

Tennyson Street intersection upgrade

Project background

Tennyson Street and Brookside Road intersect with the State Highway 1 (SH1, Main South Road) at Rolleston. These two intersections are located very close together, approximately 70m apart (Refer to Figure 1), and this is causing safety issues.

The SH1/Tennyson Street and Brookside Road intersections have had a number of crashes in the last decade and records show there is a pattern of crashes involving traffic turning right out of Tennyson Street on to SH1 towards Christchurch.

The Kidman Street Extension to Rolleston Drive was completed in July 2011 – the new extension is shown in Figure 1. The priority at the Brookside Road and Byron Street intersection has been changed so Byron Street is the main road. This reduces traffic accessing SH1 from Brookside Road as it acts as a local road together with Kidman Street that links to Rolleston Drive and the traffic signals on SH1.

The issues with the current Tennyson Street/SH1 and Brookside Road/SH1 intersections are:

- Significant safety risks for vehicles turning right at the Tennyson Street and Brookside Road intersections with SH1
- Delays and low average speed on this section of SH1 as a result of two intersections being so close together
- Lack of capacity to meet the increasing traffic demands of Rolleston.

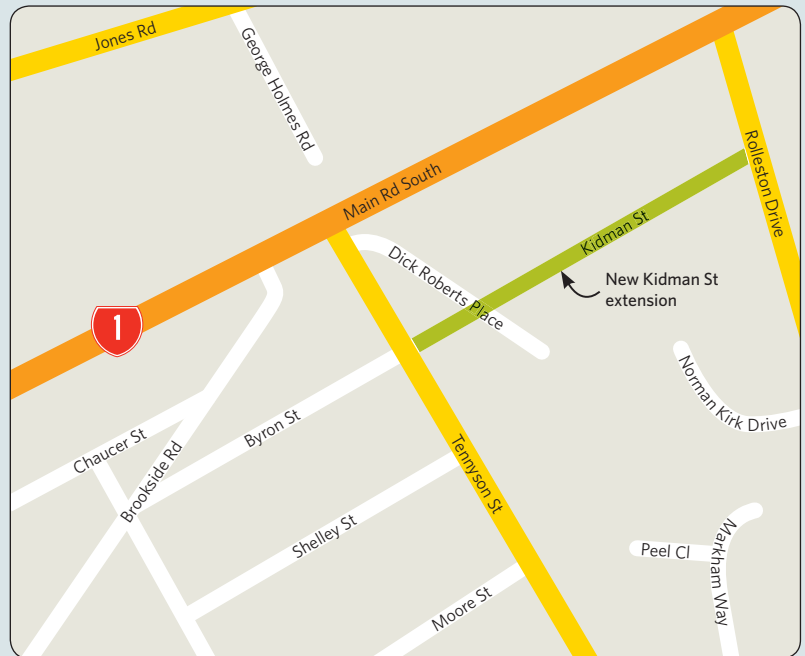


Figure 1 Overview of the project area

Project objectives

The purpose of the proposed Tennyson Street intersection upgrade is to:

- Improve the level of safety and reduce the risk of crashes at the intersections due to vehicles turning right from Tennyson Street and Brookside Road on to SH1
- Improve the efficiency of the network through a reduction in intersection delays.
- Reduce the confusion to motorists turning out of Tennyson Street from southbound vehicles turning left from the state highway actually proceeding further to Brookside Road and not Tennyson Street

The project will include a median barrier or a separated slip lane along this section of SH1 to enforce a no right turn restriction at the Tennyson Street/SH1 and Brookside Road/SH1 intersections for all options being investigated. All options may also include provision for a future pedestrian overpass to connect Rolleston to the railway and developments south of SH1.





Option 1

Do minimum – minor line marking improvements

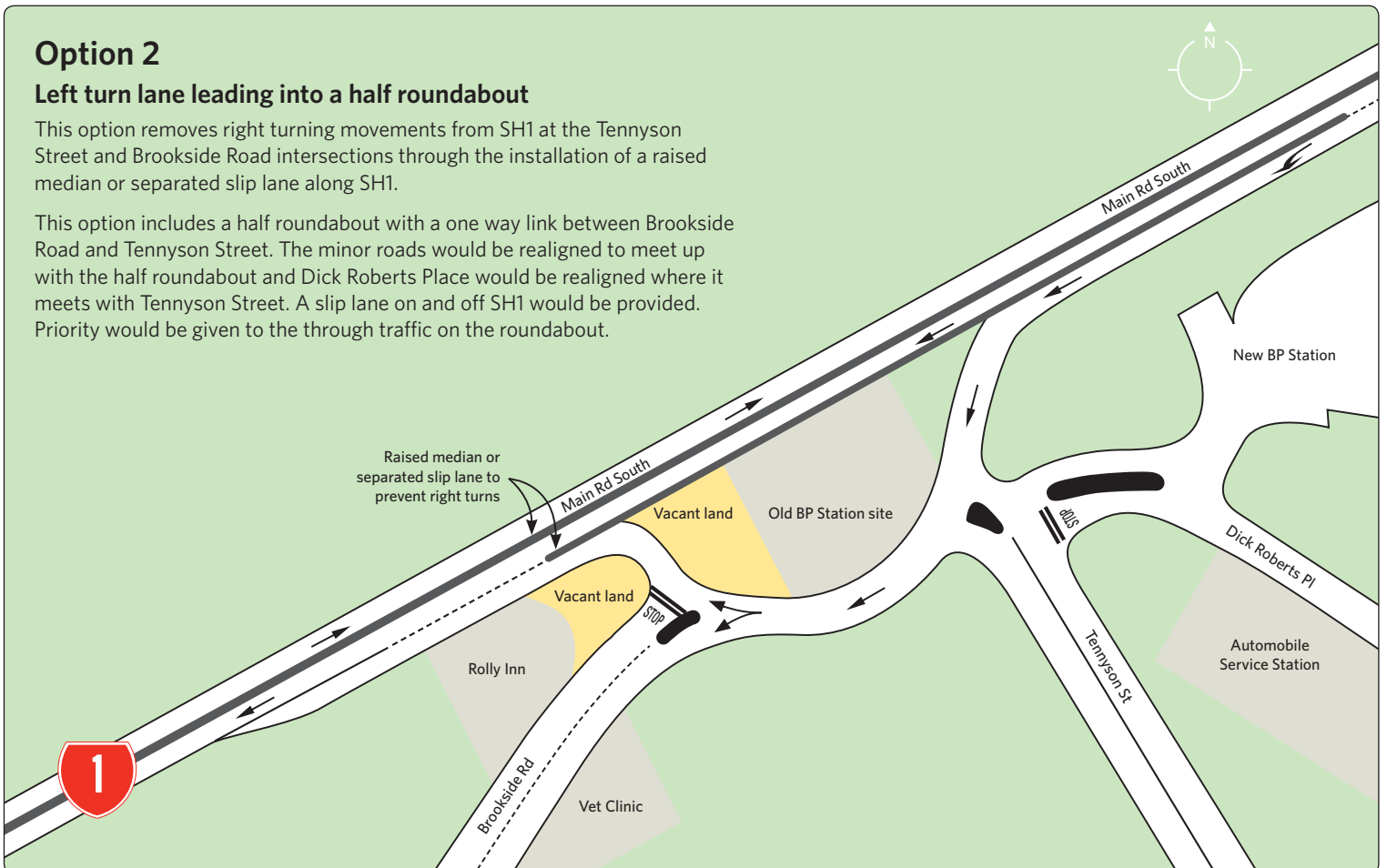
The 'do-minimum' option includes minor improvements to line-marking and signage banning right turns to and from SH1.

Option 2

Left turn lane leading into a half roundabout

This option removes right turning movements from SH1 at the Tennyson Street and Brookside Road intersections through the installation of a raised median or separated slip lane along SH1.

This option includes a half roundabout with a one way link between Brookside Road and Tennyson Street. The minor roads would be realigned to meet up with the half roundabout and Dick Roberts Place would be realigned where it meets with Tennyson Street. A slip lane on and off SH1 would be provided. Priority would be given to the through traffic on the roundabout.



Note: All options have the potential for a future pedestrian overpass to provide a safe grade separated crossing of SH1 and the southern railway line to connect the southern residential and northern industrial areas. This facility would also provide a walking and cycling connection to promote sustainable transport options.

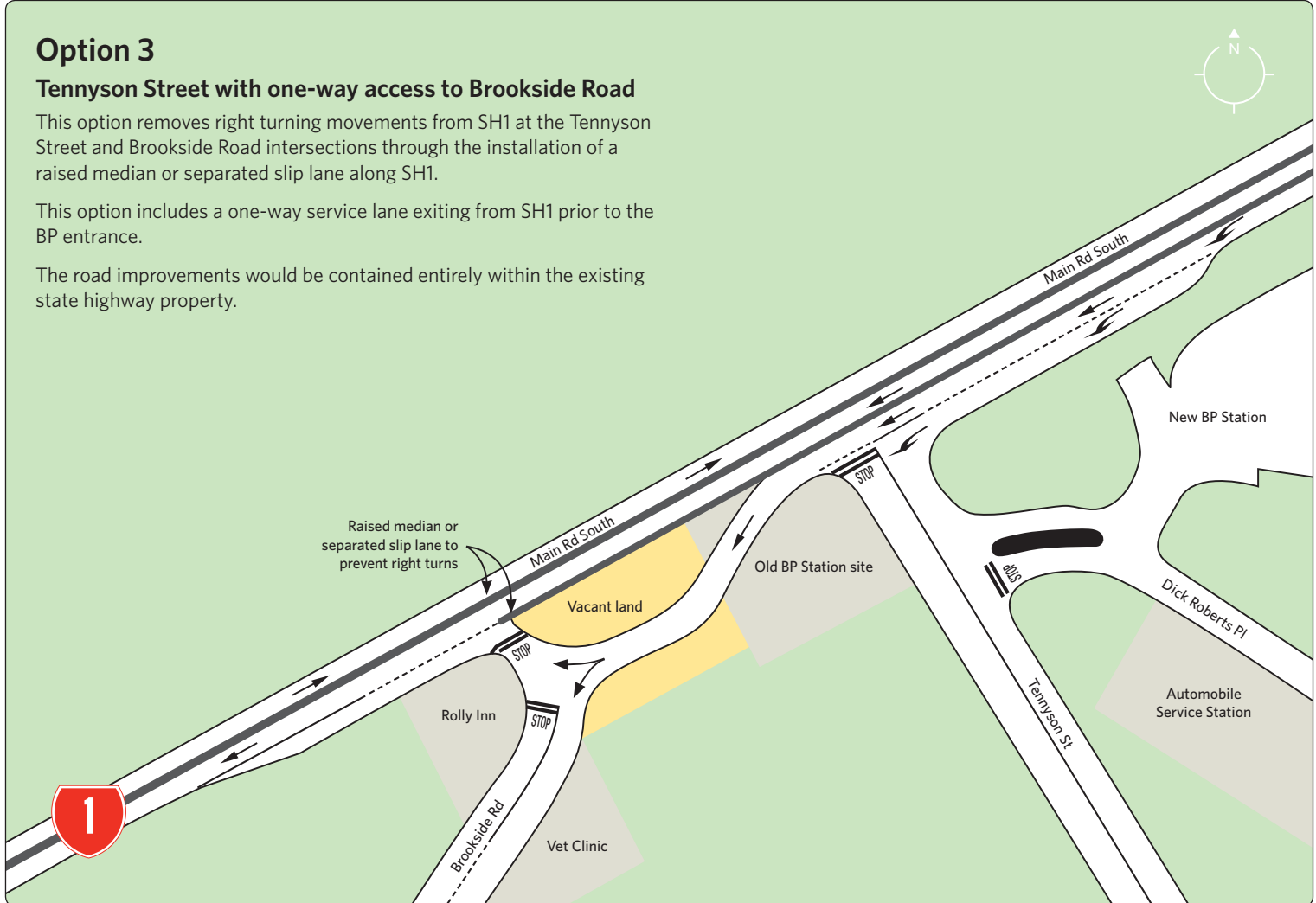
Option 3

Tennyson Street with one-way access to Brookside Road

This option removes right turning movements from SH1 at the Tennyson Street and Brookside Road intersections through the installation of a raised median or separated slip lane along SH1.

This option includes a one-way service lane exiting from SH1 prior to the BP entrance.

The road improvements would be contained entirely within the existing state highway property.

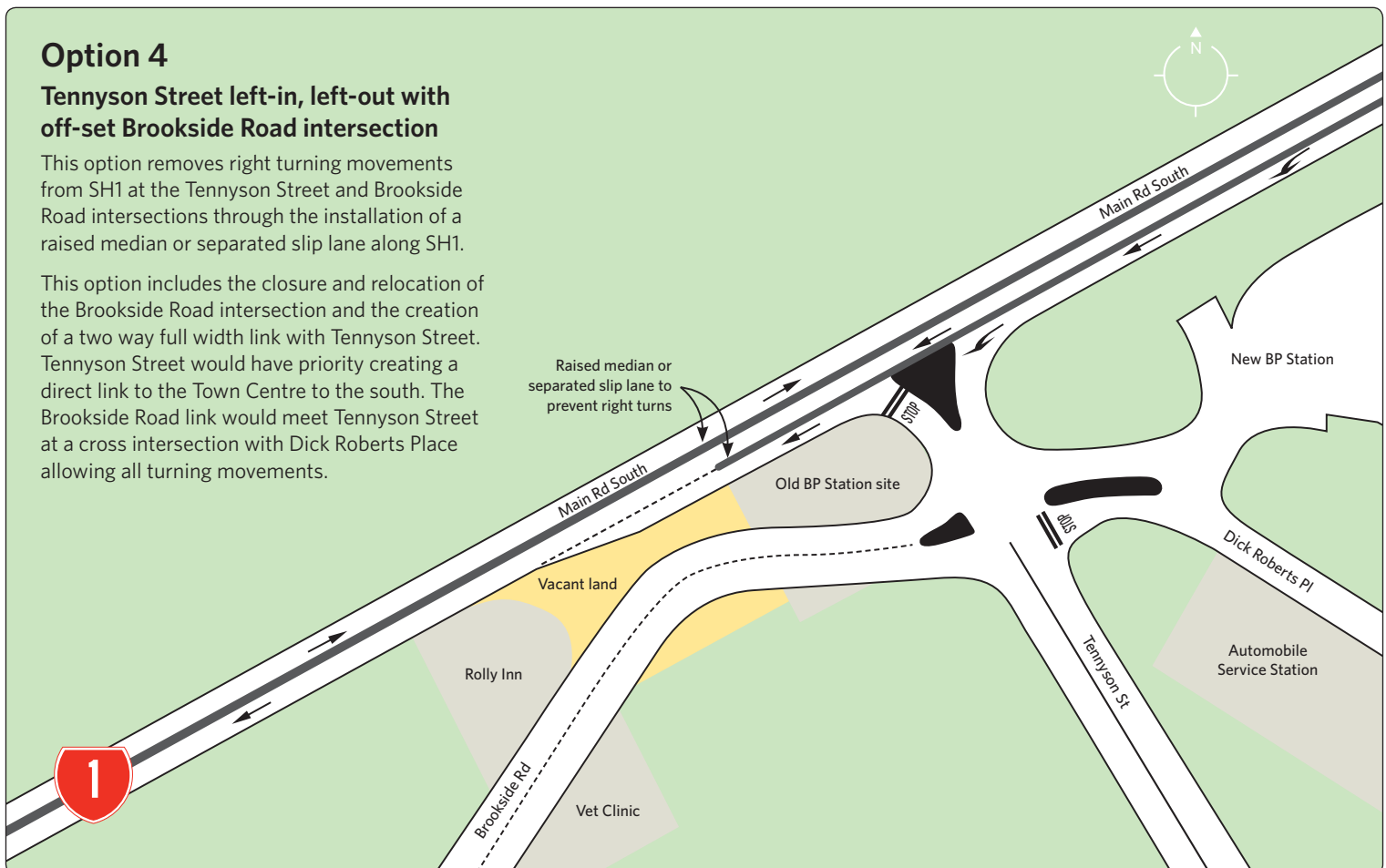


Option 4

Tennyson Street left-in, left-out with off-set Brookside Road intersection

This option removes right turning movements from SH1 at the Tennyson Street and Brookside Road intersections through the installation of a raised median or separated slip lane along SH1.

This option includes the closure and relocation of the Brookside Road intersection and the creation of a two way full width link with Tennyson Street. Tennyson Street would have priority creating a direct link to the Town Centre to the south. The Brookside Road link would meet Tennyson Street at a cross intersection with Dick Roberts Place allowing all turning movements.

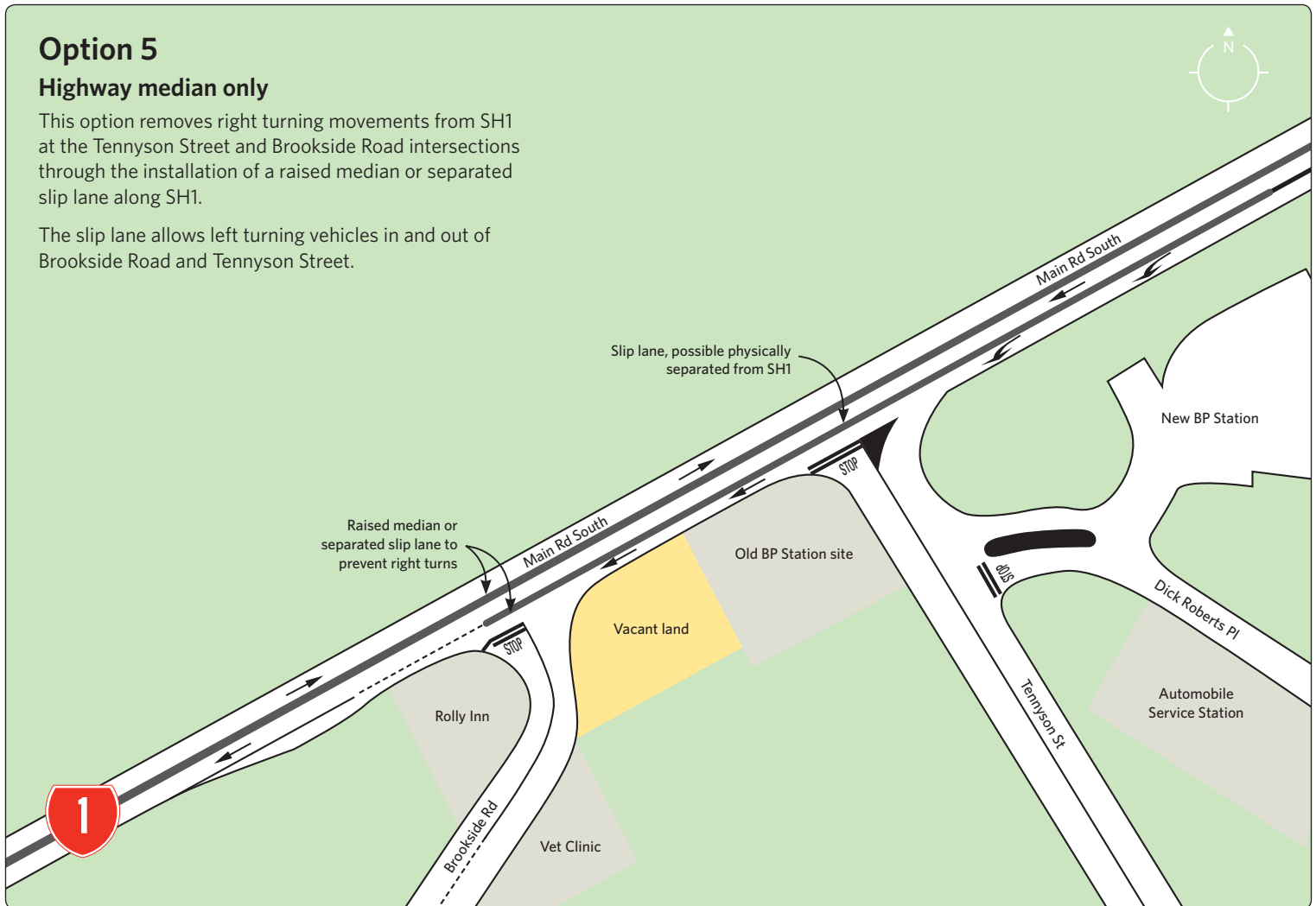


Option 5

Highway median only

This option removes right turning movements from SH1 at the Tennyson Street and Brookside Road intersections through the installation of a raised median or separated slip lane along SH1.

The slip lane allows left turning vehicles in and out of Brookside Road and Tennyson Street.



Tennyson Street intersection upgrade **Feedback form**

We welcome feedback on the preferred option for the Tennyson Street intersection upgrade. Let us know what is important to you as it will help us develop the final design.

Thank you for taking the time to provide your feedback. Please see overleaf to complete the feedback form.

Links to Southern Motorway project

While the Tennyson Street intersection upgrade is a 'stand alone' project, it also supports the Christchurch Southern Motorway Stage 2 and the Main South Road Four-Laning projects (Southern Motorway project).

This project complements the Southern Motorway project by managing access to Rolleston Township in a safer and more efficient manner.

The Southern Motorway project includes an interchange at Weedons Road which will be the main residential (south) and industrial (north) access to Rolleston. The project also involves expanding the existing two-lane SH1 to four-lanes from Robinsons Road to Weedons Road near Rolleston to increase traffic flow capacity.

More detailed information on the Southern Motorway Project is available at www.nzta.govt.nz/projects/southernmotorway2/



Contact Details (Optional)

First Name: Last Name:

Address:

Phone: Email:

Please send this feedback form to:

Tennyson Street intersection upgrade

NZ Transport Agency

FREPOST AUTHORITY NUMBER 227263

C\ - SKM

PO Box 10 283, Wellington 6143

Attention: Helen Pinson

Or

Email it to: helen.pinson@nzta.govt.nz

Please return this feedback form by 30 March, 2012

Previous work undertaken

We carried out an assessment in December 2010 which identified 12 initial options to improve the Tennyson Street/SH1 and Brookside Road/SH1 intersections. After looking into costs, land take requirements, access and safety this was reduced to five possible options.

Current project phase

We are now assessing the five remaining options to decide upon a preferred option. Your feedback on these options will form part of this assessment.

Assessment criteria

We assessed the five options against these criteria below. The preferred option is not necessarily the one that scores the highest under the most number of criteria. The preferred option needs to strike a balance between its costs (financial, environmental and social) and effectiveness in addressing the objectives.

Economic

- Economic benefits and disadvantages of the project
- Impact on the surrounding businesses
- Impact on state highway traffic.

Social

- Effects on public health including noise emissions and air quality.
- Effect on neighbouring properties.

Connectivity

- Effectiveness in moving traffic and people in a safe and efficient manner
- Access to the BP service station; the vet, and the Rolly Inn
- Reliability of the intersections and sections of SH1 in the project area.

Environment

- Effects on the surrounding environment and people, including contaminated land and water discharges.

Operational

- Traffic safety in terms of removing vehicle conflicts and addressing safety issues
- Geometric design and how it reduces accident risk by lower speeds and improving sightlines.

Constructability

- Construction impact on SH1 traffic, local traffic and local business.

Initial options assessment

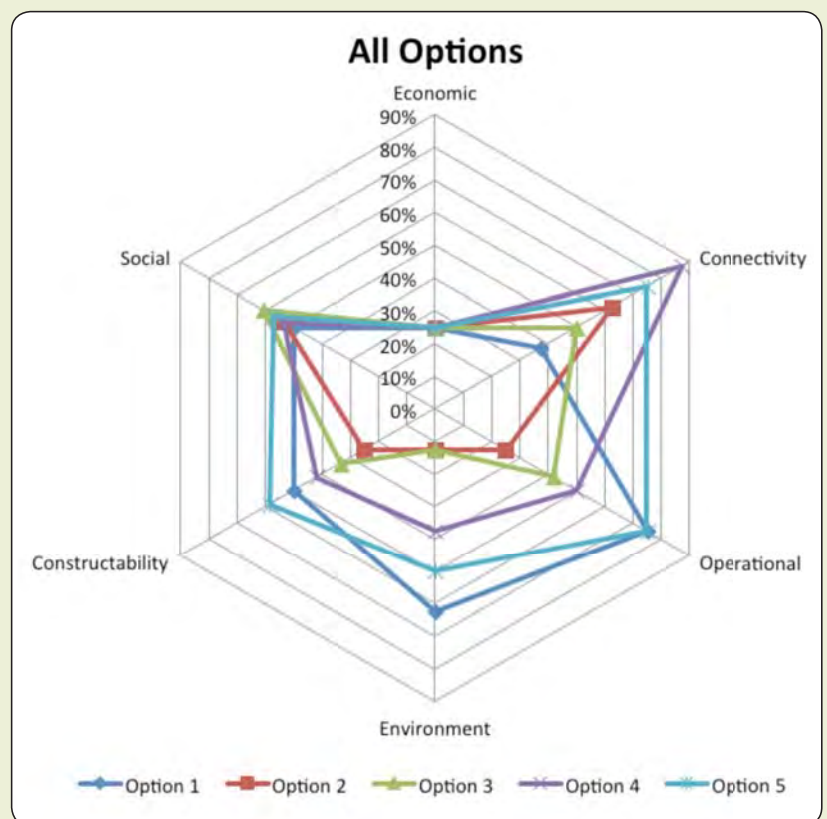
The project team has considered all five options against these criteria in an initial assessment and have produced a summary diagram of the findings. The diagram shows the percentage level in which each option meets the assessment criteria.

Based on this initial assessment, we believe that Option 5 may best meet the assessment requirements.

We recommend Option 5 be further developed to reduce the number of accesses onto SH1.

For the full assessment report please email your request to helen.pinson@nzta.govt.nz.

Please bear in mind this finding is based on preliminary analysis. We want to know what you think and Option 5 is not necessarily the final preferred option.



What happens now

We would like to receive your views on the five Options. We also welcome any feedback and issues of concern to you on the improvements. Your feedback will form part of the further assessment to determine a preferred option.