)

   3.7 **Harewood Road /Gardiners Road/Breens Road Intersection Improvements**
   
   Connie Christensen, a local resident, will address the Board in relation to the Harewood Road/Gardiners Road/Breens Road Intersection Improvements report. (Item 5 refers.)
5. Harewood Road/Gardiners Road/Breens Road - Intersection Improvements

Reference: 19/571934
Presenter(s): Brendan Bisley, Senior Project Manager

1. Purpose of Report

1.1 The purpose of this report is to advise on the outcomes of the recent consultation on two options presented to the community on the Harewood Road/Gardiners Road/Breens Road intersection and to recommend an option to progress to detailed design and construction when budgets are available.

2. Executive Summary

2.1 Council consulted with the community on two options, a left in / left out option and a traffic signal option. This consultation was undertaken in May and June 2019. Two consultation meetings were undertaken with the community.

2.2 Council received 1,085 submissions. These submissions showed a strong preference for the traffic signal option.

2.3 The key issues raised were:

- Safety at the intersection for users and pedestrians
- The adequacy and safety of the U-turn slots
- Inconvenience if the median was closed
- Rat running of local streets if the median is closed
- The money should be found to achieve a safe solution

2.4 Council engaged an independent review of the options proposed in this report. This review is included in Attachment B.

2.5 The review found that the safest option is the revised left in / left out option (refer Attachment A). Traffic signals is the least safe option.

2.6 Due to the increased safety risk associated with the traffic signals and the increased chance of a serious or fatal accident occurring, staff are not recommending this solution.

2.7 The recommended option is the modified version of the left in/left out option that addresses the issues raised about the consulted left in/left out option in the original consultation. This provides for the safety concerns and improved pedestrian crossing facilities.

2.8 Of the options consulted on, the revised left in / left out option is a lower cost and provides the best value for money solution to address the key issues at this intersection.

3. Staff Recommendations

That the Waimāero/Fendalton-Waimairi-Harewood Community Board recommend that the Infrastructure, Transport and Environment Committee recommend to the Council:

1. The Preferred Option: Revised left in / left out with signalised pedestrian crossing, as shown in Attachment A of this report.
2. To request staff to investigate funding opportunities for the preferred option. If funding cannot be found from project savings over the next 12 months, then request that staff include the project in the next Annual Plan.

4. **Background**

4.1 The intersection of Harewood Road, Gardiners Road and Breens Road has been of interest with the local community for a number of years. Submissions to the Long Term Plan have requested traffic lights at the intersection to improve safety.

**Current State**

4.2 The current intersection is an uncontrolled cross junction with Stop signs on the Breens Road and Gardiners Road approaches. Harewood Road is a four lane median divided arterial road with right turn slots into both Breens Road and Gardiners Road. As a result, traffic crossing from Gardiners Road to Breens Road has to cross six lanes of traffic. This gives 32 potential conflict points for vehicles using the intersection.

4.3 Traffic counts indicate that few vehicles attempt the straight through or right turn manoeuvre in the peak hours due to the difficulty. Less than 10% of the traffic on Gardiners Road or Breens Road attempt these movements with 90% choosing to turn left at the intersection in the peak hours.

4.4 There are no safe pedestrian crossing facilities at the intersection currently, with pedestrian crossing slots approximately 60 metres either side of the intersection. Students at local schools have been crossing the road at the intersection, rather than walking to the crossing slots, and then standing on a narrow median before crossing to the other side.

4.5 The wider area surrounding the intersection is well-established residential use. Copenhagen Bakery is located just north of the intersection on the western side of Harewood Road. This is both a factory and retail operation and has a limited number of onsite carparks. Customers currently park both sides of Harewood Road and a number of submitters highlighted the congestion this creates near the U-turn slot.

4.6 Further along Harewood Road, closer to the airport, there are future proposals for new large commercial developments near Russley and John’s Roads along with a new link road connecting these to Sawyers Arms Road. The timing for these proposals are unknown at this stage and will be dependent upon private landowners.

4.7 In the longer term, traffic volumes on Harewood Road are expected to decrease as key changes to the Northcote Road and Sawyers Arms Road and the intersections along each will make this route more attractive for traffic than Harewood Road.

4.8 Submitters that live on Gardiners Road have indicated that traffic increased noticeably on Gardiners Road after the traffic lights were installed at the intersection of Gardiners Road/Sawyers Arms Road as it became a more desirable through route.

4.9 Traffic signals were installed at the Sawyers Arms Road / Gardiners Road intersection to address a perceived safety issue after two serious injury accidents had occurred in the previous four years. Since the traffic signals were installed in 2014, there have been a further two serious injury accidents (2016 and 2018) so the traffic signals have not reduced the occurrence of serious injury accidents.

**Strategic Alignment**

4.10 Intersections across the city are analysed two yearly to assess their safety and to develop a priority list of the 100 worst intersections. The analysis looks at the number of recorded
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accidents and the severity of the accidents. Those with the highest number of fatal and serious injury accidents sit higher than those with minor and non-injury accidents. This work is undertaken in a programme called KiwiRAP.

4.11 Based on the 2016 KiwiRAP analysis, the intersection was the 62nd worst in the city for Council intersections and therefore sits outside the 10 year funding window of the LTP which funds only the top 20 in each 10 year period.

4.12 In relation to other intersections nearby, Harewood Road/Greers Road intersection was 21st worst in the city and Sawyers Arms Road/Gardiners Road intersection was ranked as the 4th worst. Both of these are signalised.

4.13 In the 2014-2018 KiwiRAP, the intersection is no longer inside the top 100 as it is assessed as having a low collective risk and a medium personal risk. Sawyers Arms/Gardiners is assessed as high risk due to the severity of the accidents still occurring at the intersection even with the traffic signals installed but also does not sit inside the top 100 intersections.

4.14 This report addresses the Council’s Long Term Plan (2018 - 2028):

4.14.1 Activity: Traffic Safety and Efficiency

- Level of Service: 10.0.6.1 Reduce the number of casualties on the road network. - <=124 (reduce by 5 or more per year)

History

4.15 The intersection has an ongoing accident history but had a particularly poor accident history for the two years when the construction on Johns Road was underway. These roadworks resulted in an increased volume of traffic trying to avoid the construction works and using the intersection of Harewood Road/Gardiners Road/Breens Road to cross to Wairakei Road. There was also a similar accident spike at the Sawyers Arms Road/Gardiners Road intersection.

4.16 In the two years after those works were complete, there were no recorded accidents at Harewood Road/Gardiners Road/Breens Road intersection before accidents have returned to its historical norm of one to two recorded accidents per year.

4.17 Accidents at the site are typically non-injury or minor injury with the predominant accident type being a vehicle crossing from Gardiners Road being hit by vehicles on Harewood Road.

4.18 The accident history in a typical year is similar to other uncontrolled intersections around the city with minor and non-injury accidents occurring as a result of vehicles failing to give way or trying to take a gap that is too small.

4.19 The intersection was not included initially in the 10 year Long Term Plan for any works. The Long Term Plan only has funding for the top 20 intersections in each 10 year period. $300,000 from the minor safety programme was allocated as part of the Annual Plan review for works at the intersection.

4.20 Prior to the 2010 earthquakes, Council proposed reducing Harewood Road between Highsted Road and Crofton Road to a single lane in each direction through remarking of the existing pavement and installation of on road cycle lanes. This was consulted with the community and approved by Council on the 26 August 2010 but never implemented due to the earthquake sequence that occurred a week later and in February the following year.

4.21 In this scenario, the intersection at Harewood/Gardiners/Breen’s was left as an uncontrolled cross junction, but traffic would only need to cross a single oncoming lane in each direction. Depending on the decision of Council regarding this report, the 2010 decision may need to be rescinded.
4.22 Traffic signals were installed at Sawyers Arms Road/Gardiners Road in 2014 following a serious injury accident. Since this time there have been two further serious injury accidents in 2016 and 2018.

Summary of Independent Safety Review

4.23 Council engaged Abley Transportation Consultants to undertake an independent review of the options proposed in this report. Their review is included in Attachment B. A summary of the key findings are:

- The independent review has assessed the safety of the main options included on this report.
- This assessment concludes the safest option is the modified left in/ left out option which is four times safer than traffic signals.
- The Harewood Road single lane option consulted with the community in 2010 is 30% safer than the existing layout and three times safer than the traffic signals.
- Leaving the intersection as currently configured is two times safer than installing traffic signals.
- Traffic Signals is the least safe option at the intersection.

4.24 The report discusses various intersection treatment types and the inherent accident characteristics. Examples include failing to give way at T intersections, right turn opposed at cross junctions (this is the predominant accident type at Harewood Road/Gardiners Road and Breezes Road) and either right turn opposed or rear end collisions at signalised intersections.

4.25 Intersections also have typical accident rates for each type. These are derived from analysing long term accident data at intersections over a number of years and then calculating the typical accident rate each year at each type. The accident types can be broken down into the overall number of accidents and then the typical rate of serious and fatal crashes within that overall number. The typical accidents rates for the various intersection options considered are shown below:

<table>
<thead>
<tr>
<th>Intersection Configuration</th>
<th>Expected # Injury Crashes per annum</th>
<th>Expected # Fatal and Serious Crashes per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left-in Left-out with RT to Gardiners</td>
<td>0.35</td>
<td>0.09</td>
</tr>
<tr>
<td>Remove one through lane</td>
<td>0.54</td>
<td>0.13</td>
</tr>
<tr>
<td>Signalise existing</td>
<td>0.75</td>
<td>0.37</td>
</tr>
<tr>
<td>Existing Intersection layout (no nothing)</td>
<td>0.54</td>
<td>0.18</td>
</tr>
</tbody>
</table>

4.26 What the above analysis tells us is that the existing arrangement is expected to generate around three injury crashes every five years. This could be expected to increase to four if the intersection is signalised and reduce to two if the left-in, left-out option is proceeded with.

4.27 When the severity component is added into the overall risk, signalising the intersection can be expected to double the number of fatal and serious crashes, whereas the left-in, left-out option is expected to have half the number compared to the existing intersection.

4.28 When the two are combined, the left-in, left-out option is around four times safer than the signalised option.
The reason that the chances of serious and fatal accidents increase at traffic signals relates to the vehicles' speeds. At the current intersection, vehicles typically stop at either Gardiners or Breen’s before trying to drive into the intersection to go straight ahead or right turn. As a result, one of the vehicles would be travelling below 20km/h when involved in an accident.

With traffic signals, accidents typically occur with both vehicles travelling at 50 to 60km/h especially if one of the vehicles is running the amber or red light. The accident severity directly relates to the energy involved in the collision and absorbed by the passengers and this is significantly larger with higher traffic speeds.

As an example of this, the intersection at Sawyers Arms and Gardiners had traffic signals installed in 2014 to address an accident history including two serious injury accidents.

Since the traffic signals have been installed there have been a further two serious injury accidents at the intersection (2016 with one serious and two minor injuries and 2018 with one serious injury). Both accidents were vehicles undertaking opposed right turn movements.

**New Zealand Transport Agency Funding**

Council are able to obtain subsidy from the New Zealand Transport Agency for eligible projects that meet their funding criteria. The funding is allocated on a project achieving a good alignment with strategic goals and an appropriate benefit/cost ratio. The benefits consider accident savings, accident severity reduction and vehicle travel time.

A benefit/cost ratio above 1.0 indicates there are more savings than the costs being spent to build the infrastructure.

The indicative ratio for the traffic signals is 0.08 which indicates the intersection only creates 8 cents of savings for every dollar spent in construction. This option is unlikely to receive NZTA subsidy.

The indicative ratio for the left in / left out is 0.98. As the cost is less than $1million, implementation can be delivered through the NZTA low cost / low risk programme, which would likely attract subsidy.

**Decision Making Authority**

In September 2018, Council considered the project as part of a Part A report from the Waimāero/Fendalton-Waimairi-Harewood Community Board. In the Council decision, resolution 4. was:

- The outcome of consultation be reported from the Community Board as a recommendation to the Infrastructure, Transport and Environment Committee for final recommendation to Council.

The Council have the final decision on the preferred treatment for the intersection and the recommendation from the Community Board is sent to the Infrastructure, Transport and Environment Committee who then make their recommendation to Council for the final decision.

**Previous Decisions**

On the 26 August 2010, Council resolved to convert Harewood Road from Highsted Road to Crofton Road to a single lane carriageway and install cycle lanes. This was to be achieved by remarking the existing carriageway to form the single lane rather than the current two lane arrangement. Gardiners/Breens remained an un-signalised cross road intersection. The plans for this option are appended to this report.

The resolution was not implemented as the 4 September 2010 earthquake sequence started the following week and continued through to the February 2011 events. Works across the city
were reprioritised at the time. The work was dropped from the Long Term Plan in this process and has not since been reinstated. The resolution for this option may need to be rescinded depending on the decision of Council regarding this report.

**Assessment of Significance and Engagement**

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

4.42 The level of significance was determined by the high level of interest in the scheme, but within a defined area. The impact of the changes to the intersection are not citywide and predominately affects those in the Bishopdale area.

5. **Options Analysis**

**Options Considered**

5.1 The following reasonably practicable options have been considered and are assessed in this report. This are listed in the order of analysed safety:

- Revised left in/left out (Consultation Option 1) incorporating changes from the consultation feedback
- One lane conversion of Harewood Road as resolved by Council in August 2010.
- Traffic Signals (Consultation Option 2)
- Do Nothing

**Options Descriptions**

5.2 **Preferred option: Revised left in/left out with signalised pedestrian crossing**

5.2.1 **Option Description:** This option is similar to the Option 1 consulted on, but has been amended to:

- Allow right turns from Harewood Road into Gardiners Road for all vehicles as requested by a number of submitters.
- The U-turn slots and adjacent lanes on Harewood Road have been amended to create stacking room for vehicles and improve safety for users.
- The increased space for the U-turn slots has been achieved by making Harewood Road one lane from Breens Road to Crofton Road and to the U-turn slot south of Gardiners Road and installing cycle lanes in this section.
- The one lane changes on Harewood Road improves delineation through the intersection and better guidance for vehicles travelling along Harewood Road.
- Painted cycle lanes are proposed where Harewood Road is changed to one lane.
- Some on street carparks have been removed outside Copenhagen bakery to accommodate the extra space for the U-turn slots and to address safety concerns raised by submitters about the conflicts between vehicles entering and exiting the bakery site along with vehicles trying to use the on street carparks.

5.2.2 **Option Advantages**

- Of the options consulted on, this option is the lowest cost option and addresses the issues raised at the intersection, therefore provides the best value for money.
• The expected number of accidents at this intersection is lower than all other options. This option is four times safer than the alternative signalised intersection consulted on.

• The provision of the right turn from Harewood Road into Gardiners Road addresses concerns raised in the consultation about the current U-turn slots and creates a safe facility for the limited number of vehicles and buses that wish to travel between Gardiners Road and Harewood and Northwood.

• The changes to the road layout on the approaches improves the usability and safety of the U-turn slots and creates sufficient stacking room for turning vehicles.

• Traffic wishing to travel from Gardiners Road to Breens Road or vice versa, can still make this movement via the use of the improved U-turn slots.

• The signalised crossing for the pedestrians minimises conflicts between pedestrians and vehicles making this the safest option for the pedestrians.

• This option has minimal delay for Harewood Road traffic as the crossing only activates when pedestrians push the call button and addresses existing safety concerns from residents regarding the U-turn slots.

• The changes to the approaches to Harewood Road from both Gardiners Road and Breens Road will be safer and will slow vehicles prior to entering the intersection.

• This option does not encourage additional traffic to use Breens Road past Breens Intermediate and the local pre-school.

• With no increase in traffic on Breens Road, it is not expected that accident migration to occur at the Wairakei/Breens intersection.

• The median changes allow further trees to be planted along Harewood Road.

• The reduction to Harewood Road to a single lane and installation of cycle lanes will assist with slowing traffic past the intersection which will improve pedestrian and cycle safety.

• This option is compatible with future planned work along Harewood Road, including new cycleway infrastructure if Harewood Road is the agreed route.

• Given the value for money calculation for this option, it is likely that NZTA will subsidise the costs.

• The left in/left out options has no impact on Harewood Road and the left turners from Gardiners Road and Breens Road. In a typical peak hour this means 2320 vehicles are not impacted (97%).

• The left in/left out option affects 3% (approximately 80 vehicles an hour) of the traffic using the intersection in the peak periods, so the impact on the local network from the traffic that would need to use alternative routes is minor. With traffic signals, 10% (approximately 200 vehicles an hour) of the existing traffic on Harewood Road would divert and rat run the local network and 900 vehicles on Harewood Road would be stopped by the traffic signals red phase in the same period (10 times the volume affected by the left in/left out option). These vehicles are currently not stopped at all.

5.2.3 Option Disadvantages

• Traffic that wishes to travel from Gardiners Road to Breens Road will need to use the U-turn slots or find an alternative route. Based on traffic counts this equates to
approximately 80 vehicles an hour, out of the 2,400 that use the intersection in the evening peak. This equates to approximately 3% of the traffic that uses the intersection in peak hours.

- Harewood Road traffic would be delayed when the pedestrian signals activate.
- To accommodate the revised U-turn slots and improve pedestrian safety, nine on-street carparks will need to be removed from outside Copenhagen Bakery.

5.3 One lane conversion of Harewood Road as resolved by Council in August 2010

5.3.1 Option Description: This option involves a re-allocation of the existing road space using paint markings to reduce Harewood Road to a single lane from the roundabout at Highsted Road to Crofton Road.

5.3.2 A buffer zone is painted adjacent to the central median and then a cycle lane is painted adjacent to the existing carparks to utilise the road space available with only a single lane.

5.3.3 New pedestrian crossing slots are created closer to the intersection of Gardiners Road and Breens Road, but these are not signalised.

5.3.4 Option Advantages

- The reduction to a single lane on Harewood Road is 30% safer than the existing intersection layout and three times safer than the signalised intersection proposed in the consultation option.
- This option provides marked cycle lanes on Harewood Road in the length converted to a single lane.
- The installation of a buffer against the central median creates a wider U turn slot and stacking room, improving safety.
- Traffic crossing from Gardiners Road to Breens Road (or vice versa) only need to cross two lanes rather than the current four lanes, reducing the number of potential conflicts points from 32 to 24.
- The works are predominately road marking related and can be implemented quickly with minimal inconvenience to residents or users of Harewood Road.
- The pedestrian crossing areas are moved closer to the intersection where the desire line for pedestrians currently exists.

5.3.5 Option Disadvantages

- The pedestrian crossing is not signalised.
- Traffic crossing from Gardiners Road to Breens Road (or vice versa) are not provided with the protected movements that traffic signals provide.

5.4 Traffic Signals (Consultation Option 2)

5.4.1 Option Description: This option is the same as that shown in the consultation booklet and proposes traffic signals at the intersection.)

5.4.2 Option Advantages

- Pedestrians are provided signalised crossings on all four approaches to the intersection.
- Traffic is able to cross directly from Gardiners Road to Breens Road on a green signal phase.
5.4.3 Option Disadvantages

- This is the highest cost option proposed and will not address all the safety concerns at the intersection, therefore does not provide value for money.
- The traffic signals will cause delay to Harewood Road traffic, with traffic expected to backup to Crofton Road in the morning peak. The modelling shows that this will cause up to 10% of the Harewood Road traffic to rat run through the local network to avoid the delay.
- Traffic signals are four times more likely to result in a fatal or serious injury accident than the left in left out option.
- Traffic volumes are expected to increase by 30% on Breens Road in the evening peak. It is anticipated this will lead to an increase in accidents at Wairakei Road/Breens Road.
- The signalised pedestrian crossing proposed on Harewood Road is a filter turn meaning right turn vehicles could conflict with pedestrians. This is less safe than the preferred option.
- Given the low value for money calculation for this option, it is unlikely that NZTA will subsidise the costs.

5.5 Do Nothing

5.5.1 Option Description: This option leaves the intersection as it is currently.

5.5.2 Option Advantages

- Council does not need to spend any additional funds at the intersection.
- Doing nothing means the intersection does not jump the priority order established by the KiwiRap assessment.

5.5.3 Option Disadvantages

- There are no safety improvements for pedestrians and motorists using the intersection.
- Accidents are likely to continue to occur at the intersection due to the complexity of the layout.
- This option does not address significant community concerns.

Analysis Criteria

5.6 The options proposed have been assessed against the following criteria:

a. Safety for motorists, pedestrians and cyclists
b. Network and residential impacts
c. Cost to implement
d. Compatibility with future works

5.7 Safety was given the highest priority in deciding the preferred option and an independent assessment was commissioned from Abley Transportation Consultants to assess the safety of all the options discussed in this report. Their review is attached in Attachment B.
5.8 The network and residential impacts relates to the impact of the various options on the surrounding network and how much traffic would divert to other streets and at what times of the day this would occur.

Options Considerations

5.9 Although favoured by the community, traffic signals are not the safest option for intersections and have a higher probability of serious or fatal accidents occurring. Traffic signals would be four times more likely to have this outcome than the left in left out option proposed.

5.10 The current funding available is insufficient to construct the traffic signals option. If that option is preferred, works could not commence until funds are available.

5.11 The traffic signal option does not meet current NZTA funding criteria and is unlikely to receive NZTA subsidy.

6. Community Views and Preferences

6.1 Consultation with the community was undertaken in May. Council resolved specific requirements for the consultation material and the consultation booklet had a preferred option (Left in/Left Out) and an alternative option (Traffic Signals). Each option was detailed with advantages and disadvantages as per the Council resolution. (Refer Attachment C.)

6.2 The consultation analysis and submissions received are attached to this report (refer Attachment D). Also attached is the communications and media report that outlines the other communications that Council undertook to try and ensure the community was well informed of the project (refer Attachment E).

6.3 1085 submissions were received from the community with 199 (18%) preferring Option 1 Left In/ Left Out, 834 (77%) preferring Option 2 Traffic Signals and 52 (5%) preferring the intersection is left as is.

6.4 The key issues raised by submitters were:

**Option 1 Left in/left out with signalised pedestrian crossing**

- Support this option
  - Quickest solution to the problem and most cost-effective/ keeps the Harewood Road flow/gets the job done/least disruptive (40 comments)
  - Safer for pedestrians, especially school children (28 comments)
  - Need to make the U-turn bays longer so they are safer to use (22 comments)
- Against this option
  - Do not want to use the U-turn bays (especially outside Copenhagen Bakery) with long queues as they are dangerous – worse alternative to traffic lights (156 comments)
  - Traffic will short cut down the side streets – in particular Cotswold Avenue which will impact on Cotswold School (25 comments)
  - Closing the intersection would be an inconvenience to residents, further to travel to access their property, block school access, impact on community connectivity and the north/south traffic movement and reduce access to local facilities (37 comments)

**Option 2 Traffic Signals**

- Support this option
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- Safest and most efficient option/witnessed many near misses or had near misses/increase in traffic through this intersection from development in the wider area/avoid using this intersection (307 comments)
- Safety of pedestrians/children crossing the road (91 comments)
- Need right turning arrows (30 comments)
- Costs should not be put ahead of safety, money should be found and do it now (51 comments)
- Works well at Sawyers Arms/Gardiners and if they can go in there they can go in here/money was found for this project/good connection between intersections (51 comments)

- Against this option
  - Will increase safety risk at Breens/Wairakei (7 comments)
  - Traffic lights will slow traffic and cause congestion on Harewood Road (5 comments)
  - Will create shortcut on Gardiners Road/make it even busier (4 comments)

Comment was also received on two options that were not formally consulted on in 2019:

**Leave the intersection as is**
- Make Harewood Road single lane (5 comments)

**Roundabout Option**
- Have Council considered a roundabout (24 comments)

6.5 Some members of the community have questioned why Council had not implemented the scheme that was consulted on and approved by Council in August 2010. This proposal reduced Harewood Road to a single lane between Highsted Road and Crofton Road and installed cycle lanes and created a buffer zone against the existing median to use up the road space. The intersection at Harewood/Gardiners/Breens remained an uncontrolled intersection.

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

8. **Risks**
   8.1 The traffic signals option is unlikely to be eligible for New Zealand Transport Agency subsidy as the left in/left out options resolves the safety issues at a significantly lower cost. This will likely require the Council to fund 100% of the project cost with the associated rates impact.
   8.2 If Traffic Signals were the recommended option, funds would need to be requested in the Long Term Plan process to be able to fund the construction works.

9. **Next Steps**
   9.1 Under the Council resolutions, the Community Board recommendation will need to be considered by the Infrastructure, Transport and Environment Committee for final recommendation to Council.
## 10. Options Matrix

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Revised left in/left out with signalised pedestrian crossing</th>
<th>Harewood Road one lane</th>
<th>Traffic Signals</th>
<th>Do Nothing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost to Implement</td>
<td>$500,000</td>
<td>$200,000 estimate</td>
<td>$1.2million</td>
<td>$0</td>
</tr>
<tr>
<td>Maintenance/Ongoing</td>
<td>Maintenance costs are similar to the existing intersection once the project is implemented. There will be additional costs for electricity and maintenance of the signalised pedestrian crossing which would be approximately $5,000 per annum. This would need to be planned for in future Long Term Plans.</td>
<td>Maintenance costs are similar to the existing intersection once the project is implemented</td>
<td>Maintenance costs are similar to the existing intersection once the project is implemented. There would be minor changes due to the extra road marking associated with the traffic signals. The increased costs for the electricity and maintenance of the traffic signals would be approximately $7,500 per annum. This would need to be planned for in future Long Term Plans.</td>
<td>As no changes are made to the intersection with this option, maintenance costs are unchanged.</td>
</tr>
<tr>
<td>Funding Source</td>
<td>Council has allocated $300,000 to undertake the safety improvements. The shortfall in funding will need to be secured before the project can proceed to construction.</td>
<td>This could be funded from the budget allocated in the annual plan for the intersection improvements</td>
<td>Council has allocated $300,000 to undertake the safety improvements. The shortfall in funding will need to be secured before the project can proceed to construction.</td>
<td>n/a</td>
</tr>
<tr>
<td>Impact on Rates</td>
<td>Item 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This option is likely to be eligible for NZTA subsidy so Council would need to fund approximately 50% of the cost. The extra $0.2 million can be accounted for in current financial budgets so there would be no further impact on rates. The additional operating and maintenance costs would have a negligible impact on rates.</td>
<td>This option is unlikely to be eligible for NZTA subsidy so would need to be entirely funded by Council. Without substituting another funded project, the additional $0.9 million in borrowing would cause a 0.01% increase in rates. The added borrowing and rates impact would need to be budgeted for in a future annual planning process. The additional operating and maintenance costs would have a negligible impact on rates.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criteria 1 Climate Change Impacts</th>
<th>Item 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The CO2 emissions will increase slightly due to the traffic being periodically stopped for the signalised pedestrian crossing.</td>
<td>This option will have higher CO2 emissions as more cars are delayed by red lights. It also increases the number of vehicles that will rat run the local network to avoid the delay with approximately twice as many rat running as option 1.</td>
</tr>
<tr>
<td>There is no change from the existing CO2 emissions</td>
<td>There is no change from the existing CO2 emissions.</td>
</tr>
</tbody>
</table>
## Criteria 2 Safety Impacts

- **This option has the lowest risk for accidents**
- **This option is 30% safer than the existing intersection layout and three times as safe as the traffic signals**
- **This option is four times as likely to have serious of fatal injury accidents occur if traffic signals are installed.**
- **This option is a lower risk of serious and fatal injury accidents than option 2, but less safe than option 1.**

## Statutory Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Revised left in / left out with signalised pedestrian crossing</th>
<th>Harewood Road one lane</th>
<th>Traffic Signals</th>
<th>Do Nothing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on Mana Whenua</td>
<td>This option does not involve a significant decision in relation to ancestral land or a body of water or other intrinsic value. Therefore the decision does not specifically impact Ngai Tahu, their culture or traditions.</td>
<td>This option does not involve a significant decision in relation to ancestral land or a body of water or other intrinsic value. Therefore the decision does not specifically impact Ngai Tahu, their culture or traditions.</td>
<td>This option does not involve a significant decision in relation to ancestral land or a body of water or other intrinsic value. Therefore the decision does not specifically impact Ngai Tahu, their culture or traditions.</td>
<td>This option does not involve a significant decision in relation to ancestral land or a body of water or other intrinsic value. Therefore the decision does not specifically impact Ngai Tahu, their culture or traditions.</td>
</tr>
<tr>
<td>Alignment to Council Plans &amp; Policies</td>
<td>This option is consistent with Council policies and provides significant improvement to safety for vehicles, pedestrians and cyclists.</td>
<td>This option is consistent with Council policies and provides significant improvement to safety for vehicles, pedestrians and cyclists.</td>
<td>This option is the least safe of the options contained in the report, so may not address Council’s policies regarding accident reduction</td>
<td>This option provides no change to the existing intersection safety for vehicles, pedestrians and cyclists</td>
</tr>
<tr>
<td>Meet NZTA subsidy criteria</td>
<td>Yes</td>
<td>Yes</td>
<td>Unlikely</td>
<td>n/a</td>
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Attachments

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<td>A</td>
<td>revised left in / left out option</td>
<td>20</td>
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<td>B</td>
<td>Abley - CCC Breens-Gardiners-Harewood Safety Assessment Report (Final)</td>
<td>21</td>
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<td>C</td>
<td>Intersection Improvements_A4_Booklet_PRINT</td>
<td>43</td>
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<tr>
<td>D</td>
<td>Harewood Gardiners Breens consultation report</td>
<td>59</td>
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<tr>
<td>E</td>
<td>Harewood Gardiners Breens communications and media evaluation</td>
<td>72</td>
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</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>Author</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brendan Bisley - Senior Project Manager</td>
<td>Lynette Ellis - Manager Planning and Delivery Transport</td>
</tr>
<tr>
<td></td>
<td>Peter Langbein - Finance Business Partner</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>
Breens / Gardiners / Harewood Intersection: Safety Assessment of Improvement Options
Breeens / Gardiners / Harewood Intersection: Safety Assessment of Improvement Options

Christchurch City Council

Quality Assurance Information

Prepared for: Christchurch City Council
Job Number: CCC-J089
Prepared by: Paul Durdin, Transportation Group Manager
Reviewed by: Dale Harris, Safe Systems Manager

<table>
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<tr>
<th>Date issued</th>
<th>Status</th>
<th>Approved by</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 July 2019</td>
<td>Draft for client comment</td>
<td>Shane Turner, Technical Director</td>
</tr>
<tr>
<td>4 July 2019</td>
<td>Final</td>
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Executive Summary

The Christchurch City Council commissioned Abley Limited to undertake an independent safety assessment of options considered for the Breen's / Gardiners / Harewood intersection. The scope of the safety assessment was to assess the expected safety performance of the options, relative to the existing situation and to each other. The intention of the safety assessment was to assist CCC staff and elected members make an informed decision about the safety implications of each option.

The configuration of the existing intersection means decision making is complex. This complexity is demonstrated by:

- Very low through traffic movements between Breen's Road and Gardiners Road, suggestive of substantial traffic diversion to alternate routes;
- Motorists changing intentions (i.e. turning left onto Harewood Road instead of travelling straight) because of excessive stop line delays;
- Motorists accelerating quickly to take small gaps in traffic on Harewood Road, and
- Motorists over-compensating for perceived risk (risk compensation) by not taking adequate gaps in traffic.

Despite the complexity, the actual safety performance of the intersection is consistent with expected performance, with 3 reported injury crashes between 2014 and 2018. No serious injuries have been recorded from 9 injury crashes in the last 10-years, which is unusual given the predominance of side-impact crash movements. The risk profile of the intersection is Low-Medium Collective Risk and Medium Personal Risk, which means it would not be classified as a high-risk intersection and therefore by unlikely to attract safety improvement funding through the NLTP.

The crash history is dominated by collisions involving a vehicle attempted to travel across the intersection from Gardiners Road and colliding with a through vehicle on Harewood Road.

Observations of the crossing behaviour of some school children in the immediate vicinity of the intersection was especially concerning. Whilst there have been no reported incidents of crashes involving a pedestrian, the high-risk behaviour suggests this is unlikely to always be the case.

The following improvement options were assessed:

1) **Option 1** – Proposed left-in / left-out configuration, with right turn movement permitted to Gardiners Road and nearby signalised pedestrian crossing.

2) **Option 2** – Proposed signalisation of the existing intersection.

3) **Option 3** – Proposed conversion of Harewood Road a single lane in each direction.

Following the safety assessment, it was concluded that:

- **Option 1** is clearly the best option from a safety perspective in that it:
  - Has the lowest expected injury crash rate;
  - Has the least number of high-severity conflict points;
  - Has the lowest expected high-severity crash rate;
  - Eliminates the main crash problem at the intersection; and
  - Positively contributes to all key safety issues and considerations.

- **Option 2** addresses some of the key safety issues and considerations, but is not recommended for consideration in its current form from a safety perspective because:
  - The injury crash rate is expected to increase;
  - The number of high-severity conflict points will increase; and
  - The high-severity crash rate is expected to increase.

- **Option 3** is positive from a safety perspective but is not as effective as Option 1. The benefits of Option 3 are:
  - The number of high-severity conflict points will reduce;
  - The high-severity crash rate is expected to reduce; and
  - All but one of the key safety issues and considerations are addressed to a mildly positive extent.

---

Our Ref: Abley - CCCJ089 Safety Assessment Report v2
Issue Date: 5 July 2019
1. Introduction

1.1 Background

Safety at the Breens / Gardiners / Harewood intersection has concerned local residents for several years. While seeking feedback on the Long-Term Plan (2018-28), CCC received a number of requests for traffic signals at the intersection.

The Harewood Road Corridor Report was developed to look at the effect on Harewood Road of planned works in the first 10 years of the Long Term Plan.

Elected members requested Christchurch City Council (CCC) staff develop improvement options for the intersection. The following two options were selected by elected members for public consultation:

- Option 1 - Left In / Left Out with signalised pedestrian crossing
- Option 2 - Traffic Signals

The public consultation provided details on each of the options, the advantages and disadvantages of each, and impacts on the wider transport network. The consultation information notes the Long-Term Plan includes a Major Cycle Route ‘Wheels to Wings’, which is planned to connect Papanui and the Airport. Various routes for the cycleway were considered, with Harewood Road identified as preferred for directness and connectivity. This project is still subject to future consultation with the community.

1.2 Purpose

The CCC commissioned Abley Limited (Abley) to undertake an independent safety assessment of the two options included in the public consultation, as well as a third option that was approved by Council in August 2010 to convert Harewood Road to a single lane but was never progressed.

The scope of the safety assessment was to assess the expected safety performance of the options relative to the existing situation and to each other. The intention of the safety assessment was to assist CCC staff and elected members make an informed decision about the safety implications of each option. It is important to note that consideration of other effects that may be generated by the options, such as changes in traffic flows, mobility, access and health outcomes do not form part of this assessment, except where they have direct or indirect safety implications.
2. Existing Intersection

2.1 Locality

The Breens / Gardiners / Harewood intersection is located in the suburb of Bishopdale in the northwest of Christchurch, as shown in Figure 2.1.

![Figure 2.1 Location of the Breens / Gardiners / Harewood intersection](image)

2.2 Description

The Breens / Gardiners / Harewood intersection is configured as a priority-controlled crossroad intersection with priority given to road users travelling on Harewood Road. Both the Breens Road and Gardiners Road legs of the intersection are controlled with a Stop sign and road markings. The speed limit on all intersecting legs of the intersection is 50 km/h.

The Christchurch District Plan classifies Harewood Road as a Minor Arterial Road and Breens and Gardiners Road as Collector Roads.

Harewood Road is configured as a four-lane median-divided road. At the intersection, opposing right turn bays are provided within the median, as shown in Figure 2.2. This means traffic travelling across Harewood Road between Breens Road and Gardiners Road must cross five traffic lanes.
Breen's Road and Gardiners Road are both configured as two-way, two-lane roads. The head of the intersection is wide enough for left-turning traffic to wait at the Stop line, beside through and right turning traffic, as shown in Figure 2.3.

The most recent intersection traffic count was undertaken in August 2018. Peak traffic movements through the intersection were recorded between 4:30pm and 5:30pm, as shown in Figure 2.4.
A key observation from the data is the very low numbers of through and right-turn movements from both the Breens Road and Gardiners Road legs of the intersection.

### 2.3 Safety Performance

**Crash History**

All crashes reported by the police are recorded in the [NZ Transport Agency's Crash Analysis System (CAS)](https://www.nzta.govt.nz/). Crashes recorded at the intersection in the last 10-years (2009-2018) were extracted from CAS and analysed. The number of injury and non-injury crashes reported per year is shown in *Figure 2.5*.

Analysis of Figure 2.5 reveals the following:

- There is considerable variability in the number of crashes reported at the intersection each year.
- Non-injury crashes are more prevalent than injury crashes.
- The general trend is an increase in the number of non-injury crashes over time, but a decrease in the number of injury crashes.
- There have been three injury crashes in the past five years.

It is important to note that the three reported injury crashes were classified as ‘minor’. No crashes resulted in death or serious injury in the ten year analysis period.
Figure 2.5 Number of reported crashes per year

Of the 28 reported crashes in the between 2009 and 2018, 21 (70%) involved a vehicle attempting to travel across the intersection from either Breens Road or Gardiners Road and colliding with a through vehicle on Harewood Road (CAS Movement Code ‘HA’). The other seven crashes comprised single vehicles losing control and collisions between turning vehicles and through traffic. All nine injury crashes were CAS Movement Code HA.

Of the 21 HA crashes, 16 involved vehicles attempting to travel from Gardiners Road to Breens Road. All five HA crashes involving a vehicle travelling from Breens Road to Gardiners Road were non-injury.

Of the 16 HA crashes where the at-fault vehicle was travelling from Gardiners Road, 9 (56%) crashes were with vehicles heading northwest on Harewood Road i.e. collision with vehicles on the far side of the intersection, 6 involved vehicles heading southeast on Harewood Road, and one Police report diagram was unable to be retrieved from CAS.

The CAS Movement Code analysis indicates that direct travel from Gardiners Road to Breens Road is the primary historic crash problem at the intersection.

Reading of the police crash reports indicate that in most circumstances the at-fault driver (on Gardiners Road) made an error of judgement or mistake that lead to the collision.

**Risk Profile**

The NZ Transport Agency’s High-Risk Intersections Guide provides a technique for evaluating the relative safety performance on intersections throughout New Zealand. It employs a method that involves converting historic crash patterns to estimated death and serious casualty equivalents (estimated DSIs) if crash patterns continue in the future.

Applying the NZ Transport Agency’s High-Risk Intersections Guide method produces the following risk profile for the intersection:

- Collective Risk = Low-Medium
- Personal Risk = Medium
The intersection risk profile does not meet the criteria to be considered a high-risk intersection. This is important, as it means any proposed safety improvements are unlikely to receive funding through the National Land Transport Programme (NLTP).

**Expected Performance**

There are two NZ Transport Agency publications that can be used to estimate the expected safety performance of the intersection independent of historic crash data. The High-Risk Intersection Guide includes a method for estimating the expected number of injury crashes for different intersection forms based on a measure of traffic flow exposure. The Crash Estimate Compendium uses a similar method based on intersection form and traffic flows on major and minor legs of the intersection.

Both methods have been applied to the existing intersection configuration. The results are an estimated 1.7 and 2.8 injury crashes per 5-year period respectively – in other words 2 or 3 injury crashes per 5-year period, given we cannot observe a partial crash.

The 3 injury crashes at the intersection in the past 5-years indicates the intersection is performing as expected – noting that 2 of the injury crashes occurred in 2014 and will drop out of the 5-year period by the end of 2019.

Overall, the predictive analysis suggests the intersection is performing as expected based on its form and traffic flows.

The elimination of deaths and serious injuries is the primary objective of the Safe System approach to road safety, a founding principle of New Zealand’s Road Safety Strategy 2010-2020 Safer Journeys and most leading road safety countries globally. This is a paradigm shift in thinking from traditional road safety approaches where the focus was making incremental improvements to the road system to reduce crashes. The Safe System approach acknowledges that road users will continue to make mistakes, meaning road environments need to be designed and operated so that crash impact forces are managed within levels tolerable to the human body.

Austroads has published a practical method for analysing crash severity at intersections based on the change in velocity resulting from expected impact speeds and angles of collision for all conflict points. The method, known as the X-KEMM-X Method is described in detail in Austroads Research Report AP-R556-17 Understanding and Improving Safe System Intersection Performance.

Application of the X-KEMM-X method to this intersection reveals that 20 of the 32 vehicle/vehicle conflict points have a greater than 10% likelihood of producing a serious injury outcome. Overall, the average expected likelihood of a serious injury outcome across all 32 conflict points is 34%.

Multiplying the expected number of injury crashes by the average expected likelihood of a serious injury outcome can provide an indication of the inherent level of safety an intersection configuration provides for given traffic flow combinations. This is especially useful for comparing the relative level of safety of different intersection forms. For the existing intersection configuration, this comes out at 0.19 high severity crashes (including fatalities) per annum, or approximately 1 per 5 years.

As there were no serious injury crashes recorded at the intersection in the past 10-years, it is concluded that the intersection is performing better than expected in terms of high severity outcomes. That is not to say the intersection is safe or risk-free from any future high severity outcomes – rather it is more likely that historic crashes were less severe than the long-term expected average.

### 2.4 Operational Performance

An evaluation of the current operation of the intersection does not strictly form part of the safety assessment that was requested. However, based on two visits to the intersection to observe road user behaviour, some operational aspects were identified that are potential safety issues.

**School Children Crossing Harewood Road**

Several children from Breezes Intermediate were observed crossing Harewood Road in an unsafe manner away from identified safe school crossing points. The children appeared to be hurrying to get to a bus stop to head southeast along Harewood Road after school. As can be seen in Figure 2.6, children crossed from Breezes Road diagonally across Harewood Road in the direction of the bus stop. Some children walked, while others ran. On more than one occasion,

---

1 Using the higher of the two injury crash estimates.
motorists heading northwest on Harewood Road slowed and/or braked in response to the crossing behaviour. The crossing behaviour indicates that the existing safe school crossing point to the east of the intersection is not sufficiently attractive to entice many children from a more direct, but less safe travel path.

Figure 2.6 School children crossing Harewood Road away from safe school crossing points.

Further west along Harewood Road, the safe school crossing point was well utilised and captured most crossing movements. It also served as the preferred route for school children riding bikes to cross Harewood Road. That said, some risky behaviour was observed with children taking relatively small gaps in traffic. Again, motorists heading northwest on Harewood Road were observed slowing and/or braking in response to the crossing behaviour, as shown in Figure 2.7.

Figure 2.7 Motorists braking in response to school students taking a small gap in traffic
Whilst there have not been any reported crashes involving a pedestrian or cyclist at the intersection in the past 10 years, under-reporting rates for non-injury and minor injury crashes involving pedestrians and cyclists are high – meaning crashes may have occurred but have not been reported by police.

**Delay Induced Route Changes**

On several occasions, motorists intending to travel straight across the intersection or turn right out of Breeens Road or Gardiners Road, appeared to become frustrated by excessive delays and opted to turn left instead. A smaller number proceeded to complete the intended manoeuvre under heavier than normal acceleration. Whilst these behaviours are not necessarily safety issues, they indicate that some road users found the intersection difficult to negotiate.

Observations also suggest that the intersection form was at least as much a contributing factor to delays/frustrations as traffic flows on Harewood Road, as on many occasions sufficient gaps were available for manoeuvres to be performed safely, yet motorists chose not to accept such gaps or missed seeing the gap because of the complexity of the intersection.

There is a phenomenon known as **risk compensation**. It is a theory which suggests that people adjust their behaviour in response to the perceived level of risk, becoming more careful where they sense greater risk and less careful if they feel more protected. It is obvious that some risk compensation is occurring at this intersection.

The very low number of through movements across Harewood Road (refer Figure 2.4) shows that substantial volumes of traffic are likely to already be diverting away from the intersection and taking alternate routes. It is important to appreciate this when considering options that improve access across Harewood Road – as these can be expected to generate increased traffic movements.

One method to illustrate the complexity of the intersection is a conflict point diagram, as shown in Figure 2.8. The diagram shows there are 32 potential conflict points at the intersection for motorists alone (assuming turning vehicles turn legally into the near lane). Adding pedestrian movements creates a further 12 conflict points to the intersection. The fact that there are eight potential conflict points for traffic crossing Harewood Road directly highlights the complexity of the intersection for decision making.

![Figure 2.8 Conflict point analysis of existing intersection configuration](image)

**Double Stacking at Stop Line**

The delays encountered by traffic attempting to travel straight across the intersection or turn right out of Breeens Road or Gardiners Road means that most left turners will pull up to the stop line to the left of these vehicles. Whilst this behaviour seems intuitive, the position of the vehicle to the right means that left turning traffic typically nudges forward of the stop line to see traffic approaching from the right, as per Figure 2.7. As there are no marked cycle lanes on
Harewood Road, any vehicle waiting ahead of the stop line is effectively occupying the space that cyclists typically use. This can be particularly hazardous for cyclists in the following ways:

- The risk of immediate conflict with the left-turning vehicle; or
- The risk of conflict by a vehicle from behind following evasive action to avoid the left-turning vehicle.

**Dynamic Lane Obstructions**

Traffic attempting to turn from a side road may have their visibility obstructed to through traffic on the main road when a vehicle is slowing to undertake a turn on the main road at the same time a vehicle is contemplating turning from the side road. Depending on the relative positions of these two vehicles, it is possible that another vehicle on the main road travelling through the intersection is masked from the vehicle attempting to turn from the side road by the turning vehicle on the main road. This situation, known as a ‘dynamic lane obstruction’ can be a significant safety issue. On multi-lane roads, the likelihood of a dynamic lane obstruction increases markedly.

During the site visits, it was observed that some motorists started to move forward from the stop line while a vehicle was turning on the main road. Whilst no near misses were observed, it was easy to envisage a situation where a vehicle might move into a conflict position because a vehicle was completely masked from view by a turning vehicle.

### 2.5 Summary

The configuration of the existing intersection means decision making is complex. This complexity is demonstrated by:

- Very low through traffic movements between Breens Road and Gardiners Road, suggestive of substantial traffic diversion to alternate routes,
- Motorists changing intentions (i.e. turning left onto Harewood Road instead of travelling straight) because of excessive stop line delays,
- Motorists accelerating quickly to take small gaps in traffic on Harewood Road, and
- Motorists over-compensating for perceived risk (risk compensation) by not taking adequate gaps in traffic.

Despite this complexity, the actual safety performance of the intersection is consistent with expected performance, with 3 reported injury crashes between 2014 and 2018. No serious injuries have been recorded from the 9 injury crashes recorded in the last 10-years, which is unusual given the predominance of side-impact crash movements. The risk profile of the intersection is Low-Medium Collective Risk and Medium Personal Risk, which means it would not be classified as a high-risk intersection and therefore unlikely to attract safety improvement funding through the NLTP.

The crash history is dominated by collisions involving a vehicle attempted to travel across the intersection from Gardiners Road and colliding with a through vehicle on Harewood Road.

The crossing behaviour of some school children in the immediate vicinity of the intersection was especially concerning. Whilst there have been no reported incidents of crashes involving a pedestrian, the high-risk behaviour suggests this is unlikely to always be the case.
3. Options Assessment

As noted earlier, the CCC has requested that three options undergo a safety assessment. These are the two options put out for public consultation, plus an option approved by Council in August 2010 to convert Harewood Road to a single lane but was never progressed. For this purpose of this report, the options will be referred to as follows:

4) Option 1 – Proposed left-in / left-out configuration, with right turn movement permitted to Gardiners Road and nearby signalised pedestrian crossing.
5) Option 2 – Proposed signalisation of the existing intersection.
6) Option 3 – Proposed conversion of Harewood Road a single lane in each direction.

3.1 Option 1

Option 1 involves major alterations to the intersection, as follows:

- Restricting movements on the Breens Road and Gardiners Road legs to left turn only i.e. right turn and through movements are prohibited.
- Removing the right turn provision from Harewood Road to Breens Road.
- Reducing the number of through lanes on Harewood Road from two to one.
- Providing separate left-turn lanes on Harewood Road.
- Introducing on-road cycle lanes through the intersection on Harewood Road.
- Improving the U-turn slots in the central median by creating a dedicated right turn bay leading to these.
- Introducing a signalised pedestrian crossing on Harewood Road immediately west of the intersection.

The proposed layout of Option 1 is shown in Figure 3.1.

![Figure 3.1 Proposed layout of Option 1](image)

The relative complexity of Option 1 can be illustrated through a conflict point diagram, as shown in Figure 3.2. This shows that Option 1 has 4 vehicle / vehicle conflict points (compared with 32 for the existing intersection configuration) and 8 vehicle / pedestrian conflict points (assuming the safe school crossing point to the east of the intersection will be closed following the introduction of a signalised crossing). This diagram indicates the intersection would be much less complex and easier to negotiate.
Expected Safety Performance

The expected safety performance of Option 1 cannot be directly estimated using existing crash prediction models because it is a non-standard configuration. The approach taken for assessing the safety of this arrangement (and all other options) involves a combination of crash prediction modelling and the X-KEMM-X method.

The expected number of injury crashes at the intersection is calculated by treating the intersection as two priority-controlled T-intersections, with adjustments made to factor in turning movements that are not provided for. The expected number of injury crashes estimated using this method is 0.38 per annum, or 1.9 per 5-years. This is comparable to the existing intersection layout (an estimated 2.8 injury crashes per 5-years).

Application of the X-KEMM-X method to this intersection shows that 20 of the 32 vehicle/vehicle conflict points have a greater than 10% likelihood of producing a serious injury outcome. Overall, the average expected likelihood of a serious injury outcome across all 4 conflict points is 25% compared to 34% for the existing intersection.

Multiplying the expected number of injury crashes by the average expected likelihood of a serious injury outcome can provide an indication of the inherent level of safety an intersection configuration provides for given traffic flow combinations. For Option 1, this equals 0.10 high severity crashes (including fatalities) per annum, or approximately 1 per 10 years. This indicates Option 1 is approximately twice as safe as the existing intersection configuration (0.19 high severity crashes per annum).

Option 1 is approximately twice as safe as the existing intersection configuration.

Design Specific Analysis

As with any proposed option, there are pros and cons that need to be considered when making an informed decision about which option to proceed with. The pros and cons of Option 1 from a safety perspective are:

Pros

- Significant simplification of movements at the intersection.
- The signalised crossing of Harewood Road provides a safer crossing point for pedestrians and cyclists.
- The primary existing crash problem at the intersection is eliminated.
- There will be minimal traffic redistribution, as banned movements already have the lowest flows.
• More gaps will be created along Harewood Road either side of the signalised crossing point.

Cons

• The signalised crossing is very close to the intersection and may create issues for the left-turn movement from Breens Road.
• Traffic turning right from Harewood Road into Gardiners Road may be unaware whether traffic heading southeast on Harewood Road are facing a green or red signal.

3.2 Option 2

Option 2 involves full signalisation of the intersection, including pedestrian crosswalks on all four legs.

The proposed layout of Option 2 is shown in Figure 3.3.

As with the existing layout, the relative complexity of the intersection can be illustrated using a conflict point diagram, as shown in Figure 3.2. This shows that Option 2 retains the same number of vehicle / vehicle conflict points (32) as the existing intersection configuration and has 16 vehicle / pedestrian conflict points. The increased number of vehicle / pedestrian conflict points is due to the crosswalks traversing five lanes on Harewood Road (instead of four), and the formal separation of right turning traffic from through and left turning traffic on the Breens Road and Gardiners Road approaches.
**Expected Safety Performance**

The expected safety performance of Option 2 was estimated using a combination of crash prediction modelling and the X-KEMM-X Method.

The expected number of injury crashes at a signalised crossroads intersection with the existing traffic flows is 0.78 per annum, or 3.9 per 5-years. This is comparable to the existing intersection (an estimated 2.8 injury crashes per 5-years. That does not factor in the high probability of increased traffic volumes that will be induced by improved access along the Breens – Gardiners corridor across Harewood Road. If higher volumes did eventuate, then the expected number of injury crashes would be higher still, but only marginally given the form of the crash prediction model equation.

Applying the X-KEMM-X method to this intersection shows that 22 of the 32 vehicle/vehicle conflict points have a greater than 10% likelihood of producing a serious injury outcome. This is more than the existing intersection, as the impact speeds associated with collisions at a signalised intersection will be different for some movements. Overall, the average expected likelihood of a serious injury outcome across all 32 conflict points is 49% compared to 34% for the existing intersection. Again, this is due to the changed impact speeds expected and consequently a much greater change in velocity.

Multiplying the expected number of injury crashes by the average expected likelihood of a serious injury outcome can provide an indication of the inherent level of safety an intersection configuration provides for given traffic flow combinations. For Option 2, this equals 0.38 high severity crashes (including fatalities) per annum, or approximately 1 per 3 years. This indicates the existing intersection configuration (0.19 high severity crashes per annum) is twice as safe as Option 2. Option 2 is also four times less safe than Option 1.

**Design Specific Analysis**

As with any proposed option, there are pros and cons that need to be considered when making an informed decision about which option to proceed with. The pros and cons identified for Option 2 from a safety perspective are:

---

*The existing intersection configuration is twice as safe as Option 2, and Option 2 is four times less safe than Option 1.*
Pros

- Signalised crosswalks on all legs will improve pedestrian safety.
- The complexity of through movements between Breen and Gardiners is simplified significantly.
- The complexity of right turn movements from Breen and Gardiners is simplified (extent dependent on whether movement would be fully controlled by turn arrows).
- More gaps will be created along Harewood Road either side of the signalised intersection.
- Cyclists are provided for.

Cons

- There is an increased likelihood of injury crashes when a priority-controlled intersection is signalised.
- There is an increased risk of high-severity outcomes because the design does not incorporate Safe System principles.
- There is a high probability of an increase in traffic flows along Breen Road and Gardiners Road.

3.3 Option 3

Option 3 involves removing one traffic lane from Harewood Road in both directions but keeping the existing priority controls and turning movements at the intersection, as shown in Figure 3.1.

![Figure 3.1 Proposed layout of Option 3](image)

Figure 3.5 Proposed layout of Option 3

As with the current layout, the relative complexity of the intersection can be illustrated by using a conflict point diagram, as shown in Figure 3.6. This shows that Option 3 reduces the number of vehicle / vehicle conflict points from 32 to 24 and the number vehicle / pedestrian conflict points does not change. The reduced number of vehicle / vehicle conflict points is the result of removing one lane from Harewood Road in each direction. The number of pedestrian / vehicle conflict points does not change, even though there are two fewer through lanes on Harewood Road, because the crossing location is relocated to where the right turn and left turn lanes are fully developed.
Expected Safety Performance

The expected safety performance of this intersection arrangement was estimated using a combination of crash prediction modelling and the X-KEMM-X method.

The expected number of injury crashes at the priority-controlled crossroad intersection with the existing traffic flows is the same as the existing intersection i.e. 0.55 per annum, or 2.8 per 5-years. Option 3 has the same estimated number of injury crashes as the existing layout because the crash prediction models do not distinguish between intersections with one or two lanes in each direction on the main road.

Applying the X-KEMM-X method to this intersection shows that 12 of the 24 vehicle/vehicle conflict points have a greater than 10% likelihood of producing a serious injury outcome. This is eight fewer than the existing intersection, due to the removal of a higher speed through movement in both directions. Overall, the average expected likelihood of a serious injury outcome across all 24 conflict points is 24% compared to 34% for the existing intersection. Again, this is due to the removal of some higher speed conflict points.

Multiplying the expected number of injury crashes by the average expected likelihood of a serious injury outcome provides an indication of the inherent level of safety an intersection configuration provides for given traffic flow combinations. For Option 3, this equals 0.13 high severity crashes (including fatalities) per annum, or approximately 1 per 8 years. This indicates Option 3 is approximately 30% safer than the existing intersection configuration (0.19 high severity crashes per annum), three times safer than Option 1 and slightly less safe than Option 2.

Design Specific Analysis

As with any proposed option, there are pros and cons to be considered when making an informed decision about which option to proceed with. The pros and cons identified for Option 3 from a safety perspective are:

Pros

- Simplifies the complexity of the intersection.
- Makes crossing of Harewood Road easier for motorists.
- Provides a safer environment for cyclists and enables high quality separated facilities to be introduced.

Option 3 is approximately 30% safer than the existing intersection configuration, slightly less safe than Option 1, but three times safer than Option 2.
Cons

- The primary existing crash problem at the intersection is only partially addressed.
- The proposed pedestrian crossing facility is uncontrolled and located in close proximity to the intersection. It requires pedestrians to cross three traffic lanes and a cycle lane when moving between the kerb and median on one half of the crossing. Although this facility is better situated to capture pedestrian desire lines, having pedestrians cross an increased number of lanes including turning lanes is less safe than the existing midblock facility. This issue could be addressed by removing the proposed crossing facility and enhancing the existing crossing points with the introduction of kerb extensions.

3.4 Summary

A summary of the expected safety performance for all options is provided in Table 3.1

<table>
<thead>
<tr>
<th>Option</th>
<th>Expected Injury Crashes per annum</th>
<th>Number of High Severity Conflict Points</th>
<th>Expected High Severity Crashes per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>0.55</td>
<td>20</td>
<td>0.19</td>
</tr>
<tr>
<td>Option 1</td>
<td>0.38</td>
<td>3</td>
<td>0.10</td>
</tr>
<tr>
<td>Option 2</td>
<td>0.78</td>
<td>22</td>
<td>0.38</td>
</tr>
<tr>
<td>Option 3</td>
<td>0.55</td>
<td>12</td>
<td>0.13</td>
</tr>
<tr>
<td>Safest Option</td>
<td>Option 1</td>
<td>Option 1</td>
<td>Option 1</td>
</tr>
</tbody>
</table>

Table 3.1 clearly indicates that Option 1 is the safest option, followed by Option 3. Option 2 is less safe than the existing intersection configuration.

Option 2 was further evaluated to see the effect of adding a raised platform to the intersection to reduce potential impact speeds. This showed the safety performance of Option 2 would be similar to the existing intersection (20 high severity conflict points and 0.24 high-severity crashes per annum).

A subjective summary of the extent to which each option contributes to key safety issues and considerations at the intersection is provided in Table 3.2.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Preferred Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduces complexity of intersection</td>
<td>★★★★★</td>
<td>★★★★</td>
<td>★★★</td>
<td>Option 1</td>
</tr>
<tr>
<td>Addresses main crash problem</td>
<td>★★★★★</td>
<td>★★★★</td>
<td>★★★</td>
<td>Option 1</td>
</tr>
<tr>
<td>Improves pedestrian crossing safety</td>
<td>★★★★</td>
<td>★★★★</td>
<td>★★★</td>
<td>Option 2</td>
</tr>
<tr>
<td>Removes likelihood of high severity outcomes</td>
<td>★★★</td>
<td>★★★★</td>
<td>★★★</td>
<td>Option 1</td>
</tr>
<tr>
<td>Minimises wider network safety implications</td>
<td>★★★</td>
<td>★★★★</td>
<td>★★★</td>
<td>Option 1</td>
</tr>
</tbody>
</table>

Table 3.2 shows that Option 1 is consistently more effective in addressing key safety issues and considerations. Option 2 is effective in some respects but may actually increase the likelihood of high severity crash outcomes. Furthermore, Option 2 is expected to increase traffic volumes along the Breens – Gardiners corridor across Harewood Road. That is concerning because two serious injury crashes have been reported at the Gardiners / Sawyers Arms intersection since it was signalised. Option 3 contributes positively to most key safety issues and considerations, but to a much lesser extent.
than Option 1. Option 3 could improve pedestrian safety if the proposed crossing facility was located away from the intersection, so pedestrians do not have to cross turning lanes.

3.5 Conclusion

The following conclusions have been drawn from the safety assessment of options:

- **Option 1** is the best option from a safety perspective in that it:
  - Has the lowest expected injury crash rate;
  - Has the least number of high-severity conflict points;
  - Has the lowest expected high-severity crash rate;
  - Eliminates the main crash problem at the intersection; and
  - Positively contributes to all key safety issues and considerations.

- **Option 2** addresses some of the key safety issues and considerations well, but is not recommended for consideration in its current form from a safety perspective because:
  - The injury crash rate is expected to increase;
  - The number of high-severity conflict points will increase; and
  - The high-severity crash rate is expected to increase.

- **Option 3** is generally positive from a safety perspective but is not as effective as Option 1. The benefits of Option 3 are:
  - The number of high-severity conflict points will reduce;
  - The high-severity crash rate is expected to reduce; and
  - All but one of the key safety issues and considerations are addressed to a mildly positive extent.
HAVE YOUR SAY

Harewood Road, Gardiners Road, Breens Road intersection

We’re proposing two options for addressing and improving the safety of this intersection and we’d like to hear your views.

Consultation open until Monday 10 June 2019

ccc.govt.nz/haveyoursay
Harewood/Gardiners/Breens intersection

Safety at the intersection of Harewood, Gardiners and Breens roads has concerned local residents for several years. While seeking feedback on our Long Term Plan (2018-28), we received a number of requests for traffic signals at the intersection.

The Harewood Road Corridor Report was developed to look at the effect on Harewood Road of planned works in the first 10 years of the Long Term Plan.

Elected members requested staff develop improvement options for the intersection. We are now seeking your feedback on the two options selected by the elected members.

- Option 1 - Left In/Left Out with signalised pedestrian crossing
- Option 2 - Traffic Signals

As requested by Councillors, we have provided details on each of the options, the advantages and disadvantages of each, and impacts on the wider transport network.

In the Long Term Plan, a Major Cycle Route – Wheels to Wings – is planned to connect Paparua and the Airport. Various routes for the cycleway have been considered, with Harewood Road being identified as preferred for directness and connectivity. This project is still subject to future consultation with the community.

How we assess accident risk

This intersection was assessed using the NZTA Crash Analysis System (CAS) and KiwiRap, an analysis tool used to rank intersection safety across New Zealand. By using nationally accepted tools, this ensures consistency of assessments.

Not all accidents are reported to Police, especially if no one is injured. The analysis tools used take into account this under reporting of accidents.

Harewood Road has three significant intersections and two of these are ranked in the top 100 dangerous intersections for Christchurch. The Harewood Road/Greers Road intersection is ranked at 21 and the Harewood/Gardiners/Breens intersection at 61. Harewood/Greers has a higher ranking as it has had a serious injury accident in the last five years and a higher number of non-injury and minor injury accidents.

The Harewood/Gardiners/Breens intersection has had 17 reported accidents between 2008 and 2017. All have been non-injury or minor injury accidents. The accident analysis shows a pattern of similar types of crashes, and the solutions developed for this intersection aim to address these accident types.

Funding

Council has allocated $400,000 funding to undertake safety improvements at this intersection. Any option that exceeds this budget would need to be included for consideration as part of the next Long Term Plan and there is no guarantee that this project would be prioritised. It is likely that another existing project would need to be deferred or a rates increase would be needed to provide the additional budget required.

2 Harewood Road, Gardiners Road, Breens Road Intersection
Intersection site constraints and issues

The layout of the Harewood/Gardiners/Breens intersection has existing constraints that are affecting safety.

- Harewood Road has a central median with two lanes on either side.
- There is a right-turn lane which can make it difficult to turn right or to travel through the intersection using the ‘Give Way’ controls on Gardiners Road and Breens Road.
- There are known speed issues on Harewood Road, and it can be difficult for drivers turning left to see around other waiting vehicles.
- The intersection is not easy to navigate by car, cycle or on foot.
- The speed issue is partly caused as Harewood Road is designed for a 60km/h speed limit. The posted speed limit has been lowered to 50km/h, but the wide dual lanes create an environment that encourages higher speeds.
- There are no pedestrian crossings at the intersection, with pedestrians needing to walk about 60 metres along Harewood Road to cross safely. Most pedestrians try to cross at the intersection using the narrow median for the right-turn bays.
- Harewood Road has U-turn slots along its length, two of these are located about 160 metres either side of the intersection.

- Vehicles crossing the intersection from Gardiners Road to Breens Road, or vice versa, effectively need to cross six lanes (four vehicle lanes and the two right-turning lanes) which creates several potential collision points.
- Information about crashes at the intersection, obtained from Police reports, suggests that drivers become impatient while waiting for a suitable gap in the traffic and risk using a shorter gap than is required. Vehicles turning left are turning while unable to see around other queued vehicles travelling through the intersection. This results in some drivers taking a risk and not seeing vehicles approaching on Harewood Road.
- Some vehicles have been observed turning left, then using the U-turn slots further along Harewood Road as a quicker and safer way of getting through the intersection.
- With the planned changes to the wider road network over the next 10 years, traffic volumes are expected to drop, as Sawyers Arms Road will become a more attractive route to connect to the State Highway (Johns Road).
Proposed options

Two options for improving the intersection have been developed and are presented in this leaflet.

Option 1: Left in/left out with signalised pedestrian crossing

A left in/left out for vehicles, with buses still having the right turn into Gardiners Road, and a pedestrian crossing signal on Harewood Road.

Option 2: Traffic signals

Traffic signals with a pedestrian crossing on each leg of the crossing.

The left in/left out option is preferred as it is most likely to reduce accidents, with the least disruption to the wider network and construction can begin immediately with available funding.
Option 1: Left in/left out with signalised pedestrian crossing - preferred option (plan on pages 6-7)

To resolve the accidents that are seen occurring at the intersection, closing the median on Harewood Road is preferred. This will make both Gardiners Road and Breens Road a left turn in and left turn out. Vehicles travelling from Gardiners Road to Breens Road will need to use the U-turn slots already provided on Harewood Road.

Pedestrian signals would be installed at the intersection to allow people to safely cross Harewood Road. Vehicles on Harewood Road would be stopped only when pedestrians push the button to cross the road, minimising traffic delays.

A bus-only right-turn slot would remain on Harewood Road to allow buses to turn into Gardiners Road. The bus would activate the pedestrian signal through sensors under the road, to stop oncoming vehicles while the bus turns. The turning slot signals will not activate for other vehicles.

Advantages

1. Traffic conflicts are eliminated, making the intersection safer for turning vehicles.
2. The pedestrian crossing signals will provide a safe point for people to cross Harewood Road at the intersection. Traffic is stopped only while the crossing is in use. For students walking to Breens Intermediate School, the signals will be a significant safety improvement and may encourage more students to walk to and from school.
3. This option has an estimated cost of $400,000 to implement and will likely be eligible for a funding subsidy from the Government.
4. The left in/left out on Gardiners Road and Breens Road means a single lane approach to Harewood Road will be sufficient. This eliminates the problem of vehicles blocking the view for left-turning traffic, which has been implicated in some collisions at the intersection. This is within the current available funding and would also allow implementation within the next 12 months.
5. Access from Gardiners Road to Breens Road, or vice versa, is still possible by using the U-turn slots on Harewood Road. This is a manoeuvre already used by drivers looking for a safe place to cross.
6. The bus route from Harewood Road into Gardiners Road will remain.
7. There will be minimal disruption to traffic flow on Harewood Road.
8. Planting of trees and grass along the new median is included in the intersection redesign.
9. This option is compatible with future planned work along Harewood Road, including new cycleway infrastructure if Harewood Road is the chosen route.

Funding

This option has an estimated cost of $400,000 to implement and will likely be eligible for funding subsidy from the Government.

Disadvantages

1. Some traffic currently crossing at this intersection will use other nearby streets rather than the U-turn slots on Harewood Road. This has been modelled and the effect would be minor.
2. There will be a change to the community connectivity as a result of the median closure. Connectivity for pedestrians is improved, but connectivity for vehicles is reduced.
3. Some local trips which would have used this intersection may require the use of local streets.
Option 1: Left In/Left Out with signalised pedestrian crossing
See details on pages 4 and 5
Option 2: Traffic Signals
(plan on pages 10-11)

A number of submissions to the Council’s Long Term Plan 2018-28 requested traffic signals at the intersection. Traffic signals can be designed to fit within the existing road reserve. A separate right-turn lane, straight ahead lane, and shared straight ahead and left-turn lane would be created on Harewood Road. Separate right-turn lanes with a combined straight and left-turn lane would be installed on Gardiners Road and Breens Road.

If following future consultation, the Wheels to Wings Major Cycle Route is approved to travel down Harewood Road, a review of this configuration would need to be carried out. The shared left and straight ahead lane will likely need to be changed to a left-turn only lane, leaving only a single straight through lane which would increase traffic delays on Harewood Road.

All pedestrian crossing movements will operate at the same time as the turning movements from Gardiners Road and Breens Road or the left turns off Harewood Road, meaning pedestrians are not fully protected and will still need to watch for turning cars. Greers Road/Harewood Road, for example, has a high crash rate involving pedestrians using intersection signals.

With Harewood Road being a two-lane road, the right turns will require all other traffic to be delayed, further increasing congestion on Harewood Road.

The predicted cost of installing traffic signals is $1.2 million and would unlikely be eligible for Government subsidies.

Funding

There is no funding in the 2018-2028 Long Term Plan for Option 2 at $1.2 million, so money would need the agreement of full Council to be put in the budget at the loss of another planned project elsewhere in the city or a rates increase.
Advantages

1. Reduce delays on Breens Road and Gardiners Road for vehicles crossing Harewood Road.
2. The bus route from Harewood Road into Gardiners Road will remain.
3. Community connectivity remains.
4. The traffic signals provide improved pedestrian crossing facilities.

Disadvantages

1. Traffic signals do not prevent all accidents. Nose-to-tail collisions and right-turn versus straight ahead collisions are likely to still occur.
2. Traffic signals will cause delays on Harewood Road. Modelling indicates that traffic queues may extend to Crofton Road in the morning peak, making Harewood Road a less desirable route. To reduce the delays, land purchases would be required from properties at the intersection to add separate lanes for straight ahead and turning traffic.
3. Modelling indicates that congestion on Harewood Road would likely divert about 10 percent of the traffic to nearby streets to avoid the signals. This would affect several roads off Harewood Road.
4. Modelling predicts traffic volume on Breens Road would increase by 30 percent in the evening peak.
5. Increased traffic on Breens Road could have a knock-on effect on the Wairakei Road/Breens Road intersection, with more turning traffic increasing the risk of accidents at this intersection. Visibility at the Wairakei Road/Breens Road intersection is poor due to the road alignment from both directions. If the accident rate was to increase, future safety improvements would be required.
6. The route would become an attractive shortcut from the city's north, along Johns Road via Gardiners Road to Wairakei Road and beyond. Local residents would then likely face increased through traffic.
7. Pedestrians crossing at the traffic signals are at greater risk because of filter turns being needed to avoid excessive delays for other vehicle phases.

Filter turns are where turning vehicles are not stopped by a red arrow if the pedestrian crossing signal is activated

8. On-street parking would have to be removed on the Harewood Road, Gardiners Road and Breens Road approaches to the intersection, affecting approximately 14 properties.
9. Sufficient funding is not available in the current 2018-28 Long Term Plan. Installation of this option will be delayed until funding is available.

If this option was funded, safety improvements at other higher-risk intersections could be delayed by a number of years. Council currently has funding for safety improvements only at the top 20 intersections over the next 10 years. This would include delays to the Harewood Road/Greers Road intersection improvements.
Option 2: Traffic signals
See details on pages 8 and 9
How to give feedback

You can provide your feedback in a number of ways:

**Fill out the submission form at:**
ccc.govt.nz/haveyoursay

**Mail to:**
Postage is free (you don’t need a stamp), if you send your comments to:
Freepost 178
Attention: Ann Campbell
Harewood Road, Gardiners Road, Breeens Road Intersection
Public Information & Participation Unit
Christchurch City Council
PO Box 73016, Christchurch 8154

**Email:**
Send your feedback and any attachments to ann.campbell@ccc.govt.nz with ‘Harewood Road, Gardiners Road, Breeens Road Intersection’ in the subject line. Please make sure you include your full name and address with your submission.

**Deliver to:**
Civic Offices, 53 Hereford Street, or at drop-in sessions.

**Submissions must reach us before consultation closes on Monday 10 June 2019.**

**Information sessions**
Come talk to us about the proposal

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**Tuesday 21 May 2019**
5.30 – 7pm
(20min presentation followed by opportunity to speak to project team)
Breeens Intermediate School Hall,
85 Breeens Rd, Bishopdale

**Thursday 23 May 2019**
10.30am – 12pm
(20min presentation followed by opportunity to speak to project team)
Bishopdale Community Centre,
33 Bishopdale Court,
Bishopdale Shopping Centre
Have your say

Make sure your feedback gets to us by Monday 10 June 2019.

Save time and do it online ccc.govt.nz/haveyoursay

Please indicate your order of preference (1 being most preferred through to 3):

- Option 1: Left in/left out with signalised pedestrian crossing
- Option 2: Traffic signals
- Leave the intersection as is

Please provide any feedback on your preferred option for Harewood Road, Gardiners Road, Breens Road intersection below, and use additional paper if required.

14 Harewood Road, Gardiners Road, Breens Road Intersection
Drop-in session
Come talk to us about the proposal

Tuesday 21 May 2019
5.30 – 7pm
(20min presentation followed by opportunity to speak to project team)
Brenn Intermediate School Hall,
85 Brenn Rd, Bishopdale

Thursday 23 May 2019
10.30am – 12pm
(20min presentation followed by opportunity to speak to project team)
Bishopdale Community Centre,
13 Bishopdale Court,
Bishopdale Shopping Centre

Ann Campbell
Engagement Team
Harewood Road, Gardiners Road, Breens Road intersection
Consultation analysis

July 2019

Consultation on the Harewood Road, Gardiners Road, Breens Road intersection was open between Monday 6 May 2019 and Monday 10 June 2019.

We delivered the consultation document to 2760 properties and posted to 40 absentee landowners. An email was sent to 77 stakeholders and hard copies were also available at Civic Offices, Bishopdale, Fendalton and Papanui libraries and service centres.

Information was available throughout the consultation period on the Have Your Say web page. We also ran a Newsline story at the start and several Facebook posts throughout the consultation. A full communications and media report is attached.

We received 1085 submissions including feedback from the following organisations and businesses:

- New Zealand Automobile Association
- Go Cycle Christchurch
- Copenhagen Bakery
- Environment Canterbury
- Seventh Day Adventist Church
- Think Papanui
- Spokes Canterbury
- Willowbank Raspberries
- Bus Go Canterbury
- Cotswold School – Board of Trustees
- Waimack Snacks Ltd
- Survus Consultants
- My Favourite Things
- Sword Productions Ltd
- Christchurch International Airport Ltd
- Breens Intermediate School
Where our submitters are from

Option 1: Left in left out with signalised pedestrian crossing - ranking is 1 (184)
Option 2: Traffic signals - ranking is 1 (804)
Leave intersection as is - ranking is 1 (47)

Harewood, Gardiners, Greens Intersection

Bishopdale and northern area enlarged
The majority of submitters were from the wider Bishopdale area. There is a significant cluster of submitters from the Northwood/Belfast area also which suggests that there are a high number of travel movements through this intersection from the north.

A further breakdown of where submitters are from per option is attached at the end of this report.

**Overall feedback statistics**

We received 1085 submissions during the consultation. Submitters were asked to rank the following options in order of preference with 1 being the most preferred and 3 the least.

- **Option 1**  
  Left in/left out with signalised pedestrian crossing

- **Option 2**  
  Traffic signals

- **Leave the intersection as is**

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**Final results**

- **Option 1**  
  199 submissions (18%)

- **Option 2**  
  834 submissions (77%)

- **Leave as is**  
  52 submissions (5%)
Where written submissions had not indicated a preference, these were recorded as Option 3. A number of online submitters also indicated that they only preferred one option but the online form made all selection fields compulsory. Once we became aware of this, the system was changed on Wednesday 15 May 2019 to allow submitters to select one option.

The main themes raised during the consultation were:

**Option 1**  Left in/left out with signalised pedestrian crossing

**Support this option**

- Quickest solution to the problem and most cost-effective/ keeps the Harewood Road flow/gets the job done/least disruptive (*40 comments*)
- Safer for pedestrians, especially school children (*28 comments*)
- Need to make the u-turn bays longer so they are safer to use (*22 comments*)

A number of submitters saw this option as the quickest, most cost-effective and with minimal construction disruption. Feedback also acknowledged that the proposed signalised pedestrian crossing with this option would provide a high level of safety for pedestrians, especially children walking to school.

While submitters supported this option, there was also feedback that we needed to address the safety of the current u-turns bays. As they are now, traffic gets backed up causing bad manoeuvres by drivers. If this option was to go ahead, these u-turn bays would need to be extended to make them safer to use.

“Something needs to be done as in the last 13 years that i have lived here, the traffic increased expectionally when traffic lights were put in Sawyers Arms Road. This is why i do not want option 2 traffic lights, which will reduce the flow of Harewood Road & make Gardiners Road even busier than what it is already. Option 1 is the only option as cheapest for funding & can be started sooner”

(*Submission #23602*)
“Prefer option 1 only if the u-turn slots either side of the intersection are improved. Currently there is not enough space to wait for a gap when u turning without blocking the right lane of traffic with the rear of the vehicle unless your vehicle is very short. Blocking off the right lane will worsen if option 1 goes ahead without improving the u-turn slots, as I imagine a queue will form in busy periods. I suggest having small bays cut into the islands to allow traffic to wait out of the traffic flow at the u turn slots, and include it option 1.” (Submission #24247)

Against this option

- Do not want to use the u-turn bays (especially outside Copenhagen Bakery) with long queues as they are dangerous – worse alternative to traffic lights (156 comments)
- Traffic will short cut down the side streets – in particular Cotswold Avenue which will impact on Cotswold School (25 comments)
- Closing the intersection would be an inconvenience to residents, further to travel to access their property, block school access, impact on community connectivity and the north/south traffic movement and reduce access to local facilities (37 comments)

Many submitters saw this option as a less safe solution compared to traffic lights. Feedback also showed the local community saw this option as unsafe for both drivers and pedestrians.

We received a significant number of submissions regarding the existing u-turn bays on Harewood Road. Many residents who currently use these u-turn bays felt they were dangerous and had witnessed near misses or unsafe manoeuvres, especially outside Copenhagen Bakery. The long queues that can occur also block traffic travelling along Harewood Road and cause frustration for drivers travelling straight through. This was one of the main reasons for submitters not supporting Option 1 – it was seen as a worse alternative than traffic lights.

There was also concern with this option that drivers would short cut down side streets, causing increased traffic on Cotswold Avenue, past the school and preschool.

Many submitters felt that removing the ability to travel north to south would be a huge impact on community connectivity, and would be an inconvenience to residents accessing local facilities. It would also increase travel distance for some residents to their property.

“Option 1 left turning from Breens and Gardiners roads then using the U turn slots creates a problem. The median is 4.5m wide and my car, an average size sedan, is 5m long. Parts of the vehicle will protrude into either the east bound lane or the west bound lane. There are generally more than one vehicle wishing to make the turn so a bottleneck is made much worse. The road is already a bottleneck by the proposed reduction to one lane so traffic will be brought to a standstill until turners are cleared.” (Submission #25465)

“I believe traffic lights would be best. Only having a left turn option from Gardiners and Breens Rd will cause more cars to use Cotswold Avenue, a small residential street with a school and kindergarten on it. Increasing traffic outside a school is not a desirable outcome. We need to keep our kids safe and I would actually like a 40km zone implemented outside all school during start and finish times.” (Submission #24325)

“In option 1, by closing the median strip, the traffic flow from Breens Rd to Gardiners Rd & vice versus will be impeded & forced either to U-turn elsewhere or proceed down to the Bishopdale shops roundabout. This will either cause a back up of traffic at the roundabout or u turn area adjacent to
the Harewood Superette. It will also increase traffic flow along such roads as Crofton.” (Submission #24522)

Option 2  Traffic signals

Support this option

- Safest and most efficient option/witnessed many near misses or had near misses/increase in traffic through this intersection from development in the wider area/avoid using this intersection (307 comments)
- Safety of pedestrians/children crossing the road (91 comments)
- Need right turning arrows (30 comments)
- Costs should not be put ahead of safety, money should be found and do it now (51 comments)
- Works well at Sawyers Arms/Gardiners and if they can go in there they can go in here/money was found for this project/good connection between intersections (51 comments)

Option 2 was the preferred option by the majority of submitters (77%). Many of the submitters told us they had experienced near misses, minor crashes, or witnessed accidents at this intersection. There were also many submitters who avoid using the intersection, especially during peak hour traffic. Feedback also talked about the safety of children getting to and from school and having to cross Harewood Road. Submitters indicated the safety of children should be a very high priority and costs should not be put ahead of safety.

We received feedback from residents who have lived in this area for many years and have wanted safety improvements made at this intersection for some time. For many this was the installation of traffic signals. There was also feedback that if traffic lights were installed a right turn arrow would be necessary.

We also had several comments about how successful the lights at Sawyers Arms Road/Gardiners Road intersection are, and if money was found for that project then money should be found for this intersection.

“Lights will be much more obvious to drivers, cyclists and pedestrians who will be able to cross to schools in a much more safe environment. With lights there should not be any doubt as to who should move when. Thank you for this opportunity, we have been asking for this for so long that the longer it goes on the more expensive it becomes and the losers as usual are us rate payers and our children.” (Submission 24947)

“…. I have used it regularly for many years, and the sheer number of near misses I have observed that exhibit these patterns have been substantial. That there have been so few accidents is miraculous. The problem with the intersection is very largely one of having to cross Harewood Rd’s four lanes, even when the traffic is light. Four lanes of sparse traffic and a huge width to cross limits the number of safe crossing gaps dramatically, and frequently leads to lengthy queues of frustrated drivers attempting to cross Harewood Rd at this intersection and waiting for others to do so. This is another reason it seems to be avoided. Council just needs to survey users to gauge popular perceptions of its efficacy and safety and councillors will quickly be persuaded of a need to upgrade
it. Only traffic lights here would significantly improve the efficient and more equitable flow of traffic across the intersection and around the district, reducing the need for drivers to detour through smaller and quieter suburban streets. Of course lights are more expensive, but spending less would not materially fix the problem, but would just kick the can down the road for a future council to deal with at even higher cost. Nor would it provide local citizens with an intersection they currently try to avoid if at all possible. That is not how it should work." (Submission #25355)

“If they can put lights at Sawyers and Gardiners which is less busy with cars and minimal pedestrians then it should be done for this one. It’s for the safety of people and flow of traffic on a main thoroughfare and link between suburbs, city, motorway and the airport.” (Submission #24274)

Against this option

- Will increase safety risk at Breens/Wairakei (7 comments)
- Traffic lights will slow traffic and cause congestion on Harewood Road (5 comments)
- Will create shortcut on Gardiners Road/make it even busier (4 comments)

Feedback indicated that installing traffic lights would increase the safety risk at Wairakei Road/Breens Road intersection due to increased traffic. Comments also mentioned that installing signals would slow traffic and cause congestion on Harewood Road, especially during peak travel.

Other residents were concerned that Gardiners Road would become even busier than it is now.

“As a home owner on Breens Road I use this intersection regularly. It can be hard to cross from breens to gardiners at busier times if users do not obey road rules and become impatient. Other times it is not an unsafe intersection, which is the majority of the time. I am against traffic lights as I do not think they are needed for this intersection, and it will slow down traffic on Harewood Road.

It will also push more traffic from the newer subdivisions, ie highfield and northwood, into breens Road as these users take short cuts across these roads to avoid Johns Rd. More traffic on Breens Road will increase the safety risk at the wakarei breens road intersection, which itself is a dangerous intersection to exit and a difficult one for school age children to cross, even using the pedestrian island available.” (Submission #23736)

“As a resident of Gardiners Road I dont want lights at the intersection. I feel this will create a path for vehicles to take short cuts down Gardiners Road at peak times. I have seen this with Trucks before.” (Submission #23612)

Leave the intersection as is

- Make Harewood Road single lane (5 comments)

Some submitters suggested leaving the intersection as it is and single laning Harewood Road.

“One-laning Harewood Road in both directions as an initial step would:

(1) make it safer/easier for road users on Gardiners/Breens to drive across, or turn right onto,
Harewood Road

(2) maintain all turns and through traffic as per the existing configuration

(3) be safer for pedestrians crossing Harewood Rd (safer than status quo, potentially safer than Option 2)

(4) be compatible with the future Wheels to Wings cycleway

(5) address the key concern raised in the Harewood Road Corridor Study - high vehicle speeds on Harewood Road due to the road having double the vehicle capacity than what is required.

(6) retain the option to implement traffic lights or the median barrier & left in/out configuration at Harewood/Gardiners/Breezes, should such options still need to be considered following the one-laning of the road.” (Submission #25322)

Roundabout suggestion

We received a number of submissions about the possibility of a roundabout at the intersection rather than the two options presented.

- Have we considered a roundabout (24 comments)

“I have lived in this area for 50 years, fully aware the dangers of this intersection for motorists & pedestrians.

A well designed roundabout would slow traffic on Harewood Road East & West.”(Submission #24572)

Drop-in sessions

We held two drop-in sessions, with approximately 60 people attending each. The project team presented an overview of the two proposed options, followed by the opportunity for the community to speak directly to one of our technical team. All feedback was recorded and has been considered by the team. Feedback is provided below from the technical team.

Tuesday 21 May 2019

Table 1

Comments repeated from the other feedback already mentioned:

- Didn’t want additional trees in the median (dropping leaves etc)
- Thought a cycle/pedestrian crossing further back up Gardiners Road with a shared path would be good for Option 1 as it’s hard to cross right at Harewood Road due to vehicles constantly moving forwards at a slow pace, rather than fully stopping.
- A few people thought reducing the number of traffic lanes on Harewood Road would make the intersection safer
- A comment about all the cul-de-sacs giving few alternatives for locals to access the area with Option 1
- A mention of propaganda in the booklet around all the negatives for Option 2
- The need to look at the whole of Harewood Road, not just one intersection (told them corridor study done, see community board agenda)

Other comments:

- The U-turn bays are inadequate in size for vehicles to be fully out of the way of following vehicles, and also won’t fit the volume of traffic that would be diverted from Option 1 – there’s space needed for several vehicles. One submitter suggested that parking would need to be removed around them, which they were happy with.
- Concerns about people stopping in the lane waiting to get into a parking space at Copenhagen Bakery blocking traffic, creating a risk of rear-end crashes. Would need to be considered in U-turn bay improvements.
- People will still turn right into Gardiners Road through the bus lane.
- Some people questioned why the right turns needed to be banned off Harewood Road, and suggested they could be kept (this would probably solve a lot of the cul-de-sac access complaints).
- Would like more direct cycle and pedestrian connections and better crossings to get to the signalised crossing in Option 1. One submitter was keen to have another crossing over Harewood Road east of Gardiners/Breens.
- Some people felt the staggered crossings in both options offered a poor experience for pedestrians as they are indirect and more difficult to negotiate with children etc.
- Some people felt that putting signals in at the Sawyers Arms/Gardiners Road intersection meant it was logical to put signals at Gardiners/Breens/Harewood intersection.
- Comment that there aren’t other good north-south routes in the area.
- Agreement from several people who cycle in the area, that the signals at Greers Road aren’t safe.
- Comment that Option 2 is all about cars, and that Option 1 is more suited for where transport needs to be going.
- Someone said that it’s not true that Harewood Road used to be a 60 km/h zone and that the four lane section has been signposted at 50 km/h for the 20 years they’ve been living there.

Table 2

My group had the following:

- They were asking about why the traffic signals had a larger impact on the local community and what those impacts were.
- They were saying there were limited alternative routes due to the number of cul-de-sac’s so residents would need to rat-run.
- No one seemed to want any additional trees in the median.
- They were concerned about access for emergency vehicles. I explained we send emergency services the consultation material and get their feedback, which the residents were happy with.
- A resident was passing on a comment from her neighbour who had children, saying that the signals in Option 1 were great, but we need safe crossing points on Gardiners Road, further away from the intersection, to allow school kids to safely cross before they get to
the intersection. As a parent she would not be keen on her kids crossing at the
intersection.
- I was asked a number of queries about the funding availability.
- One resident wanted to know why we hadn't mentioned that Council had already resolved
to make Harewood one lane and install cycle lanes prior to the earthquakes. She thought
this would resolve most of the issues at the intersection.
- I did have one lady thank us for the evening and the way we ran it and she thought the
structure was great to allow everyone to get their questions answered.

Table 3

My table commented that:

- If we go for Option 1, can we do so initially on a temporary basis (e.g. with cones) to see
  how it goes.
- One resident who lives close to the intersection on Gardiners Road, was interested in the
  no stopping outside her house.
- How do cyclists negotiate Option 1 to turn right.
- Perception that Gardiners / Breeens is a ‘main road’ and that Harewood Road is a
  ‘motorway’ and therefore traffic signals are the ‘obvious answer’.
- Option 1 won’t slow traffic, whereas traffic signals would.
- More trees (as indicated in Option 1) will create a maintenance problem with leaves
- The ‘pros and cons’ in Brendan’s presentation were bias, and should have included speed
  management as a ‘pro’ for Option 2
- Lack of alternative route choices to support effects of Option 1
- Feeling that ‘we don’t know the area’
- Consequences for level of service at Harewood Road/ Nunweek Boulevard intersection (i.e.
  feelings of creating problems elsewhere).
- A lot of talk about the ‘bigger picture’, including forecast decreases on Harewood Road
  over the coming ten year plan period - largely due to providing capacity on Sawyers Arms –
  Northcote corridor. One resident asked us why we were talking about
Harewood/Gardiners/Breeens intersection and not focussing on Sawyers Arms Road
schemes
- One of the most affected residents stated that she liked the table discussion format, as it
gave her a chance to ask questions that she otherwise wouldn’t have.

Additional feedback already noted:

- The existing U-turn pockets are unsafe and require improvement and should have been
  presented with Option 1 showing the on-street parking removal. Pockets will need to
cater for trucks, vehicles towing, and more than one vehicle stacking.
- Cycle connection along Breeens – Gardiners, this will require crossing Breeens and Gardiners
to access the mid-block signals -how will this been achieved? A gentleman in a wheelchair
asked this as he rides a recumbent style bike.
- Reduce Harewood from four to two lanes and mark a cycle lane.

Table 4

Key points that were covered several times were:
- U turn pockets – this is a significant issue for Option 1 if they cannot perform adequately. Should have been shown on drawings.
- Gardiners Road and Crofton Road have had recent increases in traffic due to the Johns Road four laning and off-ramp into Gardiners – mainly heading towards Tait/William Pickering Drive area (do our traffic counts on Gardiners Road include the Johns Road updated layout)?
- Motorists will turn right onto Gardiners Road at bus only lane
- If intersection safety ranking is so low on the list, why are we wasting time consulting on options?
- What ever happened to reducing 4 lanes to 2 lanes that was consulted on about 10 years ago?
- Extent of no-stopping for signals appears excessive on Gardiners Road.
- Luckily I did know the area – I was asked where I lived, do I drive this area etc.

Thursday 23 May 2019

Table 1

A few of the same issues as last time, and a couple of new ones

- Why can’t we do Option 1 temporarily (e.g. with cones) to see how it goes?
- Non-public transport vehicles will turn right under Option 1, and how do we enforce this?
- What happens to bus turning bay if bus route is changed?
- Rat running – local roads are narrow, especially Cardome Street
- When is Sawyers Arms Road going to be maintained? It already carries a lot of traffic.
- When are the intersections of Northcote Road / Sawyers Arms Road / Greers Road and Harewood Road/ Greers Road being fixed?
- Don’t like the speed humps in Option 1 (on the Breens Road side), in either direction.
- Why are we signalising the crossing? No pedestrians. Alignment of existing crossings are fine.
- Why don’t we scrap both ideas and just fix Harewood Road?
- All the schemes are only for pedestrians / cyclists and no one cycles on Harewood Road.
- When is State Highway 1 / Sawyers Arms Road roundabout being upgraded?
- Don’t like the additional traffic on intersection of Wairakei Road / Breens Road.
- U-turn slots: need to ensure adequate management of vehicle conflicts.

Table 2

Key points from my table:

- Crofton Road is used as a rat-run, trucks are noticed. Estimated speeds are 70km/h on this narrow road (appears to be 9m kerb to kerb) especially when vehicles are parked on either side of the road. It’s currently difficult to exit driveway due to volume and speed of vehicles.
- Left turn from Crofton on to Harewood is difficult due to the development from one to two lanes occurring through the intersection. This was changed, it used to be one lane through the intersection with a dedicated left turn from Crofton Road creating the second lane.
- Existing U-turn capacity and safety issue at Copenhagen Bakery. The bays require improvement now and removal of trees to achieve this.
- Will the Wheels to Wings Major Cycle Route require both options to be removed? Why are different cycle provisions shown in the options? I noted both options are compatible with the cycle route, however vehicle performance with Option 1 is worse, e.g. consider left turn red arrows.
- Why not reduce Harewood Road from four to two lanes now? This will reduce speeds, enable better U-turn facilities and provide for cyclists.
- Remove central median and provide light rail from airport to Papanui Station.
- Why will only 30 seconds be given to the Harewood Road traffic light phase, is this what happens at Sawyers Arms? If not, this should not be a disadvantage of Option 2. I confirmed the phase length varies by traffic demand depending on the time of day, but overall the Harewood Road performance is worse for Option 2 than 1.
- Use a policeman on point duty during peak periods – think outside the box!
- Many people thanked me for our time answering questions. Some asked if there should be a 15 minute session at end for a town hall style discussion.

**Table 3**

*Key themes from me:*

- Using the U-turn pockets is difficult as you need to merge across the faster inside lane, use the inadequately sized U-turn pockets, then merge back across the other lanes to turn left.
- Questions why both right-turns off Harewood Road couldn’t be provided. A number of people would have been happy with Option 1 if it retained the right turn into Gardiners Road.
- People questioned the cost estimates, and suggested that the cost of Option 2 had been inflated.
- Concerns about additional traffic down Cotswold Avenue – already has rat-running issues, with no traffic calming.
- Lots of questions around how the signals would work, including a few around if there would be protected turns coming out of Gardiners and Breezes (the answer is no).
- Plenty of questions around why the crossing stagger is the way it is and why the speed humps on Gardiners Road and Breezes Road etc – they’re not necessarily opposed to either.
- Someone suggested that a policeman at the intersection during peak times would be a cheaper way to solve the problem.
Summary of changes to the preferred option (Option 1) as a result of feedback received

The key changes are:

1. All vehicles can turn right from Harewood Road into Gardiners Road.
2. Harewood Road from Crofton Road to outside #390 Harewood Road will be a single lane to accommodate improved stacking areas at the U-turn slots.
3. Cycle lanes will be provided in the same area.
4. The U-turn slots are altered to allow sufficient space for vehicles to be clear of the straight through traffic lane.
5. On-street parking is removed outside #404 Harewood Road to #421 Harewood Road to accommodate the changes for the U-turn slot and to improve safety outside Copenhagen Bakery.
Communications and media report: Harewood-Gardiners-Breens

July 2019
Key communications objectives

- To ensure all communications “tell the story” so the community are well informed of the “WHY” we are presenting a preferred option that is different from what the community has asked for and what was an election “promise”. We need to ensure that all the safety and cost implications are well communicated and that the community are in a position to make a well informed submission.

- Balanced media coverage of the project through mainstream media channels.

Communications tactics

- Social media posts
- Newsline story
- Call centre briefing
- FAQs for media team and call centre
- Internal comms
Social media – Facebook post breakdown

Where: Council main page
Reach: 22,505
Likes/Comments/Shares: 232
Link clicks: 978
Boost: $50

Where: Bishopdale Community Group
Reach: N/A
Likes/Comments/Shares: 68
Link clicks: N/A

Where: Bishopdale Community Group
Reach: N/A
Likes/Comments/Shares: 49
Link clicks: N/A
Votes: 242
Facebook post breakdown

Where: Bishopdale Community Group
Reach: N/A
Likes/Comments/Shares: 3
Link clicks: N/A

Where: Bishopdale Community Group
Reach: N/A
Likes/Comments/Shares: 18
Link clicks: N/A
Facebook post breakdown (external parties)

**Aaron Keown Councillor for Harewood**

Huge news Harewood...the consultation for traffic lights at Harewood/Breens/Gardiners intersection officially opens Monday and runs for a month. Please get as many to submit as you can. The council preferred option is to cut off Harewood RPL! You can do it online or I can drop you a physical copy.

**Breen's Intermediate School**

The Christchurch City Council have come up with a couple of options to improve safety at the Breen's/Harewood/Gardiners Road intersection. Read this Newsline story and tell them what you think: bit.ly/2ZWj1aO

There will also be a public consultation meeting run by the CCC in our school hall on Tuesday 21 May at 5.30pm

**Think Papainui**

17 June at 17.47

This week’s Nor’West News reports that the majority of submissions on the Council’s proposals for the Harewood/Gardiners/Breens intersection support the installation of traffic lights. Staff are still analysing submissions, and will prepare a report for the Waimāero/Fendalton-Waimairi-Harewood Community Board, which in turn will make a recommendation to the Council. The full digital version of the newspaper is available at: https://www.yumpu.com/.../62700702/norwest-news-june-18-2019

**CcG-GOV/TNZ**

Feedback wanted on Harewood intersection safety improvements

15 2 comments
Neighbourly Posts (no likes, three comments)

**Harewood intersection consultation** 71 days ago
The Team from Christchurch City Council
Community feedback is being sought on two options for improving the safety of a busy intersection in Harewood.
For several years local residents have been raising concerns about the safety at the intersection of Harewood, Gardiners and Breens roads.
We are now looking at two options for improving... View more

**Harewood-Gardiners-Breens: Drop in session** 56 days ago
The Team from Christchurch City Council
Do you have a question about the proposal for the Harewood-Gardiners-Breens intersection? The project team will be making a presentation tonight at Breens Intermediate School Hall from 5:30-7pm and at the Bishopdale Community Centre on Thursday between 10:30am-12pm.
Make a submission online if you... View more
Social media feedback

There was a high level of engagement on our Facebook channels regarding the Harewood-Gardiners-Breenes consultation. The intersection is located within an established community with a typically older demographic.

Marketing budget $50 for one Facebook boosted post.

Tactics

- We used boosting and geographic targeting (Bishopdale) to make posts relevant to our target audience.
- Used different imagery to attract the attention of users.
- The interactive poll was popular as users are familiar with this interaction through other channels (e.g. Stuff) and it provides an informal, fun way for people to engage.
- We pointed people to the Have your Say consultation link when they shared their opinions on the social media posts.

Analysis

To the right are some examples of common themes. A large portion of the comments favoured the installation of traffic lights. Questions from residents around the consultation process, and the reasons behind the two options, were promptly answered.
## Website Views

<table>
<thead>
<tr>
<th>Content</th>
<th>Website Views</th>
<th>Facebook Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have your Say consultation page</td>
<td>3,912</td>
<td>1,442 (37%)</td>
</tr>
<tr>
<td>Newsline story (start of consultation)</td>
<td>1,591</td>
<td>1,144 (72%)</td>
</tr>
<tr>
<td>Totals</td>
<td>5,503</td>
<td>2,586 (47%)</td>
</tr>
</tbody>
</table>
Media coverage (all Nor’West News)

Feedback sought on intersection safety upgrades

By Jess Gibson

IT IS your chance to have a say on upgrades to the contentious Linwood, Harewood and Gardeners Rds intersection. The city council has proposed two options to address and improve safety at the intersection. Option one, which is the city council’s preferred option, is to make both Gardiners and Briscoe Rds a left-turn in and left-turn out only by closing the median on Harewood Rd. This would mean vehicles travelling from Gardiners Rd to Briscoe Rd would need to use the U-turn bay already provided on Harewood Rd. This option also proposes the installation of a pedestrian crossing, which would only stop vehicles when it is in use. A bus-only right-turn bay will remain on Harewood Rd to allow buses to turn into Gardiners Rd. Option two is to install traffic lights at the intersection. City councillor Aaron Kenown and has been campaigning to have traffic lights installed at the intersection for three years. Mr Kenown said the city council’s preferred option would introduce major issues as it would cut off Harewood Rd and force people to drive around the block or make U-turns. He said the Fendalton-Waimairi-Harewood Community Board will support traffic lights “in support of what the people want.” The city council will hold two public information sessions which will start with a presentation, followed by the opportunity to speak to the project team. The first session will be held at the Intermediate School Hall at 85 Briscoe Road, Harewood on May 25 from 5.30pm. The second session will be held at the Middlemore Community Centre on May 23 from 6pm. Public feedback will be open on the city council website until June 9.

Tuesday 7 May page 5

Public vocal about options for contentious intersection

Meetings to discuss intersection

by Jess Gibson

The city council has an estimated $5 million to spend on the intersection and the city council has stated it will likely be eligible for funding from the Government. The proposed cost of installing two sets of traffic lights is $3.5 million and would likely be eligible for Government subsidies. But city councillor Aaron Kenown said the budget is “not really comparable.” Mr Kenown has been campaigning to have traffic lights installed at the intersection for three years. He said the preferred option would introduce major issues as it would cut off Harewood Rd and force people to drive around the block or make U-turns. But city council is putting the issue of new traffic lights into context. Mr Kenown said: “You can’t just say we can’t afford it when there are more than four times as many traffic lights.” City councillor Paul Cooervas said he had a view that there should be some traffic lights in Christchurch which could be taken into account when considering traffic light installation. It’s extremely important that we do our job to the highest possible standard, said Mr Cooervas. Meanwhile, the city council will hold two public information sessions, followed by an opportunity to speak to the project team. The first session will be held at the Intermediate School Hall at 85 Briscoe Road, Harewood on May 25 from 5.30pm. The second session will be held at the Middlemore Community Centre on May 23 from 6pm.

Tuesday 14 May pages 1 and 4

Attachment E

Item 5
Media coverage

intersection sessions leave residents ‘frustrated’

By Jesse Gibson

RESIDENTS WHO live near the controversial Harewood, Breens and Gardiner’s Rds intersection have called drop-in sessions “a waste of time.”

Sessions were held last Tuesday at Breens Intermediate and Thursday at Bishopdale Community Centre for residents to learn more about two options to improve safety at the intersection.

Option one, which is the city council’s preferred choice, is to make Gardiner’s and Breens Rds left-turn in and left-turn out only by closing the median on Harewood Rd. Option two is to install traffic lights at the intersection.

Since consultation opened on May 6, the city council has received 662 submissions from the public.

Residents were told at the beginning of Thursday’s drop-in session they would need to wait until after the presentation to ask questions in four small groups, with one member of the project team at each table.

Turn to page 7

Tuesday 28 May pages 1 and 7

Tuesday 4 June page 5

Large amount of feedback on controversial intersection

BY JESSIE GILSON

WITH JUST under a week left to make a submission, the Harewood, Breens and Gardiner’s Rds intersection has already gained more feedback than most issues over the past 12 months.

On Friday, the city council had received 808 submissions on two options to improve safety at the intersection.

This is the second highest number of submissions received during public consultation over the last year. The highest was for the Akaroa Community Health Trust targeted rate proposal, which gained 863 submissions from February 25 to March 27.

Option one, which is the city council’s preferred choice, is to make Gardiner’s and Breens Rds left-turn in and left-turn out only, by closing the median on Harewood Rd. Option two is to install traffic lights at the intersection.

Consultation has been open for three weeks. The closing date for submissions is June 16.

The intersection proposal has also overlapped the 798 submissions received on the review of speed limits in the southern central city from August 14 to September 4.

It also passed the 167 submissions received between January 25 and April 3 on the South Express Major Cycle Route.

City councillor Aaron Keown, who has been campaigning for traffic lights at the intersection for three years, held a public meeting to discuss the proposal at the Bishopdale Library on Thursday.

About 80 residents attended, along with Fendalton-Waimairi-Harewood Community Board representative Linda Chen and Aaron Campbell, as well as board candidates Scott Francom and Jason Middlemiss, who are set to run in October’s local body elections. City council staff did not attend the meeting.

It was arranged and paid for by Mr Keown after some residents said they were dissatisfied with the city council’s drop-in sessions on the proposal.

Mr Keown made a presentation on the proposal and then opened the floor up for questions.

To have your say on the Harewood, Breens and Gardiner’s Rds intersection, visit https://ccc.govt.nz/the-council/consultations-and-submissions/haveyoursay/
Media coverage

Funding shortfall if intersection lights are approved

By Josc Gibson

MORE THAN half of the 150 submissions on the Harewood, Breens and Gardiners junction corridor for $1.2 million traffic lights.

But if this option is approved, the council will need to find $490,000 to fund it.

A proposal on two options to upgrade safety at the intersection brought in the highest amount of feedback from 20 May to June 30 of all the city council’s consultations in the last 12 months.

Head of transport Richard Osborne said staff are in the process of analysing the submissions for the Harewood, Breens and Gardiners Rd intersection but confirmed the majority supported the installation of traffic lights.

The other option, which is the council’s preferred option, is to make both Gardners Rd and Breens Rd left turns in and left turn only, and installing a traffic light-controlled pedestrian crossing —which would cost $400,000.

*Turn to page 4

Tuesday 18 June, pages 1 and 5
Summary

This campaign had high resident engagement across all communications channels which was reflected in the submission numbers and attendance at the drop in sessions. All communications, including Newsline, internal communications and key messages explained why we were presenting the preferred option. Councillor Keown received intensive media coverage from Norwest News promoting his preferred option of traffic lights. However all stories mentioned that there were two options out for consultation. We ended up not running our last planned social media post because the number of submissions we had was already very high so it didn't need additional promotion. Awareness of the consultation and drop in sessions was well communicated and promoted.