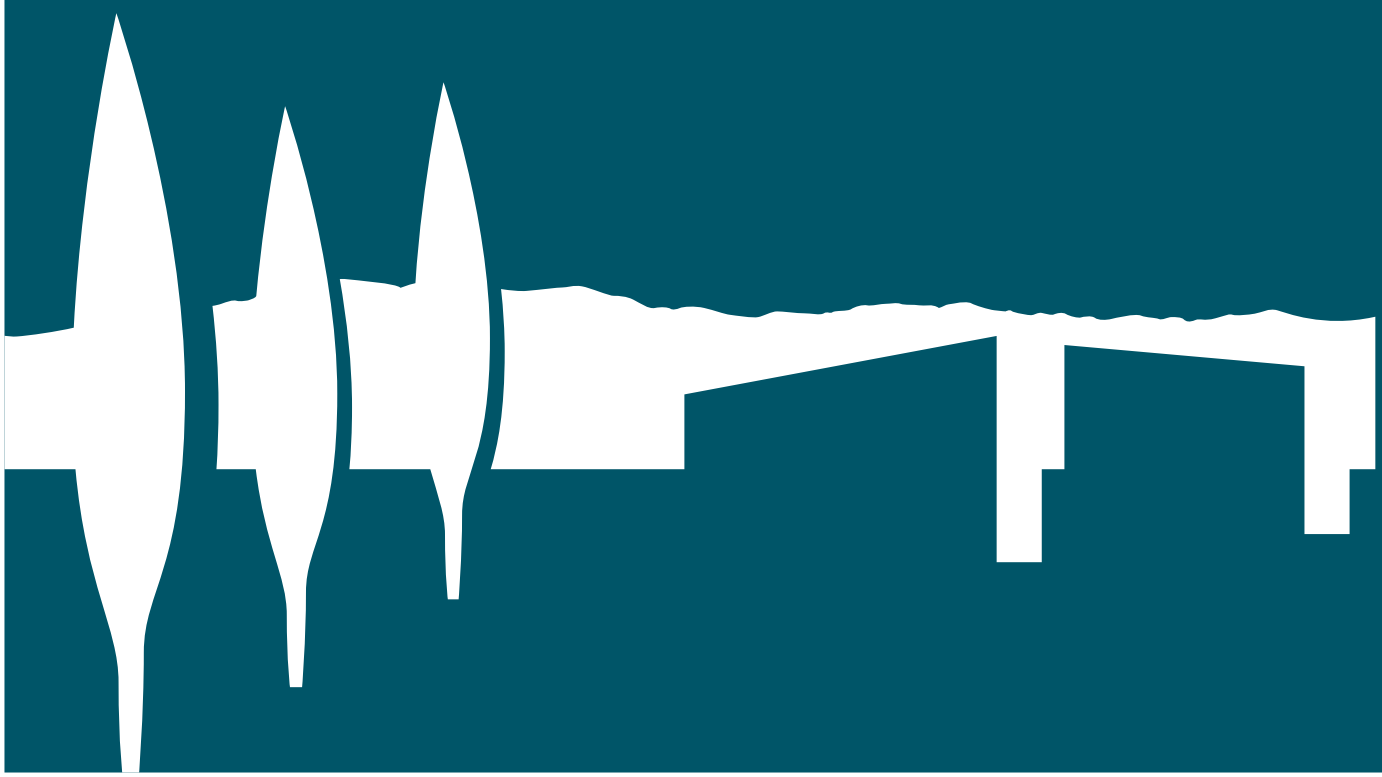
8.0

Movement Network



8.1 Introduction

A cohesive and efficient movement network is required for vehicles, pedestrians and cyclists. The new movement routes created as Rolleston develops will integrate with existing routes, providing effective linkages and efficient movement for all types of travel. There will be a focus on encouraging the community to use alternative transport methods reducing the use of private vehicles. Movement by walking, cycling and public transport reduces energy consumption, reduces greenhouse gas emissions, increases social interaction and helps build healthy communities.

8.1.1 MOVEMENT NETWORK AIMS

A key objective of the movement network is to route traffic (vehicle, cycle and pedestrian) on the most efficient and desirable routes. An efficient movement network is essential to ensure economic viability and community well-being. Movement routes can also be used to increase vibrancy and create a sense of place within the town.

The movement network aims of the Rolleston Structure Plan are to:

- Provide efficient and safe routes for vehicles, cyclists and pedestrians connecting other locations to Rolleston and within the urban area.
- Reduce vehicle dependency and encourage the community to adopt walking, cycling and public transport modes reducing the environmental impacts of travel.
- Route through-traffic away from the town centre and onto inner and outer by-pass routes.
- Manage traffic speeds on the rural/urban interface to ensure residents' and road users' safety.
- Use the existing road network to provide continuity for future expansion of the town.
- Create liveable streets that embrace CPTED principles.
- Integrate a cohesive open space network of parks, reserves, streets, walkways and cycleways.
- Create attractive entrances, road corridors and streetscapes that provide amenity for all users and reflect the character of Rolleston.
- Create a legible way finding system within the urban area for roadways, streetscapes, open spaces, and pedestrian and cycleway routes. This system should integrate signage, sculpture, artwork and landscape features into the urban fabric, allowing easy navigation by all users, and create amenity for the Rolleston community.

Figure 8.1: Transport Network – CRETS Road Hierarchy and State Highway Connections

- Urban limit
- Full Intersection - all movements
- Grade Seperated Interchange
- Grade Seperated Link
- Restricted Access (left in, left out only)
- Existing Local Road
- National Arterial
- District Arterial
- Collector (Distributor)
- Collector (Distributor) Proposed
- Proposed Collector in Southern Rolleston Transportation Strategy
- Possible Connections (road \ cycleway)
- Railway

8.2 Road Hierarchy

A road hierarchy defines different classifications, functions and standards for roads, ranging from arterial roads which cater mainly for through traffic movement to local roads whose primary function is local access. The Structure Plan identifies a network of "main roads" which will connect key locations within Rolleston, including current and future neighbourhoods, and use the existing grid pattern. This network of "main roads" will be complemented by a "local roads" network which is intended to provide a high level of connectivity within neighbourhoods and a high level of accessibility for residents.

The road hierarchy provides a mechanism for integrating urban design principles with the engineering requirements of a road network.

At the "local roads" level, Council is planning for three road standards within urban townships, ranging from a "major" local access function to a "minor" local amenity function, in addition to a range of walking / cycling routes and public transport provision.

The Structure Plan signals the pattern of main roads development within the township, but does not specify the detailed form and location of local roads other than to provide for those connections that are considered significant.

The Christchurch, Rolleston and Environs Transportation Study (CRETS) included a hierarchy for the wider area, and an indication of a suitable approach for Rolleston. Given that a significant amount of analysis has been conducted as part of the Structure Plan process, while the Plan looks out much further in time than CRETS, it is appropriate for Council to use the CRETS hierarchy as a starting point for defining the future hierarchy and classification of road standards for Rolleston. The network will be developed to provide a good level of functionality of arterial and collector roads within the expanded township.

CRETS also resolved the ultimate form and location of key intersections linking Rolleston with State Highway 1. The map in Figure 8.1 shows these along with the CRETS road hierarchy. The map also shows the general location of an additional "cross-town" collector route to the south of existing development, and the proposed and indicative pattern of road and cycling connections in the vicinity of the second primary school, as envisaged in the South Rolleston Strategic Transportation Report.

Another important influence is the UDS, which signals a range of actions relating to strategic transport projects, walking and cycling, public transport and travel-demand management across the wider UDS area.

8.3 Key Entrances

8.3.1 ACCESS POINTS

The key road access to Rolleston is via State Highway 1 from locations to both north and south. There is also a network of rural two-lane district arterial roads connecting Rolleston with other Selwyn townships, including Springston, Darfield, Kirwee, Leeston, Lincoln, Prebbleton and West Melton.

CRETS anticipated the State Highway being 4-laned by 2021.

The intersections with State Highway 1 will be further developed over time, as envisaged in CRETS and as traffic demands require, generally as follows:

- A grade separated interchange at Weedons/Weedons Ross Road will form the main entrance into the town from SH 1 and Christchurch. Construction of the interchange is expected to be an NZTA responsibility, likely to occur in the medium term, beyond 2016. Timing relates to the development of the Rolleston Drive over-bridge to Izone .
- A grade separated link across the State Highway, extending Rolleston Drive to connect Izone with the rest of the town. This will occur when the existing traffic signals reach capacity and are removed, so the new bridge will improve highway traffic flows and safety. There will be no access from Rolleston Drive to the State Highway when this occurs. SH1 may be depressed under a near at grade connection between Rolleston Rd and Hoskyns Rd. This relates to issues with proximity to the railway level crossing. This work is expected to be a shared responsibility between SDC and NZTA, occurring in the medium term.
- Restricted access (left turn in and left turn out only) from the State Highway to Tennyson Street, the Brookside Road service area and the BP garage. Preliminary roading plans have been developed for this area and timing could be in the short term (pre 2016).
- Restricted access (left turn in and left turn out only) from the State Highway onto Rolleston Drive (south) through the Catherine Fields subdivision. This will occur as and when significant traffic problems arise from the current form of the intersection, with work to be undertaken by NZTA.
- A "full at-grade" controlled intersection at Dunns Crossing Road, providing for all turning movements.
- Heavy vehicles accessing Izone from the State Highway will be encouraged to use the two "outer" intersections, and the Jones Road / Two Chain Road route.

An extension to Byron Street is planned and Council has purchased land to enable this to occur. The extension will mitigate the effects of the restriction at the Tennyson Street/Brookside Road connection to the State Highway and provide much improved east-west connectivity within this part of the town. It will also enable good access to the proposed future 'Park n Ride' site.

8.3.2 ENTRANCE CHARACTER

The key entrances to Rolleston are significant opportunities to create distinctive landscape corridors, tree lined avenues, threshold or landmark features that reinforce the character of Rolleston as a regional urban centre. Notable entrance corridors are;

- Entry routes from State Highway 1 to Rolleston (Rolleston Drive south, Weedons/Levi Rd and Dunns Crossing Rd). The route could be developed as a landscaped Avenue along Weedons and Levi Roads creating an attractive and very legible entranceway.
- Lincoln-Rolleston Road, where traffic will enter from Christchurch (south via Shands Rd and Selwyn Rd) and Prebbleton. The route from the Metropolitan Urban Limit (MUL) to Lincoln is the "alternative modes corridor" for public transport and cycling. Vehicular traffic will be encouraged to use Springston-Rolleston Road to access Lincoln. Landscaping will be used on Lincoln-Rolleston Road within the MUL to create a pleasant walking and cycling environment and signal the route as a key entranceway into the town.
- Springston-Rolleston Road, where traffic will enter Rolleston from the south, from Lincoln and Lincoln University.
- Goulds Road, where traffic will enter Rolleston from the south west, from townships such as Leeston.

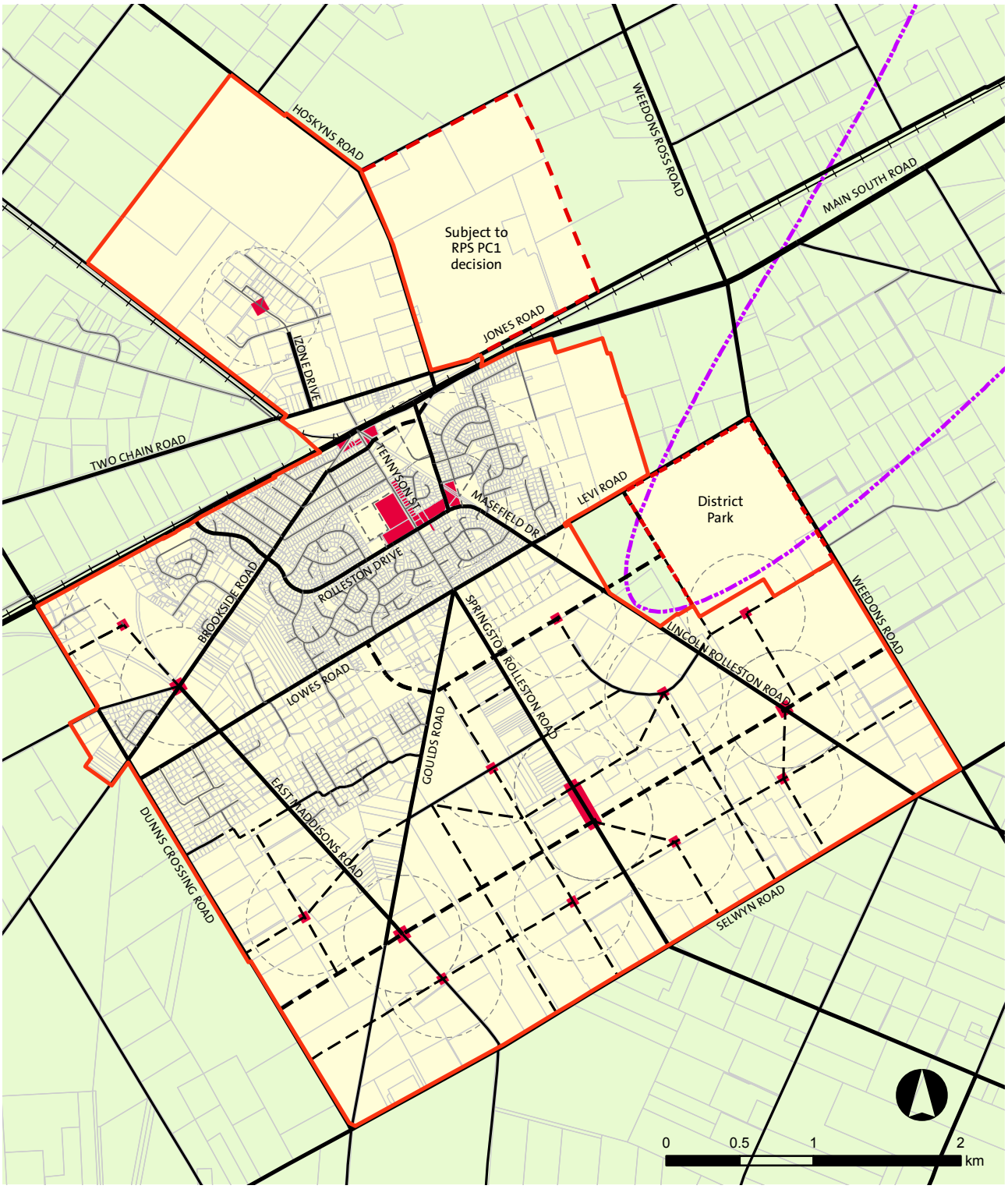


Figure 8.2: Main Roads - Primary Network

- Study area
- Noise Contour
- Town Centre
- Neighbourhood Centre
- Local Centre
- 5 Minute Walk (400m)
- Rural land
- Railway
- National Arterial
- Main (primary) roads
- Proposed main (primary) roads
- Local (secondary) roads
- Proposed local (secondary) roads
- Indicative local (minor) roads

8.4 Main Roads (Primary) Network

The main roads network consists of arterial and collector roads as defined by hierarchy (see figure 8.2). The existing network forms a radial pattern from the existing town centre, with strong linearity, linking to other localities within the area. The linear and rural nature of the existing network creates a high speed environment with the need for management at intersections.

CRETS recommended the use of a ring road pattern for Rolleston, to reduce through traffic volumes in the town centre and maintain efficient access routes around and throughout the town. There are several levels at which this will operate. To facilitate use of these routes, intersection improvements will be required, in particular roundabout or priority controls.

An inner ring road will provide access to the town centre using Rolleston Drive.

Moving outwards, a series of ring routes uses the intersections with the State Highway at Weedons and Dunns Crossing Roads, connecting to Lowes and Levi Roads, the new CRETS collector road (ultimately connecting Weedons and Dunns Crossing Roads) and Selwyn Road. The route also extends across the State Highway using Two Chain Road and Jones Road to link the Izone Southern Business Hub.

Some of the roads within the town centre, such as Rolleston Drive, have a high amenity and town centre value and will as such be less focussed on efficient vehicle flows than other roads. Although vehicle access will be maintained, these roads will focus more on creating a safe and pleasant public space for pedestrians and cyclists. Lowes Road also has a particular focus on good walking and cycling links.

CRETS recommended intersection treatments throughout the current and future urban area. Typically, roundabouts and signed priority controls are envisaged, and these will need to be developed as the township grows or safety issues become of concern. The current speed environment of 100km/hr on the rural network will require careful management, particularly at urban / rural interfaces and where new community/recreational facilities are to be built.

A new roundabout has recently been installed at the Rolleston Drive/Tennyson Street intersection. The intersection of Masefield Drive and Rolleston Drive also presents a particular challenge for traffic management. This intersection divides two of the retail areas of the town and therefore must be pedestrian friendly and provide safe passage for cyclists, whilst allowing Rolleston Drive to function in its capacity as a collector road.

Traffic signals are not considered appropriate at this time, but in future as traffic levels grow and if cyclist / pedestrian safety concerns eventuate they may be used in place of roundabouts and in 'pedestrian priority' areas such as the core Town Centre.

The CRETS road will largely be built through new subdivision development. It has been shifted slightly to the south of the route indicated in the CRETS reports. This will avoid the creation of a potentially complex junction at the intersection of East Maddisons and Goulds Roads. Depending on its final location, it may pass through land on the west side of Tennyson St which is already zoned, and this may require designation. The route will be developed in stages as outlined in Table 8.1.

Table 8.1: CRETS route staging

Growth Pocket	Linkage	Time Period	Construction Method
SR6	Goulds Road to eastern edge of SR6	By 2016	Subdivision
Private land	Eastern edge of SR6 to Springston Rolleston Road	By 2016	Designation/ property acquisition may be required
SR5	Dunns Crossing Road to Goulds Road	2017-2026	Subdivision
SR12	Springston Rolleston Road to boundary SR12 & SR13	Long term, beyond 2041	Subdivision
SR13	Boundary SR12 & SR13 to Lincoln Rolleston Road	Long term, beyond 2041	Subdivision
SR15	Lincoln Rolleston Road to Weedons Road	Long term, beyond 2041	Subdivision

Management of access onto the main roads network is important for safety and efficiency reasons. The number of entry points onto the outer ring route (namely, Dunns Crossing, Selwyn and Weedons Roads) needs to be managed to maintain a higher speed environment. The Structure Plan provides for a green buffer between these key roads and housing, with walking and cycling and parallel internal local access roads.

Landscaping and entrance treatments will also be used to differentiate and identify those roads that are main access routes from those that form entranceways to residential areas.

8.5 Local Roads (Secondary) Network

Within Rolleston the main roads form a grid pattern with additional diagonal links which provide a good level of connectivity between neighbourhoods (see figure 8.2). The nature of previous growth in Rolleston has resulted in many areas of development not being well linked, where there are many long, poorly linked cul-de-sacs.

Future development of the local roads network in Rolleston will build on the linear nature of the existing primary network, while also recognising the urban character of existing developments. The local roads network will provide for a variety of road forms to be developed, including low speed environments and changes in direction to create interest. "Major" local roads will be more linear in nature to provide connectivity and better integrate with the main roads network.

The Structure Plan provides for connections between Neighbourhood Centres and local centres in a largely grid based pattern with some diagonal routes reflecting the existing angular character. The network also provides for additional connections between ODP areas and the main roads network, including the outer ring route comprising Dunns Crossing, Selwyn, and Weedons Roads. It is expected that all of these roads will be provided by developers as part of subdivision.

This pattern will provide a high level of connectivity within the new areas of the township, and be complemented by a denser, interconnected local roads network as subdivisional development occurs. This will be controlled through SDC's Subdivision Design Guidelines and District Plan provisions, which will also limit the maximum length of cul-de-sac.

8.6 Town Centre

The preferred option for the town centre involves the redevelopment of Rolleston Reserve and the creation of additional local roads. Some of the local town centre connections, particularly those connecting to the reserve are indicative at this stage and will be developed further during the master planning stage. The new road, cycling and walking connections discussed in section 8.7 will need to be developed or facilitated by Council, given Council ownership of land. Some of this will be required for higher density housing development, so it should be feasible to fund some of the infrastructure through the sale of medium to high density residential sites.

The core town centre will be a distinctive movement zone with a focus on retail, civic open space and higher density residential character, as described in Section 6. The streetscape design within this core will reflect the requirements of this land use and function, and reinforce the civic character of the Rolleston community. Streetscape design will integrate street furniture, lighting, signage and landscaping.

The proposed master plan for the Town Centre will be highly relevant to further development of the movement network in this area. (see diagram below)

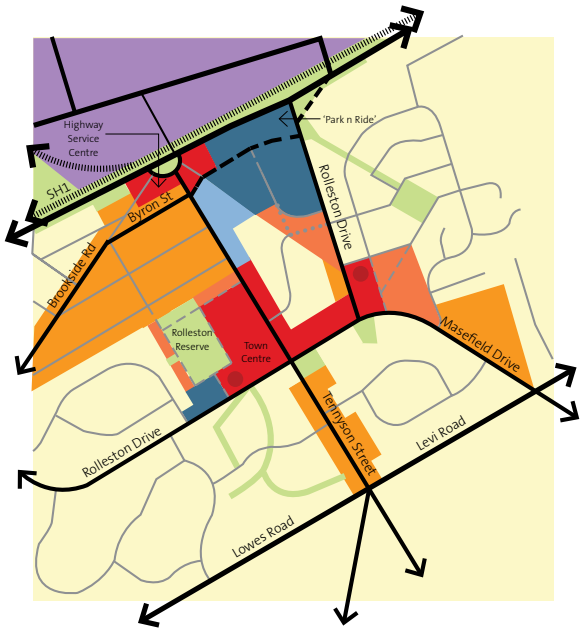


Figure 8.3: Town Centre Diagram

8.7 Cycling & Pedestrian Networks

To help Rolleston achieve its objective of being a sustainable town, provision of alternative transport methods including walking and cycling, are central to the movement network proposed as part of the Structure Plan. As an expanding town Rolleston requires additional provision for all transport types. Currently, pedestrian safety in Rolleston is a concern; long, straight, roads which currently have a rural character attract high speeds and have limited footpaths. The town's facilities are generally located on arterial and collector roads for easy access; however the higher speeds, increased road width and traffic volumes associated with these roads can present a safety issue. Road network design needs to incorporate a pedestrian and cycling network with crossing points that are fully integrated into the overall urban fabric of street furniture, lighting, signage and landscaping of the town.

Existing road reserves within Rolleston are generally wide and can provide opportunities to incorporate walking and cycling to further expand Rolleston's movement network. Walking and cycling routes may also be separate to vehicle routes, improving safety, as part of open space provision and landscape treatments to enhance amenity. "On road" cycle routes need to be on either appropriately designed streets or roads with specific cycle lanes. A problem with cycleways beside road carriageways (rather than being part of them) in urban areas is the safety issue with property entranceways and conflicts between cyclists and vehicles exiting properties. Mostly in Rolleston, the "built road environment" can cater for cyclists but "off road" facilities are also important to the network.

New development should also provide for interconnected walking and cycleway routes, integrated with open space and proposed green corridors and water races wherever possible, providing benefits for social and environmental well-being.

New walking and cycling routes will connect to a wider network which includes Lincoln-Rolleston Road and Boundary Road and is promoted as part of an alternative modes corridor in CRETS to connect Lincoln and Rolleston. A further important route will extend the network from the second primary school eastwards, ultimately connecting with the new regional 100ha Park.

All walking and cycling routes will be well signed and provide a pleasant experience for users. Roundabout design will consider pedestrian and cyclist needs to ensure continuity of the walking and cycling network.

The walking and cycling network in Rolleston will be designed to meet the objectives and action plan of the Selwyn District Walking and Cycling Strategy. The strategy aims for Selwyn to be a place "where more people walk and cycle safely for transportation and enjoyment." One of the key aims of this strategy is to reduce car journeys of less than 2km. The action plan within the Strategy details standards by which the walking and cycling network will be designed.

The action plan also includes several key initiatives, which are included in the LTCCP for the 2009-2019 period, including:

- Rolleston to Lincoln cycleway development
- Rolleston to Templeton cycleway development
- Lowes Road cycleway
- Linkage between Rolleston and Izone
- Cycling and walking developments in the Recreation Precinct area and its environs

In addition to the initiatives detailed in the LTCCP the Structure Plan proposes to provide a walking and cycling link connecting Markham Way to Norman Kirk Drive to provide access to the Primary School and Council Head Quarters.

A localised grade separated pedestrian/cycle crossing connecting Izone Southern Business Hub with the town centre over the State Highway and Railway line is also proposed. This will connect George Holmes Road and Tennyson Street. The overbridge will link to the planned cycle routes providing north/south access across the town. The overbridge will provide safe access across the state highway and railway line from the rural residential areas to the north of Rolleston to the schools and amenities within the town. The overbridge provides an opportunity to create an iconic structure that land marks Rolleston on the State Highway which can be used to link the design elements of the 'Park n Ride' facility and Izone.

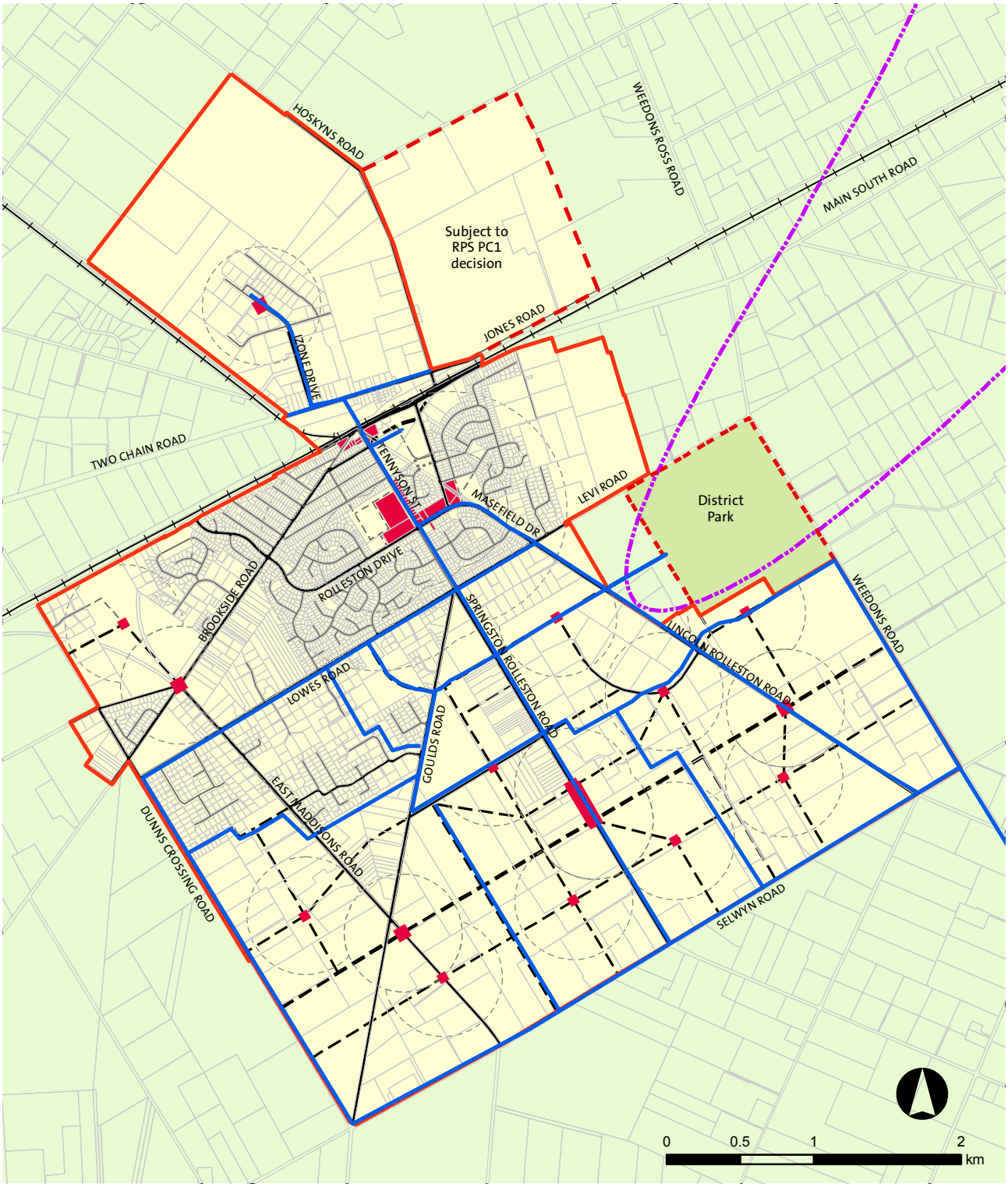


Figure 8.4: Cycleway Routes

- Study area
- Noise Contour
- Town Centre
- Neighbourhood Centre
- Local Centre
- 5 Minute Walk (400m)
- Rural land
- Cycle Routes
- Railway
- National Arterial
- Main (primary) roads
- Proposed main (primary) roads
- Local (secondary) roads
- Proposed local (secondary) roads
- Local (minor) roads
- Indicative local (minor) roads
- Walking and Cycling Link

8.8 Public Transport

8.8.1 BUS SERVICES

Over time, as Rolleston grows, bus services will be expanded, connecting to the main nodes within the town; town centre, Izone, schools, neighbourhood centres, local centres and the Recreation Precinct. The internal bus network will connect to the 'Park n Ride' facility and provide links to neighbouring towns such as Lincoln, Hornby and an express service to Christchurch City. The bus service will, with increased demand, provide a viable alternative to private transport with regular services and good connections.

The expected development of bus service routes is shown in figure 8.5. This will develop over time as development occurs.

8.8.2 RAIL SERVICES

Expansion of rail to include provision of passenger rail services could be a possible longer term future addition to Rolleston's public transport network. The UDS team is currently conducting studies into the viability of long term passenger transport services for Greater Christchurch, including rail systems. It is unlikely that Rolleston will have the population and trip demand necessary to make a specific service viable for some time, unless part of a wider integrated service with Christchurch.

8.8.3 'PARK N RIDE' FACILITY

A 'Park n Ride' facility has been planned for siting adjacent to State Highway 1 near the Selwyn District Council offices. This would provide for commuters to park their vehicles and use public transport to access Christchurch City and other major locations. Such a facility would also provide for residents from outside Rolleston to park on a major access route and use public transport or pedestrian facility to access amenities within the town. There would also be provision for cyclists with secure cycle parking.

Pending further investigations and confirmation through the UDS public transport review process, financial provision has been allocated in the 2009-2019 LTCCP.

There are also longer term opportunities to expand 'Park n Ride' to cater for potential passenger rail extensions. This expansion could be in the form a separate parking facility across the State Highway or through provision of a pedestrian overpass.

8.9 Rail Freight

Rolleston is located close to a node of the two main South Island railway corridors, connecting Invercargill to Rolleston/Christchurch and Greymouth to Christchurch/ Lyttelton. Currently these railway lines are mainly used for freight transport, especially coal from the West Coast.

Future extension of the railway network to provide rail services in Rolleston would provide increased opportunities for the Izone Southern Business Hub, which will help to create and retain viable and sustainable businesses. An appropriate railway siding is needed to make use of the rail network for freight in Rolleston, and planning is presently underway in scoping this.

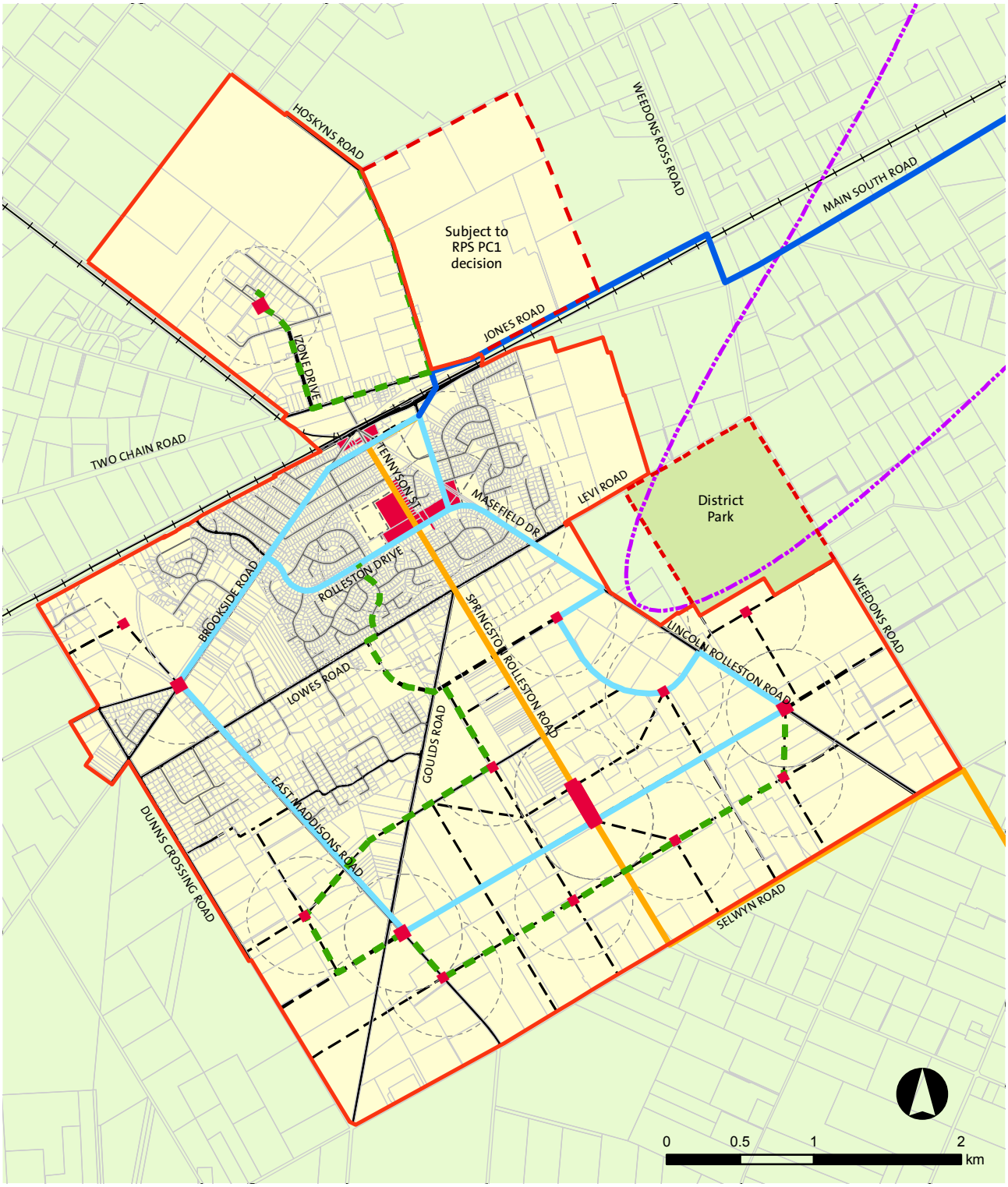


Figure 8.5: Public Transport Route Patterns

- Study area
- Noise Contour
- Town Centre
- Neighbourhood Centre
- Local Centre
- 5 Minute Walk (400m)
- Rural land
- Railway
- National Arterial
- Main (primary) roads
- Proposed main (primary) roads
- Local (secondary) roads
- Proposed local (secondary) roads
- Local (minor) roads
- indicative local (minor) roads
- Destination Service to Lincoln
- Destination Service to ChCh
- Orbital Service
- Potential Service

8.10 Movement Network Summary

Table 8.2: Key Issues, Constraints & Design Outcomes

Item		Key Issues and Constraints	Design Outcomes
Movement	Vehicular	High use of private vehicles for access to areas outside and within the town particularly related to commuting	Enhanced walking and cycling network Good public transport links Long term consideration of passenger rail to Christchurch
		High speed rural roads and interface with urban areas	Rural roads are part of the current character of Rolleston Traffic controls, landscaping and narrowing in urban areas will be needed to manage speeds
		Road hierarchy is not clear to road users creating navigation difficulties	Urban design incorporating hierarchy of street design to assist legibility; use of signs and visual aids
		Over-reliance of cul-de-sac design, poor linkages	Application of SDC's subdivision standards which limit the lengths of new cul-de-sac
	Cycling & Walking	Increasing use of roundabouts which are not cycle and pedestrian friendly	Consideration of most appropriate traffic control mechanisms for all road users; providing crossing points and facilities for pedestrians
		Lack of defined movement networks for pedestrians and cyclists	Design of integrated network of walking and cycling routes that offer where possible segregated routes connecting main nodes within the town
	Izone	Segregation of Izone from the rest of the town by the State Highway	Physical and visual connections to link both sides of the township including intersection improvements and provision of pedestrian and cycle access
	Legibility	Current entrance experience into the Township is not clearly defined	Design of entrance boulevard along Levi Road and enhancements of entrances along Dunns Crossing Road, Lincoln Rolleston and Springston Rolleston Roads.

8.11 Implementation

8.11.1 ACTION PLAN

The likely land requirements, approximate timelines and cost implications have been assessed. The rate of development of the movement network is related to both the rate of population growth and subdivisional activity, and therefore subject to change. Some actions may need to be undertaken ahead of development occurring in order to provide appropriate connections.

Table 8.3: Movement Network Action Plan

Layer Component	Action	Land Requirements	Time Frame	Cost Implications
Road Network	Confirm road hierarchy within the MUL and for external connections to other destinations	N/A	Short term	Planning action, no capital cost
	Construct CRETS 'cross-town' main road connection	Part of the route may require designation	All periods, staged	Largely developer provided SDC may need to construct part through private property
	Develop new local roads network as per Structure Plan	Provided by subdivisions	All periods	Developer funded
	Upgrade rural arterial road connection Christchurch to Rolleston: Lincoln-Rolleston and Selwyn Roads	Nil to minor	Short term	LTCCP provides for a $4m upgrade 2009-2012
	Byron St extension	SDC ownership	Short term	LTCCP provides for Rolleston network upgrades
	Develop concepts for Gateway entrances to Rolleston, e.g. Avenue Planting, signage, lighting etc	Possible	Short term	No provision yet. Cost depends on design
	Rolleston Drive / SH 1 changes	SDC ownership	Likely to be Medium Term	NZTA driven
	Tennyson St / SH 1 changes	Underway	Likely to be short term	NZTA driven with SDC input
	Upgrade intersection controls, typically roundabouts	Possibly for corner splays	All periods, staged	LTCCP provision or developer provided
	General road improvements, including widening	To be identified	Short term, then ongoing	LTCCP provides a district wide programme
	Signage, lighting, streetscape provision – develop standards	Nil	Short term	Planning action, no capital cost
Town Centre	New walking and cycling connections to Norman Kirk Drive – further discussion, confirm feasibility and funding	School land and SDC land	Short term	No provision, to be determined
	Tennyson St and Rolleston Drive upgrades	Nil	Short term	To be confirmed through master planning process

Layer Component	Action	Land Requirements	Time Frame	Cost Implications
Walking & Cycling	Develop internal walking and cycling networks, especially Lowes Rd, Recreation Precinct, schools, Izone	May require negotiation with developers	Short term, then ongoing	Partly developer provided, partly SDC LTCCP has provision
	Provision of a walking/cycling over-bridge over the state highway and railway line connecting Izone to Tennyson Street	Minor	Medium term	Provided by NZTA in conjunction with SDC. Funding likely to be identified in the next 10 year plan
	Cycling connections to Lincoln and Templeton	On road	Short term	LTCCP has provision
	Review SDC footpaths policy for Rolleston and increase numbers of footpaths	Nil	Short term	Developer funded for new subdivisions LTCCP funding for dual footpaths on busier roads
Public Transport	Improved Public Transport Service, including liaison with ECan	N/A	Ongoing	ECan funds services, SDC will need to fund infrastructure (shelters etc)
	'Park n Ride' facility, to be confirmed through UDS PPT planning	2 ha, SDC ownership	Short term	LTCCP provision

Short term – to 2016, Medium term – 2017-2041, Long term – 2042-2075

Note: *implementing the above will also involve best practice urban design or placemaking principles.*

8.11.2 MOVEMENT - DEVELOPMENT PRINCIPLES CHECKLIST

Well Designed Rolleston

A cohesive and well planned movement system which caters for all modes (i.e. vehicular, pedestrian, cyclists and public transport services) will support future growth of the urban area. An efficient and well planned movement network is essential to the economic and social well-being of the community.

This integrated movement framework will provide effective Regional and District linkages, that place Rolleston at the heart of the Selwyn community with strong links to the rural communities.

The movement network provision has been designed to utilise and complement the existing roads where appropriate.

A Sustainable Town

Achieving a compact transport system which includes a connected open space network of walkways and cycleways and efficient public transport, will contribute to improving overall community well-being. Reducing reliance on vehicle use, creating safe, walkable neighbourhoods and reducing fuel consumption has multiple benefits for the community. Developing and maintaining good movement connections will help local businesses develop and thrive, delivering economic sustainability for the town.

These benefits will be further increased as the transport system adopts low impact urban design approaches and integrates public transport modes such as bus, shuttle and rail.

Realistic and Achievable Rolleston

The short term actions required to implement the proposed movement network can largely be achieved through provisions in the 2009-19 LTCCP, with much of the infrastructure being provided by developers as the township grows. There are some actions which require further planning effort and this may lead to designations being sought. Close and ongoing liaison with key stakeholders, such as Council's UDS partners (CCC, NZTA and ECan), will also be necessary.