

Strategic Theme:

8

A Future-proofed Street Network

Strategic Priorities aimed at balancing the needs of all road users

Initiatives under this Theme include:

- Improving the opportunities for walking and cycling in the town centre and on certain key routes.
- Signalising several intersections that are currently roundabouts in order to make them more pedestrian and cycle friendly and solve immediate or future traffic flow problems at the same time.
- Proposing a corridor for a long term local re-routing of State Highway 1 and thus reclaiming Sinclair Street.



5.8.1 The street network

Blenheim's central street network consists of a fine-grain square block system in some areas combined with a number of large oblong blocks and diagonal links in other areas, resulting in intersections with 45° and 135° corners. In addition, the Taylor River causes some disconnections in places (e.g. High Street peters out in the east and forms a 'dog leg', using Symons Street to connect with Main Street). Two state highways and rail line, which are difficult to cross or to connect with, as well as several one way systems, further complicate the network.

The result is an overall disconnected urban system and poor legibility.

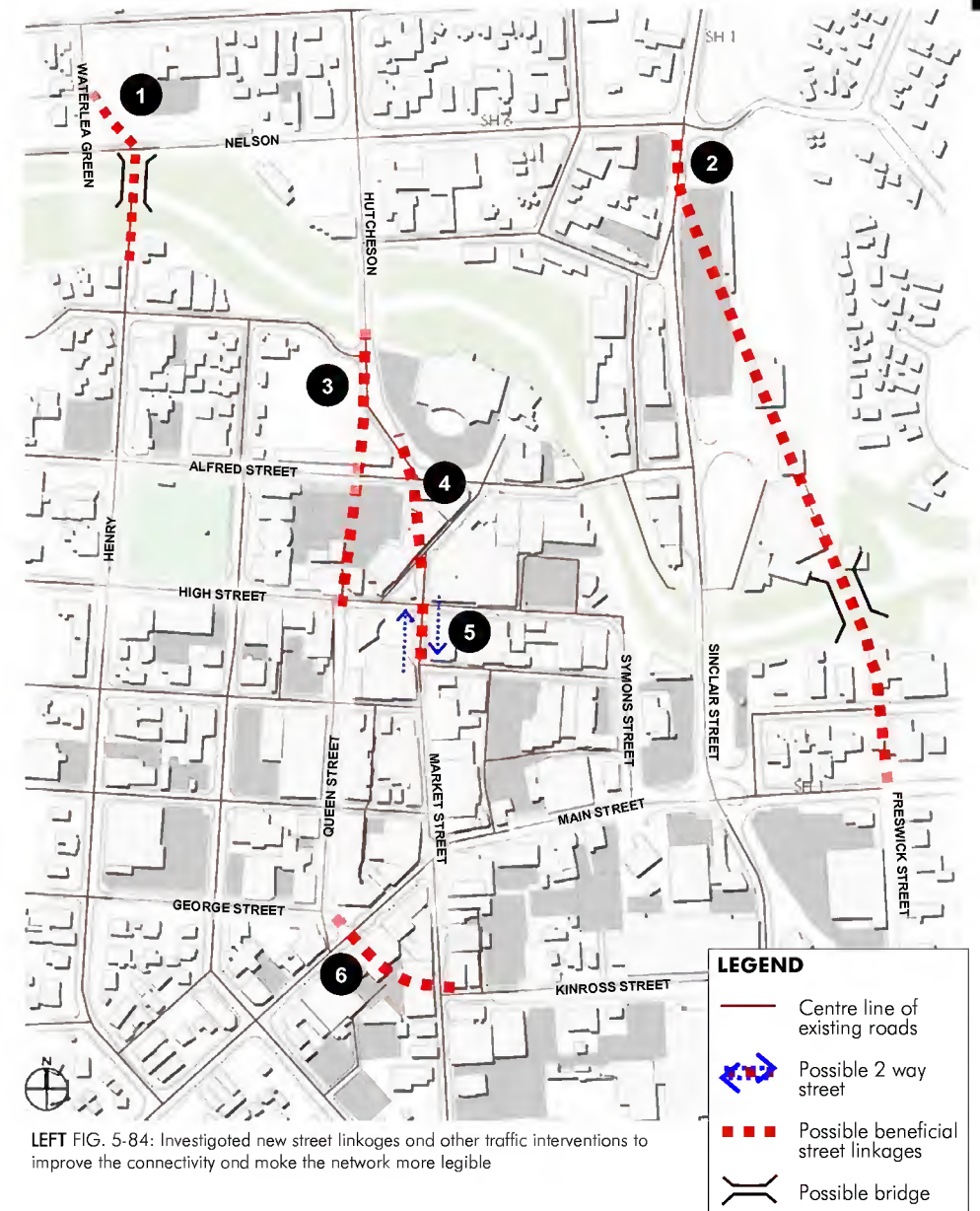
Scope for improvement

Refer to figure 5-84 for possible initiatives the movement system may benefit from. However, dealing with an existing urban area, many measures to improve this could prove unaffordable. Investigated new street linkages and other traffic interventions are:

1. Extend Henry Street to the north to connect with Parker Street via Waterlea Green using a bridge spanning over the Taylor River;
2. Local realignment of State Highway 1: from the intersection of Sinclair and Auckland Streets, to the intersection of Main and Freswick Streets;
3. Extend Queen Street to the north to connect with Hutcheson Street, through the Alfred Street carpark and the south-eastern corner of the Blenheim School site;
4. Extend Hutcheson Street to connect with Market Street through the Criterion Hotel;
5. Reconfigure the northern part of Market Street into a two way street;
6. Establish a direct connection between Kinross Street and the Queen Street-Maxwell Road intersection.

Interventions 1, 2 and 5 are considered feasible or require further investigation and will be discussed further in this section of this report.

In addition, a range of smaller local traffic interventions are proposed to make the movement network more legible, more balanced for all users, more connected and more future proof.



LEFT FIG. 5-84: Investigated new street linkages and other traffic interventions to improve the connectivity and make the network more legible

5.8.2 Walking and cycling

The benefits of increased walking and cycling are multiple. Apart from the general health and environmental benefits, increased walking and cycling in the Blenheim Town Centre will lead to increased vibrancy and less parking problems.

The opportunities for increasing walking and cycling activity in the Blenheim Town Centre are present, as the town centre is flat and distances are limited. Using and improving the present conditions is key to increased pedestrian activity and bicycle use.

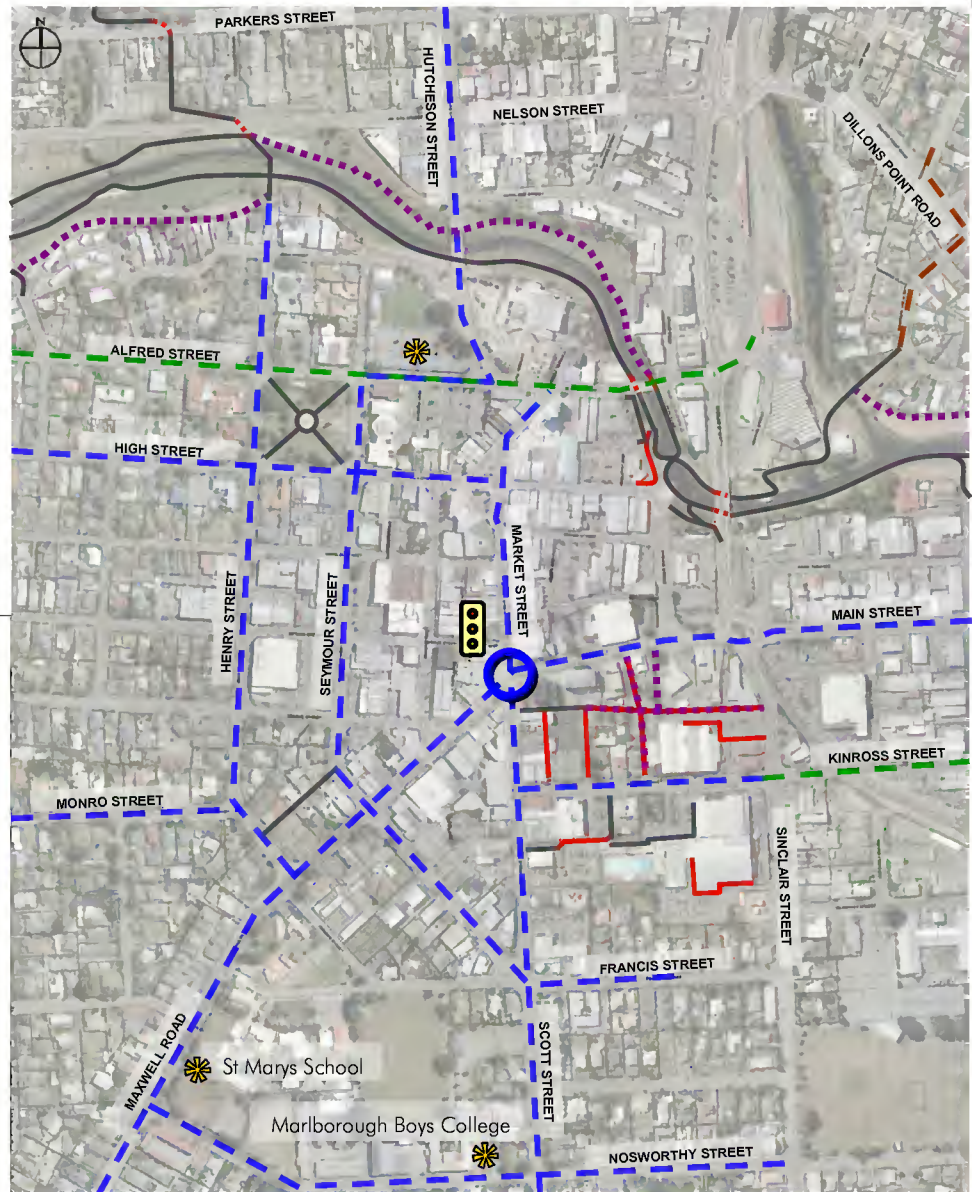
The walking and cycling plan as part of the town centre Vision is shown in figure 5-85.

Initiatives aimed at improving the opportunities for cycling and walking:

- Footpath and streetscape upgrade initiatives as presented under Strategic Themes 2 and 6. Part of this should be the consideration of existing locations of cycle storage and appropriate additional locations if required.
- Install pedestrian signals at existing crossing at intersection of Market Street, Main Street, Scott Street and Maxwell Road to regulate the many crossing movements taking place as a result of increased town centre activity in upper Scott Street.
- Install dedicated cycle lanes on Hutcheson Street between Nelson Street and Alfred Street; on Seymour Street between High Street and Maxwell Road; and investigate cycle lanes on Maxwell Road between Seymour Street and Alabama Road.
- Install a pedestrian crossing (no traffic signals in first stage, possibly added later) and refuge island at the intersection of Curry and Nelson Streets as a crucial link in a safe and direct walkway between the town centre and Pollard Park (alternative to the one that is currently signposted).
- Build several more direct connections in the form of staircases and/ or ramps between town centre footpaths and riverside walkways (refer to Strategic Theme 5).
- Signalising roundabouts to increase pedestrian crossing movement and make cycling safer (refer to the next paragraph overleaf).
- Investigate traffic calming Stephenson Street between Weld Street and Scott Street to improve safety for school children.
- Investigate inclusion of Kinross St in the 30km/h zone in conjunction with streetscape improvements to improve safety for pedestrians and enhance the amenity of the commercial area.

LEGEND

- Priority bicycle route
- Other bicycle route
- Desired new bike / walk link or improvement of existing one
- - - Proposed bike / walk path
- Proposed pedestrian signals
- Existing bike / walk path
- - - Existing path requiring improvement
- - - Existing good connection
- Existing schools



ABOVE FIG. 5-85: Walking and cycling strategy for the wider town centre (not shown on this map: the alternative walkway from the town centre to Pollard Park via the northern riverbank, crossing Nelson Street and then via Curry Street).

5.8.3 Signalising intersections

Roundabouts are an effective means of ensuring efficiency of vehicle traffic flowing and turning. However, in many situations roundabouts negatively impact on pedestrian conditions. The average frequency of cars leaving a roundabout is approximately 1 car per 3 seconds. Pedestrians usually need a 6 to 7 second gap to cross a 6m wide street. In many cases, traffic efficiency thus leaves few 'gaps' for pedestrians to cross the streets. Pedestrian connections around roundabouts are often 'pushed out', resulting in less direct connections. To a lesser extent, these difficulties apply to cyclists as well, in addition to the dangerous turning movements on and off roundabouts.

As traffic amounts grow, even roundabouts will not be able to prevent vehicle congestion. This applies in particular to intersections with imbalanced flows (i.e. flows in a certain direction far greater than in the other direction). In the case of Blenheim, this means that local movement often suffers under regional movement.

Signalisation initiatives:






Over time signalising the following intersections (including pedestrian crossings) in order to make them more pedestrian and cycle friendly and solve immediate or future traffic flow problems at the same time:

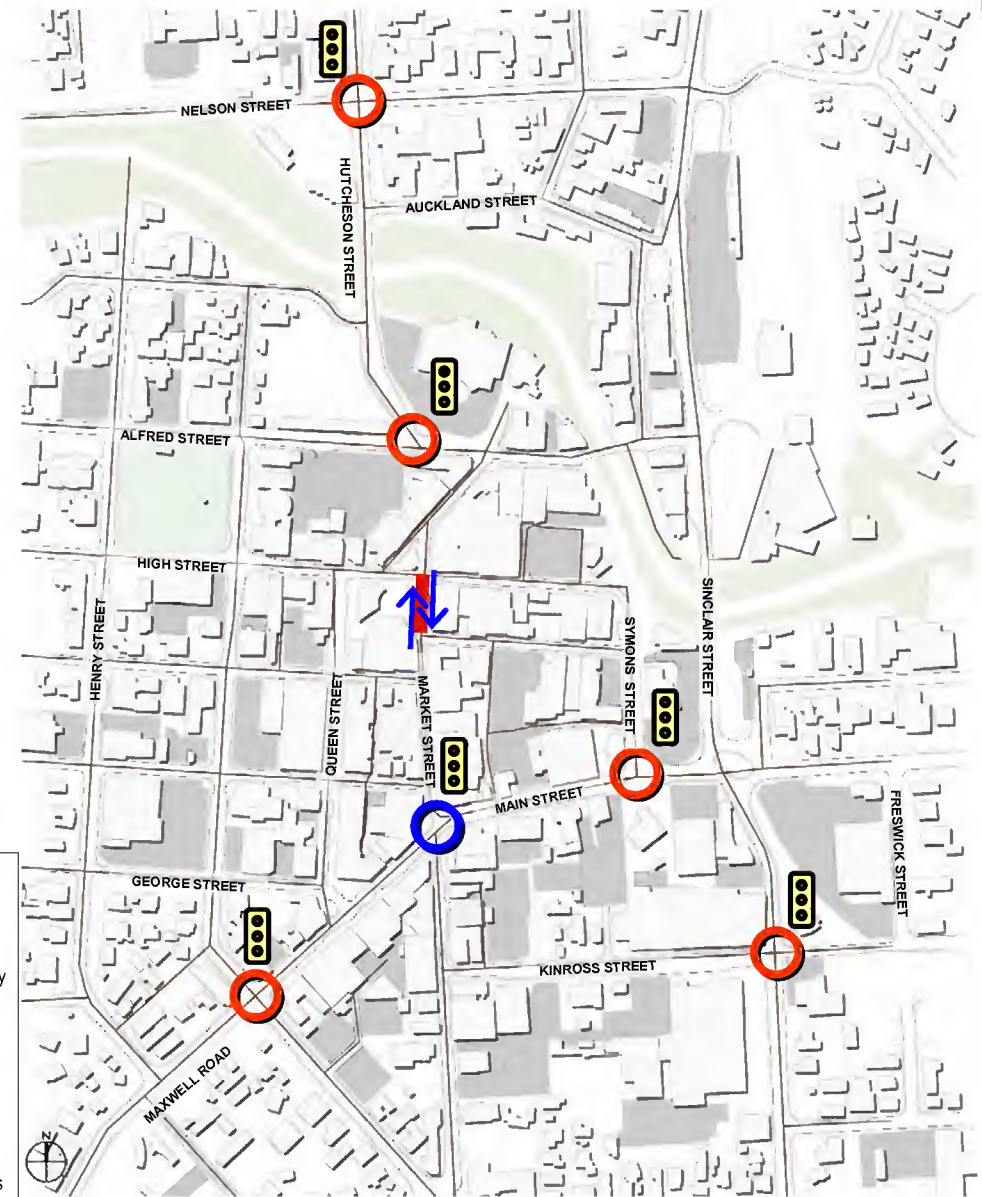
- Nelson St - Hutcheson St intersection;
- Symons Street - Main Street intersection;
- Sinclair Street - Kinross Street intersection;
- Seymour Street - Maxwell Road intersection; and
- Alfred Street - Hutcheson Street intersection, in conjunction with the construction of a parking structure in Alfred Street and subsequent vehicle entrances into this parking garage.

Additional initiative to improve traffic flows

- The 'two way-ing' of Market Street-North to improve legibility and connectivity and increase traffic flow through Wynen Street to improve business viability resulting from increased passing trade.

LEGEND

-  Centre line of existing roads
-  Proposed two-way street
-  Proposed new corridor SH 1
-  Proposed new traffic signals
-  Proposed new pedestrian signals



ABOVE FIG. 5-86: Proposed traffic signals and two-way street

5.8.4 Re-routing State Highway 1

The State Highways bring a large amount of 'passing trade' into the town centre, benefiting the local economy. However, the negative impacts of this traffic are considerable. Apart from noise and air pollution, these impacts include severance, e.g. cutting off areas north and east of the town centre. The Council and Marlborough Roads have undertaken strategic investigations of options for the re-routing of State Highway 1, located to the east of Blenheim. This Town Centre Vision proposes in concept an alignment that is shorter (and more affordable) and is located closer to the town centre to retain the benefits of the movement economy, whilst reclaiming Sinclair Street as a local street with more pedestrian and cycle friendly conditions.

Initiatives:

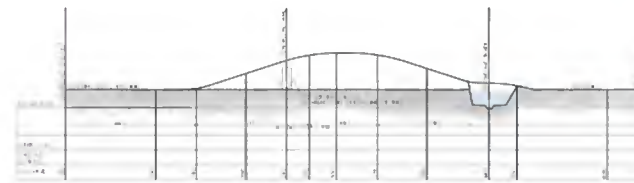
→ Investigate the costs and benefits of the realignment of State Highway 1, using a shorter route and a corridor closer to the town centre: starting from the intersection of Sinclair Street with Auckland Street, crossing the railway line (grade separated), parallel to the Opawa River (western riverbank), crossing the Taylor River west of the Boathouse theatre and connecting with Main Street (SH1) at the Freswick Street intersection (refer to figures 5-87 and 5-89). Preliminary design suggests the technical feasibility of this alignment, including curves and gradients for grade separated crossings with the railway line and the river (figure 5-88). **However, more detailed design is required to investigate the feasibility of this route.**

In conjunction with this local re-routing, the following measures are required:

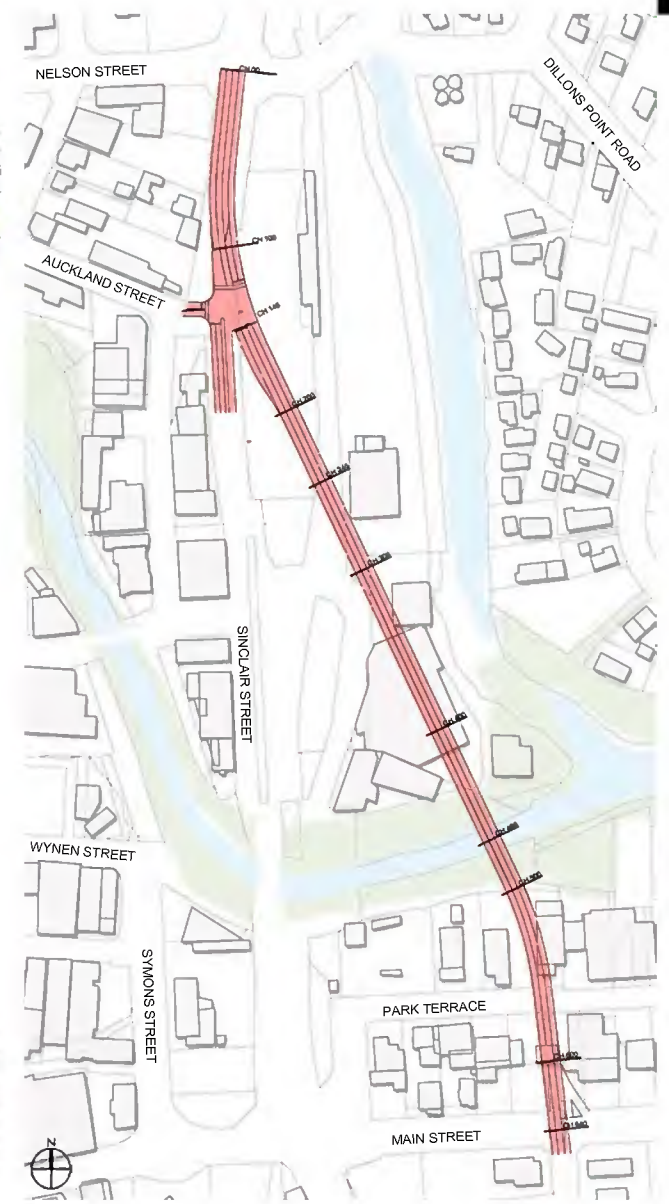
- Widening of the Nelson Street - Sinclair Street roundabout to allow for increased turning traffic at the Auckland Street intersection onto the proposed newly aligned State Highway 1.
- Installation of traffic signals (including pedestrian crossings) at the Main Street - Freswick Street and Sinclair Street - Auckland Street intersections.



ABOVE FIG. 5-87: Approximate corridor of the proposed local re-routing of State Highway 1



ABOVE FIG. 5-88: Proposed re-routing - diagrammatic cross section



ABOVE FIG. 5-89: The proposed corridor for the re-routing of State Highway 1

Technical background: ring road considerations

The Council has considered enlarging the 'Ring' around the town centre by moving it from Francis Street and Seymour Street to Francis, Hodson and Henry Streets. However, traffic counts (as partly shown in figure 5-90) suggest that the 'Ring' is actually a 'Western bypass', as the main flow of traffic is Scott Street - Seymour Street, rather than Francis Street - Seymour Street.

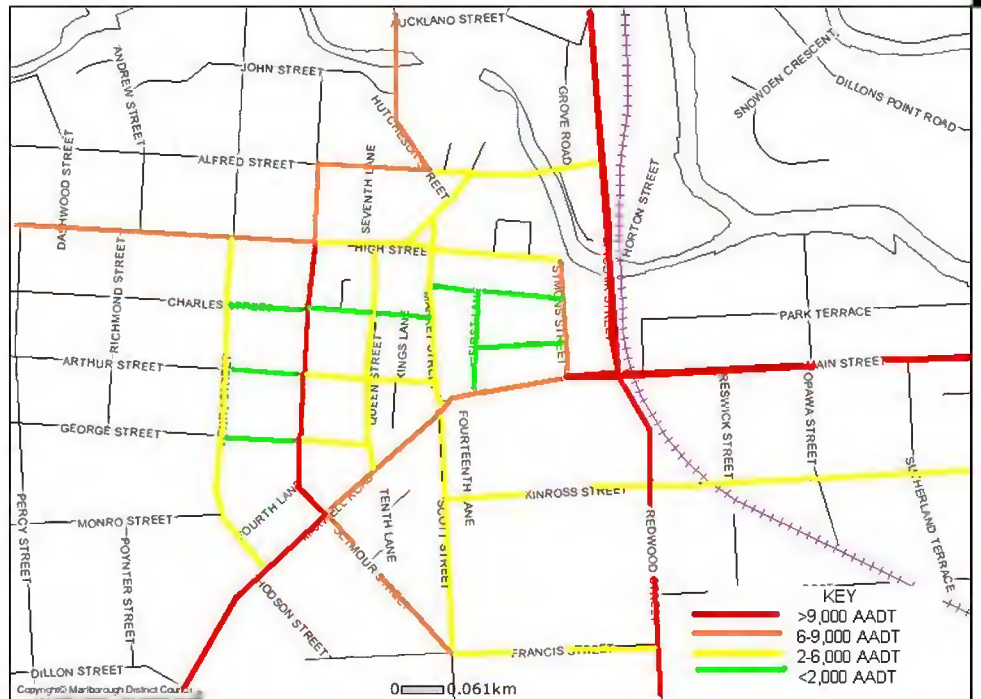
If the emphasis is shifted from Seymour Street to Henry Street, it is required to make some considerable changes to the Scott Street - Francis Street intersection to allow for turning traffic, in addition to works to the Hodson Street - Maxwell Road intersection (refer to figures 5-91 and 5-92).

Until a possible Henry Street bridge (across the Taylor River and connecting to Nelson Street) is in place, traffic would have to turn at least once again to reach Alfred Street, requiring the upgrade of the Henry Street - Alfred Street intersection.

A possible Henry Street bridge would only be necessary to cater for traffic that leaves Blenheim northbound, as westbound traffic would use High and Boyce Streets to connect to State Highway 6.

This leads to the conclusion that a possible Henry Street bridge would be a long term option (figure 5-93). Northbound traffic needs to increase to a point that justifies it. Besides that, drastic changes to the Scott Street - Francis Street intersection and Hodson Street - Maxwell Road intersection are required.

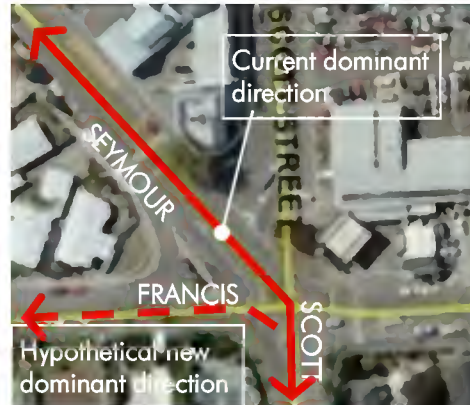
For the short to medium term, it is proposed to leave the 'ring road' in place. Traffic signals are proposed for the Seymour Street - Maxwell Road intersection (figure 5-94) to increase efficiency and counter delays.



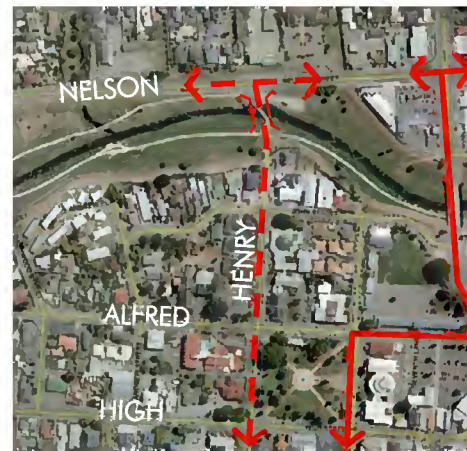
ABOVE FIG. 5-90: Average daily traffic (ADT) in and around the town centre



ABOVE FIG. 5-91: Hadsan St - Maxwell Rd intersection



ABOVE FIG. 5-92: Scott, Francis, Seymour Sts. intersection



ABOVE FIG. 5-93: Current ring road vs. possible long term future ring road



ABOVE FIG. 5-94: Proposed signalisation

5.8.5 Cost estimation, timeline & prioritisation

Ref.*	page	Action	Admin./ Physical	Timeline: short (<2yrs); medium (2-5 yrs); long (>5yrs)	Priority: high/ medium/ low	Comments/ assumptions
D2	88	Signpost alternative walkway to Pollard Park (Henry St-across footbridge-along northern riverbank, crossing Nelson at Curry St, through Curry St, crossing Parker St).	physical	Short term	High	
K1	89	Replacing one-way system of Market Street between High Street and Wynen Street by a two-way system.	physical	Short term	High	
K2	88	Investigate inclusion of Kinross St in the 30km/h zone in conjunction with streetscape improvements (see O7).	administrative	Short term	Medium	
K3	88	Investigate traffic calming Stephenson St between Weld St and Scott St.	admin first, possibly physical	Short term	Low	
K4	89	Signalisation of Nelson St-Hutcheson St intersection (incl. pedestrian crossings).	physical	Medium term	Medium	
K5	89	Signalisation of Symonds Street and Main Street intersection (incl. pedestrian crossings).	physical	Medium term	High	
K6	89	Signalisation of Redwood Street and Kinross Street intersection (incl. pedestrian crossings).	physical	Medium term	High	
K7	89	Signalisation of Seymour Street and Maxwell Road intersection (incl. pedestrian crossings).	physical	Medium term	High	
K8	90	Investigate realignment SH 1: from intersection Sinclair St-Auckland St, crossing the railway line (grade separated), parallel to the Opawa River (western riverbank), crossing the Taylor river west of the Boathouse theatre and connecting with the current SH1 at the intersection Main St-Freswick St. (Includes construction of 2 bridges and the carriageway).	admin first, possibly physical	Long term	High	
	90	Works and costs ancillary to construction of re-routing SH1 (includes land acquisition, alterations to services, engineering and administration, contingencies on construction costs).	admin first, possibly physical	Long term	High	
K9	90	In conjunction with K8: widen roundabout Nelson St-Sinclair St to allow for increased turning traffic at Auckland St intersection onto newly aligned SH as described in K8.	physical	Long term	Medium	

*) Refers to Blenheim Town Centre Draft Implementation Strategy

**) NB. Calculations are based on rough estimates and conceptual design, further design work and more accurate information is required for more realistic cost estimations

Ref.*	page	Action	Admin./ Physical	Timeline: short (<2yrs); medium (2-5 yrs); long (>5yrs)	Priority: high/ medium/ low	Comments/ assumptions
K10	90	In conjunction with K8: signalisation of Main St-Freswick St intersection.	physical	Long term	High	
K11	90	In conjunction with K8: signalisation of Auckland Street-Sinclair Street intersection.	physical	Long term	High	
L1	88	Pedestrian crossing + island at intersection Curry St-Nelson St to improve safety of walkway CBD to Pollard Park.	physical	Short term	Medium	
L2	88	Pedestrian signals at existing crossing at intersection of Market Street, Main Street, Scott Street and Maxwell Road.	physical	Short term	Medium	
M1	88	Investigate cycle lanes on Maxwell Road between Seymour Street and Alabama Road.	admin first, possibly physical	Short term	Low	
M2	88	Cycle lanes on Hutcheson Street between Nelson Street and Alfred Street.	physical	Medium term	High	
M3	88	Cycle lanes on Seymour Street between High Street and Maxwell Road.	physical	Medium term	High	
N1		In conjunction with car parking building and possible relocation of i-Site into it: traffic and parking management (coach and campervan parking) in Alfred Street between Seymour St and Hutcheson St.	physical	Short term	High	
N2		Investigate installing live signage town centre carparking vacancies.	admin first, possibly physical	Medium term	Low	
L3	88, 70	Build a staircase to connect the footpath on the northern side of Alfred Street (immediately west of the bridge) with the footpath on the eastern bank of the Taylor River.	physical	Short term	High	
L4	88, 70	Build pedestrian connections (staircase and/ or ramps) between the footpaths on both sides of Hutcheson Street (immediately south of the bridge) with the footpath on the southern bank of the Taylor River.	physical	Short term	High	
L5	88, 70	Build a pedestrian connection between John Street and the footpath on the southern bank of the Taylor River (aligning with Seymour Street).	physical	Short term	High	

*) Refers to Blenheim Town Centre Draft Implementation Strategy