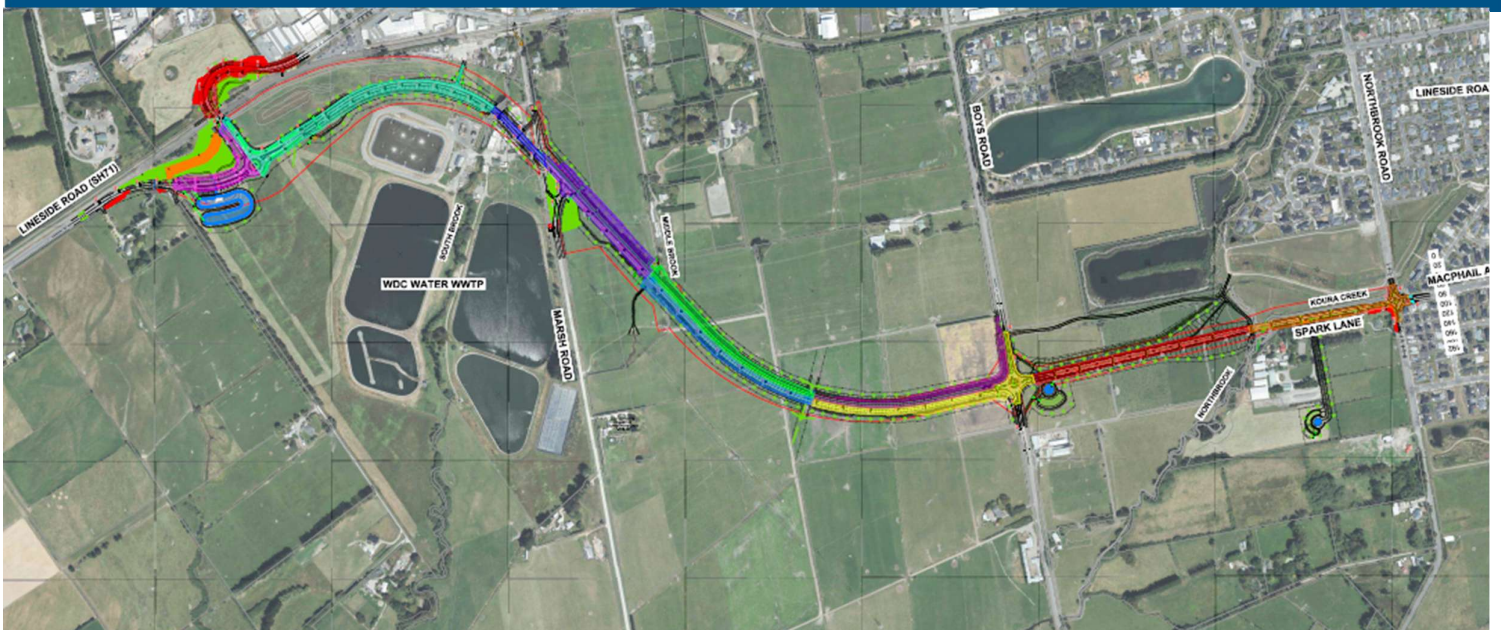


RANGIORA EASTERN LINK

Single Stage Business Case

Enabling efficient movement of people and freight

February 2026
Trim 260207021457



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Executive Summary

Project Overview

The Rangiora Eastern Link (REL) is a proposed 2.88 km new road designed to relieve traffic congestion on Southbrook Road, enhance transport efficiency, and unlock new residential areas in East Rangiora and commercial development in Southbrook. With the town being a Priority Development Area in Greater Christchurch and the largest part of a National Infrastructure Priority programme of work, this investment is essential to accommodate the region's rapid growth.

Strategic Need & Objectives

Rangiora's population is expected to grow significantly, with over 5,000 new homes planned in East Rangiora alone. Currently, Southbrook Road carries over 23,000 vehicles per day, leading to severe congestion, safety concerns, and inefficient freight movement. The REL will:

- Reduce travel time and congestion in peak periods.
- Improve access to residential and industrial zones.
- Enhance road safety, particularly for rail users.
- Support economic growth by ensuring reliable transport links.

Alignment with Policy & Growth Plans

The REL aligns with key national, regional, and local strategies, including:

- The key and largest component of a National Infrastructure Priority Programme of Work

- New Zealand Government Policy Statement (GPS) on Land Transport 2024-34 – Prioritising economic growth, safety, and resilience.
- Canterbury Regional Land Transport Plan (CRLTP) 2024-34 – Addressing congestion, sustainability, and freight efficiency.
- Greater Christchurch Spatial Plan – Supporting intensification and urban expansion.
- Waimakariri District Transport Strategy – Ensuring connectivity for future development.
- Waimakariri District plan – Designation of route and associated Outline Development Plans

Preferred Option & Economic Case

Following a detailed multi-criteria analysis (MCA), the preferred option is to increase the capacity of the network through a new transport corridor that runs west of the Wastewater Treatment Plant and connects with Northbrook Road, as it provides the best balance of cost-effectiveness, land-use benefits, and project feasibility. The project is expected to:

- Reduce vehicle travel time by 3-4 minutes per trip for those in East Rangiora.
- Decrease vehicle kilometres travelled (VKT) by 7,000 km/day, lowering emissions and fuel costs; and
- Improve intersection performance and freight movement efficiency.
- Deliver an excellent Benefit Cost Ratio of 3.3, with a Net Present Value of \$180 million and a government BCR of 4.3.

Rangiora Eastern Link Business Case

The Financial Case

The project is estimated to cost \$65.5 million (P₅₀) to \$78.8 million (P₉₅) in out-turn cost (excl. GST), based on an estimate process with WSP, BG Contracting and with assistance from Beca to prepare the quantitative risk analysis, prepared in accordance with SM014.

The funding structure has been designed to minimise reliance on general rates and to prioritise growth-funded and co-investment mechanisms wherever possible. Funding is proposed through a balanced model of:

- Supplementary Funding (East Rangiora ODA) \$14.6 m
- District Wide Development Contributions \$8.0 m
- NTLP (NZTA) co-funding \$26.0 m
- Council local share (rates/borrowing): \$17.0 m

Risks associated with slower growth affecting Development Contribution (DC) collection are recognised. Should growth timing vary from forecast, Council will manage any temporary funding gap through a combination of treasury tools, programme sequencing, and district-wide DC balancing, consistent with its Long Term Plan and prevailing fiscal settings.

The Commercial Case

Subject to early stage market sounding, procurement analysis indicates that a traditional Design /Tender/Construct model is preferred.

Packaging options will be market-tested, but delivery as a single contract is anticipated to reduce interface risks, with the exception of one section delivered through a development agreement with the adjacent development.

Key commercial risks include geotechnical conditions, coordination with Kiwirail, and integration with adjacent development has been mitigated through the early progress made on the concept design; these will continue to be actively managed through early contractor engagement and robust contract conditions.

The Management Case

Governance will be provided by Waimakariri District Council. A detailed project management framework will ensure transparent reporting, stakeholder engagement, and benefits realisation. Risk management processes and consenting strategies are already underway, reducing uncertainty ahead of procurement. Subject to co-funding decision by NZTA, delivery is targeted for commencement in 2027, aligned with adjacent development staging.

Conclusion

The peer review of this business case concludes that a strong well-aligned case for investment has been made. The Rangiora Eastern Link is a strategically critical project for Greater Christchurch and is the key component of a National Infrastructure Priority.



It resolves long-standing congestion on Southbrook Road, unlocks regionally significant housing supply, supports industrial growth, and delivers a highly positive BCR with an IPM ranking of four, providing a compelling case for investment.

With half the corridor already constructed, committed DC funding, and strong policy alignment, the REL is ready for investment and delivery under a fair and sustainable funding model.

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Introduction

The proposed investment

This business case explores the opportunity to relieve traffic congestion and unlock land for residential development through delivery of a major new transport corridor in East Rangiora.

Rangiora is a Key Activity Area¹ in Greater Christchurch and the fastest growing town in one of the faster growing districts in New Zealand². The important regional role the town provides Greater Christchurch is reflected by being a Priority Development Area in the Greater Christchurch Spatial Plan (2023)³. This status is to facilitate coordinated regional investment and effort that is focused on accelerating and supporting significant growth in the township.

Southbrook is a key industrial and big box retail area on the southern edge of Rangiora which is accessed via Southbrook Road: the key strategic route into Rangiora. Southbrook Road carries in excess of 23,000 vehicle per day, and the mix of through and accessing traffic causes high levels of congestion during peak hours.

These high traffic volumes also sever the local community, with a number of schools and other social destinations, meaning many vulnerable users are forced to cross the busy road at peak times.

This growth has been enabled through significant investment by the Council and Waka Kotahi NZTA over the last number of decades, with

further growth being enabled through the various planning instruments including the District Plan⁴. This plan identifies a further 390ha of new residential land on the east side of Rangiora with capacity for over 5,000 homes as well as further commercial and industrial growth in Southbrook.

This growth provides the opportunity to reduce traffic volumes along Southbrook Road, and the district has been planning for this for some time, with the proposed investment being first identified in 2001 as part of the Rangiora Transport Study (Beca 2001). This study forecasted pressure on the transport network as the population grows, as well as identified the opportunity to unlock residential land as part of the solution to improving transport capacity.

The proposed investment is called the Rangiora Eastern Link and will divert traffic via a new 2.88 km long road from the southern end of Rangiora (Lineside Road) to connect with recently constructed urban collector through new residential developments that will eventually link to Coldstream Road in the north. Coldstream Road connects to the northern route into/out of the town. On the way the proposed eastern link intersects with the major collector roads to enable traffic to move quickly and efficiently around the town.

Approximately 35% of a new transport corridor has already been constructed as part of the residential development process and funded through rates, development contributions and the Infrastructure

¹ Canterbury Regional Policy Statement

² <https://enterprisenorthcanterbury.co.nz/invest/waimakariri-demographics/>

³ <https://www.greaterchristchurch.org.nz/urbangrowthprogramme/greater-christchurch-spatial-plan/draft-greater-christchurch-spatial-plan>

⁴ The Waimakariri District Plan was made operative in July 2025

Rangiora Eastern Link Business Case

Acceleration Fund, with a further 15% to be constructed through development. The remaining section (50%) is remaining to be funded and proposed to be delivered through a combination of development contributions and public funding.

This business case sets out the case for investment and the preferred transport solution, along with how the project is proposed to be funded, procured and delivered to enable material reductions in travel time, unlock significant quantities of greenfield residential land and enable commercial growth.



Figure 1: Context Plan

One Network Framework: Urban Connector

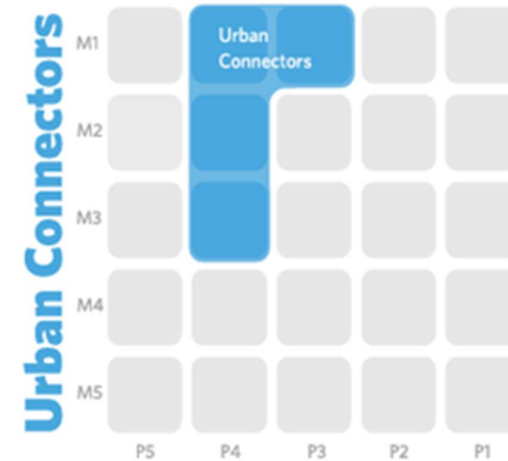
The One Network Framework (ONF) provides a nationally consistent system for classifying transport corridors based on both their movement function and place value.

Applying the ONF to the Rangiora Eastern Link (REL) ensures that the proposed corridor design aligns with national expectations for safety, accessibility, multi-modal integration, and future urban development.

The classification process helps determine the appropriate design standards, performance outcomes, and operational requirements for the REL, ensuring the corridor supports both regional connectivity and local amenity as Rangiora grows. The ONF therefore forms a critical foundation for confirming the function, form, and performance criteria of the preferred option.

Table 1: ONF assessment

Ranking	Lineside to Boys	Boys to Northbrook
Place	P4/P5 – Little on-discernible on-street activity	P4 – Low to medium on-street activity
Movement	M2/M3: c12,000 vpd	M2/M3: c 12,000 vpd



Urban connectors



One Network Framework

Urban connectors make it safe, reliable, and efficient for people and goods to move between different parts of urban areas. There are high levels of motor vehicle traffic, including freight. They often support public transport and provide major routes for people cycling. There are low levels of pedestrian activity associated with people moving along the road.

Safe and appropriate speeds for urban connectors

Urban connectors that have no median divider or travel through residential areas will have a safe and appropriate speed

of 40km/h. The safe and appropriate speed on these urban connectors can be increased to 50km/h where separated cycling facilities are provided.

Urban connectors that have a median divider and travel through non-residential areas, or carry high volumes of vehicles and have more than one lane travelling in each direction will typically have a safe and appropriate speed of 50km/h.

The safe and appropriate speed can be increased to 60km/h where walking and cycling facilities are separated from traffic and no on-street parking is provided.



The stakeholders in this proposal

The key partners in this proposed investment are:

- Waimakariri District Council – the sponsor and driver of this investment proposal as the road controlling authority;
- Waka Kotahi / NZTA – as co-funder with the Council of the business case and concept design and potential delivery funding partner;
- Waka Kotahi / NZTA – as owner and manager of the State Highway network, and specifically State Highway 72 (Lineside Road) and feeds into the southern end of Rangiora
- Te Ngāi Tūāhuriri Rūnanga – as mana whenua of the takiwa in which Rangiora is located
- Belgrove and Rossburn (Sparks) – Land developers – as the major land developers in East Rangiora
- Kiwirail, as operator of the Main North Truck Railway;
- Southbrook Transport reference group – as a local community group established by the Council providing advice and input to management of traffic on Southbrook Road (being the main corridor into Rangiora from the south);
- Major freight movers, and Southbrook Industrial Park developer
- The Rangiora Ashley Community Board, representing the community of Rangiora, including residents and businesses; and
- Waimakariri District Council – as regulator under the Resource Management Act and as three waters infrastructure operator and manager of the adjacent Rangiora Wastewater Treatment Plant.

⁵ as at 1 July 2023

The sponsor organisation

The Waimakariri District lies to the north of the Waimakariri River in North Canterbury. The district covers around 225,000 hectares of land and extends from Pegasus Bay in the east to the Pukatea Range in the west and is bounded to the north by the Hurunui District.

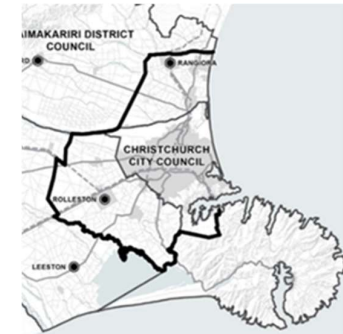


Figure 2: Greater Christchurch

The Council is the road controlling authority for the district, with the role of managing the districts transport network. Our goal is to provide a transport network which is affordable, integrated, safe, responsive and sustainable, and which contributes to the attainment of high quality natural, living and productive environments within the District and assists development of a strong sense of community.

To deliver upon this goal, Council manages⁵

- 1,562 km of roads (979km sealed and 568km unsealed)
- 157 bridges and 132 large culverts
- 385km of footpaths and 25km of shared paths
- 5,648 Street lights
- 32 bus shelters

The Strategic Case

The Strategic Alignment

This section summarises the alignment of this investment with national, regional and local priorities. A more detailed exploration is included as appendix C.

Introduction

The Rangiora Eastern Link (REL) is a proposed transport corridor aimed at addressing severe congestion on Southbrook Road, unlocking land for residential and economic growth, and enhancing transport efficiency in Greater Christchurch. This project aligns with national, regional, and local strategic objectives by improving transport connectivity, reducing congestion, and facilitating sustainable urban development.

Alignment with National Policies

New Zealand Government Policy Statement (GPS) on Land Transport 2024-34

The project supports the GPS priorities:

- **Economic Growth and Productivity:** REL enhances the efficiency of people and freight movement, reduces travel times, and unlocks housing development.
- **Safety:** Addresses congestion-related safety issues, particularly for vulnerable road users crossing Southbrook Road and rail crossing.
- **Resilience:** Provides an alternative transport route, enhancing network reliability.
- **Value for Money:** Utilizes existing infrastructure and development contributions for cost-effective delivery.

National Infrastructure Strategy

The project contributes to:

- **Net-zero carbon emissions:** Reducing congestion and improving travel efficiency lowers vehicle emissions.
- **Regional economic growth:** Facilitates development and employment in Rangiora.
- **Resilient infrastructure:** Provides an additional transport lifeline for the township.

A National Infrastructure Priority

The Rangiora Eastern Link forms the single largest and most important component of the Eastern District Strategic Roding Programme, a coordinated package of interventions developed to address long-term transport pressures across East Rangiora, Southbrook and Ashley.



This programme has achieved Stage One endorsement as a National Infrastructure Priority, confirming the strategic need, problem definition, and overall direction for a staged implementation of key network improvements.

Within this programme, the REL is the anchor project alongside a portfolio of smaller local road upgrades, intersection improvements, and growth-related infrastructure sequencing. Its delivery is essential to achieving the programme’s network performance, safety, and growth

Rangiora Eastern Link Business Case

objectives and provides the foundation upon which future stages of the Eastern District transport system will be built.

Regional and Local Strategic Fit

Greater Christchurch Spatial Plan

- Recognises Rangiora as a Priority Development Area, supporting intensification and development while ensuring infrastructure is in place to handle projected growth.
- Improves transport connectivity by reducing reliance on Southbrook Road and enhancing public transport efficiency.

Canterbury Regional Land Transport Plan (CRLTP) 2024-34

- Identifies REL as a regionally significant project, addressing congestion, access issues, and unlocking greenfield land.
- Supports sustainable transport modes, resilience, and economic growth.

Greater Christchurch Public Transport Futures

- Improves public transport journey times and reliability.
- Supports increased PT (public transport) usage by reducing congestion.

Waimakariri District Growth and Planning

Waimakariri District Transport Programme

- Enables over 5,000 new residential lots in East Rangiora.
- REL integrates with other planned routes, ensuring efficient freight movement and reliable access to Christchurch.

- Enhances walking and cycling connectivity to support sustainable travel.

Integrated Transport Strategy 2035+

- Ensures the growth does not hinder freight movement.
- Provides safe and efficient transport links for new residential areas.
- Supports multi-modal transport options, including improved pedestrian and cyclist infrastructure.

Waimakariri District Plan

- The recently made operative Waimakariri District Plan plays a crucial role in enabling the Rangiora Eastern Link by setting the framework for extensive residential and commercial development in East Rangiora.
- The plan proposes to rezone over 615 hectares of greenfield land for residential expansion, including enabling more than 5,000 new homes in East Rangiora. Additionally, the district plan provides for the integration of transport infrastructure with urban development, providing essential connectivity through codifying Outline Development Plans.

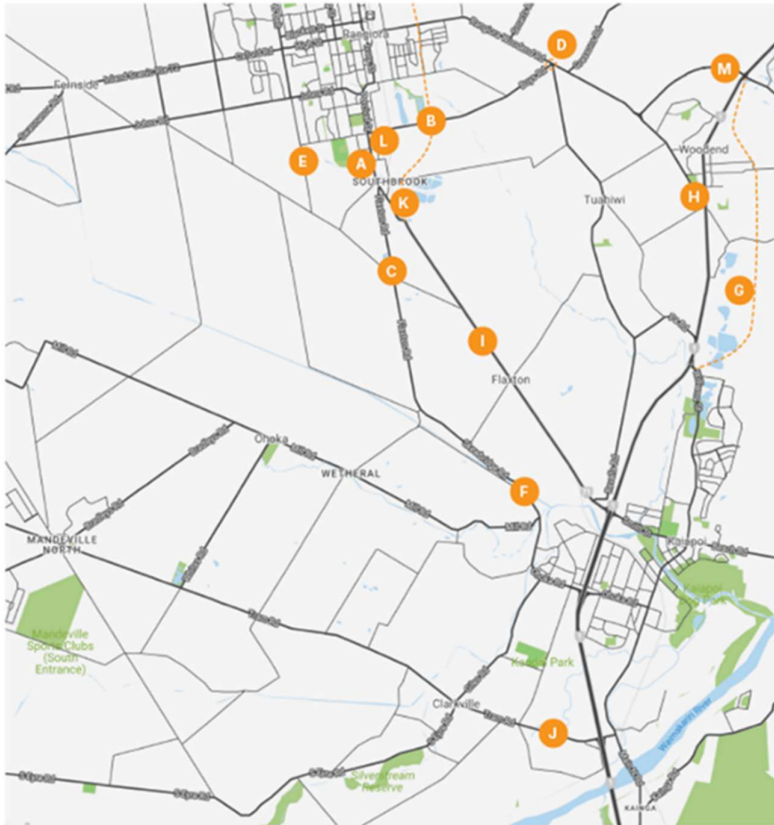


Figure 3: Map of major planned roading projects in the east of the District

The Council has been planning to address congestion and enable growth for over two decades

- The concept of an eastern link was first identified in 2001, and planning for growth has been long standing through various iterations of structure plans, district plans and outline development plans.
- During intervening years there has been continued to be substantial growth which is exacerbating congestion along Southbrook Road.
- The 2001 Rangiora Transport Study (Beca) identified a range of existing and future deficiencies in the transport network. The greatest issue identified was the increasing congestion on the Rangiora North-South strategic route. Also noted was the impact of housing growth, safety at the railway level crossings and the rural/urban fringe and the need for more direct bus routes.
- This study identified an eastern link road from Southbrook to the east of town as the second highest priority project after interim traffic signal improvements on the north-south route. In 2005, Opus (now WSP) completed a Scheme Assessment of a new road, called the Rangiora Eastern Link.
- In 2021, further technical work was undertaken to support a Notice of Requirement to include the route of the road as a designation in the recently made Operative District Plan. This designation became operative in July 2025.

Rangiora Eastern Link Business Case

- The proposed Eastern Link was included in the Canterbury Land Transport Plan (2024-2034) and co-funding for this business case work was included in the National Land Transport Plan (2024-2034).
- Council has leveraged the land development on the east side of town to progressively advance development of the eastern link between Northbrook Road and Coldstream Road.
- Through major developments such as Belgrove, 35% of the road has already been constructed, with a further 15% to be completed in future subdivision processes, with contributions levied towards the section south of Northbrook Road.
- This section, south of Northbrook Road, forms 50% of the length and is the subject of this business case.

A potted history of the Rangiora Eastern Link



Figure 4 REL Potted history

The Investment Environment

This section considers the strategic environment that this investment is being considered, and what may influence the outcomes sought

Major investment environment risks and uncertainties

Main Risks	Consequence (H/M/L)	Likelihood (H/M/L)	Comments and Risk Management Strategies
Land development and growth does not occur as expected	L	L	The District Plan had established the land use pattern and areas of future development for the next period, and this it is unlikely that this will change materially. Regardless, the benefits of the investment would accrue either slightly faster or slower depending on the pace of growth. Investment in development (planning and associated services) are being made in all the major land holdings in East Rangiora.
Mass Rapid Transport is funded and delivered in the near term	L	M	Mass Rapid Transport is being planned for greater Christchurch, with the likely form of link to Rangiora via high frequency buses and park and ride systems. This is already largely in place and the investment would reduce travel time for public transport in Rangiora.
Technological change away from private car use	M	L	Should an unknown technology that changes the type and volume of traffic, then this will result in a longer lifespan of the proposed investment.
Insufficient funding with the	H	H	WDC has 60% of the funding in place for the proposed investment, however if it is not able to raise the balance of the funding then the current Long

NLTP to support this investment			Term Plan, then the investment would not proceed, This was decided on the basis of community feedback as part of the Long Term Plan process.
The District Plan is challenged to the Environment Court, affecting the designation for the land.	L	L	The time required to conclude the RMA proceedings are shorter than the development timeframe for this project. There is no objection in place to the designation.
Pressure on rates leads to deferral or removal of funding	H	L	Although the Waimakariri District is subject to pressure on rates as most local authorities in New Zealand, The Council have committed to this project provided that NLTP funding is also secured.
If traffic growth does not occur as forecast, the timing and scale of benefits may change	L	M	Thresholds for action have already been reached and hence slower growth may slow growth in benefits. No or delayed action would lead to greater disbenefits.
Traffic forecasts are correct	M	L	The thresholds for action have already been reached (poor level of service and rezoning of residential land), and hence variation in forecasted traffic volume is unlikely to make a material change to the benefits

Table 2 Investment risk and uncertainties

Emerging and Innovative Transport Technologies

The investment provides an opportunity to consider emerging technologies that enhance network efficiency, improve safety, and future-proof the corridor as Rangiora continues to grow.

Key technology trends include:

Smart Traffic Management Systems: Adaptive signal control, real-time network monitoring, and intelligent intersection management to support improved travel-time reliability.

Connected and Low-Emission Mobility: Micromobility devices (e-bikes, scooters), charging infrastructure, and potential future uptake of electric or automated public transport services.

Future-Proofing for mode shift: Ensuring intersection geometry, corridor width, and design standards allow for emerging mobility technologies and flexible operational changes.

The Case for Change

What are the problems

The following problems were developing an Investment Logic Mapping process through workshops with participants from Council (staff and elected), NZTA and mana whenua.

***Growing traffic volumes** have caused severe congestion, leading to increased travel time and unreliability along Southbrook Road.*

Acknowledgement of Funding Risk

Insufficient funding availability in the National Land Transport Programme (NLTP) presents a material delivery risk for the Rangiora Eastern Link (REL). While approximately 60% of project funding is already secured through Development Contributions and Council, the remaining share reliant on NLTP co-funding is essential for progressing to construction.

The key outcome sought by Council from development of this Business Case is to secure funding through the NLTP.

New growth areas on the eastern and south edges of Rangiora have insufficient capacity transport links, which will constrain housing growth and economic activity.

*Higher volumes across all travel modes are **increasing conflicts and severance**, leading to an increased risk of death or serious injury.*

Evidence for these problems

Stakeholder and Community Engagement Findings

Extensive engagement has informed both the identification of problems and the refinement of options for Southbrook Road. Key findings include:

- Community feedback over several years has consistently raised concerns about congestion, unsafe turning movements, and poor pedestrian crossing opportunities—particularly around school travel peaks. The 2020 staff report to the Rangiora Ashley Community Board (Trim ref 20051205446) notes that Council receives “many comments, complaints and suggestions” from residents, businesses, police, and school communities regarding safety and congestion issues on the corridor.
- At the Community Board workshop on 12 February 2020, elected members and staff reviewed operational pressures on the Kea crossing, and the need for a controlled, intuitive crossing that meets the demands of high-volume school travel.
- Local businesses expressed that while vehicle access must remain functional for freight and customer flows, the current environment encourages high speeds and difficult turning movements, increasing crash risk.
- The Council rejected emphasis on prioritisation of public transport in favour of maintaining traffic flow on the basis of community expectations.

The population has grown fast and will continue to grow

Waimakariri District is a member of the Greater Christchurch partnership, a high growth area under National Policy Statement direction. The approved Future Development Strategy, (FDS), for Greater Christchurch anticipates steady District growth from the current population of 67,900 to around 82,000 by 2033, and in the order of 102,000 by 2052. Up to 15,000 additional homes are expected to be required to accommodate population change over the next 30 years

As of 2023, Rangiora’s population is estimated at around 21,400 and is projected to grow to approximately 26,200 by 2048 and is a local service centre for about 60% of the district’s population. By 2031, it is expected to provide goods and services for around 50,000 people.

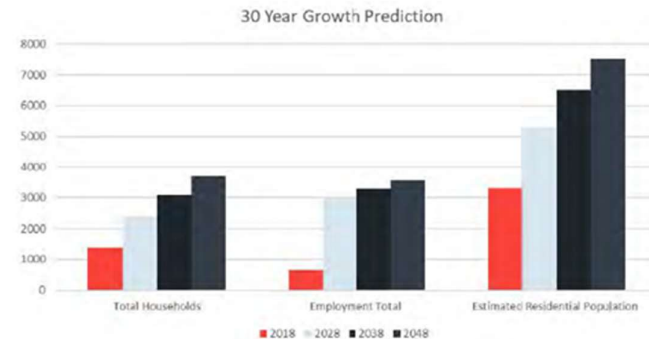


Figure 5 30 year growth forecasts

Rangiora Eastern Link Business Case

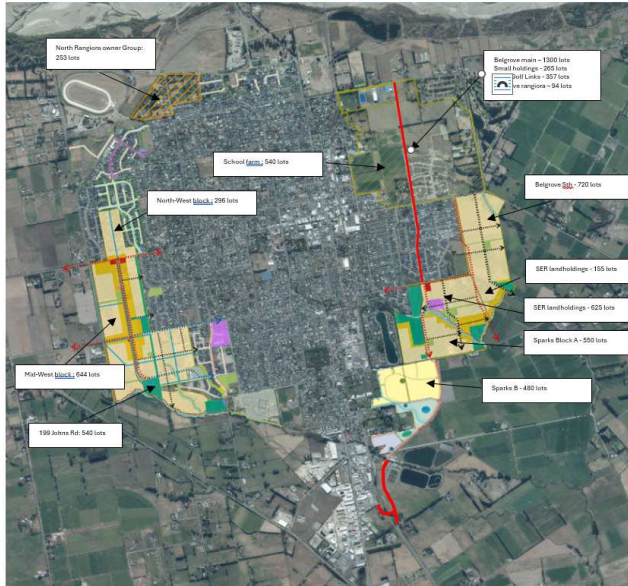


Figure 6: Rangiora Growth areas

The District Plan identifies land for up to 5,086 new residential lots in East Rangiora and a further 1,733 lots in West Rangiora.

The map below shows the areas identified in the newly operative District Plan for greenfield residential development in Rangiora. This encompasses 415ha to the east of Rangiora, of which approximately 25ha has already been developed, with a potential upper bound yield of 5,086 lots.

A further 200ha of land in West Rangiora is re-zoned with a potential yield of 1,733 lots.

⁶ Rangiora Eastern Link: Transportation Assessment of options. Stantec, 2024

Growing traffic volumes has already caused congestion and slowed travel times

A Transport Assessment⁶ has been completed to understand the impact of the growing traffic volumes with and without intervention. Figure 3 shows that traffic volumes on Southbrook Road, Lineside Road and Flaxton Road plateau because Southbrook Road is at or near capacity. This is reinforced by the travel times presented in Figure 5 and the delays at intersections in figure 4

As development progresses in the eastern growth areas, this also leads to an increase in traffic on the Rangiora-Woodend Road as drivers take alternative routes.

The modelling shows that the intersections along Percival Street and Southbrook Road show increasing levels of delay, meaning it is more difficult to access the north-south corridor. with minor approaches consistently at LOS E/F.

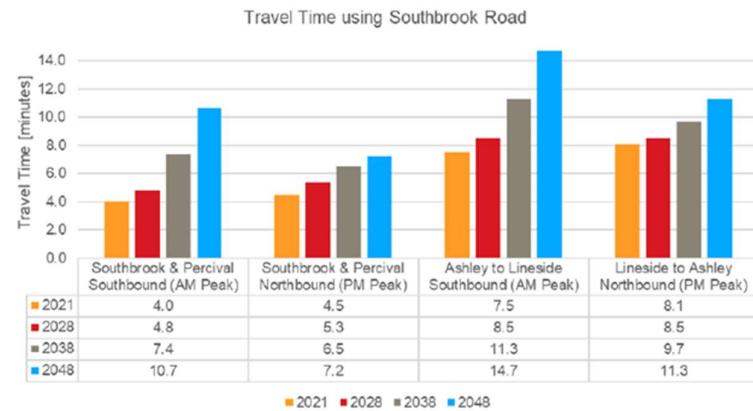


Table 3 Travel Time using Southbrook Road

Rangiora Eastern Link Business Case

The intersection of Ivory Street and Northbrook Road is the southernmost access to the eastern development areas (without an eastern link in place). Here the LOS is forecast to degrade with the uptake of residential development.

Intersection LOS for AM Peak	2028			2038			2048		
	Veh	Do Minimum Delay	LOS	Veh	Do Minimum Delay	LOS	Veh	Do Minimum Delay	LOS
Ashley Street / Coldstream Road	857	11	B	1,058	13	B	1,304	24	C
Ashley Street / High Street	1,333	25	C	1,472	27	C	1,641	30	C
Ivory Street / Northbrook Road	1,309	23	C	1,566	91	F	1,601	141	F
Percival Street / Victoria Street	1,535	38	E	1,609	50	E	1,632	62	F
Percival Street / Johns Road	1,657	42	E	1,784	67	F	1,807	73	F
Percival Street / Charles Street	1,505	36	E	1,831	127	F	1,871	179	F
Southbrook Road / South Belt / Percival Street / Boys Road	2,045	46	D	2,066	56	E	1,953	24	C
Southbrook Road / Torlesse Street	1,873	7	A	1,944	21	C	1,912	27	C
Southbrook Road / Pak 'n Save supermarket	1,972	7	A	1,952	7	A	1,914	7	A
Lineside Road / Todds Road	1,866	79	F	1,828	113	F	1,810	243	F
Lineside Road / Flaxton Road	1,866	38	E	1,805	36	E	1,777	39	E
Kippenberger Ave / MacPhail Ave	781	11	B	1,156	12	B	1,422	13	B
Northbrook Road / MacPhail Ave	287	6	A	954	12	B	1,030	12	B

Table 4 Intersection level of service

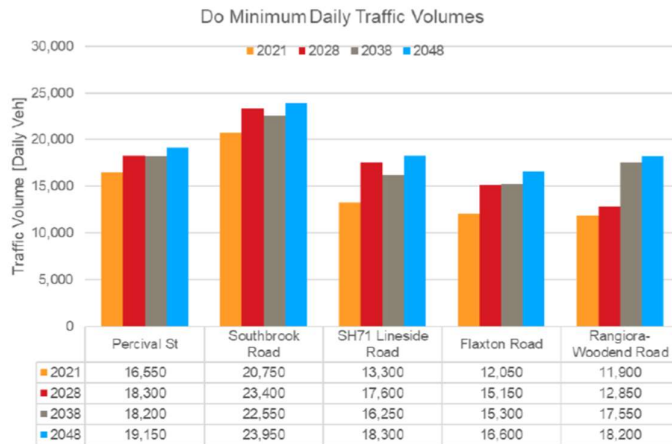


Table 5 Do minimum daily traffic volumes

Rangiora Eastern Link Business Case

East Rangiora development has been planned around a new transport connection to enable development

The Outline Development Plans for East Rangiora show a north-south road providing a core transport link

Outline Development Plans (ODP) in the District Plan have been developed through multi-disciplinary processes included transport expertise to prepare viable and robust urban development strategies. This is supported by expertise evidence given at various hearings⁷.

As shown in the ODP to the right, a key element is the provision of a new major road corridor through the development areas linking to the south.

A Transport Assessment (Rangiora Eastern Connection – Technical Assessment - Transportation, WSP 2021) used the CAST⁸ traffic model to assess the impact of the likely best project and compared with the do-minimum option of retaining Southbrook Road as the only north-side transport corridor.

Comparing the travel times to/from four destinations in Rangiora show the 41-64% reduction in travel time as a result of the REL. This is in the

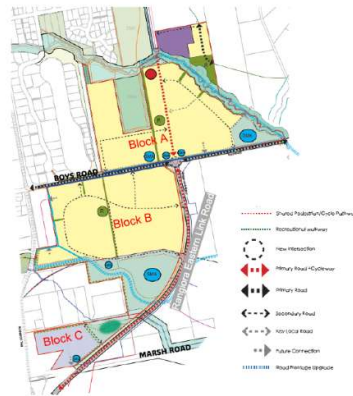


Figure 7 South east Rangiora Draft Outline Development Plan

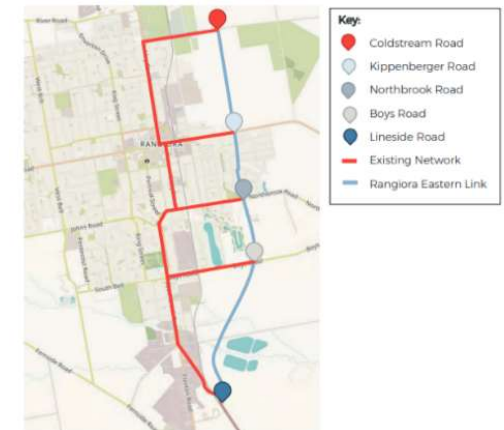
context of the poorly performing (Level of Service F) intersections along Southbrook Road. The key diagrams from this study are reproduced below.

Without an alternative transport link, these development areas will have poor connection with the town and to Christchurch and travel times will be materially higher and even more unreliable than at present.



Figure 4-2. AM northbound travel time from Lineside Road.

Table 6 AM Northbound from Lineside Rd



⁷ https://www.waimakariri.govt.nz/_data/assets/pdf_file/0019/160732/Lisa-Williams-Transport.pdf

⁸ This model is the strategic level traffic model used across Greater Christchurch

Rangiora Eastern Link Business Case

Southbrook Industrial Area is a major economic hub in Rangiora.

Southbrook in Rangiora is strategically positioned as the southern entry point to Rangiora, making it a key location for business activity. It is a significant area for commercial and industrial activity, particularly for industries like manufacturing, warehousing, and engineering.

This is particularly important due to the constraints on commercial land supply in the town centre and elsewhere⁹.

The area is zoned for Business 2 activity, allowing for a range of commercial and industrial development, including low-density projects. The current industrial area development area of 130ha was zoned under Plan Change 28 in 2010, with a further extension to the zone proposed under the recently made Operative District Plan. This includes an Outline Development Plan to guide co-ordinate further development of the area.

The Draft Waimakariri Economic Development Strategy 2024-34 sets one of the key priorities to 'Improve the connectivity and efficiency of the transport network and its resilience'.

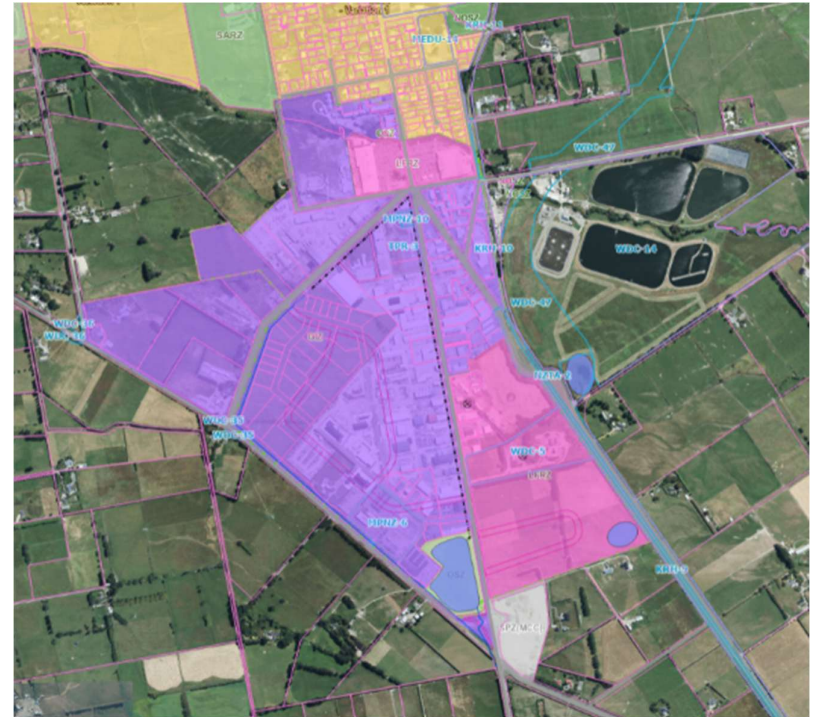


Figure 8 Southbrook Industrial Area

Links to the State Highway network and other business within the District are essential to support this economic hub

⁹ Draft Waimakariri Economic Development Strategy 2024-34

Safety

Lineside Road Rail Crossing is medium-high risk

There has been extensive early engagement with Kiwirail on the design and development of the Lineside Road rail crossing including preparation and endorsement of the LCSIA's referred to below and So Far As Reasonably Practical (SFARP) assessment for Lineside Road.

Daily traffic volumes travelling east-west across the level crossings are forecast to increase as a result of growth without intervention. The exception is the railway crossing on Lineside Road where the upstream effects of Southbrook Road limit the daily traffic increase past 2028.

A Level Crossing Safety Impact Assessment (LCSIA) has been completed on the Lineside Road and Marsh Road level crossings. The Level Crossing Safety Score (LCSS) has been assessed as follows:

Lineside Road Level Crossing¹⁰

- LCSS = 40
 - increasing to 42 with growth
- Medium High Risk Band
- Fatal Return period 732 years
 - reducing to 630 years with growth

Marsh Road level Crossing¹¹

- LCSS = 44
- Medium High Risk Band
- Fatal Return period 770 years

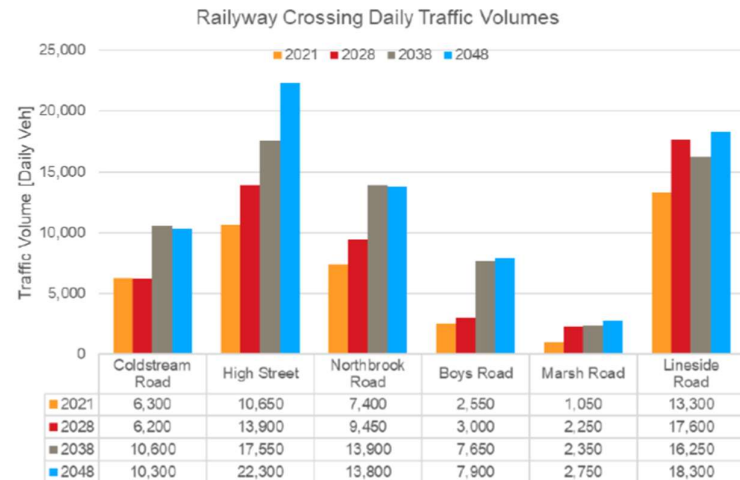


Table 7: Rail crossing daily traffic volumes

Vulnerable user destinations along or near Southbrook Road

The following are on common travel routes for pedestrians, cyclists, elderly, and school children on or near Southbrook Road:

Education & Childcare

1. **Southbrook School** – 50 Southbrook Road
(Primary school with many students walking or biking from nearby homes)
2. **Tree Town Early Learning Centre** – 62 Southbrook Road
(Preschool; young children frequently picked up/dropped off)

¹⁰ Lineside Rd LCSIA, Stantec 2025

¹¹ March Rd and Dunlops Road LCSIA , Stantec 2023

Rangiora Eastern Link Business Case

3. **Little Oaks Preschool Rangiora** – 4C Southbrook Road
(Another ECE provider right on Southbrook Road)

Aged Care / Community Services

5. **Charles Upham Retirement Village** – 22 White Street
(Residential care facility close to Southbrook Road – frequent crossings and accessibility concerns)
6. **Rangiora RSA & Community Club** – Victoria Street
(connected to Southbrook Rd area by nearby intersections)
7. **Southbrook Medical Centre** – 70 Southbrook Road
(Right on the corridor – regular foot traffic from older or mobility-impaired patients)

Churches

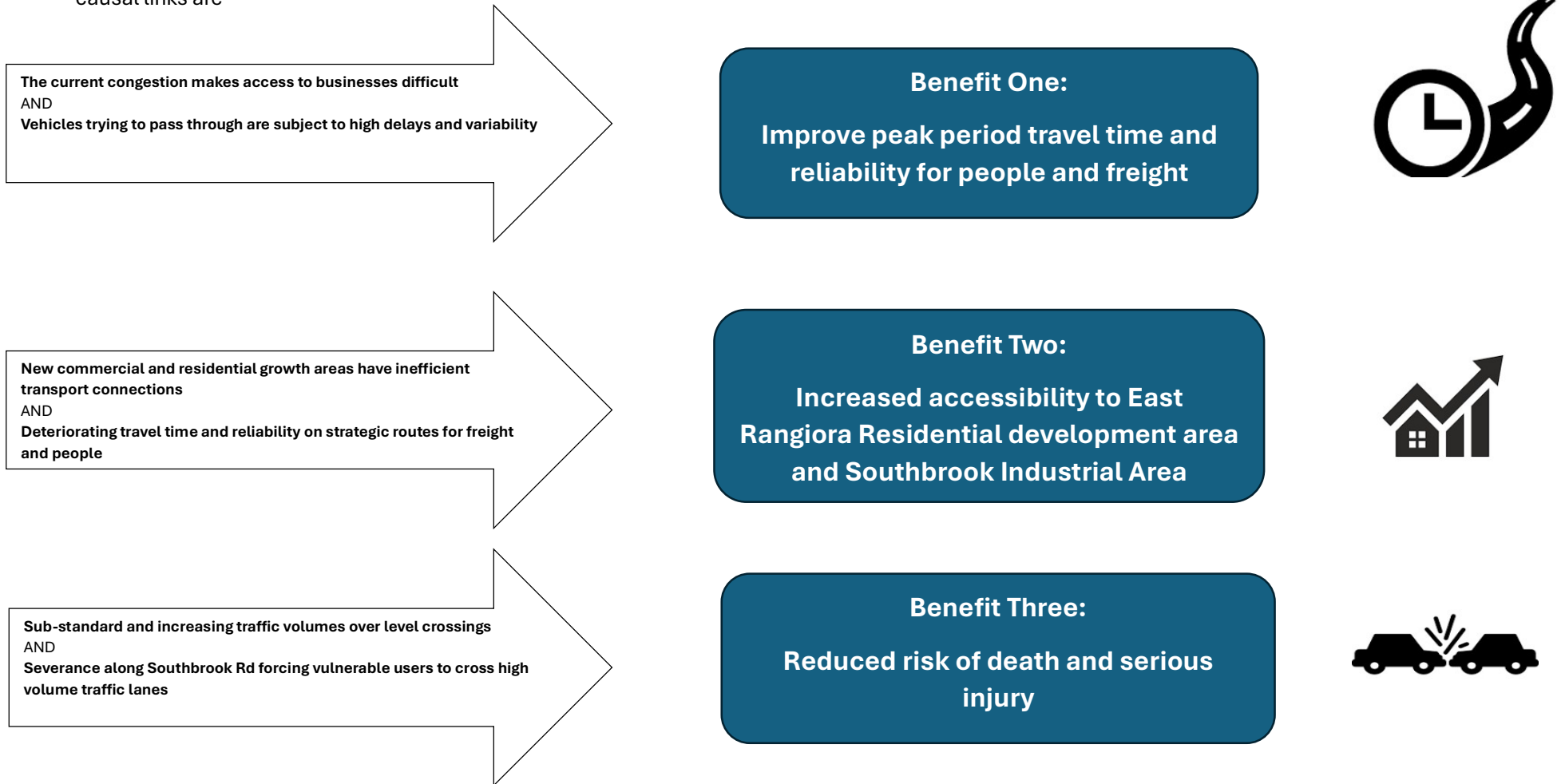
8. **The Church of Jesus Christ of Latter-day Saint**; 72 Southbrook Road
9. **Gateway New Life Centre**: Drenches Rd. off Southbrook



Figure 9: Rangiora destinations map

What are the potential benefits

The key benefits identified through ILM workshops and identified causal links are



NZTA Land Transport Benefits Framework

The Waka Kotahi NZTA Land Transport Benefits Framework is a consistent set of benefits and measures that makes it possible to consider, measure and report on all impacts of New Zealand’s investment in land transport. They provide a consistent way of measuring benefits across all projects and across time.

The following table sets out which benefits from the framework are expected to accrue from this investment. Refer to attachment B for the Benefits Map

Healthy and safe people 1. Changes in user safety	1.1 Impact on social cost of deaths and serious injuries	1.1.2 Crashes by severity [#]
	1.2 Impact on a safe system	1.2.1 Road assessment rating
Economic prosperity 5. Changes in transport costs	5.1 Impact on system reliability	5.1.2 Travel time reliability – motor vehicles [#]
		5.1.3 Travel time delay [#]
	6.2 Impact on network productivity	6.2.6 Access to key economic destinations
Inclusive access 10 Changes in access to social and economic opportunities	10.1 Impact on user experience	10.3.1 Access to key social destinations

Table 8 Benefits table

Benefit cluster	Benefit	Measure
-----------------	---------	---------

The Investment Objectives

Objective One: *Reduce pm peak travel time between Lineside and Northbrook Road by 20% by 2038*

Objective Two: *Improve accessibility from East Rangiora development area to SH1 by 3 minutes by 2038*

Objective Three: *Improve the Infrastructure Risk Rating on strategic roads in South Rangiora to Medium or better by 2038*

Summarising the Case for Change

The fast growing town of Rangiora is an important component of the South Island's largest urban conglomeration and is a Priority Development Area for greater Christchurch.

This fast growth over the last decades have led to the high levels of congestion currently seen along the major north-south strategic road, but on top of the high growth already experienced, the town is set to grow considerably further with over 6,700 greenfield residential lots enabled under the recently made operative District Plan.

New transport links are required to unlock these development areas and ensure that people and freight can move quickly. But this growth is hindered by the north south strategic corridor that connects business, freight and people to Christchurch that is already severely congested. The desired growth will make this congestion materially worse and cause significant travel time unreliability and delay.

The increasing traffic volumes also highlight existing weaknesses in the network that might otherwise be tolerable, and particularly the level railway crossings and severance created by Southbrook Road.

There is evidence for these problems through modelling, traffic survey and expert evidence as well as lived anecdotal experience of travel delays in peak times reported by residents and businesses.

Without intervention, traffic delay and reliability will continue to deteriorate, access to business and residential areas will worsen and severance and safety issues will increase due to increased volumes of conflict. With national priorities for land transport focused on economic growth and unlocking land for housing, there is a strong case for intervention to address these issues.

The Economic Case – Exploring the Preferred Way Forward

The purpose of the Economic Case is to identify the investment option that optimises value for money. Having determined the Strategic Context for the investment proposal and established a robust case for change, this part of the Business Case assesses the best solution to address the objectives.

1. What are we trying to achieve?	<ul style="list-style-type: none"> • Critical Success Factors
2. What are choices?	<ul style="list-style-type: none"> • Strategic interventions and response • Long List and shortlist
3. How do they stack up?	<ul style="list-style-type: none"> • Economic Assessment • Detailed Assessment of Shortlist
4. The preferred way forward	<ul style="list-style-type: none"> • The proposed solution
5. What the solution will deliver	<ul style="list-style-type: none"> • Key outcomes and benefits of the preferred solution

Table 9 Critical Success Factors

What are we trying to achieve?

Critical Success Factors (CSFs) are the essential conditions, capabilities, or actions that must be in place for a project or investment to achieve its intended outcomes. They represent the few key areas where strong performance is vital to success.

They help decision-makers understand *what must go right*—beyond the preferred option itself—to ensure benefits are realised, risks are managed, and the project delivers value for money. The following critical success factors have been developed to assist in assessing the options:

Critical Success Factors	Broad Description
Value for money	<ul style="list-style-type: none"> • optimises value for money i.e., the optimal mix of potential benefits, costs and risks • balances the cost of delivery and management with the financial and non-financial benefits
Affordable	<ul style="list-style-type: none"> • can be met from likely available funding • matches other funding constraints • avoids displacing other priorities
Achievable	<ul style="list-style-type: none"> • in the proposed timeframe • with the current resources and support • within the programme’s control and influence • with continuity of operation maintained during the construction period

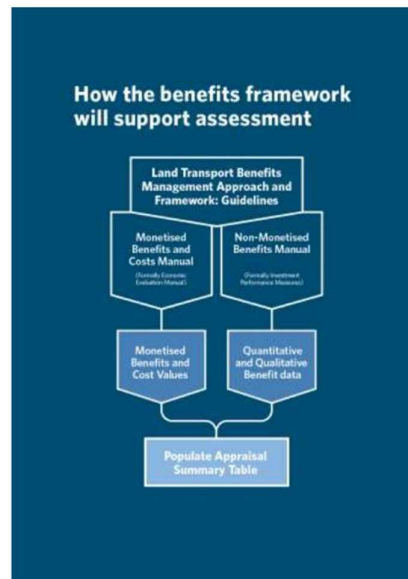
What are the choices?

Approach to option development

This business case takes a multistage approach to developing, sifting and assessing the options.

The initial optioneering developed the (1) preferred strategic response, following the methodology in Victoria’s Department of Treasury and Finance Investment Management Standard.

This strategic level process has confirmed the need for new infrastructure, and so the next stage was to explore the long and short list of physical options (primarily routes) for the new infrastructure. This used the (2) Early Assessment Sifting Tool (EAST) and then (3) MCA analysis to develop the shortlist, and then (4) more detailed MCA assessment incorporating the monetised and non-monetised benefits and costs and impact assessment to determine the preferred way forward.



Step	Name	Key question
1	Strategic Interventions	What are the available strategic interventions that might be taken to address the problems identified?
2	Early Assessment Sifting Tool (EAST) to determine Long List	What are all the new infrastructure options available (very long list)What is the reasonable list of long list options to assess
3	Assessment of Long List to determine Short List	How does each options stack up against benefits, critical success criteria and impacts
4	Detailed Assessment of Short List	Which option provides the best value for money
5	Determination of the preferred way forward	Decision on the preferred route

Table 10 Optioneering process

The Do minimum

The do minimum is established as the existing range of transport projects in the Council’s Long Term Plan and NLTP, with the exception of the Rangiora Eastern Link. These include:

- Rangiora Western route improvements
- Flaxton/Skew Corridor improvements
- Belfast to Pegasus SH1 Woodend bypass
- Five crossroads improvements
- Other minor works

Of note, it also includes the forecast growth outlined in the Strategic Case and enabled through the Waimakariri District Plan.

Step One: Determine the Strategic Response

Introduction

To enable value for money and prioritise more space efficient modes of moving people and goods, the NZTA Intervention Hierarchy recommends an approach that considers land use first and investment in new infrastructure last.



In this process, land use has been considered in detail through the district plan and related structure planning processes which are prior to and outside this business case. The optioneering in this Business

Case seeks to enable this land use and achieve the best outcome against the objectives.

Methodology

The Response Options Assessment (ROA) for the Rangiora Eastern Link was undertaken in accordance with Victoria’s Department of Treasury and Finance Investment Management Standard (IMS). The IMS framework is designed to ensure that investment decisions are evidence-based, outcomes-focused, and aligned with clearly articulated strategic benefits.

The ROA process followed four key stages:

1. *Confirmation of Strategic Context and Benefits*
The assessment was anchored to the agreed Investment Logic Map (ILM), including the identified problems, drivers, and benefits. Benefit weightings were carried forward into the assessment to ensure consistency between the strategic problem definition and the options evaluation.
2. *Identification of Strategic Response Options*
A deliberately broad set of strategic response options was identified to test fundamentally different ways of addressing the problem, rather than prematurely converging on a single infrastructure solution. These options ranged from “business as usual” through to transformational land-use and behavioural change responses.
3. *Packaging of Interventions*
Each strategic option comprised a coherent package of interventions, spanning infrastructure, planning, demand management, safety, and behavioural measures. This ensured

each option was internally consistent and capable of delivering benefits in its own right.

4. *Multi-Criteria Assessment and Ranking*

Each option was assessed against:

- Expected benefit delivery¹²
- Risks and uncertainties
- Dis-benefits
- Interdependencies
- Indicative cost ranges
- Timeframes to full benefit realisation

The outcome was an evidence-based ranking of strategic options and a clear recommendation regarding the preferred strategic direction.

Strategic Response Options Investigated

Five strategic response options were investigated. Each represents a materially different approach to addressing congestion, safety, economic productivity, and growth pressures in Rangiora.

Option 1: Business as Usual / Do Nothing

This option represents continuation of current policies and investment settings, with no material change to capacity, demand, or network operation. The package of interventions included:

- Ongoing maintenance and minor operational improvements only
- No new infrastructure or demand management initiatives
- Reliance on existing land-use and transport planning settings

This option provides a baseline against which other options were assessed.

Option 2: Increasing Capacity

This option focuses on expanding transport network capacity to accommodate forecast growth. The package of interventions included:

- New transport infrastructure to expand network capacity
- Strategic future-proofing to support growth beyond 2038
- Targeted upgrades to improve freight and general traffic flow
- Integration of new infrastructure into the wider network

This option primarily targets reduced travel time and increased economic activity through supply-side investment.

Option 3: Reducing Demand

This option seeks to reduce reliance on private vehicle travel through demand-side interventions. The package of interventions included:

¹² expressed as a percentage of full benefit delivery aligned to ILM benefit weightings

Rangiora Eastern Link Business Case

- Dynamic demand management (e.g. flexible work hours, peak disincentives)
- Enhanced public transport patronage initiatives
- Improved first/last-mile connectivity
- Optimisation of existing road space using smart traffic management
- Behaviour-change initiatives to reduce private vehicle dependency

This option places a strong emphasis on mode shift and behavioural change.

Option 4: Improving Safety

This option focuses on improving safety outcomes while maintaining reasonable network efficiency. The package of interventions included:

- Safe System aligned safety improvements
- Speed management and traffic calming within Rangiora
- Intersection and level-crossing safety upgrades
- Multimodal safety enhancements for pedestrians and cyclists
- Driver education and road safety programmes

Safety improvements were considered alongside their impact on network performance and economic activity.

Option 5: Changing the Way We Live

This option represents a transformational approach focused on long-term land-use change and societal behaviour. The package of interventions included:

- Transit-Oriented Development (TOD) and integrated land-use planning
- Incentives for brownfield intensification
- Alignment with high-frequency public transport corridors and potential future MRT
- Structural changes to growth patterns to reduce travel demand

This option relies heavily on planning system changes and long-term shifts in development and travel behaviour.

Assessment of Strategic Options

Benefit Delivery

The assessment demonstrated clear differences in benefit delivery across options:

- **Business as Usual** delivered minimal benefits and performed poorly across all benefit categories.
- **Increasing Capacity** delivered the highest proportion of benefits overall, particularly for:
 - Reduced travel time
 - Increased economic activity
 - Reduced risk of death and serious injury (DSI)
- **Reducing Demand** and **Changing the Way We Live** offered partial benefit delivery but were heavily dependent on behavioural change and long-term planning outcomes.
- **Improving Safety** delivered strong safety benefits but more limited economic and travel time benefits.

Overall, options focused on economic productivity and network performance consistently outperformed those reliant on indirect or long-term societal change.

Risks and Uncertainties

Key risks identified across options included:

- **Funding risk**, particularly the availability of NLTP funding for non-traditional or demand-management-heavy approaches
- **Public acceptance risks**, especially for congestion pricing or direct charging mechanisms
- **Delivery risk**, where benefits depended on changes to district planning instruments or wider government policy settings
- **Effectiveness risk**, particularly for education campaigns and behaviour-change initiatives where uptake is uncertain

Options with a strong reliance on behavioural or planning system change were assessed as having materially higher uncertainty.

Dis-benefits

Noted dis-benefits included:

- Increased congestion, emissions, and safety risk under the Business as Usual option
- Potential short-term disruption during construction for capacity-based options
- Potential economic displacement or reduced activity where restrictive demand measures were applied

Rangiora Eastern Link Business Case

- Risk of constraining growth and investment under transformational land-use options

These dis-benefits were considered alongside benefit delivery rather than in isolation.

Costs and Timeframes

Indicative assessments showed that:

- **Increasing Capacity** options involved higher capital costs but delivered benefits within shorter and more predictable timeframes (approximately 5 years).
- **Demand and behavioural change options** had lower direct capital costs but longer timeframes (up to 10 years) and higher uncertainty in benefit realisation.
- **Business as Usual** incurred no new capital cost but resulted in escalating long-term economic and safety costs.

Conclusions and Preferred Strategic Direction

The Response Options Assessment concluded that a **focus on economic productivity and growth** represents the most robust and achievable pathway for addressing the identified problems.

The **Increasing Capacity** response option ranked highest overall because it:

- Delivered the greatest proportion of weighted benefits
- Provided clearer and more reliable benefit realisation

- Was less dependent on behavioural change outside Council and transport system control
- Aligned strongly with national and regional transport and economic objectives
- Offered a practical and fundable pathway within existing planning and investment frameworks

While other options offer important complementary measures—particularly in safety, demand management, and land-use integration—the assessment found that these are most effective when supporting, rather than substituting for, a capacity-led strategic response.

Accordingly, the Business Case proceeds on the basis that capacity expansion, supported by integrated planning and complementary demand and safety measures, represents the preferred strategic approach for the Rangiora Eastern Link.

Rangiora Eastern Link Business Case

ENABLING SAFE AND EFFICIENT MOVEMENT AROUND SOUTHBROOK AND EAST RANGIORA
 Driving economic growth

Department: Roading
 Investor: Joanne McBride
 Facilitator: Rob Kerr

Initial Workshop: <did/mm/yyyy>
 Version No.: <e.g. 0.1, 1.0 etc.>
 Last Modified by: Rob Kerr 06/02/25

Interventions	Response options				
	Option 1 Business as usual / Do nothing	Option 2 Increasing capacity	Option 3 Reducing demand	Option 4 Improving safety	Option 5 Changing the way we live
Integrated Planning					
Integrated Land Use					
Enhance driver skills and road safety programs → Align with the Safe System Approach and ensure compatibility with increased vehicle, pedestrian, and cyclist activity.	50%			20%	
Refine urban development planning in Rangiora → Prioritise Transit-Oriented Development (TOD) to support sustainable transport integration.					50%
Expand incentives for brownfield intensification → Include fast-tracking of development approvals and infrastructure investment alignment.					30%
Managing demand					
Implement dynamic demand management strategies → Encourage flexible work hours, congestion pricing, and peak travel disincentives.			60%		
Introduce speed-calming measures in Rangiora → Ensure a balance between safety improvements and maintaining efficient traffic flow.				30%	
Enhance multimodal transport incentives → Improve accessibility and attractiveness of public transport, cycling, and walking to further reduce private vehicle dependency.			20%		
Best use of existing assets					
Optimize Southbrook Road lane usage based on real-time traffic patterns → Utilize smart traffic management systems.					10%
Enhance level crossings and intersections for multimodal safety → Incorporate grade separation where feasible and/or intelligent crossing systems.		30%		50%	
Upgrade western route with strategic freight and traffic flow improvements → Focus on integrating it into the broader network as a viable alternative corridor.	50%				
New infrastructure					
Expand network capacity with strategic future-proofing → Ensure infrastructure supports projected growth beyond 2038.		70%			
Accelerate development of high-frequency public transport corridors → Align investment with regional Mass Rapid Transit (MRT) planning.					10%
Enhance bus patronage through integrated mobility solutions → Incorporate real-time information systems, Park & Ride expansions, and first/last-mile connectivity improvements.			20%		
Total	100%	100%	100%	100%	100%

		Option 1	Option 2	Option 3	Option 4	Option 5
Business as usual / Do nothing			Increasing capacity	Reducing demand	Improving safety	Changing the way we live
Percentage of full benefit to be delivered		10.0%	85.0%	16.0%	15.0%	17.5%
Benefit 1	Reduced Travel Time	3.0%	28.5%	12.0%	0.0%	9.3%
Benefit 2	Increased economic activity	3.5%	38.5%	0.0%	0.0%	7.0%
Benefit 3	Reduce risk DSI	2.0%	18.0%	4.0%	15.0%	1.0%
Risk and uncertainty						
Risk 1	High: Community expectations not met	Med: Insufficient funding available through NLTP	High: Support for constraint on type of growth	Med: Insufficient funding available through NLTP	H: Process to change district plan unlikely to be successful or timely	
Risk 2	Med: Not delivering GPS outcomes	L: Design solutions do not deliver outcomes	H: Take up of mode shift uncertain	L: Design solutions do not deliver outcomes	H: Public acceptance of any form of direct charging	
Risk 3			H: Public acceptance of any form of direct charging	M: Effectiveness of education campaigns unknown	M: Effectiveness of change to working and industry unlikely to be effective	
Dis-benefits						
Dis-benefit 1	High: Increased risk of DSI	Low: Increased emissions	Med: Reduction in economic activity and or residents leaving	Med: Reduction in economic activity and or residents leaving	M: Loss of existing planning support	
Dis-benefit 2	Med: Increased disruption/delay to travel				H: Loss of existing industries	
Interdependencies						
Interdependency 1	M: Growth forecasts and development contributions	L: Proposed District Plan	L: Ecan bus operators	L: Ecan bus operators	H: Government Policy statements	
Interdependency 2		M: Long Term Plan funding process	L: Proposed District Plan		H: Proposed District Plan	
Is a real options analysis workshop required? Yes/No/Maybe						
	No	No	No	No	No	No
Cost						
Capital total estimated investment (TE) (range)	no extra	\$35 M	\$10 M	\$10 M	\$10 M	
Time						
(Range)	0	5 years	2 years	5 years	10 years	
Ranking						
1-6	4	1	3	2	5	
Overall Assessment:		A strategic focus on economic productivity and growth is considered the best approach to delivering the benefits. It is more achievable and delivers more benefits and does not require significant change in the				
Recommendation:		Adopt a focus on economic growth and productivity as the preferred way forward				

Table 11 Strategic Response Options Assessment

Stage Two: Sifting the Very Long List

The above preferred strategic response includes increasing the capacity of the transport network in Rangiora and to serve new growth areas. It also includes improving safety for cyclists and matching the pace of development.

Analysis of these options identified a very long list of options and these are shown in the table below. with key columns from the Early Assessment Sifting Tool (refer appendices for full EAST)

Intervention types	"Name of alternative/option"	Cost	Fatal flaws	Summary of decision made
Integrated planning	Change development pattern to align with existing network	\$5-\$50 million	Decisions already made. Mostly supports existing corridors now	Discontinue
Manage demand	Time of Use Charging	\$5-\$50 million	New technology in small town appears inappropriate but progress to test further	Progress
Manage demand	Congestion Charging	\$5-\$50 million	New technology in small town appears inappropriate	Discontinue
Best use of the existing system	Tidal laning (2+1)	\$5-\$50 million		Progress
Best use of the existing system	Four lane Southbrook Rd within existing road reserve	\$5-\$50 million		Progress
Best use of the existing system	Increase PT frequency	\$1-\$5 million	Unlikely to be effective in changing patterns	Discontinue
Best use of the existing system	Upgrade western route	\$5-\$50 million	Does not meet objective for East Rangiora growth	Discontinue
New infrastructure	Construct REL Sbk to Northbrook (West of WWTP)	\$5-\$50 million		Progress
New infrastructure	Construct REL Sbk to Northbrook (East of WWTP)	\$5-\$50 million		Progress
New infrastructure	Construct REL Lineside to Northbrook	\$5-\$50 million		Progress
New infrastructure	Park and Ride upgrade	\$1-\$5 million	Unlikely to be effective in changing patterns	Discontinue
New infrastructure	Mass rapid transit	\$50+ million	Unlikely to be effective in changing patterns sufficiently	Discontinue
New infrastructure	New western bypass	\$50+ million	Does not meet objective for East Rangiora growth	Discontinue
New infrastructure	New eastern bypass - Fernside to Coldstream Rd	\$5-50 million		Progress
New infrastructure	Widen and four lane Southbrook Rd			Progress

Table Long List

Stage Three: Assessment of Long List

Taking the long list from the previous section (Sifting), a Multi Criteria Assessment (MCA) was undertaken with rough order cost estimates¹³ with routes developed for each option. The map of each route is figure 7.

The full MCA is included as an attachment, and the table below summarises the key findings. The options were assessed against the

- Three investment objectives,
- Critical success factors, and
- Opportunities and Impacts

Via workshop with participants from NZTA, WDC and mana whenua (represented by Whitiōra), weightings were agreed as follows:

- Each of the three categories above were equally weighted
- For each sub-category
 - The weighting from the ILM were applied to the Investment objectives
 - Affordability, risk and VfM was weighted higher than resilience

33%	Unlocks land for housing	45%
	Reduces travel times	45%
	Improves safety	10%
33%	Affordability	35%
	Risk to delivery	35%
	Value for money	30%
	Resilience	5%
33%	Environment and Cultural	40%
	Social and Landscape	30%
	People & Property	30%

- Environment and Cultural was weighted slightly higher than social, landscape, people and property impacts.

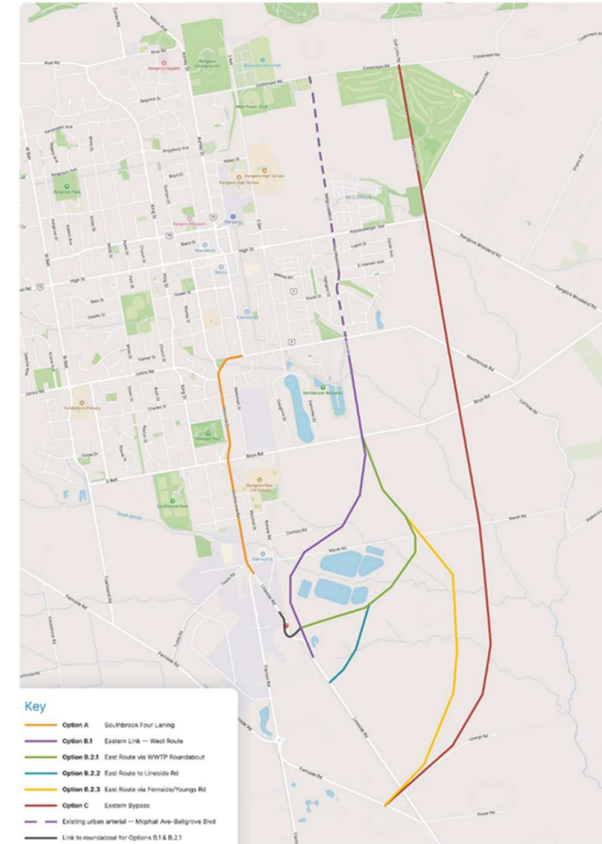


Figure 10 Long List of route options

¹³ The cost estimates for each options were updated to the same basis of more detailed cost estimate undertaken for the concept design and MCA reviewed in light of the revised (higher) estimated costs.

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Observation from the assessment include:

- The cost of land acquisition and building demolition in order to widen Southbrook Road to 24m is both very high, very disruptive and will require significant use of compulsory acquisition powers in order to achieve which will be challenged and may be denied as there are viable alternatives.
- Time of Use Charging in a town would be expensive to establish and is likely to create significant community opposition¹⁴, increasing the risk to delivery. It will also only be partially effective in delivering the investment objectives.
- Similarly, tidal flow laning of Southbrook Road is both very expensive to implement and carries a high delivery risk due to likely community opposition. It will also only be partially effective in delivering the investment objectives particular as evidence¹⁵ is that crash rates increase by 30%.
- All the new routes to the east of the township score well in achieving the objectives, notwithstanding that all routes carry similar geotechnical and water challenges.
- The routes that are outside the designation carry greater risk to delivery as a full consenting process and compulsory acquisition of the land will be required.

- The two options involving connection to Lineside Road at Fernside Road would assist in resolving a safety issue at the Fernside/Lineside intersection but are materially more expensive and involve greater levels of land acquisition.
- The four laning of Southbrook Road within the existing 20m road reserve is physically achievable and the lowest cost, however carries very significant safety, severance and impacts on access to business and social destinations.

Options		RoC	Weighted score	Rank	Shortlist
DM	Do Minimum		0	4	Y
Southbrook Road					
A.1	Southbrook Four laning – within existing road	\$42 M	-0.68	6	Y
A.2	Southbrook Four laning – within wider road	\$66 M	-0.85	8	
A.3	Southbrook three laning – tidal flow 2+1 within existing road reserve	Not costed	-0.7	7	
A.4	Congestion charging / Time of Use	Not costed	-1.17	10	
Eastern Alignments					
B.1	Eastern Link - west route	\$67M	1.1	1	Y
B.2.1	Eastern Link – east route to WWTP roundabout	\$69M	0.98	2	Y
B.2.2	Eastern Link – east route to Lineside Rd	\$65M	0.37	3	Y
B.2.3	Eastern Link – east route to Fernside/Youngs	\$72M	-0.37	5	
C	Eastern Bypass	\$92M	-0.97	9	

¹⁴ The evaluation team have considerable experience in engaging with the community on transport issues and made this assessment based on recent engagement processes on related matters

¹⁵ Simulator Assessment of Alternative Lane Grouping at Signalized Intersections, Office of Safety Research and Development Federal Highway Administration (2019)

Sensitivity testing

To test the sensitivity of the assessment, the MCA was adjusted to weighted towards a) the investment objectives, or b) Economic productivity, or c) Social and Cultural impacts.

The results are shown in the table below. This shows

- the inclusion of the three variations on the Rangiora Eastern Link are not sensitive to the weightings of the MCA,
- The inclusion of four laning of Southbrook Road is somewhat sensitive to the weightings.

		Base Ranking			What if Scenarios: if we weighted towards:						
		Weighted score	Rank	Shortlist	Investment Priorities		Economics		Social & Cultural		
Options					Weighted	Rank	Weighted	Rank	Weighted	Rank	
DM	Do Minimum		0	4	Y						
Southbrook Road											
A.1	Southbrook Four laning – within existing road reserve	\$42 M	-0.68	6		0.15	8	0.25	5	-1.35	7
A.2	Southbrook Four laning – within wider road reserve	\$66 M	-0.85	8		0.35	6	0.25	5	-1.25	6
A.3	Southbrook three laning – tidal flow 2+1 within existing road reserve	Not costed	-0.7	7		0.15	8	0.25	5	-1.14	3
A.4	Congestion charging / Time of Use	Not costed	-1.17	10		0.35	6	-1	9	-1.24	5
Eastern Alignments											
B.1	Eastern Link - west route	\$67M	1.1	1	Y	3	1	1.75	1	-0.87	1
B.2.1	Eastern Link – east route to WWTP roundabout	\$69M	0.98	2	Y	3	1	1.75	1	-0.87	1
B.2.2	Eastern Link – east route to Lineside Rd	\$65M	0.37	3	Y	2.8	3	1.5	3	-1.18	4
B.2.3	Eastern Link – east route to Fernside/Youngs	\$72M	-0.37	5		2.55	4	1	4	-2.04	8
C	Eastern Bypass	\$92M	-0.97	9		2	5	0.25	5	-2.3	9

Selection of the Shortlist

The analysis indicates that the variations on an eastern link (options B.1 and B.2.x). all score the highest and are bought forward for more detailed assessment.

Option A.1 Southbrook Rd is being bought forward to the shortlist despite scoring lower than other eastern link options. The project team consider that it is important to continue to test this option as it forms a baseline to maximise the capacity of an existing asset, is a lower cost option and is sensitive to the weighting of the criteria.

As such, the preferred shortlist is:

- Do Minimum
- Option A.1 Four laning Southbrook Road within the existing road reserve
- Option B.1 Rangiora Eastern Link to Southbrook Road, West of the WWTP along the existing designation
- Option B.2.1 Rangiora Eastern Link to Southbrook Road, East of the WWTP outside the existing designation
- Option B.2.2 Rangiora Eastern Link to Lineside Road, East of the WWTP outside the existing designation

Stage Four: How do the shortlisted options stack up?

Understanding different view points

A feedback session with Elected Members (Councillors and Community Board members from across the District) was held on 19th February 2025. There was a range of views expressed at the session and written feedback received from 9 members.

Of those who provide written feedback, there was support for route directly to Lineside Road as well as the other options, with no support for four laning Southbrook Road. This is summarised in the table below:

Option	Preferred	Support also	Oppose	Comment
A	Four laning Southbrook Rd			
B.1	REL, west of WWTP	2	1	Expected by community
B.2.1	REL, east of WWTP	2	2	1
B.2.2	REL directly to Lineside Rd	4	1	Lowest cost
B.2.3	REL to Fernside Rd	1	3	Resolve issue at Fernside Rd also

The response from the neighbours along the southern boundary of the wastewater plant is varied, with three comfortable with all the routes

(east or west of the plant), with one opposed to the eastern routes which would bring the road nearer to their property.

The Spark family, as landowners to the north of Marsh Road and to the east of the wastewater plant, prefer the eastern route options. This includes the better urban form created by an eastern route which leads to less impact on the farming operation, better support industrial land uses and future development to the east and allow creation of a more welcoming entrance centred around the values of the Southbrook and Middlebrook Streams.

Economic Modelling

An economic analysis¹⁶ undertaken for the Rangiora Eastern Link (REL), follows the guidelines and procedures outlined in the Monetised Benefits and Cost Manual (MBCM, November 2024) and the Crash Estimation Compendium (CEC). Note that this assessment was updated with more robust cost estimates in January 2026.

As a note, safety benefits have not been monetarised in this assessment. They benefits come from a safer rail crossing and reduced traffic on Southbrook Road, leading to reduce risk to vulnerable users crossing the carrigeway. While these are important to the community, they are not likely to be material in terms of economic impact and hence neglected for this assessment.

¹⁶ Rangiora Eastern Link - Economics Memorandum, Stantec, 12 March 2025 updated 5th February 2026 with revised cost estimates

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The key metrics for each shortlisted option are summarised in the table 11. Refer to appendices for more detailed information.

Component	Option A (4-laning)	Option B1a (REL West)	Option B2.1 (REL East)	Option B2.2 (Lineside Rd)
TT Savings	\$24.4	\$214.4	\$190.0	\$206.6
VOC Savings	\$28.2	\$36.0	\$34.5	\$38.2
Active Modes	\$3.7	\$3.6	\$4.1	\$4.3
Safety	\$0.0	\$0.0	\$0.0	\$0.0
Total PV Benefits	\$56.4	\$254.1	\$228.6	\$249.1
Total PV Costs	\$46.8	\$76.0	\$77.2	\$73.2
Developer Contribution PV Costs	\$3.4	\$16.0	\$16.2	\$15.9
BCR (National)	1.2	3.3	3.0	3.4
BCR (Government)	1.2	4.0	3.5	4.1
FYRR	4%	4%	5%	3%

Figure 11: Economic Evaluation on short list of options

Traffic Modelling and advice

Key findings from the traffic modelling undertaken to support this business case are outlined below with more detail in the appendices:

The shortlisted options all relieve the congestion on Southbrook Road

Route	AM Peak					PM Peak				
	DM	OptA	OptB1a	OptB21	OptB22	DM	OptA	OptB1a	OptB21	OptB22
2028										
Northbrook to Lineside SBD	4.8	3.5	4.0	4.0	4.0	4.3	3.3	4.0	4.0	4.0
Lineside to Northbrook NBD	4.1	3.2	3.7	3.7	3.7	5.3	3.7	4.6	4.7	4.6
Lineside Road SBD	6.2	6.5	6.6	6.6	6.7	5.7	6.0	6.0	6.0	6.1
Lineside Road NBD	5.2	5.4	5.5	5.4	5.6	7.3	8.6	8.0	7.9	7.9
Rangiora-Woodend EBD	8.3	8.3	8.3	8.3	8.3	8.4	8.5	8.5	8.4	8.4
Rangiora-Woodend WBD	8.6	8.6	8.6	8.6	8.6	8.9	8.8	8.8	8.8	8.8
Eastern Link SBD			6.1	6.3	6.5			6.0	6.3	6.5
Eastern Link NBD			5.8	6.1	6.2			5.9	6.2	6.4
2038										
Northbrook to Lineside SBD	7.4	3.8	4.0	4.1	4.0	4.3	3.3	3.9	3.9	3.9
Lineside to Northbrook NBD	4.2	3.4	3.7	3.8	3.7	6.5	4.7	5.0	4.9	4.8
Lineside Road SBD	6.8	7.6	8.6	8.5	8.6	5.7	5.9	6.1	6.0	6.2
Lineside Road NBD	5.2	5.4	5.5	5.5	5.7	7.8	8.4	9.0	8.7	8.8
Rangiora-Woodend EBD	11.6	9.4	8.8	8.8	8.8	8.8	8.9	8.8	8.8	8.8
Rangiora-Woodend WBD	9.0	8.9	8.8	8.8	8.8	10.2	9.7	9.7	9.6	9.6
Eastern Link SBD			7.0	7.0	7.4			6.5	6.7	6.9
Eastern Link NBD			6.1	6.4	6.6			6.4	6.7	6.9
2048										
Northbrook to Lineside SBD	10.7	4.3	4.2	4.3	4.2	4.5	3.4	3.9	3.9	3.8
Lineside to Northbrook NBD	4.4	3.4	3.9	3.9	3.8	7.2	5.9	5.5	5.2	5.2
Lineside Road SBD	6.9	9.0	11.0	10.4	10.7	5.9	6.1	6.5	6.3	6.5
Lineside Road NBD	5.2	5.5	5.6	5.5	5.7	9.2	10.0	10.8	10.1	10.3
Rangiora-Woodend EBD	14.9	12.0	10.9	10.4	10.5	9.1	9.1	9.1	9.1	9.1
Rangiora-Woodend WBD	9.4	9.4	9.1	9.0	9.0	12.5	11.9	11.5	10.7	10.7
Eastern Link SBD			7.2	7.2	7.5			6.8	6.9	7.1
Eastern Link NBD			6.1	6.4	6.6			6.5	6.7	6.9

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All options will shift traffic away from Southbrook Road, rat running will reduce and better use is made of Flaxton Road

		Do Min	Opt A	Opt B.1a	Opt B.1a	Opt B.2.1	Opt B.2.2
		2028					
Ivory Street	north of Northbrook Road	12,100	16,450	11,550	11,450	11,700	11,350
Percival St	north of South Belt	18,300	23,400	15,900	15,850	16,250	15,850
Southbrook Road	north of Station Road	23,400	28,050	20,400	20,300	20,750	20,150
Southbrook Road	at level crossing	17,600	20,550	15,250	12,700	14,550	13,350
SH71 Lineside Road	south of REL roundabout	17,600	20,550	19,250	18,800	18,800	18,150
Rangiora-Woodend Road	east of Golf Links Road	12,850	10,600	11,900	12,300	12,000	12,450
Fernside Road	south of Townsend Road	11,700	10,450	11,000	10,750	11,350	11,100
Flaxton Road	south of Lineside Road	6,800	7,950	7,250	7,850	7,400	7,950
		2038					
Ivory Street	north of Northbrook Road	13,450	18,150	12,800	12,650	13,000	12,700
Percival St	north of South Belt	18,200	24,800	15,500	15,300	16,000	15,650
Southbrook Road	north of Station Road	22,550	28,900	19,800	19,400	20,050	19,600
Southbrook Road	at level crossing	16,250	20,800	14,700	11,250	13,650	12,650
SH71 Lineside Road	south of REL roundabout	16,250	20,800	20,700	18,550	20,050	19,800
Rangiora-Woodend Road	east of Golf Links Road	17,550	14,800	16,150	18,050	16,400	16,500
Fernside Road	south of Townsend Road	12,450	11,500	11,750	10,900	11,950	11,900
Flaxton Road	south of Lineside Road	6,700	8,350	8,000	8,750	8,150	8,500
		2048					
Ivory Street	north of Northbrook Road	16,150	18,900	14,050	14,050	14,250	13,950
Percival St	north of South Belt	19,150	25,800	16,200	16,300	16,500	16,400
Southbrook Road	north of Station Road	23,950	30,300	20,450	20,300	20,400	20,100
Southbrook Road	at level crossing	18,300	21,600	15,200	12,700	14,200	13,100
SH71 Lineside Road	south of REL roundabout	18,300	21,600	21,550	21,300	20,900	20,750
Rangiora-Woodend Road	east of Golf Links Road	18,200	16,450	18,050	18,050	18,600	18,550
Fernside Road	south of Townsend Road	14,200	12,300	12,850	13,000	13,150	13,050
Flaxton Road	south of Lineside Road	6,700	8,800	8,250	8,550	8,150	8,600

Delays at intersections will be reduced materially, but are still poor in some places

Intersection LOS for AM Peak	Do Minimum			2038 Option A			Option B.1a			Option B.2.1			Option B.2.2		
	Veh	Delay	LOS	Veh	Delay	LOS	Veh	Delay	LOS	Veh	Delay	LOS	Veh	Delay	LOS
Ashley Street / Coldstream Road	1,058	13	B	1,133	15	B	1,169	11	B	1,122	12	B	1,120	11	B
Ashley Street / High Street	1,472	27	C	1,888	30	C	1,345	26	C	1,380	26	C	1,382	26	C
Ivory Street / Northbrook Road	1,566	91	F	1,886	24	C	1,392	29	D	1,421	30	D	1,424	29	D
Percival Street / Victoria Street	1,600	50	E	1,967	54	F	1,473	36	E	1,502	37	E	1,504	34	D
Percival Street / Johns Road	1,784	57	F	2,131	57	F	1,611	39	E	1,642	39	E	1,647	38	E
Percival Street / Charles Street	1,831	127	F	2,203	79	F	1,397	36	E	1,451	35	D	1,453	33	D
Southbrook Road / South Belt / Percival Street	2,066	56	E	2,837	44	D	2,007	30	C	2,016	30	C	2,016	28	C
Southbrook Road / Torlesse Street	1,944	31	C	2,424	6	A	1,631	6	A	1,611	6	A	1,615	6	A
Southbrook Road / Pak 'n Save supermarket	1,952	7	A	2,462	5	A	1,736	6	A	1,688	6	A	1,688	6	A
Lineside Road / Todds Road	1,828	113	F	2,282	10	A	1,499	41	E	1,587	48	E	1,589	44	E
Lineside Road / Flaxton Road	1,805	36	E	2,271	13	B	1,656	23	C	1,699	24	C	1,700	22	C
Coldstream Road / REL	583	8	A	549	8	A	762	10	A	685	9	A	681	10	A
Kippenberger Ave / MacPhail Ave	1,156	12	B	1,245	12	B	1,519	13	B	1,419	13	B	1,420	13	B
Northbrook Road / MacPhail Ave	954	12	B	811	10	A	1,490	12	B	1,171	11	B	1,173	12	B
REL / Boys Road	96	11	B	154	11	B	1,293	12	B	1,037	11	B	1,037	12	B
REL / Marsh Road	156			144			1,015	16	C	1,060	13	B	1,088	16	C
Lineside Road / REL	1,367			1,615			1,941	14	B	1,703	13	B	1,707	13	B

It is challenging to enhance safety on Southbrook Road

A Safety Investigation by Beca in 2019¹⁷ provided a Safe System Assessment Framework (SSAF) analysis for the existing and future corridor. Key evidence informing option selection includes:

Existing Safety Risks

- AADT of approximately 23,000 vehicles per day, with ~6% heavy vehicles, creates high exposure for vulnerable road users (VRUs).
- A cluster of rear-end crashes and turn-related incidents is evident, particularly near high-turnover land uses.
- Pedestrian crossing movements are high during school peaks, yet the corridor lacks suitable controlled crossings, increasing the likelihood of unsafe gap selection.

Severance and Accessibility Issues

- Long crossing distances, high traffic volumes, and heavy vehicle presence create significant severance, especially for children, older adults, and mobility-impaired users.
- The current layout and speeds are misaligned with the corridor's place LOS function and the expectations for an urban arterial connecting residential, commercial, and school precincts.

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- Safe School travel is a key concern: the existing Kea crossing is operating beyond its recommended thresholds, and observed behaviours indicate unsafe demand during peak periods.

Relative Performance of Options

- **Option 3 (four-laning)** increases safety risk by creating additional lanes for pedestrians to cross, introducing “multiple-threat” conditions, and encouraging higher operating speeds. SSAF results show increased head-on and pedestrian crash risk when compared with existing conditions.
- **Option 2 (two lanes with enhanced pedestrian facilities)** significantly improves safety outcomes by reducing crossing distances, calming speeds, and introducing a signalised pedestrian crossing between Torlesse Street and Denchs Road.
- **Option 1 (two lanes with improved PT priority)** recorded the highest alignment with target Levels of Service (LOS) and is the recommended strategic option with the strongest safety and accessibility outcomes.

The evidence demonstrates that low-cost options—largely confined to minor markings and localised changes—do not meaningfully reduce these core safety and severance issues.

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Multi Criteria Analysis

A cross-agency group of senior staff from Council, NZTA and Whitiora (on behalf of Ngai Tūāhuriri) assessed the short-listed options against a series of criteria.

This assessment is summarised in the following table, with more detailed information in appendix I.

Type of Criteria	Criteria	Considerations	Option A: Four Laning Southbrook Road	Option B.1 : REL west of WWTP (designated route)	Option B.2.1 REL east of WWTP	Option B.2.2 REL east of WWTP to Lineside Rd
Investment Objectives	Improve accessibility from East Rangiora development area to SH1 by 3 minutes by 2038 (30%)	Measure 1: Travel time improvement from Area of East Rangiora greenfield land to SH1 (Lineside Road) Measure 2: Proportion of population living within 10 mins (am peak) of Southbrook Industrial Area (%) Measure 3: Reduce sideroad delays accessing Southbrook Road (secs)	2	2	2	-2
	Reduce am peak travel time between Lineside and Northbrook Road by 40% by 2038 (55%)	Measure 1 Proportion of population within 10 mins of Southbrook Measure 2 Time to travel from Southbrook to Northbrook Road (Mins) Measure 3:Improvement in travel time reliability (comparing peak to inter-peak) (%)	2	2	2	2
	Improve the Infrastructure Risk Rating on strategic roads in South Rangiora to Medium or better by 2038 (15%)	Measure 1: Number of deaths and serious injuries Measure 2: Infrastructure risk rating > medium Measure 3: Ease for locals to cross the road (and access)	-2	2	2	1
Critical success factors	Affordability		-1	-2	-2	-2
	Deliverability (achievability)	Note advice in slide pack, Consenting, schedule, construction and land acquisition key risks	2	2	0	0
	Value for money	Economic metrics below	-1	3	2	3
Opportunities and Impacts	Te ao Māori	Workshop deliberations	-1	-1	-1	-2
	Environment and ecology	Workshop deliberations	-1	-1	-1	-2
	Social and Landscape	Workshop deliberations	-3	1	1	1
	Private Property and immediate neighbours	Workshop deliberations	-3	2	0	-1
Economic indicators	Benefit Cost Ratio	Stantec Economic Assessment	1.2	3.3	3.0	3.4
	BCR (Govt)	Stantec Economic Assessment	1.2	4.0	3.5	4.1
	Net Present Value (\$millions)	Stantec Economic Assessment	9.6	178.1	151.4	175.9
	First year rate of return	Stantec Economic Assessment	4%	4%	5%	3%
Cost	Capital Cost (P ₅₀)	Programme Manager	\$41.8 m	\$67.7 m	\$68.8 m	\$65.1 m
	Public sector cost (P ₅₀)	Programme Manager	\$31.4 m	\$44.4 m	\$45.2 m	\$42.6 m
		Raw unweighted sum	-6	10	5	-2
		Investment Objectives (weighted)	1.5	2.1	2.1	0.55
		Critical Success Factors (unweighted)	0	3	0	1
		Opportunities and impacts (unweighted)	-6.8	4.3	2	-0.6
		Rank	4	1	2	3

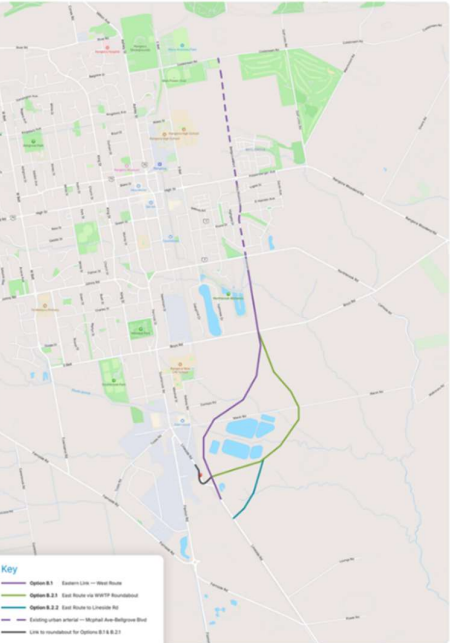


Figure 12 Short list of route options

Stage Five: Determining the preferred way forward

Discarding the lowest cost option: four laning of Southbrook Road

Option A: Four laning of Southbrook Rd is physically possible and would be able to be achieved within the existing road reserve. To assist understanding, this is similar to the design of Curletts Road in West Christchurch. However it does not deliver the full range of benefits and would result in increased severance, poor outcomes for cyclists, reduced accessibility for business and high risk for pedestrians, and particularly children crossing the road.

Despite Option A being the lowest cost option (\$42 Million), it has a much lower benefit cost ratio (1.2) than the other options and hence is not considered to provide the value for money that investment in the REL would provide.



Previous safety assessment investigation¹⁸ described earlier and subsequent engagement with the community on the future of Southbrook Road (2020) identified the safety concerns on the route,

¹⁸ Southbrook Road Safety Investigation - Options Assessment Report (Beca, 2019)

but also rejected measures that would increase the congestion and slow traffic flow.

With this, and expert advice provided as part of the MCA process that concluded that four-laning Southbrook Road would increase traffic volumes, speeds, crossing distances, and conflict points, resulting in greater severance, reduced active-mode safety, and a higher likelihood of serious and fatal crashes.

The corridor's mixed industrial/residential environment is incompatible with a high-capacity multi-lane design, and this treatment would worsen, rather than mitigate, pedestrian, cyclist, and intersection safety outcome

The constraint option will lead to the following outcomes and hence has scored poorly in the MCA analysis

- Four-laning increases vehicle speeds and traffic volumes, raising crash severity.
- Longer, wider crossings create greater pedestrian severance and fewer safe gap opportunities.
- Higher risk of “multiple-threat” pedestrian crashes across multi-lane traffic.
- More lanes mean more conflict points, especially for turning into/out of side streets.
- Increased lane-changing and overtaking, lifting rear-end and side-swipe crash risk.
- Industrial traffic (HCVs) mixing with multi-lane flow increases vulnerability for pedestrians and cyclists.

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- Reduced accessibility and comfort for walking, cycling, and mobility-impaired users.
- Greater noise, vibration, and visual dominance make the corridor feel unsafe and vehicle-oriented.

On that basis, this option is not considered further, and the remainder of this discussion focuses on the three shortlisted variations of the REL.

How well does each option achieve the objectives of relieving congestion, serving growth and improving safety

A Transport Assessment¹⁹ with associated traffic modelling has been prepared for the project. This is included as an attachment along with a summary plan of the modelling outcomes.

The analysis found that each of the shortlisted options provides good benefits in terms of travel time and reliability with some relatively minor variation in resulting traffic volumes and intersection delays. As such, the decision on which route to prefer should be based on the ability to deliver the project and the impact of each option.

How well do the options integrate with active and public transport journeys

Enhancing multi-modal access directly supports safety, accessibility, and travel-time objectives, particularly given the large number of schools, early childcare facilities, aged-care centres, and social destinations along Southbrook Road. Key considerations include:

- **High-Quality Walking and Cycling Facilities:** The REL corridor has been planned to provide continuous, separated facilities that reduce severance and improve safety for vulnerable road users. This supports Waimakariri's transport strategy objectives and aligns with movement/place principles in the One Network Framework. The route options west of the railway but connected to Southbrook best support this outcome.
- **Public Transport Efficiency:** The REL provides an opportunity to shorten bus travel times, improve route reliability, and enable higher-frequency services connecting East Rangiora to Christchurch. The improved network geometry enhances access to the Southbrook Industrial Area, residential catchments, and potential Park & Ride facilities. All options support this outcome, with those achieving best travel time savings the most effective.
- **Multi-Modal Connectivity:** The corridor enables safer and more attractive first- and last-mile connections, increasing the viability of trips by foot, bike, micromobility, or public transport, particularly as growth intensifies on the eastern edge of Rangiora. All options support this outcome, with those achieving best travel time savings the most effective.

These opportunities for multi-modal improvements complement the preferred option and assist in achieving the inclusive access and productivity benefits identified in the Benefits Framework.

¹⁹ Rangiora Eastern Link Transport Assessment of options, Stantec, March 2025

How well each option integrates with future Land Use

The REL is a land-use-enabling project, unlocking more than 5,000 new homes and supporting major commercial and industrial areas. Strengthening the integration between transport provision and land-use outcomes will ensure a coordinated approach that maximises benefits and avoids creating long-term dependency on constrained routes.

- **Supporting Growth Areas:** The options which link directly to growth areas will unlock the residential and employment capacity identified in the District Plan and reduces reliance on Southbrook Road as the sole north–south strategic corridor.
- **Improved Urban Form:** A well connected route will support well-designed neighbourhoods with short trip lengths, improved accessibility, and opportunities for more efficient public transport routing.
- **Staging and Sequencing:** Coordinated delivery with development staging ensures that transport capacity is available at the right time, preventing network deterioration and enabling orderly, cost-effective urban expansion.
- **Access to Key Social and Economic Destinations:** The improved network supports safe and reliable access to schools, medical facilities, industrial activity, and future commercial centres.

The two options which provide a strong edge and connection to the South-East Rangiora developments are preferred over four laning of Southbrook Road.

Is the project likely to be funded and delivered?

Any project needs to be (1) affordable, (2) provide value for money, and (3) be able to be delivered. These are the critical success factors.

The three REL variation each have similar benefit cost ratios and total forecast costs and hence can be considered to provide value for money. Because 40% of funding is likely to come from development contributions, they each provide excellent value for money for public investment (ratepayer and taxpayer).

In terms of risks to delivery, a key difference between these options and the route to the west of the plant (along the designation in the district plan) is the effect on people and property and related risk to delivery of the project.

Whereas the western route is distant from residential property and primarily passes through land owned by the Council or the Spark Family (with land recently rezoned), the eastern route passes immediately adjacent to several existing residential properties and, in the case of the route directly to Lineside Road, requires acquisition of land that has not previously been identified.

As noted above, one landowner opposes the eastern route, while all landowners are comfortable with the western route. The Spark Family prefer the eastern route and the landowner affected by the route directly to Lineside Road is likely to be a willing seller.

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If Option B.1 is preferred, which follows the designation in the recently made Operative District Plan, limited resource consents²⁰ are required, there is some distance to neighbours and land acquisition is more assured.

Conversely, a full consenting and land acquisition process will need to be advanced for work outside the destination. Further, the eastern route options pass close to existing homes and (for option B.2.2) require land acquisition on land not previously identified.

In other projects, this would be expected to raise the risk of drawn-out consenting and land acquisition processes that may not be successful due to the impact on neighbours and property owners. However, in this case, the feedback from neighbours indicates that there is support for all routes from most landowners, with one opposing.

Is there a difference in terms of impacts or opportunities?

The environmental impact and the impact on Te Ao Māori are similar across Options B.1 and B.2.1, with only the option B.2.2 (direct to Lineside Road) being scored lower due to crossing an additional high value waterway²¹.

Option B.2.2 has a slightly lower safety score due to maintaining the existing level crossing rather than upgrading.

The two variations of eastern link that pass to the east of the wastewater plant offer benefits in terms of urban form as they open up more area immediately north of Marsh Road for industrial purposes (noting that land use is constrained due to proximity to the wastewater plant) and perhaps better support for any future urban expansion to the east.

While the western route passes through the existing operations area and would affect the pound, civil defence and water unit facilities, while eastern route would constrain the ability of the plant to be extended. As noted above, there is impact on the neighbours of the eastern route due to the proximity to homes, albeit that this is moderated somewhat by the support of some of these neighbours.

The Preferred way forward

It is fair to conclude that there are not strong reasons to prefer one shortlisted route option for the Rangiora Eastern Link over another. They each will deliver the transport benefits, provide value for money and are similar in cost. However there are differences between each option.

The two options which avoid crossing the South-Southbrook Stream to link directly to Lineside Road are slightly preferred as they lead to an upgraded level crossing, reduce impact on both the environment and Te Ao Māori and avoid the need to acquire and sever a large farm paddock.

²⁰ An Outline Plan will need to be prepared and submitted, however provided that the proposal aligns with the notice of requirement then this is unlikely to

be declined. Some consents may be required for the length of new road south of the dual roundabout (Lineside/Southbrook)

²¹ South-Southbrook Stream

The remaining two options (east or west of the wastewater plant) can be differentiated by the benefits to urban form provided by the eastern route and the lower risk to delivery provided by the western (designated) route.

If the impact on residential properties to the south of the wastewater plant and consequent risk to consenting requirements is considered to carry greater weight, then option B.1 West of WWTP would be preferred

If benefits to urban form and future development scenarios is weighted higher, then the route around the east of the wastewater plant would be preferred

With the designation in the recently made operative District Plan, the benefits of the eastern route option would have to outweigh those of the designated route to be preferred. While there are real benefits to urban form of the eastern route, this is not sufficient to outweigh the impacts on people and property and subsequent risk to delivery.

As such, option B.1 REL west of the Wastewater plant (designated route) is the preferred route. A tabulated summary comparing these two options is included on the next page.

Confirming the option as the Minimum Viable Product

Following refinement of the preferred option to a Minimum Viable Project (MVP) design standard, a review of safety, operational performance, and benefit delivery has been undertaken.

The MVP design maintains compliance with the One Network Framework Urban Connector classification and continues to achieve the investment objectives, including:

- A 20% reduction in PM peak travel time between Lineside and Northbrook Road;
- Improved accessibility from East Rangiora to SH1;
- Improvement of infrastructure risk rating to Medium or better.

The scope refinements remove non-essential urban design and staging enhancements but do not materially alter traffic modelling assumptions, safety performance, network productivity outcomes, or land unlocking capacity.

Accordingly, the benefits and Benefit Cost Ratio presented in this Business Case remain valid and are not undermined by the MVP refinement.

Summary table for section of preferred route over option B.2.2

Criteria	B.1 (Preferred)	B.2.2	Implication for Selection
BCR	3.3	3.4	Marginal 0.1 difference – within modelling tolerance and not material for decision-making.
Consenting Risk	Lower consenting complexity. Corridor largely consistent with operative District Plan designation and ODP framework.	Higher consenting exposure due to greater environmental and property interface effects. Potentially more complex RMA pathway.	B.1 offers greater consenting certainty and reduced programme risk.
Designation Certainty	Aligned with recently operative District Plan designation (July 2025). Minimal legal exposure.	Greater risk of challenge or requirement for variation to designation footprint.	B.1 provides statutory certainty and reduced risk of delay.
Land Acquisition	Lower number of directly affected properties. Reduced reliance on compulsory acquisition.	Higher property acquisition requirement and greater likelihood of Public Works Act processes.	B.1 materially reduces acquisition risk, cost escalation risk, and delivery timeframe uncertainty.
Residential Impacts	Fewer residential severance and amenity effects. Better alignment with planned growth structure.	Greater impact on established or developing residential areas. Higher social and property effects.	B.1 results in lower social impact and stronger community acceptability.
Delivery Risk Profile	More straightforward construction staging and integration with development.	Greater interface complexity and higher risk of objection during delivery.	B.1 provides more predictable delivery.

Infrastructure Priorities Assessment

The Investment Prioritisation Method (IPM) for the 2024–27 National Land Transport Programme (NLTP) is used to prioritise activities into the 2024–27 NLTP and at the funding approval stage. It includes three

prioritisation factors to give effect to the Government Policy Statement on land transport (GPS) 2024. It also includes a prioritisation matrix that sets out how the three prioritisation factors combine to determine an overall investment priority ranking.

<p>GPS alignment</p> <p>Economic growth and productivity</p>	<p>Journey times and travel time reliability. >30% improvement in travel time reliability and/or trip time for freight on a regionally significant route.</p> <p>Access to key destinations that contribute to economic growth. Contributes to transport network efficient access to/from regionally important economic growth locations with >1 minute travel time saving.</p> <p>Access to new housing</p> <ul style="list-style-type: none"> Enables required access to a regionally significant housing development (minimum 1,000 houses). 	<p>MEDIUM</p>
<p>Scheduling</p> <p>Criticality and Interdependence</p>	<ul style="list-style-type: none"> Another significant activity or non-transport investment (for example housing development) is dependent on this phase of the activity being undertaken in the 2024-27 NLTP period and non-delivery of that phase in the 2024-27 NLTP period would have a significant impact on realising the benefits of the interdependent activity. With the high level of growth occurring in Waimakariri, and around Rangiora, failure to provide alternatives to this route which already carry very high volumes of traffic, without consideration of the needs of future growth would have significant implications for the community in terms of having reliable access to key activity areas, school and businesses Impact on safe system – poor visibility and high approach speeds combined with increasing traffic is impacting the network. Impact on system reliability – the project aims to achieve a 57% reduction in travel time. The 390ha of proposed greenfield development is now operative with development be advanced by several landowners impact on user experience of the transport system – the level of service for the network along Southbrook Road is currently D & E. This is impacting user experience of the transport system. 	<p>HIGH</p>
<p>Efficiency</p>	<p>Indicative Efficiency Rating Is 6 BCR Ratio is 3.3 (BCR_e = 4.0)</p>	<p>MEDIUM</p>
<p>INVESTMENT PRIORITY RANKING</p>		<p>4</p>

What the solution will deliver

Rangiora grew up centred around a single north south strategic road (Southbrook Road).

This was sufficient when the town was small, but rapid growth over many decades has led to the development of a western route (Flaxton, Fernside, Merton/ Lehmans) which serves as heavy vehicle bypass and the residential growth in the west as well optimising the capacity of the single laned Southbrook Road.

The town will be mainly growing eastwards for the next decades, with up to 5,100 new homes enable by the recently made operative District Plan. This rapid growth reflects the important role that the town plays in the greater Christchurch region and its status a Priority Development Area.

As any district grows, so must the infrastructure required to serve it, and the Council has developed an overall programme of physical and non-physical interventions to match the pace of that growth and ensure that the district keeps on moving. This programme is a National Infrastructure Priority.

The town has now reached a population and level of commercial activity where the bottleneck on Southbrook Road has become a drag on economic activity as well as making public and private transport unreliable and unattractive. Rail crossings which where tolerable when traffic volumes were low are becoming a greater risk to life, and this will be made substantially worse as the town grows further.

Modelling indicates very severe congestion will force traffic to take circuitous routes to minimise travel time, creating pressure on other parts of the network which were not built for it. The impact on the

Southbrook Industrial Area will constrain freight movement and deter investment.

A solution that relieves the existing congestion and enable people and freight to move more quickly, as well as unlocks the land for housing is sought.

The preferred way forward involves creating a third north-south route through the town, spreading the traffic across multiple routes in order to improve travel time and reliability, improving safety and resilience and providing a connection to residential areas and industrial growth areas.

- Supports the growth of up to 5,000 new homes in East Rangiora
- Provides 3-4 minutes in shorter travel time from East Rangiora (300-400 veh. hours each day)
- Saves approximately 7,000 kms per day (VKT) in driving distance, leading to economic and emissions savings
- Reduces the traffic volume across Lineside Road level crossing down from 17,600 vpd to 14,000 per day
- Limits traffic volume to 19,200 vpd on Lineside Road instead of 23,000 vpd.
- And maintain a population of approximately 40,000 people within 10 minutes' drive of Southbrook and its employment and retail opportunities.

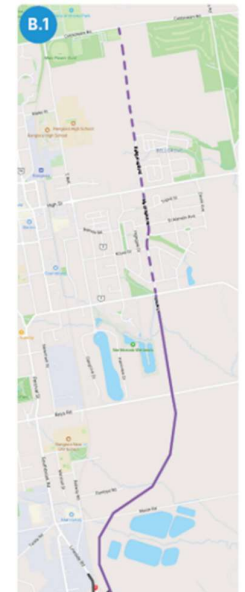


Figure 13
Recommended route

Financial Case

Introduction

This section sets out the financial considerations for the Rangiora Eastern Link (REL). The analysis demonstrates how much the project will cost, the structure, the treatment of supplementary funding and development contributions, and the co-funding sought from Waka Kotahi.

The overall objective of the Financial Case is to confirm that the project can be delivered within an affordable and sustainable funding model, while aligning with the principles of the NTLF Funding policy and the Council's Long Term Plan (LTP) and Development Contributions Policy.

This Financial case aligns with the NZTA/Treasury BCA methodology

Structure of the Financial Case

- A Capital Cost estimates
- B Funding Sources and Structure
- C Financial Risk and Uncertainty
- D Value for Money and affordability

A Capital Cost Forecast

Background to development of the Cost Estimate

An initial Concept Design has been prepared by WSP which has been subject to peer review, safe system audit and a parallel estimate process (parallel estimate by Beca). The WSP and Beca estimates were prepared in accordance with SM014 (NZTA Cost estimation manual).

However, the estimate was well in excess of expectations: the principal driver for this was the adoption of a 1% AEP flood design standard (Arterial Rd classification).

The project has therefore been through an extensive value engineering and ECI process to develop the Minimum Viable Product that delivers the functional transport benefits (No Frills approach).

This has led to the cost forecast outlined in this section and Cost Estimate Report in appendix AA.

Costs in this section are DBE (Detailed Business Case) stage and are presented as Total Out-turn Cost (excl. GST) in 2025 dollar terms without escalation applied.

Consistent with NZTA SM014 and the BCA Financial Case guidance, the P_{50} represents the base estimate plus objective contingency; the P_{95} adds costed residual risk. Contingency has been assessed using the advanced methodology (QRA) set out in SM014 through an elicitation process with Beca, WSP, NZTA, BG Contracting and Council

Investigations undertaken to reduce cost risk

To support this development of this design, a range of investigations have been completed focused towards understanding cost risks, including:

- Concept Design (WSP)
- Fluvial flood modelling (Internal WDC modelling team)
- Geotechnical factual site investigations and interpretive report (WSP)
- Groundwater monitoring (WSP)
- Soil contamination, including
 - Detailed Site investigations WWTP land (PDP)
 - Detailed Site investigations – Marsh to Northbrook (FT)
 - Site Management Plan (WWTP land) (PDP)
 - Coal tar investigation (PDP)
- Noise assessment (WSP)
- Ecological assessment (AEL)
- ECI earthworks management plan (BG Contracting)
- Minimum Viable product value engineering assessment (WSP)
- Archaeological screening assessment (WSP)
- Transpower Safety assessment (Lumion)

Forecast Outturn Cost

The project capital cost forecast be **\$65.6 million (P₅₀) to 78.8 million (P₉₅)** covering the section between Lineside Road and Northbrook Road.

Item	Description	Total (\$)
1	Property Costs	4,190,314
2	Consultancy Fees	4,031,175
3	Client Managed Costs	500,000
4	Physical Works	44,790,831
	Project Base Estimate	\$53,512,320
5	Contingency (P50)	12,078,960.70
	Project Expected Estimate	65,591,280.73
6	Funding Risk Contingency (P95)	13,268,308.15
	95th Percentile Project Estimate	78,859,588.88

Assessment of risk and contingency

Contingency has been calculated using the Advanced Method, and specifically a Monte Carlo based QRA methodology, with input data developed through an expert elicitation process involving WSP, Beca, ECI Contractor and WDC staff.

Break down of costs and contingency

The QRA covers the physical works costs only. The contingency and funding risk allowances for land acquisition (Property Purchase and Compensation), Professional Fees and enabling works (Koura Creek habitat works and WDC Operations area relocation) are added to this assessment and based on percentages, or for property, the range of market land values.

The graph is the output from the QRA modelling with a table that summarises the P₅₀ contingency for sub-items from the model.

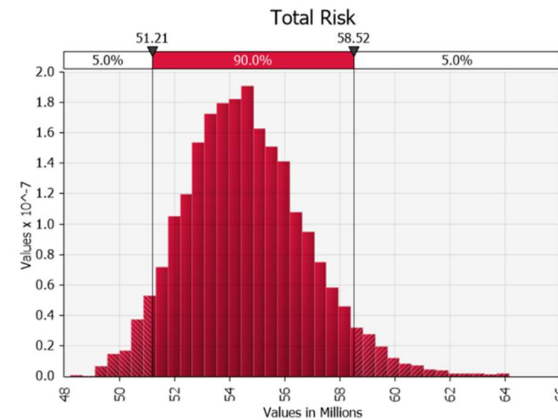
Risk Headings	P50 Contingency	%age of base estimate
Environmental	\$337,038.61	32%
Earthworks	\$1,943,857.70	29%
Drainage	\$1,464,603.20	26%
Pavement	\$1,953,838.43	18%
Minor Structures	\$825,219.74	28%
Traffic Services	\$311,123.55	6%
Utilities	\$502,719.29	95%
Landscaping	\$269,975.53	20%
TTM	\$100,899.17	4%
Rail	\$451,329.23	90%
P&G	\$903,971.65	14%
Sundries	\$41,166.67	4%

Adjustment to funding risk allowance

The QRA model calculates a funding risk allowance of 11%. Although the state of maturity of this estimate is more advanced than normal at the DBE stage of a project, and most elements are at or close to PE1 state of development (Concept Design), it is considered that this allowance is too low.

A further reason for this is that funding risk have been excluded from the QRA on the basis that the project outturn cost will only represent an approved budget after funding is approved (and hence funding risk should not be included in the contingency forecast).

As such, a higher funding risk allowance is recommended than forecast by the model, and a more prudent 20% of P₅₀ physical works estimate has been allowed for in the cost estimate.



B Funding Sources and Structure

Development Contributions

The Council's Development Contributions (DCs) Policy provides for two separate contributions associated with the REL:

- **Outer East Rangiora ODA DC** across 2,964²² lots.
- **District Wide DC** across 4,950 lots.

The Outer East Rangiora ODA DC reflects localised growth demand while the District Wide DC reflects the impact of growth on the existing transport network.

These contributions are already incorporated into the Council's adopted DC schedule and LTP. Of note is that Council is acting as banker for development contributions and takes the risk of under collection (i.e. development is slower or lower density) than assumed. Similarly, faster or more dense growth may yield a greater contribution, however this is known only after a ten year cycle. This is a normal part of the land development process where the Council (i.e. ratepayer) is underwriting the cost of growth.

Outer East Rangiora ODA DC

Based on an analysis by WSP²³ and Vale Consulting and followed by negotiation on a Private Development Agreement (PDA) with Bellgove

²² 2614 lots in 2025 DC schedule plus 350 for Block B and C Rosburn

²³ Rangiora Eastern Link Road Modelling: Developer Contribution Policy advice (2011)

²⁴ <https://www.waimakariri.govt.nz/consents-and-licences/resource-consents-and-planning/development-contributions>

(the largest developer in the East Rangiora ODA area), the localised growth contribution was set at 25% of the total forecast project cost. This established the development contribution on a per lot basis that is now reflected in the Council's Development Contributions Policy and schedule²⁴.

The number of lots estimated in the growth area is 2,964.

Under the [National Land Transport Programme Funding Sources Policy](#)²⁵, the Outer East Rangiora ODA Development Contribution is considered to be Supplementary Funding.

Of note, the Bellgrove PDA includes a clawback mechanism should Waka Kotahi co-funding be secured that could be applied to the local growth portion of the funding. This is not the case and hence the clawback provision is not triggered.

This has been accepted by Bellgrove.

District Wide DC

The district wide growth contribution was set at 25% of the project cost (i.e. both DC components make up half the total project funding).

²⁵ <https://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/202427-nltp-investment-requirements/202427-nltp-principles-and-policies/funding-2/national-land-transport-programme-funding-sources-policy>

Supplementary funds

Supplementary funds refer to contributions that are additional to the NITF and local share funding.

Where a third party benefits from a land transport investment, we expect the third party to contribute to the level of that benefit.

The main examples of supplementary funds are:

- financial contributions towards the costs of improving network infrastructure (to the benefit of the development)
- betterment from landowners receiving value from road improvements
- additional contributions from local authorities or other parties that reduce the proportion of our contribution to the cost of an activity below the normal FAR
- contributions from community groups or other government agencies to community programmes
- borrowing and payments from concession agreements
- the value of land and buildings of redundant public transport facilities owned by local authorities
- funds from the sale of future development rights of a new or redeveloped public transport facility owned and operated by a local authority.

The multi-party funding policy provides more information about supplementary funds and how they must be shared.

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District wide contributions address the consequences of growth on the existing transport network and in this case, specifically the congestion on Southbrook Rd which will be exacerbated by further growth. As such this development contribution is not considered as supplementary funding.

Based on growth forecast for the district over the next ten year (DC's can only be held for the next ten years) the number of lots this is spread over is 4,950.

Proposed Funding Structure

The Council is seeking full funding (pre-implementation and implementation phases) of the REL in the 2024–27 National Land Transport Programme. The proposed arrangement is set out in the table below and summarised as:

- Outer East Rangiora ODA Development Contribution is considered as supplementary funding (\$14.577 million)²⁶
- 51% FAR NTLTP contribution applied to the balance (\$51.012m), equating to approximately \$26.016 million (National Share).
- The Local Share funded²⁷ through Rates (\$16.961 million) and the District Wide Development Contribution (\$8.035 million)

	Total
Total project cost	\$ 65,590,000
LESS	
East Rangiora ODA DC's (not subsidised)	-\$ 14,577,384
Cost to be shared by Council and NLTP	\$ 51,012,615
Made up as follows	
NZTA co-funding 51% FAR.....	\$ 26,016,434
District wide growth (DC's).....	\$ 8,034,775
Rates/LoS (debt funded).....	\$ 16,961,406

²⁶ Note that the DC from first 800 lots of the Bellgrove development is fixed at a lower per lot contribution.

²⁷ The national contribution (at FAR) is applied to both the district wide DC and Rates in accordance with Council Development Contributions Policy.

C Financial Risk and uncertainty

The principal financial risks for the project are:

Item	Cost risk	Mitigation
1	Development contributions are subject to the risk of slower-than-forecast growth leading to lower DC receipts,	Council accepts the risk of a shortfall, which would need to be met through rates. This will be partially offset through increasing DC's to cover escalation and inflation.
2	Outturn cost exceeds budget	Continue robust budgeting, advancing Concept Design and Parallel estimates and tight scope management. Attention to advanced management of contingency.
3	Insufficient funding from NZTA	The subject of this business case. Council would not proceed with the project without co-funding from NZTA. See below

Key risk: What if there is no co-funding under the NLTP:

A key uncertainty in the investment environment is the availability of co-funding through the National Land Transport Programme (NLTP). Although approximately 75% of the project cost is already secured through Development Contributions (DCs) and Council's Long Term Plan (LTP), the balance of funding required from Waka Kotahi represents a material delivery dependency. If NLTP funding is delayed, reduced, or unavailable within the desired timeframe, this could defer or prevent construction proceeding as planned.

In the event of insufficient NLTP co-funding, Council will consider the following supplementary or alternative mechanisms:

- Deferring the project until NTLP co-funding is available
- Reprioritisation within future Annual Plans or the LTP, where feasible, to increase the local share over time without compromising essential programmes.
- Engagement with central government growth-related funding programmes, should future contestable funding streams become available that align with the enabling-growth nature of the REL.
- Exploration of partnership opportunities with land developers, where elements of the project directly enable residential or industrial development, noting that DCs already contribute a substantial share of the corridor cost.
- Advocacy through Greater Christchurch Partnership (GCP) to reinforce the position of the REL as a nationally significant transport investment supporting growth and housing supply.

These pathways are unlikely however to replace the preferred co-funded model and may lead to the project not being able to be delivered or benefits realised.

Staged Delivery Options

To increase flexibility and reduce financial exposure, the project could be delivered in stages aligned with available funding and development sequencing. Indicative staging includes:

- Stage 1: Northbrook Road to Boys Road (through Rossburn development).
- Stage 2: Lineside Road to Boys Road.

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A staged approach enables early delivery of some benefits, supports continued residential growth. That said, the transport benefits will only be enabled once the full connection is in place.

Monitoring and Decision Points

Key decision points will be established to:

- confirm funding availability prior to tendering major packages
- evaluate timing of staged delivery based on development progression
- adjust the delivery programme in response to external funding changes

This contingency framework enhances the resilience of the project, supports prudent financial management, and allows the Rangiora Eastern Link to progress in a manner that remains aligned with growth, affordability, and long-term strategic outcomes for the district.

Sensitivity to Construction Cost Escalation

Construction costs are the largest driver of financial risk. Industry cost indices suggest that escalation above the assumed rate could materially affect affordability and the funding agencies will need to adjust budgets to align with inflation expectation (as normal practice).

Scenario	Escalation Assumption	Estimated Impact on P50	Commentary
Base case	Nil provided for in the base estimate as per SM014	P50 = \$65.59	As per SM014 inflation assumptions.
Moderate escalation	2%	P50 increases by approx. \$4.9m	Within expected market variation;
High escalation	4%	P50 increases by approx. \$10.1m	Adjustment through Annual Plan process will be required

D Value for Money, cashflow and affordability

Selecting the appropriate design standard

The Rangiora Eastern Link (REL) will be owned and operated by Waimakariri District Council and designed in accordance with the Council's Engineering Code of Practice (ECoP). The ECoP establishes consistent standards for all new roads in the district, including those constructed as part of subdivisions, and incorporates relevant national and Australasian design references such as Austroads Guide to Road Design and Austroads Guide to Traffic Engineering.

A short section at the northern interface with State Highway 72 (Lineside Road) will be designed in accordance with Waka Kotahi NZTA standards to ensure appropriate transition geometry, safety performance and asset integration.

Appendix L outlines consideration of the Design Standard for the project and sets out the basis for the Concept Design

A key decision is the Cross-Drainage Design standard, and a detailed assessment has been completed to consider the options. Flood modelling shows that during large flood events (including the 1% AEP event), extensive network-wide inundation occurs across SH71/Lineside Road, the Southbrook Industrial Area, and the SH1/SH71 interchange at Kaiapoi.

As a result, the REL cannot function as a resilient alternative route during extreme flood events regardless of the design standard adopted at individual crossings.

Given that flooding at the southern end of REL is driven by wider catchment behaviour:

- Designing REL itself to a higher standard does not eliminate flood risk
- Residual risk would remain largely unchanged at a network level

A 10% AEP standard (which includes an allowance for climate change) therefore represents a balanced response, acknowledging climate uncertainty while avoiding disproportionate expenditure on mitigation that cannot fully address system-wide flooding.

The design standard selected represents a Collector standard with Arterial shoulder width to provide additional cycling capacity, providing a cost-effective balance of safety, capacity, resilience, and affordability. This aligns with the project's Critical Success Factors and Economic Case value-for-money principles.

Table: Design Element Comparison and Adopted Standard

Design Element	Collector Standard	Arterial Standard	REL Adopted Standard
Traffic lanes	2 × 3.5 m	2 × 3.5 m	2 × 3.5 m
Shoulders	2 × 1.5 m	2 × 2.0 m	2 × 2.0 m
Minimum carriageway width	10 m	11 m	11 m
Cross drainage	10% AEP	1% AEP	10% AEP
Secondary flow path	>10% AEP	>1% AEP	>10% AEP
Shared path	2.5 m (one side)	2.5 m (one side)	3.0 m (one side; deferred)
Intersection design vehicle	12.5 m Semi Trailer	12.5 m Semi Trailer	12.5 m Semi Trailer

No Frills Assessment

The project has been assessed against the NLTP ‘No Frill’s guidance, and the following are noted:

- Cycleway and pedestrian features have been removed from the project scope
- The total cost of landscaping and waterway restoration is \$1.4 m (3% of base estimate), with the work undertaken in order to reduce the total project cost (examples include the Koura Creek and Middlebrook diversions) and hence are essential elements.
- The remaining project elements are also assessed as core roading infrastructure and required to meet safety and functionality standards.

The design standard developed for the Rangiora Eastern Link is the Minimum Viable Product required to deliver the transport outcomes without undermining long term life cycle costs

Confirmation of MVP Scope and Benefit Integrity

As part of the refinement process, the preferred option has been reviewed and confirmed as a Minimum Viable Project (MVP) aligned to the Urban Connector classification under the One Network Framework.

The MVP scope removes non-essential urban design enhancements and staging contingencies while retaining all elements necessary to achieve the agreed investment objectives. In particular, the MVP:

- Maintains the geometric and operational standards required to deliver the forecast travel time savings;
- Preserves intersection performance and network productivity outcomes assumed in the economic modelling;
- Retains all safety treatments necessary to achieve improvement in Infrastructure Risk Rating to Medium or better; and
- Maintains full connectivity required to unlock East Rangiora residential and Southbrook industrial growth areas.

A targeted review of modelling assumptions confirms that the MVP refinement does not materially alter the forecast benefits or the Benefit Cost Ratio presented in this Business Case.

Accordingly, the value-for-money assessment remains robust, and the cost optimisation undertaken improves affordability without compromising safety, performance, or benefit realisation.

Updated Economic Analysis

The economic assessment detailed for the Economic Case uses the estimated project cost detailed in this Case and remains valid.

Cash flow and affordability

After accounting for development contributions and NZTA co-funding, the balance will be funded from Council’s local share. This will primarily be met through the roading rates account, with borrowing as required for cashflow timing.

The table below shows the changes required to the Annual Plan and Long Term Plan to match the delivery plan set out in the following Management Case. This cashflow includes all expenditure regardless of funding source.

	FY26-27	FY27-28	FY28-29	FY29-30	TOTAL
Total project cost	5,629,916.36	20,233,630.24	31,782,187.31	7,945,546.83	65,591,280.73
Debt funding	1,455,884	5,232,373	8,218,805	2,054,701	16,961,764
DCs revenue	1,940,910	6,975,530	10,956,887	2,739,222	22,612,548
NLTP share	2,233,122	8,025,727	12,606,495	3,151,624	26,016,969

The project is affordable within the Council’s LTP provided NZTA co-funding is secured.

Local Share – Capacity and Risk Exposure

The proposed funding structure includes a Council local share contribution of approximately \$17.0m (P50 basis), with total outturn cost estimated between \$65.5m (P50) and \$78.8m (P95).

The Council’s exposure is therefore primarily:

- The agreed local share;
- Any cost escalation beyond P50 not covered by NLTP co-funding; and
- Timing risk associated with development contribution (DC) cashflow.

Local Share Risk Profile

The local share is considered manageable within the current Long Term Plan (LTP) assumptions for the following reasons:

- Approximately 60% of funding is secured through Development Contributions and other sources.
- The project is already incorporated within the adopted capital programme.
- The Council retains flexibility within its transport capital envelope to phase expenditure if required.

The primary fiscal risk to Council arises not from base local share, but from:

- Construction cost escalation beyond forecast;
- NLTP funding timing or moderation adjustments; and

- Slower DC collection if growth staging is delayed.

However, the project is growth-enabling and therefore closely aligned with the revenue stream supporting it.

Construction Cost Escalation Sensitivity (Beyond 4%)

The base financial modelling includes standard escalation assumptions consistent with current market forecasts. However, recent infrastructure markets have demonstrated volatility exceeding historic norms.

Sensitivity Scenarios

The following escalation sensitivity illustrates Council exposure if escalation exceeds forecast levels based on P50 construction component and proportional funding share assumptions:

Escalation Above Forecast	Approx. Additional Project Cost	Indicative Additional Local Share (if cost share maintained proportionally)
+2%	~\$1.3m	~\$0.3–0.4m
+4%	~\$2.6m	~\$0.6–0.8m
+8%	~\$5.2m	~\$1.3–1.6m
+12%	~\$7.8m	~\$2.0–2.5m

Even under a +8% scenario above forecast, the additional local share requirement remains within the scale that can be managed through:

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- Minor reprioritisation within the transport capital programme; or
- Short-term debt smoothing across rating cycles.

The risk of escalation is partially mitigated through:

- Early contractor engagement;
- Market testing of packaging strategy;
- Contingency allowance developed under SM014 process;
- Current easing in construction inflation compared with 2022–2023 peaks.

Borrowing Headroom and Prudential Limits

Council borrowing associated with this project remains within adopted prudential limits under the LTP and Treasury Management Policy.

Key considerations:

- Net debt levels remain compliant with LGFA covenant thresholds.
- Debt servicing ratios remain within policy limits even under moderate escalation scenarios.
- The project is growth-enabling, meaning debt is aligned with asset creation and DC-backed funding.

Importantly, even in a downside scenario combining:

- 8% cost escalation above forecast; and
- 12-month NLTP delay,

- Council borrowing headroom remains sufficient without breaching policy limits.

Debt servicing impacts would be modest relative to total district-wide transport expenditure and can be smoothed across rating cycles.

NLTP Timing Risk and LTP Triggers

The most material financial risk is not total cost but timing risk associated with NLTP approval.

Scenario: NLTP Co-funding Delayed by 12–24 Months

If NLTP funding approval is deferred:

- Council would not proceed to full construction commitment without funding confirmation.
- Pre-construction and consenting work could continue within approved budgets.
- Capital programme phasing would be adjusted in the next LTP or Annual Plan.

LTP Trigger Mechanisms

The following governance triggers would apply:

- Material funding shortfall (>10% of total project cost) would lead to formal reconsideration through Annual Plan or LTP amendment.
- NLTP deferral beyond one funding cycle would lead to rephasing of construction in capital programme.

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- Material change in BCR or scope would lead to revalidation of Economic Case and Council decision gateway.
- Debt headroom approaching prudential limit would lead to a review of project timing or alternative funding tools (e.g., smoothing via rates or DC recalibration), noting that this is a matter well beyond the scale of only the REL

Council retains discretion to defer commencement until NLTP co-funding is secured. The project is therefore not exposed to forced borrowing in the absence of co-funding confirmation.

Combined Downside Scenario Assessment

A combined stress test scenario including:

- +8% construction escalation beyond forecast;
- 12-month NLTP funding delay;
- Slower DC collection by 12 months;

Indicates:

- Temporary increase in borrowing requirement;
- No breach of prudential ratios;
- No requirement for emergency reprioritisation of core services;
- Manageable impact on rates trajectory.

Under this scenario, Council could:

- Stage works;
- Adjust drawdown timing;

- Smooth debt servicing across rating cycles.

Summary on affordability

While cost escalation and funding timing risks exist, sensitivity testing demonstrates that the project remains financially manageable within current prudential settings.

The Council retains borrowing headroom and programme flexibility to absorb moderate escalation or NLTP timing shifts without breaching fiscal limits. Accordingly, the Rangiora Eastern Link remains affordable and deliverable under both base-case and moderate downside scenarios.

The Commercial Case

Introduction

This section considers a procurement strategy to deliver the works. The objectives and outcomes in this strategy are consistent with Council's strategic and organisation-wide Procurement and Contract Management Policy.

For clarity, as this is a Council led project, the Council's Procurement policy apply and not that of NZTA²⁸.

The key outcomes sought by the strategy include:

- ✓ To provide for the procurement of goods, works and services in a way that ensures value for money
- ✓ To ensure that procurement practices meet the requirements of good management
- ✓ To enable fair competition between suppliers
- ✓ To ensure quality outcomes for the community are delivered
- ✓ To encourage a competitive and effective market

Scope of this Commercial Case

In the interest of conciseness, this Commercial Case does not address the everyday activity that is undertaken by Council in procuring consultant (pre-implementation resource) to support the project. There are well defined processes and thresholds in place within Councils procurement policies that guide this process. The full

²⁸ NZTA procurement guidelines would apply when NZTA is the delivery agent but in this case they are a funding partner only.

scope of this procurement is noted in the next section for completeness.

Structure of Commercial case

- A Defining the scope of procurement
- B Understanding the Context and Success Factors
- C Assessing the Procurement Options
- D Managing and allocating risk
- E Structuring implementation
- F Acquiring the land

A Defining the scope of Procurement Activity

The procurement activity for the Rangiora Eastern Link (REL) encompasses all activities required to take the preferred option (Option B.1 – West of Wastewater Treatment Plant, designated route) from concept design through to physical construction and commissioning.

The procurement scope includes the full range of services and physical works necessary to enable delivery of the REL, including planning, design, property, construction, and commissioning. The scope aligns with NZTA BCA expectations for an SSBC and includes both pre-implementation and implementation activities.

The scope reflects the nature of the project: a 2.88 km new road delivered partly through greenfield land and partly within developer-constructed corridor sections, with interfaces to local roads, growth areas and an active rail environment. This section outlines the breadth of procurement activities required to successfully deliver the project and achieve value for money.

Pre-Implementation Procurement Activities

These services will be procured to refine the design, reduce delivery risk and achieve consenting and property readiness ahead of construction procurement:

- **Professional Services – Detailed Design**
Completion of detailed geometric design, structures, active modes facilities, intersection design, drainage, utilities, stormwater treatment, earthworks modelling and landscape design.

- **Additional geotechnical and utility investigations**
Confirmatory investigations to reduce ground risk and pipe/cable location, given known soft soils and drainage constraints along the corridor.
- **Property Acquisition and Valuation Services**
Property agent, valuation, surveying and legal support is required to finalise boundaries, secure easements, and confirm access arrangements, in accordance with the Public Works Act.
- **Planning & Consenting**
Preparation of any required resource consents and procurement of ecological, hydrological and cultural specialists.
- **Early Contractor Involvement (ECI) – Targeted**
Early engagement with the market will be used to reduce risk in relation to staging, ground conditions and construction methodology. This is a limited-scope ECI, not a full alliance model.

3. Implementation Procurement Activities

These activities relate to procurement of physical works contracts required to construct the REL:

- **Main Civil Works Contract**
The principal construction contract comprising road formation, pavements, structures, shared paths, stormwater systems, lighting, safety barriers, landscaping and traffic control devices.

- **Rail Interface Works**
Allowances for Kiwirail interface management, including any adjustments needed to signalling, level crossing warning systems or access controls near Lineside Road.
- **Utility Relocation and Service Coordination**
Engagement with utility providers for relocations, protection, design certification and construction supervision.
- **Developer-Constructed Works Integration**
Procurement interfaces with the Rossburn development-constructed sections, ensuring consistent standards and seamless connection to Council’s corridor.

4. Contract Packaging Included in Procurement Scope

The procurement scope includes assessment and sequencing of contract packages to optimise delivery:

- **Enabling Works Package** – earthworks preload, utility diversions, temporary diversion of watercourses, moving of operations area, and early stormwater works.
- **Single Main Contract Package** (default).
- **Developer Partnership Package** – ensuring integration with Private Development Agreement (PDA) commitments.

The Commercial Case will test packaging decisions with the market prior to RFQ/RFT issue.

5. Procurement Governance, Probity and Market Engagement

The procurement scope includes:

- Establishing an evaluation panel and probity advisor.

- Running a two-stage procurement approach (ROI/RFT) where market testing indicates this will improve competitive tension.
- Conducting market sounding to understand contractor appetite, capacity, and preferred contract forms.

6. Out-of-Scope Procurement Activities

To maintain clarity, the following are *not* within the procurement scope:

- Construction of future stages of eastern development roads outside the REL alignment.
- Any land-use planning or rezoning unrelated to the transport corridor.

Linkages to the Strategic and Economic Cases

The Commercial Case directly supports the Strategic and Economic Cases by ensuring that the preferred option—the Rangiora Eastern Link (Option B.1: West of the Wastewater Treatment Plant)—can be procured and delivered in a way that achieves the investment objectives, responds to the identified problems, and provides value for money.

Alignment with the Strategic Case:

The Strategic Case establishes the need to relieve severe congestion on Southbrook Road, unlock over 5,000 homes in East Rangiora, and improve safety and access for people and freight. The procurement approach has been developed to ensure that the selected commercial model facilitates timely delivery of a connection that aligns with growth sequencing, supports the Priority Development

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Area status of Rangiora, and maintains network performance during construction.

Contract packaging and supplier engagement have been shaped to reduce delivery risks associated with ground conditions, property interfaces, and adjacent land development—critical to achieving the strategic outcomes of reduced travel times, improved accessibility, and enhanced safety.

Alignment with the Economic Case:

The Economic Case identifies the REL as the option that delivers the highest value for money, with substantial travel-time savings, improved network reliability, reduced VKT, strong safety benefits, and an excellent BCR.

The Commercial Case ensures that the procurement strategy preserves these benefits by selecting a delivery model that supports competitive pricing, efficient staging, and disciplined risk allocation. The recommended Design–Tender–Construct approach, supported by targeted early contractor involvement, mitigates key cost and delivery risks and maximises the prospects of realising the forecast economic benefits.

The procurement scope and packaging reflect the economic findings that timely delivery and minimisation of interface risks are essential to achieving the modelled transport performance and growth-enabling benefits.

B Procurement context and outcomes

Characteristics of this procurement

The exact sequencing is flexible but requires coordination

- Sequencing may depend on the rate of residential development in the adjacent development area (Rossburn/Sparks).
 - That is: the timing of the Rossburn develop will influence if it is done as part of the development works or in advance.
- Coordination and integration with the adjacent land developments is required as well as with the operation of the wastewater treatment plant.

It will be important that road is designed and constructed with long term maintenance and life cycle costs in mind

- These are public works and will not be tolled, therefore have no opportunities for PPP or other partnering solutions
- They will form part of the larger transport network and must fit with the overall asset management of the network
- Whole of life considerations and meeting minimum design standard are important as the Council (and NZTA) will carry the cost of maintenance.
- Climate change and particularly ground water are key design and future proofing considerations
- Consistency with existing standards is essential, including compliance with Council's Engineering Code of Practice.

Cost certainty within a typical margin that reflects the risk profile will be required at the start of construction

- Risks need to be understood, and allocated to the party who is best able to control them
- Cost certainty is essential to meet obligations to ratepayers
- A high level of pre-tendering data collection on ground conditions, ground water levels and services locations will be required
- Early engagement with regulatory agencies and securing of consents will also be required

There are a range of key interfaces and stakeholders that need to be carefully managed and coordinated

- Coordination with the adjacent development is required
- There are three, and potentially four, land acquisition required outside the main landowner developer
- Agreement and coordination with Kiwirail in regard to the rail crossings is also essential and key timeframe risk
- The directly affected landowners, local and neighbouring residents, wider scheme beneficiaries, and Rangiora residents need to feel informed and engaged
- Disruption due to noise, vibration, traffic effects etc needs to be well managed

There are a number of technical and consenting challenges, but these are not unusual

- There will be some groundwater challenges, and excavation may intersect with the groundwater in locations.

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- Considerable geotechnical, ground water and services investigations are required prior to contracting.
 - Much of this has been completed as part of the Concept Design and Business Case phase
- Some localised soil remediation (contamination) may be required, however this is lower risk post investigations.
- There is a low level of technology improvement opportunity therefore technology obsolescence is minimal.
- Cultural considerations in the approach around waterways will be critical in securing resource consents.
- There are limited planning constraints, but these will need to be resolved and particular relate to groundwater and the crossing of the major waterways. Especially Koura Creek.
- However, these risks and solutions are well understood and not unusual.

This is a normal scope of work for the Waimakariri District Council, and they have the capability to deliver the project

- WDC has traditionally investigated risks, sought to mitigate where practical, and then allocated residual risk through the traditional Design/Tender/Construct approach
- WDC has rarely engaged in more direct risk share mechanisms with the private sector although has accepted a fair allocation when considering variation claims
- The main unknowns associated with this project are ground conditions and groundwater levels.
- The downside risk for WDC will need to be capped and controlled
- Some pain/gain share may be acceptable however the project is unlikely to be suitable for this model

- The need for coordination across multiple interfaces (developer, Kiwirail, Council three waters) is a material factor.
- As such, WDC seeks to retain close involvement with the project

It is anticipated that this work will be attractive to the market

- The scope of the work is normal civil construction with a reasonable scale.
- However, the type of procurement will influence the attractiveness to various segments of the market. Most local contractors are less experienced with Design & Build packages
- In addition, the sizes of the packages will determine the size of contractors who may be interested (e.g. smaller local, medium regional, large national)
- This will be of interest to the Council who may want some degree of local economic benefit, reflecting the Coubcul procurement policy.
- There is the opportunity to procure part of the works as part of the land development process through an agreement with the developer. This will depend on their timing, and WDC budget process, but is a common approach.
- The opportunity is to either let the whole project in one contract or break it into multiple contracts.

Critical Success Factors

The following factors were used to identify the procurement risk and evaluation criteria for the project:

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Criteria	Description
Scale, Complexity and Flexibility to Refine Scope	<ul style="list-style-type: none"> are scope requirements simple and are risks clearly identified and understood? contractor management capability / ability to retain competent resources for duration of contract opportunities or need for Contractor input into innovation in design, build or maintenance (routine or non-routine) opportunities to bundle early works likelihood of changes to the project scope through the life of the project or ability to accommodate scope trimming to meet the budget
Public Profile and Strategic Fit	<ul style="list-style-type: none"> expectations of users, Council Development Plan, other stakeholders with influence consider public profile and project sensitive commitments made to the public and/or stakeholders and potential for any stakeholder opposition that could affect the project risk to Council credibility and reputation
Market Conditions	<ul style="list-style-type: none"> likelihood of getting competitive interest from the market, and attractiveness to contractors, sub-contractors and suppliers of materials and equipment vs. cost (to market) of tendering

Criteria	Description
	<ul style="list-style-type: none"> market sustainability, capability and capacity/opportunities for contribution from the private sector Council management capability/ability to retain competent and experienced resources for the duration of the contract
Time	<ul style="list-style-type: none"> certainty that deadlines and NNND's will be met, critical completion dates, need for a quick start or is early completion of benefit to the Council? ability to accommodate potential disruptions outstanding or yet to be finalised approvals
Cost	<ul style="list-style-type: none"> need for certainty of cost predictions/funding availability need for lump sum (full price) cost competition in the tender decision is it more important to have the most skilled or most economical team? ability to meet minimum design standards (Council's ECoP).
Ability to Deliver the Required Scope And Quality	<ul style="list-style-type: none"> incentives and impediments to: (a) meeting user needs, (b) improving whole-of-life recurrent cost efficiency, (c) appropriately allocating and managing design risks, (d) accommodating future works and

Criteria	Description
	<p>variations, (e) providing necessary innovation and flexibility</p> <ul style="list-style-type: none"> • iconic vs. functional outcomes • required level of Council staff and stakeholder involvement in, and influence over, the design • impact of site or technical uncertainties (e.g. geotechnical, environmental, green field (vacant sites) or brown field (site containing existing infrastructure), future proof new technology etc).
Ability to Manage Contractor and Stakeholders/Interfaces	<ul style="list-style-type: none"> • consider physical, contractual, statutory approval, stakeholders, operational, related essential projects nearby that will impact project and any other types of interfaces • degree of stakeholder liaison, influence and agreement required for success of the project

Criteria	Description
	<ul style="list-style-type: none"> • commitments made to the public or stakeholders • approvals and agreements required, and the likelihood of significant approval conditions
Focus on Future Operations of Asset And Knowledge Management	<ul style="list-style-type: none"> • knowledge handover to operations and maintenance personnel to ensure a smooth start to operations • Likelihood of achieving desired efficiencies in the operation and maintenance of the asset (to minimise recurrent costs, staffing levels, etc. • Opportunity for operational staff and service providers to have input and participation in the project

C Assessing the procurement options

A quantitative analysis of options has been undertaken and is included in **attachment A** and summarised below. The first ranked are highlighted in green.

Procurement Delivery Method			
	Score	Rank	Notes
Design and Construct	4.2	4	Score lower due to limited control on interfaces with Kiwirail and Development and high cost exposure variations in interface
Document and Construct	4.75	2	Slight increased score over Design and Construct due to more advanced design resolving some interfacing, but more cost risk if changes are made post contract
Construction Management (CM)	4.15	5	Scored lower due to loss of cost certainty and that only a few number of trades, and hence package values are large.
Design/Tender/Construct	5.8	1	Highest scoring option due to combination of market conditions, cost confidence and ability to manage interfaces and quality well.
Managing Contractor (MC)	4.25	3	Scored lower due to loss of cost certainty and that only a few number of trades, and hence package values are large.
Alliance Contracting (GMP)	3.35	8	Too large an establishment cost and time for this scale of project.
Cost Plus	3.95	7	Scored lower due to loss of cost certainty
Direct Managed (DM) with Panel/Framework Agreements	4.15	5	Scored lower due to loss of cost certainty and that only a few number of trades, and hence package values are large.

The highest scoring procurement methods

Design/Tender/Construct

With a traditional approach, the design and final route are completed by a multi-disciplinary design team, which is then used to approach the market for a suitable construction partner. The key benefits of this approach are that the Principal maintains control at every stage over the design, quality and standards of construction. There is also the benefit of price certainty if a fixed price-contracting model is used. However, the Principal also retains all design risk for any omissions or errors in the documentation that could result in later variations and costs.

This traditional approach often takes the longest, as design, tender and construction are carried out sequentially. Additionally, there is no opportunity for the contractor to have input into the final design. This can limit opportunities for innovative approaches to improve the functionality or buildability of the system.

Example projects delivered under this model are the Kaiapoi Shovel ready Flood Improvements (\$22m), Tran Road upgrade programme, the majority of Councils capex programme (smaller projects), An Accessible City programme of works in the Christchurch Central City (\$72 million) and many others.

Document and Construct

This is a project delivery method whereby the Principal advances the design to (say Concept phase but potentially further) and the contractor takes responsibility for both the design and construction of the project based on the concept and requirements specified by the Principal.

This method allows the Principal to establish the key parameters of the project and resile interface and other design issues and requirements. Consultant inputs may be required to develop early design brief and concept documentation. Example projects delivered through this model include the Avon River Precinct (\$96 million), Ashley River Bridge Replacement and Oxford WWTP (\$10m).

Recommended procurement model

In comparing the various options, the key considerations include:

- The multi-criteria analysis shows that a fully documented (traditional design/tender/construct) approach is strongly favoured due to the well-developed standard and type of work required.
- There is an interface risk due to the proximity to Kiwirail, collaboration with new development, geotechnical conditions and services.
- Because of this, a D&C approach is not likely to be recommended as it would leave considerable risk of variation due to needing to adjust to stakeholder needs which may be difficult to anticipate or transfer this risk to the contractor.
- That said, the geotechnical risks on this site means that the additional expertise of an experienced contractor could add value to the design process and assist in ensuring an optimum design

- For this reason, engagement of the short-listed contractors on a two stage process to take part in an ECI process, with subsequent tendering between these contractors may be advantageous.
- The Managing Contractor option scored well on the assessment. This is because the contractor doesn't need to build risk into their pricing and the cost risk is borne by the principal. However, this is not recommended as it transfers too much risk to WDC.
- The traditional fully documented design/tender/construct option scores highest because it gives greater cost certainty,

ability for WDC to manage the interfaces and best suits the contracting market.

A traditional fully documented, design, tender and construction procurement approach is recommended.

D Structuring delivery

Packaging options

Three principal approaches to packaging and bundling have been considered:

- (a) Packaging by element type
 - Road construction
 - Bridge construction
 - Rail Crossing
- (b) Packaging by geographical location
 - Northbrook Rd to Northbrook Stream
 - Northbrook Stream to Boys Road
 - Boys Road to Marsh Road
 - Marsh Road to Lineside Road
- (c) Single package

Criteria to determine the packaging

To determine the optimal contract packaging for the Rangiora Eastern Link, the project will apply the following criteria:

Delivery Risk – Packaging must minimise geotechnical, groundwater, sequencing, and interface risks and support efficient construction.

Market Capacity & Competition – Packages will be sized to attract strong competition from Tier 1 and Tier 2 contractors and reflect current industry capacity.

Sustainability and Local Economic Participation²⁹ – Packaging will enable meaningful opportunities for enhanced sustainability initiatives, local contractors and local suppliers where this can be achieved without increasing delivery risk.

Programme Efficiency – The preferred packaging must support timely delivery, allow parallel work fronts where beneficial, and avoid delays caused by fragmented delivery.

Risk Allocation & Commercial Fit – Packaging must align with the preferred commercial model and allocate risks to the parties best able to manage them.

Value for Money – Packaging will be assessed on whole-of-life value, not just lowest price, and must support durable, resilient outcomes.

These criteria will be applied through a structured comparison of packaging options, informed by Early Market Engagement feedback, with final recommendations approved by the Project Steering Group.

Considerations

- There is greater attractiveness of larger packages and larger more capable contractors which minimises the client/contractor interfaces.
- However there are benefits of a letting several contracts to attract smaller and local contractors (and hence spread the economic benefit), but these do not outweigh the

disadvantages. The “local benefit’ element could be included as an evaluation criterion.

- While the bridge/culvert construction will involve a different set of skills than the road works, it is a smaller part of the overall contract and hence is more suited to a sub-contractor arrangement to avoid the inherent interface risks of having separate contractors.
- The section between Northbrook Stream and Boys Road is likely to be delivered at the same time as the adjacent residential development (Rossburn). Initial discussion with Rossburn are well advanced and it will be more efficient to sub-contract delivery of the works to the developer as part of the construction of the infrastructure. This is typically achieved through a Private Development Agreement (PDA) and is common for Council to enter into these arrangements.
- Undertaking the balance (majority) works as one contract will minimise interface risks, however the question will be if a single contractor has the resources to deliver in the timeframe desired by Council, or a faster delivery could be achieved through offering multiple contracts.

²⁹ This will be achieved through the implementation of Council’s Procurement Policy and sustainable procurement policy Think Local, Think Environmental,

Think Social, and Think Social: giving weighting to a ‘Sustainable Impact’ non-price attribute

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- This is not required to be decided at this stage and will be tested through a market sounding and/or Registration of Interest process to understand the market capacity and appetite.
- The timing of completion of land acquisition and Kiwirail approvals) may influence these decision as this may allow one or more sections of the road to be delivered earlier (or later).

*The project is likely to be **delivered as two contracts**, with one delivered through a sub-contract with the adjacent residential developer with the majority delivered through a single design/tender/construction process,*

Market Sounding

To confirm the approach from the options outlined above, Council will undertake Early Market Engagement (EME).

A structured open-market Request for Information (RFI) will be issued to gather supplier insights on procurement model preferences, market capacity, and key delivery risks associated with the Rangiora Eastern Link. This will ensure that the final procurement plan reflects actual market conditions and supports a competitive tender process.

- **Issue an open-market RFI**
Published on GETS, inviting feedback from Tier 1 and Tier 2 civil contractors, roading specialists, structural contractors,

and local suppliers. The RFI will seek input on contract packaging, staging, risk allocation, geotechnical risks, and timing.

- **Industry and Supplier Briefings**

Optional confidential one-on-one discussions will be offered, following a standardised question set to ensure fairness. Topics include procurement model preferences (traditional, D&C, ECI), optimal contract packaging (single vs multi-package), and opportunities for innovation.

- **Feedback Analysis and Reporting**

All responses will be collated and anonymised. Key insights will be documented in a Market Feedback Report and incorporated into the final procurement options analysis.

How Feedback Will Inform Procurement Decisions

The results of the EME process will be used to:

- confirm the preferred procurement model (e.g., traditional, D&C, or ECI)
- refine contract packaging and staging options
- adjust risk allocation to align with market capability and pricing certainty
- define information and investigation requirements prior to tender
- validate the proposed tender timeline and ensure market capacity exists at the intended time of tendering

E Managing and allocating risk

Commercial Risk Analysis

The following table outlines the risk and options for how they can be mitigated

Risk	Consequence	Likelihood	Risk Rating	Proposed Mitigation Measures	Residual risk rating
1. Uncertainty in Ground Conditions	High	Likely	Extreme	Undertake comprehensive geotechnical and groundwater investigations as part of Concept Design (completed); allow for contingency. Design elevates road mostly above existing ground SI completed and advanced QRA used in concept design	Medium
2. Interface with Kiwirail for Rail Crossing	High	Possible	High	Engage early with Kiwirail; secure agreements prior to tendering; include interface management in contract scope. Informal engagement will be advanced. Sequence construction at end of programme	Medium
3. Coordination with Adjacent Land Development	Medium	Likely	High	Establish communication protocols; consider Private Development Agreements (PDAs); set clear construction phasing. Initial discussion held and 2 year programme contingency included.	Medium
4. Unclear Scope due to Timing of Residential Development	Medium	Possible	Medium	Retain flexibility in packaging; set clear scope milestones; confirm dependencies in early contractor involvement.	Low
5. Cost Overruns from Scope Changes or Variations	High	Possible	High	Adopt Design/Tender/Construct model; finalise detailed design before tender; include variation cap clauses.	Low
6. Limited Market Capacity or Interest	Medium	Possible	Medium	Conduct market sounding/ROI; adjust package size to suit contractor capability; include local participation scoring.	Low
7. Delays in Consenting and Regulatory Approvals	High	Likely	High	Engage early with regulators; identify and resolve consent conditions during design phase. Adopt global consents where possible. Early engagement with mana whenua	Medium

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8. Disruption to Local Stakeholders During Construction	Medium	Possible	Medium	Implement comprehensive stakeholder engagement plan; monitor construction impacts; manage communication.	Low
9. Inaccurate Utility and Services Location Information	Medium	Possible	Medium	Complete utilities survey before tender; ensure utility plans are verified; include utility relocation allowances.	Low
10. Granular material supply constraints due to competing projects	Medium	Possible	Medium	Consider directly securing access to gravel supply.	Medium

Likely contractual risk allocation table

Risk Category	Description	Principal (WDC) Responsibility	Contractor Responsibility	Shared / Notes
Site Information & Existing Conditions	Accuracy of supplied geotechnical, utilities, topographic and groundwater information	Provide all known and reasonably obtainable information; disclose hazards	Allowance for normal construction risks; conduct own due diligence	Latent conditions treated per NZS 3910 differing site conditions provisions
Design Risk	Completeness and accuracy of design	<i>If traditional procurement:</i> Principal retains design risk	<i>If D&C/ECl:</i> Contractor accepts design & design-build integration risk	Risk allocation depends on procurement model
Ground Conditions	Variability in soils, soft ground, groundwater levels	Principal carries latent/unforeseen subsurface risk	Contractor manages construction methodology, dewatering, temporary works	Clear geotechnical baseline recommended
Utilities Relocation	Identification and relocation of services	Principal coordinates utility owners & relocation programmes	Contractor protects and works around confirmed services	Shared where utilities affect construction sequencing
Environmental Compliance	Adherence to resource consents, silt control, water-quality limits	Provide consent conditions & monitoring framework	Contractor delivers site ESCM controls, compliance, reporting	Major breaches attributable to contractor actions sit with contractor
Traffic Management	TMP certification, safety, public access	Principal provides overarching requirements	Contractor prepares and implements TMPs	Shared where staging changes require Principal approval
Land Access & Property	Securing land, licences, easements	Principal fully responsible	Contractor complies with access constraints	Nil
Materials Supply & Quality	Specification, standards, quality testing	Principal sets standards & test regimes	Contractor sources, tests, certifies, and warranties materials	Nil
Programme & Sequencing	Ability to meet milestones	Principal provides timely approvals & access	Contractor manages construction sequencing, resources and delays within control	Delay events assessed per NZS 3910
Cost Escalation / Inflation	Material and labour cost increases	Principal pays only where contract allows (e.g., escalation clause)	Contractor carries normal price fluctuation risk	Depends on whether escalation clauses are included

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Weather & Natural Events	Weather delays, extreme rainfall, flooding	Normal weather allowed for in tender	Contractor responsible for typical weather	Principal responsible for extraordinary/force-majeure events
Health & Safety	Site safety, HSMS, subcontractor management	Principal provides PCBU engagement, H&S expectations	Contractor leads site H&S and compliance with HSWA	Shared PCBU obligations
Cultural & Archaeological Finds	Unexpected kāinga/artefacts	Principal provides cultural protocols & contacts	Contractor stops work, protects site, follows Accidental Discovery Protocol	Shared under ADP requirements
Stakeholder & Community Impacts	Public communication, complaints	Principal leads strategic comms	Contractor manages day-to-day site communication	Shared—contractor supports Principal messaging
Quality Assurance & Defects	QA documentation and remedying defects	Principal reviews and accepts QA	Contractor delivers QA, corrects defects during DLP	Nil
Environmental & Social Sustainability Outcomes	Carbon reduction, waste minimisation, local participation	Principal sets sustainability targets	Contractor delivers practicable measures	Targets set in tender

F Property Acquisition

The properties identified in the table below will be required to be acquired to enable to project to be delivered as per the Concept Design.

The table below sets out the approach to acquisitions which will be led by the Council’s property team.

Address	Owner	Acquisition Approach	Risk
4 Ryans Place	Luisetti Seeds	Informal sounding expected to lead to willing buyer/seller under the Public Works Act.	Low: Unlikely to progress to compulsory acquisition
580 Lineside Road	James Franklyn	Informal sounding. May lead to willing buyer/seller under the Public Works Act	Medium: Some potential to lead compulsory phase
197 Boys Road & others	Spark Family	Land has been re-zoned: On-going coordination with development planning. Integrate with broader Private Development Agreement that supports the development	Low. Expected normal valuation negotiation only
147 Northbrook Road	O’Loughlin	Informal sounding expected to lead to willing buyer/seller under the Public Works Act.	Low: Small likelihood of leading to compulsory phase

Acquisition Timeline

Confirm land requirement	Q2 2026
Valuation	Q2 2026
First contact	Q2 2026
Negotiation	Q2 to Q4 2026
Agreement in Principal	Q4 2026
Consider PWA compulsory powers if AiP not reached	Jan/Feb 2027

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Settlement (planned)	Q1 2027
Subdivision , fencing etc	Q1 to Q3 2027
Latest acquisition dated to maintain programme	Q4 2027

The Management Case

Purpose of the Management Case

The Management Case addresses the achievability of this proposal, setting out the planning required to ensure successful delivery, effectively coordinate change and manage project risks. This section considers the arrangements necessary to realise benefits and allocates project governance, ownership, roles and responsibilities.

Delivery of projects of this nature is business as usual for the Council and has a long track record in successful major project delivery. This Management Case sets out the approach that the Council adopts for all major projects, as well as the programmes and key risks specific to this project.

Scope and Structure of this Case

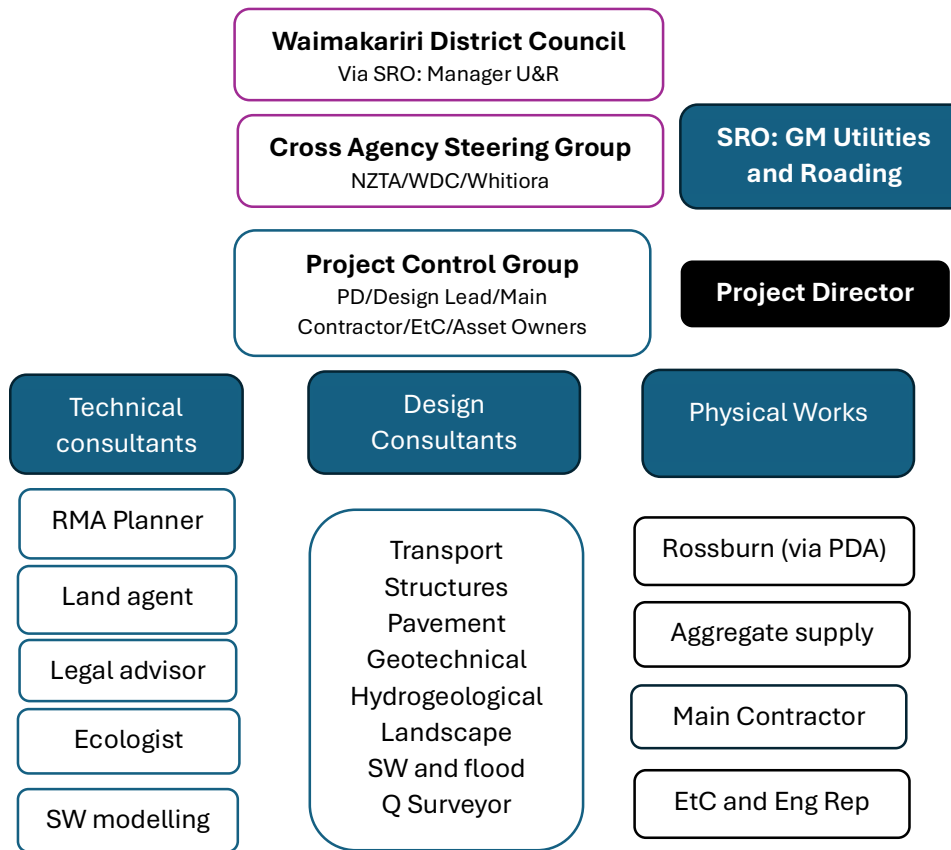
The management case is set out as follows:

- A: Project Governance and Assurance
- B Project Delivery Plan
- C Project Management Controls
- D Risk management
- E Benefits Management

A: Project Governance and Assurance

Project Governance

The following governance and reporting structure is proposed for the project.



The **Council** provides ultimate governance of the organisation.

The **Senior Responsible Owner (SRO)** is the individual accountable for the overall success of the project, ensuring it remains strategically aligned with organisational objectives.

The **Project Steering Group** will have the project governance role, ensuring that the project is delivered to the required standards, risks are appropriately managed, and benefits delivered

The **Project Control Group** will work together to help deliver a successful project and comprises the key leadership positions in each discipline, supplier and asset owner.

The responsibilities of **Project Director** include but are not limited to successfully delivering the project and ensuring effective risk identification and management.

Roles and responsibilities

	Responsible	Accountable	Supporter	Consulted	Informed
Programme Management	Project Director	Project Steering Group	Project Control Group	Senior Engineering Advisor	Council
Land Negotiations	Property Agent	Project Steering Group	Project Director	Project Control Group	Council
Agencies engagement	Project Director	Project Steering Group	Senior Engineering Advisor	Project Control Group	Council
Technical studies	Consultant suppliers	Project Director	Project Control Group	Project Steering Group	Council
Procurement	Project Director	Project Steering Group	All team	Council NZTA	Council
Design	Design Team	Project Director	Project Control Group	Project Steering Group	Council
Engineer to Contract and QS	TBC				
Project Controls	Project Director	Project Steering Group	Senior Engineering Advisor	Project Control Group	Council
Assessment of Effects and consent application	Consultant suppliers	Project Director	Project Control Group	Project Steering Group	Council

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Communication	WDC Communications Lead	Project Director	Project Control Group	Project Steering Group	Council
Benefits Realisation	Transport Asset Advisor	Transport and Roding Asset Manager	Project Director	Project Steering Group	Council

Resourcing Plan

	FTE	Source	Risk Mitigation
Client-side Project Director	0.6 FTE	Contracted	Secure PD early. Alternative options available in-house and through larger consultancies
Project Coordinator	0.25 FTE	Internal	Additional administration staff available
Technical advisors			
Design team		Contracted	Depending on procurement method, multiple options availability to be secured through competitive tender
Safe System Audit	40 hrs x 3	Contracted	Multiple options available to be secured through competitive tender
Engineer to Contract	0.2 FTE	Contracted	Depending on procurement method, multiple options availability to be secured through competitive tender
Quantity Surveyor	0.2 FTE	Contracted	Multiple options available to be secured through competitive tender
WDC Internal team			

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Communications Lead	80 hrs	In house	Multiple in-house options available
Transport Asset Manager	low	In house	Part of wider Transport Activity Management programme
RMA Planner	80 hrs	In house	Multiple external options available
Transport SME	low	In house	Part of wider Transport Activity Management programme

Assurance Framework

The Rangiora Eastern Link project will follow a proportionate and transparent assurance approach appropriate for a council-led infrastructure programme. Assurance activities are structured to provide confidence to Waimakariri District Council, Waka Kotahi, project partners, and the community that the project is being well governed, risks are being appropriately managed, and delivery remains aligned with agreed objectives and investment principles.

Independent quality assurance (IQA) will be applied at key stages, including cost estimation reviews, procurement strategy confirmation, and pre-implementation checks on design, safety, and statutory compliance. Internal council processes—such as senior leadership oversight, legal review, and financial controls—will form the core of the assurance environment.

Gateway-style reviews may be undertaken at major decision points (procurement plan approval, award of physical works contract) to confirm readiness to proceed. Together, these measures ensure the project is delivered in a controlled, transparent manner that meets the expectations of both Council and Waka Kotahi.

Assurance Step	Purpose	Responsibility	Timing / Trigger
1. Design Review	Confirm technical robustness, compliance with codes, planning alignment.	WDC Engineering & Planning Teams	Early design stages and before each major design milestone.
2. Safe System Audit	Confirm meets safety requirements	Independent auditor	At Concept, Detailed and post Construction stages
3. Cost Estimate Parallel Estimator	Validate methodology, unit rates, contingency levels, and alignment with SM014 estimating requirements (P50/P95).	Independent Quantity Surveyor / External Reviewer	At completion of concept estimate and again at pre-tender design.
4. Governance Oversight Checkpoint	Review progress, confirm scope, approve key decisions, and ensure alignment with Council and Waka Kotahi investment objectives.	Project Steering Group / SRO	Monthly governance meetings and strategic decision gates.
5. Risk & Opportunities Review	Ensure risks are identified, assessed, mitigated; confirm residual risk position is acceptable.	Project Manager + Governance Group	At each design milestone and prior to procurement.

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6. Procurement Assurance	Confirm procurement method, market sounding (if required), risk allocation, and compliance with WDC Policy and NZTA expectations.	Council Procurement Team + Project Director	Before release of ROI/RFT and at contract award.
7. Safety in Design Review	Ensure designs meet engineering, safety, and resilience requirements; confirm readiness for construction.	Chartered Engineers + Safety in Design Lead	At 60% and 100% design completion.
8. Gateway Readiness Review (“Go/No-Go”)	Independent check confirming the project is ready to enter the next phase (e.g., tender, construction). NZTA funding commitment at pre-tender gateway	Steering Group NZTA	Before going to market
9. Construction Quality Assurance	Ensure physical works are undertaken to specification and standards; track defects and compliance.	Contractor + Engineer to Contract	Continuous during construction.
10. Practical Completion & Handover Assurance	Confirm all works completed to required standard, documentation received, and assets ready for operation.	Engineer to Contract + Council Asset Team	At practical completion and final completion.
11. Post-Implementation Review (PIR)	Assess whether benefits are being realised and identify improvement opportunities for future projects.	Council + Waka Kotahi (if co-funded)	6–12 months after opening.

B Project Delivery Plan

The Scope of the Project

A draft concept has been prepared by WSP, with amendments through a value engineering process to determine an affordable and robust scope of works and includes

- **New road** approx. 3 km long, single lane each direction.
- **Speed limits:** 60 km/h (Lineside–Boys), 50 km/h (Boys–Northbrook).
- **Marked cycleway on road shoulder** on the west side (3m off road path deferred with spatial provision for future implementation).
- **Intersection upgrades including:**
 - Dual-lane roundabout at **Lineside Road**
 - Single-lane roundabouts at **Boys Road** and **MacPhail/Northbrook Road**
 - Priority intersection at **Marsh Road**
 - New **rail level crossing** at Lineside Rd
- **Multiple waterway crossings**
- **Drainage network:** mix of **swales** (rural sections) and **kerb & channel** (urban sections).
- **Stormwater Management Areas (SMAs)** integrated with adjacent development.

Scope exclusion and deferral

Through the design and value engineering process, a number of items have been deferred or excluded from the project, including

- Deferral of the share use path, with spatial provision for future
- Closing (or partial closing) or a Marsh Rd rail crossing, with fencing instead to prevent rat running from the REL
- Cycle connections from Northbrook Rd and from Lineside Road
- Cycle underpass below Northbrook Stream Bridge

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- Bridging of Northbrook Stream and Southbrook Stream (culvert only)
- Intersection lighting only

Scope Confirmation and Benefits Assurance

The defined project scope represents the Minimum Viable Project (MVP) necessary to achieve the agreed Investment Objectives and deliver the benefits identified in the Investment Logic Map.

The MVP scope has been subject to:

- Review against the One Network Framework Urban Connector classification;
- Independent road safety audit processes appropriate to the project stage;
- Cross-check against traffic modelling and economic evaluation assumptions; and
- Review against the Benefits Management Plan.

This assurance confirms that the refined scope:

- Continues to achieve the required reduction in peak travel time and improved accessibility outcomes;
- Maintains Safe System alignment and level crossing risk management commitments;
- Does not reduce network resilience or compromise freight productivity; and
- Does not materially change the forecast benefits or BCR.

Any future scope changes that could affect performance, safety outcomes, or benefit realisation will require formal governance review and, where necessary, revalidation of the economic case.

Delivery Approach and sequencing

Name	Notes and dependencies
Pre- implementation	
Design	Procurement form follows outcomes from market sounding set out in the Commercial case (ie Design/tender/build or D&B)
Consenting	Refer specific section below
Land acquisition	Refer approach set out in Commercial Case
Kiwirail approvals	Long lead time process
Implementation	
Stage 1a Boys to Northbrook Stream	Delivered via Private Development Agreement with Rossburn Residential development as part of overall land development works
Stage 1b Northbrook Stream to Northbrook Rd	Delivered by Council in parallel with stage 1a to create complete transport link
Stage 2a Marsh to Boys	No dependencies
Stage 2b Lineside to Marsh	Dependence on Kiwirail approval timeframe and land acquisition and hence staged to back of programme, but able to be bought forward as soon as dependencies resolved

High Level Project Plan

The key activities and milestones are shown in the table below. Refer to appendix J for a dependencies driven path Gantt format master schedule.

Project milestones

Proposed key milestones	Duration	Estimated Start	Estimated completion	Notes
Complete Business Case and Concept Design	12 months	Q4 2024	Q4 2025	Current
Agree PDA with adjacent development (Rosburn)	12 months	Q3 2025	Q3 2026	Initial discussion underway
Land Acquisitions³⁰	12 months	Q1 2026	Q1 2027	Four properties
Contingency for compulsory land acquisition processes under Public Works Act	12 months	Q1 2027	Q4 2027	Critical path along with Kiwirail
Prepare Assessment of Environmental Effects and consent applications	4 months	Q1 2026	Q2 2026	
Consent processing	6 months	Q2 2026	Q4 2026	
Design and agreement process with Kiwirail for signalised trail crossing	24 months	Q1 2026	Q1 2028	Critical path
Consultation on Speed limit provisions	6 Months	Q4 2026	Q2 2027	
Enabling Works: Infrastructure relocation and operations area relocations	12 months	Q3 2027	Q2 2028	Affects Marsh to Lineside section
Detailed Design	12 months	Q2 2026	Q1 2027	
Procurement	3 months	Q1 2027	Q2 2027	
Construction				
Spark Lane	9 months	Q4 2027	Q4 2028	Post land acquisition
Boys to Northbrook Stm³¹	12 months	Q3 2026	Q1 2027	By Rosburn PDA. Timing with development
Boys to Marsh	12 months	Q2 2027	Q2 2028	Post PDA approval, design & consenting
Marsh to Lineside	12 months	Q4 2027	Q4 2028	Post Kiwirail approval

³⁰ 147 Northbrook – only affects Spark Lane. 4 Ryans Place and 580 Lineside Road only affects Marsh to Lineside section

³¹ Through Rosburn residential development via Private Development Agreement. Bulk earthworks commencing in early 2026

Consenting Strategy

The project will require a coordinated consenting approach because the range of activities intersect with both Environment Canterbury (ECan) and Waimakariri District Council (WDC) responsibilities.

A detailed consenting strategy has been developed (attached) to clarify statutory requirements, outline potential risks, and ensure that early investigations and technical inputs are aligned with the delivery programme.

Scope of Regulatory Requirements

Environment Canterbury consents are likely to include:

- Discharge permits for stormwater and dewatering (addressed through global consent held by WDC) , construction phase discharge, and floodwater diversion.
- Water take permits for construction dewatering (held) and ongoing road drainage if required.
- Land use consents for culverts, bridges, flood diversion structures, earthworks in the riparian margin, and potential reclamation of waterways.

Waimakariri District Council approvals will cover:

- Land disturbance under NES–Contaminated Soil regulations is not required.
- Outline Plan of Works, including archaeological and cultural assessments, noise and severance management, stormwater and flood assessments.
- Consents for earthworks volumes and setbacks in rural zones.

Technical Assessments

The recommended approach is to integrate consents under a single coordinated programme, supported by early technical assessments. Key technical assessments are shown below along with the status of each assessment:

- **Contaminated land investigations** and management plan (Marsh Road site) (completed).
- **Ecological surveys** of indigenous species, fish passage, and riparian habitats (part completed), and subsequent ecological impact assessment
- **Cultural advice** from Ngāi Tūāhuriri, particularly on stream diversions, culvert design, and riparian restoration. (Part completed)
- **Flood hazard modelling** for Ashley River breakout scenarios (part completed)
- **Noise and severance assessments** to inform Outline Plan conditions and mitigations (Part completed)
- Erosion, sediment, dust, and dewatering management plans.
- **Hydo-geological and Groundwater Assessment**, to consider the effect of intersecting groundwater by stormwater management areas; and
- Stormwater, Transport, landscape, and Geotechnical impact Assessments

Consenting pathway

All consents are assessed as restricted discretionary or discretionary activities with low-to-medium risk of refusal, provided technical advice is incorporated into design and construction planning.

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Key consenting risks

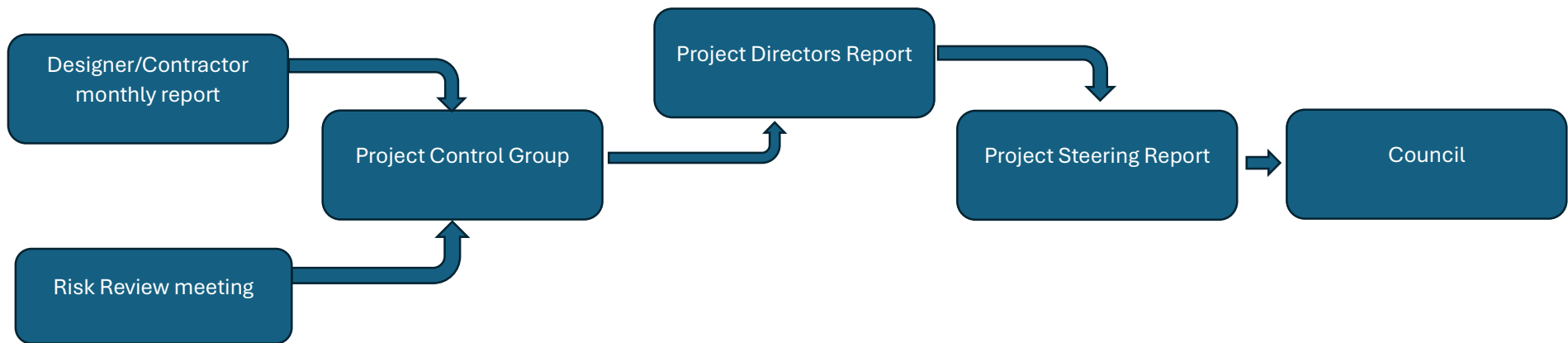
Key consenting risks and mitigation are set out in the table below

Hazard	Mitigation
Permanent stream diversions and particularly Koura Creek	High Risk: Due to importance to mana whenua. Early engagement with Runanga through Whitiara. Allow for material environmental compensation scheme
Flood risk modelling outcomes related to Ashley River breakout.	Medium risk: Concept design has used flood modelling to allow for impacts. Next phase to ensure effects remain no more than minor. Pre-app with ECan
Groundwater, and specifically interception of groundwater in stormwater management areas	Low/medium Risk: Potential GW interception. preliminary advice is that risk is low to moderate, as GW zone is not overallocated. Pre App with ECan. Majority of works elevate road structure above existing ground

C Project Controls

Project Reporting and accountability mechanism

The following illustrates the monthly Reporting Drumbeat to provide operational accountability mechanism for the project



Project Controls

A formal three-tier change control process will be used to manage scope, cost, and schedule changes on the Rangiora Eastern Link. This process is aligned with the Waimakariri District Council Delegations Manual and ensures that all changes are appropriately identified, analysed, escalated, and approved. High-impact changes will be submitted to Council (and Waka Kotahi where relevant) for approval, ensuring transparency and alignment with governance requirements.

1. Change Identification and Logging

Any team member, contractor, or consultant may raise a Change Request (CR). All CRs are entered into the **Project Change Register**, including:

- description of the change
- reason/driver
- impact on design, cost, risk, or schedule
- options (do, defer, decline)
- recommendation from the Project Director.

2. Initial Assessment (Project Director)

The Project Director reviews the CR for completeness and assesses:

- alignment with project scope and objectives
- cost and schedule impacts (P50 and P95)
- effects on consenting, safety, ONF classification, land requirements, and engagement commitments
- whether the change is *mandatory* (compliance/legal) or *discretionary*.
- The Project Director then classifies the CR into the appropriate approval tier (below).

Approval Thresholds (Waimakariri District Council Delegations)

Criteria		Reporting
<p>Low-impact changes</p> <p>Asset Manager approval</p>	<ul style="list-style-type: none"> • Cost impact ≤ \$50,000, AND • No change to project scope or footprint, AND • Schedule impact ≤ 10 working days, AND • No material increase in risk or stakeholder impact 	<ul style="list-style-type: none"> • Noted at next internal project meeting
<p>Medium-impact changes</p> <p>GM Utilities and Roothing</p>	<ul style="list-style-type: none"> • Cost impact \$50,001–\$250,000, OR • Schedule impact >10 days and ≤ 1 month, OR • Minor modifications to scope that do not affect the designation, consenting pathway, or approved ONF classification. 	<ul style="list-style-type: none"> • Reported to the Project Steering Group (PSG). • Noted in monthly Council Infrastructure & Roothing activity report.
<p>High-impact changes</p> <p>Council or Committee approval</p>	<ul style="list-style-type: none"> • Change affects NLTP co-funding or triggers need to resubmit to Waka Kotahi, OR • Change materially alters scope, footprint, service levels, or strategic objectives, OR • Schedule change > 1 month, OR • Requires altering designation, land acquisition strategy, or consenting approach. 	<ul style="list-style-type: none"> • Formal Change Control Report prepared by Project Director and endorsed by GM Utilities and Roothing. • Updated budget and schedule submitted to Council for resolution. <p>Waka Kotahi approval required for any changes affecting FAR, funding profile, or activity class eligibility</p>

D Risk Management

Framework

The Rangiora Eastern Link will apply a structured and proactive risk management framework consistent with the Waka Kotahi/NZTA Risk Management Standard and Council’s project delivery processes. Risks will be identified early, assessed for likelihood and consequence, and assigned clear ownership to ensure effective mitigation throughout planning, design, procurement, and construction. A live risk register will be maintained, tracking emerging risks, opportunities, and residual risk positions, with regular reporting to the Project Director, Senior Responsible Owner, and Governance Group.

Risk reviews will be undertaken at all key project milestones, including design checkpoints, procurement readiness, and pre-construction phases, ensuring that risk treatments remain appropriate and proportional to project scale and complexity. Particular focus will be placed on cost escalation, consenting/design uncertainties, market capacity, land acquisition dependencies, and construction delivery risks. This framework provides confidence to Waimakariri District Council and Waka Kotahi that potential threats are actively managed and that the project remains controlled, resilient, and aligned with investment expectations.

Key Implementation Risks and Dependencies

A detailed risk register has been developed and is available as part of attachment L.

Risks result from uncertain events that either improve or undermine the achievement of benefits. The main risks that might create, enhance, prevent, degrade, accelerate or delay the achievement of the investment objectives are identified and analysed below.

Main Risks	Consequence (H/M/L)	Likelihood (H/M/L)	Management Strategy
Resource consent to divert Koura Creek not able to be secured for the project due to environmental impact	H	M	SW discharge consents are secured with extension of the global discharge consent The main risk will be the diversion of Koura Creek as this may not be supported by man whenua. This is the principal reason why consenting is major risk: principally due to the time required to secure the necessary consents.

			<p>Engagement with mana whenua has been part of the development of this business case, and specific engagement on the potential division of the waterway is ongoing. The key mitigations measures are</p> <ul style="list-style-type: none"> i) Seek consent and address any appeals. This is a programme risk: OR ii) Alternatively, construct a longer and more expensive bridge: This is a \$6-7M million cost risk
Land not able to be secured in a timely manner	H	L	<p>This is a programme risk only. Two years have been allowed in the programme for securing the land under the process in the Public Works Act with a further year for the last construction package. Early engagement with all landowners has confirmed that there is no strong opposition to acquisition at this stage. negotiation of an agreement with the principal landowner (Spark Family/Rosburn development is well advanced.</p> <p>The balance landowners are at the end of the project and construction period, providing up to three years to secure the land.</p> <p>The key mitigation measure is the powers under the Public Works Act for compulsory acquisition held by Council.</p>
Delay to project due to long design and approval process on rail crossing	M	M	<p>This is a programme risk as the Kiwirail approval timeframe is slow and extended and likely to take up to 2 years. There appears to be limited options to reduce this timeframe, and hence the key mitigation is early advancement of that work. This has been commenced, LCSIA and SFAR assessment completed and informal agreement reached.</p> <p>Adopt close collaboration with adjacent developer and their agents and with Kiwirail will continue, along with this timeframe integrated into the master programme</p>
Housing market slow down leads to delay in residential development adjacent to REL	L	L	<p>Accept this risk. Acquire land and advance works regardless of pace of development as the REL has wider benefits to existing requirements, Delay in growth will mean slower accumulation of transport benefits: L conversely delay in the project will delay accumulation of transport benefits.</p>

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Design or construction errors leading to asset failure	L	L	Adopt robust peer review and audit and quality assurance processes
Groundwater and geotechnical conditions cause significant delays an/or cost increases	M	L	Significant site investigation has been completed to define the scope of work required. This has included Early Contractor Involvement (ECI) process to assist in setting design solutions and timeframes. Further mitigation will involve further investigation where gaps arise during the next stage of design, and particle in relation to the structures. The risk allocation set out in the commercial case for physical works contracts places the risk on the party best placed to manage them
The final cost exceeds the available budget	H	L	The Concept Design was bought forward to be done alongside this BC to reduce this risks. Multiple value engineering, parallel estimating, ECI estimating and sufficient risk based contingency using a QRA (SM014 Advanced method) approach, updated at each phase of design
Insufficient contractor interest leading to competitive tender process and high prices	M	L	This is a low risk. Undertake market sounding and adopt appropriate risk allocation.
Key Constraints and Dependencies			
Funding	M	M	WDC has sufficient funding measure in place to support the Council contributions (and supplementary funding). The mitigation if NZTA co-funding is not approved is to defer the project until co-funding is available.
Construction of adjacent residential development	H	L	Council is continuing to work closely with agents for developer to coordinate both design and delivery. This includes an agreement that includes delivery and land ownership of the REL. This is considered to be low risk due to this early work, with the backing of the designation on the land in Councils favour.

C Stakeholder Engagement and Permissions

Engagement objectives

The primary engagement objective for the Rangiora Eastern Link is to ensure the community, affected landowners, key stakeholders, and partners are well informed about the project’s purpose, scope, timelines, and expected impacts. Engagement will focus on providing clear, accessible, and timely information so stakeholders understand what the project involves, why it is needed, and how it aligns with wider transport and growth objectives for Rangiora and the wider district. Transparent communication will support confidence in the project and reduce uncertainty during planning and delivery.

While the engagement approach is largely situated at the Inform end of the IAP2 spectrum, it will also provide opportunities for stakeholders to ask questions, seek clarification, and understand how decisions are being made. This includes sharing consistent updates through Council channels, fact sheets, visualisations, and direct communication with affected parties where necessary. The objective is not to seek broad public input into technical decision-making, but to ensure all stakeholders receive reliable information that supports awareness, minimises surprises, and maintains trust throughout the project lifecycle.

A stakeholder engagement strategy is appended to this Business Case.

Stakeholder identification

A detailed communication and engagement strategy will be prepared that will focus on stakeholders and the wider community. The table below summarises the principal activity.

Stakeholder/Partner	Frequency	Purpose	Method
Internal			
Waimakariri District Council	As required	Escalate any formal decision making within the full Council delegation	Formal papers to scheduled Council meetings
Utilities and Roading Committee	Bi-Monthly	Informal input and then decision making	Part of MUR regular updates. Specific briefing and decision making as required

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Rangiora Ashley Community Board	Quarterly	Informal input then endorsement	Part of MUR regular updates. Specific briefing and input was required
Steering Group - Accountability	Fortnightly	Steering group governance	Meeting
Steering Group – Content review	Fortnightly	Advice and briefing	Meeting
Project Control Group	Fortnightly	Co-ordination	Meeting
Water Unit	In concept design process	Design input	Workshop
Finance, Recreation, Planning	Bi-monthly informal briefing/updates	Awareness	Email or verbal
External			
Mana whenua (via Whitiara)	Via Cultural Values commission	Technical input to design and consenting process	Commission under existing master services arrangement
NZTA	Quarterly	Quarterly	Maintain liaison and accountable with funding partner
Kiwirail	Bi-monthly??	Input to design process	Meeting and involvement in workshops
ECan	As required: Consenting team	Inform and advice on planning issues	Meeting once scope of consents drafted
Service providers (esp. Mainpower and Transpower)	At regular Utility coordination meetings	Input to design process	Meeting and involvement in workshops
Landowners	Meet early and agree pathway	Secure access or acquisition agreement	Face to face meetings
Adjacent properties	Contact once potential impacts understood	Inform on progress	Face to face meetings
General Public	Quarterly	Inform on progress	Regular Council wide communications and Site Signage

High level Engagement Plan

Phase	Timing	Engagement Focus	Key Activities
1. Planning & Business Case (Complete)	2023–2025	Route confirmation, funding alignment	ILM workshops, Council and NZTA co-design, Elected Member drop-in sessions
2. Design Development & Consenting	2025–2026	Design refinement, cultural input, environmental and property engagement	Mana whenua CIA, property owner meetings, Regulator, Kiwirail, Marsh Rd and Water Unit
3. Procurement Preparation	2026	Contractor market engagement, pre-tender communication	Market sounding, Contractor briefing
4. Construction Delivery	2027–2029	Traffic management, communication, community relations	Dedicated project website, construction notices, on-site liaison.
5. Post-Construction & Opening	2029–2030	Opening events, performance review	Ribbon-cutting, benefits monitoring updates

Communications with KiwiRail: key project risk

Communication with KiwiRail will follow a structured and transparent protocol to ensure early alignment on rail safety requirements, level crossing policy constraints, and technical considerations. Consistent with KiwiRail guidance, early engagement is essential to confirm whether any proposed rail interface—such as a level crossing modification or new crossing—can be considered in principle before detailed design work proceeds. This phase has already been completed.

All contact is led by the Council’s Project Director, with all formal correspondence submitted through KiwiRail’s Property Department as required for Stage 1 assessment of feasibility and policy compliance. This ensures expectations are clear from the outset and avoids unnecessary design expenditure on options that cannot be supported.

Throughout design development, the project will maintain a single point of contact for KiwiRail to streamline information flow. Technical discussions, design reviews, and risk workshops will be scheduled at key milestones to support KiwiRail’s Stage 2 requirements, including risk assessment, design acceptance, drainage and access considerations, and operational safety.

All information requests—such as traffic projections, land use details, justification for any exception to the no-new level crossings policy, or construction methodologies—will be responded to promptly and comprehensively. Any proposed changes affecting the rail corridor will be

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communicated to KiwiRail immediately for review and approval in line with their Safety, Health and Environment requirements. This protocol ensures a collaborative, predictable, and compliant relationship with KiwiRail, supporting timely decision-making and maintaining the safety and integrity of their rail network.

Risk and Mitigation

Engagement Risk	Impact	Mitigation Strategy
Opposition from nearby residents (noise, land acquisition)	Delay to consents	Early one-on-one engagement; transparent mitigation design
Cultural concerns around waterways	Consent delay	Early CIA integration and design adaptation
Communication fatigue or misinformation	Public opposition	Consistent messaging through multiple channels
Construction impacts (noise, dust, traffic)	Community frustration	Active communication, clear mitigation, real-time updates

Engagement Monitoring and Key Performance Indicators

Engagement performance for the Rangiora Eastern Link will be monitored throughout the project to ensure communication remains timely, accurate, and responsive to stakeholder needs. Monitoring will track engagement activities, stakeholder sentiment, issue resolution, and achievement of key performance indicators. Feedback from stakeholders—particularly directly affected landowners, mana whenua, community representatives, and technical partners—will be collected through meetings, email correspondence, enquiries, drop-in sessions, and Council channels to identify emerging issues early and adjust engagement approaches where required. This supports a proactive, transparent approach in line with the project’s Inform-focused engagement objectives.

Reporting will occur at several levels to maintain oversight and accountability. Monthly project team reports will summarise engagement activity, risks, and issues, while quarterly updates to the Council will outline progress, stakeholder feedback themes, and any required changes to strategy.

Significant issues, opportunities, or shifts in stakeholder sentiment will be escalated promptly to the Senior Responsible Owner and Governance Group for direction. A post-construction review will assess engagement effectiveness and lessons learned to inform future major infrastructure projects.

KPI	Purpose	Target / Measure
Timeliness of Communications	Ensure stakeholders receive clear, consistent information throughout planning, design, procurement and construction	≥ 95% of planned communication updates delivered on schedule (e.g., newsletters, website updates, notices).
Stakeholder Awareness	Confirm that key partners and directly affected landowners understand project scope, timing, and impacts.	≥ 80% of surveyed or contacted stakeholders report that project information is clear and easy to understand.
Response Time to Enquiries	Maintain responsiveness and transparency	90% of stakeholder enquiries responded to within 5 working days.
Issue Resolution Effectiveness	Track ability to manage concerns and avoid misinformation	≥ 85% of identified engagement issues resolved within agreed timeframes.
Engagement Touchpoint Completion	Ensure required engagement activities for each project phase (Planning, Design, Procurement, Construction) are delivered.	100% completion of engagement activities scheduled in the Engagement Plan for each phase.
Landowner Engagement Completion	Ensure early and ongoing property engagement to support consenting and land acquisition.	Meetings offered to 100% of directly affected landowners during relevant design or acquisition stages.

D Benefits Management

Delivery of the Rangiora Eastern Link will be tracked against the benefits framework established through the ILM and the NZTA Benefits Framework. Benefits will be monitored progressively through design, construction, and operation, with accountability assigned to Council Roding and Transport Asset team under implementation of the Transport Activity Management Plan.

Governance and Ownership

- **Project Steering Group** – overall accountability for ensuring benefits are realised.

Rangiora Eastern Link Business Case

- **WDC Asset Management** – responsible for monitoring of benefits
- **NZTA** – joint monitoring partner for national network integration and freight efficiency.

Monitoring and Reporting

- **Pre-implementation baseline data** collected during 2024–2025 (travel times, crash rates, accessibility mapping).
- **Post-construction monitoring** within 12 months of opening (e.g. 2029/30).
- **Ongoing monitoring** every two years using CAST/SCATS traffic models, GIS accessibility analysis, IRR safety ratings, and WDC asset data as part of wider Transport Activity management Plan benefits monitoring
- **Benefit realisation reports (via TIO) to be produced at:**
 - Project completion (close-out)
 - Two years post-completion
 - Five years post-completion

Key Measures

- Reduced peak travel times between East Rangiora and SH1 (6.5 → 3.5 minutes by 2038).
- Improved travel reliability ratios (peak:inter-peak 120% → 133%).
- Increased population within 10–15 minutes of Southbrook industrial and social destinations.
- Reduced DSI crashes on Southbrook and Lineside roads.
- Removal of medium-risk sections on key freight corridors.

Dependencies

- Timely completion of adjacent residential and industrial development to realise accessibility and economic benefits.
- Continued funding for monitoring programmes as part of Transport Activity Management Plan³².

³² For the avoidance of doubt; this is not part of the capex estimates and are an opex cost as part of the TAMP.

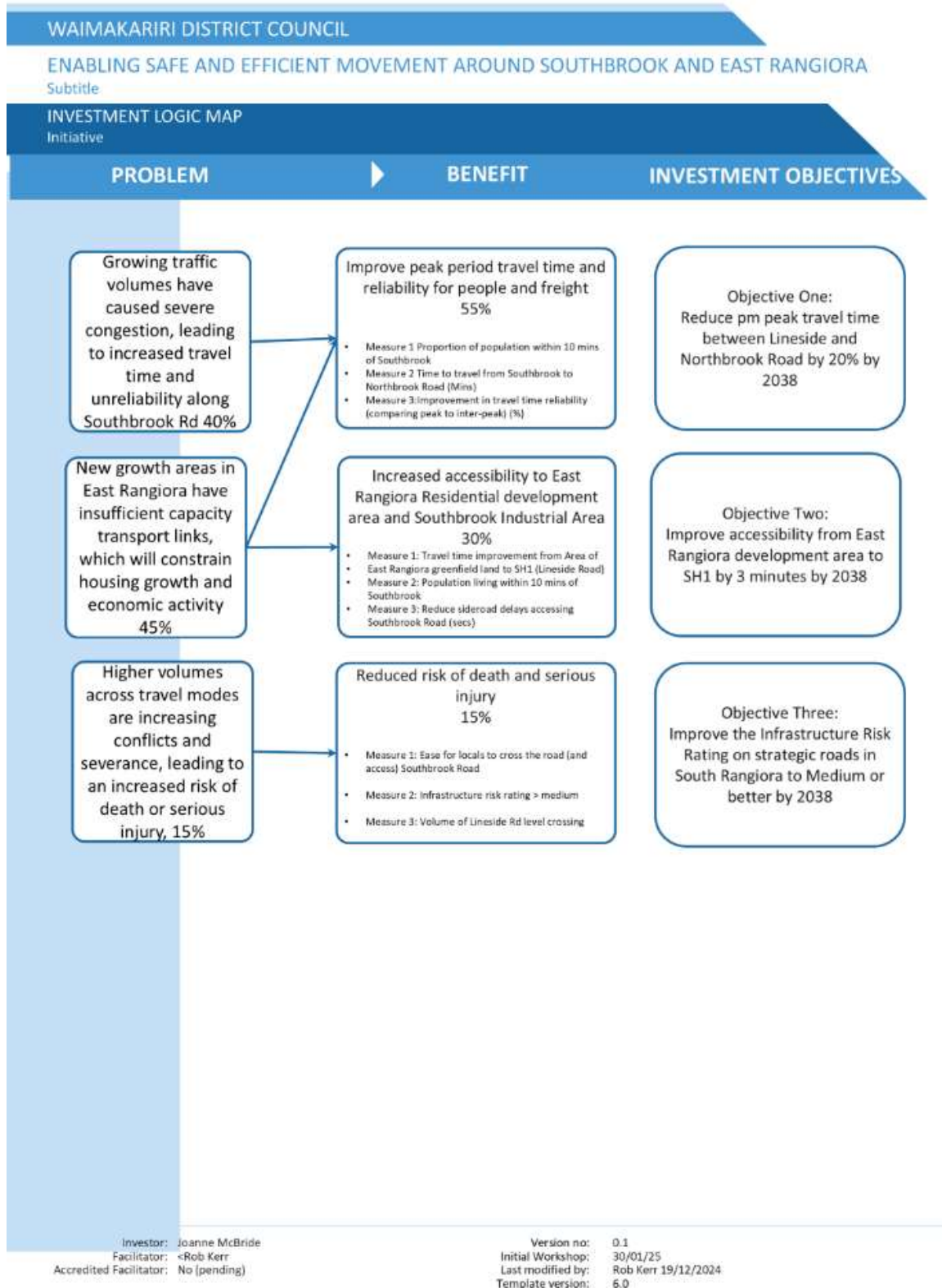
Benefits Map

Benefit Cluster	Benefit	Measure	Baseline (Year)	Target (Year)	Owner	Monitoring Approach
10 Inclusive Access Changes in access to social and economic opportunities	10.1 Impact on user experience	Travel time from East Rangiora to SH1 (am peak, minutes)	6.5 mins (2024)	3.5 mins (2038)	WDC Transport Planning	Travel time surveys; CAST model updates (biennial)
	5.1 Impact on system reliability	Travel time Lineside to Northbrook Rd (PM peak, minutes)	6.5 mins (2024)	5.0 mins (2038)	WDC Transport Ops	SCATS/traffic model outputs
		Population living within 10 mins of Southbrook Industrial Area (am peak)	38,000 (2024)	40,000 (2038)	WDC Planning	GIS-accessibility analysis
5 Economic Prosperity Changes in travel costs		Travel time delay (vehicle minutes)	120% peak:inter-peak ratio (2024)	133% ratio (2038)	WDC / NZTA	Modelled performance; time reliability index
	Impact on network productivity	Delay on Flaxton Rd onto Southbrook	36 sec (2024)	25 sec (2038)	WDC Transport Ops	Periodic turning movement counts

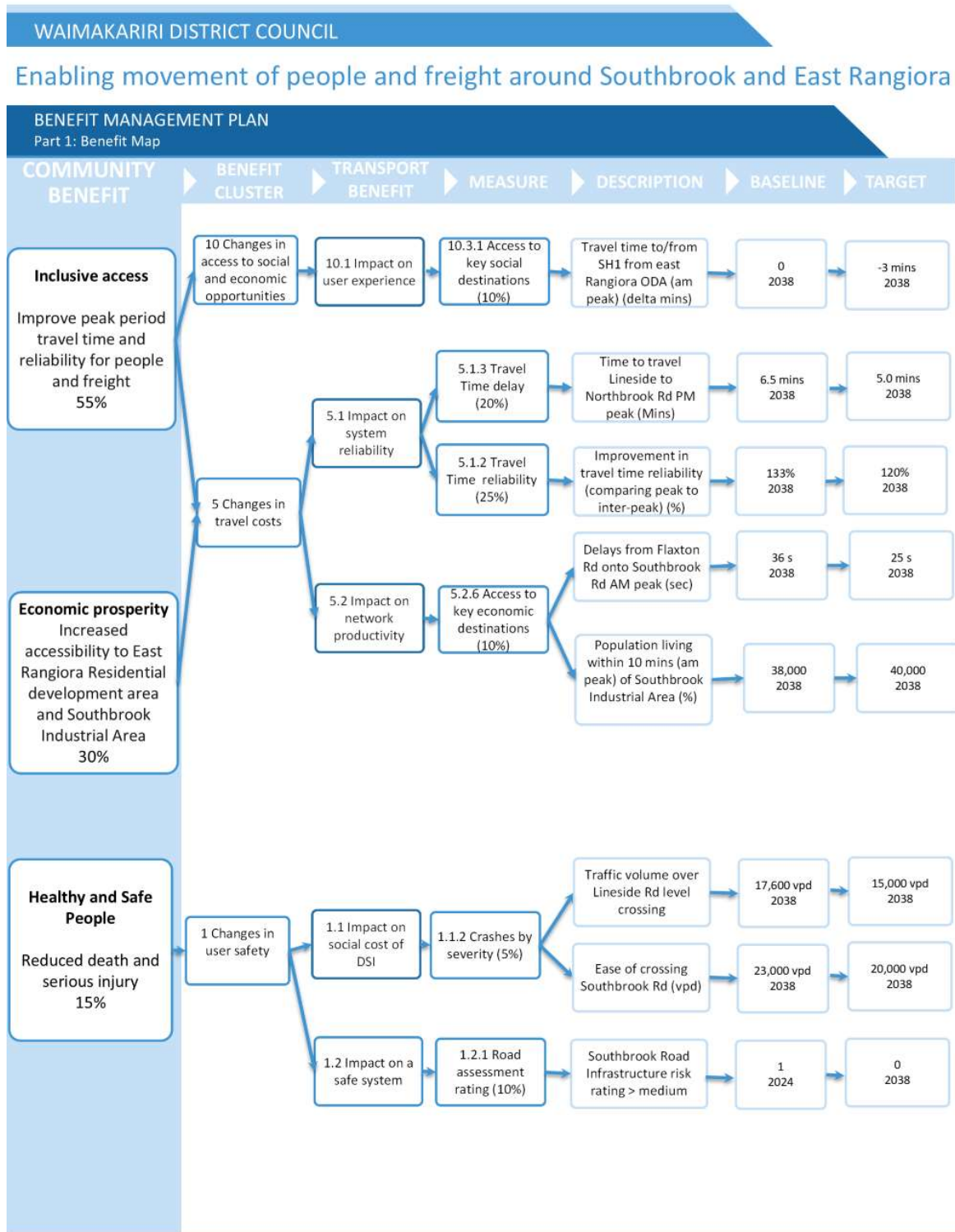
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		Rd (seconds, am peak)				
	5.2 Impact on network productivity	Access to key economic destinations – freight efficiency	Infrastructure risk rating on Southbrook Rd	1 section rated > Medium (2024)	0 sections > Medium (2038)	WDC Asset Mgmt
1 Healthy & Safe People Changes in user safety		Lineside Road crossing volume (vpd)	17,600 vpd (2024)	15,000 vpd (2038)	WDC / KiwiRail	Traffic counters, LCSS updates
	Crashes by severity	Ease of crossing Southbrook Rd – proxy: vpd	23,000 vpd (2024)	20,000 vpd (2038)	WDC Transport Strategy	Traffic volume monitoring
	1.2 Impact on a safe system	Road assessment rating	Southbrook Rd > Medium Risk	Medium or better (2038)	WDC Safety Engineers	IRR or equivalent rating

Attachment A: Investment Logic Map



Attachment B: Investment Benefits Map



Investor: Joanne McBride
Facilitator: Rob Kerr
Accredited Facilitator: No (pending)

Version no: 0.1
Initial Workshop: 30/1/2025
Last modified by: Rob Kerr 19/12/2024
Template version: 6.0

Attachment C Detailed strategic alignment

Greater Christchurch – and the Waimakariri District - is thriving - and growing fast.

Over the past 15 years, Greater Christchurch has grown rapidly to a population of around half a million. By 2050, up to 700,000 people could be living in Greater Christchurch – 40% more than there are today, with the population potentially doubling to 1 million people in the future,³³

Greater Christchurch is well placed for much greater population and economic growth. The latest projections from Stats NZ indicate Greater Christchurch’s population could grow from a population of approximately half a million to around 700,000 by 2051.

The Greater Christchurch Spatial Plan anticipates steady growth in the Waimakariri District from the current population of 67,900 to around 82,000 by 2033, and in the order of 102,000 by 2052. Up to 15,000 additional homes are expected to be required to accommodate population change over the next 30 years.



If Greater Christchurch was to grow at the rate seen over the last 15 years, then it could reach a population of 700,000 within the next 30 years and in time one million, doubling the size of today’s population.

³³ Greater Christchurch Spatial Plan, 2023

Canterbury’s priorities for transport investment are about economic growth, safety and resilience coupled with promoting more sustainable transport modes.

The *Canterbury Regional Land Transport Plan (CRLTP) 2024-34* outlines the strategic direction for land transport planning and investment in the Canterbury region over the next decade. The objectives are:

- *Sustainable Transport*: Promotes the use of sustainable transport modes to reduce emissions and environmental impact.
- *Safety*: Aims to reduce deaths and serious injuries on the roads.
- *Resilience*: Enhances the resilience of the transport network to withstand natural disasters and climate change.
- *Economic Growth*: Supports economic development through efficient and reliable transport infrastructure.

The Rangiora Eastern Link is a Regionally Significant Project in the Canterbury RLTP. Ranked 25 for addressing congestion and access issues along Southbrook Road, materially reducing travel time, and unlocking access to greenfield development land.

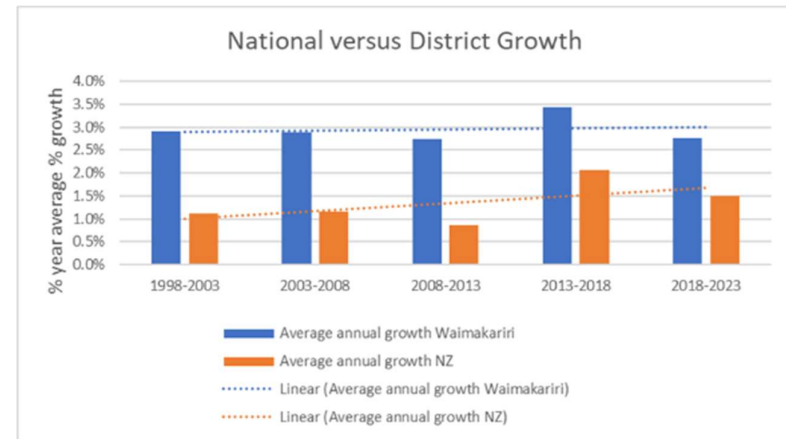
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The major transport challenges for Canterbury are rapid population growth with growing urban boundaries while maintaining efficient freight routes and adapting to a changing climate.

Waimakariri District is growing fast and is a critical part of greater Christchurch

The Waimakariri district was one of the five fastest growing (measured as a percentage growth rate) local authorities in New Zealand in seven of the ten years between 2007 and 2016. At the 2018 census growth was 3.81%. In 2019, the national ranking dropped to 11thth, and growth now sits at around an estimated 2.7%, (67900-69,760) compared with an average estimated growth rate for New Zealand of 2.3% (5117100-5236300), from 2022-2023³⁴.

Rangiora plays a significant role in the urban form of Greater



Christchurch, contributing to the region's economic, social, and infrastructural landscape. It is one of Greater Christchurch's Key Activity Centres which highlights its importance in clustering community, retail, residential, and business activities.

The town is well-connected to Christchurch via major transport routes, including State Highway 1 with improved public transport options between Rangiora and Christchurch, reducing reliance on private vehicles and promoting sustainable transport. It is the largest centre in one of the fastest growing districts in New Zealand and has experienced significant economic growth and development in recent years.

While 41%³⁵ of spending by residents is outside the district (i.e. retail leakage) is not good news for local business, it reminds us of the strong

³⁴ Transport Asset Management Plan 2024 (WDC, 2024)

³⁵ Waimakariri Economic Development Strategy, 2024).

Rangiora Eastern Link Business Case

connection between Christchurch and the Waimakariri. The district also provides jobs for around 7% of Greater Christchurch's labour, the proximity to Christchurch provides an important way for businesses to access and attract skilled labour.

Rangiora is a Priority Development Area for growth and economic development in greater Christchurch

A *strengthened network of urban and town centres* is one of the five key moves identified in the *Greater Christchurch Spatial Plan* and, through Priority Development Areas, provide the opportunity to accelerate development in locations that support the desired pattern of growth.

Rangiora is one of these areas and the Plan supports the growth of Rangiora by:

1. **Intensification and Development:** Encouraging higher density residential and commercial development around Rangiora's town centre while retaining its character.
2. **Transport Connectivity:** Improving public transport connections to enhance accessibility and reduce reliance on private vehicles.
3. **Economic Hub:** Recognizing Rangiora as a key service and employment centre for surrounding areas, providing a mature offering of employment, retail, and community facilities.
4. **Infrastructure Investment:** Ensuring that infrastructure is planned and developed to support the anticipated growth and maintain the quality of life for residents.

Identifying Rangiora as a Priority Development Area means coordinated efforts and investments will be focused to accelerate and support significant growth.

The Waimakariri District Plan enables significant growth in East Rangiora

The Proposed Waimakariri District Plan operative and Specifically for Rangiora, it includes:

- Approximately 615 ha of new greenfield land for residential development is rezoned
- This includes East Rangiora, with over 5,000 new lots, forecast to see a doubling in population over the next 30 years.
- A designation for the proposed route of the Rangiora Eastern Link.

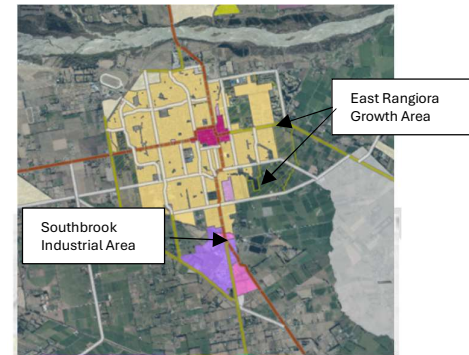


Figure 14 Proposed District Plan Zones



Figure 15: East Rangiora Outline Development Plan

The (Proposed) District Plan enables further extensive residential development in East Rangiora and a new eastern route to service growth areas and address congestion

Rangiora Eastern Link Business Case

The Council's Integrated Transport Strategy seeks to ensure the impacts of growth do not hinder reliable and efficient movement of freight

This strategy, and the underlying Transport Asset Management Plan, seeks to a preferred freight route that bypasses Rangiora and Kaiapoi town centres and manages freight movements (e.g. safe stopping point locations) with destinations within our townships.

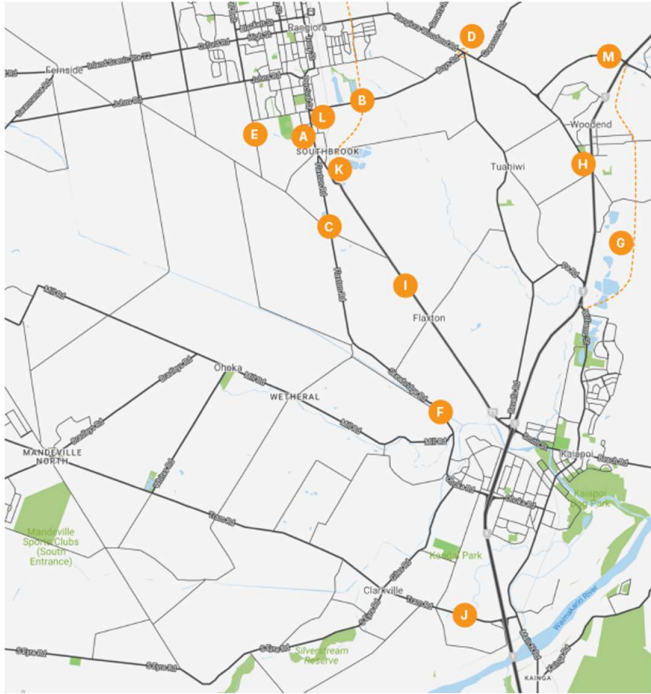
Along with other objectives, it also seeks to better connect the industrial areas and freight hubs to the transport network and looks to upgrade strategic freight routes that service rural areas for primary industries.

The Integrated Transport Strategy supports greenfield expansion where the development will improve transport outcomes or is enabled by good multi-modal transport linkages.

The Council and Waka Kotahi NZTA have a programme of work across the east of the district to enable growth and remove constraints on efficient movement of freight and people

This package of projects is centred around the nodes of Kaiapoi, Woodend and Rangiora, and address the impacts of an increasing traffic volume that is inherent from a growing population and economic base. These projects are shown on the plan to the right and demonstrate the significant investment and long term strategic planning behind the management of the transport network in the district.

Rangiora Eastern Link Business Case



The Council has been planning to address congestion and enable growth for over two decades

The concept of an eastern link was first identified in 2001, and planning for growth has been long standing through various iterations of structure plans, district plans and outline development plans.

During intervening years there has been continued to be substantial growth which is exacerbating congestion along Southbrook Road.

The 2001 Rangiora Transport Study (Beca) identified a range of existing and future deficiencies in the transport network. The greatest issue identified was

the increasing congestion on the Rangiora North-South strategic route. Also noted was the impact of housing growth, safety at the railway level crossings and the rural/urban fringe and the need for more direct bus routes.

This study identified an eastern link road from Southbrook to the east of town as the second highest priority project after interim traffic signal improvements on the north-south route. In 2005, Opus (now WSP) completed a Scheme Assessment of a new road, called the Rangiora Eastern Link.

In 2021, further technical work was undertaken to support a Notice of Requirement to include the route of the road as a designation in the Proposed District Plan. This designation became operative in July 2025.

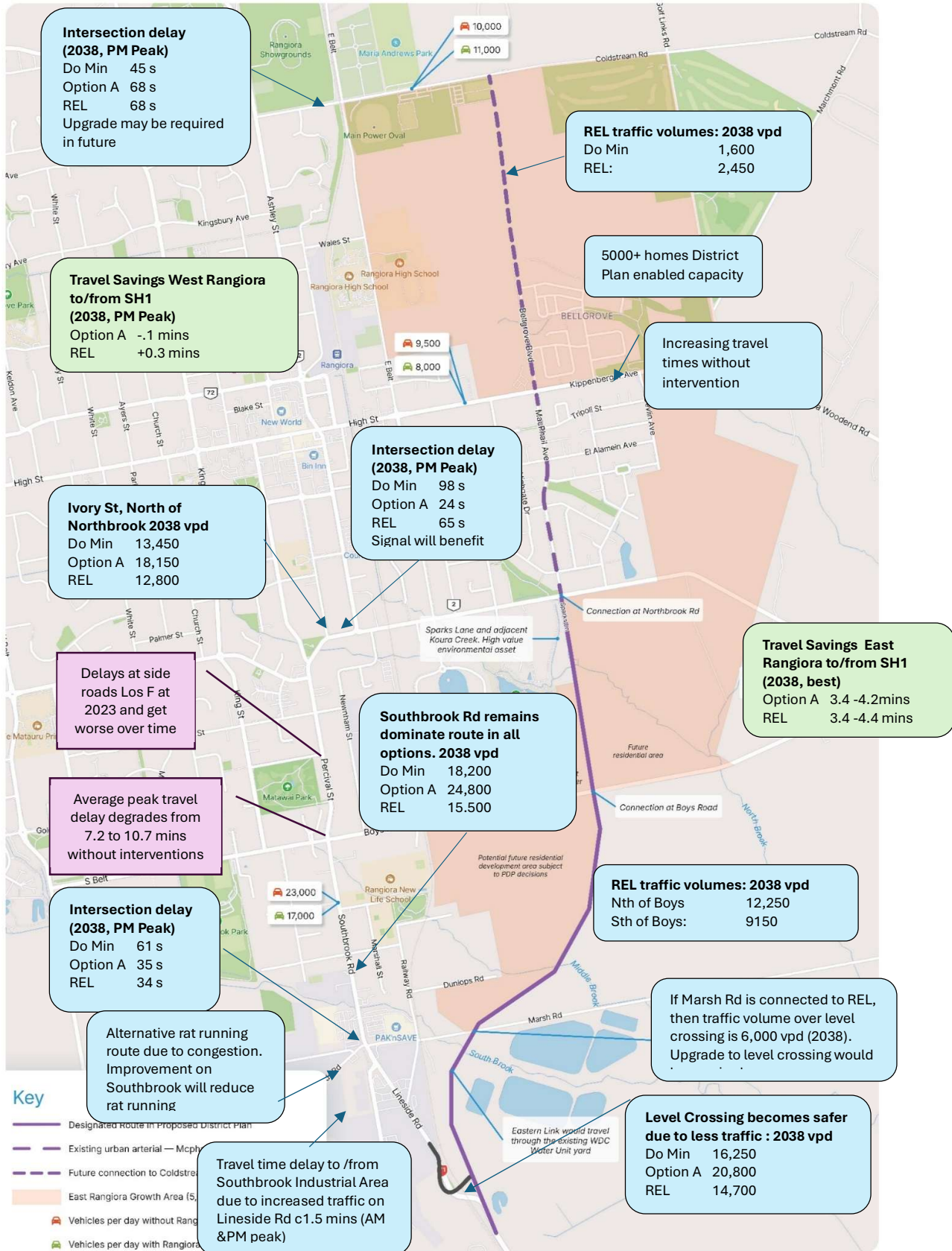
The proposed Eastern Link was included in the Canterbury Land Transport Plan (2024-2034) and co-funding for this business case work was included in the National Land Transport Plan (2024-2034).

Council has leveraged the land development on the east side of town to progressively advance development of the eastern link between Northbrook Road and Coldstream Road. Through major developments such as Belgrove, 35% of the road has already been constructed, with a further 15% to be completed in future subdivision processes, with contributions levied towards the section south of Northbrook Road.

This Business Case is revisiting the Problems, clarifying the Investment Objectives and confirming the best way to achieve these outcomes.

Attachment D Summary of traffic modelling

Rangiora Eastern Link Business Case



Attachment E Transport Assessment of Options

Bound separately Trim Ref 250324049901

Attachment F: Economic Modelling

Bound separately Trim Ref 260209022213

Attachment G: Early Assessment Sifting Tool

Early Assessment Sifting Tool template

Early Assessment Sifting Tool: Excel template
 The Early Assessment Sifting Tool (EAST) supports an initial coarse screening of alternatives and options. The EAST is designed to quickly and robustly rule out alternatives and options, allowing for a more manageable subsequent multi-criteria analysis exercise.

Project overview

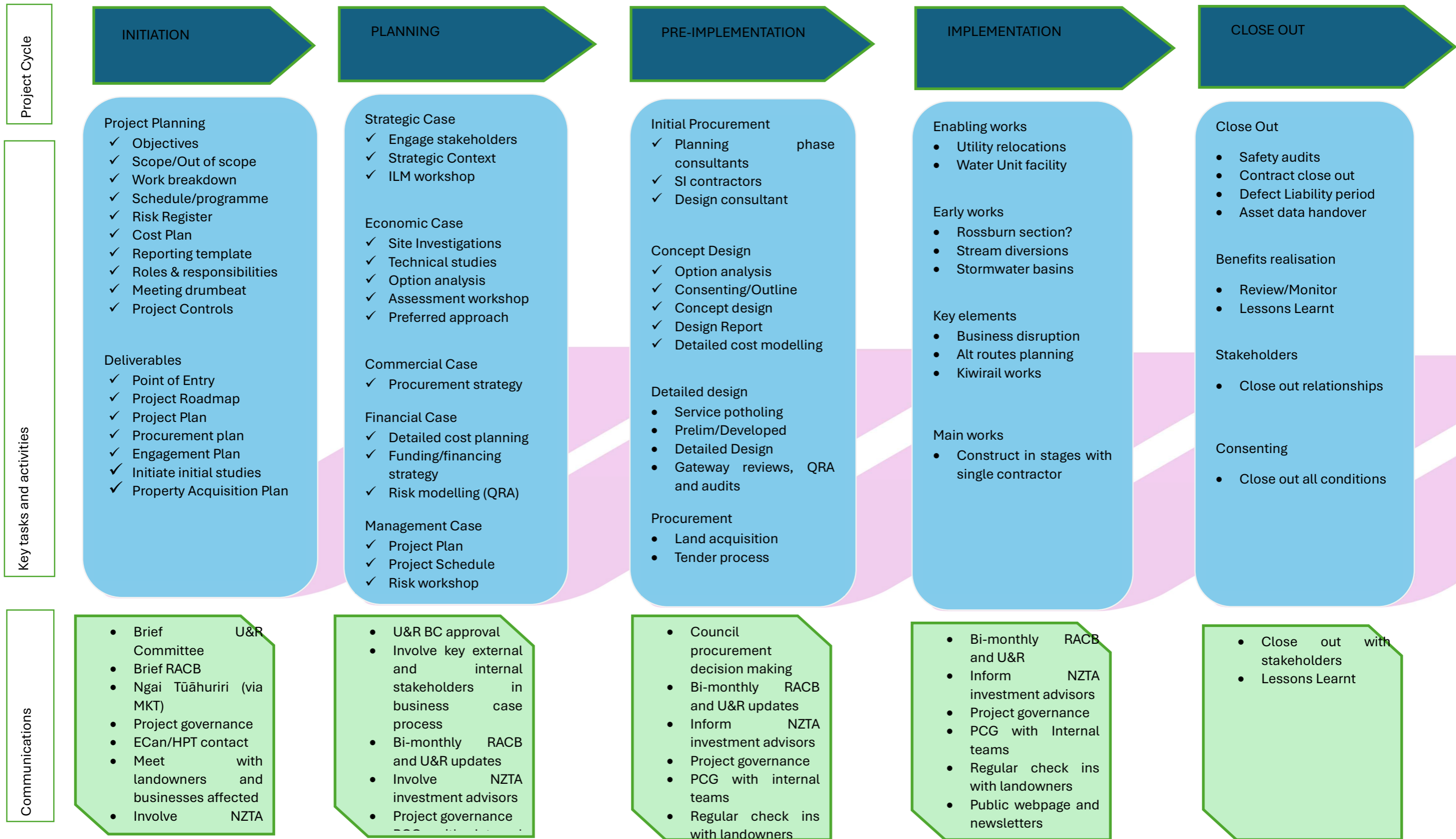
Date:	19/12/2024	Business case phase:	Single stage business case	Do-minimum:	Current scope of Long Term Plan projects
Project name:	Rangiora Eastern Link	Problem/opportunity statement:	Enabling free movement of goods and people in South and East Rangiora		

Investment objective:	Reduce congestion along Southbrook Road to level of Service C or better
Investment objective:	Provide transport connections to enable development of 5,000 lots in East Rangiora
Investment objective:	Improve safety of network to IRR rating of medium or better
Note: Please copy the row above to add an additional investment objective.	

Alternative or option details			Investment objective			Practical feasibility			Scheduling/programming	Cost	Key risks and uncertainties	Impacts on te ao Māori	Environmental and social responsibility		Fatal flaws	Other impacts	Summary of decision made	
Intervention types sourced from the intervention hierarchy	Unique identifier	Name of alternative/option	Reduce congestion along Southbrook Road to level of Service C or better	Provide transport connections to enable development of 5,000 lots in East Rangiora	Improve safety of network to IRR rating of medium or better	Technical	Safety and design	Consentability					Identify	Mitigation Can these be avoided, remedied or mitigated?			Summary of decision made	Progress or discontinue this alternative/option?
Integrated planning	1	Change development pattern to align with existing network	1.Low	3	1.Low	5.Red (difficult/complex)	1.Green	5.Red (difficult/complex)	5+ years	\$5-\$50 million	Partially achieved. Ten years to next PDP	Note Greater CHC partnership agreements	Urban form forced by existing network	User to describe...	Decisions already made. Mostly supports existing corridors now	User to describe...	Discontinue	
Manage demand	2	Time of Use Charging	3	1.Low	2	5.Red (difficult/complex)	5.Red (difficult/complex)	3.Amber	5+ years	\$5-\$50 million	Social licence and implementation	unknown	Impact on low income travellers	Alternative longer route	New technology in s small town appears inappropriate	User to describe...	Progress	
Manage demand	3	Congestion Charging	3	1.Low	2	5.Red (difficult/complex)	5.Red (difficult/complex)	4.Red/amber	5+ years	\$5-\$50 million	Social licence and implementation	unknown	Impact on low income travellers	Alternative longer route	New technology in s small town appears inappropriate	User to describe...	Discontinue	
Best use of the existing system	4	Tidal laning (2+1)	3	3	1.Low	3.Amber	4.Red/amber	3.Amber	2-5 years	\$5-\$50 million	Social licence and implementation	unknown	Nil material			User to describe...	Progress	
Best use of the existing system	5	Four lane Southbrook Rd within existing road reserve	5.High	3	2	1.Green	2.Amber/green	2.Amber/green	2-5 years	\$5-\$50 million	Community adverse response	unknown	Nil material			User to describe...	Progress	
Best use of the existing system	6	Increase PT frequency	2	2	1.Low	1.Green	1.Green	1.Green	5+ years	\$1-\$5 million	Funding	unknown	Nil material		Unlikely to be effective in changing patterns	User to describe...	Discontinue	
Best use of the existing system	7	Upgrade western route	1.Low	1.Low	1.Low	1.Green	1.Green	1.Green	2-5 years	\$5-\$50 million	Limited risk	unknown	Nil material		Does not meet objective for East Rangiora growth	User to describe...	Discontinue	
New infrastructure	8	Construct REL Sbk to Northbrook (West of WWTP)	5.High	5.High	4	2.Amber/green	1.Green	2.Amber/green	2-5 years	\$5-\$50 million	Normal risk profile. Land acquisition	High value water resources	Waterways	Good design and restoration		User to describe...	Progress	
New infrastructure	9	Construct REL Sbk to Northbrook (East of WWTP)	5.High	5.High	4	2.Amber/green	1.Green	2.Amber/green	2-5 years	\$5-\$50 million	Normal risk profile. Land acquisition	High value water resources	Waterways	Good design and restoration		User to describe...	Progress	
New infrastructure	10	Construct REL Lineside to Northbrook	5.High	5.High	4	2.Amber/green	1.Green	2.Amber/green	2-5 years	\$5-\$50 million	Normal risk profile. Land acquisition	High value water resources	Waterways	Good design and restoration		User to describe...	Progress	
New infrastructure	11	Park and Ride upgrade	1.Low	1.Low	1.Low	2.Amber/green	1.Green	2.Amber/green	2-5 years	\$1-\$5 million	Effectiveness	Unknown	Nil material		Unlikely to be effective in changing patterns	User to describe...	Discontinue	
New infrastructure	12	Mass rapid transit	2	2	1.Low	5.Red (difficult/complex)	3.Amber	3.Amber	5+ years	\$50+ million	Funding and delivery	Unknown	Unknown		Unlikely to be effective in changing patterns sufficiently	User to describe...	Discontinue	
New infrastructure	13	New western bypass	2	1.Low	1.Low	1.Green	1.Green	2.Amber/green	5+ years	\$50+ million	Landowner and funding	High value water resources	Waterways	Good design and restoration	Does not meet objective for East Rangiora growth	User to describe...	Discontinue	
New infrastructure	14	New eastern bypass - Fernside to Coldstream Rd	5.High	5.High	4	1.Green	1.Green	2.Amber/green	5+ years	\$5-\$50 million	Landowner and funding	High value water resources	Waterways	Good design and restoration		User to describe...	Progress	
New infrastructure	15	Widen and four lane Southbrook Rd	5.High	5.High	4	1.Green	1.Green	3.Amber	5+ years	\$5-\$50 million	Community adverse response	unknown	Private impact	Purpose of built and improved private land		User to describe...	Progress	

Note: Please copy the row above to add a new alternative or option

Attachment H - Project Lifecycle



Attachment H: Long List Multi Criteria Assessment

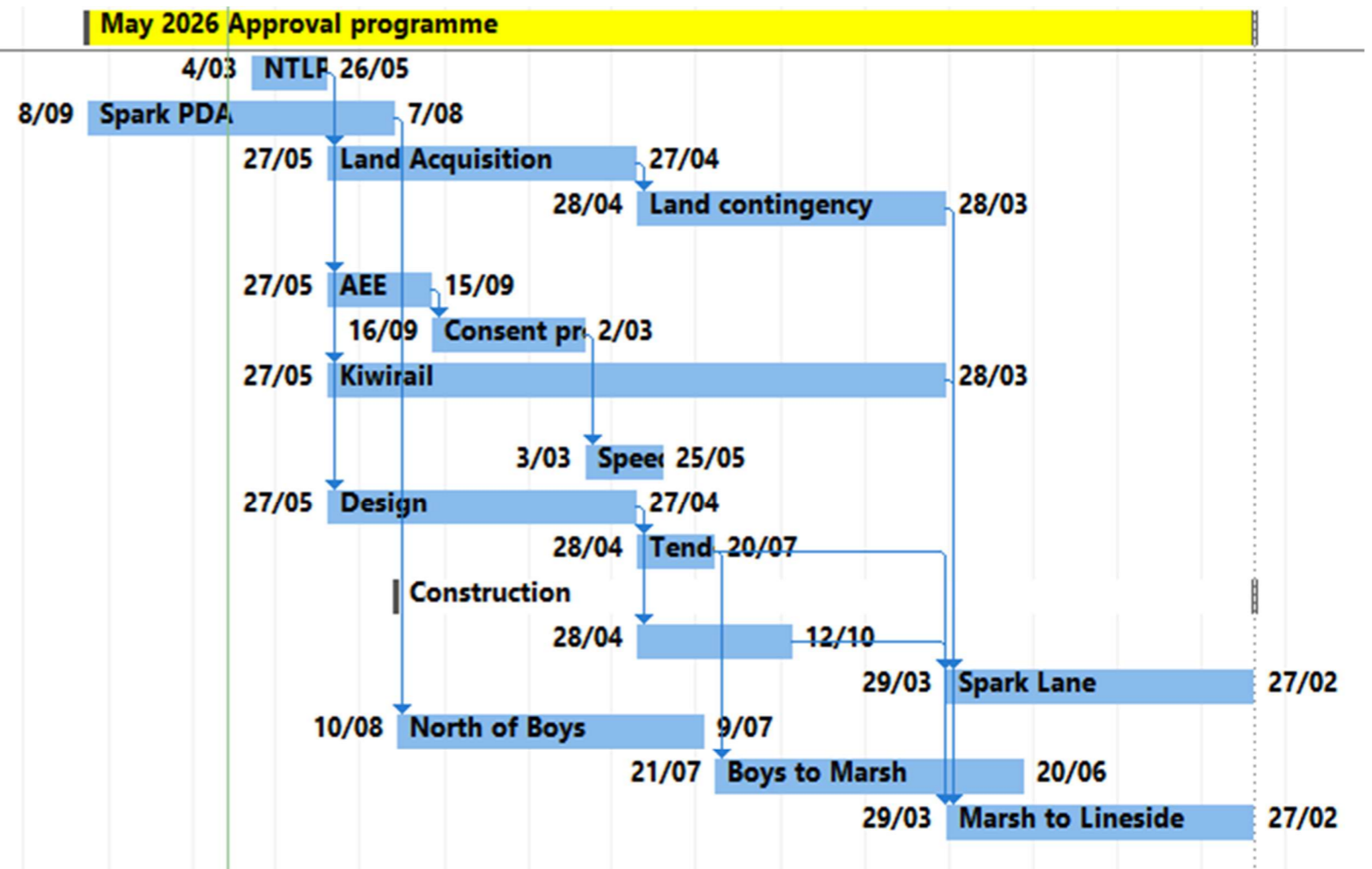
Criteria		Likely Investment Objectives			Critical success factors				Opportunities and Impacts			Base Ranking			What if Scenarios: If we weighted towards:						
		Unlocks land for	Reduces travel	Improves safety	Affordability	Risk to delivery	Value for money	Resilience	Environment and	Social and Landscape	People & Property				Investment Priorities		Economics		Social & Cultural		
Options		15%	15%	10%	12%	12%	10%	2%	13%	10%	10%	Weighted score	Rank	Shortlist	Weighted	Rank	Weighted	Rank	Weighted	Rank	
DM	Do Minimum	0	0	0	0	0	0	0	0	0	0	0	4	Y							
Southbrook Road																					
A.1	Southbrook Four laning – within existing road reserve	\$42 M	0	1	-3	-1	-2	1	1	0	-2	-3	-0.68	6		0.15	8	0.25	5	-1.35	7
A.2	Southbrook Four laning – within wider road reserve	\$66 M	0	1	-1	-2	-3	1	1	0	-2	-3	-0.85	8		0.35	6	0.25	5	-1.25	6
A.3	Southbrook three laning – tidal flow 2+1 within existing road reserve	Not costed	0	1	-3	-1	-3	1	1	0	-2	-2	-0.7	7		0.15	8	0.25	5	-1.14	3
A.4	Congestion charging / Time of Use	Not costed	0	1	-1	-2	-3	-3	0	0	-3	-1	-1.17	10		0.35	6	-1	9	-1.24	5
Eastern Alignments																					
B.1	Eastern Link - west route	\$67M	3	3	3	-2	3	3	3	-2	0	-1	1.1	1	Y	3	1	1.75	1	-0.87	1
B.2.1	Eastern Link – east route to WWTP roundabout	\$69M	3	3	3	-2	2	3	3	-2	0	-1	0.98	2	Y	3	1	1.75	1	-0.87	1
B.2.2	Eastern Link – east route to Lineside Rd	\$65M	3	3	1	-2	-1	2	3	-2	0	-2	0.37	3	Y	2.8	3	1.5	3	-1.18	4
B.2.3	Eastern Link – east route to Fernside/Youngs	\$72M	3	2	3	-2	-2	1	3	-3	-3	-2	-0.37	5		2.55	4	1	4	-2.04	8
C	Eastern Bypass	\$92M	2	2	2	-2	-3	-1	3	-3	-3	-3	-0.97	9		2	5	0.25	5	-2.3	9

Attachment I: Multi Criteria Shortlist Assessment

Type of Criteria	Criteria	Considerations	Option A: Four Laning Southbrook Road	Option B.1 : REL west of WWTP (designated route)	Option B.2.1 REL east of WWTP	Option B.2.2 REL east of WWTP to Lineside Rd
Investment Objectives	Improve accessibility from East Rangiora development area to SH1 by 3 minutes by 2038 (30%)	Measure 1: Travel time improvement from Area of East Rangiora greenfield land to SH1 (Lineside Road) Measure 2: Proportion of population living within 10 mins (am peak) of Southbrook Industrial Area (%) Measure 3: Reduce sideroad delays accessing Southbrook Road (secs)	1	3	3	3
	Reduce am peak travel time between Lineside and Northbrook Road by 40% by 2038 (55%)	Measure 1 Proportion of population within 10 mins of Southbrook Measure 2 Time to travel from Southbrook to Northbrook Road (Mins) Measure 3:Improvement in travel time reliability (comparing peak to inter-peak) (%)	2	2	2	2
	Improve the Infrastructure Risk Rating on strategic roads in South Rangiora to Medium or better by 2038 (15%)	Measure 1: Number of deaths and serious injuries Measure 2: Infrastructure risk rating > medium Measure 3: Ease for locals to cross the road (and access)	-2	2	2	1
Critical success factors	Affordability		-1	-2	-2	-2
	Deliverability (achievability)	Note advice in slide pack, Consenting, schedule, construction and land acquisition key risks	-2	-1	-2	-3
	Value for money	Economic metrics below	1	3	3	3
Opportunities and Impacts	Te ao Māori	Workshop deliberations	-1	-1	-1	-2
	Environment and ecology	Workshop deliberations	-1	-1	-1	-2
	Social and Landscape	Workshop deliberations	-3	1	1	1
	Private Property and immediate neighbours	Workshop deliberations	-3	2	0	-1
Economic indicators	Benefit Cost Ratio	Stantec Economic Assessment	1.2	3.3	3.0	3.4
	BCR (Govt)	Stantec Economic Assessment	1.2	4.0	3.5	4.1
	Net Present Value (\$millions)	Stantec Economic Assessment	9.6	178.1	151.4	175.9
	First year rate of return	Stantec Economic Assessment	4%	4%	5%	3%
Cost	Capital Cost (P ₅₀)	Programme Manager	\$41.8 m	\$67.7 m	\$68.8 m	\$65.1 m
	Public sector cost (P ₅₀)	Programme Manager	\$31.4 m	\$44.4 m	\$45.2 m	\$42.6 m
		Raw unweighted sum	-9	8	5	0
		Investment Ojectives (weighted)	1.15	2.45	2.45	2.3
		Critical Success Factors (unweighted)	-2	0	-1	-2
		Opportunities and impacts (unweighted)	-6.8	4.3	2	-0.6

Attachment J: Master Schedule

May 2026 Approval programme	45.35 mons
NLTP co-funding approved	3 mons
Agree Private Development Agreement with adjacent	12 mons
Land Acquisitions	12 mons
Contingency for compulsory land acquisition processes under Public Works Act	12 mons
Prepare Assessment of Environmental Effects and c	4 mons
Consent processing	6 mons
Design and agreement process with Kiwirail for signalised trail crossing	24 mons
Speed limit consultation	3 mons
Detailed Design (incl procurement of designer)	12 mons
Procurement	3 mons
Construction	33.35 mons
Enabling Works	6 mons
Spark Lane	12 mons
Construction – North of Boys (Rossburn)	12 mons
Construction –Boys to Marsh	12 mons
Construction – Marsh to Lineside	12 mons



Attachment K: Design Standard: ensuring value for money

The Rangiora Eastern Link (REL) will be owned and operated by Waimakariri District Council and designed in accordance with the Council’s Engineering Code of Practice (ECoP). The ECoP establishes consistent standards for all new roads in the district, including those constructed as part of subdivisions, and incorporates relevant national and Australasian design references such as Austroads Guide to Road Design and Austroads Guide to Traffic Engineering.

A short section at the northern interface with State Highway 72 (Lineside Road) will be designed in accordance with Waka Kotahi NZTA standards to ensure appropriate transition geometry, safety performance and asset integration.

Road Classification Considerations: Arterial or Collector

As part of developing the concept design and this SSBC, the project team assessed the appropriate road classification for the REL (and hence design standard), recognising that the District Plan designation does not prescribe a classification. Under the Waimakariri District Plan:

- **Collector Roads** “collect and distribute traffic between neighbourhoods and arterial roads..., act as spine roads, and provide a significant property access function.”
- **Arterial Roads** “serve significant populations..., function as primary access routes inside and outside the District and provide connections between strategic roads and major commercial or industrial areas.”

The REL is intended primarily to serve local connectivity between eastern Rangiora growth areas, Southbrook, Southbrook Road, and SH71. It does not perform a strategic freight or public transport role and therefore aligns most closely with a collector road function under the Waimakariri District Council Engineering Code of Practice and District Plan.

In One Network Framework terms – the road is an urban connector.

Key Factors Considered in Selecting the Design Standard

1. Functional Transport Performance

- Both arterial and collector standards³⁶ provide 3.5 m traffic lanes, meeting the capacity and travel-time assumptions used in traffic modelling.
- Intersection design is not affected by adopting the collector or arterial standard, as the same design speeds and design vehicle applies to both.
- Shoulder widths vary between standards; the arterial-width shoulders (2.0 m) is proposed for improved safety and to provide an interim on-road cycle environment until the separated path is fully constructed.

³⁶ Waimakariri District Plan (60kph)

2. Pavement and Life-Cycle Costs

- The ECoP applies a traffic-volume-based pavement design, not a classification-based design.
- There is no difference in required pavement performance or life-cycle expectations between arterial and collector standards for this corridor.

3. Flood Resilience and Cross-Drainage Design Standard

A report³⁷ prepared by WDC assesses the appropriate flood design standard for cross-drainage structures on the Rangiora Eastern Link (REL), comparing a 10% Annual Exceedance Probability (AEP) standard with a 1% AEP standard. The assessment informs Council decision-making by considering flood performance, safety, network resilience, statutory compliance, affordability, and value for money.

Flood modelling shows that during large flood events (including the 1% AEP event), extensive network-wide inundation occurs across SH71/Lineside Road, the Southbrook Industrial Area, and the SH1/SH71 interchange at Kaiapoi. As a result, the REL cannot function as a resilient alternative route during extreme flood events regardless of the design standard adopted at individual crossings.

A multi-criteria assessment comparing the two options found that:

- The 10% AEP option delivers strong value for money, remains within Council’s funding envelope, and meets NZTA funding expectations, with an estimated project cost saving of approximately \$19.3 million compared with the 1% AEP option.
- The 1% AEP option provides higher flood immunity at the REL itself but at a substantially higher cost, does not meet standard funding thresholds, and introduces unavoidable floodwater diversion onto some third-party properties.
- Both options can comply with District Plan flood hazard objectives, but the 10% AEP option better avoids adverse effects on surrounding land.
- The practical benefit of higher flood conveyance is limited by wider network constraints during extreme flood events.

Recommendation:

The report recommends that the Rangiora Eastern Link be designed to a 10% AEP cross-drainage standard, consistent with its function as a collector road. This approach is fit for purpose, affordable, represents best value for money, and aligns with statutory flood management objectives. It is further recommended that detailed design incorporate robust exceedance flow paths, scour and erosion protection, debris management, and operational response measures to manage residual flood risk.

4. Recommended Design Standard for the REL

³⁷ Rangiora Eastern Link Cross-Drainage Design Standard Assessment (WDC, 2025)

The Rangiora Eastern Link is a strategically important growth-enabling corridor; however, it is not capable of functioning as a lifeline route during major flood events, irrespective of the standard applied to its internal cross-drainage.

This is because:

- The southern tie-in to Lineside Road and the Southbrook area is itself subject to flooding during large storm events
- Flooding within the lower Southbrook catchment constrains access to the wider network
- These downstream and surrounding flooding constraints are not reasonably practicable to resolve,

As a result, even if the REL corridor were designed to a 1% AEP standard:

- The route would still be unavailable or functionally constrained during extreme flood events
- The REL would not provide a continuous flood-resilient lifeline connection
- The additional resilience would be partial and localised, rather than network-wide

Accordingly, the majority of the additional expenditure would not translate into materially improved network resilience or economic outcomes.

Attachment L: Schedule of supporting technical documents

Bold is most recent report

Discipline	Information available	Summary
Statutory Planning	<p>Notice of Requirement (Incite 2021)</p> <p>REL Planning Strategy (WDC 2024)</p> <p>CRC CRC262840 - Waimakariri District Council</p>	<p>Sets out basis for NOR and included in District Plan</p> <p>Provides pathway for consenting for project.</p> <p>Decision Documents Rangiora Stormwater Network Discharge Consent</p>
Traffic and Transport	<p>Rangiora Transport Study, Beca, September 2001</p> <p>Scheme Assessment Report, Opus, February 2005, developed alignment options for study and provided preliminary details for the selected alignment.</p> <p>Technical Assessment – Transportation (WSP 2021)</p> <p>Southern roundabout traffic modelling (WSP 2024)</p> <p>Transport Assessment of Options (Stantec, 2025) (250324049901)</p>	<p>The WSP TA:</p> <ul style="list-style-type: none"> Assessed route efficiency (travel time dramatically reduced by 40-70%) (588hrs and 5,558km pr day) Intersection Level of Service (limited adverse impact Most LOS A, with some LOS B) Area wide effects (noting rat-running north of Northbrook RD) Safety (increase by 1 crash pa) And other potential effects <p>Intersection modelling:</p> <ul style="list-style-type: none"> Modelling roundabout and signalised intersection options. Recommended two lane roundabout. Key issue is stacking distance to kiwirail. Active transport to be resolved. <p>TA assessing the options and informing the Economic Case in this BC.</p>
Ecology	<p>REL – Ecology Report – (Boffa Miskell, 2021)</p> <p>Impact of Koura Creek Diversion Options of Koura Creek, AEL, 2025) 260209022133</p>	<ul style="list-style-type: none"> High level ecological assessment. Negligible terrestrial ecological value due to farmland. NZ pipit potential to nest but low risk Lizard habitat outside designation area (by Northbrook Wetland) but some risk remains Waterways degraded (fair stream health) Koura Creek of high value Risk of curing off stream loss by diversion of shallow groundwater Fish passage maintained with bridges Effects of impervious area and need for SW treatment Lighting effects noted <p>Assessment of Koura Creek ecology</p>

Discipline	Information available	Summary
Stormwater	<p>Technical Assessment – Stormwater and Flood Risk (WSP 2021)</p> <p>Spark Dairy Farm, Stormwater Assessment (Fraser Thomas 2023) (Not for WDC)</p>	<p>Culverts roughly sized</p> <p>SW treatment and attenuation noted as required</p> <p>Overland flow paths noted</p>
Fluvial flood risk	<p>Spark Dairy Farm, Flood Risk Assessment (Fraser Thomas 2023) (Not for WDC)</p> <p>Preliminary flood modelling of REL (WDC Internal)</p> <p>Cross Drainage Design Standard Assessment (2026, WDC)</p>	<p>Proposed cut off channel by development to mitigate risk to residential area, and requires a culvert under REL</p> <p>Site is subject to material flood risk south of Marsh Road and a raised road will displace flood waters to other flow paths, however can be mitigated by either adequately sized culvert below road or setting road level at close to existing GL (refer to original 2005 long section by WSP).</p> <p>Assess design standard to be used for REL (1% or 10% AEP)</p>
Geotechnical and hydrogeology	<p>Spark Dairy Farm, Geotechnical Investigation Report (Fraser Thomas 2023) (Not for WDC)</p> <p>Geotechnical Factual Report (WSP, 2025) (250626115604)</p> <p>Geotechnical Interpretive Report (WSP, 2025) (250725137040)</p>	<p>Known area of peat, high groundwater and springs. Some risk of settlement.</p> <p>Some risk of capping or diversion of springs and groundwater</p>
Land contamination	<p>Desktop HAIL Assessment (WSP 2021)</p> <p>Site Management Plan (PDP 2018)</p> <p>DSI Marsh Road WWTP for REL , PDP, 2025) 250131015741</p> <p>DSI Marsh to Northbrook (Fraser Thomas , 2025) V= 251208232782</p>	<p>Three HAIL sites identified with only one in work area being the WWTP.</p> <p>Known AC pipe stockpile and potential AC from buildings in compound. PDP prepared SMP. Additional stockpile by Marsh Road investigated and confirmed below thresholds.</p> <p>Farmland confirmed below thresholds</p>

Discipline	Information available	Summary
	REL Coal Tar assessment (PDP, 2025, 250131015744)	No coal tar found
Cultural Values	Cultural Advice (MKL 2024)	Concerns include that the proposal will involve the capping of springs and/or interception of groundwater which may have an impact on the flow regime of waterways. Kaitiaki are opposed to the capping of springs and don't want to see a change in the hydrology of the area as a result of the proposed eastern bypass. In addition, Kaitiaki are opposed to the re-alignment of Koura Creek or any other waterway to provide for the proposed eastern bypass.
Archaeology	Technical Assessment - Desktop Archaeological (WSP 2021)	No archaeological sites recorded within the proposed designation corridor between Lineside Road and Northbrook Road. No sites of interest were identified along the Corridor, but it was noted that a large silent file area centred around Tuahiwi Marae lies along its eastern boundary. Two potential unrecorded sites of historic homes. Minor effects can be mitigated through archaeological investigation and recording during construction
Noise	Road Traffic Noise Assessment (WSP 2021)	No issues at Southern tie in 147 Northbrook Rd in Cat B 152,250 NB Rd and 75 MacPhail Ave close to or in Cat B. Suggests that quieter road surface or barriers will be appropriate mitigation
Landscape and visual	Technical Assessment – Landscape and Visual (Landscape and Visual)	No material landscape or visual adverse effects. Mitigation through landscape and riparian planting
Electrical Safety	Report on clearances future road clearances, (Lumen 2022). Rangiora Eastern Link EPR Safety Review (Mittons April 2022)	Ground clearances have been checked and there are no issues. Construction of a road under the lines will require care to ensure plant and machinery is kept at least 4.0m from the line at all times. This may limit the height of plant to 3.6m in some areas. Meeting the requirements of NZECP34, as the alignment is within 12m of the tower foundations. This is where there is an existing road, so is unlikely to be a significant issue. With the construction of the roading development in this area, the risk profile (class) for direct contact with the structures is likely to remain the same. Due to the location of these towers, we do not expect that mitigation would be necessary, however, the hazardous touch voltages would need to be discussed with Transpower.
Adjacent residential development infrastructure and earthworks	Spark Dairy Farm, Infrastructure Assessment Report (Fraser Thomas 2023) (Not for WDC)	Outlines at a high level the infrastructure servicing and earthworks proposal for development of the adjacent land for residential development.
Concept Design	REL Concept design Report (WSP, 2025) 250926183948	Design concept and value engineering assessment

Discipline	Information available	Summary
	<p>Concept Design Drawings (WSP, 2025) 250926183952</p> <p>REL Value Engineering Evaluation (WSP, 2025) 260120008297</p> <p>Safe System Audit (Via Strada, 2025, 250813149781)</p>	
Rail	<p>Level Crossing Safety Assessment (Stentec 2025) 250416067072</p> <p>SFAIR MzQueen, 2025) 250521089823</p>	Establishes basis of design and agreed with Kiwirail
Engagement	REL Engagement Strategy (REL, 2025251011193373)	Set out engagement strategy for REL
Cost estimates and risk registers	<p>REL Cost Estimate Report (WDC, Feb 2025)</p> <p>REL Risk Register (WDC, 260205020911)</p> <p>REL QRA Modelling, (Beca, 2026)</p>	Established the estimate of cost for the project