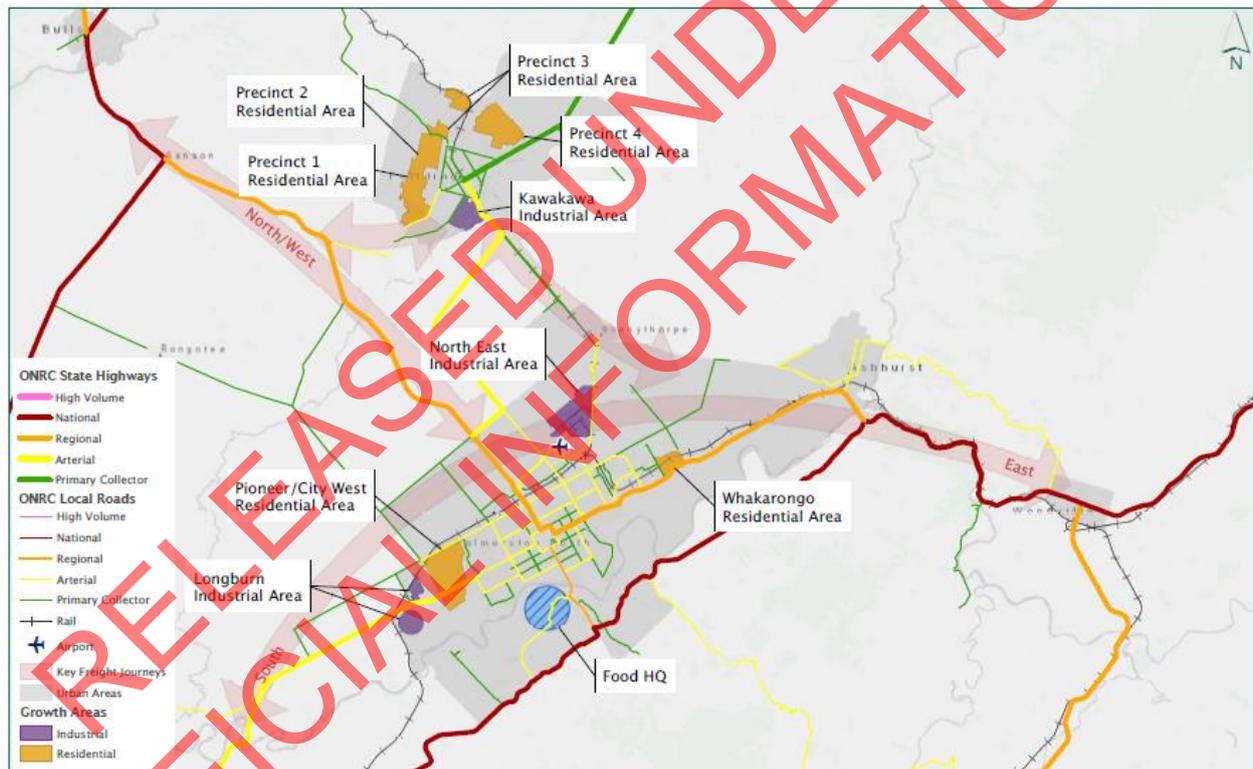


Accessing Central NZ Strategic Case

12 November 2016

VERSION 0.1

Strategic assessment of the transport requirements for delivering on the Manawatu-Whanganui Economic Action Plan



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November 2016

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EXECUTIVE SUMMARY

Strategically transport has been identified in the Manawatu–Whanganui Regional Economic Action Plan, titled Accelerate25, as a key enabler for economic growth in the region. The Manawatu–Whanganui region is one of four regions that are identified by the government as economic growth areas, and where there is a focus on helping these regions reach their economic potential to deliver the economic and social benefits. The Transport Agency’s ‘Statement of Performance Expectations’ for 2016/17 has highlighted the delivery on the actions identified in the economic action plans for these growth areas.

There is much economic potential within the Manawatu–Whanganui that Accelerate25 has identified. From a transport perspective the central location of the Manawatu–Whanganui and Palmerston North has seen the region develop as a key freight and distribution hub in New Zealand. A twelve-hour drive time for a heavy vehicle provides significant cover across New Zealand. The region provides good inter-modal freight opportunities. The main north island trunk line runs through the region and has connections to Hawkes Bay and Taranaki. Palmerston North airport is one of only three in New Zealand that is operational 24-hours per day and this provides flexibility.

The strategic case highlights the key problems and benefits of investing as identified by key stakeholders through facilitated workshops. These are:

Problems

1. Access into and from key destinations in the area is deteriorating and becoming less predictable creating inefficiencies, particularly in the freight distribution logistics chain. (60%)
2. Recent and future development in land use is outpacing the direction of the planned strategic network leading to a transport network that is not functioning as intended. (30%)
3. Changes in the type and size of vehicles using the network has created pinch points at locations across the transport network. (10%)

Benefits

1. Greater optimisation of the transport network (75%)
2. An agreed transport network (hierarchy) (10%)
3. Less modal conflict (15%)

Progressing the strategic case to a programme business case a whole of network approach can be considered when realising the benefits of investment.

In addition two sections of the network have been considered in the context of the problem statements and urgency. The SH54 section extending from the SH3/54 section through to the intersection of Kairanga–Bunnythorpe/Milsons Line intersection is a key access point to the north-east industrial area. It has been investigated previously and the solution is fairly scoped. This section should proceed to a single staged Detailed Business Case. Similarly the problems on SH3 between Roberts Line and Stoney Creek are well known, and the options for solving the problems on this section should also be advanced, but through an Indicative Business Case as a wider range of solutions may be available.

The profile for the strategic case would be a High strategic fit given the whole of network considerations for the next phases, and a Medium effectiveness given it has been developed and agreed in consultation with key stakeholders.

THE STRATEGIC CASE

1. INTRODUCTION

1.1 Purpose

The central location of the Manawatu–Whanganui region and Palmerston North has meant that it has become a key freight and distribution hub in New Zealand. An acceleration of growth in the distribution sector in recent times has resulted in problems on the road network affecting access. There is concern amongst key stakeholders that the access problems are not only affecting existing efficiency in the freight supply chain but also limiting the future growth of the freight sector in the region.

The preparation of this Strategic Case has been triggered as the first stage of the business case process to investigate the access problems.

The purposes of the of this Strategic Case are to:

- Identify the key problems and the benefits gained from any investment.
- Gain alignment between the Transport Agency and key stakeholders on the direction of future investment proposals.
- Outline the strategic context and fit of any proposed investment
- Determine if there is a compelling case for change and the need for investment.

The area covered by this Strategic Case is shown in Figure 1.

1.2 Background

Palmerston North is the key focal point of road and rail movements in the Central North Island and has connections to all points of the compass. The key connections are:

- Westerly connections to Wanganui and Taranaki via SH3
- Northerly connections to the Upper North Island, Tauranga and Auckland via SH3, SH1 and SH54
- Easterly connections to Napier via SH3 and SH2
- Southerly connections to Wellington and the South Island via SH56, SH57 and SH1 and the Inter Islander Ferry

Two key journeys as defined by NZ Transport Agency run through the assessment area, one north–south between Wellington and Auckland and the other east–west between New Plymouth and Port of Napier.

The issue of access to key industrial areas in the region, and particularly through the Palmerston North urban area has been the focus of attention from local and regional authorities since pre–2010.

In 2010, Palmerston North City Council, Manawatu District Council, Horizons Regional Council and the Transport Agency undertook the development of a Joint Manawatu–Palmerston North Transport Study (JTS). The study identified a road hierarchy in and around Palmerston North along with a series of road improvements to give effect to the hierarchy over a 30-year horizon, although none of these improvements have been progressed through to implementation. The JTS was endorsed by the Regional Transport Committee.

In July 15, The Ministry of Business, Innovation and Employment (MBIE) and the Ministry for Primary Industries (MPI), engaged a consortium comprised of New Zealand Institute of Economic Research (NZIER) and HenleyHutchings to undertake an Economic Growth Study in the Manawātū–Whanganui region. The study identified the distribution sector and transport as enablers of economic growth.

In 2016, an implementation plan for the findings of the Growth Study was launched called Accelerate25. This has a set of actions aimed at realising the growth in distribution and developing the transport network as a key enabler. One of these actions is the development of a business case as a precursor to investment in improvements to the road network that will improve the efficiency of access to Palmerston North.

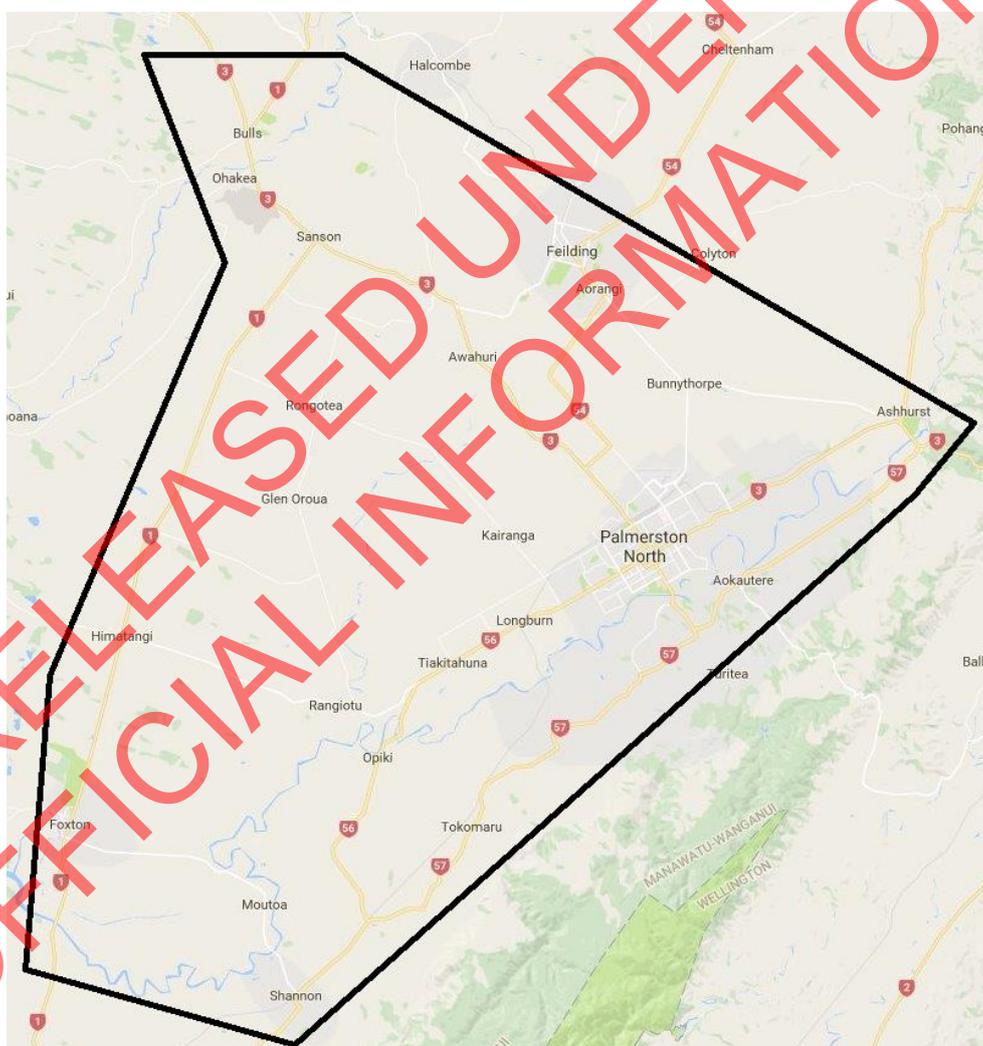


Figure 1: Area Covered by Strategic Case

2 PARTNERS AND KEY STAKEHOLDERS

Taking a One Network approach to freight journeys the following key partners are likely to have ownership of the problems. As greater understanding of the problems emerge through future business case stages, then the list of key partners may change.

Table 1: Key Partners Identified in the Strategic Case

Partners	Knowledge/involvement
Horizons Regional Council (Manawatu-Whanganui Region)	Responsible for approving the Regional Land Transport Plan prepared by the Regional Transport Committee (RTC). The plan sets the strategic direction for Transport in the region over a 30-year horizon and gives effect to the Government Policy Statement (GPS)
Palmerston North City Council	Brings knowledge and governance of local roads within the Palmerston North City Council boundary, and is a member of the RTC. Some of the issues identified relate to local roads within the PNCC area.
Manawatu District Council	Brings knowledge and governance of local roads within the Manawatu District.
Rangiteki District Council	Brings knowledge and governance of local roads within the Rangiteki District. Two key locations in the assessment area, Bulls and Sanson are both within the Rangiteki District boundary.

Several key stakeholders have assisted in the preparation of the strategic case by contributing information, knowledge and/or participated in the ILM and benefits workshops.

3 STRATEGIC ASSESSMENT – OUTLINING THE NEED FOR INVESTMENT

3.1 Defining the problem/opportunity

The key issues affecting access and freight movement were discussed at an ILM workshop held on the 28th September 2016. Participants identified the following problems along with their cause and effect.

Problem One (Weighting 60%)

Access into and from key destinations in the area is deteriorating and becoming less predictable creating inefficiencies, particularly in the freight distribution logistics chain.

Problem Two (Weighting 30%)

Recent and future development in land use is outpacing the direction of the planned strategic network leading to a transport network that is not functioning as intended.

Problem Three (Weighting 10%)

Changes in the type and size of vehicles using the network has created pinch points at locations across the transport network.

The investment logic map is provided in Appendix B.

The identification of **Problem One** stems from the operational inefficiencies at several locations for the movement of freight that are being caused by the road network. Operational inefficiencies can be described as delays at intersections and delays and reduced safety on where large vehicles are required to travel at slower speeds as the geometric standard of the road dictates. Key destinations were defined as Palmerston North and industrial areas within it. Freight movements to and from Palmerston North are required to travel through the urban area. A key route is via Tremaine Avenue which is a local road and has become increasingly congested contributed by the increased freight movements.

Problem One and **Problem Two** are linked. The discussion around **Problem Two** was centred on the linkage between land-use development and transport as an enabler of development. Workshop participants identified the development of the JTS and the supporting road network had been developed from a land-use planning perspective, including land rezoning. A further response was a Council boundary change between Manawatu District and Palmerston North City to better manage the demand for development, since the development was straddling the boundary. The crux of the problem is that despite the development it is not supported by a clear road hierarchy or advancement of improvements on the ground as proposed by the JTS.

It was recognised in **Problem Three** that there are several pinch points around the study area. The view at the workshop was that vehicles had become larger and this was making the situation at pinch points worse. The pinch point that attracted most discussion is at the SH1/3 intersection in Bulls. Large vehicles turning left on SH1 towards SH3 need to use the right turn bay for traffic turning right to head north on SH1 and creating a conflict between these movements. This conflict can cause lengthy delays if when there are several of large vehicles waiting to turn. Other key pinch points are discussed later in this document. Several other intersection were identified where conflicts currently exist and these were tied closely to the changes in land-use as described above.

3.2 Problem Overview

This section examines each of the problems identified in the ILM workshop and looks at their cause and effect.

Background

For ease of reference and discussion of the issues the area covered by this strategic case has been divided up into zones and these are shown in Figure 2. These zones represent journeys across sections of the road network and are not intended to represent complete journeys.

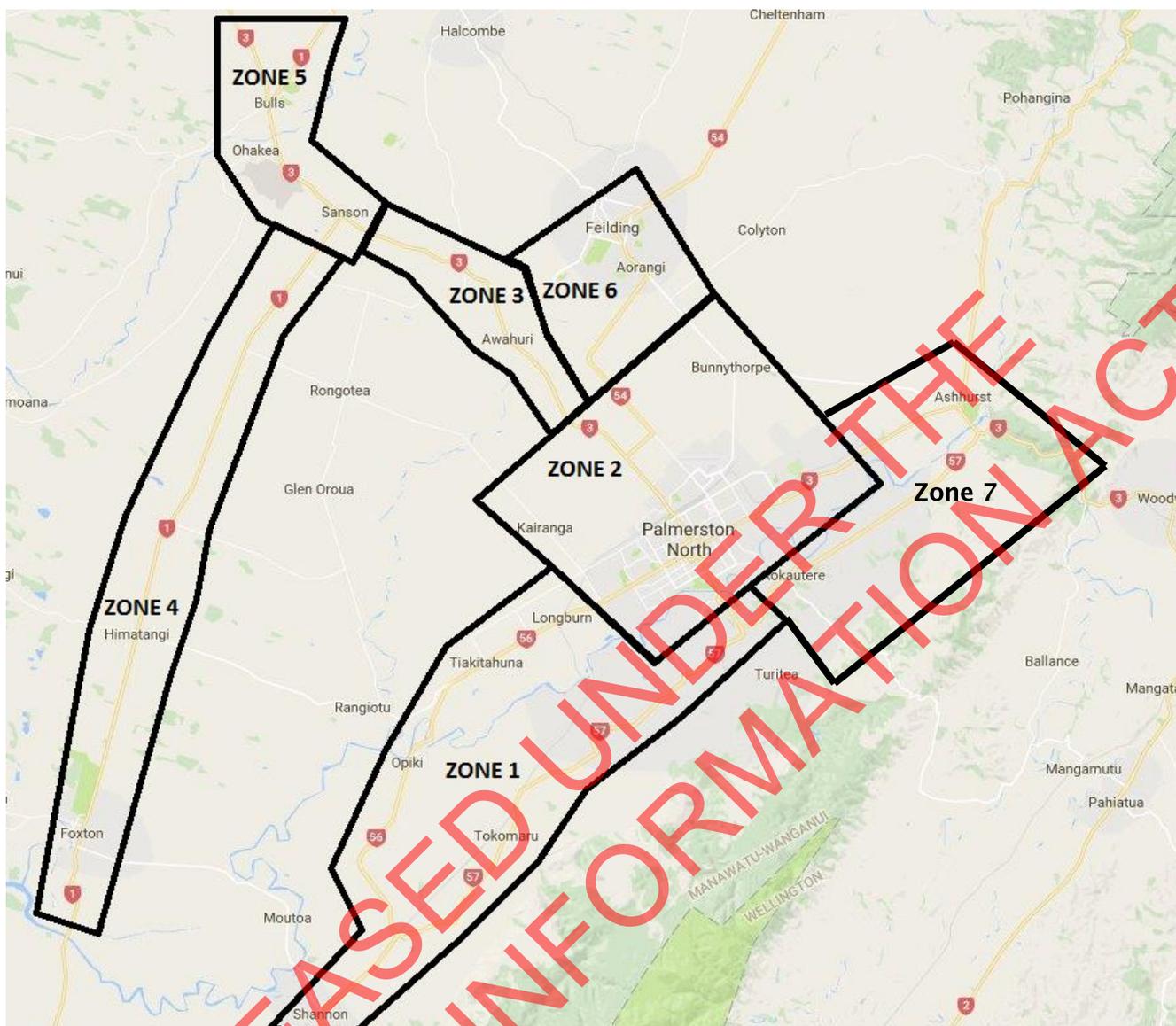


Figure 2: Zone Map

Zone 1 – Between Levin and Palmerston North City Boundary

Running along the western boundary of the study area is SH57, classified as a National route it connects south of Levin and SH3 near the Manawatu Gorge. It provides connection to Palmerston North across the Fitzherbert Bridge via a local road, Tennent Drive. This is the only bridge near Palmerston North that crosses the Manawatu River.

SH56 connects to SH57 approximately 5km north of Shannon and extends to the boundary of the urban area of Palmerston North at Pioneer Highway.

The decision on whether to use SH57 or SH56 is based on the destination within Palmerston North, typically any destination on the south-eastern side of the Palmerston North would use SH57 and any destination on the north-western side of the city centre would use SH56.

Industrial development areas are predominantly on the northern side of Palmerston North along with the airport. This means that freight accessing Palmerston North generally uses SH56. Longburn is accessed directly from SH56 and is the location of a key freight hub.

There are two issues with SH56 that contribute to the inefficiency in the movement of freight, these are the cross-section of the road and the undulating nature of the carriageway. In terms of the cross-section there are no shoulders along half of the 22km route and where there are no shoulders there is generally a deep side drain. When this cross-section is combined with the level of undulations in the carriageway then heavy vehicles travel slower to maintain safety. A further exacerbating issue is that the strong winds that are prevalent in the area.

A resilience issue exists on SH56 caused by the highway being within a flood plain for the Manawatu River. The road typically closes 2 to 3 times a year and can be closed for up to 1 to 2 days. SH57 is the main detour route when SH56 is closed, and will utilise the Fitzherbert Street bridge for access as it can accommodate heavy vehicle traffic. In the event that the Fitzherbert Street bridge is also closed the detours required would be significant.

Whilst the key route to the industrial areas at Longburn and within Palmerston North is via SH56, SH57 still carries an equal share of heavy vehicles. This demonstrates the strategic importance of both routes. A comparison of the traffic volumes on the two routes is shown in Table 2.

Table 2: Traffic Volumes on SH56 and SH57

Route	AADT (All vehs)	AADT (HCV's)
SH57	4440	400
SH56	4639	603

Zone 2 – Access to Key Destinations within Palmerston North

All three of the problems identified are particularly relevant to the road network within Palmerston North. However, problem two is specific to Palmerston North, with the problem currently developing within Fielding. The key issue is that development has taken place without the implementation of a suitable road network to support it.

The Joint Manawatu–Palmerston North Transport Study undertaken in 2010 set about identifying a road hierarchy for Palmerston North that integrates both the local and state highway networks in a one network approach. The proposed hierarchy would provide improved access for freight into key destinations, particularly the North East Industrial Zone. However, the problem identified at the ILM workshop is essentially the hierarchy exists on paper and not on the ground. Industrial and residential development along with the hierarchy considerations identified in the JTS is provided in Appendix A.

It is easily concluded that the proposed route in the hierarchy to the North East Industrial Zone via Kairanga–Bunnythorpe Road is of an unsuitable standard as a key freight route. The route is narrow and intersects with SH3 and SH54. Both these highways carry significant volumes of traffic at 9,646 and 7,249 vehicles per day respectively.

The hierarchy was identified due to increasing delays and conflict between adjacent land-uses along the current access route which is via Tremaine Avenue. The Bunnythorpe – Kairanga Road route was also highlighted as a preferred route by the distribution companies in the North East Industrial Zone. Tremaine Avenue has residential development along part of it but a significant part of it has light industrial/commercial development alongside it. The traffic volume along Tremaine Avenue is between 10,000 to 13,000 vehicles per day which combined the number of access points creates an

inefficient route. The busiest intersection and has the highest delays in Palmerston North is where Tremaine Avenue crosses SH3. The intersection carries over 25,000 vehicles per day.

SH3 between Roberts Line and Stoney Creek Road has had a high public profile in recent years with increasing conflict between residential growth and heavy vehicles accessing industrial areas. This has put the three key intersections of Roberts Line, James Line, and Stoney Creek Road under increasing pressure and an appropriate solution to this conflict is required. Roberts Line in particular has had a number of issues with safety, and has recently had the speed limit reduced to 80kph.

Zone 3 – Between Palmerston North and Sanson via SH3

Once past the SH3/54 intersection, this route is generally of a high standard. The programme business case would consider how this part of the network would operate effectively with other options.

Zone 4 – Between Levin and Sanson via SH1

This is part of a key national journey between Wellington and Auckland and therefore is a key freight route.

The Wellington Northern Corridor RoNS project extends to immediately north of Levin. Improvements are planned between Levin and the Whirokino Trestle and these are Waitarere Curves Upgrade and the replacement of the Whirokino Trestle.

Investigations have been previously carried out along this route as part of the Desert Road to Levin Strategic Study. From a moving freight perspective, it is an efficient route. The route is generally flat and straight and heavy vehicle speeds are at an optimum level.

The key issue identified was lack of passing and overtaking opportunities for cars and light vehicles.

Zone 5 – Sanson to Bulls via SH1 and 3

The Sanson to Bulls corridor is a key part of the network carrying both SH1 traffic heading north-south and SH3 traffic heading in an east-west direction. Traffic volumes are 13,207vpd with 13% HCVs. The efficiency of the corridor is under pressure from high traffic and freight volumes and adjacent land uses. A key pinch point exists at the SH1/3 intersection in Bulls, which affects safety and efficiency of the route.

The Royal NZ Air Force Base Ohakea is located between Sanson and Bulls and has direct access from the State highway. It maintains a key role as a training base and logistics hub as well as for search and rescue, VIP flight operations and a variety of other functions. With over 1,000 personnel working at the base puts pressure on the safety and efficiency of the highway at the access point.

Bulls has developed as a service centre for motorists. Until a couple of years ago development was largely contained to onside of the highway however this has changed with the development of a retail complex with shops, cafes, take-away and BP petrol station on the north side of Bridge Street. The vehicle turning movements to and from the highway impacts on the efficiency of through traffic. Also, with development now being on both sides of the road there is an increased number of pedestrians crossing the road. Recently pedestrian refuges have been installed to improve pedestrian

safety however these also have affected the space available for large vehicles to make their turning manoeuvres.

A key pinch point identified and discussed at the ILM workshop is the intersection of SH1 and SH3 in Bulls. With the alignment of SH1 going through greater than 90 degrees traffic on SH1 gives way to SH3. There is a significant conflict point exists for large vehicles that are southbound and turning left from SH1. There is insufficient space for these vehicles to make their turn without encroaching into the right-turn bay for northbound vehicles. This can cause significant delays whilst drivers wait for a suitable gap to make their turn safely. In addition, delays and congestion can occur at peak traffic periods impacting on travel time reliability.

Zone 6 – Fielding to Palmerston North via SH54 and 3

A growing freight hub is emerging in Feilding, which also requires links through to Palmerston North as well as changes to the strategic network to enable connectivity.

Zone 7 – SH3 Stoney Creek Road to the Gorge and SH57

SH57 is a national strategic route but the traffic volumes drop significantly past the Pahiatua Track intersection to approximately 2100 vehicles a day from approximately 7800 vpd between Summerhill Drive and the Pahiatua track intersection. SH3 from Stoney Creek Road through to the intersection with SH57 has traffic volumes that are influenced by the landuse and commuting traffic into Palmerston North and traffic entering from SH57. A whole of network approach to the problem statements would consider these network sections as part of the key links between the Manawatu and the Hawkes Bay.

3.3 Benefits of investment

Following the first ILM workshop identifying the problems, a second workshop was held on the 6th October 2016 to identify what the benefits would be from any potential investment. The benefits and associated weighting identified at the workshop were as follows.

Benefit One (Weighting 75%)

Greater optimisation of the transport network

Benefit Two (Weighting 10%)

An agreed transport network (hierarchy)

Benefit Three (Weighting 15%)

Less modal conflict

Benefit One was identified as having a significantly high weighting at 75%. The consequences of not dealing with the problems identified relate to inefficiencies in the movement of freight. The benefits of a more optimised transport network in this situation will significantly improve the effectiveness and efficiency of freight movement. It is widely recognised particularly in Government Strategies that the efficient movement of freight has significant benefits to the national economy and helps New Zealand's competitiveness in worldwide markets. Efficient movement reduces time and therefore cost in the supply chain.

Although **Benefit Two** only received a weighting of 10%, it was widely understood by ILM participants that a road hierarchy is fundamental to the planning and management of the road network. Having a hierarchy in place would lay the foundation to unlocking the other benefits and would provide opportunities including more targeting investment.

Benefit Three is less modal conflict. The discussion at the ILM focussed on locations where pinch points existed resulting in conflict between large vehicles. Reducing modal conflict will improve journey reliability, reduce delays and increase throughput.

The Benefit Map is attached as Appendix C.

3.4 The Key performance measures

The investment key performance indicators and associated measures were also determined at the workshop on the 6th October 2016. These are summarised in Table 3 and the complete benefits map including the measures and descriptions are provided in Appendix 3.

Table 3: Investment Benefits, KPI's and Measures

Benefit	Investment KPI	Measure
Greater Optimisation of the transport network	Maintain Travel Times	Travel Times
	Increase Network Availability and Access	Access to Key Destinations
	Improve Journey Reliability	Travel Time Reliability
	Increase Freight Throughput	Freight Throughput – Weight
An Agreed Transport Network (Hierarchy)	Network Availability and Access	Agreed RLTP
		Spatial Coverage – Freight
Less modal conflict	Freight Throughput	Traffic Mode Share

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3.5 Status of the existing evidence base

This section examines the evidence base to determine if there is a case for change. Table 4 provides a summary of the key findings from the evidence base.

Table 4: Evidence Base Key Findings

Problem Identified in ILM	Key Findings in the Evidence	Discussion
<p>Access into and from key destinations in the area is deteriorating and becoming less predictable creating inefficiencies, particularly in the freight distribution logistics chain.</p>	<p>Existing freight routes congested in Palmerston North.</p> <p>Multiple intersections on key freight routes cause delays and safety issues.</p> <p>Existing freight routes are of poor geometric standard (esp. SH56) causing slower travel speeds. Typically, these routes are narrow with no shoulders and side drains.</p>	<p>There is no travel time data to show the degree of predictability in journey times. This needs to be determined at the next stage of the business case.</p>
<p>Recent and future development in land use is outpacing the direction of the planned strategic network leading to a transport network that is not functioning as intended.</p>	<p>State highway network does not serve key destinations within Palmerston North.</p> <p>No clear freight routes through the urban area to access key destinations in Palmerston North, especially from the south. Lack of One Network Approach.</p> <p>SH3 Roberts Line to Stoney Creek Road and SH54 from the SH3 intersection through to Kairanga–Bunnythrope Road/Milsons Line intersection are high profile areas where this conflict is driven by changing land-uses.</p> <p>Road hierarchy identified in Joint Transport Study not implemented.</p>	<p>Problems on the existing freight routes as stated above may be resolved by establishing a road hierarchy and then implementing any necessary roading modifications and improvements to give effect to it.</p> <p>Traffic modelling of any proposed road hierarchy is required.</p> <p>Level of Service provided by SH 56 and 57 and their linkage with the Palmerston North needs to be assessed.</p> <p>The problems at SH54 and SH3 are well known, and it is proposed that these proceed to the next appropriate phase for development as it highly expected that they would have been identified in the programme business case.</p>
<p>Changes in the type and size of vehicles using the network has created pinch points at locations across</p>	<p>Key pinch points identified in Bulls at the SH1/3 intersection, and other key intersections within the Manawatu region, including the Palmerston urban area.</p>	<p>Level of delays caused by pinch points has not been determined.</p> <p>Some of the key pinch points are safety issues. Refer to opportunities identified below.</p>

the transport network.		
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Conflict between residential areas and freight was linked to safety issues around the network where the road hierarchy was out of step with the growing land-use changes. There are specific points around the network where the Transport Agency should be proactive in investigating options for reducing this conflict. These are summarised on the following table.

Table 5: Identified Opportunities

Opportunity Identified	Key Findings in the Evidence	Discussion
Opportunity to improve poor safety performance at several locations.	<p>SH3 Napier Road between Stoney Creek Road and the 50km/h limit at the start of the Palmerston North urban area. Currently has reduced speed limit of 80km/h over part of it.</p> <p>SH3/54 Intersection. Poor safety record currently has RIAWS controlling speeds. This intersection is on the proposed freight route b</p> <p>Milson Line/SH3/Kairanga Bunnythorpe Intersection. Poor safety record, minor safety project planned.</p> <p>SH1 Sanson to Bulls Corridor. Increasing traffic volumes affecting road safety.</p>	<p>There is no travel time data to show the degree of predictability in journey times. This needs to be determined at the next stage of the business case.</p> <p>As noted in Table 4 the problems at the SH54 section (SH3/54 to Milson Line/Kairanga Bunnythorpe Intersection) and SH3 (Roberts Line to Stoney Creek Road) are well known. Progressing these to a single stage DBC and IBC respectively are anticipated outcomes of the PBC, and should be progressed immediately.</p>

Palmerston North as a Distribution and Freight Hub

Whilst the assessment area covers only part of the Manawatu-Whanganui region the level of vehicle kilometres travelled (VKT) in the region reflects its importance as a freight hub. The region has the second highest VKT for all traffic on State highways behind the Wellington region at 1430 million veh-Km in 2015 and the highest VKT for heavy traffic at 200 million veh-Km also in 2015. A key aspect of this is the high level of through trips especially on SH1.

Growth in heavy traffic VKT on the State highway network has been strong since 2013 with on average 9.3% per annum over the 2013 to 2015 period.

Two main centres for freight distribution have established in Palmerston North at Longburn and the North East Industrial Zone (NEIZ). The NEIZ has been established for some time but continues to grow. The NEIZ located to the north east of Palmerston North is close the airport but does not have direct connection to the rail network. Foodstuffs, NZ Post, Ezibuy and along with other companies have their distribution centres located here. Although, not in the NEIZ, Toyota NZ has its national distribution Centre located adjacent to it on Roberts Line. The site does not have direct access to the State highway network but relies on the local road network. The airport is one of only three in the country that is operational 24 hours a day giving flexibility for around the clock freight movements

The development of a new inland port and intermodal freight hub in 2015 at Longburn demonstrates a strong future for the freight industry in Palmerston North. The development is a joint venture between Ports of Auckland, Napier Port and Icepak, and are the first stage of a \$20 million investment into the region as the Longburn site is developed. Details of future investment are summarised in the following press release:

“This new inland port has been in development for some time and is strongly aligned with our recently announced Central New Zealand Agribusiness Strategy, a collaboration between all eight councils in our Horizons region with the target of doubling Agribusiness exports from \$1.9 billion to \$3.8 billion per year by 2025. This will help our growth potential throughout central New Zealand, and we expect further investment and development activity as our capability continues to increase.”

Access to Key Areas is Deteriorating

Since the State highway network ends at the urban boundary of Palmerston North, the key freight routes are through the urban area. These routes have become increasingly busy as population and development growth has taken place. It is important to note that whilst the Manawatu–Whanganui region had a decline in population between 2006 and 2013 of –0.1%, Palmerston North experienced an increase in population of 3% over the same period. This increase in population has an influence on traffic levels in Palmerston North. On SH3, Rangitikei Street traffic volumes have increased by 5.5% over the five-year period between 2011 and 2015.

As discussed previously under problem definition, many of the routes that heavy vehicles are expected to use simply are not of a suitable geometric standard and intersection layouts cause unnecessary delays and compromise safety.

Pinch Points on the Network

The key pinch point is at the SH1/3 intersection with left turning southbound traffic from SH1 conflicting with vehicles waiting to turn right and head north on SH1. Traffic volumes in Bulls are 13,514 vpd with 12% HCV's and on SH1 immediately north of Bulls the traffic volume is 5,456 and 16% HCV's. Both locations have experienced growth at approximately 8% over the 5-year period 2011 to 2015. The increase in the number of HPMV vehicles in line with the general increase in vehicles means that problems at these pinchpoints will be expected to grow.

Road Safety

Between 2011 and 2015 (5 years) on the State Highway network in the study area there were:

- 41 fatal crashes resulting in 49 Fatalities (which is over half the fatalities in this region)
- 183 Serious Injuries
- Over the last 5 years the serious and fatal injuries have cost \$279M (2015 Social Costs)

According to the regional safety strategy four of the top five issues in the region are in the area covered by the strategic case.

Over the whole region there is an issue with lane departure crashes (run off road) which are at a higher rate than the rest of the state highway network.

SH3 Palmerston North to Bulls is a High & Medium–High Risk Route. It includes a developing issue at Ohakea AFB and the Police Weigh Station as well as the high crash risk on the outskirts of Palmerston North to Mt Stewart.

SH3 Albert St to Ashhurst has a series of High & Medium–High Risk Intersections including Albert St, Roberts Line and James Line. This section is expected to worsen as the north side of SH3 is developed over time.

4 STRATEGIC CONTEXT

4.1 Organisational overview

The scope of the investment is about improving access for freight movements through the study area and to and from key freight distribution centres in Palmerston North. The problems that have been identified affect both the State highway and local road networks.

At this stage, there are four partner organisations that are involved, NZ Transport Agency, Palmerston North City Council, Manawatu District Council and Horizons Regional Council. Many of the issues identified within the urban and immediate rural surrounds of Palmerston North relate to the local road network. The proposed road hierarchy could potentially trigger a State highway review which would affect funding arrangements.

4.2 Alignment to existing strategies/organisational goals

Investment in the problems identified and the benefits of doing so are very well aligned to many of the key transport strategies, policy documents and the outcomes they aim to deliver.

The overall strategic direction of the Government in terms of land transport is to drive improved performance from the land transport system by focussing on:

- economic growth and productivity
- road safety
- value for money.

The effective and efficient movement of freight is highlighted in the GPS as being critical to the economic health of an export nation. Reducing transport costs for producers and exporters of primary produce assists in improving international competitiveness.

The benefits identified in this Strategic Case are aimed at ensuring the effective and efficient movement of freight which contributes to economic growth and productivity.

Table 6 gives details of some of the areas where there is alignment between the outcomes and benefits of this Strategic Case with various organisational strategies. In carrying out this assessment, there was no strategies, policies or organisational goals identified that are not aligned and support the case for change.

Table 6: Assessment of Key Strategies and Organisational Goals

Strategy	Organisation	Areas of Alignment with Investment Benefits
Government Policy Statement on Land Transport 2015/16–2024/25	Central Government	<p>GPS2015 has the economic growth and productivity as a key priority. The long-term results that are expected under this priority are:</p> <ul style="list-style-type: none"> • Support economic growth and productivity through the provision of better access to markets, employment and business areas • Support economic growth of regional New Zealand through provision of better access to market
Statement of Intent	NZ Transport Agency	<p>The strategic case is aligned to the long-term goals:</p> <ul style="list-style-type: none"> • Integrate one effective and resilient network for customers • Deliver efficient, safe and responsible, and resilient highway solutions for customer. <p>And aligns to these medium-term goals:</p> <ul style="list-style-type: none"> • Integrate land uses and transport networks to shape demand at national, regional and local levels. • Integrate national and local transport networks to support strategic connections and travel choices. • Improve freight supply chain efficiency. • Deliver consistent levels of customer service that meet current expectations and anticipate future demand.
Statement of Performance Expectations	NZ Transport Agency	<p>Key Deliverables for 2016/2017 refers to</p> <ul style="list-style-type: none"> • the delivery of the transport initiatives in the Regional Economic Development Action Plans • Improve freight network productivity
Regional Land Transport Plan 2015–2025	Horizons Regional Council	<p>Key priorities identified in the Plan are:</p> <ul style="list-style-type: none"> • Enhanced freight efficiency across the Region. • Enhance the strategic advantage of the freight hub for the central North Island. • Better targeted investment for a strategic network. • A resilient and multi modal transport system.
Integrated Transport Strategy	Palmerston North City Council	<p>Two key drivers for the transport system identified in the strategy are to:</p> <ul style="list-style-type: none"> • Optimise Use, Access and Movement • Build Resilience

		<p>Underpinning these drivers are the desire to:</p> <ul style="list-style-type: none"> • Increase use of primary freight routes • Maximise resilience and connectivity
Manawatu-Whanganui Growth Study 2015	MBIE, MPI	<p>The study recognises the importance of transport and distribution as key enablers. They are identified as going to the heart of the present and long term future of Manawātū-Whanganui as an exporting area.</p> <p>Logistics and supply chains are vital to economic growth.</p>
The Palmerston North-Manawatu Joint Transport Study 2010	Palmerston North City Council, Manawatu District Council, NZ Transport Agency, Horizons	<p>Sets out a broad plan for the strategic network over the next thirty years based on an adopted rural road hierarchy around Palmerston North.</p> <p>The Strategy identified road improvements required to give effect to the proposed road hierarchy.</p>

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5 KEY FINDINGS/CONCLUSIONS AND NEXT STEPS

5.1 Key Findings

The ILM workshop identified three problems considered to be affecting the efficiency of freight movements within the area covered by the strategic case.

The causes of these problems were attributed to there being no suitable designated freight routes, no suitable road hierarchy established on the ground, high traffic volumes and competing land-uses adjacent to freight routes, highways that are of a poor geometric standard for heavy commercial vehicles and pinch points at intersections where there is conflict between large vehicles.

Investing in these problems would provide benefits that would assist economic growth and productivity through improved freight supply chain efficiency. Key outcomes delivered through the benefits are increases in freight throughput, journey time reliability and increased network availability and accessibility.

Whilst road safety was not identified in either the problem and benefit statements, the causes of the problems have an adverse effect on road safety. Three intersections in Palmerston North that are on key freight routes have very poor crash records, one has a RIAWS installed at it and the other two have reduced speed limits, though these interventions do not address the growing need for more efficient freight journeys. Safety is also an issue between Sanson and Bulls. Therefore, an opportunity exists through the next stage of the business case process to consider improvements to road safety.

The evidence base supports the problem statements and given the clear evidence that Palmerston North is growing as a distribution and freight hub then the case for change is established.

The Manawatu-Whanganui Growth Study 2015 concludes that transport is a key enabler in many aspects of the region's economy and it will be critical to unlocking the opportunities identified in the study. The study identified several issues with road transport that require resolution almost all of which have been identified in this strategic case. The findings of this Strategic Case are fully aligned with the Transport Agencies Statement of Performance Expectations 2016/17 which identifies delivery of the transport initiatives in Regional Economic Development Action Plans and improve freight network productivity as two key deliverables.

5.2 Key Issues for Further Consideration

The identification and confirmation of a road hierarchy to serve key destination within Palmerston North is required as a first step. Whilst this is largely done as part of the JTS it needs to be reviewed in terms of its linkage to the State highway network.

A traffic model is required to inform the further development of the road hierarchy. It is understood that Palmerston North City has a model covering the urban area however this may need to be extended to include parts of the State highway network.

An assessment of how the State highway network can best serve Palmerston North from the south is required. This needs to consider whether the status quo of SH56 and SH57 or a new route would be the most efficient, effective and cost effective way of serving Palmerston North.

A new bridge over the Manawatu River to the south of Linton has been proposed by Palmerston North City Council. This would affect the distribution of traffic using SH56 and SH57 and how the local road network within Palmerston North functions.

5.3 Next Steps

The recommended delivery phases for realising the benefits from investing in change are described below.

Recommendation 1

Progress a Programme Business Case that will consider the programme of options and alternatives for delivering on solving the problems.

There is a clear disconnect between the planned growth in the freight hubbing and distribution sector and other industries in the Palmerston North and wider area, and how development of the transport network has progressed. As a regional economic development area, there is significant potential for transport to enable economic growth, and a lack of investment in the transport network has likely contributed to a reduction in this enabling function. The JTS represents a programme maximum for the transport network, and it can be speculated that the lack of delivery could be because of its low priority nationally, and a lack of commitment to the level of funding required. By exploring programme options it will allow for a comparing a range of interventions and their overall impact on delivering against the investment objectives.

Recommendation 2

Progress an Indicative Business Case for SH3 between Stoney Creek Road and Palmerston North urban boundary at Keith Street. This includes the Roberts Line and James Line intersections.

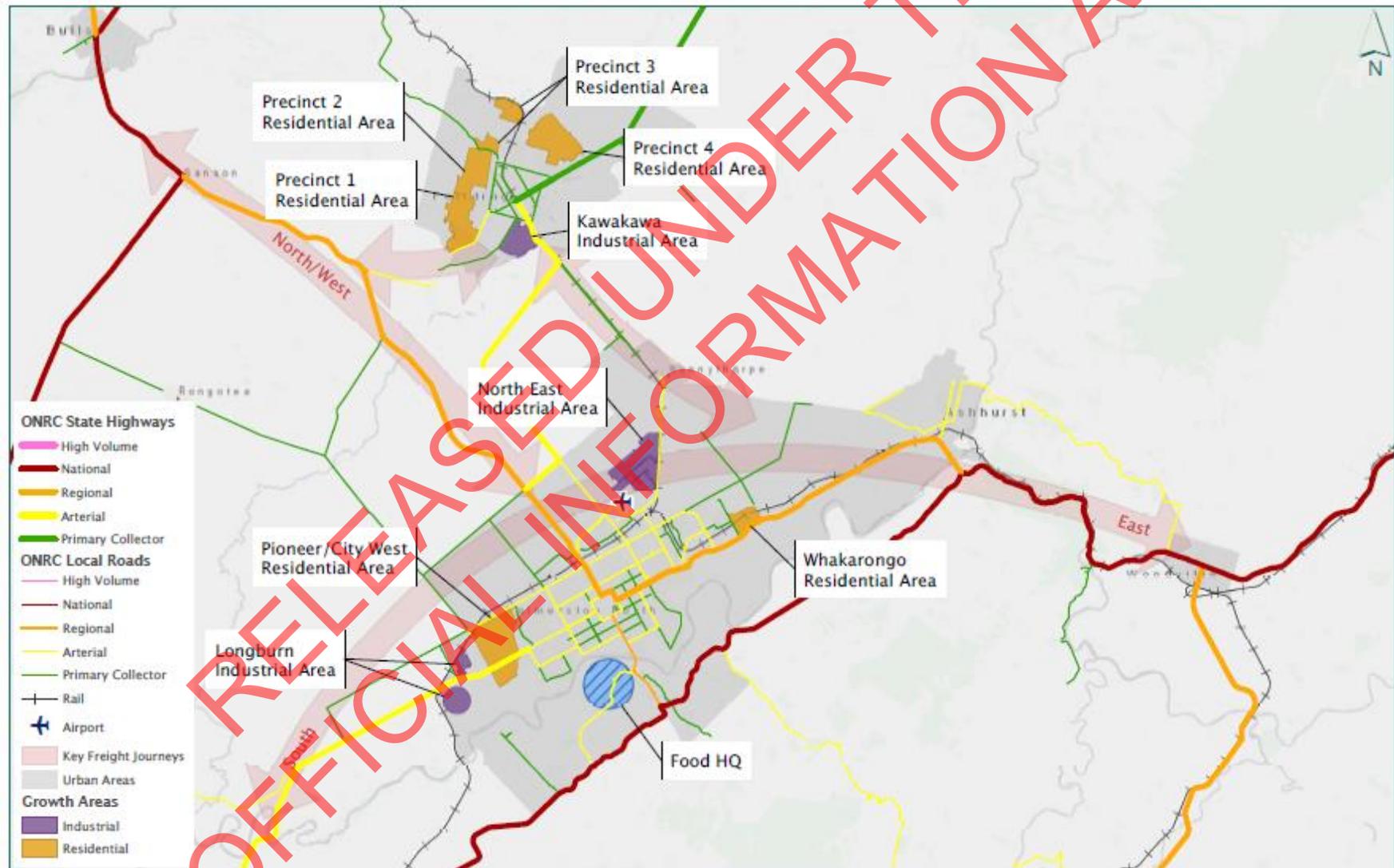
Conflicts in traffic flow, and industrial and residential growth has highlighted this as a key issue. The progress of an Indicative Business Case is required to fully investigate the options for resolving the conflicts between increasing residential development with existing future industrial development..

Recommendation 3

Progress a single stage Detailed Business Case for SH54 between the SH3/54 intersection and Kairanga–Bunnythorpe/Milson Line Intersection, including the two intersections.

Conflicts in traffic flow between Fielding and Palmerston North with increasing traffic growth has highlighted this as a key issue. The progress of a single stage DBC is appropriate as the options have been investigated in detail over recent years. A single stage DBC will more fully consider the short list of options.

APPENDIX A – INDUSTRIAL AND RESIDENTIAL DEVELOPMENT



APPENDIX B – INVESTMENT LOGIC MAP

Include the investment logic map.



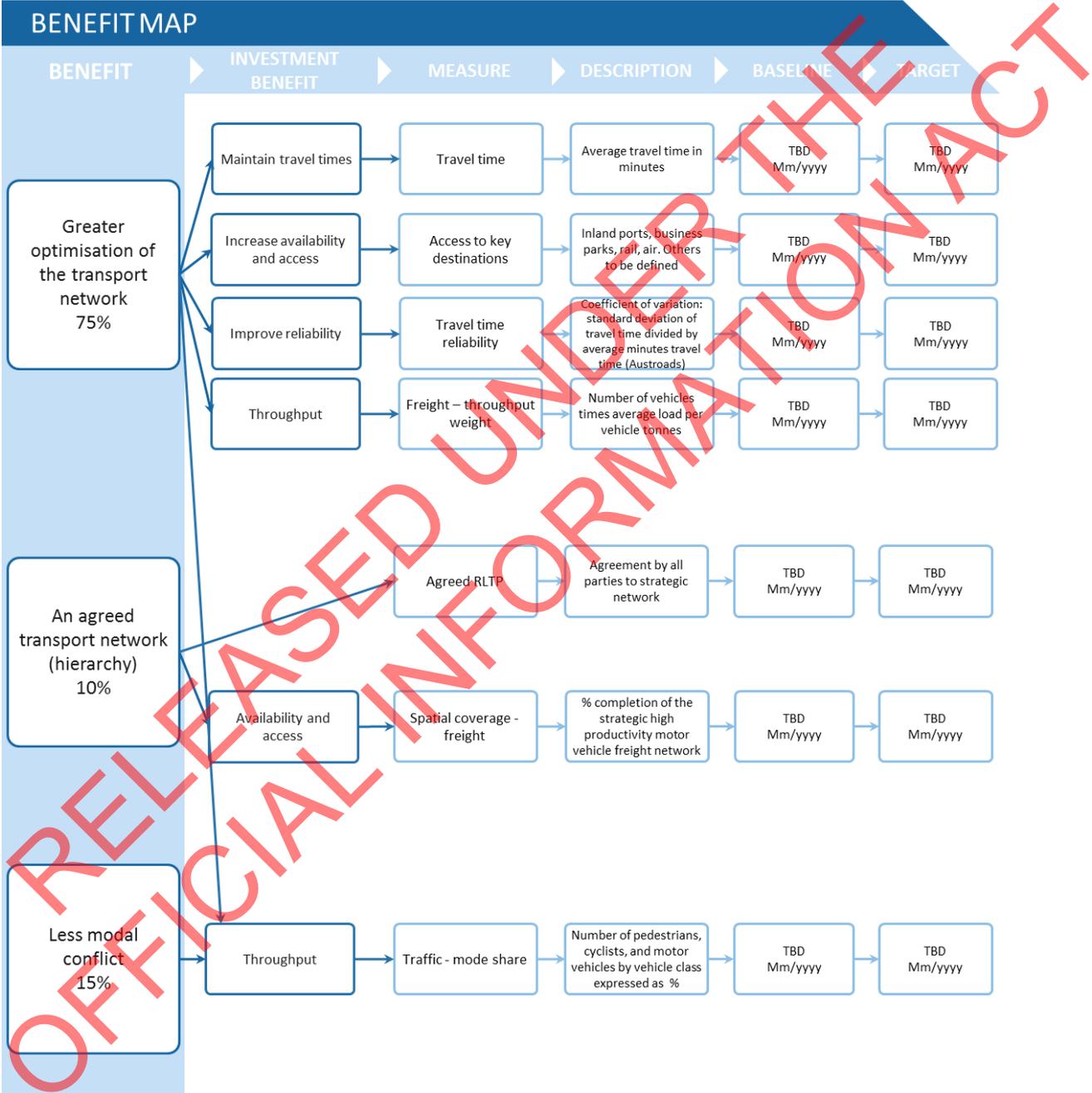
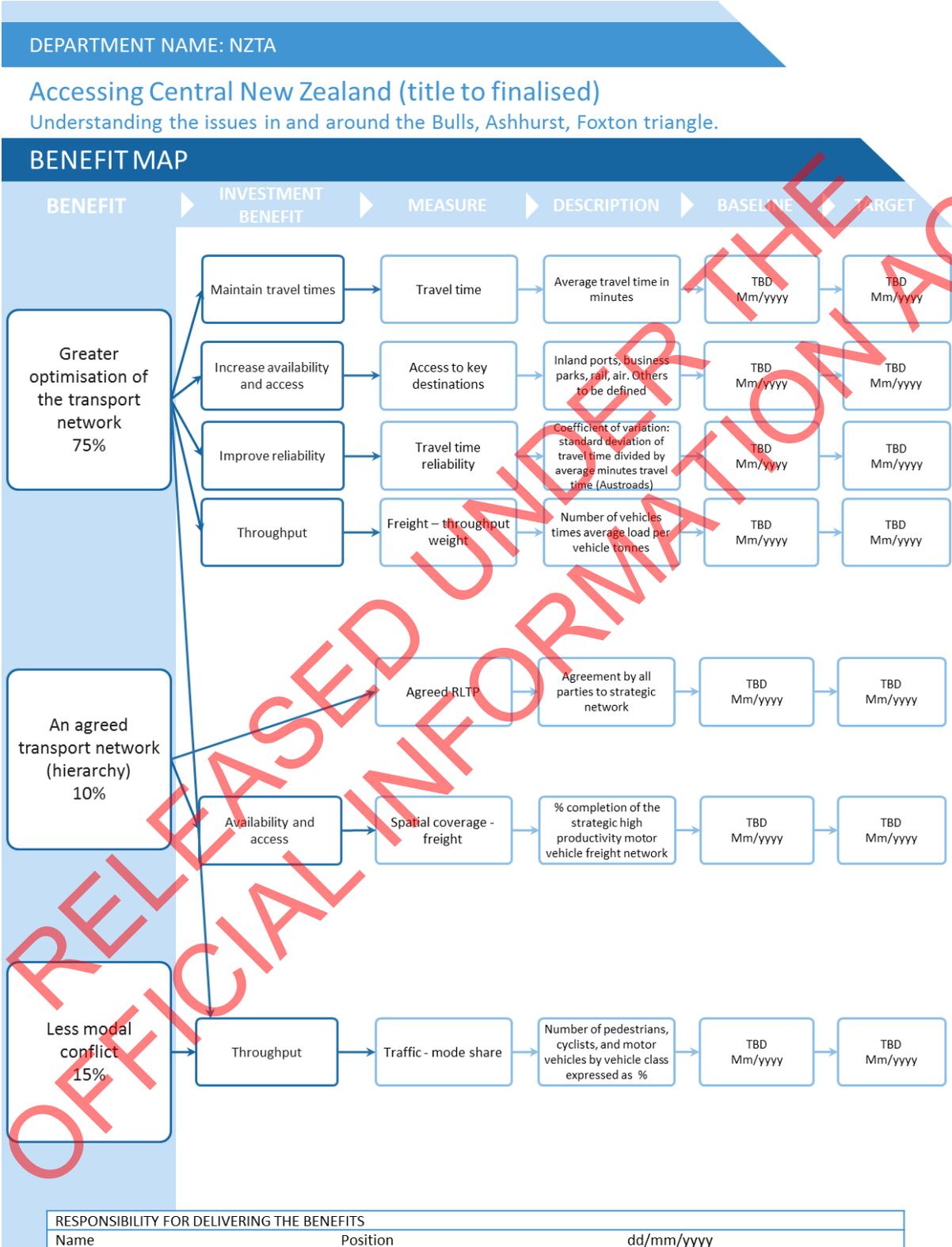
Accessing Central New Zealand (title to be finalised)
 Understanding the issues in and around the Bulls, Ashhurst, Foxton triangle.



Business Problem Owner: Ross l'Asson
 Facilitator: Matt Barnes
 Accredited Facilitator: No

0.3
 28/09/2016
 Matt Barnes 12/10/2016
 5.0

APPENDIX C – BENEFITS MAP



Business Problem Owner: Ross l'Asson
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Accredited Facilitator: No

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