

Social Assessment of the proposed Christchurch Southern Motorway (Stage 2) and Main South Road Four Laning.

Technical Report No. 13

For The New Zealand Transport Agency (NZTA).

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This Technical Report has been produced in support of the Assessment of Environmental Effects (AEE) for the Main South Road Four Laning and Christchurch Southern Motorway Stage 2 Project. It is one of 20 Technical Reports produced (listed below), which form Volume 3 of the lodgement document. Technical information contained in the AEE is drawn from these Technical Reports, and cross-references to the relevant reports are provided in the AEE where appropriate.

A Construction Environmental Management Plan (CEMP) has been prepared to provide the framework, methods and tools for avoiding, remedying or mitigating environmental effects of the construction phase of the Project. The CEMP is supported by Specialised Environmental Management Plans (SEMPs), which are attached as appendices to the CEMP. These SEMPs are listed against the relevant Technical Reports in the table below. This Technical Report is highlighted in grey in the table below. For a complete understanding of the project all Technical Reports need to be read in full along with the AEE itself; however where certain other Technical Reports are closely linked with this one they are shown in bold.

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Executive Summary

The Christchurch Southern Motorway Stage 2 (CSM2) and Main South Road Four-Laning (MSRFL) Project is being developed in the context of a number of regional and district policies that govern the relationship between urban settlements and their transport networks, each reflecting extensive community consultation.

The CSM2 and MSRFL alignment passes through areas which are largely rural with an increasing peri-urban character. In the area between Templeton and Rolleston, Weedons is the main community bisected by the Project alignment. While Weedons is a socially distinct area its social boundaries reflect a lot of overlap in terms of social and economic networks and communities of interest. New highways have a recognised social-economic effect of altering urban form. Overall, the effects on urban form will reinforce strong existing trends towards a greater Christchurch that is widely distributed (north and south). There are, however, strong tools in place to guide pressures around changes to urban form by way of established planning.

Reduced congestion on principal commuter routes will result in reduced travel times, and increasing opportunities for employment in the metropolitan labour market area in relation to place of residence. Reduced congestion on existing routes and higher safety standards on the proposed motorway are likely to lower accident rates for vehicles within the Christchurch-Rolleston corridor. There are significant social benefits from reduced congestion and improved travel times, particularly for commuting workers, plus the likely improvements in road safety from the. Effects on active transport (pedestrians and cyclists) also provide a net social benefit due to the Project's design features.

There will be some local changes in traffic with a number of improvements in convenience and safety, as local access and connectivity will improve. There is a local concern about a possible reduction of safety in the vicinity of Weedons School. Emergency services anticipate significant benefits from the Project, so long as details about crossing the median barrier can be clarified. The overall social effect on traffic will be positive.

Significant Project construction noise effects can generally be avoided, remedied or mitigated by utilising the best practicable option approach and the achievement of compliance with the relevant standards. Construction noise effects, although temporary in duration, will require pro-active management to achieve acceptable outcomes. Most dwellings near the existing Main South Road are likely to experience improvements in their ambient residential noise environment from the operation of the new motorway.

Health is an important component of social wellbeing. The Air Quality Assessment concludes that no mitigation or monitoring of effects from vehicle emissions is required, as vehicle emissions are unlikely to exceed the relevant health-based assessment criteria (AQNES, ambient air quality guidelines and regional air quality targets). Dust and fumes from earthworks can affect human health and be a nuisance to the surrounding public. An Air Quality Management Plan will set out the approach and requirements for monitoring, management and mitigation of dust.

The visual "audience" of the Project comprises residents living within 500m either side of the new motorway, road users on adjacent and intersecting local roads, users of the industrial and commercial areas, and users of the motorway and link roads, including pedestrians and cyclists. In some specific

Locations adverse effects on residential amenity values may be moderate. Mitigation measures are set out in the Landscape and Visual Assessment report and will be included in a Landscape Management Plan and conditions, including lighting controls. As these will include elements such as hedges and copses of trees that local people are well used to, and see as beneficial, the long term social effect from further changes to the landscape from the Project are likely to be minor. Some individuals are still likely to consider the changes unacceptable.

Negative social effect from loss of property access along the alignment, particularly for MSRFL, are avoided or reduced in the Project design through a combination of proposed new local roads and property entrance ways. Issues for directly affected parties are being resolved through individual negotiations including property purchases in some instances. Inconvenience for some is balanced against considerably safer, and in many instances more convenient, property access, leading to an overall social benefit.

With the closure of only one local road and the construction of over and underpasses, the potential for social severance relating to residents, businesses and services is low. There is no assessed potential for social or economic disparities emerging either side of the highway.

Planning effects typically arise for people and communities in the course of planning for a major infrastructure Project such as this. There is inevitable uncertainty as the Project moves from concept through technical investigations and feasibility analysis to detailed design and feasibility. Temporary relocation of some households during construction will be an option only at the end of a cascade of other practicable options. A communications plan and community liaison group are proposed.

The overall conclusion of this assessment is that from the point of view of people and identifiable communities in the impact area, the Project should bring significant social benefits. There will, however, be some localised negative social effects experienced by a number of individuals and businesses and one small residential area. Most of the negative effects can be mitigated so that the residual effects are relatively minor and the net social benefit will still be significantly positive.

1 Introduction

1.1 Project background

The NZ Transport Agency (NZTA) is implementing a programme of “Roads of National Significance” (RoNS). Roads known as the Christchurch Motorways are one of seven RoNS projects, and the Christchurch Southern Motorway and four laning of State Highway 1 (SH1) to Rolleston is one of these projects along with the Northern and Western corridors.

The first stage of the Christchurch Southern Motorway (CSM1 to Halswell Junction Road) is under construction and the second stage is to complete the motorway to link with SH1 and then four-lane SH1 to Rolleston. There will be a number of grade-separated intersections along this route (see 1.4 Project description, below). This second stage is known as the “Christchurch Southern Motorway Stage 2 and Main South Road Four Laning” Project (referred to subsequently as the **CSM2** and **MSRFL** or collectively as the Project).

1.2 Strategic background

Movement along the Southern Corridor is often subject to congestion. Furthermore, the Project has taken on increasing strategic importance since the Christchurch earthquakes with the shift of businesses from the central city to western areas such as Hornby and Russley. Post earthquakes, and with implementation of the Greater Christchurch Urban Development Strategy (**UDS**) through proposed changes to the Regional Policy Statement (**RPS**), the western and southern corridors will have increased strategic importance for the overall development of metropolitan Christchurch including the well-established growth node of Rolleston.

Combining the CSM2 project with the MSRFL project into a single project reflects the need to integrate all sections of the Southern Corridor, including the CSM1 stage currently under construction, before all the anticipated benefits can be realised.

The Assessment of Environmental Effects (**AEE**)¹ outlines the NZTA’s objectives for the Project as follows:

- to improve accessibility from Christchurch and the Port of Lyttelton to the south and west for individuals and businesses while improving local access to work, shops and social amenity in Templeton and Hornby
- to align traffic types and movements with the most appropriate routes by separating through traffic from local traffic to the south west of Christchurch and promoting other routes for passenger transport
- to improve network resilience and safety by providing a route with enhanced safety standards and capacity.

¹ Section 2.6

1.3 Policy context

This Project is being developed in the context of a number of regional and district policies that govern the relationship between urban settlements and their transport networks, each reflecting extensive community consultation. These policies and plans include the:

- Canterbury Regional Policy Statement – Proposed Chapter 12A Development of Greater Christchurch, 2012 (CRPS-PC1)
- Canterbury Regional Land Transport Strategy 2012–2042, 2012 (CRLTS)
- Greater Christchurch Travel Demand Management Strategy and Action Plan, not dated (GCTDMS)
- Transport Strategy of the Christchurch, Rolleston and Environs Transportation Study, 2007 (CRETS)
- Proposed Plan Change 7 of Selwyn District Plan, 2011 (SDC-PC7)
- Rolleston Structure Plan of Selwyn District Council (SDC), 2009 (SDC-RSP)
- Land Transport Activity Management Plan of SDC 2009 (SDC-LTA)
- Walking and Cycling Strategy of SDC, 2009 (SDC-WCS).

All these policies and plans address the issue of transportation within the context of the sustainable development of Greater Christchurch (including Selwyn District).

Objective 7 of Chapter 12A of the Canterbury Regional Policy Proposed Statement (Plan Change 1) requires planners to integrate transport infrastructure with settlement patterns in the Greater Christchurch area, while *(a) limiting network congestion, (b) reducing dependency on private motor vehicles, (c) reducing emission of contaminants to air and energy use; and (d) promoting the use of active transport modes.*² This objective is particularly relevant for two existing towns in the wider impact area of the Project, Prebbleton and Rolleston, which under Policy 4 (b) of Proposed Change 1 are expected to accommodate future urban growth that *Enables efficient and economic provision of network infrastructure.*³ Under Policy 5 (a) Rolleston is identified as a Key Activity Centre that Selwyn District Council shall manage to *(b) (v) support the development of the principal public transport and cycling networks and the ability to change transport modes and (vi) encourage pedestrian and cycling access to and within these centres.*⁴ Policies 7 and 9, regarding development design and transport effectiveness, reinforce this shift away from private motor vehicles by providing for a variety of travel options including public transport, paths and cycleways, while avoiding any development that could overload existing and proposed transport networks.⁵

The Canterbury Regional Land Transport Strategy 2012–2042 complements CRPS-PC1 by providing greater choice for the public by investing in initiatives that promote increased use of public transport, cycleways and footpaths; integrate land use and transport to avoid negative effects; improve human health of residents through the physical activity of walking and cycling; and enhance community connectedness by reducing walking distances between key locations.⁶

² Canterbury Regional Policy Statement, 2012, pages 7–8.

³ Canterbury Regional Policy Statement, 2012, page 11.

⁴ Canterbury Regional Policy Statement, 2012, page 12.

⁵ Canterbury Regional Policy Statement, 2012, pages 19 and 21.

⁶ Canterbury Regional Transport Committee, 2012: 5 & Appendix F– Regional Outcomes, pages 26–28, and 30.

The partners of the Greater Christchurch Urban Development Strategy (who include the NZTA) are committed to sustainable transport options that would provide a broader range of transport modes in future for residents of Selwyn District: *“Transport choices, including public passenger transport, walking, and cycling will be encouraged to achieve a greater share of trips.”*⁷ The Greater Christchurch Travel Demand Management Strategy and Action Plan notes people residing in Selwyn District have fewer choices of modes of transport than those living in Christchurch City, and often have longer distances to travel to work, school or recreational activities.⁸

The Christchurch, Rolleston and Environs Transportation Study, prepared for the UDS partners in 2007, supports the use of main roads, and the redirection of traffic onto alternative routes and modes to minimise the effects of traffic through Templeton, Lincoln and Prebbleton. It concludes that rail is not a viable option for commuters in the foreseeable future, but as demand for public transport increases options such as larger buses or rapid transit buses, and park and ride facilities for Rolleston and Lincoln, could be introduced. Moreover, CRETS proposes a stage 2 extension to the Christchurch Southern Motorway⁹ which is consistent with this Project. Planned improvements at Rolleston include the promotion of an inner and an outer ring road, linking of the town and industrial area with *“a grade separated access”* across SH1, restricted access of roads and SH1 at a number of locations, and a realignment of Two Chain and Jones Roads at Railway Road.¹⁰

Selwyn District also has a number of plans which address transport strategies. Proposed Plan Change 7 of the Selwyn District Plan (2011) provides the overall direction for the main towns. It rezones 809 hectares of land in Lincoln and Rolleston for residential development, and introduces provisions to implement consolidation of these towns. PC7 is based on the first stage of the Rolleston Structure Plan that identifies planned transport connections between the town and SH1. These planned connections are (from SW to NE in direction) a full intersection allowing all movements at Dunns Crossing Road, two restricted access (left in/out) intersections at Rolleston Drive (south) and Tennyson Street, a grade separated link extending Rolleston Drive to the Izone with a bridge, and a grade separated interchange at the Weedons Road/Weedons Ross Road intersection.¹¹

The Land Transport Activity Management Plan of SDC describes the positive and negative effects of the land transport network, and the Council’s responses to those negative effects. In response to the negative effect that transport routes can have by separating communities, for instance, it proposes to integrate walking and cycling links with public transport and vehicle routes to connect communities, amenities and shopping precincts.¹²

1.4 Project description

The NZ Transport Agency (NZTA) seeks to improve access for people and freight to and from the south of Christchurch via State highway 1 (SH1) to the Christchurch City centre and Lyttelton Port by

⁷ UDS Section 3.6 cited by Environment Canterbury (nd: 17

⁸ Environment Canterbury, nd, page 11.

⁹ Connell Wagner Ltd, 2007, pages 6,13.

¹⁰ Connell Wagner Ltd., 2007, page 11.

¹¹ AECOM and Boffa Miskell, 2009, page 107.

¹² Selwyn District Council, 2009a, pages 2–11.

constructing, operating and maintaining the Christchurch Southern Corridor. The Government has identified the Christchurch motorway projects, including the Christchurch Southern Corridor, as a road of national significance (RoNS).

The proposal forms part of the Christchurch Southern Corridor and is made up of two sections: Main South Road Four Laning (MSRFL) involves the widening and upgrading of Main South Road (MSR), also referred to as SH1, to provide for a four-lane median separated expressway; and the construction of the Christchurch Southern Motorway Stage 2 (CSM2) as a four-lane median separated motorway. The proposed construction, operation and maintenance of MSRFL and CSM2, together with ancillary local road improvements, are referred to hereafter as 'the Project'.

MSRFL

Main South Road will be increased in width to four lanes from its intersection with Park Lane north of Rolleston, for approximately 4.5 km to the connection with CSM2 at Robinsons Road. MSRFL will be an expressway consisting of two lanes in each direction, a median with barrier separating oncoming traffic, and sealed shoulders. An interchange at Weedons Road will provide full access on and off the expressway. MSRFL will connect with CSM2 via an interchange near Robinsons Road, and SH1 will continue on its current alignment towards Templeton.

Rear access for properties fronting the western side of MSRFL will be provided via a new road running parallel to the immediate east of the Main Trunk rail corridor from Weedons Road to just north of Currags Road. For properties fronting the eastern side of MSRFL, rear access is to be provided via an extension of Berketts Drive and private rights of way.

The full length of MSRFL is located within the Selwyn District.

CSM2

CSM2 will extend from its link with SH1 / MSRFL at Robinsons Road for approximately 8.4 km to link with Christchurch Southern Motorway Stage 1 (CSM1, currently under construction) at Halswell Junction Road. The road will be constructed to a motorway standard comprising four lanes, with two lanes in each direction, with a median and barrier to separate oncoming traffic and provide for safety.¹³ Access to CSM2 will be limited to an interchange at Shands Road, and a half-interchange with eastward facing ramps at Halswell Junction Road. At four places along the motorway, underpasses (local road over the motorway) will be used to enable connectivity for local roads, and at Robinsons / Currags Roads, an overpass (local road under the motorway) will be provided. CSM2 will largely be constructed at grade, with a number of underpasses where elevated structures provide for intersecting roads to pass above the proposed alignment.

CSM2 crosses the Selwyn District and Christchurch City Council boundary at Marshs Road, with approximately 6 km of the CSM2 section within the Selwyn District and the remaining 2.4 km within the Christchurch City limits.

¹³ CSM2 will not become a motorway until the Governor-General declares it to be a motorway upon request from the NZTA under section 71 of the Government Road Powers Act 1989 (GRPA). However, for the purposes of this report, the term "motorway" may be used to describe the CSM2 section of the Project.

Key Design Features

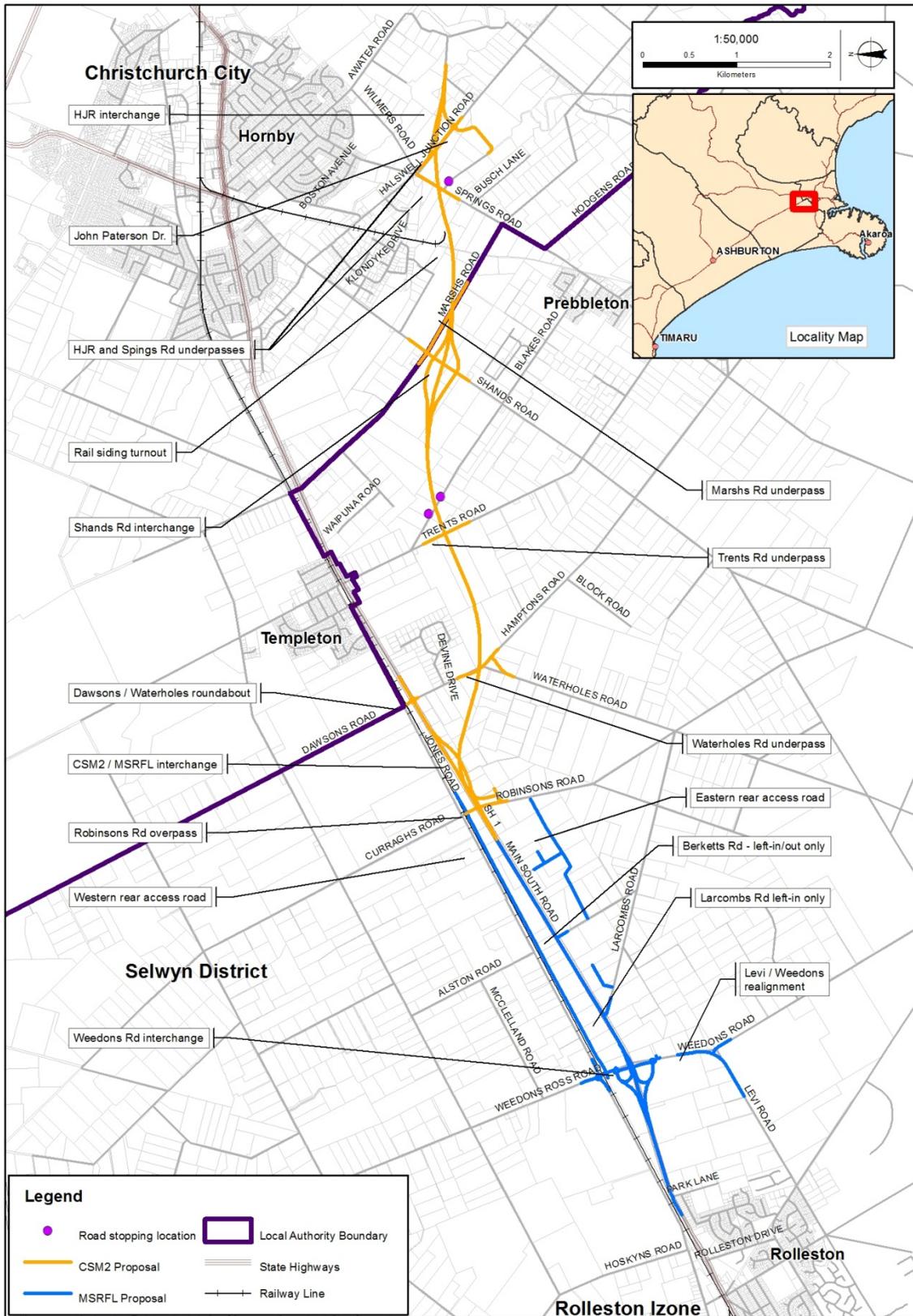
The key design features and changes to the existing road network (from south to north) proposed are:

- a new full grade separated partial cloverleaf interchange at Weedons Road;
- a new roundabout at Weedons Ross / Jones Road;
- a realignment and intersection upgrade at Weedons / Levi Road;
- a new local road running to the immediate east of the rail corridor, to the west of Main South Road, between Weedons Ross Road and Curraghs Road;
- alterations and partial closure of Larcombs Road intersection with Main South Road to left in only;
- alterations to Berketts Road intersection with Main South Road to left in and left out only;
- a new accessway running to the east of Main South Road, between Berketts Road and Robinsons Road;
- an overpass at Robinsons and Curraghs Roads (the local roads will link under the motorway);
- construction of a grade separated y-junction (interchange) with Main South Road near Robinsons Road;
- a link road connecting SH1 with Robinsons Road;
- a short new access road north of Curraghs Road, adjacent to the rail line;
- a new roundabout at SH1 / Dawsons Road / Waterholes Road;
- an underpass at Waterholes Road (the local road will pass over the motorway);
- an underpass at Trents Road (the local road will pass over the motorway);
- the closure of Blakes Road and conversion to two cul-de-sacs where it is severed by CSM2;
- a new full grade separated diamond interchange at Shands Road;
- an underpass at Marshs Road (the local road will pass over the motorway);
- providing a new walking and cycling path linking the Little River Rail Trail at Marshs Road to the shared use path being constructed as part of CSM1;
- an underpass at Springs Road (the local road will pass over the motorway);
- a new grade separated half interchange at Halswell Junction Road with east facing on and off ramps linking Halswell Junction Road to CSM1; and
- closure of John Paterson Drive at Springs Road and eastern extension of John Paterson Drive to connect with the CSM1 off-ramp via Halswell Junction Road roundabout (east of CSM2).

The proposed alignment is illustrated in Figure 1 and encompasses the MSRFL and CSM2 alignments between Rolleston and Halswell Junction Road.

The Project will take around three to four years to construct with a likely peak workforce of 150–200.

Figure 1 Proposal location map



1.5 Expected project social benefits

The NZTA expects the Project will provide improved outcomes for driving, walking, cycling and public transport. These community benefits are outlined on the Project website as follows:¹⁴

Reduced Congestion

- Improved traffic flows will reduce journey times and enhance travelling efficiency, particularly for commuters and regular delivery services between Christchurch and Rolleston.

Improved access and connectivity

- CSM2 and MSRFL will improve connections between Lyttelton Port, the City Centre and industrial areas in the south of Christchurch and Rolleston
- Reduced traffic on many local roads will make access easier and safer
- The growing populations of Rolleston, Lincoln and West Melton will benefit from improved inter-connections

Improved safety

- CSM2 will reduce vehicle numbers on local roads around Templeton, Hornby and Prebbleton, making these roads safer for local residents, particularly school children and the elderly
- Introducing a raised median and safety barrier on MSRFL will improve motorist safety by separating oncoming traffic
- Restricting right-hand turns across the busy state highway will also improve motorist safety

Improved cycling

- With traffic moving onto CSM2, local roads through Templeton and into Christchurch will be safer for cyclists due to reduced traffic volumes

Improved public transport

- With additional lanes on SH1 and less traffic through Templeton, Hornby and Prebbleton, there will be increased opportunities for bus priority

Improved environment

- Less traffic travelling through the Templeton, Hornby and Prebbleton communities is expected to reduce noise, vibration, air pollution and other effects of high volumes of traffic, resulting in a more pleasant environment for residents.

1.6 Background to the SIA

The NZTA prepared a preliminary SIA and has undertaken a range of public consultation activities reported in the AEE as discussed in section 2.2 of this report below. The preliminary SIA was essentially a desk study, supplemented by information extracted from written submissions. Subsequently, Taylor Baines & Associates was commissioned in March 2012 to complete this more comprehensive SIA to support the Assessment of Effects requirements for the NZTAs NOR and consent applications on this Project.

¹⁴ <http://www.nzta.govt.nz/projects/southernmotorway2/overview.html>

1.7 Objectives of this SIA

The objectives of this SIA are to compile a comprehensive assessment of social effects and the overall implications of the scheme for social and economic wellbeing of people and communities. The scope of the SIA is discussed in section 2, below.

The objectives of the SIA are to:

1. Prepare a social impact assessment of the Project to support NORs and applications for resource consents.
2. Develop proposals for mitigation of social effects to assist the Project design, reduce the significance of any residual effects and enhance Project social benefits.
3. Undertake the SIA in accordance with the NZTA guidelines and international standards of best practice.

Excluded from this SIA are:

- Consideration of alternatives for alignment of CSM2 (alternatives are discussed in Chapter 7 of the AEE)
- Input into major design features of the Project such as intersection or interchange placement or design (minor changes may be accommodated in the detailed design)
- Consideration of a detailed construction methodology.

Limits to methods used in this assessment are as follows:

- Scoping was limited to use of existing material including the NZTA's consultation results
- Technical reports by other consultants were relied on to understand amenity effects (noise, air quality, visual) rather than systematic interviewing along the alignment
- The field methodology for the assessment was limited to key informant interviews
- While a researcher attended some consultation with directly affected parties as described below (section 2.4), it was inappropriate to interview these people directly as they were affected parties who were in the process of discussions with the NZTA
- There was no time for a feedback loop with key stakeholders.

Nevertheless, Taylor Baines were able to engage and interview a range of stakeholders and gather a large amount of secondary data sources in order to develop an evidence-based understanding of the existing social environment and how it will be affected by the Project.

1.8 Organisation of this report

The report is organised into the following main sections:

- Section 2 outlines the scope of this SIA and the approach adopted in it
- Section 3 provides a description of the social environment, looking at the Selwyn District and the South-west area of Christchurch City, the main settlements affected (Templeton, Prebbleton and Rolleston) and the local impact areas (the areas most likely to be affected by the Project)
- Section 4 provides an assessment of effects on the social environment
- Section 5 considers the potential to mitigate or manage effects in order to reduce potential negative effects and enhance positive ones
- Section 6 provides conclusions in respect to overall outcomes for social well being.

2 Approach and scope

2.1 Approach

The assessment has used a standard SIA approach, which typically involves scoping the assessment, developing a profile of the affected area, assessing effects, and considering ways to mitigate negative effects and enhance Project benefits from a social perspective.

The social assessment methodology typically utilises a multi-method approach, which is carried out in phases. For this assessment the approach was to conduct the SIA in two main phases. While SIAs are often carried out in three phases, two were preferred in order to shorten the timeline. This truncation was possible because considerable material was already available from the preliminary SIA, along with the outcomes of public consultation activities.

Tasks to undertake the SIA for each phase were identified as follows as part of the agreed Scope of Work. The work took place in March to May 2012.

Phase 1 (profile and scoping)

1. Discussions with Project team members, site visits and review of Project land use data and mapping to define the assessment area, scope impacts and understand the context of current land owner negotiations.
2. Review of background documents including the preliminary SIA by BECA/GHD and the NZTA review, and road user data and traffic impact model results.
3. Review of the policy background including the UDS/Proposed Change 1, SDC's Change 7, Selwyn future strategies, Regional Land Transport Strategy, etc.
4. Review of the outputs and data provided through consultation activities by the NZTA and BECA to understand key issues and effects and list stakeholders.
5. Review of scheme descriptions and technical assessments relating to amenity values, including noise, air quality, visual and landscape effects.
6. Preparation of profiles of business activity and service sectors in the assessment area, including a description of the workforce in proximity to SH1 using 2006 census data, and travel to work data.
7. Preparation of profiles of the usually resident population for potentially affected populations using demographic data, mainly from the 2006 census. With 2011 estimates.
8. Key informant interviews (councils, schools, businesses, residents) to understand and interpret the social context.
9. Mapping of results of residential and business profiles to better understand the assessment area using Mapinfo – mostly by meshblock and area unit.

Phase 2 (assessment and reporting)

1. Semi-structured interviews covering major employers, residents, schools and early-childhood centres and a range of local services and businesses in different localities, and a range of business/service types, plus special interest groups such as cycling, health, recreation and emergency services. Where any of these people or businesses were directly affected, the SIA team liaised with BECA (acting on behalf of the NZTA) on any possible conflicts or issues arising around negotiations taking place.
2. Based on the key informant interviews (Council, schools, social service organisations etc.) social mapping included mapping of typical local movements of people (vehicles, cycling, walking, riding and public transport) to ascertain potential access and severance effects.

3. Analysis all assessment data and identify and describe significant social effects (positive and negative) and any likely differential distribution of effects.
4. Identification of mitigation potential for social effects and likely residual effects if mitigation proceeds.
5. Preparation of a draft report and revisions in response to feedback from Project team members.

2.2 Consultation undertaken by the NZTA

The NZTA consultation¹⁵ has involved two main strands of activity: (a) general community and stakeholder engagement activities, and (b) discussions with individual property owners. The general community and stakeholder engagement activities have been focussed on two phases. Phase 1 began in July 2010, with three Project Open Days at the Prebbleton Hall in November and December 2010, eliciting 266 written responses. Phase 2 began in August 2011, with another three Project Open Days (Prebbleton Hall and Rolleston Community Centre) by the end of August, eliciting 37 written responses.

Over the same time frame, consultation has taken place with Key Stakeholders (see section 2.4 below) and also with Directly Affected Parties, with whom the most recent phase of consultation began in March 2012. Those considered to be directly affected parties were property owners and residents adjoining the proposed CSM2 and the MSRFL that are potentially subject to property purchase or who may be affected by any alterations to existing property access methods, as well as lessees and residents of any Crown owned property.

Consultation has also involved two Project advisory groups. The Project Advisory Group (PAG) has been responsible for providing coordination between the principal proponent organisations for the Project – the NZTA, Christchurch City Council (CCC), SDC, and Environment Canterbury (ECan). The Statutory Authority Advisory Group has had more of a regulatory focus on the process of the application, involving representatives from the EPA, and the regulatory officers from CCC, SDC, ECan, and the NZTA.

2.3 Scope of issues

Issues were scoped on the basis of the preliminary SIA, records of consultation by the NZTA and its consultants, the draft technical reports and site visits by the assessment team.

NZTA Consultation

The NZTA consultation undertaken prior to this SIA (its consultation is an ongoing process) identified the following issues associated with the proposed CSM2 and MSRFL as being of most common concern:

- impacts on the quality of life of rural and lifestyle areas along the route (mainly CSM2)
- potential social severance issues
- impacts on property access (particularly for MSRFL), including direct property access, school bus access, emergency vehicle access to homes, rural delivery postal service access

¹⁵ Described in section 8 of the AEE.

- local road connectivity, including issues for cycling, walking and public transport infrastructure and services
- potential effects on local businesses
- air quality
- noise emissions
- traffic impacts on local roads
- safety
- visual/amenity values
- property value effects.

Preliminary SIA

The preliminary SIA discussed the following types of social effects:

- Individual property effects, including business re-location, relinquishing farm land, dwelling re-location, safety concerns regarding Left-In/Left-Out access, and safety and access issues during construction
- The social benefits of improved connection to SH1 and associated access improvements
- Amenity and access improvements to local centres due to congestion relief
- Impacts on businesses in local centres and along the existing Main South Road
- Community severance and loss of access
- Safety improvements in local centres and along new roads
- The social consequences of other environmental effects such as noise and air quality.

Site visits

As part of scoping, the team members undertaking the assessment undertook a number of site visits in order to understand the physical dimensions and footprint of the Project on the ground and in relation to the settlement pattern. In addition, a field researcher accompanied staff from BECA and Property Consultants on two days of consultation meetings they undertook with directly affected parties. The researcher had an observer role at 10 of these meetings and, while not being actively involved, did explain her role, evoking some responses in respect to the SIA. These visits with directly affected parties were very useful in helping to understand the impact area and issues for the directly affected parties. Given the sensitivities around on-going land negotiations, the SIA did not involve any further contact or interviews with directly affected parties but there were opportunities to debrief members of the consultation team to gain further information about the effects on this group.

It should also be noted that the Taylor Baines team has extensive background knowledge of the study area, based on other research and consultancy activities in Rolleston, Templeton, Lincoln and the Selwyn District as a whole over the past two decades.

2.4 Key stakeholders

The NZTA Consultation reports identify Key Stakeholders, Other Stakeholders and Other Affected Parties. These parties are listed in Attachment 1 to this report and, with one exception,¹⁶ the lists are common to both CSM2 and MSRFL activities. It should be noted that not all of these parties chose to make a formal response to the NZTA's invitation for consultation.

¹⁶ The Riccarton/Wigram Community Board has been a Key Stakeholder for consultation on CSM2 but not on MSRFL.

For the purposes of conducting the assessment of social effects, the assessment team contacted a number of those listed. The team also contacted others suggested as the work proceeded, and as various issues were considered for further investigation. Altogether the team undertook key-informant interviews with 28 respondents¹⁷ with interests that covered:

- Primary and secondary schools
- Pre-schools
- Ministry of Education
- Emergency services
- Medical centres
- Three residents groups
- A cycle users group
- Business owners
- Selwyn District Council.

Interviews were generally semi-structured, being guided by the need to develop the social profile and investigate the topics suggested through the scoping work.

2.5 Assessment area

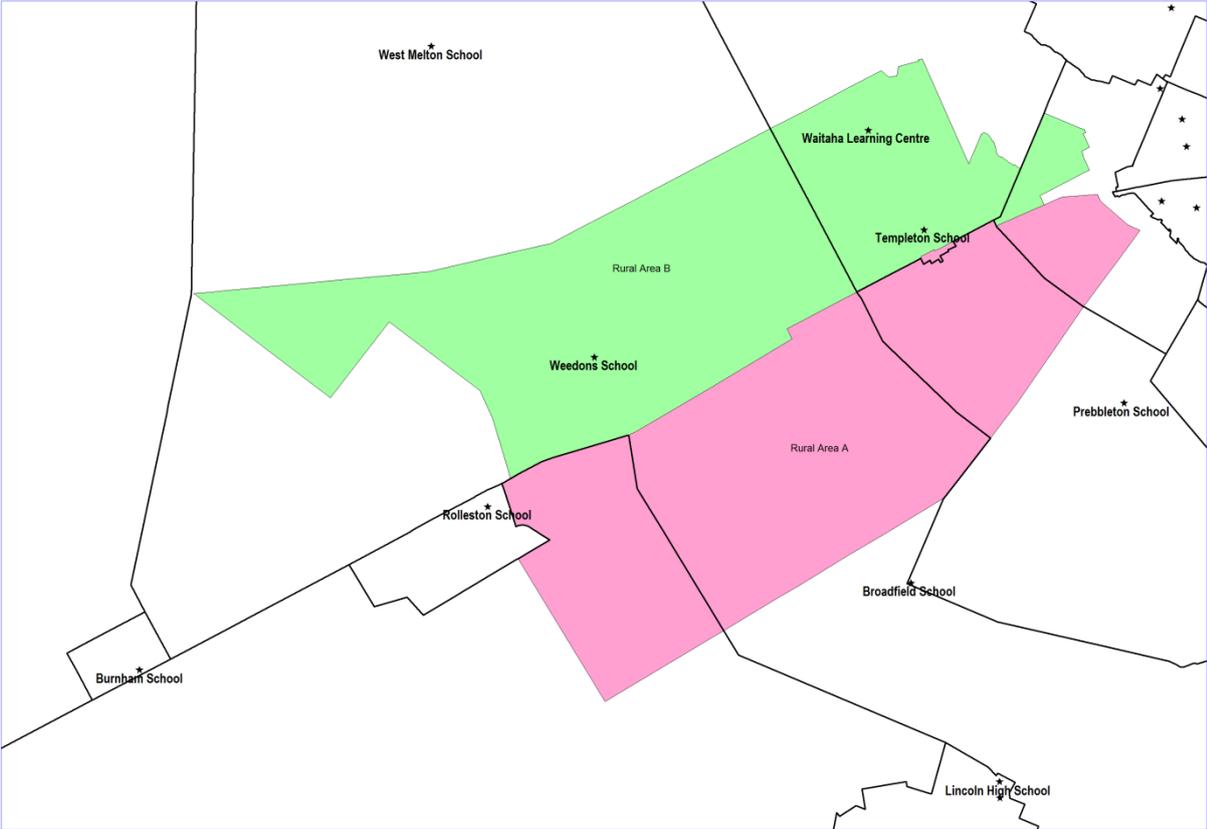
The assessment area¹⁸ was defined as extending from south west Christchurch City, where Hornby is the dominant commercial centre, and including Templeton, to Selwyn District and the towns of Prebbleton, Rolleston and Lincoln. In the rural, or peri-urban, area between Templeton and Rolleston, Weedons is the main community. The Weedons area is bounded by West Melton to the west and Broadfields and Prebbleton to the east, and is therefore bisected by the Project alignment. While Weedons is a socially distinct area, its social boundaries reflect a lot of overlap in terms of social and economic networks and communities of interest. For the purposes of demographic analysis a wider rural area was used, consisting of a set of meshblocks that incorporated the full rural local impact area. Data for this set of meshblocks¹⁹ was divided for analysis into Area A (pink) and Area B (green – see map in Figure 2 below).

¹⁷ Ethical practice in social assessments requires respondent identities and information reported to be kept anonymous. We acknowledge the willingness and helpful input of these respondents.

¹⁸ Where useful, reference was also made to the City and District as a whole. The Economic analysis (TR 14) was undertaken largely at a regional level. The economic report included consideration of construction workforce effects and, in the context of the Christchurch rebuild and a project similar in scale to CSM1, the number of workers does not raise concerns about social issues.

¹⁹ The most recent census data for this area was 2006, in the absence of a 2011 census. This meant that recent subdivisions in these areas, such as Claremont and Aberdeen, were not captured in the census data used.

Figure 2 Map of the local impact area



3 Description of the social environment

3.1 The Selwyn District

Land use and economy

The plains area of Selwyn District is primarily used for cropping (grain and seed), pastoral (sheep and beef) and intensive farming (dairying and some horticulture). Horse farming and training are also important activities.²⁰ The total irrigated land in Selwyn District for the year ended 30 June 2007 was 84,450 hectares and irrigation has supported the expansion of dairying and dairy processing in recent years.²¹ The recently consented Central Plains Water project allows 30,000 ha of new irrigation. A particular feature of land use is strong demand for small allotments of less than four hectares for residential development including small holdings, rural residential and large sections (as in Aberdeen and Claremont), particularly within a commuting distance of 30 kilometres from Christchurch City. Tourism is a growing sector with the State Highways through the District and the international airport in close proximity all important to tourism flows.

A major industrial and business park (Izone) of regional economic significance has been established west of Rolleston, with a mix of functions including warehousing and distribution, agricultural servicing and milk-product processing. Development of this area is boosted by its close proximity to SH1 and both the main trunk and western rail lines.

Population change

The population in the Selwyn District grew significantly between 1996 and 2006, at more than three times the national rate, and 2011 estimates by Statistics NZ indicate this growth has continued. Growth has been boosted further by the arrival of people from Christchurch City displaced by the Canterbury earthquakes. Estimates by Statistics New Zealand for 2011²² reveal that most areas of the district experienced at least some growth in recent years, and the main towns have continued to grow vigorously. Much of the population growth has occurred in areas in close proximity to Christchurch City, such as Prebbleton, Springston and environs and, most notably, Rolleston. Most other rural townships in the district experienced more moderate growth, with the only declines in this 10 year period occurring at Burnham Military Camp and Taitapu.

About three-quarters of the population of Selwyn District reside in service towns and smaller townships, and these settlements face challenges in maintaining a compact urban form and essential services, such as post offices and service stations, to meet the needs of their communities.²³ The district attracts families with children and 'empty nester' households due to its capacity to supply new residential lots. There is a high rate of home ownership within Selwyn District (81% cf 67 % for NZ). Over the 2001–2006 period 45 per cent of the population (about 15,000 people) moved to the District. Just under half (48%) of those residents came from Christchurch City.²⁴

²⁰ Opus International Consultants Ltd., 2011, page 147. Note current estimates by ECan of irrigated area in the District are 105,000 ha.

²¹ Schilling *et al.*, 2010, page 34.

²² In the absence of the 2011 Census.

²³ Opus International Consultants Ltd, 2011, page 149.

²⁴ Opus International Consultants Ltd., 2011, page 122.

School rolls are a useful indicator of population change and community vigour given the function of schools as community focal points. Rolls for the period from 2002 to 2011 show growth over the district as a whole, particularly in the towns, but declines for some rural schools. Community life is also supported by a wide range of social services, clubs, organisations, sports groups, with community and recreation facilities based around the main towns in particular.

Despite its significant growth, the population of the district is very homogenous with 79 per cent belonging to the European ethnic group, compared with 68 per cent for New Zealand as a whole. Just 6 per cent of people in Selwyn District belong to the Māori ethnic group, compared with 15 per cent for all of New Zealand. Pacific Islands and other ethnicities are very low in number.

In 2006, all 14 of Selwyn District's occupied area units had average deprivation scores between 1 and 5, indicating they were among the 50 per cent least deprived areas of New Zealand. Six area units – Kirwee, Prebbleton, Rolleston, Springston, Taitapu and West Melton – had average deprivation scores of 1, identifying them as being among the country's 10 per cent least deprived areas. District schools also reflect generally high socio-economic status.²⁵

Employment and commuting to work

Selwyn District had an annual increase in employment of four per cent between 2000 and 2011, with the number of jobs increasing from 8,500 to 12,000 over that period. The fastest growing sectors were public administration (22%), agriculture (17%) and manufacturing (17%). Job growth in the manufacturing sector was concentrated at Rolleston mainly due to the establishment of the Izone industrial park. Two forecasts of employment numbers project an annual growth rate of 440–450 jobs (2.3%).²⁶

There are significant differences between the transport modes chosen by residents of Rolleston and Lincoln. Ninety-one per cent of Rolleston's residents who travelled to work on census day 2006 did so either as the driver or passenger in a private motor vehicle. Only 5 per cent went by cycle or motor bike (2%) or walked/jogged (3%). By contrast residents of Lincoln were much more likely to have walked/jogged (13%) or used a cycle or motor bike (6%), influenced by the development of off-road cycling/pedestrian infrastructure (see further detail below under Active Transport) and proximity of some work places. The use of public buses by residents in both towns was very minor (see Attachment 2 to this report). For Templeton the basic pattern reflects that of Rolleston – very high reliance on private/company motor vehicles.

Environment Canterbury contracts bus services for three routes within the wider impact area of the CSM2.²⁷ Route 81 operates between Lincoln and Christchurch City via Birches and Springs Roads; route 88 between Rolleston, Templeton and the city via Jones and Waterloo Roads; and route 820 which connects Burnham, Rolleston, Springston and Lincoln via several rural roads.

²⁵ Selwyn District Council, 2007, pages 13 and 25.

²⁶ Opus International Consultants Ltd., 2011, page 141.

²⁷ Opus International Consultants Ltd, 201, page 115.

3.2 The main settlements affected

South-west Christchurch/Hornby

South West Christchurch is bounded by the Port Hills to the south, Lyttelton Street to the east, Blenheim and Main South Roads to the north, and the City boundary to the west. Over recent years there have been a number of residential developments, particularly in Halswell, Wigram and Hornby. The total population of South West Christchurch in 2006 was 35,241, and had increased by 15 per cent over the previous ten years (cf. 10 per cent for Christchurch City). It is projected in the Area Plan that there will be 10–12,000 new households and a further 200–300 hectares of business land developed in the area over the next 35 years. The transport features of South West Christchurch include SH1 and the railway line along the western boundary and the southern motorway which transects the area. Both the Main South Road and SH75 become congested with traffic at peak periods.²⁸

There is a relatively high concentration of Maori and higher levels of social deprivation in the suburbs of Hornby, Hillmorton and Wigram, compared to Christchurch as a whole.²⁹ Residents of South West Christchurch have access to a diverse range of health and social services. The Canterbury District Health Board, for instance, provides 39 health and welfare services to South West Christchurch. Hornby centre, with a catchment extending to Rolleston, is well served by health and social service providers. The medical centres closest to the wider impact area are located at Halswell and Hornby centre (Amyes Road and Brynley Street). In addition to the two medical centres at Hornby, there are two physiotherapy practices, two dental practices and two providers of other health services. Three agencies deliver specialised services for elderly people, families and children and youth. A further 12 organisations and churches supply generic services to the community, and there are two providers of preschool education.³⁰

The most important commercial centre within South West Christchurch is the Hornby Mall, which has a broad range of retail and other business activities that serve a wide catchment area, and respondents as far as Rolleston noted their areas use it. Hornby is growing as a diverse retail and employment centre, with associated growth issues. A respondent described Hornby as “commercially frenetic”, with traffic congestion and a shortage of parking.

Templeton

Templeton³¹ is a town on SH1 on the outskirts of Christchurch City. It is 14 kilometres west of central Christchurch on State Highway 1 and is a centre of harness racing in Canterbury. The usual residential population of Templeton was 1,572 in 2006, and it had increased by only four per cent over the previous ten years (cf. 36% for Selwyn District).³²

²⁸ Beca Carter Hollings & Ferner Ltd, 2008, pages 1 and 23.

²⁹ Beca Carter Hollings & Ferner Ltd, 2008, pages 22 and 14.

³⁰ Beca Carter Hollings & Ferner Ltd, 2008. Appendix 3, pages 2–4.

³¹ Further details on the populations of Templeton, Prebbleton and Rolleston are provided in Attachment 1.

³² The town's residents were predominantly of European descent, while eight per cent were Maori. They held relatively fewer educational credentials than the district's residents; with 29 per cent lacking any qualification (cf. 21% for Selwyn District) and a further 29 per cent holding tertiary qualifications (cf. 29% for Selwyn District).

The rate of unemployment among Templeton's residents, at 2.7 per cent in 2006, was higher than the district average, and paid employees comprised 87 per cent of the town's labour force. Templeton also had relatively more people (22%) with blue collar occupations than did the district's workforce (19%). The main sources of employment for residents of the town were the wholesale/retail/hospitality (22%), education/health/social/education/arts (22%), and manufacturing (16%) sectors. Other demographic characteristics of the town were the high proportions of one parent families (15% cf. 9% for Selwyn District) and one person households (17% cf. 14% for Selwyn District). Household incomes were lower than those at the district level in 2006. Residents of Templeton also had a greater dependence on income received from government, and a lower level access to motor vehicles than the district's residents.

A key informant described the area as self-contained with a majority of young two parent families and noted that houses sell easily. The area was described as "ripe for development" with its new subdivisions but "tired" shopping areas. Templeton primary pupils attend secondary schools throughout the city giving weight to the fact residents see themselves on the outer reaches of the city, with ready access to the city via private and public transport.

The Templeton school is a full primary school, which has an enrolment zone stretching from the West Coast Road (SH73) in the north to Shands Road in the southeast. Thus the southernmost portion of its zone currently lies east of SH1 and is bisected by the proposed CSM2 alignment. See further discussion of schools in Section 3.4. Templeton also has several preschool and childcare centres, a Returned Services Club, golf club, swimming pool, a domain, and a community centre that hosts a range of sports and recreational activities.

In addition to the education and community facilities and a few businesses scattered along Kirk Road, there are also a number of businesses situated on State Highway 1. These include a pub, motel, petrol station and agricultural machinery firms. There is also a cluster of shops³³ just north of Marshs Road that service the local area and customers from further afield. Interviews found these businesses rely on passing traffic only to a limited extent. Workers and residents in the area typically access the Templeton shops by driving there, parking on Marshs Rd and walking via an unsealed walkway, rather than making a right hand turn outside the shops as it is seen as too dangerous.

Near the town is Ruapuna Park which is an important venue for motor sports in the region. There are also a number of specialised health, educational and correctional services in close proximity to the town but servicing the region. The Brackenridge Estate on the former site of Templeton Hospital on Maddisons Road provides residential accommodation for people with special needs. The Waitaha Learning Centre on Kirk Road provides special education for people with disabilities, and the Nova Lodge on Newtons Road operates a residential alcohol and drug rehabilitation programme. Also in close proximity to the town are the Christchurch men's and women's prisons.

Prebbleton

Prebbleton is 15 kilometres south west of central Christchurch, and 7 kilometres south of the industrial suburb of Hornby. The town is on Springs Road, an arterial route between Christchurch and Lincoln. It is one of the earliest settlements in Canterbury having been founded by the Prebble

³³ These comprise a dairy, takeaways, bakery, butcher, printer, pharmacy, hair salon and vet shop.

brothers in 1855. The town had a population of 2,073 in 2006; an increase of 399 people (24%) over the previous ten years.

Prebbleton's population increased rapidly during the first decade of this century as new residential subdivisions trebled the extent of the settlement. The older housing in the town is to the west and south of the commercial centre, and the newer residential subdivisions are on the north east side of Blakes Road and on the south side of the town.³⁴

The Prebbleton area unit, which includes the town and its rural hinterland, had a usually resident population of 3,024 in 2006. The population had increased by 81 per cent over the previous ten years; a rate that was more than twice that of Selwyn District (36%). Prebbleton had relatively more children, and fewer people aged 65 years and over among its residents than did the rest of the district. Most people (64%) had resided in the area for less than five years. They were relatively better educated; with two-fifths of them (42%) holding tertiary qualifications.

Residents of Prebbleton participated in the labour force at a high level compared with the country as a whole (80% cf. 70% for NZ). Like many other rural districts, Prebbleton had higher proportions of employers (10%) and self-employed persons (14%) in its labour force than the workforces of nearby towns. Forty per cent of Prebbleton's labour force was engaged in high status occupations in 2006. Many of them were farmers (classified as managers at this census), but others were managers and professionals who commute to workplaces in Christchurch City and other parts of Selwyn District. For many of its recent residents, Prebbleton provides the advantages of a relatively small rural community with proximity to a wide range of job opportunities – something of a dormitory settlement for Christchurch, with a good range of local amenities as discussed below.

Two parent families comprised more than half of all family types in Prebbleton (55% cf. 41% for Selwyn District). The incomes of the area's households in 2006 were relatively higher than those at district and national levels. Furthermore, the incidence of home ownership was very high; with 86 per cent of the area's dwellings either being owned by their occupants or held in a family trust.

The commercial centre on Springs Road is at the northern end of the town and includes small shops, a restaurant and a tavern. Other businesses located along Springs Road are a petrol station and garage, a children's nursery, a beauty clinic, an equine clinic, a greengrocer, café, a community hall and Union Church. A Plunket Centre is situated in William Street, while a primary school with a community swimming pool, and an Anglican church are on Blakes Road. Meadow Mushrooms operates from a site on the north western side of Springs Road, and there is a cold store to the north of the town.

Additional land around the town is zoned for residential development and other land is available for expanding the commercial centre. Selwyn District Council's growth projections (2008 base) for Prebbleton predict the population to reach 4,775 (or 1,816 households) by 2026. This population growth between 2008 and 2026 would require the construction of 1300 dwellings; mostly on already zoned land and greenfield sites.³⁵

There are a lot of large subdivisions being developed in and around Prebbleton with noticeable movement of families between one subdivision to another as newer and more desirable properties come on the market.

³⁴ Selwyn District Council, 2010, pages 1 and 2 provides background information on the town and its development.

³⁵ Selwyn District Council, 2010, page 12.

Prebbleton has a full primary school, which has an enrolment zone stretching from MSR in the north to Ellesmere and Whincops Roads in the southeast, with Halswell Junction Road and Marshs Road defining its northeastern boundary. Thus the northernmost portion of its zone is crossed by the proposed CSM2 alignment.

Rolleston

Rolleston is 22 kilometres south of Christchurch on the Main South Road at the junction of the South Island Main Trunk and Midland railway lines. At the beginning of the 20th century, the sole business in the settlement was a blacksmith shop. The only other structures were the railway station, school and public saleyards.³⁶ The town grew slowly despite proposals in the early 1970s to build a satellite town. Then, after ten years of moderate growth between 1986 and 1996, the usually resident population increased rapidly by 264 per cent over the following decade to 3,822 residents in 2006. This rate of population growth far exceeded that of Selwyn District and has continued. The population of Rolleston was younger than the district's population in 2006, with relatively more children (29% cf. 23% for Selwyn District) and fewer people aged 65 years and over (5% cf. 9% for Selwyn District). Just under three-quarters (74%) of Rolleston's population had lived there for less than five years in 2006, and a further five per cent of Rolleston's residents had been in the town for 15 years or more (cf. 13% for New Zealand).

The main sources of employment for residents of Rolleston in 2006 were the government/community/social and personal (25%), wholesale/retail/hospitality (25%) and manufacturing (17%) sectors, with many residents commuting to Christchurch to work. The town had relatively more residents engaged in higher status white-collar occupations (legislators/administrators/managers and professionals and technicians (39%) than did Selwyn District (36%). It also had relatively more residents who were trades/plant and machine/elementary workers (29% cf. 25%). Over three-fifths of residents of Rolleston (63%) were employed full-time. The proportions of employers (4%) and self-employed persons (7%) were about half those of the district's workforce, reflecting the limited business base in the town.

Seen as an attractive area especially to young couples who are wanting a large section on stable land,³⁷ Rolleston is anticipated to grow strongly over the next 35 years from the current population of 7,000 to about 20,000. The Rolleston Structure Plan notes that the metropolitan urban limit (MUL) of the town has potential land capacity for a population of 50,000 should there be full intensification of existing areas and development of all 886 hectares of greenfield areas.³⁸

Reflecting growth in the area, Rolleston presently has two full primary schools, Rolleston School and Clearview Primary School. Both have enrolment zones, neither of which are crossed by the MSRFL route. In 2009, prior to Clearview opening, Rolleston School had 800 pupils with "prefabs everywhere".

³⁶ Ellesmere Camera Club, 1997 pages 176–178.

³⁷ Comments from interviews noted ... a lot of families coming into the area with red zone pay outs... prior to the quake a lot of immigrants from UK and South Africa who are used to long distance commuting. Since the quakes more Christchurch families are moving in. There is very little rental accommodation.

³⁸ AECOM and Boffa Miskell, 2009, page 6.

3.3 Local impact areas

The rural and peri-urban areas

The CSM2 and MSRFL alignment passes through areas which are largely rural in character with an increasing peri-urban character. However, within this broad characterisation, there is considerable diversity in the intensity and nature of land use and development, ranging from open farmland with extensive shelter belts and expansive areas of grazing and cultivation, to orchards, race-horse training, lifestyle blocks, exclusive new, large-section and rural-residential subdivisions and pockets of other business and tourist activity.

Between SH1 and Prebbleton, east of the proposed alignment, there is an area of approximately 70 residences in a three-year old subdivision known as Aberdeen. This area has a single, public entrance, and comprises relatively large homes on large sections along a crescent roading pattern. On the outside of the crescent (closest to the alignment at approximately 130m from the closest home to the southbound access lane) the homes are rural-residential in character, with room for lifestyle farming activities. The area effectively comprises an extension of Prebbleton township with residents in the area using the town centre and services as their local centre. They also make use of Hornby, Lincoln and Halswell. With a mix of families in the area, children typically go down Blakes Road to the Prebbleton School and secondary children use a private bus to access schools in the City. Templeton School reported having no children from the area. Aberdeen residents³⁹ form a group within the Prebbleton Residents Association and also have a Neighbourhood Watch group.

North-west of SH1, the extent of rural residential development has been somewhat constrained by the noise contours for Christchurch International Airport and the presence of other institutions such as Christchurch Women's and Men's Prisons and a Youth Justice Facility.

A further residential sub-division, known as Claremont, was established about six years ago in an area east of SH1 from the southern areas of Templeton on Waterholes Road. Not officially part of Templeton, in fact Claremont is in Selwyn District, the subdivision has no clear community affiliation. There are 52 large (5-6,000 m²) sections of which 48 are occupied, mainly by families and a few retired couples. Children from the area are split between Weedons and Templeton primary schools. Residents associate with Rolleston, Templeton and further afield, to Hornby, Lincoln and Halswell, for services such as supermarket shopping. The intersection of Waterholes Road and SH1 is difficult to negotiate for crossing and for right turns, in particular, and residents often use Hamptons Road as an alternative route. Respondents reported increasing use of Hamptons Road by traffic from SH1.

Weedons

Weedons was established at a key transport point on the main road south from Christchurch, with stabling and an accommodation house (licenced in 1859). Availability of well water led to development of holdings for agriculture in the late 1800's. The railway led to later development as a siding and station. The community was shaped further by establishment of the domain, school and a

³⁹ Residents have been actively involved in the Project and there were 45 individual feedback forms to the NZTA from Aberdeen, with concerns about amenity effects and issues such as the visible height of the motorways structures. It was pointed out that while some properties are screened by shelter trees at the back of their ex-orchard properties these are deciduous and would therefore not screen them in winter time.

church. In 1942 an airport supply depot was built and only disestablished in 2002. The base had numerous families at its peak. Today the community is shaped by its school, the domain (Weedons Reserve) and golf club (site also of the Weedons Country Club, on McClelland Road).⁴⁰

An official boundary of Weedons is set by the local rating area, which has 297 rate paying residences⁴¹ and around 700 people. Farming in the area is mixed with sheep and beef, cropping, some horticulture, poultry and horses (including training establishments). There are a number of businesses in the area, particularly along the main road – as discussed in the following section.

The Weedons Residents Association represents residents' concerns and aspirations. The local area rate is used to help maintain the Reserve and while this is a Council asset the Reserve Committee is responsible for management. The most active clubs at the reserve are the cricket and tennis clubs. While the rating boundary is physical the social boundary is much more flexible with the School, cricket, tennis and golf clubs all drawing people from a wider area, including some from the City. Blurred social boundaries in the local impact area are further illustrated by sports participation in that cricket is based in Weedons, rugby in West Melton and football at Rolleston.

Area directly affected by MSRFL east of SH1

The area directly affected by the MSRFL involves properties along the alignment from the intersection with the CSM2 alignment just north of Robinsons Road. This area has a combination of farming areas, lifestyle blocks and businesses (which mostly are positioned along the highway or close to access roads). The businesses include a knit ware business, equine centre, horticultural supplies, garage door makers, book binders, a berry farm and ice-cream shop, and a winery and function centre. These businesses vary in the degree to which they derive custom from passing motorists., Several businesses are heavily dependent on direct access to the State highway while others are more flexible about their location. Residents also vary in their dependence on SH1 for direct access. Several have access options from the rear or from side roads.

There are a number of side roads intersecting with SH1 along this section. Generally it is easier to turn left (south from this impact area toward Rolleston) than it is to cross or turn right, although left turns also require sufficient space in the traffic flow (to speed up to open-road speeds).

The land between SH1 and Jones Road

Of particular interest is a narrow wedge of land, bounded by the existing SH1 /MSR, Jones Road to the north-west, and extending from Curraghs Road to Weedons Road. All properties within this wedge of land are currently accessed from SH1 /MSR. Two other features accentuate the 'isolation' of this wedge of land. Along its southern/eastern boundary, the NZTA already holds a designation over a 10m-wide strip⁴² adjacent to the existing SH1 /MSR. Along its northern/western boundary, the existing South Island Main Trunk Railway prevents any property access via Jones Road.

⁴⁰ Weedons Residents Association. Nd. Welcome to Weedons! Information Pack Volume 1, Issue 1. See also, http://www.weedons.school.nz/history_district.html

⁴¹ Selwyn District Council Draft Long Term Plan 2012/2022, page 167.

⁴² This existing designation is not considered sufficient area to accommodate the proposed MSRFL improvements and CSM2 alignment.

3.4 Social services, local networks and movements

The assessment undertook social mapping in order to understand school zones, participation in sports and community organisations, and access to employment in relation to SH1. This information is important for assessing the potential for social severance. Details from the social mapping for health services and education are provided in Attachment 3 to this report.

Health services

There are a range of health services that service the people living and working in the assessment area. These include medical centres and pharmacies at Hornby Rolleston, Templeton and Lincoln, and a range of other services such as dental services, chiropractors and mental health services.⁴³ Health services are principally located at the main centres of Templeton, Rolleston, Lincoln and Hornby, with people travelling by vehicle to access them at these centres.

Education services

There are pre-school education and childcare providers in multiple locations, with most operating from premises in townships.⁴⁴

- With no kindergarten in Rolleston, the Templeton kindergarten has children from the rural impact area across SH1, including the new subdivisions of Aberdeen and Claremont. Rolleston families approach the kindergarten from Jones Rd because this is a less busy route with access across SH1 through the traffic lights at Rolleston.
- Prebbleton preschool and kindergarten have children attending from the wider Prebbleton area. There are many younger families living in this area and the more “local” children walk.
- Rolleston First Learners has families coming by car from Burnham and Hornby as well as the Rolleston area.

There are two high schools servicing the assessment area:

- Lincoln High School has an enrolment zone reaching from West Melton in the northwest and part of Prebbleton in the northeast to Little River in the southeast with an extensive bus service throughout the zone. The buses bring students from Rolleston and Templeton (across SH1). No pupils cycle on the main roads, however, there is use of the Cycle trail (from Shands Road through Prebbleton to Lincoln), which provides a safe, off-road route.
- Hornby High School services the Hornby area, with some students from Shands Road and Springs Road.

There are also a number of primary schools, most with enrolment zones:

- Templeton Primary school on Kirk Road has an enrolment zone stretching from the West Coast Road in the north to Shands Road in the southeast. Its roll has declined slightly in recent years. Most of the school community comes from north of SH1 with only a few families on the southern side. Very few pupils walk or cycle to school, and there is no school bus service provided. Claremont residents can choose between Templeton and Prebbleton Schools.
- Rolleston Primary school on Tennyson Street has an enrolment zone bounded by Kerrs, West Melton and Hoskyns Roads on the north side of SH1 and bounded by Weedons, Boundary and

⁴³ Selwyn District Council, no date, pages 15–31.

⁴⁴ Selwyn District Council, no date, pages 42–45.

Lowes Roads on the south side of SH1. Its roll fell when the Clearview Primary School opened in 2010 taking pupils from the southern parts of Rolleston.

- Clearview Primary School on Broadlands Drive, Rolleston, has an enrolment zone bounded by Brookside, Selwyn and Boundary Roads and takes no out-of-zone pupils.
- Together the two Rolleston schools exceed the 1000 primary school aged children considered a trigger point for providing a new secondary school.
- Weedons School on Weedons Ross Road has an enrolment zone bounded by Hoskyns, Knights, Newtons and Maddisons Roads on the northern side of SH1 and by Larcombs, Bellam and Robinsons Roads on the south side. Nearly all families living in zone send their children to Weedons School and most travel to school by car.
- Broadfield Primary School, near the junction of Selwyn and Shands Roads, has no enrolment zone. Pupils come from Rolleston, Burnham, Templeton, Lincoln and Prebbleton, mostly by car. The small rural school character attracts some parents, with the Broadfield population relatively small. A significant proportion of its roll in recent years has come from the rapid growth of Rolleston.
- Prebbleton School has an enrolment zone bounded by Hamptons, Main South and Marshs Roads to the northwest. Most families live within walking distance of the school and the school estimates about 30% walk or scooter. Some families live in Aberdeen and Claremont, with few living west of the proposed Project alignment.
- Rolleston, Templeton and Burnham Schools have school buses provided to take the senior pupils to Breens Intermediate for technical classes.

Emergency services

Emergency services are widely dispersed over Selwyn District, with those based in smaller towns relying primarily on volunteers. Some emergency services are available from Christchurch City and these employ full-time professionals. The rapid response team is based in Sydenham and are often the first on the job from the city. Volunteer fire brigade services are at Darfield, Lincoln, and Rolleston. There are also three rural fire units in the district and a fire brigade at Burnham Military Camp. Police stations are located at Rolleston, Lincoln and Darfield. Ambulance stations operated by volunteers are at Leeston, Darfield and Rolleston.⁴⁵

Rolleston Fire Brigade with 35 volunteers and three units has a response area that includes Dawsons Rd, both sides of SH1 and as far south as Dunsandel; they also provide support to Hornby and Sockburn. All the volunteers are trained paramedics and are often called upon first because they are local. Attending women in labour is not an unusual event for them.

The St Johns Station is based in the IZONE complex although there are plans to build a new station within Rolleston township. Twenty five volunteers are based at the centre and there is one ambulance. They cover an area from Hei Hei to Methven and The Old West Coast Rd to Lincoln. In 2011 they attended 900 callouts and this does not include responses from the city team. The growth of the Rolleston area, including the IZONE industrial park, has been increasing demands on the team.

Community services

Rolleston Community House, which is supported by Selwyn District Council and the Canterbury Community Trust, was opened in 2010, and several health and social services agencies operate from

⁴⁵ Opus International Consultants Ltd, 2011 page 158, and Selwyn District Council, no date, page 43.

its premises. These agencies include Presbyterian Support, CDHB Rural Child and Family Mental Health Service, Comcare, Relationship Services and Stronger Selwyn Earthquake Recovery. It also provides meeting spaces for community groups. There are also “One Stop Shops” at the library/service centre facilities of Selwyn District Council at Darfield and Leeston that provide office space for agencies to come to the district instead of residents having to travel to Christchurch. Many services from government and other agencies, however, can only be accessed from Christchurch. A range of these services, including budget advice, housing assistance, family planning and community law, are available from Hornby Heartlands which is located at Work and Income in Shands Road.⁴⁶

Active transport

Active transport is promoted in the region as generating positive health and sustainability outcomes and there are some excellent assets. Nonetheless, walkers and cyclists in Selwyn District face a number of challenges. For walkers, they include lack/poor quality of footpaths; lack of “safe” space along many rural roads; no off-road walking tracks; lack of facilities connecting subdivisions and towns; and low levels of street lighting. For cyclists, they include lack of cycle lanes on desired routes and space on rural roads; narrow roads in newer residential areas; speed on rural roads; insufficient cycle stands; potholes and rough surfaces on the shoulders of the roads; narrow bridges; and the “cycle unfriendly” character of roundabouts.⁴⁷ Notwithstanding these challenges, interviews for this assessment found instances of individuals commuting long distances across the District and into the City, such as from Rolleston to the Airport and from Halswell to Templeton. Nevertheless, the use of active transport modes in general in the District was falling steadily from 1996 (12.5%) to 2006 (9.2%)⁴⁸. Consequently, the Selwyn District Council has developed a walking and cycling strategy and action plan to address these challenges and promote a transport system that supports active transport and recreational uses. Christchurch City also has a Cycling Strategy.

Although the Little River Railtrail was primarily established for recreational users and tourists (see below), sections of the pathway between Shands Road and Prebbleton and besides Birchs Road between Prebbleton and Lincoln are now used by school children and as a commuter route,⁴⁹ particularly for students at Lincoln High School and people working at Lincoln University or the adjacent science centres. Data⁵⁰ from a survey commissioned jointly by SDC and CCC in 2011⁵¹ indicate a marked increase in commuter cycling on the route. Indeed, the success of this route is a reason for considering a potential Rolleston–Hornby off-road facility using the Jones Road corridor. It should be noted that the Birchs Road section of the Railtrail is generally fully separated from the sealed roadway, an important factor in the perceived attractiveness and safety of the route.

⁴⁶ Selwyn District Council, nd. Pages 11 and 52.

⁴⁷ Selwyn District Council, 2009, pages 9 and 11–13.

⁴⁸ Selwyn District Council, 2009, page 4.

⁴⁹ Selwyn District Council, 2009, page 5.

⁵⁰ Annual Average Daily Traffic of cyclists on the Birchs Road section increased by 35% between November 2007 and January 2011. The survey showed ‘summer’ usage in January/February 2011 to be about 190 cycle movements/day and ‘winter’ usage in May/June 2011 to be about 150 cycle movements/day. The data also show that commuter cycling use is less influenced by weather conditions than the more discretionary recreational cycling use.

⁵¹ Via Strada, 2011. Rail Trail Cycle Counting 2011. Table 3, page 3.

Sport and recreation

The Selwyn District Council operates an events centre at Lincoln and a community centre at Rolleston. It is also building a recreational complex including an aquatic centre at Rolleston and has further plans to develop recreation for the growing population. The Rolleston Community Centre is a multi-use facility for meetings, indoor sports and personal fitness.

The Lincoln Events Centre includes a hall and a lounge (each with a capacity for 200 people) that are available for a variety of purposes, and a sports stadium that accommodates about 700 people.

At Prebbleton there is a community hall and several sports clubs (e.g. touch, rugby, soccer and tennis). School children play sport on local school grounds but are taken into Christchurch city for after school sport activities .

Templeton has a golf club, a branch of the Returned Services Association and a community centre that hosts "a range of sporting, dance, educational and art and craft activities".⁵²

The Weedons Domain and Golf Club are focal points for the area in addition to the school. The Weedons cricket club is the strongest in the wider area with 18 teams. Many Golf Club members come from the city but it is a popular recreational facility for locals as well.

The Christchurch to Little River Railtrail was founded in 2003 by a voluntary organisation of cycling enthusiasts and follows the route of a railway branch line from Hornby to Little River that was closed in 1962. A combined cycle and walkway, it comprises a 3.5 kilometre section between Shands Road in Hornby to Prebbleton, a 7 kilometre section between the towns of Prebbleton and Lincoln, and a 20 kilometre section between Motukarara and Little River. The final section of 14 kilometres connecting Lincoln and Motukarara is currently under development.⁵³

The trail is part of a popular recreational cycling and walking route. Recreational cycling through the impact area is popular for city cyclists wanting to head into the countryside. Cyclists indicated one popular route is from Halswell to Templeton/ Weedons and on to Yaldhurst and then out behind the airport to Macleans Island. Another popular route is from Rolleston to Lincoln and on to Tai Tapu and return or back over the Port Hills.

⁵² Christchurch City Council, 2012.

⁵³ Christchurch–Little River Railtrail Trust, 2012.

4 Assessment of Effects

4.1 Introduction to the assessment of effects

Planning, construction and operation of the Project could potentially cause social effects on people throughout the impact area. Some of these effects will be consequent on environmental effects that are assessed in other Technical Reports, including analysis of noise, air quality and visual effects. In practice, these sorts of amenity effects can also have social consequences; they reflect the amenity values and perceptions of affected people. Another set of effects results from traffic assessments⁵⁴ and changes in patterns of activity and the movement of people to and through localities adjoining the highway. Other effects relate to the physical changes from the highway that require acquisition of properties or parts of properties or affect access to properties. The highway can also cause social severance by cutting through social boundaries.

This section of the SIA relies on a combination of information from the description of the social environment, interviews with local people and key informants and information from Technical Reports to consider the potential social effects of the project. Where relevant, suggestions are made for mitigation and management of effects⁵⁵, with comments on the likely residual effect assuming successful mitigation and management takes place. The mitigation of effects is considered in more detail in Section 5.

4.2 Effects on urban development and form

New highways have a recognised social-economic effect of altering urban form. Their development is best undertaken in the context of a wider urban development strategy, as in this instance with the Greater Christchurch Urban Development Strategy (UDS). The UDS seeks to promote compact urban settlements rather than unconstrained urban sprawl, and also to give more emphasis to mixed-use urban environments, reducing to some extent the need for commuting at the local level. The proposed highway will have the effect of encouraging urban development in around existing urban areas and also of forming a strong boundary to residential and commercial activities because of the limited motorway access points.

In combination with earthquake effects already underway⁵⁶, the Project will have an effect of further stimulating urban development in South West Christchurch (particularly Hornby) and Templeton in Christchurch City, and Prebbleton, Lincoln and Rolleston in Selwyn District.⁵⁷ These areas have strong residential growth and also emerging commercial and service functions in their centres, plus Rolleston, Lincoln and to a lesser extent Templeton are already employment nodes. They will undoubtedly benefit from the stronger transport linkages provided by the Project plus CSM1 as well as the work on the western corridor currently underway, providing improved links to the Airport, Russley area and further north.

⁵⁴ Assessment of Traffic and Transportation Effects, Technical Report No. 2.

⁵⁵ With references, where appropriate to the Construction Environmental Management Plan (CEMP).

⁵⁶ Gale force winds of change in Hornby, Christopher Moore, Mainlander, The Press, Christchurch, June 23–24, 2012, pages C4–C5.

⁵⁷ This effect is also noted in the Assessment of Effects – Urban design, Technical Report No. 5.

Specific points about effects on urban form are outlined here, drawing on the assessment team's understanding of the UDS, Proposed Chapter 12A to the RPS and Plan Change 7 to the Selwyn District Plan, as well as knowledge about rural land uses in the District including subdivision for residential use, and of the inter-district labour market:

- In future, CSM2 will tend to form a strong southern boundary for the industrial areas of Hornby and Islington and thereby become a de facto rural-urban boundary for this part of the City. Some areas are already zoned for this purpose. Industrial/business activity is likely to spread further into the area out to Marshs Road, with parts already zoned for this purpose.
- The CSM2 proposed new road link from a roundabout on Halswell Junction Road to John Paterson Drive will allow access by residents to the area, especially from a new subdivision allowed by Christchurch City (Plan Change 60, Halswell West), and also excellent access to a proposed new sports and recreation area adjacent to the new road. Also, a Plan Change has been promoted by CCC for a rural business zone in the area.⁵⁸
- With the completion of CSM2, and in the aftermath of the earthquakes and spreading of commercial activity southwards, momentum to site and access business activity around Templeton is likely to increase.⁵⁹
- Izone will continue to develop at Rolleston- land is currently fully allocated in the current industrial area and the SDC is developing further stages and looking at the potential to develop north over Hoskyns Road. Improved road access to the City, the Airport and the port will tend to support this development.
- Residential development in Rolleston will be encouraged with a range of section sizes and prices available there. Future development of the Rolleston commercial centre can also be expected with two supermarkets and big-box retail already established there in the last two years.
- There is very likely⁶⁰ to be pressure for further development of lifestyle blocks and rural residential development, as far south as Leeston and Rakaia (including areas of Ashburton District) as travel times lessen on the motorway and with improved access to the airport and emerging employment nodes in the south-west post earthquakes.
- Development of Ashburton will be advanced. Currently at the outer limit of the Christchurch labour market - an hour's drive from the City - improvements such as CSM1, CSM2, MSRFL and any subsequent improvements along SH1 such as more passing lanes will cumulatively bring Ashburton 'closer' to Christchurch and vice versa. Already, post-earthquakes, greater use has been made of Ashburton facilities such as Lake Hood and entertainment facilities by Christchurch groups.

Overall, the effects on urban form will reinforce strong existing trends towards a greater Christchurch that is widely distributed (north and south). There are, however, strong tools in place to guide pressures around changes to urban form by way of established planning mechanisms such as

⁵⁸ The urban form benefits of this element of the proposal are noted in Technical Report No., 5, Assessment of Effects - Urban Design.

⁵⁹ There have been proposals in the past to develop a business park on the old Templeton Hospital site.

⁶⁰ Any future restrictions on ground water takes and nutrient loads from irrigation will influence the propensity of farmers to subdivide rural land.

Proposed Chapter 12A to the RPS, The Christchurch South West Area Plan, the Selwyn District Plan which includes PC7, and structure plans for Rolleston and Lincoln.

4.3 Effects on commuting patterns and employment

Reduced congestion on principal commuter routes will result in reduced travel times, which can be expected to influence individuals' future choices about opportunities for employment in relation to place of residence – in effect increasing the range of possibilities within a unified metropolitan labour market area. Reduced congestion on existing routes and higher safety standards on the proposed motorway are also likely to be conducive to lower accident rates for vehicles within the Christchurch–Rolleston corridor.

Congestion and travel times

The Project is expected to attract significant volumes⁶¹ of traffic away from the existing main traffic corridors when it opens, thereby reducing congestion, particularly on the following sections of principal commuter routes:⁶²

- MSR (west of Halswell Junction Road)– (46% decrease)
- MSR (west of Trens Road/Kirks Road): – (52% decrease)
- MSR (west of Marshs/Barthers Roads) – (39% decrease)
- Halswell Junction Road (north of Springs Road): – (30% decrease)
- Springs Road (south of Trens Road): – (47% decrease)

The Project is also expected to reduce intersection delays along these routes.

The changes in levels of congestion have been estimated to result in peak-hour time savings of 10–12 minutes when travelling by car from Rolleston to Brougham St in 2041⁶³ according to the Assessment of Traffic and Transport Effects. On a daily basis (working days only), the time savings for vehicle commuters amounts to 20–24 minutes. When considered on a cumulative basis over a working week, the total weekly time savings amount to approximately two hours per week.

To understand the potential social significance of the benefit of this level of time saving, it is instructive to compare 20–24 minutes daily with the amount of time typically spent by New Zealanders on various other activities on a daily basis. For example, the 2009/2010 Time Use Survey⁶⁴ reveals that working-age New Zealanders typically spent on a daily basis 32–33 minutes on sports and hobbies, 40–43 minutes shopping for goods and services, 1 hr 25–26 minutes in social entertainment, 1 hr 54 minutes – 2 hrs 24 minutes on household work, and 11–17 minutes on other unpaid work of some kind. A reduction in the average daily time spent commuting could make a significant difference to the amount of time available for other activities.

⁶¹ Assessment of Traffic and Transportation Effects, Technical Report No., 2, Tables 6.1, 6.4 and 6.7 comparisons for 2016.

⁶² Assessed as Average Daily Traffic Volume (ADTV).

⁶³ Travel time savings of up to eight minutes for the journey between Brougham Street and Rolleston are predicted from opening, increasing up to 12 minutes by 2041.

⁶⁴ Statistics NZ, 2011. Time Use Survey, 2009/10.

http://www.stats.govt.nz/browse_for_stats/people_and_communities/time_use/TimeUseSurvey_HOTP2009-10.aspx (accessed 11 April 2012).

It is also pertinent to note that New Zealanders typically spent on average 16 minutes daily on work-related travel, confirming that commuters between Rolleston and Christchurch are already spending well above the national average amount of time commuting (remembering that the 20–24 minutes of potential time savings is only a portion of the total travel time). These travel-time benefits are likely to reinforce Rolleston as part of the Christchurch labour market area and increase inter-district commuting, reinforcing the urban development trends discussed in section 4.2 above.

During interviews for this assessment a number of observations were made about travel-time benefits:

- The overall travel times will improve and it can only serve “to improve access between the city and Rolleston for the school community”. Parents commuting to the city for work are under pressure to return and collect their children by 3 pm and often have to use the after school programme for a short time as a “holding bay”.
- The route may become less congested and therefore provide a shorter travel time for those who work at Rolleston and Burnham.
- The Project should make travel time more attractive for sports participation. Local schools are reluctant to send children into the city (eg to Hagley Park) for a game of sport that takes 45 minutes to play but takes considerably more travel time. They avoid entering teams in some competitions.
- Access for emergency vehicles should be faster as discussed below.
- Routes across the impact area should become easier through easier and safer crossings of MSR.

One negative point raised in interviews relates to the possible temporary effects of construction.⁶⁵ If despite mitigation, construction works cause delays for commuting parents picking up their children from schools or childcare, this may increase staff requirements at lunchtimes and after school.

Road Safety

The Assessment of Traffic and Transport Effects⁶⁶ has summarised the trends in reported crash statistics along the MSR corridor for the five-year period 2006 to 2010, demonstrating a significant reduction in the first two years, followed by a relatively constant incidence of crashes since 2008. These data reveal almost half (45%) of the crashes occur at intersections along MSR and Halswell Junction Road, 12% occur at property accessways, with the remaining 43% at other mid-block locations. When compared with experience on similar road types elsewhere, mid-block crash rates for the section of MSR proposed for four laning are currently 10% higher than typical. Whilst the crash rate along Halswell Junction Road is relatively low, there is likely to be a significant increase in accidents, This is because of the increased traffic volume resulting from operating CSM1 and the resulting conflicts between a busy arterial road and one servicing the local industrial area and associated side accesses. Regarding intersection crash rates, the data indicate clearly that those intersections with the highest crash rates under current traffic volumes are those without traffic signals.

The assessed effect of the Project, from a combination of grade-separated intersections and substantially reduced traffic volumes, will be to reduce the high crash rates along MSR, and address the temporary road safety concerns along Halswell Junction Road that result from a partially-

⁶⁵ These will be managed by a “Traffic Management Plan” under the Construction Environmental Management Plan.

⁶⁶ Section 5.7.1.

completed motorway project (CSM1). The intersections on MSR that currently experience the highest numbers of crashes will in future have less than half the current levels of traffic passing through them, while the intersections on Halswell Junction Road will have a third less traffic passing through them. Reduction of death, injury and damage from crashes is potentially a significant, long-term contribution to enhanced social and economic wellbeing of all users of the highway

Effects on public transport

Existing public transport routes do not use the MSR corridor, with Rolleston services using the adjacent Jones/Waterloo Roads route and Lincoln services travelling along the Springs/Birchs Roads route. Nor is it intended that the proposed CSM2 and MSRFL routes have any dedicated bus lanes to give priority to public transport. The gains to users of these public transport services, in terms of faster and more reliable travel times, will come from substantially reduced congestion along Jones/Waterloo Roads (with a proportion of commuter traffic diverted onto MSRFL/CSM2) and the possibility for 'express' bus services using the MSRFL/CSM2 with correspondingly reduced travel times.

Rolleston, Templeton and Burnham Schools have school buses provided to take the senior pupils to Breens Intermediate for "tech" classes. The proposal should make this run faster with less traffic on the roads.

Effects on active transport (cycling and walking)

The Project includes elements of cycling/pedestrian infrastructure. Key proposals are:

- A continuous link connecting the CSM1 shared-use route from its termination at the Owaka subway, passing under bridges at Halswell Junction Road and Springs Road to access the Little River Railtrail at Marshs Road
- Provision of 2m shared use routes on both sides of most underpass/overpass structures.⁶⁷

The Project therefore has strengths and weaknesses when assessed in terms of effects on active transport. The strengths are associated with:

- The connection between the CSM1 and CSM2 routes and the Little River Railtrail which will benefit commuters towards Lincoln using the Shands Road/Marshs Road route and recreational cyclists and walkers using the CSM1 extension, encouraging higher levels of utilisation
- The positive connections for cyclists and pedestrians across CSM2 and MSR which ensures continued connectivity for people on either side of the proposed alignment who choose to walk or cycle
- Reduced vehicular traffic volumes on the MSR through Templeton, which will reduce the risks to cyclists and pedestrians wishing to cross the MSR and therefore reverses the recent trend towards severance caused by increasing levels of traffic congestion – particularly evident at the intersections with Kirks/Trents, Dawsons/Waterholes and Barters/Marshs Roads
- The opportunity to progress SDC's intention to create a second commuter cycling route into the City via the Jones Road/railway corridor.⁶⁸

⁶⁷ Alternatively, a 3.5m shared use route on one side of each structure.

⁶⁸ With the Weedons Road interchange becoming the main entrance/exit for Rolleston, care will have to be exercised to design the cycle/pedestrian route in this location that is conducive to commuters wishing to connect between Weedons Road/Levi Road and the off-road facility proposed for the Jones Road/railway corridor on the

In contrast to these benefits for active transport, the Project does not take advantage of the opportunity for enhancing commuter cycling with an off-road option along the CSM2 alignment.⁶⁹ Furthermore, the decrease in vehicular traffic along Springs Road is offset to some extent by an increase in vehicular traffic along Shands Road. In the absence of off-road options, re-distribution of vehicular traffic is unlikely to make more of the road network more appealing to cyclists, particularly cycling commuters at times of peak traffic in the absence of an off-road alternative.

Feedback received by the NZTA during two rounds of consultation⁷⁰ called for improvements to be made to the cycling and pedestrian infrastructure network in the affected area. Numerous comments were also provided in the course of interviews for this assessment. Suggestions included:

- the need to facilitate commuting by cycle between Rolleston, Templeton, Hornby and the City through separate walking and cycle ways
- development of and connections to a cycle way along the rail corridor/Jones Road including the proposed new access road
- the need to facilitate movements by foot and cycle east-west across the Project alignment with safe over/under passes
- creation of cycle access from surrounding areas to expanding employment in the Izone
- The need to encourage cycling and walking to schools.

Selwyn District Council, through its walking and cycling strategy, is endeavouring to establish a more sustainable transport system. The goals of the SDC strategy are: (i) improved safety for pedestrians and cyclists; (ii) more people choosing to walk and cycle more often; and (iii) convenient and safe community environments and transport systems that encourage and support walking and cycling; and (iv) a transport system that is more sustainable in the long term.⁷¹

Overall, the social benefits from reduced congestion and improved travel times, particularly for commuting workers, plus the likely improvements in road safety from the Project are assessed from a social perspective as significant social effects. Effects on active transport (pedestrians and cyclists) also provide a net social benefit due to the Project's design features.

Rolleston to Hornby route. Alternatively, as indicated in the network map for SDC's 2009 Walking and Cycling Strategy Action Plan, the principal connection between Rolleston and the Jones Road/railway corridor may be routed closer to the current town entrances of Rolleston Drive or Tennyson St.

⁶⁹ Cycling advocates pointed the social assessment to the potential to accommodate a 2–3m shared use route within the area of the CSM2 designation, safely separated from the road, in order to enhance the active transport network and provide greater connectivity to any future development by the SDC. The NZTA have informed the social assessment that recent consultation with cycling advocacy groups and CCC has resulted in a mutually agreed approach for the Project.

⁷⁰ These comments came from a variety of groups, including the CCC, Environment Canterbury, the Bicycle User Group, the Claremont Residents' Association, the Halswell Residents' Association, as well as several property owners adjacent to the designation and over forty individuals who attended the Open Days.

⁷¹ Selwyn District Council, 2009b, pages 11–13.

4.4 Effects from changes in access and local traffic movements

Principal traffic effects

The Assessment of Traffic and Transportation Effects⁷² summarises the principal effects on traffic patterns once the Project is completed:

- the CSM Stage 2 between Halswell Junction Road and Main South Road will be used in preference to the baseline routing of Halswell Junction Road and Main South Road (adopted once CSM1 is commissioned); this improvement will see Average Daily Traffic Volumes (ADTVs) fall along Halswell Junction Road and the affected stretch of Main South Road. The Project route will be used instead of the alternative routes (Selwyn Road, Pound Road, Jones Road and Maddisons Road) as congestion falls and speeds increase on Main South Road, taking pressure off these roads otherwise used for local movements
- most trips between southern areas of Christchurch (including Hornby) and Rolleston will travel via Main South Road.

Other notable local changes in traffic volumes (ADTVs) include:

- reductions of about 30% on the eastern sections of Jones Road and up to 100% on the western sections of Jones Road
- Springs Road, between Prebbleton and Halswell Junction Road will experience reductions of around 2,000 vpd (9%)
- Shands Road is likely to experience little change north of Marshs Road, an increase south of Marshs Road to Trents Road and then improvements further south.⁷³

Main-South Road through Templeton

The stretch of MSR between Islington and Robinsons Road through Templeton was identified by locals as dangerous and inconvenient. There are problems crossing to access services such as the health centre, schools and other educational establishments, including turning right into Kirk Road from the north. There are particular problems accessing the shops just north of Marshs Road (see section 3.2), including crossing and turning into Barters Road and pulling into the stream of traffic going south.

There is an expectation locally that increased safety on this stretch will take effect once the Project is completed and traffic numbers reduce. The SH1 /Dawsons Road roundabout will also change the speed environment for vehicles approaching Templeton from the south. There is an expectation that the improvements will make it possible to develop a more coherent Templeton town centre,⁷⁴ where current commercial activities and services are spread out along MSR and Kirks Road. The Project should serve to reduce current social severance of Templeton by SH1 (see section 4.6 below).

Some key-informant interviewees in Templeton expressed concern about a possible increase in volume and number of heavy trucks accessing SH1 via Kirk Rd during construction, especially if the local quarry companies gain contracts on the Project. This effect would require monitoring and possibly traffic calming measures if it eventuates.

⁷² Assessment of Traffic and Transportation Effects, Technical Report No 2, May 2012, Section 6.

⁷³ Assessment of Traffic and Transportation Effects, Technical Report No. 2, Table 6-4.

⁷⁴ A structure plan would assist this outcome.

Weedons–Ross Road

For those that cross SH1 the intersection with Weedons–Ross Road, for instance to access Weedons School, the route will be easier and safer with the proposed interchange. However, for those turning off SH1 to the west, the trip will be a little longer due to the interchange. The interchange will assist those from the south, including Burnham, to access Lincoln, Broadfields (school) and Prebbleton.

The Weedons School expressed concern that an existing unresolved safety issue may be exacerbated in the amount of traffic on the road passing the school and the consequent safety of pupils. At present, well-marked signs ask motorists to pass at 40km per hour but the school would prefer an official speed limit. The traffic assessment team advises that there will be a moderate increase in traffic along Weedons Ross Road, as it provides a direct link to the Weedons interchange. The increase is estimated in the range of an additional 50 to 100 vehicles per day in the short to medium term, which is relatively insignificant in traffic terms. Long term may see more of an increase as people choose to use the Weedons–Ross route instead of Hoskyns Road when coming from the west – this potential issue is related to the performance of the MSR/Hoskyns Road signals in Rolleston which are forecast to reach capacity by 2041. It is also potentially affected by further development of the Izone envisaged by the SDC, and any future access to the Izone via Maddisons Road.

It will be important to monitor the performance of the interchange and Weedons Ross Road from the point of view of the School and the residents, and businesses in the area nearby.

In a related but separate project, the NZTA is investigating options to upgrade the Tennyson Street intersection with SH1, complementing the Kidman Street extension between Rolleston Drive and Tennyson Street. There are current safety issues with the access to and from SH1 to Tennyson St and Brookside Road.⁷⁵

Waterholes and Hamptons Roads

Residents in the Claremont area off Waterholes Road pointed out they will not gain full advantage from CSM2 as they do not have a convenient way to access the new highway. Instead, depending on destination, they are likely to continue to travel north via SH1 making use of the new roundabout at Dawsons Road to access Main South Road, as well as use Hamptons and Shands Road as their access to the new motorway. They have concerns that Waterholes–Hamptons Road will continue to be used as a route to Prebbleton and the Lincoln area. A respondent suggested that the intersection with SH1 would benefit from traffic signals rather than a roundabout although Project consultation found Claremont residents endorsed the roundabout option.

Emergency services

Officers from the St Johns Ambulance, Rolleston Volunteer Fire and the Rolleston Police commented on the expected improved time for attending to emergency events once the Project is complete. Back up support from the city would also be able to get to the rural areas more quickly. However the need for emergency u turns and quick exits on the motorway should be provided for and would be easier to negotiate from a 4 lane road (with a properly designed emergency facility) than in the tight, busy space of the existing two-lane highway. Emergency services would prefer an emergency crossing point at Larcombs Road to provide improved links to Broadfields and Prebbleton. The new layout at

⁷⁵ NZ Transport Agency (2012). Tennyson Street intersection upgrade. Information pamphlet.

Weedons was considered an improvement to the existing situation which is a "black spot" in its present form. They noted that 4 laning is safer overall for emergency vehicles as drivers tend to stay in their lane more and it is easier for an emergency vehicle to pass compared with the two-lane highway.

Comments on the Project noted a faster time for travel in and out of the city will assist in emergencies. The new SH76 would be the preferred route into the public hospital for ambulances, however, the rapid response team comes out from Sydenham and its access to Springs Rd is vital for places such as Prebbleton, Lincoln and beyond. The proposed over and under passes should help improve access and reduce response time for emergency vehicles. Police noted the proposed highway will assist in the support of policing in Rolleston from officers based in town, and for local police to respond to a major emergency in the city.

The need for safety exits and barrier gaps is important for rapid response units travelling on a motorway. Emergency services suggested gaps along the median barrier are required every 3 km to allow for emergency u turns, given the proposed barrier itself is considered by the services as an important safety improvement. The staff would like to know more about how the barriers are planned to work as any increase to access time is considered "life and death".

For CSM2 the design principle is similar to CSM1 where a median cross over is provided at a maximum spacing of 3km, depending on the location and spacing of interchanges. An issue with median crossovers is the need to drop a wire rope and pull out the posts before driving across the median at a paved crossover. This method relies on traffic management to be in place.

A reduction in accidents will also affect emergency services. The Project will address a number of accident prone intersections. The officers observed the majority of accidents attended to on the SH1 involve people doing u turns or turning right and not head on collisions. The new layout with median barriers should help address this situation.

In summary, while there will be some local changes in traffic patterns, there will be a number of improvements in convenience and safety and local access and connectivity will improve. The most important potential negative effect identified is any reduction in safety in the vicinity of Weedons School. Emergency services anticipate significant positive effects on safety and their operations from the Project, so long as details about crossing the median barrier can be clarified. The overall social effect will be positive.

4.5 Amenity effects⁷⁶

Noise effects

Marshall Day Acoustics (MDA) conducted a Noise and Vibration Assessment.⁷⁷ The reports describe the relevant noise standards, the assessment process including the identification of Protected

⁷⁶ This section relies on technical assessments because of time constraints and sensitivities about additional consultants visiting directly affected properties at the same time as NZTA's property team.

⁷⁷ Assessment of Operational Noise Effects, Technical Report No. 8 and Assessment of Construction Noise and Vibration, Technical Report No. 9.

Premises and Facilities⁷⁸ (PPFs), the measurement and modelling of existing ambient noise levels, the prediction of expected noise levels from construction and operation of CSM2 and MSRFL, and associated noise mitigation. Reporting on noise level surveys, the noise assessment observes that the dominant noise source affecting the ambient noise environment of those dwellings close to roads is traffic.⁷⁹

Operational noise

By comparison with the existing levels of traffic-related noise, the noise criteria for normal operation of 'altered roads' or 'new roads' are in the range 57–67 dBLAeq(24h) for noise experienced externally and 40 dBLAeq(24h) for noise experienced internally. Where assessed as necessary to comply with these standards, the noise mitigation options considered have focussed primarily on noise barriers (fences) of 1.8 in height if required, and (ii) the use of Open Graded Porous Asphalt (OGPA) surfacing.⁸⁰

The assessment considered potential changes to the noise environment for 34 PPFs along the Project alignment, and found that 26 will experience no change or reductions of between 1 and 11 decibels while 8 will experience increases of between 1 and 4 decibels. Relating noise level changes to typical perceptions of people, the assessment describes changes of 1–2 decibels as “insignificant” and changes of 3–4 decibels as “perceptible”.

Most dwellings near the existing MSR are likely to experience considerable improvements in their ambient residential noise environment from the operation of the new motorway. While 8 dwellings near the proposed CSM2 will experience increases in ambient noise levels of up to 4 decibels, these are unlikely to be particularly noticeable and all will comply with the Category A criterion expressed in the standard.

Construction noise and vibration

The NZ Standard NZS 6803: 1999 provides upper limits of noise received in residential zones differ according to time of day and night, and also differentiate weekdays from Saturdays, Sundays and public holidays. The Construction Noise and Vibration Assessment considers typical construction noise levels for a range of construction equipment and activities. It notes that some construction equipment has the potential to generate noise levels in excess of the daytime construction noise limits, but there is potential to mitigate the effect with noise control fences or localised screens.

⁷⁸ The most recent standard, NZS6806:2010, lists types of protected premises and facilities to be assessed in accordance with the standard – dwellings, educational facilities, marae, hospitals with in-patient facilities, motels and hotels in residential zones and playgrounds within 20m of education facilities. In “urban” areas, all PPFs within 100m of the alignment are assessed, and in “rural” areas, all PPFs within 200m. Commercial and business uses are not considered to be noise sensitive and are therefore excluded from formal noise assessments.

⁷⁹ Specifically, the Construction Noise and Vibration Assessment notes that ‘noise levels at dwellings that are located close to Main South, Springs and Shands Roads are subject to relatively high ambient noise levels in excess of 70 dBLAeq[24h]. Elsewhere, where dwellings are set back further from less busy roads, noise levels are in the order of 50dB dBLAeq[24h]’.

⁸⁰ OGPA’s use in mitigation refers to situations where OGPA is applied to the surface of other roads (e.g. side roads and bridges as part of interchanges or underpasses) in order to reduce this source of road-surface noise.

The Construction Noise and Vibration Assessment indicates there are a number⁸¹ of dwellings within around 50 metres of the carriageway edge, and as a result, there is likely to be construction work right up to the residential boundaries with the consequent risk of construction noise intruding on residential activities. The independently certified CEMP will include a Construction Noise and Vibration Management Plan (SEMP004). The CEMP will include details such as engineering details and information on staging and timing of activities.) The CEMP will emphasise the need for timely communications with affected property owners and dwelling occupants and set out the range of possible mitigation measures required to achieve acceptable outcomes in these temporary circumstances. A construction noise guide,⁸² outlines a cascade of mitigation measures likely to be used in SEMP004 in a structured hierarchy depending on the extent of predicted effects:

- managing times of activities to avoid night work and other sensitive times
- liaising with neighbours so they can work around specific activities
- selecting equipment and methodologies to restrict noise effects
- Using screening, enclosures or barriers
- offering temporary relocation to affected people
- treating neighbouring buildings for long duration works.

The overall conclusion is that significant project construction noise effects can generally be avoided, remedied or mitigated by utilising the best practicable option approach and the achievement of compliance with the relevant criteria of NZS 6806:2010. Construction noise effects, although temporary in duration, will require pro-active management to achieve acceptable outcomes as set out in the CEMP, and reinforced in Section 5, below.

Emissions and health effects

An Assessment of Air Quality Effects (Technical Report No. 10.) covers the potential for effects on people's health or residential amenity from vehicle emissions and construction-related dust. The assessment has identified no specific sensitive receptors – being schools, pre-schools, residential healthcare or retirement facilities – within 200m of any part of either CSM2 or MSRFL, although there are a number of residential premises within 200m of the proposed alignments (as noted in the discussion of noise effects above), giving rise to a need for further assessment of the potential impacts of discharges of construction dust.

Vehicle emissions

The Assessment of Air Quality Effects notes that there is only one continuous ambient air quality monitoring site currently operating in the study area, at Lincoln,⁸³ which has been monitoring PM₁₀ levels since 2010. The assessment of vehicle emissions modelled dispersion over a sequence of sections of the CSM2 and MSRFL proposal and included all dwellings, even if destined for outright purchase by the Crown. Beginning at the southern end, the section of MSRFL between Rolleston Drive and Weedons Road is the only section with large numbers of residential receptors within 200m of the centreline. The section from Weedons Road to the beginning of CSM2 has a number of residential receptors within 200m, including five houses within 5–20m of the alignment of the widened MSR.

⁸¹ A count of all dwellings within 50m of the MSRFL and CSM2 sections is MSRFL approx. 18 dwellings and CSM2 approx. 17 dwellings. The count was done by BECA, Christchurch, and included side roads/underpasses etc within the appropriate section but excluded houses to be demolished as part of the Project works.

⁸² NZTA, 2012. State highway construction noise guide. Version 0.4, February 2012.

⁸³ See Table 1, p.16. Another site in Hornby operated from 1995 to 1998.

Between the beginning of CSM2 and Shands Road there are a limited number of residential receptors located within 200m, although the closest is located approximately 20m from the edge of the proposed CSM2 alignment. Similarly, between Shands Road and Halswell Junction Road there are a very limited number of residential receptors within 200m, but the closest is approximately 30m from the edge of the proposed CSM2 alignment. Finally, there are a limited number of residential receptors within 200m of the Shands Road intersection, with the closest being approximately 60m from the edge of the southbound on-ramp.

The Assessment of Air Quality⁸⁴ indicates that discharges of air pollutants from vehicles using the CSM2 and MSRFL are unlikely to cause instances exceeding national air quality standards at any nearby receptor. People living close to the proposed CSM2 alignment or the existing MSR corridor will have a slightly increased exposure to vehicle related contaminants as a result of the Project. Concentrations of PM10 will be greatest for any receptors located close (25–30m from the centre line) between Shands Road and Marshs Road but will still be well below the relevant health-based assessment criteria.

The Assessment of Air Quality concludes that no mitigation or monitoring of air effects from vehicle emissions is required. While health is an important component of social wellbeing and there may be concerns about vehicle emissions in the future with population growth in the area, the specialist report recommendation has been relied upon in relation to the need for monitoring of vehicle emissions from the Project.

Dust

The Assessment of Air Quality acknowledges that dust can affect human health and be a nuisance to the surrounding public. It notes that the scheme will involve major earthworks. Dust discharges from earthworks typically fall into the larger particle sizes with minimal adverse physical health impact⁸⁵ but may cause nuisance effects in sensitive areas due to soiling.⁸⁶

The assessment describes potential sources of dust factors influencing dust generation, possible measures for dust mitigation, and recommends a dust monitoring programme). The CEMP will provide details on the locations likely to be most vulnerable to the risk of dust nuisance, depending on the construction methodology and construction programme. An Air Quality Management Plan will set out the approach and requirements for monitoring, management and mitigation of odour, dust and fumes.

Visual effects

The extent of change in the rural landscapes of the study area over the past decade has been considerable, with the advent of several major subdivisions, as well as rural-residential development, industrial and commercial activity, all introducing built structures and night lighting. Consequently, the nature and extent of permanent visual effects from the Project post construction are not exceptional for an area so close to an urban boundary, with a distinctly peri-urban character already.

⁸⁴ Section 9.2, Technical Report No. 10.

⁸⁵ Because these larger particles have limited penetration into the respiratory tract

⁸⁶ Soiling includes excessive dust deposits on houses, cars, and washing and excessive dust within houses.

These effects have been assessed in Technical Report No. 4 – Landscape and Visual Effects and also in the Lighting Assessment (Technical Report No. 19).⁸⁷ When discussing amenity values, the assessment of Landscape and Visual Effects explains the subjective elements that may contribute to amenity, and the effect of different combinations of these elements and changing amenity values over time.

In considering visual effects of the Project, the Landscape Assessment pays particular attention to changes resulting from CSM2 (e.g. localised removal of dwellings, shelter belts and amenity trees; excavated and overhead structures for local roads and interchanges; two cul-de-sacs resulting from the closure of Blakes Road) and from MSRFL (e.g. localised removal of shelter belts, widening of the road corridor, the creation of the grade-separated interchange at Weedons Road). Some visible features will be common throughout, such as overhead lighting, stormwater swales and acoustical fences.

The report describes the visual “audience” as comprising residents living within 500m either side of the new motorway, road users on adjacent and intersecting local roads, users of the industrial and commercial areas, and users of the motorway and link roads, including pedestrians and cyclists. While visual effects will depend on factors such as viewer proximity, viewer aspect, and the perceived contrast with the surrounding environment, one important distinction for social effects will be the difference between permanent effects on residential amenity (such as the loss of spacious, rural outlook; risk of intrusive lighting from headlights and overhead lights) and transitory effects experienced by people travelling through the area (momentary passing views and panoramic vistas from elevated bridge locations). While noting that existing neighbourhood and residential amenity values are not generally high in areas close to SH1, the assessment acknowledges, for some specific locations, adverse effects on residential amenity values may be moderate.

The assessment identifies particular properties (in its Appendix 1) where mitigation of local visual effects is recommended, including 20 dwellings requiring mitigation for visual effects from the Project in general, and 6 dwellings requiring mitigation for the visual effects of noise-mitigation fences. Mitigation measures are set out in the Landscape and Visual Assessment report and will be included via the CEMP in a Landscape Management Plan and in conditions, including lighting controls. As these will include elements such as hedges and copses of trees that local people are well used to, and see as beneficial, the long term social effect from further changes to the landscape from the Project are likely to be minor. As human perception of landscape is highly variable, however, with a strong emotional component related to sense of place, there will be individuals who consider the changes taking place as unacceptable.

4.6 Effects on local residents and businesses

Planning effects

Planning effects typically arise for people and communities in the course of planning for a major infrastructure project such as this. There is inevitable uncertainty as the Project moves from concept through technical investigations and feasibility analysis to detailed design and feasibility. This uncertainty has seen consideration of a number of alignments and configurations of highway crossings

⁸⁷ In addition, the Urban and Landscape Design Framework (Technical Report No. 6) and the Assessment of Effects – Urban Design (Technical Report No. 5) provide supplementary material.

and other details. The Project team has worked with property owners (residential and business) on issues of acquiring property and to resolve issues of access to individual properties as discussed below.

As a result of these activities, planning effects identified include:

- anxiety about the future of businesses and their assets
- anxiety about the family home
- anxiety about the nature, quality and safety of the future living environment
- advancing or delaying decisions and actions relating to life choices, investment, and residential location
- time taken up and stress from negotiating with planning teams and taking part in consultation activities
- disagreements in the affected communities about the merits of the project, alignments, design and mitigation proposals.

The well-established method for mitigating these types of planning effects is to ensure that there are excellent information flows to interested and affected parties, including the project website, newsletters and information handouts, open days, and discussions with individuals. Incomplete or inaccurate information can compound stress and anxiety amongst businesses and residents. It can also lead to exaggerated perceptions of an effect from the Project. A communications plan and a community liaison group are proposed in Section 5 below.

Property acquisition

Property acquisition is necessary for the Project. The NZTA has already acquired a number of properties on a hardship basis. Altogether they expect to remove a total of 17 residential dwellings, 12 located in the CSM2 alignment and five in the MSRFL alignment. Possibly, a small number of further residential dwellings will need to be removed depending on construction mitigation options and costs. The majority of the residential properties that require purchase are rented out or occupied by business managers and staff. A number of these houses are likely to be relocated nearby so while there will be some short term disruption, there will be minimal overall effects longer term on occupants of these properties, and no further mitigation is proposed. Only three residential properties are long-term, owner occupied and it is possible these people would relocate in the assessment area. While the process is disruptive to these particular households they are compensated financially and there is no obvious effect at the community level.

The NZTA are also purchasing land from a number of businesses, the majority of which can be reconfigured on their existing premises. Four businesses will need to be relocated within the immediate locality with their compensation calculated to cover any effects on goodwill or turnover. Only two) are expected to close at this stage.

Property access

Along the MSRFL stretch there will be a loss of property access for some properties, firstly because the design approach including a median barrier⁸⁸ will remove vehicle access to properties adjacent to SH1, secondly, because an NZTA safety audit has concluded that left-in/left-out access for private

⁸⁸ The NZTA has concluded there are significant safety concerns with U-turn arrangements in high speed environments.

properties adjacent to the MSR should not be allowed. As a result of these restrictions, there are around 40 properties (residential and business) affected by changes to their access.

The negotiation around properties includes outright purchase (as discussed above), partial purchase with, in some instances, reconfiguration of land and access ways, and relocation of activities such as horse training and business activity, with the resolution depending on how the access on each property is directly affected. Reconfiguration of access on the east side of the MSRFL alignment includes new property entrances off side roads and the use of private and paper roads. However, to avoid some properties becoming “landlocked”, the proposed solution includes a new rear access road that utilises existing local roads and private right of ways and a proposed extension of Berketts Drive. The recommended concept relies in the first instance on discussions with, and where possible agreement of, affected landowners.

On the west side of MSR there are a number of properties in a relatively narrow area between MSR and Jones Road between Weedons–Ross Road and Curraghs Road. There are 18 properties affected on this side that will lose their existing access. A new road is proposed along the railway line to provide new access from the west.⁸⁹

While potentially the loss of property access along the alignment, particularly for MSRFL, is a significant negative social effect for residents and businesses, it has been avoided or reduced in the design stage of the Project through a combination of proposed new local roads and property entrance ways, with issues for directly affected parties resolved through individual negotiations including property purchases in some instances. The net result will be some loss of convenience balanced against considerably safer, and in many instances more convenient, property access, leading to an overall social benefit.

Social severance

Social severance effects occur when patterns of movement of people are affected. People living, working, running a business or recreating on either side of a highway are potentially separated by it because of the reduced ability of vehicles, pedestrians or cyclists to move safely and conveniently from one side to the other. The effects of severance can flow into social and economic life as people change their patterns of relationships, from meeting each other informally to doing business or recreating. Over time, the immediate effects of severance will change as communities adapt and new patterns of movement and social and economic life emerge.

The Project has potential both to cause social severance and to reduce it, where the existing highway causes severance. As social boundaries in the impact area are very soft, with different boundaries for different networks and social facilities, it is more likely that the Project will lead to some redefinition of social boundaries than cause severance as a clear negative effect. Social boundaries in peri-urban areas, as affected in this instance, are typically dynamic and the population is changing rapidly. These communities will therefore adjust to change over time. It is possible, however, that some older, longer-term residents with a strong sense of place will experience a cumulative effect in respect to a

⁸⁹ The proposed Western rear access road provides a continuous road between Weedons Ross Road and 250 m north of Curraghs Road, located between the rear of the properties and the railway line.

loss of sense of place and social identity from the Project in addition to the ongoing effects of urbanisation in the area.

The potential for any severance effect is likely to be offset to a great extent by the proposed under/overpasses of the Project, providing safe vehicle, walking and cycling crossing points along a stretch of highway that is seen by local people as very dangerous and difficult to cross.

Considering the potential effects from the alignment in detail, working from North to South, the following observations about social severance effects are possible:

- residents in the area between Templeton and the CSM2 alignment will most likely find they have easier access to the township of Templeton as a service centre, including the school, medical centre and shops. For this area, the ties to Templeton will potentially be strengthened and ties to Prebbleton weakened. The highway will form a distinct physical and most probably a social boundary to the east of Templeton. With reduced through traffic on SH1 Templeton is likely to develop its commercial potential with a more coherent commercial centre, although the close presence of the Hornby commercial centre will tend to limit the scope and size of retail and service activity in Templeton. The town also has the potential to form stronger social-economic linkages across SH1. As one observer noted: "it may allow the two parts of Templeton to gel as they have always been dissected by the busy SH1," although, SH1 through Templeton will still be a busy highway
- residents between CSM2 and Prebbleton, including Aberdeen, will tend to see the motorway as a strong boundary between themselves and Templeton, reinforcing existing relationships and social identity with Prebbleton and the use of Hornby as their main service centre
- The Ministry of Education prefers to use clear physical boundaries such as roads to draw school zones highways so the new highway alignment is likely to become the future school zone demarcation for Templeton School and Lincoln High School
- the Weedons area will continue to be divided by the MSR and the Weedons-Ross interchange, while safer, will impose a substantial perceptual barrier to people living on the east side (with the school, golf club and domain to the west). In time this eastern part of the Weedons area will tend to look more towards Broadfield and Rolleston as their communities
- Rolleston will continue to develop a strong role as the commercial, administrative and social service centre for residents in the area between Templeton and Rolleston. This role will be encouraged by the availability of motorway access from the north.

Overall, with the closure of only one local road (Blakes Road – as a result of CSM2) and the construction of over and underpasses, with some left in and out options from local roads as well, plus mitigation of property access, the potential for short and longer-term social severance relating to residents, businesses and services is assessed here as low. An important potential long-term effect of social severance is for new social or economic disparities emerging either side of a new highway. There is no evidence of such an effect happening as a result of this Project.

5 Mitigation and management of social effects

5.1 Summary of mitigation and management measures

A number of mitigation and enhancement measures are noted above in relation to particular effects (negative and positive). This section summarises the mitigation and management related to effects of the Project on people and communities and also provides some recommendations towards wider management measures, such as community liaison and provision of public information. This assessment supports throughout the approach of avoiding, remedying or mitigating negative effects at the design stage, if possible, and also of enhancing positive effects in order to achieve sustainable benefits for social well being.

In the hierarchy of dealing with effects the common starting point is project design. At this point in the Project the main design elements have been around size and alignment of the highway, decisions around enhancing access to properties, provisions for active transport, and the nature and positioning of interchanges and crossings.

Later in the process, subject to RMA approvals and designation, there will be options for design elements within the planned highway, such as size and positioning of landscaping and planting that can mitigate particular amenity effects. As noted, construction management plans will be developed to support adaptive management.

On a broader level, recognising that highway construction is the responsibility of the NZTA, there will be possibilities for the SDC and CCC to be involved in managing effects, with their wider responsibilities for local roads and intersections and improvements to these, and controls on speed limits. The two councils, along with ECAN, will have responsibilities for managing effects on urban form and development of public and active transport.

5.2 Mitigating construction effects

Mitigation of construction effects will require sufficient description of the construction approach, methods, locations, scheduling and duration, to be set out in the CEMP. Principal construction effects in relation to social amenity include noise and vibration effects, air quality (dust) effects, property access effects, and local road network and road safety effects. Mitigation of those effects is identified in the relevant assessment reports and will include development of the CEMP including several Specialised Environmental Management Plans. It is considered here that these mitigation measures are sufficient to address social amenity of these amenity effects in combination with the measures outlined below.

The CEMP will include identification of properties most likely to be at risk of temporary, adverse amenity and potential health effects, or temporary access disruptions. Mitigation options in the CEMP will be agreed between the contractor and affected property owners, and involve a range of measures. Temporary relocation of some households will be an option only at the end of a cascade of other practicable options. In implementing the CEMP, close attention should be paid to the potential planning effects outlined in section 4.6 above, and the need to ensure full information is provided at both an individual and community level (see discussion below) about what is going on.

5.3 Mitigating loss of property access off MSR

As discussed in Section 4.6, a range of measures have been investigated for resolving issues around property access along the MSR. Individual property owners are concerned to maintain sufficient access to replace what they have lost. The ideal outcome is to improve on their access; however, in some cases this has not proven possible leaving property purchase as the only practicable option.

Consultation with landowners has resulted in two key design components to either avoid or reduce effects on access. These include a proposed access road on the western side of MSR from Weedons Ross Road to Curraghs Road. On the eastern side of MSR it is proposed to form access through a new rear access road that utilises existing local roads and private right of ways and a proposed extension of Berketts Drive. In resolving access issues it is important to note some landowners are looking to further develop their properties or businesses in future – this potential loss of opportunity has to be accounted for on an individual basis during direct negotiations. No further mitigation is recommended here.

5.4 Mitigating wider access issues

Wider access issues arise around achieving positive future outcomes for public transport, and for cycle and pedestrian traffic, are discussed above in section 4.3. There are no specific provisions in the Project design for buses and none appear necessary. The main measure for active transport is enhancement of highway crossings through provision for cyclists and pedestrians in the design of all over and under passes. In addition, there is design of a cycle link from CSM1 along part of CSM2 to link with the Rail trail at Marshs Road. This provision will achieve an important improvement for recreational and commuter cyclists. However, cycling advocates point out these measures do not provide any obvious improvement for the major commuting route between Rolleston and Hornby, other than the rather bland observation that there will be less traffic on some local roads. A more strategic and proactive approach would look for ways of enhancing a cycle route from Rolleston north, recognising that there are land limitations in the MSRFL alignment.

5.5 Mitigation of amenity effects (operational)

Amenity effects from operation of the new highway include visual and landscape effects, noise effects and air quality effects from vehicle emissions. Mitigation measures are proposed in the relevant technical assessments and CEMP, and will be the subject of conditions.

Some dwellings will require mitigation of the visual effects of the new motorway/expressway, while others may require mitigation of the visual effects of fences used for noise mitigation. The mitigation proposed includes limiting vegetation removal, minimising earthworks and designing structures integrated into the particular landscape of the alignment. Particular aspects include protecting valued view shafts, planting for visual screening of the motorway and choosing plant species to reflect local landscape character and management of light spill from highway lighting. Consultation feedback points to the need to use evergreen trees for screening and these observations should be reflected in design plans.

Options for mitigating noise operational noise effects include acoustic fences, the type of asphalt used and the design of off and on ramps and signalling.

The Air Quality Effects Assessment suggests potential adverse effects on air quality may be close to the threshold of acceptability. Given urban growth in the area, it would therefore be prudent as part of wider air quality monitoring to initiate an additional baseline air quality monitoring site to Lincoln.

5.6 Monitoring and management

The preferred approach to monitoring and managing social outcomes (positive and negative) in best-practice social assessment is community based and involves affected parties and local councils. It is not therefore simply the responsibility of the NZTA and its contractors. In this instance, key components are proposed here: a community liaison group (CLG), a public reporting/complaints mechanism and excellent information systems.

Formation of a CLG should take place prior to commencing construction so it can have input to the finalisation of construction management plans. The group should be facilitated by the NZTA with the aim of including representatives of directly affected rural properties (farming, non-farming, rural business), the main communities (Prebbleton/Aberdeen, Templeton, Claremont, Weedons, Lincoln and Rolleston), business clusters on MSR (Templeton), emergency services (police, fire, ambulance, civil defence) and councils (SDC, CCC, ECan). In reality, not all these interests will require a representative on the group as many people have multiple roles. It is important to ensure both men and women are represented. The CLG should meet as required from pre-construction through the first year of operation, with at least quarterly meetings through the main construction period.

The proposed role of the CLG includes:

- acting as a liaison mechanism between Project management and the various constituencies of interest
- monitoring complaints and Project responses (see below)
- evaluating monitoring information and Project responses (discussed elsewhere)
- helping to define any longer-term (operational) monitoring requirements.

A system for public information and any complaints should include a 24/7 0800 number and, when at that point, a clearly identifiable and accessible Project office and liaison person. The Project website could have a mechanism for public suggestions during construction. A protocol should be established for timely responses and there should be regular reporting to the CLG.

Good information systems and communication practices are essential. The Project already has a website, which includes an excellent flyover animation. This website needs to be kept up-to-date with technical reports and information on the EPA process included, as opportunities for public input to this process are not understood well. The following additional suggestions are made:

- community open days have been useful. Further open days are recommended (i) prior to the public submission period; and (ii) prior to commencement of construction activities
- written information such as a newsletter should be widely distributed with extra copies provided to local organisations (schools, pre-schools, medical centres, emergency services, cafes, Lincoln University and science centres) as well as libraries and council service centres)
- all information should include contact numbers direct to Project management and the Project website.

6 Conclusions

The overall conclusion of this assessment is that from the point of view of people and identifiable communities in the impact area, the Project should bring significant social benefits. There will, however, be some localised negative social effects experienced by a number of individuals and businesses and one small residential area. Most of the negative effects can be mitigated so that the residual effects are relatively minor and the net social benefit will still be considerable.

The positive benefits of the Project are reduced congestion, improved travel times and greatly enhanced safety along an otherwise dangerous stretch of main highway, with improved access to work and a range of services including education, health and emergency services, and retail and commercial services. On the negative side are short-term effects on individuals and businesses who will be displaced or experience temporary disruption during construction. There also will be some amenity effects experienced along the new highway once completed but they are manageable with proven techniques. The residual effects will be minor and communities are likely to adjust relatively quickly.

This assessment has considered carefully the possibility of social severance and found that even in the short term (post-construction), community severance is unlikely to be a significant issue for any of the existing rural communities and town-based communities of interest in the Project area, since both the CSM2 and MSRFL sections create safer crossing points between the two sides of this major traffic corridor. Indeed, as it passes through Templeton, the transfer of traffic from MSR to the motorway will reduce the existing degree of severance caused by SH1 traffic and allow Templeton to consolidate better its focus and identity. In the long term, the proposed motorway alignment will also reinforce the identity of Prebbleton as the focus of urban development in the northeastern part of Selwyn District. The highway will continue to cut through the rural area of Weedons, with the possibility that it promotes a shift of the eastern part of its rating area to Broadfields over time. However, change in the social boundaries of per-urban communities is common and the social boundaries are blurred anyway. The proposed interchange and underpasses will enable motorists, cyclists and pedestrians to move more easily and safely, particularly in the east/west directions.

This assessment also considered effects on active transport as an important component of social wellbeing. The integrity and future potential of the Little River Railtrail is enhanced by proposed links through CSM2 and the risk of the CSM2 and MSRFL infrastructure becoming an impediment to cycling and pedestrian connectivity is avoided by design features for over and under passes. Further increases in commuter cycling to Lincoln are a likely effect. The opportunity for a new cycling commuter route along the Jones Road/railway corridor between Rolleston and Hornby, with a future link to the rail-trail route, is made more attractive

Longer term the new highway (including CSM1) will add to current changes already underway in urban form. It will further encourage urban development in Templeton, Prebbleton, Lincoln and, most particularly, Rolleston. It will extend the commuter "belt" and metropolitan labour market and create demand for further rural subdivision, extending as far south as Ashburton District. There are policy instruments in place to manage these effects through the UDS and associated planning tools.

The following table summarises the expected social effects within the social wellbeing framework (1st column) commonly adopted in recent Social Impact Assessments. The second column (labelled “Likely Outcomes”) summarises expected social benefits while the third column (labelled “Residual effects”) summarises expected adverse social effects remaining given the current design and mitigation proposals. The table demonstrates how the Project will mostly contribute to the elements supporting social and community wellbeing. Residual negative effects span a number of elements which contribute to social well being, however, the net result for social well being is likely to be significantly positive.

Elements of Social Wellbeing*	Likely Outcomes	Residual Effects
Housing, living space, neighbourhood & sense of place	<ul style="list-style-type: none"> Strengthened community identities for Templeton, Prebbleton and Rolleston; Access to affordable housing in a range of locations and neighbourhoods; Access to rural living opportunities combined with enhanced urban employment access (e.g. Aberdeen, Claremont). 	<ul style="list-style-type: none"> The Weedons community is potentially severed by traffic flows along MSR, and the substantial new infrastructure in the form of the Weedons–Ross Rd interchange may not fully reduce the effect.
Economy, business activity, income and employment	<ul style="list-style-type: none"> Improved connectivity between Rolleston I-Zone, City, Port and airport; Expanded labour market area for employers and employees; Increase in businesses operating successfully in I-Zone; Future expansion of I-Zone. 	
Transport and communications	<ul style="list-style-type: none"> Reduced congestion and enhanced travel efficiency, particularly for commuters and regular delivery services between Christchurch and Rolleston; Increased public transport patronage due to reduced congestion on the new motorway and opportunities for bus priority off the motorway 	
Goods and services, retail and commercial space	<ul style="list-style-type: none"> Expanded scale and role of commercial centres in Rolleston, Prebbleton and Lincoln. 	
Lifelong learning and education	<ul style="list-style-type: none"> Shorter travel times to the City may enable more rural schools to participate in inter-school events; Enhanced access to a range of education opportunities. 	
Personal, community and public safety and freedom from risk	<ul style="list-style-type: none"> Effective emergency and disaster response assisted; Improved safety for motorists travelling along the main transport corridor; Improved safety for motorists, cyclists and pedestrians crossing the main transport corridor, and within Hornby. 	<ul style="list-style-type: none"> Increased vehicular traffic on some local roads (e.g. Shands Road), will make the road environment less attractive to cyclists and pedestrians A risk of increased traffic and heavy traffic hazard for Weedons School

Physical and mental health	<ul style="list-style-type: none"> Improved access to health services and medical centres located in Rolleston, Templeton and Hornby for residents either side of the main transport corridor; Increase in active transport and access to a range of physical recreation activities. 	<ul style="list-style-type: none"> A slight increase in risk of occasional PM10 exceedences for a few properties along the alignment. Some instances of unacceptable dust, and construction and operation noise for a few properties along the alignment giving rise to complaints;
Outdoor areas, natural environment and open space	<ul style="list-style-type: none"> Slight reduction in traffic noise (operational) for 80% of affected properties along the main alignment; New landscape vistas for users of new bridges (underpasses); Enhanced landscape planting. 	<ul style="list-style-type: none"> Some residual visual and lighting effects for a few residential properties along the alignment giving rise to complaints
Lifestyles, leisure and recreation	<ul style="list-style-type: none"> Work-related travel time savings for Rolleston commuters will be available for leisure activities; Easier access for Rolleston and rural residents to a wider range of entertainment and recreation opportunities in Hornby and the City. 	
Family, social attachment and support	<ul style="list-style-type: none"> Work-related travel time savings for Rolleston commuters available for household-centred activities Enhanced community cohesion in Templeton. 	
Participation in community and society	<ul style="list-style-type: none"> Enhanced participation in community life from improved access and reduced travel times. 	

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Attachment 1: Stakeholders identified through NZTA records

The following Key Stakeholders were identified from the NZTA consultation activities:

- Christchurch City Council
- Environment Canterbury
- Environmental Protection Agency
- KiwiRail
- Selwyn District Council
- Te Runanga o Ngai Tahu
- CCC and SDC Community boards
- Community/Residents' Groups
 - Aberdeen - Neighbourhood Support Group
 - Bicycle User Group
 - Claremont Residents' Association
 - Halswell Residents' Association
 - Izone Park Project Team
 - Prebbleton Enviro-Village
 - Rolleston Residents' Association
 - Templeton Residents' Association
- Members of Parliament, Local Councillors (or representatives) of ECan, SDC, CCC

The following Other Stakeholders were identified:

- Government and Statutory Organisations
 - Department of Conservation
 - New Zealand Historic Places Trust
 - New Zealand Fish and Game
 - Urban Development Strategy Partners (through the implementation Committee)
 - Regional Land Transport Committee
- Port of Lyttelton
- Road and Transport Operators and Organisations
 - NZ Road Transport Association
 - NZ Trucking Association
 - Heavy Haulage Association
 - Taxi/shuttle operators
 - Metro Public Transport
 - Automobile Association
 - Cycling Advocates' Network (CAN) and Spokes
- Network Providers and Utilities
 - Orion
 - Transpower
 - Telecommunication providers
 - Water race operators
 - Emergency Services
 - NZ Fire Service
 - NZ Police
 - St John Ambulance

The following Other Affected Parties were identified:

- Owners and residents of property adjacent to the CSM2 or the MSRFL – i.e. properties that do not have a frontage to the CSM2 or the MSRFL, but may be affected by intersection or access changes
- Canterbury Employers Chamber of Commerce
- Canterbury Manufacturers Association
- Christchurch International Airport Limited.

Attachment 2: Social profile additional information

These profiles of selected areas within the wider impact area of the project (CSM2 and MSRFL) were compiled mainly from 2006 census statistics. The profiles of the communities were either prepared by combining data from a number of mesh blocks or by using data from area units.

Profiles were compiled for the following areas:

- Rural Area A (Mesh block numbers 2496700, 2496800, 2496900, 2497000, 2498700, 2498800, 2719301, 2719500)
- Rural Area B (Mesh block numbers 2493300, 2493400, 2493500, 2495600, 2495700, 2495800, 2495900, 2496003, 2496100, 2497500, 2498000, 2498400)
- Templeton (Mesh block numbers 2496002, 2496004, 2496005, 2496006, 2496007, 2496200, 2496300, 2496400, 2496500, 2496600)
- Prebbleton (Area unit)
- Rolleston (Area unit)

Census statistics for the Selwyn District and New Zealand have been used as a basis of comparison for all the selected areas profiled here.

Census data were collected for the following key variables for each of the selected areas and Selwyn District:

- usually resident population (1996, 2001 and 2006)
- age and sex structure
- ethnic composition
- period of residence of the population
- educational qualifications
- labour force status
- employment status
- occupational status
- employment by industry for residents of the area
- family types
- household types
- household income
- sources of income received from government
- dwelling tenure
- access to motor vehicles by households

Usually resident population

The population of Selwyn District grew at three times the rate of the national population between 1996 and 2006. Within the district itself there were areas that had even higher rates of growth over this decade. The population of Rural Area A, for instance, increased by 61 per cent. Prebbleton's population grew by 81 per cent and Rolleston's population by 263 per cent. Yet there were also parts of the wider impact area of CSM2 such as the town of Templeton, which had a small increase of population (4 per cent), or Rural Area B that experienced population decline (19 per cent) much of it due to the closure of Templeton Hospital. Population growth was strongest in areas where new residential subdivisions had been developed for people seeking a rural lifestyle within a comfortable commuting distance of Christchurch City.

Table A1: Changes in usually resident population of parts of the wider impact area of CSM2 – 1996–2006

Area	1996	2001	2006	Per cent change 1996-2006
Rural Area A	987	1155	1587	60.8
Rural Area B	1458	1038	1179	-19.1
Templeton	1515	1575	1572	3.8
Prebbleton	1674	1833	3024	80.6
Rolleston	1053	1974	3822	263.0
Selwyn District	24783	27312	33669	35.9
New Zealand	3618303	3737280	4027947	11.3

Source: Statistics New Zealand

Age and sex structure

The populations of parts of the wider impact area were generally younger than the population of New Zealand. Only Templeton's population had an age structure that was similar to that of the national population. Rolleston, Prebbleton and Rural Area A had relatively more children, and relatively fewer people aged 65 years and over among their residents. Rural Area B had a much lower proportion of children than the other areas, and had a higher proportion of people between 15 and 64 years. Males predominated in Rural Area B (M/F ratio 1.21 cf. 1.04 for Selwyn District); a typical demographic feature of rural districts in New Zealand.

Table A2: Percentages of usually resident population of parts of the wider impact area of CSM2 belonging to three age groups – 2006

Area	14 years & under Per cent	15–64 years Per cent	65 years & over Per cent
Rural Area A	23.2	67.9	8.9
Rural Area B	15.9	73.7	10.5
Templeton	21.5	67.5	11.0
Prebbleton	25.0	67.1	7.9
Rolleston	28.5	66.5	4.9
Selwyn District	23.0	68.0	9.0
New Zealand	21.5	66.2	12.3

Source: Statistics New Zealand

Dependency ratio: 0.47 Rural Area A, 0.36 Rural Area B, 0.48 Templeton, 0.49 Prebbleton, 0.50 Rolleston, 0.47 Selwyn District, 0.51 New Zealand.

Sex ratio Males/Females: 0.98 Rural Area A, 1.21 Rural Area B, 1.00 Templeton, 0.98 Prebbleton, 0.95 Rolleston, 1.04 Selwyn District, 0.95 New Zealand.

Ethnic composition

The populations of all the parts of the wider impact area were relatively homogenous in their ethnic composition. People identifying themselves as being of European descent comprised around 75 per cent of the population in all six parts. By comparison the proportions of Maori, Pacific peoples and Asian were much lower than the national pattern. The presence of Maori was strongest in the wider impact area at Templeton (8%) and Rolleston (7%).

Table A3: Percentages of usually resident population of parts of the wider impact area of CSM2 belonging to major ethnic groups – 2006

Area	European Per cent of responses	Maori Per cent of responses	Pacific & Asian Per cent of responses
Rural Area A	78.2	4.9	2.5
Rural Area B	72.4	5.1	5.1
Templeton	74.6	8.3	3.1
Prebbleton	79.1	3.5	1.9
Rolleston	74.7	7.3	3.6
Selwyn District	74.5	5.8	3.1
New Zealand	61.2	13.3	14.5

Source: Statistics New Zealand

Period of residence

Further evidence of rapid population growth in Rolleston and Prebbleton during recent years is provided by statistics about the period of residence. Just under three-quarters (74%) of Rolleston's population had lived there for less than five years, while almost two-thirds (64%) of Prebbleton's residents had done so for the same period (cf. 57% for Selwyn District, 54% for New Zealand). Furthermore, only five per cent of Rolleston's residents in 2006 had dwelt there for 15 or more years (cf. 13% for New Zealand).

Table A4: Period of residence of population of parts of the wider impact area of CSM2 – 2006

Area	Less than five years Per cent	Fifteen or more years Per cent
Rural Area A	50.7	12.0
Rural Area B	49.4	14.8
Templeton	48.7	11.8
Prebbleton	63.7	12.1
Rolleston	74.3	4.6
Selwyn District	56.5	13.0
New Zealand	53.9	14.5

Source: Statistics New Zealand

Educational qualifications

Residents of Prebbleton were relatively better educated than residents of other parts of the wider impact area. About two-fifths of residents (42%) of Prebbleton indicated they held tertiary qualifications in 2006. There were high proportions of people who lived in Rural Area B (32%) and Templeton (29%) who had no educational qualifications (cf. 21% for Selwyn District).

Table A5: Percentages of usually resident population aged 15 years & over of parts of the wider impact area of CSM2 with tertiary and no educational qualifications – 2006

Area	Tertiary qualifications Per cent	No qualifications Per cent
Rural Area A	36.8	21.2
Rural Area B	27.5	32.4
Templeton	28.5	28.7
Prebbleton	42.3	17.8
Rolleston	35.8	22.1
Selwyn District	37.1	21.1
New Zealand	35.8	22.4

Source: Statistics New Zealand

Labour force status

Residents of the wider impact area had a high level of participation in the labour force when compared with the country as a whole. The participation rate varied between 71 and 81 per cent for the five areas, and compared favourably with the national rate of 70 per cent. Many of the residents held full-time positions in 2006, and the unemployment rate for all parts of the wider impact area was lower than the national rate. The towns of Templeton and Rolleston, however, had relatively more unemployed people (2.7%) than did Selwyn District (1.7%).

Table A6: Labour force status of residents of parts of the wider impact area of CSM2 – 2006

Area	Employed FT Per cent	Employed PT Per cent	Unemployed Per cent	Not in Labour Force Per cent
Rural Area A	59.4	16.1	1.5	21.2
Rural Area B	52.3	14.6	1.5	28.9
Templeton	55.1	17.3	2.7	24.4
Prebbleton	56.9	20.5	1.3	20.1
Rolleston	62.5	14.6	2.7	19.2
Selwyn District	56.4	17.0	1.7	22.8
New Zealand	48.4	14.4	3.4	30.4

Source: Statistics New Zealand

Employment status

The labour forces of Rolleston, Templeton and Rural Area B had higher proportions of paid employees than the district's workforce, whereas those of Rural Area A, Rural Area B and Prebbleton had higher proportions of employers. Rural Area B and Prebbleton also had relatively more self employed people than did the district workforce.

Table A7: Percentages of paid employees, employers and self employed persons resident in parts of the wider impact area of CSM2 – 2006

Area	Paid employees Per cent	Employers Per cent	Self Employed Persons Per cent
Rural Area A	66.7	11.8	13.7
Rural Area B	64.8	10.0	16.9
Templeton	87.0	4.0	6.7
Prebbleton	71.1	10.4	14.5
Rolleston	87.9	4.0	6.7
Selwyn District	71.8	9.3	13.5
New Zealand	76.1	7.2	11.8

Source: Statistics New Zealand

Occupational status

Forty per cent of Prebbleton's labour force was engaged in higher status occupations in 2006, while only 23 per cent of Templeton's labour force did so. The labour forces of Rural Area B and Templeton, moreover, had relatively more people (22%) with blue collar occupations compared with the district's workforce (19%).

Table A8: Percentages of residents with higher status and blue collar occupations in parts of the wider impact area of CSM2 – 2006

Area	Higher status occupations Per cent	Blue collar occupations Per cent
Rural Area A	35.6	15.6
Rural Area B	26.3	22.8
Templeton	23.3	21.6
Prebbleton	39.7	12.6
Rolleston	29.3	18.2
Selwyn District	36.9	18.5
New Zealand	36.0	16.8

Source: Statistics New Zealand

Note: Higher status occupations are the manager and professional categories, and blue collar occupations are the machinery operators and driver, and labourer categories.

Employment by industry for residents of the area

The main sources of employment for residents of the wider impact area in 2006 were the wholesale/retail/hospitality, education/health/social/education/arts, manufacturing, and professional/technical/administrative sectors. By comparison relatively few people living in the wider impact area had jobs in the agriculture/forestry/fishing sector that provided 17 per cent of employment for residents of Selwyn District. Both Rural Areas were exceptional in this regard as 12 per cent of their residents were employed in this sector of the economy.

Table A9: Percentages of residents of selected areas parts of the wider impact area of CSM2 – employment by industry 2006

Area	Agriculture, forestry, fishing Per cent	Manufacturing Per cent	Wholesale, retail, hospitality Per cent	Professional, technical, administrative Per cent	Education, health, social, recreation, arts Per cent
Rural Area A	12.7	14.0	19.2	10.6	16.8
Rural Area B	12.4	14.9	18.0	13.2	19.3
Templeton	1.8	16.1	22.1	14.6	20.7
Prebbleton	6.8	13.2	17.6	14.9	21.2
Rolleston	2.4	16.6	23.1	15.7	11.9
Selwyn District	17.0	11.2	16.3	15.9	18.0
New Zealand	6.9	11.7	22.0	16.0	22.5

Source: Statistics New Zealand

Family types

Two parent families were predominant in Prebbleton and Rolleston (both 55%), while there were high proportions of one parent families in Templeton (15%). Couple only families were more prevalent in Rural Area A (43%) and Rural Area B (48%).

Table A10: Family types in parts of the wider impact area of CSM2 – 2006

Area	Couple only Per cent	Two parent Per cent	One parent Per cent
Rural Area A	43.2	50.3	6.5
Rural Area B	48.1	43.3	8.7
Templeton	40.1	44.7	15.1
Prebbleton	37.9	55.1	7.0
Rolleston	34.9	55.2	9.9
Selwyn District	41.7	49.3	9.0
New Zealand	39.9	42.0	18.1

Source: Statistics New Zealand

Household types

One family households were a higher proportion of households in the wider impact area than occurred at the national level in 2006. There were relatively more one person households in Templeton and Rural Area B than in Rural Area A, Prebbleton and Rolleston however.

Table A11: *Types of households in parts of the wider impact area of CSM2 – 2006*

Area	One family Per cent	One person Per cent
Rural Area A	84.6	10.3
Rural Area B	75.8	16.1
Templeton	76.8	17.0
Prebbleton	86.7	9.1
Rolleston	85.3	9.9
Selwyn District	80.1	14.4
New Zealand	67.8	22.6

Source: Statistics New Zealand

Household income

The distribution of household incomes reveals significant differences between the five parts of the wider impact area. The incomes of households in Prebbleton, Rolleston, and Rural Area A were relatively higher than both the district and national distributions, while those of households in Rural Area B and Templeton were lower than the district standard of distribution but better than the national standard.

Table A12: *Distribution of household incomes in parts of the wider impact area of CSM2 – 2006*

Area	\$20,000 & under Per cent	\$20,001–\$50,000 Per cent	\$50,000 & over Per cent
Rural Area A	7.3	19.1	60.1
Rural Area B	7.8	35.0	45.6
Templeton	11.5	24.5	52.6
Prebbleton	5.1	18.1	66.5
Rolleston	5.3	19.8	62.3
Selwyn District	8.5	24.5	53.9
New Zealand	13.8	27.1	42.9

Source: Statistics New Zealand

Sources of income received from government

Residents of Templeton had a greater dependence on income received from government than did residents from the other parts of the wider impact area. This dependence was mainly due to the higher proportion of people aged 65 years and over in Templeton, who received NZ superannuation and veterans pensions.

Table A13: Sources of income from government received by residents of parts of the wider impact area of CSM2 - 2006

Area	Total number of payments received	Number of residents (15 years & over)	Total payments received ÷ number of residents Per cent	NZ superannuation & veterans pension received Per cent of residents
Rural Area A	173	1212	14.3	7.4
Rural Area B	114	887	12.9	6.8
Templeton	285	1224	23.3	14.2
Prebbleton	381	2268	16.8	8.3
Rolleston	462	2736	16.9	8.1
Selwyn District	5046	25929	19.5	10.9
New Zealand	931407	3159879	29.5	13.9

Source: Statistics New Zealand

Dwelling tenure

All five parts of the wider impact area had high levels of home ownership compared with Selwyn District and New Zealand, with at least four-fifths of dwellings being owned by the occupants or held in a family trust. The town of Templeton had relatively more rental dwellings (17%) than did other parts of the wider impact area.

Table A14: Tenure of dwellings held by residents parts of the wider impact area of CSM2 - 2006

Area	Owned/partly owned Per cent	Held in a family trust Per cent	Not owned Per cent
Rural Area A	65.3	15.3	15.9
Rural Area B	64.8	15.6	12.5
Templeton	74.0	7.7	16.8
Prebbleton	68.1	17.8	12.0
Rolleston	78.3	6.2	13.3
Selwyn District	64.9	11.1	20.6
New Zealand	51.2	11.5	31.1

Source: Statistics New Zealand

Access to motor vehicles by households

Very few households in the wider impact area did not have access to a motor vehicle. Even in places where household incomes were lower than the district pattern of distribution, such as Templeton and Rural Area B, only two or three houses in a hundred had no access to this mode of transport. In general access to motor vehicles was very high by national standards. Only for households in Templeton, where 67 per cent of them reported two or more vehicles, was there lower access to motor vehicles than found at the district level.

Table A15: Access to motor vehicles for households of parts of the wider impact area of CSM2 - 2006

Area	None Per cent	One motor vehicle Per cent	Two motor vehicles Per cent	Three or more motor vehicles Per cent
Rural Area A	0.6	16.1	44.3	37.9
Rural Area B	3.3	18.9	38.5	36.1
Templeton	2.1	30.4	47.4	19.1
Prebbleton	0.6	14.2	51.8	32.2
Rolleston	1.0	21.9	55.2	21.0
Selwyn District	1.6	22.3	45.9	28.3
New Zealand	7.8	36.3	36.6	15.3

Source: Statistics New Zealand

Transport to work

Travel to work for the main towns and the District in 2006 shows that for Rolleston the figure for those driving or passenger in a vehicle is very high (90.9%), but the figure drops for Templeton and is noticeably lower for Lincoln (75.6%) where a much higher proportion (18.5%) use active transport.

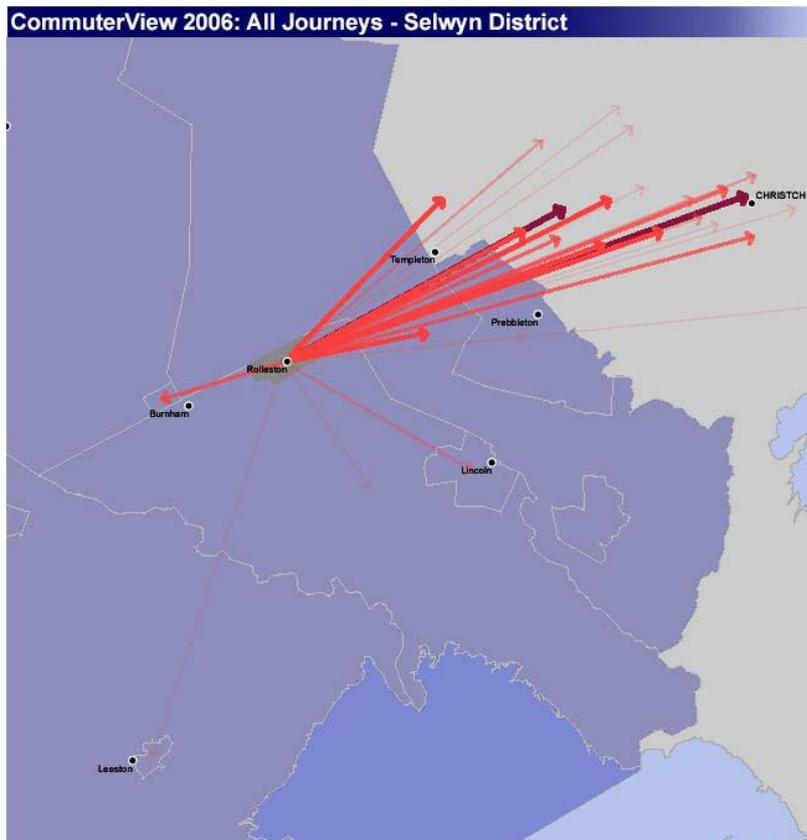
Table A16: Mode of transport to work for residents of Rolleston, Lincoln and Templeton, 2006

Transport mode	Rolleston Per cent	Lincoln Per cent	Templeton Per cent	Selwyn District Per cent
Drove car/truck/van	86.6	68.3	72.8	78.6
Passenger	4.3	4.0	2.8	3.4
Public Bus	1.2	2.6	1.7	0.7
Motor bike/Power cycle	0.8	0.6	0.8	1.9
Bicycle	1.3	5.8	1.9	2.7
Walked/jogged	2.7	12.7	4.2	6.5
Other	0.7	0.9	0.3	0.8
Not specified	2.3	5.2	15.6	5.4
Total number of people	1809	1041	1080	14310

Source: Statistics New Zealand

Note: People who worked at home or did not go to work on the day of the census have been deducted from the total number of people.

The following map illustrates diagrammatically the general direction (home to area units of work) that Rolleston people commuted to work in 2006. This picture will have changed somewhat since then with the 2010 and 2011 earthquakes affecting the Christchurch CBD and the emergence of the Izone for local work opportunities.



Attachment 3: Health and schooling additional information

Health services

The health services that are within or near the impact area include:⁹⁰

- three medical centres – at Rolleston, Templeton and Lincoln
- four pharmacies at Rolleston, Templeton and Lincoln (2)
- a chiropractor at Rolleston
- counselling services at Lincoln
- mental health services (Comcare Trust) at Rolleston
- dental services at Rolleston (3) and Lincoln
- a carers bureau at Rolleston
- a maternity hospital at Lincoln
- an optometrist at Lincoln
- an osteopath at Rolleston
- three physiotherapists at Rolleston (2) and Lincoln
- two podiatrists at Rolleston and Lincoln
- three antenatal and postnatal services at Lincoln

It is evident from this list that health services are mainly located at the centres of Rolleston and Lincoln.

Rolleston Medical Centre has about 7,000 patients from Rolleston, Weedons and Dunsandel. It has eight doctors, nurses, a dietician, a counsellor and a practice manager. The practice acts as an emergency response centre for the local primary and preschools because of time delays that can be experienced by emergency services arriving from the city. Since the earthquake events the practice has become busier, and there is no room to expand on the existing site. A number of new families have relocated to Rolleston, and some residents of Rolleston, who formerly were enrolled with medical centres in Christchurch City that have closed, have registered with the practice.

Templeton Medical Centre employs three doctors, three nurses, a counsellor, a practice manager and three receptionists. The practice has between 4,000 and 5,000 patients who reside in Templeton, Rolleston, Prebbleton, Burnham, West Melton and Hei Hei. A doctor at the Templeton Medical Centre has responsibility for patients at the Nova Trust Rehabilitation Centre and Brackenridge Estate (a residential centre for the mentally and physically challenged). Several employers in the area (e.g. Fulton Hogan and Brinks chicken farm) use the services of the centre for work related accidents. Very few patients walk to the practice from the eastern side of SH1. The practice is busier since the earthquake events; with more families moving into the new subdivisions at Templeton and Claremont. There are plans to expand the practice and establish retail shops on its site.

Early childhood education

There are pre-school education and childcare providers operating at multiple locations within the impact area, whereas others operate from premises in the townships. Those based in the townships

⁹⁰ Selwyn District Council, no date, pages 15–31.

include three pre-school education/care providers at Burnham, two at Dunsandel, 14 at Rolleston, four at Prebbleton and six at Lincoln.⁹¹

Templeton Kindergarten employs six staff, and has a roll of 50 families. Half of the roll comes from Rolleston where there is no kindergarten, and the remainder are locals; including those from the new subdivisions of Aberdeen and Claremont. All families come to Templeton Kindergarten by car, unless they are able to use a safe walking route. Families from Rolleston travel to the kindergarten by Jones Road as it has a lower volume of traffic. When they leave the kindergarten for school, children either attend the local primary school or those at Prebbleton, Rolleston, Hornby, Halswell and West Melton.

Prebbleton Preschool and Kindergarten operate from two sites. They are licensed for 250 families and have a staff of 15. Eighty per cent of their children reside within the wider Prebbleton area, and many living nearby are transported by pedestrians.

Rolleston First Learners has a roll of 69 families and a staff of 14. Around 70 per cent of families travel by car, and come from Burnham, and Hornby as well as Rolleston itself. Most of the children who attend the centre go on to the two local primary schools at Rolleston. There are 14 preschools in Rolleston; with three opening in 2011 that were triggered by the rapid growth of the town.

Schools

Lincoln High School:

Lincoln High School has enrolment zone stretching from West Melton in the northwest and Prebbleton in the northeast to Little River in the southeast. It is a decile 9 school that currently has a roll of 1,580 and a staff of 140. Although its zone is geographically extensive, it does take a few students from out of zone, and its roll has grown steadily during recent years. The school is situated on Boundary Road, Lincoln. The Ministry of Education has recommended that the whole of the Prebbleton area be included in the Lincoln High School zone, which is presently divided through the Aberdeen subdivision. Lincoln is no longer a farming community as the arrival of younger and retired families, who have been attracted by the wider range of housing built recently in the town, has changed its social character. An extensive bus service (20 school buses and three private buses) collects students from throughout the zone, with eight⁹² buses travelling from Rolleston and a smaller number of students coming from the northern side of SH1 (using five buses). Many students currently come from Rolleston, although this may change depending on the type and location of a secondary school that is built to service the rapidly growing population of Rolleston. The three private buses bring students from the Templeton area. No pupils cycle on the main roads, but the Prebbleton Cycle trail is popular with some students. School buses take students into the city, and their families provide the return transport.

Hornby High School:

Hornby High School, with no enrolment zone, is a decile 3 school with a current roll of 460 students and 55 staff, situated on Waterloo Road. The roll has been declining slowly in recent years. Hornby High School was opened in the 1980's with a roll of 800. During the 1990's the closure of the

⁹¹ Selwyn District Council, no date, pages 42–45.

⁹² Up until 2012 one more bus a year has been added to the Lincoln High School fleet from Rolleston

Islington Meat Works and the Wigram air base significantly reduced its population catchment. The school lost a lot of families; particularly those with parents having managerial occupations. The school went into decline, and the BOT struggled to keep up with the needs of students. Social issues resulted in a low-achieving school community. Over recent years the school has increased its roll, a new BOT has been set up, and a vertical educational plan developed for linking with the nine schools in the area and the CPIT. The latest ERO inspection of the school reported a higher achievement level. At the present time the majority of students reside in the Hornby area, with 20 per cent living in Hei Hei and Halswell. Almost all of the students walk or cycle to school. Population growth is expected in the catchment area of Hornby High School. The Ministry of Education, for example, is in discussion with interested parties about building a new primary school in the area as land has been allocated recently for a 3,000 house subdivision adjacent to Halswell Junction Road.

Templeton Primary School:

Templeton Primary school has an enrolment zone stretching from the West Coast Road in the north to Shands Road in the southeast. It is a decile 7 full primary school with a current roll of 350 and 35 staff. The roll has declined slightly in recent years. Staff travel from the south and west of Christchurch, but also from Rolleston, Prebbleton and Templeton itself. The school is situated on Kirk Road. Most of the school community resides north of SH1 with only 10 families on the southern side. Very few pupils walk or cycle to school, and no school bus service is provided. The roads are extremely busy; particularly since the rapid growth of Rolleston's population and the development of the industrial park has generated increased volumes of commuter and commercial traffic. At present Jones Road and the SH1 are *"bumper to bumper with speeding cars"*. Kirk Road is very congested as it provides access between the north and south, with large facilities such as Brackenridge Estate, Nova Trust and the Womens Prison as well as a Fulton Hogan quarry off West Coast Road. Claremont residents have a choice between Templeton and Prebbleton Schools. However, with only 30 sections in Claremont, this may result in all pupils from this locality being allocated to the Prebbleton zone due to safety concerns about crossing SH1. Templeton School holds a ballot four times a year for out-of-zone pupils.

Rolleston Primary School:

Rolleston Primary School has an enrolment zone bounded by Kerrs, West Melton and Hoskyns Roads on the north side of SH1 and bounded by Weedons, Boundary and Lowes Roads on the south side of SH1. It is decile 9 full primary school, with a current roll of 625 and 40 staff. The roll fell when the nearby Clearview Primary School opened in 2010, taking pupils from the southern parts of Rolleston. However, Rolleston Primary School currently takes no out-of-zone pupils. The school is located on Tennyson Street. No school bus service is provided, although Rolleston, Templeton and Burnham Schools have buses to transport senior pupils to Breens Intermediate for technical classes. The 14 local preschools feed into the school as well as Templeton kindergarten.

The build-up of traffic within Rolleston itself, particularly around Tennyson Street, is an issue for school patrols. Rolleston Primary School is also a drop-off point for Lincoln High School buses.

Clearview Primary School:

Clearview Primary School is a decile 9 full primary school with a current roll of 455 and 30 staff, half of whom live within Selwyn District and half who travel from the city. The school is situated on Broadlands Drive, and has an enrolment zone bounded by Brookside, Selwyn and Boundary Roads. There are plans to extend the school with 12 extra teaching positions as a roll of 700 is expected by the end of 2012. The school currently takes no out-of-zone pupils. The rolls of Clearview and Rolleston Primary Schools exceed the 1000 primary school aged children that is considered the trigger point for providing a new secondary school, but as yet no land has been designated for this purpose.

Broadfield Primary School:

Broadfield Primary School, with no enrolment zone, is a decile 10 full primary school with a current roll of 98 and 8 staff. The school is located near the junction of Selwyn and Shands Roads.

Pupils come from Rolleston, Burnham, Templeton, Lincoln and Prebbleton. Most travel by car, and the main reason for attending the school is its attraction as a small rural school. The local population is small, so a significant proportion of its roll in recent years has come from the rapid growth of Rolleston. The school reports that traffic in the area has become much busier with a lot more trucks on Robinsons Road. Consequently, the school now rosters parents on duty both before and after school, since the road allows 100kph speeds, with 40kph at the driver's discretion outside the school gate.

Weedons School:

Weedons School, has an enrolment zone bounded by Hoskyns, Knights, Newtons and Maddisons Roads on the northern side of SH1 and by Larcombs, Bellam and Robinsons Roads on the south side of SH1. It is a decile 10 full primary school with a current roll of 189 and a staff of 15. The school is situated on Weedons Ross Road and has been at or near capacity for some years. Four staff live locally and the remainder travel from the city. No school bus service is provided. A lot of the pupils have attended pre-schools in Rolleston, while the majority live on the northern side of the SH1. Some pupils reside around Hoskins and Knights Roads. Nearly all families living in the enrolment zone send their children to Weedons; with 95 per cent of them travelling to school by car.

Roads in the area are described as being extremely busy, as Weedons Ross Road serves as an entry/exit route to IZONE, resulting in many trucks travelling past the school. It is also a south to north route and vice versa. The 100kph speed zone outside the school has recently been altered to 40 kph, but only at the driver's discretion outside the school. While this is an improvement, it is still an issue as many drivers ignore it and there is no come back against those who persistently speed (e.g. *"the speed and volume on Weedons Ross Rd is our biggest concern"*). Jones Road is another busy route, particularly since traffic lights went in at Rolleston.

Prebbleton School:

Prebbleton School is a decile 10 full primary school with a current roll of 375 and 31 staff. The school is situated on the corner of Springs and Blakes Roads, and its roll has been growing rapidly in recent years, so that the school presently takes no out-of-zone pupils. Its enrolment zone is bounded by Hamptons, Main South and Marshs Roads to the northwest, and by Halswell Junction, Whincups, Ellesmere, and Leadleys Roads to the southeast. Most families live within walking distance of the school, and about 30% per cent walk or use a scooter. The majority of households associated with the school have two income earners who work outside of Prebbleton. Some families reside in Aberdeen and Claremont but very few live west of the proposed CSM2 alignment.

Waitaha Special School:

This school is on Kirk Rd west of Templeton and caters for special needs children aged 5–21 yrs from throughout the City. It has a roll of 30 and 25 staff. Five small buses bring and return students each day as well as private cars.

It was observed that Kirk Rd, with a 100 km limit is dangerous to both Waitaha School and the Bretheren School on Maddison Estate. In comparison Templeton School has a 50 km limit on Kirk Rd. They would like to see the 100k changed to a slower speed especially if the project goes ahead as the road is getting much busier and could attract more trucks during construction. It was also observed that Traffic on SH1 is very dangerous and it is not possible to turn right into Kirks Rd in the mornings safely against the oncoming traffic.