

25. ECONOMIC

Overview

This chapter addresses the main economic effects of the Project. The Project will have potentially far reaching economic benefits in terms of providing for the efficient movement of goods and people, and will help facilitate economic growth. The Project will also have local economic impacts and these are assessed as being broadly positive, recognising that there will be some individual adverse economic effects, specifically businesses which have frontage to Main South Road that will be either bypassed by CSM2 or have their highway frontage access removed.

Overall, it has been assessed that although there may be some adverse effects on individual businesses, the overall economic benefits to the region outweigh these individual business impacts.

25.1. Introduction

This chapter addresses economic effects as they relate to the RMA's focus on enabling economic wellbeing and achieving efficient resource use. The potential economic effects of the Project upon the local population and for businesses are also assessed. This assessment is based primarily upon the economic assessment (Technical Report 14, Volume 3) that has been carried out for the Project.

This chapter does not specifically address the Project's overall economic assessment, which involves cost benefit analysis and the calculation of a benefit/cost ratio ("BCR") for the Project using the NZTA's Economic Evaluation Manual ("EEM") procedures. However, the BCR is discussed as part of the concept of economic efficiency.

The remainder of the assessment concentrates on the economic consideration of effects at the regional and local levels.

25.2. Canterbury economic context

25.2.1. Population

Christchurch City, being the economic hub of the South Island, has the second largest population in the country with an estimated 2011 residential population of 368,000¹⁰¹. The neighbouring districts of Selwyn to the south and Waimakariri to the north have 2011 population estimates of 41,100 and 48,600 respectively. Selwyn District was the fastest growing district in New Zealand (up 3.9% from 2010), and Waimakariri was the fourth fastest (up 2.0% from 2010). This is important, as in order to contribute economically, many of these residents need to travel to work, to study and to shop in a diverse range of locations many of which are in the City. Therefore, increasing traffic on key arterial roads in and out of Christchurch is anticipated.

¹⁰¹ Statistics New Zealand subnational population estimates

Within the UDS (referred to in Chapter 2), the Greater Christchurch area is defined by drawing a line around Christchurch City that takes in the communities within the “commuter belt” (approximately half an hour drive from the Central City) in Selwyn and Waimakariri Districts. Positive population growth is projected in the Greater Christchurch area, with the 2006 population base expected to grow from 414,000, to 501,000 in 2026 and 549,000 in 2041¹⁰². This represents an increase of approximately 135,000 (or around 30%) over the 35 year period from 2006 to 2041.

25.2.2. Households and employment

For most transport projects, projected growth in population is considered as growth in households and employment. The growth in these two land use variables is then used in traffic models to determine the growth in the number of trips on the transport network. This is further explained in Technical Report 2¹⁰³ in terms of the overall modelling approach.

Projected post-earthquake household (HH) and employment (Empl) data for the Greater Christchurch UDS area is presented in the table below. This is based on a “Rapid Recovery” scenario.

Table 39: UDS household projected growth

Area		2011	2016	2026	2041	2011-2041
Christchurch City inside UDS	HH	146,600	152,600	176,000	196,000	49,400
	Empl ¹⁰⁴					
Waimakariri District inside UDS	HH	15,700	18,200	21,000	23,200	7,500
	Empl					
Selwyn District inside UDS	HH	9,800	11,800	16,000	19,700	9,900
	Empl					
Total	HH	172,200	182,600	212,900	238,800	66,600
	Empl	195,800	204,800	231,200	243,700	47,900

Over the 30 year period between 2011 and 2041, it is projected that there will be an approximate 40% increase in total households and 25% increase in employment.

¹⁰² Greater Christchurch Urban Development Strategy 2009 Demographic Update. Projection is based on Statistics New Zealand medium/high growth scenario.

¹⁰³ Technical Report 2 section 3.2

¹⁰⁴ It should be noted that a disaggregation of this data to Local Authority boundaries has not yet been carried out.

25.2.3. Key economic hubs

Lyttelton Port and Christchurch International Airport are identified as key import and export hubs for the area, the region and the South Island. They make large contributions to the Canterbury economy and both are essential infrastructure upon which significant amounts of regional economic activity are based. The Airport is New Zealand's second largest, and in 2011, handled 5.6 million passengers. Lyttelton Port is the South Island's largest port and the third largest port in New Zealand.

Recent trade figures (2011) for the two facilities are presented in Table 40. These include the free-on-board (fob) value of exports and cost insurance freight (cif) value of imports.

Table 40: Value of Lyttelton Port and Christchurch International Airport Imports and Exports - 2011

	Exports (fob \$billion)	Imports (cif \$billion)	Total (\$billion)
Lyttelton Port	5.1	2.9	8.0
Christchurch Airport	3.4	0.6	4.0
Total Canterbury	9.3	3.9	13.1
Total New Zealand	50.4	46.3	96.8

Together, the Port and Airport contributed approximately 90% of the total value of regional imports and exports and nearly 12% of total New Zealand imports and exports. In addition to this, the Airport generates significant regional and national tourism benefits, contributing to approximately 7% of Canterbury's Gross Domestic Product¹⁰⁵.

Both of these facilities are expected to grow over the next 30 years with associated growth in freight movements, and from an economic perspective, it is recognised that efficient access to, from and between these two facilities must be maintained and enhanced if possible.

On the basis of expected growth, the efficient movement of people and freight needs to be considered and addressed. As is explained in Technical Report 2, the Project is an important component to achieving the economic benefits sought nationally through the LTMA 2003¹⁰⁶ and the Government Policy Statement on Land Transport Funding July 2012¹⁰⁷. On a regional strategic basis the Project is also supported by the Regional Policy Statement, the Regional Land Transport Strategy and the Urban Development Strategy. Both Chapter 2 of the AEE and Chapter 2 of the Assessment of Traffic and Transportation Effects discuss the strategic context further.

¹⁰⁵ Christchurch International Airport Ltd website

¹⁰⁶ Technical Report 2: Section 2.6.1

¹⁰⁷ Technical Report 2: Section 2.6.2

25.2.4. Canterbury earthquake effects

It is also appropriate to consider the effects of the Christchurch earthquake from an economic perspective. While some data is emerging, the wider economic effects are not yet clear¹⁰⁸. However, some 8,000 existing residential properties, primarily on the east of the city, are now unsuitable for housing because of their susceptibility to liquefaction and rockfall in future earthquakes. Therefore residents in these properties have relocated or are going to need to relocate. While there is considerable debate as to likely changes in medium term population¹⁰⁹ and where those that remain will live, there is, as yet, no strong evidence as to what the final outcome will be. One likely outcome is that there will be faster-than-forecast growth on the southern fringes of the city (e.g. Wigram and Halswell Junction Road area) and in Selwyn district, particularly in Rolleston.

Based upon the above assumptions, it is reasonable to expect that transportation improvements in the southern corridor post-earthquake are even more important economically to Greater Christchurch.

25.3. Benefits and costs

Outside of the RMA assessments, an economic evaluation of the Project has been carried out in accordance with the latest version of the NZTA EEM. The economic analysis provides a comparison between the 'Do minimum' (baseline)¹¹⁰ and the preferred option. In terms of benefits assessed these include

- travel time savings;
- congested travel time savings;
- vehicle operating cost (VOC) savings;
- trip reliability savings;
- accident cost savings; and
- reduction in Carbon Dioxide (CO₂) emissions.

In terms of costs assessed through the EEM process, these constitute:

- property costs;
- design and project documentation costs;
- management, surveillance and quality assurance; and
- physical works.

¹⁰⁸ Technical Report 14: Section 2.5

¹⁰⁹ Expectations for the medium term range from losses of several per cent (compared to the forecast growth path), as residents who have left do not return, to gains of several per cent as there is an influx of construction labour to rebuild the city.

¹¹⁰ Technical Report 2: Chapter 4

On the basis of this assessment, the BCR for the Project is assessed at 1.5 i.e. for every dollar of cost there will be \$1.50 of benefits. As has been outlined in Technical Report 14,¹¹¹ there are also other factors that influence the BCR.

“The RoNS projects, which include CSM2 and MSRFL, have been scored against Strategic Fit, Effectiveness and Efficiency. The inclusion of the first two categories is an implicit acknowledgement that the standard economic analysis framework does not take into account some intangible costs and benefits associated with improvements in economic growth¹¹² that is believed will flow from a better transport network with increased connectivity. These benefits are described as WEBs (Wider Economic Benefits), and they include:

- *agglomeration impacts – the productive advantages that arise from close spatial concentration of economic activity, most likely to arise within major urban areas; and*
- *the impacts on employment levels experienced both within urban areas and more widely throughout the area of influence of the road project.”*

The Christchurch RoNS projects are expected to generate intangible benefits which are equivalent of 60 to 80% of the EEM benefit cost ratio, implying that the BCR of the Project is in the order of 2.6 unless there are significant non-market dis-benefits.

The alternative northerly alignment that was considered by the NZTA, bisects the large block of industrial zoned land (Alignment C in Chapter 7 Consideration of Alternatives) in relation to property costs. The alternative northern route required a total purchase of future business land, while the preferred option only requires a partial purchase.

On property costs alone, the preferred alignment is preferable in an economic sense for a number of reasons. These equate to an estimated additional Alignment C property cost of \$14 to \$34 million. This additional cost reflects the importance of industrial land that has been considered through Proposed Change 1 to the RPS, the lesser degree of severance, restrictions on the potential shape of subdivision possibilities and possible length of negotiations.

25.4. Property value effects

Changes to the value of individual properties are a reflection of a combination of tangible and intangible effects on matters such as amenity values that are addressed elsewhere in the AEE.

The major changes in property values will accrue to all those properties that now have better access on the improved network. However, since these benefits have already been reflected in the reduced operating costs and travel costs which are included in the economic evaluation, it is important not to double count these effects by treating likely changes to individual property values separately.

¹¹¹ Technical Report 14 section 2.2.

¹¹² “Second order effects on wider economic activity, including agglomeration benefits, labour productivity and supply, and the impacts of improved competition. There may be additional effects at a macro-economic level resulting in GDP changes.

For some properties adjacent to the Project, property values will already include a market allowance for the fact that development of a major road of some form has been flagged for a number of years and certainly since the start point (Springs Road) and end point (in the vicinity of Robinsons Road) of the CSM2 preferred option has been firmed up through strategic planning processes since the production of the CRETS Final Report in 2007.

Project design and mitigation measures aim to mitigate adverse effects (including amenity effects). Mitigation includes the NZTA seeking a reasonable separation distance from properties, the design quality of structures, provision of landscaping, noise barriers, and the use of noise reducing surfacing.

25.5. Business impact and transfer effects

Section 3.6 of Technical Report 14 outlines that there are about 30 businesses which have frontage to Main South Road that will be either bypassed by the Project or have their highway frontage access removed. To the extent that casual stops will be less, this may affect some businesses. The Social Impact Assessment (Technical Report 13) however did not reveal any expected significant loss in Templeton shops, while other businesses are assessed as not relying on passing trade. Two exceptions to this are Knitworks and the Blue Gum Lodge Motel which are proposed to be purchased by the NZTA in their entirety.

Further in terms of effects on businesses, Technical Report 14 at section 3.7 states:

“Any business effects will almost inevitably be transfer effects within the regional economy. That is, any loss in trade for existing businesses will be offset by increases in trade for competing businesses, and the overall efficiency effects and economic impacts are expected to be trivial from a wider community viewpoint.

Generally under the RMA, retail or business redistribution effects, also known as trade competition effects, are not relevant insofar as they impact on individual business. They are only relevant to the extent that they are of such significance that they threaten public amenity values of city, town or suburban centres. There is no expectation that there will be any such loss of amenity in the case of CSM2.

The dynamics of business rises and falls are an inevitable part of commercial life, and over time businesses must address changes in their environment and their future viability is not assured. Smaller business effects over time do not imply that CSM2 should be declined.”

Generally under the RMA, retail or business redistribution effects are not relevant insofar as they impact on individual businesses. Such impacts are only relevant under the RMA if, cumulatively, they are of such significance that they threaten the public amenity values of city, town or suburban centres. This is through the loss of critical mass, sustainability, vibrancy and vitality.

It has therefore been assessed that the effects on businesses, while in some individual circumstances may be noticeable the overall economic benefits to the region outweigh individual business impacts.

25.6. Other economic effects

Other economic effects include:

25.6.1. Construction activity

A temporary boost to local economic activity and employment is likely to occur, with positive overall benefits for Christchurch and the wider region, including businesses and people prepared to relocate from other centres. However, it is predicted that the construction sector will be at full capacity utilisation during the next decade as a result of the Christchurch rebuild. Hence, construction activity is likely either to be a substitute for other construction activity in the region with no overall increase, or will be undertaken by labour and companies from beyond the Christchurch area. While this may generate increased economic mass and resultant economies of scale for the regional economy as a whole, any benefit will be “second order” and is unlikely to be significant.

25.6.2. Traffic related effects for local residents and businesses

Positive economic effects are likely to arise from the reductions in travel times and accident costs and improvements in trip time reliability for local residents and businesses (for example, freight movement and employee travel). These effects are likely to occur when both (a) making journeys from Hornby to Rolleston and (b) making journeys to the city, to the Port and Airport and other destinations within Christchurch City and to the south more reliable. However there will also be some individuals for whom access is severed or restricted, and for whom trips will be slightly longer than they are currently (see section 11.7.8).

25.6.3. Increased economic activity

Once the Project is operational, net positive economic benefits are predicted to occur. Associated with increased levels of economic activity can be economic benefits from increased economies of scale, increased competition, and reductions in unemployment and underemployment of resources. While the extent of these benefits may be difficult to predict, they are likely to be noticeable in Hornby, Rolleston and potentially both Prebbleton and Templeton.

25.6.4. Managing potential economic effects during construction

During construction, there will be some adverse temporary effects from construction activity and traffic. The specific routes and locations that will be affected have been identified and assessed and measures to address these are detailed in the Construction Traffic Management Plan (“CTMP”) included in Volume 4. While these measures will not totally avoid effects on some

businesses from construction activity, they should assist in reducing such effects and in providing business operators with sufficient information to plan appropriate responses.

25.6.5. Managing operational economic effects

As with any significant highway project, there will be some inevitable redistribution of economic activity, as some businesses take advantage of the changes in the roading network, while some others respond to the disruption of the current dynamics of passing traffic. As part of the construction Project, directional signs can be used to assist travellers in way finding. In addition, opportunities will be available through standard NZTA State highway management processes for appropriate directional signage.

25.7. Economic wellbeing

Within section 5 of the RMA the definition of sustainable management means:

“Managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety.”

Therefore, a fundamental part of the purpose of the RMA is to provide for social, economic and cultural wellbeing. From an economic perspective, it can be demonstrated that the Project can realise tangible economic benefits at reasonable costs. In particular, people and freight will move more efficiently than they do currently, therefore achieving wider economic benefits for Greater Christchurch.

In terms of local economic impacts, these are assessed as being broadly positive recognising that there will be some individual economic effects. The avoidance, remedy or mitigation of any adverse effects from the construction and operation of the Project are considered in other parts of this AEE.

The other two components of Part 2 of the Act that are relevant to economics are:

- *s7(b) the efficient use and development of natural and physical resources: and*
- *s7(ba) the efficiency of the end use of energy.*

It is considered that the Project is an efficient use of natural and physical resources in that it enhances the development of the State highway system and aligns with the overall strategic direction for the Christchurch RoNS projects. In terms of efficient use of energy, vehicles will be able to travel at a more consistent speed particularly those that are utilised for freight.

25.8. Conclusion

The Project will have potentially far reaching economic benefits in terms of providing for the efficient movement of goods and people, and will help facilitate economic growth. The Project

will also have local economic impacts and these are assessed as being broadly positive, recognising that there will be some individual adverse economic effects, specifically businesses which have frontage to Main South Road that will be either bypassed by CSM2 or have their highway frontage access removed.

Overall, it has been assessed that although there may be some adverse effects on individual businesses, the overall economic benefits to the region outweigh these individual business impacts.