

Southern airport access

We received feedback from the Christchurch International Airport Limited, the Christchurch City Council, emergency organisations, businesses and the general public voicing concerns about reduced access to the airport with the closure of Avonhead Road and the changes at Wairakei Road. For this reason and the expected increase in industry around the airport we are planning a third access point to the airport south of Avonhead Road.

As well as providing additional access to the airport, the southern airport access will mean heavy vehicles servicing the business and cargo areas of the airport will be separated from the light vehicles using the passenger terminals of the airport.

Initially, access to Dakota Park will be developed for left-in movements as part of the four-laning works through to Avonhead Road. The final grade separated southern airport access will be completed following the required consenting and property purchase process.

We expect the consenting process for the Harewood Road to Pyne Gould Stream project to start early next year. The consenting process will be publicly notified providing the opportunity for interested parties to submit on the application. This process plus land matters will take about two years to work through and then construction of the Russley Road project will take a further 2-3 years to complete.

Western airport bypass

A significant number of people who provided feedback on this project have asked whether we have considered diverting SH1 to the west of the airport.

We have done a considerable amount of work to determine if a western airport bypass would be a better option for SH1 than the current planned Russley Road (SH1) upgrade.

A western airport bypass could run from Johns Road (north of Sawyers Arms) and then join into Pound Road. If it was going to be the new SH1 it would need to be a high speed (100 km/h) route with limited entry and exit points. This route would also need a grade separated interchange at the northern connection around Sawyers Arms Road to meet highway safety standards.

We have assessed this option and found it is not viable at this stage because:

- Less than 15% of traffic on Russley Road (SH1) is going beyond the Hornby area and would use a western airport bypass. This small decrease in traffic on Russley Road (SH1) would not greatly reduce congestion on this road and the improvement works proposed would still be needed
- Land would need to be purchased from numerous land owners
- The western airport bypass option has a high cost that outweighs the benefits it would provide at this time.

The Western Corridor as proposed will not preclude a future western airport bypass.

In the interim the NZ Transport Agency, Christchurch International Airport Limited and Christchurch City Council will work together to enhance the local road route to the west of the airport.



Russley Road (SH1)/Memorial Avenue Intersection



Gateway bridge design for the Russley Road (SH1)/Memorial Avenue Interchange

What happens next?

An open day will be held on Tuesday 9 October at Russley Golf Club from 3:30pm to 7:30pm. Members of the project team will be there to answer questions and additional information will be available.

The project needs to go through a Resource Management Act approvals process with Environment Canterbury and the Christchurch City Council. The applications for the necessary approvals will be publicly notified and therefore any interested parties will have the opportunity to lodge a submission on the proposal. We are planning to lodge the applications for these approvals early next year.

What we are planning

We are planning a number of minor road upgrades that will allow traffic to use Pound Road to bypass Hornby. This would not be a highway but a local road option. These improvements include:

- Better access to SH1 at the north through an extension of Broughs Road through to McLeans Island Road
- Better access to SH1 at the south through an upgrade to the Barbers Road Intersection
- Christchurch International Airport Limited will develop a realignment of Pound Road around the north west runway (expected 2013).

Western Corridor

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Russley Road (SH1) upgrade
Including the Russley/Memorial Interchange
and the new southern airport access.

Update
September 2012

Project update

As part of the Western Corridor improvements, the NZ Transport Agency (NZTA) is upgrading Russley Road (SH1) between Yaldhurst Road and Harewood Road. This project will four-lane Russley Road, upgrade the Russley Road (SH1)/Memorial Avenue intersection and provide a new southern access to the airport area.

In November 2010 we presented plans for the upgrade of Russley Road (SH1) including a grade separated interchange (overbridge) at the Russley (SH1)/Memorial intersection. We received a lot of feedback about the planned changes to Russley Road (SH1) and the impact on the local community. We have considered all this feedback in depth and made changes to the scheme.

The main changes we have made are:

- Increased access at Wairakei Road
- A new access to the airport area from the south
- An upgraded Harewood Road roundabout.
- A cycle and pedestrian underpass at Harewood Road
- Improvements to the local road western airport bypass.

These changes to the plans for this part of the Western Corridor improve access to and across Russley Road (SH1), and to the airport. The changes at Wairakei Road and the Harewood Road roundabout retain the opportunity to access the city side of Wairakei Road (east) from Russley Road (SH1).

Open day

Tuesday 9 October at
Russley Golf Club
from 3:30 to 7:30pm

Project background

The SH1 Western Corridor runs from Belfast to Hornby along Johns, Russley, Masham and Carmen Roads. A Western Belfast Bypass is proposed as part of the corridor, and will run from the Northern Motorway and join Johns Road near The Groynes. When complete, the Western Corridor will be a four-lane highway (two lanes in each direction) with a median separating oncoming traffic. Access to the highway will be made safer by rationalising and upgrading local road intersections and by changing access to some properties.

The corridor's role is to provide a safe and efficient, free flowing arterial for long distance journeys through Christchurch and local medium distance journeys between Belfast and Hornby. It also provides safe and efficient access to Christchurch International Airport and Christchurch City, via high quality intersections.

Traffic volumes on this corridor are increasing and this is expected to continue into the future as commercial and industrial activity grows (particularly in Hornby and at the airport). There is insufficient capacity in the existing two-lane roads to absorb this future traffic growth. To ensure businesses based in and outside Christchurch are able to get their goods to and from suppliers, customers and the airport, the current road requires upgrading to improve safety, reduce congestion and provide travel time certainty.

The Western Corridor is part of Christchurch's roads of national significance (RoNS) project, which recognises that this project will improve safety and support economic growth. It is also a key project in the rebuild of Christchurch.



Harewood Road roundabout

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Feedback

The NZ Transport Agency received a significant amount of feedback in response to the consultation newsletter and open day held in November 2010. The common themes were:

- A solution to the growing congestion on SH1 is vital
- The Russley (SH1)/Memorial interchange was generally seen as positive
- Concern about reduced access to the airport and Russley Road (SH1) because of the changes at Wairakei Road and the closure of Avonhead Road
- Concern about a possible increase in traffic on local roads like Roydvale Avenue and Wooldridge Road

- Safe access across and along Russley Road (SH1) for cyclists and pedestrians is a concern
- Have alternatives such as a bypass to the west of the airport been considered
- General road safety concerns.

In November 2010 we agreed to carry out two studies, a transportation impact assessment and a social impact assessment. These studies helped us measure the likely effects of this highway plan on the local area. The findings of these studies combined with the community feedback have shaped the changes we have made.

Transportation impact assessment

This study measured the effects this project would have on state highway traffic and the surrounding local road network. Traffic modelling was used to determine the likely redistribution of traffic once the project is finished. This modelling compared predicted traffic volumes and movements in 2021 with and without the Russley Road (SH1) improvements. Conclusions from this study include:

Without the Russley Road (SH1) improvements (2021)

- There would be heavy congestion and considerable delays at all intersections on Russley Road (SH1)
- There would be heavy congestion and considerable delays on a number of local network roads in proximity to Russley Road (SH1) including Harewood Road, Wairakei Road, Memorial Avenue and Roydvale Avenue.

With the Russley Road (SH1) improvements completed (2021)

- There will be an increase in traffic on east-west routes like Harewood Road and Memorial Avenue due to drivers choosing to use the improved Russley Road (SH1) and also because of the changes at the Russley (SH1)/Wairakei intersection
- A slight increase in traffic on Roydvale Avenue and Wooldridge due to the changes at Wairakei Road
- Vehicles travelling along Russley Road (SH1) or using the Russley (SH1)/Memorial interchange will find travel time and travel time reliability significantly improved as congestion is markedly reduced. They will also enjoy improved safety.

The transportation impact assessment has confirmed the need for the four-laning of Russley Road (SH1) and the proposed Russley (SH1)/Memorial interchange.

Social impact assessment

This study helped us understand the community's concerns about possible project impacts on the health and wellbeing of the local neighbourhood. Interviews were conducted, with a range of resident, business, school and community representatives, who either requested to be involved or were contacted by the project team.

The interviews confirmed many changes have taken place for the residents and businesses in the area, particularly since the Christchurch earthquakes. These changes mean local roads are already experiencing issues like more commuter parking and congestion at key intersections.

The social impact assessment recorded participants' positive and negative thoughts on the highway's potential impacts and their suggestions for dealing with these impacts. The issues identified included; congestion, road safety, safety of pedestrian and cycle crossings (particularly near schools) and social severance.

We used the information gathered in these studies to help finalise the highway design including what solutions to issues we could put in place. In response to predicted vehicle increases on Roydvale Avenue and Wooldridge Road, we are working with the Christchurch City Council to reduce delays at the Wooldridge/Harewood intersection and safety improvement have already been made outside the Roydvale School with a new school zone now in place.

The social impact assessment also identified a number of existing issues in the surrounding area that the NZ Transport Agency has no control over (lack of parking and increased traffic congestion due to businesses moving into this area). We have passed this information on to the Christchurch City Council to consider.



HAREWOOD ROAD ROUNDABOUT

The Harewood Road roundabout will be replaced with a larger diameter roundabout and additional lanes on the Harewood Road approaches to the roundabout. A pedestrian and cycle underpass will be built under the Harewood roundabout. The underpass will provide safe access across Russley Road (SH1) and access to both the airport precinct and the McLean's Island recreational area.

THE ROUNDABOUT AT ORCHARD ROAD

To improve safety at this sharp corner, we are proposing a roundabout.

RUSSELY ROAD (SH1) / WAIRAKEI ROAD INTERSECTION

The intersection at Wairakei Road needs to be changed as it is too close to the Russley (SH1)/Memorial interchange slip lanes to be safe.

The safety standards require a minimum of 900m separation between two intersections of this type, so vehicles can merge safely. The distance between the end of the Russley (SH1)/Memorial Interchange slip lanes and the Wairakei Road intersection is only about 200m. This distance does not allow the Wairakei Road intersection to have direct access to Russley Road (SH1).

The changes to this intersection outlined in the November 2010 newsletter were to remove the roundabout and only allow a left turn from SH1 onto the eastern (city) side of Wairakei Road. We received a lot of feedback asking for access at Wairakei Road to be increased. Now we are also providing a left turn from the eastern (city) side of Wairakei Road onto the SH1 slip lane. Access to and from Russley Road (SH1) from the west (airport) side of Wairakei Road will need to remain closed.

We considered a number of intersection options for Wairakei Road including Wairakei Road going over Russley Road (SH1) via a bridge. All these options required large amounts of land and/or provided less direct access to Russley Rd (SH1) than the chosen option.

RUSSELY ROAD (SH1)/MEMORIAL AVENUE INTERCHANGE

The Russley Road (SH1)/Memorial Avenue intersection is the gateway to Christchurch from the airport. This important intersection is currently experiencing congestion and delays, which are predicted to worsen in the future. To allow this intersection to function well into the future the existing roundabout will be replaced with a grade separated interchange with Russley Road (SH1) going over Memorial Avenue.

The advantages of this design are:

- Uninterrupted traffic flow along SH1
- A long term solution to congestion and delays
- Improved travel time and reliability
- Good provision for pedestrians, cyclists and public transport
- Room for future public transport options.

A range of short and long-term intersection options were investigated for this key gateway into the city.

Short-term options considered included; improvements to the existing roundabout, traffic signals, a signalised roundabout, and a larger multi-laned roundabout. These options made little improvement in terms of safety and capacity for significant cost.

Several grade separated (long-term) options were also considered including Memorial Avenue going over Russley Road (SH1) and Russley Road (SH1) sunk either fully or partially in a trench under Memorial Avenue.

The Russley Road (SH1) over Memorial Avenue option was chosen after a consultation process in March 2010, where it found support. This option also needs considerably less land and earthworks than the Memorial Avenue over Russley Road (SH1) option.

As this bridge is an important gateway to Christchurch and the South Island, we have commissioned a gateway bridge design to welcome visitors and those returning home. The design can be seen on the back page and more images will be available at the open day and on the website.

RUSSELY ROAD (SH1) / AVONHEAD ROAD INTERSECTION

As with the Russley (SH1)/Wairakei Intersection, the Russley (SH1)/Memorial interchange slip lanes are too close to Avonhead Road to allow it to stay open safely. There are relatively low traffic numbers using Avonhead Road (east) to access Russley Road (SH1) and an alternative route exists via Roydvale Avenue and Memorial Avenue. For Avonhead Road (west) an alternative is available via internal airport roads to access Russley Road (SH1).

SOUTHERN AIRPORT ACCESS

This southern airport access is in response to feedback we received during our consultation asking for more access to the airport precinct. This intersection allows direct access for both north and southbound traffic to the airport freight and business area at Dakota Park. We have planned this intersection in the form shown because it is too close to the Russley (SH1)/Memorial interchange slip lanes to allow a roundabout or traffic signals to function safely and efficiently. Traffic wishing to turn right into or out of the airport precinct at this point will drive under Russley Road (SH1) via an underpass. Russley Road (SH1) will remain at ground level. This is subject to full investigation into the groundwater level in this location.

Access to adjacent residential properties to the east of Russley Road (SH1) will be via a service road. (More information on the southern airport access is on the back page.)