UPPER NORTH ISLAND FREIGHT STORY

Reducing the cost of doing business in New Zealand through an upper North Island lens

SHARED EVIDENCE BASE

April 2013

Developed by the Upper North Island Strategic Alliance

Waikato Regional Council · Hamilton City Council · Northland Regional Council · Whangarei District Council · Auckland Council · Bay of Plenty Regional Council · Tauranga City

in partnership with Auckland Transport, KiwiRail and the NZ Transport Agency

Auckland Transport · KiwiRail · NZ Transport Agency

Foreword

The upper North Island of New Zealand is critical to New Zealand's economic success. More than 55% of New Zealand's freight travels through the Northland, Auckland, Waikato and Bay of Plenty regions, and collectively these regions generate over 50% of New Zealand's gross domestic product. The freight task in the upper North Island is predicted to double by 2035.[1]

The Upper North Island Strategic Alliance (UNISA) is made up of Northland Regional Council, Whangarei District Council, Auckland Council, Waikato Regional Council, Hamilton City Council, Bay of Plenty Regional Council and Tauranga City Council. UNISA is collaborating with Auckland Transport, KiwiRail and the NZ Transport Agency on initiatives to reduce the cost to do business in New Zealand – through an upper North Island lens.

> **"It is crucial that we establish a culture of long term collaboration on significant strategic issues across the upper North Island. We need to work together through collective priority and focus on areas and issues where we can add the most value to enhance New Zealand's economic performance."**
> *Upper North Island Strategic Alliance mayors and regional chairs and chief executives*

The goal is that by delivering freight efficiencies, this will in turn reduce costs of trade – with the result being cheaper goods for New Zealanders and a competitive advantage for New Zealand importers and exporters.

> **"The efficient movement of freight through the upper North Island is vital to New Zealand's economic success. This partnership is an example of the kind of collaboration and joined up thinking that we'll need to see more of in the years ahead to deliver the high performing transport system that New Zealand needs to grow and prosper."**
> *Geoff Dangerfield, Chief Executive NZ Transport Agency*

All the organisations involved share the view that to invest smarter and deliver better certainty for industry and investors, we need to understand the picture at an upper North Island scale and work together, with the sector, on the critical issues that will add the most value.

> **"In delivering an efficient freight network for New Zealand it is important that we work together with other network and land use providers to find integrated solutions. Because rail is such an integral part of the country's freight networks it is an important opportunity to work across the sector to better understand freight flows and industry requirements into the future."**
> *Jim Quinn, Chief Executive KiwiRail*

This approach has had and continues to have discussions with industry, freight operators and ports, to ensure their views are included, and that their needs can be better understood.

[1] Upper North Island Freight Study 2010.

Contents

Disclaimer

The information and data contained in this document, has been produced for the Upper North Island Strategic Alliance, in partnership with Auckland Transport, KiwiRail and the NZ Transport Agency and is for the purpose of information only.

While every attempt has been made to ensure the accuracy and completeness of the information, it cannot be guaranteed and may be subject to change without notice. Any use of this document by a third party is without liability and independent advice should be sought.

Upper North Island Freight Story Overview

The New Zealand government has a strong focus on improving freight efficiency to promote economic growth and productivity and ensure New Zealand has a prosperous future. An example of this is the recent Productivity Commission Inquiry into International Freight Transport (2011-12).

For this vision to be achieved, key decision makers across New Zealand need to work, plan and invest together in the delivery of shared priorities and outcomes.

New Zealand needs to continue to enhance its competitive position in international markets and, as decision makers, we need an integrated land use and transport planning and investment focus on the areas and assets that will give us the highest productivity returns.

We need to provide further certainty and transparency around infrastructure and industry projects to build confidence across the public and private sector and support joined up investment.

And we need to do this together…

In essence, the Upper North Island Freight Story is a process of **high level, upfront conversations**, looking at **key issues and opportunities at an upper North Island scale** where partners can **collectively focus attention and add value** with a direct view to **reduce the costs to do business** and in turn deliver **freight efficiencies and improve the economic performance** of New Zealand.

The purpose of the Upper North Island Freight Story is for key partners in the upper North Island to work together on:

- *a Story*, based on '**reducing the cost to do business in New Zealand** – through an upper North Island lens' to support informed decision making on key land use, infrastructure and investment, to improve the economic performance of the upper North Island and New Zealand
- *a shared approach* for **key partners to make decisions together**.

Purpose of the Upper North Island Freight Story

The purpose of the Upper North Island Freight Story (the Story) is to take a collective partnership approach within an upper North Island 'freight lens' to determine issues or areas that are limiting our ability to 'reduce the cost to do business in New Zealand'.

The Story is about identifying the critical issues at an upper North Island scale with stakeholders and partners, and then developing a shared evidence base to support discussions and decisions.

The Story is purely about supporting better informed decision making from a freight perspective through a factual and evidence based position. Any relevant responses and / or decisions on the identified issues remain with the organisation(s) responsible in partnership with their stakeholders, including how the freight conversation sits within other competing outcomes and areas of focus.

The Productivity Commission's International Freight Transport Services Inquiry Report 2012 endorses the approach taken in the development of the Story. The Commission notes that to better coordinate investment in freight transport infrastructure, greater use should be made of 'facilitated discussion models', such as this.

Purpose of this Document - 'Shared Evidence Base'

This is the supporting document for the *Upper North Island Freight Story – Summary of Critical Issues* and includes the 'shared evidence base' for each of the identified critical issues.

This shared evidence base has been developed by the ten partner organisations within the Story, working and sharing information with other local government, industry, operator and port partners.

This document provides decision makers with a greater depth of information relating to the critical issues identified in the Story and will be used as a key reference for any relevant freight-related decisions by the partner organisations.

To ensure that the shared evidence base remains current the responsibility for ensuring the currency of each critical issue's evidence set will sit with the organisation that has the lead role i.e. Critical Issue: Utilisation of industrial land – the responsibility will be held, on behalf of the partnership, by Hamilton City Council. It is important to note that the ownership of the data and/or information remains with the organisations the data was sourced from.

Upper North Island Strategic Alliance (UNISA)

The Upper North Island Strategic Alliance (UNISA), made up of the three Regional Councils (Northland, Waikato and Bay of Plenty), Auckland Council and the three City/District Councils (Whangarei, Hamilton and Tauranga), have joined together to establish a long term collaboration for responding to and managing a range of inter-regional and inter-metropolitan issues.

The top four 'first order issues' identified by the Strategic Alliance include:

- Economic development linkages
- Transport, including rail, roads, freight
- Ports, including inland ports
- Tourism

The Story is one of the projects and approaches the Strategic Alliance has undertaken to support the first order issues in partnership with Auckland Transport, KiwiRail and the NZ Transport Agency.

Upper North Island Freight Story Critical Issues

Upper North Island scale criteria

The following four criteria were applied to ensure consistency in the scale of and approach used to identify the critical issues:

- Contributes to the economic productivity of the upper North Island and/or NZ.
- Reduces costs to do business at a regional and/or interregional scale.
- Needs a cross regional partnership to resolve and/or deliver.
- Decision or consequence of a decision will impact at a regional and/or interregional scale.

Prioritised critical issues

The critical issues outlined in the tables below were identified through regional workshops by participants, tested against the criteria above with regard to upper North Island scale and then further refined, where relevant, based on technical evidence.

The focus of this exercise was to identify the issues, at an upper North Island scale, that are limiting economic productivity and New Zealand's ability to reduce the cost to do business, and build a shared evidence base to support future discussions and decision making.

The seven critical issues focused on in the Story are:

No.	Critical Issue
1	**Strategic Road and Rail Network Constraints** There are a number of constraints on the upper North Island strategic freight road and rail network that are limiting our ability to enhance economic performance and reduce the cost to do business in New Zealand.
2	**Delivery of the High Productivity Motor Vehicle (HPMV) programme** There is a need to develop a more coordinated approach to the implementation and communication of the upper North Island HPMV programme. Freight operators require a fast and seamless permitting process, appropriate rules and enforcement, consistent coordination between agencies and regular communication on the status of routes ('whole of journey' network approach).
3	**Utilisation of industrial land** There is a need to understand the likely supply and demand for industrial land (amount, type and location) across the upper North Island so that land and public investment can be provided and staged at appropriate times.

No.	Critical Issue
4	**Lack of strategic, integrated land use and transport planning and investment** There is a lack of a comprehensive, integrated approach to current and future land use and land transport (road and rail) planning and investment at an upper North Island scale. A more strategic approach would increase certainty for industry and public sector agencies and support effective industry, local government and central government planning and investment.
5	**Lack of shared and accurate data** A lack of shared and accurate data (e.g. freight volume and value for both road and rail) means it is difficult for public agencies to make well-informed, collective decisions about land use and transport planning and investment that will increase efficiencies for business and public investment.
6	**Need to understand costs of freight supply chains for critical industries in the upper North Island** There is a need to better understand the costs of the freight supply chain for the upper North Island's key economic industries in order to support development / alignment of initiatives by industry and the public sector to reduce the cost to do business.
7	**Challenging local government and central government funding structures** The current range of central and local government funding structures and requirements (i.e. legislation, policy and application) are hindering 'smart investment' decisions due to their multitude and complexity.

Critical issue: **Strategic road and rail network constraints**

Problem definition

There are a number of constraints on the upper North Island strategic freight road and rail network that are limiting our ability to enhance economic performance and reduce the cost to do business in New Zealand.

Approach undertaken

Identify the strategic road and rail network constraints at an upper North Island scale limiting the ability to enhance economic performance.

Benefit from a collective partner focus

Partners can collectively focus on the key areas where we could reduce the cost to do business, now and into the future.

It is imperative to note that this focus is not about investment. Investment decisions sit with the relevant organisations, need to be weighed up along with other investment priorities, and in most cases are governed by legislation or Government policy.

Upper North Island Independent Port Technical Study 2012

The Upper North Island Strategic Alliance commissioned an independent technical study in 2012, which explored current and future freight demand for ports and ports related infrastructure in the upper North Island. The study was undertaken by PricewaterhouseCoopers (PwC).

Evidence and information on corresponding issues was shared, where relevant and appropriate, between this Study and the Story throughout the development of both. One of these key areas was the strategic road and rail network constraints critical issue.

Completed Actions

No.	What	Who	When
1	Identification of strategic road and rail network constraints through regional workshops and technical analysis.	Technical Working Group	Complete (included in Shared Evidence Base)
2	Development of a 'strategic road and rail network constraints table' including key information on each of the constraints.	Technical Working Group	Complete (included in Shared Evidence Base)
3	Development of methodology to identify benefit at a corridor level for further collective partner focus in reducing the cost to do business.	Technical Working Group	Complete (included in Shared Evidence Base)

Future Actions

No.	What	Who	When
4	Continue to work in partnership through future discussions on the identified road and rail network constraints.	Lead: NZ Transport Agency KiwiRail Upper North Island Strategic Alliance Councils Auckland Transport	from 2013
5	Look at opportunities for the development of an integrated system and / or model to support a shared evidence base for future decision making on critical road and rail network constraints. When system or model in place, test back against the growth projections of the Upper North Island Independent Port Technical Study 2012.	Lead: NZ Transport Agency KiwiRail Upper North Island Strategic Alliance Councils Auckland Transport	from 2013
6	Include strategic constraints information into the Upper North Island Freight Plan and into relevant strategic transport planning processes and decision making.	NZ Transport Agency KiwiRail Upper North Island Strategic Alliance Councils Auckland Transport	from 2013

Evidence and analysis set

- Upper North Island strategic road and rail constraints benefit for collective partner focus methodology.
- Comparative list of corridors for collective partner focus.
- Upper North Island strategic road and rail network constraints table (key information on each constraint).

Benefit for collective partner focus - methodology

The critical constraints have been assessed to identify where the greatest potential for further collaborative focus lies. The methodology, in summary, used information about whether the issue was of significant scale, needed to be addressed in the short to medium term (<10yrs), whether funding was already committed to address the issue and, finally, ranked the constraints based on the degree to which they meet the upper North Island scale criteria, and the average scale of freight volumes and values at a corridor level being 'impacted' on. This provides a comparative list in terms of highest to lowest to highlight areas where partners could focus further collaborative work.

The methodology used to develop a comparative list of the constraints is as follows:

- The 28 constraints were grouped, where appropriate, into 16 defined corridors.
- Where possible a site reference number from one of the monitoring points from the NZ Transport Agency New Zealand Freight Flows Model (Market Economics 2012) was allocated to each constraint. This allows for a cross-check of the data provided. Where appropriate State highway monitoring site data was matched to local road and rail constraints.
- Freight values were calculated from the NZ Transport Agency New Zealand Freight Flows Model. For constraints grouped into corridors, the value of freight passing through the corridor was determined by averaging measured flows or calculating a value from nearby State highway monitoring sites and measured heavy vehicle volumes (i.e. local road data).
- Each 'corridor' was then tested against the upper North Island scale criteria:
    - Corridor contributes to the economic productivity of the upper North Island and/or New Zealand.
    - Corridor can contribute to reducing costs to do business at a regional and/or interregional scale.
    - Corridor needs a cross regional partnership to resolve and/or deliver.
    - Decision or consequence of decision will impact at a regional and/or interregional scale.
- The corridors were then assessed to determine:
    - Does some or the entire corridor need action in the short–medium term (<10yrs)?
    - Is all funding required fully committed for the short - medium term action?
- This then identified those corridors that met the majority of the upper North Island scale criteria, need work in the short – medium term and that don't have all funding committed.
- The corridors were then ranked by the average volumes and values of freight passing through them at a corridor level.
- The rail Heavy Annual Average Daily Trips (HAADTs) use net tonnes divided by 20, plus a 20% 'backload' factor, where vehicles are using the same route empty. The backload factor of 20% under represents likely truck-equivalent volumes. The annual figure was divided by 350 to determine to daily figure.
- A number of High Productivity Motor Vehicle (HPMV) corridor constraints were identified. These are not listed in the upper North Island strategic road and rail network constraints table, below, as they are detailed in the Critical Issue: **Delivery of the High Productivity Motor Vehicle (HPMV) programme**.

Comparative list of corridors for collective partner focus

Based on the methodology, following is the list of corridors ranked high, medium or low in terms of 'scale of benefit of collective partner focus' in reducing the cost to do business.

High

- Auckland north – south state highway road corridor
- Auckland urban state highway links corridor
- Auckland urban local road corridors
- Inter-regional road corridors (Auckland / Waikato / Bay of Plenty)

Medium

- Whangarei - Auckland road corridor
- Auckland north – south rail corridor
- Greater Hamilton access corridors
- Inter-regional rail corridors (Auckland / Waikato / Bay of Plenty)
- Tauranga central corridor
- Tauranga rail corridor

Low

- Whangarei – Auckland rail corridor
- Inter-regional corridors (Waikato / Hawke's Bay / Manawatu-Whanganui)
- Inter-regional corridors (Waikato / Taranaki / Manawatu-Whanganui)
- Thames / Coromandel Coast corridors

Low (due to insufficient data at this time for assessment)

- Mangakahia Road, Pipiwai Road and Opouteke Road Corridor
- Whangarei – Marsden Rail Corridor

NZ Transport Agency New Zealand Freight Flow Model

The NZ Transport Agency New Zealand Freight Flow Model (Market Economics 2012) used to build the following network constraint evidence is in early phases of development and currently is not as robust in the rail data as it is in the road data – hence there is further work required to source key data around value and volume on the upper North Island rail network, which could result in future changes to the above ranking.

Upper North Island strategic road and rail network constraints table

The purpose of this table and methodology is to give an indication of the network constraints or corridor of constraints that could benefit from or deliver best return in terms of a collective partner focus on 'reducing the cost to do business' in the upper North Island. It is not to identify a priority order or timing for investment.

It is recognised that this table identifies strategic road and rail network constraints for freight on a corridor basis. In large urban areas, the efficiency across the whole transport network is significant in the 'cost of doing business'. Consequently for large urban areas, in particular, it is important to consider the corridor constraints as part of a whole-of-network approach. The strategic responses across congested urban networks will include public transport, active modes and demand management initiatives.

REF #	NAME OF CORRIDOR	NAME OF CONSTRAINT	MONITORING REFERENCE ID (Freight flows model)	STRATEGIC LINK National Network i.e. State Highway classification / RLTS classification	KEY ISSUE with constraint in reducing the cost to do business	VOLUME Average Annual Daily Traffic (AADT) through constraint 2011 data	VOLUME % Heavy Vehicles within AADT through constraint	VALUE of product carried through constraint 2011 (2007$mil)	CORRIDOR LEVEL STRATEGIC RESPONSES What is the range of strategic interventions that could be considered? Includes short (0-5yrs), medium (6-10 yrs) and long –term (>10 yrs). Committed investments or current processes noted where known	BENEFITS POTENTIAL to be realised through a upper North Island collaborative approach	AREAS FOR UPPER NORTH ISLAND COLLABORATION To assist in resolving the constraint
Northland – Road											
NRD1	Whangarei - Auckland Road Corridor	**Whangarei Urban Congestion**	01N00265	SH1 National Strategic Route Classification	Congestion, travel time reliability at peaks.	23,000	1,610 (7%)	$9,019	**Short term:** • Whangarei City Urban State Highway corridor – widening to four lanes ($20 million). • Portland / Loop Road intersection – partial grade separation intersection upgrade and associated upgrade to adjoining local road bridges ($15.6 million) • Brynderwyns – Minor realignment of existing route ($23 million). • Puhoi - Warkworth Expressway / Motorway (RoNS)– route identified and currently at planning / consenting stage (consent applications to be lodged by August 2013) $0.76 billion • Develop land use controls supporting access management along entire corridor. **Medium term:** • Warkworth to TeHana Expressway / Motorway (RoNS) - major realignment indicative route identified ($1.03 billion) • Protection of corridor areas in-between these major project areas for future capacity. • Brynderwyn's – investigation of major realignment / alternative secure route (yet to be investigated). **Long term:** • Upgrading of entire corridor between Whangarei and Puhoi – including local road connections to Motorway / Expressway performance.	**Medium**	
NRD2	Whangarei - Auckland Road Corridor	**Portland Road / Loop Road Intersection**	01N00274	SH1 National Strategic Route Classification	Main intersection for logging trucks heading to Northport on SH1. Right turn causes frequent stacking and delays.	14,000	1,540 (11%)	$10,447			
NRD3	Whangarei - Auckland Road Corridor	**Brynderwyns**	01N00309	SH1 National Strategic Route Classification	Steep grades, travel time reliability, vehicle operating costs and lack of suitable alternative for freight traffic (route security).	7,900	950 (12%)	$10,336			
NRD4	Whangarei - Auckland Road Corridor	**Wellsford - Warkworth** (including TeHana)	01N00357	• SH1 National Strategic Route Classification • Road of National Significance (RoNS)	Steep grades, travel time reliability, vehicle operating costs and route security.	11,207 (Nth of Kraak Rd)	1,009 (9.2%)	$11,550			
NRD5	Whangarei - Auckland Road Corridor	**Warkworth - Puhoi**	01N00372	• SH1 National Strategic Route Classification • Road of National Significance (RoNS)	Steep grades, travel time reliability, vehicle operating costs, congestion and route security.	17,000 (Pohuehue viaduct)	1,200 (7%)	$12,969			

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NRD6	Mangakahia Road, Pipiwai Road & Opouteke Road Corridor	**Mangakahia Road, Pipiwai Road & Opouteke Road**	Not referenced due to constraint being at a corridor level rather than a specific location.	HPMV Regionally Proposed Investment Route.	6 specific bridges require strengthening to accommodate HPMV use.	2,100 (Mangakahia) 1,700 (Pipiwai) 214 (Opouteke)	273 (13%) 83 (4.9%) 100 (47%)	Local road - therefore data not available	**Short term:** • Will be assessed in the second tranche of HPMV routes.	**Low** (due to insufficient data for assessment)	
Northland – Rail											
NRL1	Whangarei - Auckland Rail Corridor	**North Auckland Rail Line**	01400034	Branch Line	Some track and bridges restrict train speeds, and some tunnels prevent the line catering for high cube containers.	N/A	220,000 net tons per annum	$818	**Short term:** • Invest in capacity improvements (Gauge clearance work required in 10 of 13 tunnels plus some bridge strengthening – not committed). • Understand customer requirements and ensure roading connections to rail facilities are supporting customer and KiwiRail needs. • Implement strategic land use planning to encourage industrial clustering around rail hubs. **Medium term:** • Protect corridor in Auckland (Avondale to Southdown) to remove freight traffic from inner city rail network. **Long term:** • Construct corridor in Auckland (Avondale to Southdown) : costs not identified/funding not committed	**Low**	
NRL2	Whangarei - Marsden Rail Corridor	**Port Marsden not rail served**	No suitable road reference point available at this time.	Future branch line	Lack of rail link to port limits opportunities. Linked to Northport in the upper North Island.	N/A	N/A	N/A	**Short term:** • Develop business case for new rail link to Port Marsden (designation and resource consents for construction approved; land purchases underway, construction funding uncommitted). • Develop understanding and recognition of the strategic value of a rail connection to Northport in terms of the freight task and the operation of rail and ports within the upper North Island. **Long term (>10yrs):** • Construction of Marsden Point Rail Link - currently estimated at $130 million (funding uncommitted)	**Low** (due to insufficient data for assessment)	

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Auckland – Road											
ARD1	Auckland North - South State Highway Corridor	**Auckland Harbour Crossing**	01N00424 01N10424 01N20424 (Centre span + 2 X clip ons)	SH1 National Strategic Route Classification	Congestion and travel time reliability. Need to manage growth in heavy vehicles in medium-term. Restrictions on use by HPMVs.	158,220 (2011)	5,850 (5.0%)	$75,458	**Short term:** • Alternative Western Ring Route (Waterview and SH16 committed) • SH1 Corridor Optimisation - signal optimisation, ramp metering, freight priority lanes • Removal of pinch points on the strategic road network to improve throughput • Auckland Harbour Bridge heavy freight vehicle management • Travel demand management programmes – public transport service improvements, increasing vehicle occupancy, parking management • Additional Harbour Crossing Route protection **Medium term:** • Complete removal of pinch points on the strategic road network • Auckland Harbour Bridge heavy freight vehicle management **Long term:** • Construction of additional Auckland harbour crossing • Travel demand management – road pricing	**High**	
ARD2	Auckland North - South State Highway Corridor	**General North - South route (SH1)** Ports of Auckland to SH2	01N00463	• SH1 National Strategic Route Classification. • Part of a HPMV Investment Route	Congestion and travel time reliability including HPMV structural constraints.	128,165 (2011 at Green Lane I/C)	7,180 (5.6%)	$70,874			
ARD3	Auckland Urban State Highway Links	**Airport Access (SH20A & SH20B)**	20A00003	SH20 National Strategic Route Classification.	Congestion and travel time reliability.	61,600 (2011, SH20A & SH20B)	3,600 (5.7%)	$14,436 (SH20A)	**Short term:** • Improved road access to the port - Grafton Gully investigation (underway) **Medium term:** • Upgrade of road access to the port **Long term:** • Upgrade SH20A to motorway standard (includes grade separation) • Upgrade SH20B to expressway • 6 lane SH20 from Mangere to Puhinui • Travel demand management – road pricing	**High**	
ARD4	Auckland Urban State Highway Links	**Port Access (SH16)**	01600001	SH16 National Strategic Route Classification Part of a HPMV Investment route	Congestion and travel time reliability.	42,790 (2011)	3,125 (7.3%)	$30,873			
ARD5	Auckland Urban	**Neilson Street**	02010010	• Local Road -	Congestion and travel	29,600	4,875	Local road	**Short term:**	**High**	

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	Local Road Corridors			Regional arterial. • Includes local road portions of HPMV investment routes.	time reliability.	(2012)	(13.4%)	- therefore data not available	• Arterial road network improvements for capacity and journey time reliability (upgrade of Neilson St - under construction; investigation of East-West Link solutions – currently at pre-investigation phase) • Invest in multi-modal infrastructure across multiple corridors - (Auckland Manukau Eastern Transport Initiative (AMETI) Part funded. Some construction underway) • Use congestion management to reduce travel demand through improvements in public transport services, travel planning, parking management. Arterial road network improvements; • Optimise use of existing network (Network Operating Plans under development); • Implement land use controls supporting access management (Proposed Auckland Unitary Plan); **Medium term:** • Arterial road network improvements; • Congestion Management - reduction in travel demand on the inner city road network through construction of City Rail Link and improvement in public transport services. **Long term:** • Travel demand management – road pricing		
ARD6	Auckland Urban Local Road Corridors	**East – West Link** (Otahuhu link to Southdown)	01N10454	• Local Road - Regional arterial. • Includes local road portions of HPMV investment routes.	Congestion and travel time reliability. Lack of strategic east-west connection. Poor connectivity to inland port, airport and surrounding business land.	29,600 (2012)	4,875 (13.4%)	Local road - therefore data not available			
ARD7	Auckland Urban Local Road Corridors	**Auckland Manukau Eastern Transport Initiative** (AMETI)	01N10435	Local Road - Regional arterial.	Congestion and travel time reliability.	85,880 (2010, Pakuranga Bridge & Lagoon Drive)	10,550 (12.3%)	Local road - therefore data not available			
ARD8	Auckland Urban Local Road Corridors	**Arterial routes on the Regional Freight Network**	01N10454	Local Roads - Regional Freight Network.	Congestion and travel time reliability.	Varies	Varies	Local road - therefore data not available			
Auckland – Rail											
ARL1	Auckland North – South Rail Corridor	**Auckland Eastern Line to Port**	No suitable road reference point available at this time.	Yes	Significant growth in Public Transport (PT) trains timetable will limit freight capacity including link to Port of Auckland.		1,100,000 net tonnes total per annum,	$9,694	**Short term:** • City Rail Link Investigation • Investigation of additional 3rd track (uncommitted - currently at pre-investigation phase) • Optimise use of existing network (signalisation, scheduling, siding improvements) **Medium term:** • Construction of City Rail Link and integration with bus services **Long term:** • Triple track the North Island Main Trunk rail line	**Medium**	

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									(the Port to Westfield to Wiri to Papakura) • Improved rail freight handling capacity within the port		
Waikato – Road											
WRD1	Inter-regional Corridors – Waikato / Hawke's Bay / Manawatu-Whanganui	**SH1 Piarere to Desert Road**	01N10636	• SH1 National Strategic Route Classification. • Part of a HPMV Investment route	Critical link through to central North Island and a conduit for north -south freight movements. Carries high proportion of heavy vehicle traffic, limited passing opportunities and high crash rate.	7,906 (South of Piarere) 9,095 (Litchfield) 3,331 (Rangipo)	973 (12.3%) 1,423 (15.7%) 570 (17.1%)	$4,479	**Short term:** • Road network improvements for safety and travel time reliability (Tirau SH1/5 improvements design & construction – included in 2012-15 NLTP; Piarere Junction safety improvements included in 2012-15 NLTP) • Land use interventions including management of road hierarchy and access to the network (South Waikato District Plan Review) • Land use interventions to maintain efficient operation of road network (Taupo District Plan changes – align land use with optimising investment in East Taupo Arterial) **Medium term:** • Road network improvements for safety and travel time reliability **Long term (>10yrs):** • Road network improvements for Route Security (south of Taupo)	**Low**	
WRD2	Thames / Coromandel Coast corridors	**Coromandel Peninsula** SH25 (Thames Coast Road) / SH25A	02500036	SH25 Regional Distributor / Regional Connector Route Classification.	Route security, safety (including conflicts between freight and tourist traffic).	SH25: 5,665 (Thames Coast) SH25A 3,228	328 (5.8%) 258 (8.0%)	$860 $849	**Short term:** ○ Road network improvements for route security and safety (South Coromandel motorcycle safe system demonstration project; SH2/25 intersection improvements– included in NLTP 2012-15) ○ Land use policies and rules to manage access to the State highway network (Thames Coromandel District Plan changes to implement Blueprint strategy principles).	**Low**	
WRD3	Inter-regional Corridors – Waikato / Taranaki /	**SH3**	00300012	• SH1 Regional Strategic Route Classification. • Part of a HPMV	Freight route for servicing Port Taranaki, route security and safety issues. Need for good	11,047 (Sth of SH21) 6,906	1,005 (9.1%) 1,043		**Short term:** ○ Road network (strategic responses currently being developed by SH3 working group collaborative	**Low**	

REF #	NAME OF CORRIDOR	NAME OF CONSTRAINT	MONITORING REFERENCE ID (Freight flows model)	STRATEGIC LINK National Network i.e. State Highway classification / RLTS classification	KEY ISSUE with constraint in reducing the cost to do business	VOLUME Average Annual Daily Traffic (AADT) through constraint 2011 data	VOLUME % Heavy Vehicles within AADT through constraint	VALUE of product carried through constraint 2011 ($2007mil)	CORRIDOR LEVEL STRATEGIC RESPONSES What is the range of strategic interventions that could be considered? Includes short (0-5yrs), medium (6-10 yrs) and long –term (>10 yrs). Committed investments or current processes noted where known	BENEFITS POTENTIAL to be realised through a upper North Island collaborative approach	AREAS FOR UPPER NORTH ISLAND COLLABORATION To assist in resolving the constraint
	Manawatu-Whanganui			Investment route	connections to upper North Island and any future port developments. Also Includes HPMV structural constraints, Hamilton to Mokau HMPV.	(South of Otorohanga) 2,109 (Piopio)	(15.1%) 460 (21.8%)	$3,675	process) ○ freight fleet productivity improvements (possible measures to permit HPMV use under investigation)		
WRD4	Greater Hamilton Access Corridors	**Hamilton Western Corridor**	01N00548	Local Road - Regionally Significant Corridor (Hamilton Ring Road).	Inter-regional freight travelling through SH 1 through Hamilton encounters delays at Greenwood/ Kahikatea/ Lorne Street and at the Hillcrest and Morrinsville Road Intersections. Will be assisted by completion of the Waikato Expressway (medium term).	22,107 (Greenwood St) 26,575 (Hamilton East) 34,750 (Hillcrest)	1,750 (7.9%) 1,514 (5.7%) 1,738 (5.0%)	$12,755	**Short term:** • Invest in road network improvements in Hamilton Western Corridor (Kahikatea Drive / Greenwood intersection improvements proposed; Hillcrest/ Morrinsville Road intersection improvements proposed); • Optimise use of existing road network (Hamilton City Network Operating Plan under development); • Land use interventions supporting access management (Proposed District Plan under consultation); **Medium term:** • Invest in alternative route for traffic bypassing Hamilton (Hamilton Section of Waikato Expressway designated – construction funding not committed); **Long term:** • Protect corridor options for future infrastructure to increase capacity, (Hamilton Southern Links under investigation; additional river crossing to north of Hamilton signalled in Access Hamilton strategy).	**Medium**	
WRD5	Inter-regional Road Corridors – Auckland / Waikato / Bay of Plenty	**SH1 Pokeno to Piarere (SH1/29)**	01N00533	• SH1 National Strategic Route Classification. • Part of a HPMV Investment route	Primary freight route connecting Auckland and Waikato regions to Bay of Plenty and south. Conflicts between freight and local traffic in urban centres along SH1. Also includes HPMV structural constraints.	20,878 (Nth of Huntly) 20,686 (Taupiri) 23,420 (Tamahere) 14,629 (Karapiro)	2,422 (11.6%) 2,130 (10.3%) 2,130 (6.8%) 1,551 (10.6%)	$14,917	**Short term:** • Invest in road network improvements for travel time reliability and journey time along SH1 corridor between Pokeno and Cambridge (Waikato Expressway Road of National Significance – Rangiriri, Ngaruawahia, Cambridge sections under construction; Te Rapa section completed Dec 2012). • Optimise investment in Waikato Expressway through associated transport and land use activities (as identified in Waikato Expressway Network Plan)	**High**	
WRD6	Inter-regional Road Corridors	**SH29 Piarere to Kaimai**	02900043	• SH1 National Strategic Route Classification.	Primary freight route connecting Bay of Plenty,	8,770 (Kaimai	1,250 (14.3%)	$6,195			

REF #	NAME OF CORRIDOR	NAME OF CONSTRAINT	MONITORING REFERENCE ID (Freight flows model)	STRATEGIC LINK National Network i.e. State Highway classification / RLTS classification	KEY ISSUE with constraint in reducing the cost to do business	VOLUME Average Annual Daily Traffic (AADT) through constraint 2011 data	VOLUME % Heavy Vehicles within AADT through constraint	VALUE of product carried through constraint 2011 ($2007mil)	CORRIDOR LEVEL STRATEGIC RESPONSES What is the range of strategic interventions that could be considered? Includes short (0-5yrs), medium (6-10 yrs) and long –term (>10 yrs). Committed investments or current processes noted where known	BENEFITS POTENTIAL to be realised through a upper North Island collaborative approach	AREAS FOR UPPER NORTH ISLAND COLLABORATION To assist in resolving the constraint
	– Auckland / Waikato / Bay of Plenty			• Part of a HPMV Investment route	Auckland and Waikato regions, including access to Port of Tauranga. Includes HPMV structural constraints.	Ranges) 5,684 (South of Hinuera)	915 (16.1%)	$4,763	• Strategic planning activities and freight network improvements (actions and mode scope still to be confirmed - strategic responses developed by SH1/29 working group collaborative process) • Promote, develop and protect SH1 and SH29 as a strategic long term corridor connecting Auckland and the Waikato with the Bay of Plenty, including though protection of corridor options. • Optimise use of available freight capacity on cross Kaimai routes via road (SH2/27, SH1/29 etc), rail (NIMT/ ECMT) and coastal shipping to determine best modal responses and timing • Proposed land use policy which identifies Future Proof industrial land allocation and staging **Medium term:** • Invest in road network improvements for travel time reliability and journey time along SH1 corridor between Pokeno and Cambridge (Waikato Expressway Road of National Significance – Huntly & Hamilton sections: construction funding not committed) • Optimise investment in Waikato Expressway through associated transport and land use activities (as identified in Waikato Expressway Network plan) **Long term:** • Road network improvements for improved journey time, travel time reliability on SH29 across Kaimais (possible future Road of National Significance)		
BRD2	Inter-regional Road Corridors – Auckland / Waikato / Bay of Plenty	**SH29 Tauriko - Kaimai Ranges** Kaimai Ranges between the Waikato and Bay of Plenty regions	02900034	• SH29 National Strategic Route Classification. • Part of a HPMV Investment route	Investment in the Waikato Expressway means this is the strategic long term route for road freight movements between the Bay of Plenty and other upper North Island regions. Kaimai ranges gradient seen as impacting on freight efficiencies. Includes HPMV structural constraints.	16,276 (Tauriko) 8,770 (Kaimai summit)	1,903 (11.7%) 1,250 (14.3%)	$6,195			
Waikato – Rail											
WRL1	Inter-regional Rail Corridors – Auckland / Waikato / Bay of Plenty	**East Coast Main Trunk (ECMT) West of Tauranga**	02900034	KiwiRail Turnaround Plan – Key route	ECMT is single track, however recently completed crossing loops doubled route capacity to 4 trains/hour (up to 900m long). A number of other infrastructure and rolling stock options exist before the Kaimai tunnel is a		3,800,000 net tonnes per annum	$7,011	**Short to medium term:** • Planning phase for enhancement works to 12km section (North Island Main Trunk) **Medium to long term:** • Construction of sections of double tracking (North Island Main Trunk north of Hamilton). Currently uncommitted. • East Coast Main Trunk crossing loops and double tracking to Kaimai tunnel portal as funding permits.	**Medium**	

REF #	NAME OF CORRIDOR	NAME OF CONSTRAINT	MONITORING REFERENCE ID (Freight flows model)	STRATEGIC LINK National Network i.e. State Highway classification / RLTS classification	KEY ISSUE with constraint in reducing the cost to do business	VOLUME Average Annual Daily Traffic (AADT) through constraint 2011 data	VOLUME % Heavy Vehicles within AADT through constraint	VALUE of product carried through constraint 2011 (2007$mil)	CORRIDOR LEVEL STRATEGIC RESPONSES What is the range of strategic interventions that could be considered? Includes short (0-5yrs), medium (6-10 yrs) and long –term (>10 yrs). Committed investments or current processes noted where known	BENEFITS POTENTIAL to be realised through a upper North Island collaborative approach	AREAS FOR UPPER NORTH ISLAND COLLABORATION To assist in resolving the constraint
					constraint.				• Investment requirement not determined		
WRL2	Inter-regional Rail Corridors – Auckland / Waikato / Bay of Plenty	**NIMT (north of Hamilton)**	01N10509	KiwiRail Turnaround Plan – Key route	Te Kauwhata to Amokura single track		4,700,000 net tonnes per annum	$11,992	**Short to medium term:** • Planning phase for enhancement works to 12km section • Medium to long term: construction of sections of double tracking. Currently uncommitted.		
Bay of Plenty - Road											
BRD1	Tauranga Central Corridor	**Tauranga Urban Area** Strategic road routes through Tauranga urban area (includes SH2 & SH29)	00200160	• SH29 National Strategic Route Classification. • SH2 Regional Strategic Route Classification.	Constraints on the expansion of key road freight corridors including to the Port of Tauranga. Mixing of freight and commuter traffic. Likely to increase in the future with the further development of the Port of Tauranga and projected freight and population increases.	23,314 (SH2 Bethlehem) 30,634 (Takitimu Drive) 39,780 (Hewlett's Road)	1,958 (8.4%) 2,360 (7.7%) 4,177 (10.5%) 2,162 (9.7%)		**Short term:** • Road network improvements for capacity and travel time reliability (SH29 Hairini Link Stage 4 design and construct and Maunganui-Girven intersection improvements design and construct included in NLTP 2012-15) • Optimise staged development of land to south and west of Tauranga city (SmartGrowth Review in progress during 2013). • Use travel demand management to optimise use of arterial network • Optimise use of existing road network (Network Operating Plan proposed by Tauranga Urban Network Study). **Medium term:** • Integrated network improvements for capacity and travel time reliability in Northern Corridor. • Optimise staged development of land to south and west of Tauranga city (SmartGrowth Review in progress during 2013). **Long term:** • Integrated network improvements for capacity and travel time reliability in Northern Corridor • Optimise staged development of land to south and west of Tauranga city (SmartGrowth Review in progress during 2013).	**Medium**	
Bay of Plenty – Rail											

REF #	NAME OF CORRIDOR	NAME OF CONSTRAINT	MONITORING REFERENCE ID (Freight flows model)	STRATEGIC LINK National Network i.e. State Highway classification / RLTS classification	KEY ISSUE with constraint in reducing the cost to do business	VOLUME Average Annual Daily Traffic (AADT) through constraint 2011 data	VOLUME % Heavy Vehicles within AADT through constraint	VALUE of product carried through constraint 2011 (2007$mil)	CORRIDOR LEVEL STRATEGIC RESPONSES What is the range of strategic interventions that could be considered? Includes short (0-5yrs), medium (6-10 yrs) and long –term (>10 yrs). Committed investments or current processes noted where known	BENEFITS POTENTIAL to be realised through a upper North Island collaborative approach	AREAS FOR UPPER NORTH ISLAND COLLABORATION To assist in resolving the constraint
BRL1	Tauranga Central Rail Corridor	**Tauranga CBD / Port** Strategic rail links through • Tauranga urban area (Strand level crossings) • Port rail capacity limited	00200160	KiwiRail Turnaround Plan – Key route	Amenity conflicts and reverse sensitivity as train movements increase and CBD development continues. Shunting in CBD area caused by limited port rail capacity. Line failure would have major implications for the road network if freight was transferred to the road.		1,400,000 net tons per annum	$7,011	**Short term:** • Port of Tauranga increasing rail capacity – underway. **Medium to long term:** • Reverse sensitivities and CBD level crossings need addressing at local level.	**Medium**	

Note: It has been a challenge to compare 'like with like' for road verses rail freight, as rail volume information is measured while road information is modelled.

Strategic Responses:

- a high-level approach to addressing the issues identified
- have more than one way to be implemented (i.e. not a solution)
- think about demand (e.g. land use, travel demand management), productivity (e.g. network operational efficiency, logistics methods, vehicle productivity), and supply (additional capacity etc.).

Evidence sources reference table

Evidence sources and other information or processes (used in the absence of empirical evidence)	Format and held by	Use / application within the Upper North Island Freight Story
Critical issues: Strategic road and rail network constraints		
National		
Automobile Association Roadwatch. Road closures & locations of constraints. weblink	• Tables – Web, electronic • AA	Use ideal versus congested time data
Ministry of Transport. Transport Monitoring Indicator Framework. weblink	• Tables / Charts / CSV / PNG – Web, electronic • Ministry of Transport	Use appropriate indicator sets
NZ Transport Agency (NZTA). National Road Classification System (NRCS) tables	• Tables – Kete, electronic • NZTA	Use criteria to help rank constraints
NZTA. National State highway classification criteria. weblink **and** weblink	• Tables – Web, electronic • NZTA	Use criteria to help rank constraints
NZTA. 2012. Upper North Island Freight Flows Model. Market Economics	• electronic model and hard copy outputs • NZTA	Link with State highway traffic count site reference to determine appropriate volume & value of freight
NZTA. 2012. State Highway Traffic Data Booklet 2011. Appendix A National Telemetry Site Summary Report (2007-2011). weblink	• Electronic and hard copy maps, tables, graphs • NZTA	Link AADT & % Heavy data with freight flows model
Northland		
Whangarei District Council. 2010. *Sustainable Futures 30/50*. weblink	• Report – electronic and hard copy • Whangarei District Council	Growth strategy for Whangarei District. Used to assist in identifying growth areas and pressures on network.
Whangarei District Council. 2010. *Whangarei Transportation Network Strategy*.	• Report – electronic and hard copy • Whangarei District Council	Technical constraints and long term strategic approach for development of transport network within Whangarei.
Northland Regional Council. 2010*. 30 Year Transport Strategy for Northland*. weblink	• Report – electronic and hard copy • Northland Regional Council	Key strategic document for transport within Northland. Includes both key constraints and key priority areas in the short and long term.

Evidence sources and other information or processes (used in the absence of empirical evidence)	Format and held by	Use / application within the Upper North Island Freight Story
Northland Regional Council. 2008. *Northland Transport Network Study.*	• Report – electronic and hard copy • Northland Regional Council	Technical constraints on road network within Northland.
NZTA. 2007. *SH1N Loop Rd to Smeatons Hill Scheme Assessment Report.*	• Report – Electronic copy • NZTA	Detailed technical analysis of the Loop road / Portland intersection critical issue.
NZTA. 2010. *Northland Flood Mitigation Areas Project.*	• Report – Electronic copy • NZTA	Technical report confirming flood risk areas in Northland (underpins the RLTS).
KiwiRail. 2011. *The Northland Lines: Reviewing their Future.*	• Report – Electronic copy • KiwiRail	Overview of the reasons for reviewing the future in Northland. Used as a scene setter as doesn't contain detail (has been the instigator for detailed work which remains confidential).
Auckland		
Auckland Transport. 2011. *Auckland Manukau Eastern Transport Initiative (AMETI)*. weblink	• Network Plan – Web, electronic • Auckland Transport	Provides information on existing or planned sub-regional area or corridor plans including: • Purpose & objectives • Planned activities • Maps
Auckland Transport and NZTA. 2010. *Western Ring Route (North West) Network Plan*. weblink **State Highway project web sites:** **http://www.nzta.govt.nz/projects/wrr/** **http://www.nzta.govt.nz/projects/manukauextension/** **http://www.nzta.govt.nz/projects/mhc/** **http://www.nzta.govt.nz/projects/mountroskill/** **http://www.nzta.govt.nz/projects/waterviewconnection/**	• Network Plan – Web, electronic • NZTA & Auckland Transport	Provides information on existing or planned sub-regional area or corridor plans including: • Purpose & objectives • Planned activities • Maps

Evidence sources and other information or processes (used in the absence of empirical evidence)	Format and held by	Use / application within the Upper North Island Freight Story
http://www.nzta.govt.nz/projects/hobsonville/		
Auckland Transport. 2011. *South-western Multi-modal Airport Rapid Transit (SMART)*. weblink & weblink	• Network Plan – Web, electronic • Auckland Transport & Auckland Council	Provides information on existing or planned sub-regional area or corridor plans including: • Purpose & objectives • Planned activities • Maps
Auckland Transport and NZTA. 2012. *Multi Modal East West Solution (MMEWS).* Network Plan	• Network Plan – • NZTA & Auckland Transport	Provides information on existing or planned sub-regional area or corridor plans including: • Purpose & objectives • Planned activities • Maps
Other Information/processes		
Auckland Transport. 2012. *Auckland Integrated Transport Programme*	• Report –hard copy • Auckland Transport	Table 2.4 – Freight levels of service Figure 3.8 - Current priorities for use of the network Appendix 2 – Regional freight network map
NZTA. Auckland Network Performance Monitoring Monthly Reports	• Report – Kete, • NZTA – HNO	Congestion levels on selected key routes
NZTA. Auckland Travel Time Survey Performance Monitoring Reports & Maps	• Report • NZTA – HNO (Kete)	Congestion levels on selected key routes
Bay of Plenty		
NZTA and SmartGrowth. 2012. *Draft Tauranga Urban Network Study*	• Report - electronic and hard copy • Tauranga City Council	Technical constraints analysis of Tauranga strategic road network. Used in identification of network constraints within the Tauranga urban area.
Tauranga City Council. 2006. *Rail Corridor from Kaimai Tunnel to Te Puke – Widening for*	• Report – hard copy • Bay of Plenty Regional	Technical constraints analysis of rail corridor. Used in

Evidence sources and other information or processes (used in the absence of empirical evidence)	Format and held by	Use / application within the Upper North Island Freight Story
***Double Tracks*. Opus**	Council	preliminary identification of constraints on ECMT rail corridor.
Ministry of Transport. *Transport Monitoring Indicator Framework - Indicator NR002 - Reliability of travel time*. weblink	• Excel spreadsheet • Ministry of Transport	Comparative measure of network reliability. Used in preliminary analysis of constraints within Tauranga urban area.
Port of Tauranga. 2010. Port operations presentation to Regional Advisory Group. August	• PowerPoint presentation • Bay of Plenty Regional Council	Quantifies future development capacity at Port of Tauranga. Used in preliminary analysis of constraints on Port development.
Tauranga City Council. 2007. *Tauranga City Centre Strategy.* weblink	• Strategy – online • Tauranga City Council	Future development plans for Tauranga CBD. Used in preliminary analysis of constraints on ECMT rail corridor.
Bay of Plenty Regional Council. 2008. *Review of Reports on Railway Crossings on Tauranga Harbour.* URS Corp	• Report - electronic and hard copy • Bay of Plenty Regional Council	Review of alternatives to existing Tauranga Harbour rail crossing. Used in preliminary analysis of constraints on ECMT rail corridor.
Bay of Plenty Regional Council. 2011. *Bay of Plenty Regional Land Transport Strategy 2011-2041*. weblink	• Strategy – online • Bay of Plenty Regional Council	Used in preliminary identification of Bay of Plenty constraints.
Bay of Plenty Regional Council. 2011. *Bay of Plenty Economic Development and Transport Study*. Richard Paling Consulting, Ascari Partners and BERL. weblink	• Report – online • Bay of Plenty Regional Council	Used in preliminary identification of Bay of Plenty constraints.
NZTA, Rotorua District Council and Bay of Plenty Regional Council. 2012. *Draft Rotorua Integrated Network Strategy 2012-2042*. Gray Matter.	• Report – electronic • Bay of Plenty Regional Council	Used in preliminary identification of Bay of Plenty constraints.

Critical issue: **Delivery of the High Productivity Motor Vehicle (HPMV) programme**

Problem definition

There is a need to develop a more coordinated approach to the implementation and communication of the upper North Island HPMV programme. Freight operators require a fast and seamless permitting process, appropriate rules and enforcement, consistent coordination between agencies and regular communication on the status of routes ('whole of journey' network approach).

Approach undertaken

Develop a high level strategic summary of existing and proposed end-to-end HPMV routes (state highways and local roads) across the upper North Island to support communication with stakeholders, and provide better certainty for planning and investment across the partners, industry, operators and ports.

Benefit to collective partner focus

This will provide key partners, primarily from the freight sector, with succinct, relevant end-to-end HPMV route application process and information to support their communications, planning and investment.

It is important to note that HPMV was raised as the primary concern of freight operators at all of the Story regional workshops.

Note: An independent review commissioned by the NZ Transport Agency and Ministry of Transport in 2011 concluded that the uptake of HPMVs allowed for productivity improvements in the order of a 20% decrease in truck trips for over-mass HPMVs and a 14% decrease in trips for over-dimensioned HPMVs.
These benefits included reduced fuel consumption (for the freight moved), reduced vehicle operating and capital cost and reduced driver hours.

The NZ Transport Agency and Ministry of Transport are working on commissioning an update of this review during 2013.

Completed Actions

No.	What	Who	When
1	Document and agree a high level HPMV overview for the upper North Island including summary detail on each of the routes.	Technical Working Group	Complete (included in Shared Evidence Base)

Future Actions

No.	What	Who	When
2	Identify relevant local authorities with a local roading connection and use existing forums i.e. regional advisory groups to ensure improved communication, consistency and coordination of HPMV delivery across the network. Where required, team up with UNISA Councils, to support ongoing partnering conversations to ensure a one network approach.	Lead: NZ Transport Agency Upper North Island Strategic Alliance Councils Auckland Transport	mid 2013
3	Deliver a 'whole of network' (state highways and local roads) HPMV programme for New Zealand including customer driven stakeholder information.	NZ Transport Agency	2013
4	Communicate the high level upper North Island HPMV programme with relevant partners and industry through existing NZ Transport Agency and partner relationships and forums.	Lead: NZ Transport Agency Upper North Island Strategic Alliance Councils Auckland Transport	ongoing

Evidence and analysis set

- HPMV high level overview.
- HPMV National Land Transport Programme investment routes map.
- HPMV National Land Transport Programme investment routes table (key information on each route).
- HPMV approved routes and respective vehicle types table (key information from destination to destination).

Upper North Island High Productivity Motor Vehicle (HPMV) programme overview

Providing a national HPMV network will allow for New Zealand businesses to carry significantly more freight using fewer trips. That will make our roads safer and at the same time reduce the cost of trade, which can result in cheaper goods, increasing our competitive advantage with exported and imported goods. The potential percentage productivity gains, in terms of reduced trips to complete the same freight task, are estimated to be about 10 - 20% for higher mass vehicles. Over-length permits provide wide ranging levels of benefit from combinations of both increased payload mass and volume[2].

The HPMV investment routes are New Zealand-wide State highways and local roads that were approved by the NZ Transport Agency Board for inclusion in the 2012–2015 National Land Transport Programme (NLTP). Through a process of consultation, these end-to-end routes were selected as they represent New Zealand's strategic freight network, based on: regional industry demand; the commodities being transported; composition of the vehicle fleet; the expected efficiencies and productivity gains; and having a freight volume of greater or equal to 100,000 tonnes, sustainable over the next 20 years.

The current maximum legal operating weight on New Zealand's State highway system, without a vehicle permit, is 44 tonnes. This 44 tonne Class 1 limit is due to the carrying capacity of structures (e.g. bridges, culverts, underpasses) on the routes. A Bridge Improvement Programme is in place to assess and strengthen the limiting structures on each end-to-end HPMV investment route. Each route will be 'Full HPMV' capable once the improvement programme is complete. Full HPMV ranges from 48–62 tonnes dependent upon the vehicle and axle configuration[3].

The NZ Transport Agency made an initial screening of all the structures on the upper North Island end-to-end investment routes, which identified the structures that:

1. are **'OK'**: do not require any strengthening to be full HPMV capable, or
2. are **'not OK'**: are under strength and definitely require strengthening, or
3. **'need detailed reassessment'**, prior to being assigned to one of the above categories.

Almost all of the upper North Island bridge reassessments and strengthening cost estimates are complete for State highway structures. However, there are a few bridges requiring site material testing. The following summarises the results of the State highway bridge assessment process:

- Bridges originally identified for potential strengthening 53
- Bridges confirmed as 'ok' following re-assessment 22
- Bridges confirmed as definitely requiring strengthening 20
- Remaining bridges pending further material testing 11

The NZ Transport Agency and local authorities are currently discussing the assessments of State highway structures and using a similar approach to analyse structures on the local road portions of the end-to-end routes, to confirm the capacity of these structures.

The attached table summarises the structures on each investment route that either require strengthening or reassessment. This represents the situation on 20 February 2013, as documented in the Bridge Improvement Programme. Therefore, the total number of bridges in this table will reduce as they are either reassessed as being full HPMV capable, or are strengthened over the next three years.

A prioritised schedule for the required bridge improvement work will be undertaken once the detailed reassessment is complete. Design of the bridge strengthening will commence in March 2013. This will be followed by final funding approval, which is expected to be completed by April. It is intended that the

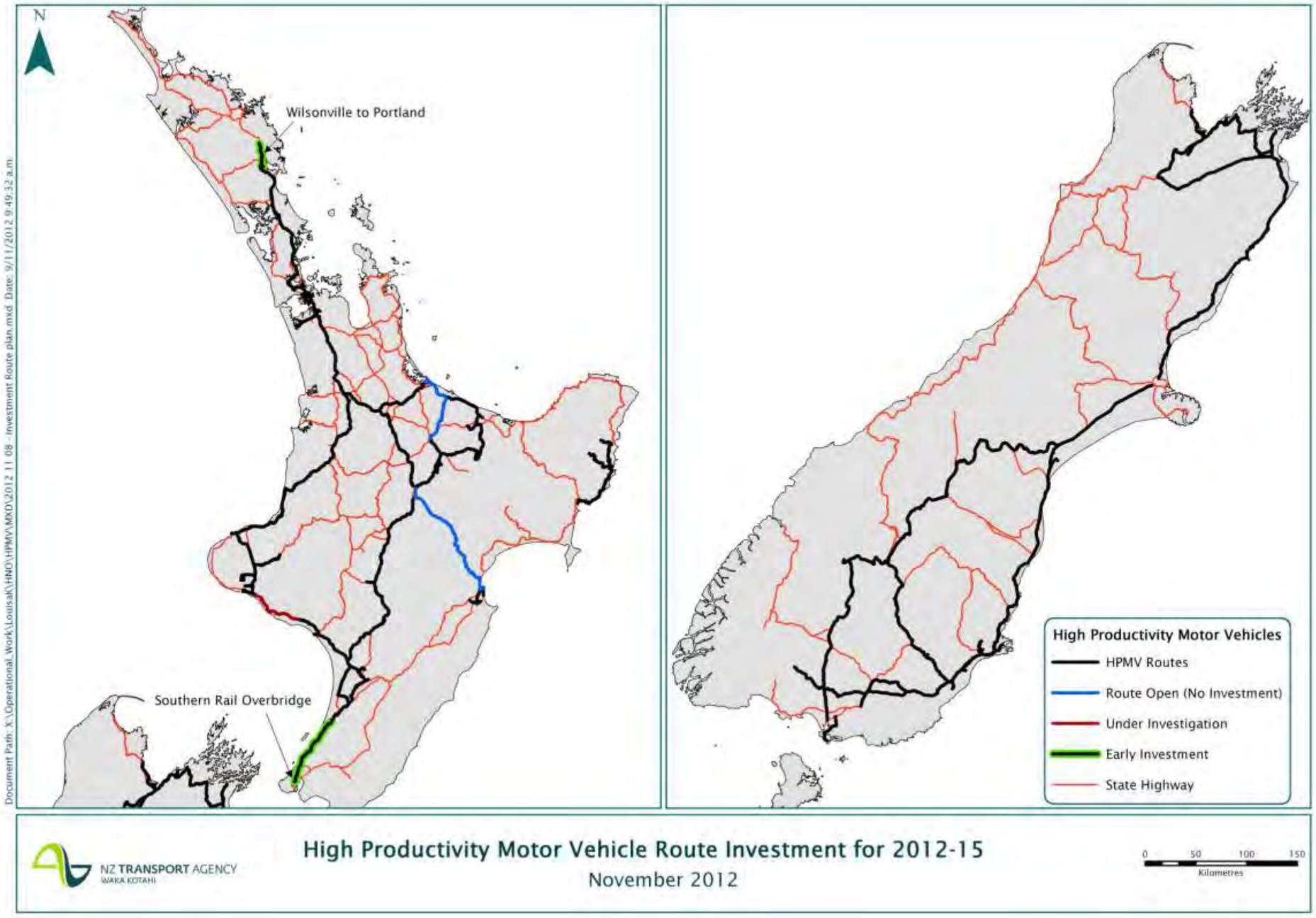
[2] Stimpson & Co. 2011. Monitoring, evaluation and review of the Vehicle Dimensions and Mass Rule *May 2010 – April 2011. PART A – SUMMARY REPORT.* 6 September

[3] See http://www.nzta.govt.nz/hpmv for guidance maps detailing route-specific axle and vehicle configuration information.

investment routes are operational to Full HPMV by 1 July 2015. These routes will be funded ahead of any other HPMV routes.

The investment routes are in addition to State highway and local HPMV routes that are already permitted, and any regionally proposed local roads that require HPMV bridge assessments.

Map: High productivity motor vehicles investment routes



HPMV – Investment routes as prioritised by the NZ Transport Agency for inclusion in the NLTP 2012–15 *

Notes to the table

Information current as at 20 February 2013

* Routes chosen for investment are where the NZ Transport Agency and Road Controlling Authorities believe there will be no discernible change in the wear and tear of the p

For updated and further information please refer to http://www.nzta.govt.nz/hpmv

Broad HPMV classifications:

Class 1: 44 tonnes

Limited HPMV: 44–58 tonnes

Full HPMV: 48–62 tonnes

Regional workshops identified limitation	NZTA, local authorities Responsible Road Controlling Authority in bold	Region	HPMV investment route		State highways	Local roads	State highway km	Local roads km	Principal load type	Restrictive/constraining structures and operational mass limitations (tonnes) current capacity stated [1] *** bold text denotes structures on local roads**		Comments
			From	To						Under strength and definitely needing strengthening	Needs detailed re-assessment	
yes	Whangarei DC, **NZTA**	Northland	Wilsonville (View Rd/ SH1 intersection)	Portland	1		23	7	Aggregates	• Otaika Stream Bridge - Class1 • Kauri Railway Overbridge - Class 1		Discussions ongoing for partial funding for strengthening Otaika + Kauri by Winstone Aggregates Strengthening is already being designed for the two under strength bridges - considered a priority as forms an important route from Winstone Aggregates.
yes	**NZTA**	Auckland / Northland	Auckland	Whangarei (Portland)	1		160	10	Logging, Agriculture, General	• Coates Bridge No. 105 - Limited HPMV • Coates Bridge No. 106 - Limited HPMV • **Helaby's Siding - Ltd HPMV*** • Hoteo River Bridge - Ltd HPMV • Piroa Stream Bridge No. 104 - Limited HPMV • Topuni River Bridge - Class 1 • Tauroa Stream Bridge No. 98- Class 1 • Waipapa Stream Bridge No. 95 - Class 1 • Pohuehue stream (Wilsons) bridge • **Westfield Rail Overbridge - Limited HPMV***	• Okahu Creek (Titfords) • **Neilson St Overbridge - Limited HPMV***	(Henderson Creek No 1 / 2 bridges to be replaced - no further action required) * **Auckland Transport Structures. Investigative work on these bridges is being undertaken by Auckland Transport's in-house team.**
yes SHs: 1, 16, 20, 22, 29 yes local rd: 1, 6, 7, 8,	**Auckland Council**, Waikato Regional Council, Bay of Plenty Regional Council, **NZTA**	Auckland	Auckland	Tauranga	1 2 16 20 22 29	1. Glenbrook Rd 2. Quarry Rd to SH22 3 Hunua Rd 4. Wiri Station Rd, Rosscommon Rd 5. Highbrook Rd 6. Onehunga, Neilson St, Church St to Ellerslie 7. Favona Rd, James Fletcher Dr to Sylvia Park Rd 8. Tamaki Dv 9. Rosebank Rd	228	114	Logging, Dairy, General	• Great South Road Bridge 1 - Limited HPMV • Tamaki River Bridge - Class 1 • Drury Rail overbridge Northbound - Limited HPMV	• Great South Road Bridge 2 - Limited HPMV • Trenwith Street Overpass - Ltd HPMV • Hopuhopu rail overbridge	

Regional workshops identified limitation	NZTA, local authorities Responsible Road Controlling Authority in bold	Region	HPMV investment route		State highways	Local roads	State highway km	Local roads km	Principal load type	Restrictive/constraining structures and operational mass limitations (tonnes) current capacity stated [1] * bold text denotes structures on local roads		Comments
			From	To						Under strength and definitely needing strengthening	Needs detailed re-assessment	
forms part of route above	Waikato DC, HCC, **Waipa DC**, SWDC, MPDC, WBOPDC, **TCC**, **NZTA**	Waikato/BoP	Hamilton Region Boundary	Port of Tauranga	1 2 29	Route K Tasman Quay Maungatautiri Rd	180	55	Logging, Dairy, General	• Waikato River Bridge (Ngaruawahia) - Ltd HPMV • Cobham Bridge (Waikato River) - Limited HPMV • Kaukumoutiti Stream (Boulder Bridge) - Limited HPMV • Te Ahara Stream (Beacon) Bridge • Bridge #66	• Taukopai Stream Bridge • Waimapu stream bridge • Kouprererua stream bridge • Cambridge Rd (rural) bridge • Shakespeare St bridge	This is the Waikato/BoP section of the Auckland to Port of Tauranga route listed above
yes	HCC, Waipa DC, **ODC**, Waitomo DC, **NZTA**	Waikato/BOP	Hamilton	Mokau	1 3	Arapuni Rd Honikiwi Rd Mangaorongo Rd Maihihi Rd Lawrence St Cambridge Rd	162		General	• Mangaorongo Stream Bridge - Limited HPMV • Otorohanga Rail Overbridge - Limited HPMV (Note Heavy Route Bypass available around Otorohanga) • Mangapiko Stream Bridge - Limited HPMV • Mangaotaki - Limited HPMV	• Mangapu River No. 1 Bridge (deck) - Limited HPMV • **Mulligan's Bridge - Limited HPMV***	Not yet classified as an HPMV Investment route - currently under detailed investigation. This is part of the Hamilton - Port of Taranaki route (being considered as part of the Lower North Island Study) *** Otorohanga DC confirm bridge lies on a logging route but this will only operate a few more years - thus council unlikely to assess / strengthening be required.**
yes	**S Waikato DC**, Taupo DC, Waipa DC, **NZTA**	Waikato/BOP	Waikato southern regional boundary (Wellington)	Piarere	1N	Domain Rd Ngatira Rd Arapuni Rd Waiotu Rd Wiltsdown Rd Wawa Rd East Taupo Arterial	177		General	• Oraka Stream Bridge (North) • Oraka Stream Bridge (South)	• Putaruru Rail Overbridge • **Pokaiwhenua Bridge (Wiltsdown Road) - Limited HPMV***	Construction on replacement Atiamuri bridge has commenced This forms the northern section of the SH1N route from Centreport Wellington to Piarere *** South Waikato DC - Assessment partially complete by Local Authority Bridge Consultant - likely to be ok for Full HPMV**
yes	TDC, WBOPDC, RDC, Taupo DC, **NZTA**	Waikato/BOP	Port of Tauranga	Taupo	2 33 30 5	Broadlands Rd Campbell Rd Forest Rd Ash Pit Rd Ngamotu Rd Rerewhakaaitu Rd Hamurana Rd	149	112	General	• Kaituna River Bridge	• Kawaunui Stream (Hickey's Bridge) • Waingaehe bridge	Both Okere Bridge (Kaituna River) & Mourea Bridge (Ohau Channel) originally identified for strengthening but determined as ok for Full HPMV following recent re-assessment

Regional workshops identified limitation	NZTA, local authorities Responsible Road Controlling Authority in bold	Region	HPMV investment route		State highways	Local roads	State highway km	Local roads km	Principal load type	Restrictive/constraining structures and operational mass limitations (tonnes) current capacity stated [1] *** bold text denotes structures on local roads**		Comments
			From	To						Under strength and definitely needing strengthening	Needs detailed re-assessment	
no - UNISA inc PoT to Kawerau via SHs 2, 33, 30	Kawerau DC, WBOPDC, TCC, **NZTA**	Waikato/BoP	Kawerau	Port of Tauranga	2 34	Galatea Rd Pokairoa Rd Ngamotu Rd	90	118	Logging, General	• Kaituna River Bridge	• Moores Bridge (Awatarariki Stream) • Kaikokopu Canal (Mangatoetoe) • **Rangitaiki 49 Bridge - Class 1***	(Pikowai Stream Bridge anticipated to be ok for Full HPMV) *** Whakatane DC - timing of assessment to be agreed with local authority as feedback from Whakatane DC is that the route is not currently used by HPMV's**

Upper North Island approved HPMV routes and respective vehicle types

Northland, Auckland and Bay of Plenty as at 1 November 2012. Waikato as at 23 January 2013. All these routes are full HPMV capable, but are currently permitted to the mass tonnes indicated.

Region	Origin	Destination	Route description – State highways listed as stated on permit applications. (Routes may contain local roads, but these are not necessarily listed on the permit applications)	Mass (tonnes)	A224	A124	A134	R12T22	R22T22	R22T23	R23T23	B1222	B1232	B1233	B1243	B2232	B2233	B2234	B2243
Auckland / Northland	Aupori Forest SH1N	Whangatane Drive Kaitaia	SH1	58									■	■					
	Brynderwyn	Port Marsden	SH1	51					■										
	Marsden Point	Port of Whangarei	Sh1	46					■				■						
	Te Paki Northland	Kaitaia	SH1, SH1F	52					■										
	Glenbrook	Penrose	SH1	50								■							
	Wiri	Waikato Boundary	SH1	58							■								
	Ridge Rd Bombay	45 Cryers Rd East Tamaki	SH1	52					■										
	Union Road, Pukekohe	BOP boundary	SH2	53						■									
	Velonia St, Mt Roskill	Winstone Quarry, Wiri North	SH20	51.8					■										
	Winstone quarry Hunua	Winstone Quarry Hunua Wiri North	SH1	51.8						■									
	Mangere	Waterview	SH20	62												■			
	Mission Bush Road, Glenbrook	Great South Road, Penrose	Sh22, SH1	51										■					
	Neilson St Auckland	Nelson / Invercargill	SH1, Waikato Boundary	57															
	Union Road Pukekohe	Rakaia, Canterbury	SH1 Waikato Boundary	48						■									
Bay of Plenty	Kawerau	Whakatane	SH30, SH34, SH3	56.8	■				■										
		Port of Tauranga	SH30, SH34, SH2	56.8	■				■					■					
		Mt Maunganui	SH30, SH34, SH2	56.8	■				■					■					
		Kaingaroa	SH30, SH34, SH2						■	■	■								
		Edgecumbe	SH34, SH30, SH2	45.5	■														
		Waikato Boundary	SH5, SH28								■								
	Mt Maunganui	Rotorua	SH2, SH35	56.8					■	■									
		Edgecumbe	SH2	52					■	■									
		Whakatane	SH2	52															
		Taupo	SH2, SH35, SH5	55.8					■										
		Waikato Boundary	SH35	55.8															
		Kinleith	SH2, SH29, SH1	62					■				■						
		Sulphur Point	SH2	48.8															

Region	Origin	Destination	Route description – State highways listed as stated on permit applications. (Routes may contain local roads, but these are not necessarily listed on the permit applications)	Mass (tonnes)	A224	A124	A134	R12T22	R22T22	R22T23	R23T23	B1222	B1232	B1233	B1243	B2232	B2233	B2234	B2243
		Auckland / Northland Boundary	SH2	47.5					■										
		Napier Boundary	SH29, SH5	49.8	■								■						
		Waikato Boundary	SH29, SH1, SH36, SH5										■						
		Port of Tauranga	SH2	55.8					■										
		Port of Whakatane	SH2	56					■										
		Kawerau, Whakatane & Port of Tauranga	SH30, SH34, SH2	56					■	■	■								
	Port of Tauranga	Rotorua	SH2, SH35, SH5	51.8							■								■
		Hampton Downs	SH2, SH29, SH5	62															■
		Edgecumbe	SH2	57.5					■	■									
		Whakatane	SH2	55.7	■					■	■								
		Kinleith	SH2, SH29, SH1	62							■								■
		Kaimais	SH2, SH29	48.8	■														
		Waikato Boundary	SH29, SH1, SH36, SH5	55					■		■								
		Port of Whakatane	SH2	56					■		■								■
		Auckland / Northland Boundary	SH2	47.5							■								
		Napier Boundary	SH29, SH5	49.8							■		■						
		Kaingaroa	SH34, SH29, SH5, SH2	56.8					■	■				■					■
		Port of Whakatane	SH2	56					■										■
	Whakatane	Rotorua	SH30	53					■	■									
		Kinleith	SH30, SH1	62					■				■						
	Kaingaroa	Rotorua	SH5	54					■	■									■
		Whakatane							■	■									
		Kinleith								■									■
		Taupo								■									■
	Rotorua	Reporoa	SH5	52				■	■										
		Kinleith	SH5	62					■				■						
		Kaingaroa		54					■				■	■					
		Taharokuri	SH5, SH1	53					■										
		Mangakakahi		62											■				■
Waikato	Auckland regional boundary: Pokeno	Hampton Downs Road SH1	SH1	58							■				■				■
		Matamata, Waikato	SH2, SH27, SH29	47.8						■									
		Waitoa, Morrinsville, SH26	SH2, SH27, SH26	48.5									■						
		Tokoroa - Option 1	SH2, SH27, SH1																

Region	Origin	Destination	Route description – State highways listed as stated on permit applications. (Routes may contain local roads, but these are not necessarily listed on the permit applications)	Mass (tonnes)	A224	A124	A134	R12T22	R22T22	R22T23	R23T23	B1222	B1232	B1233	B1243	B2232	B2233	B2234	B2243
		Tokoroa - Option 2	SH1, SH1B, SH1																
		Hamilton, Waikato	SH1, SH1B, SH26																
		Te Awamutu, Waikato	SH1, SH1B, SH26, SH1, SH21, SH3																
		BOP regional boundary SH29	SH2, SH27, SH29	52					■	■									
		BOP regional boundary SH29	SH1, SH1B, SH1, SH29	68	■					■									
		BOP regional boundary SH30	SH2, SH27, SH1, SH30	49.1					■										
		BOP regional boundary SH5 Mamaku - Option 1	SH2, SH27, SH1, SH5																
		BOP regional boundary SH5 Mamaku - Option 2	SH1, SH1B, SH1, SH5																
		Manawatu regional boundary - Option 1	SH2, SH27, SH1, SH32, SH41, SH1	52.1						■				■					
		Manawatu regional boundary - Option 2	SH1, SH1B, SH1, SH32, SH41, SH1	47.8						■			■						
		Tirau, Waikato - Option 1	SH1N, SH1B, SH1N, SH27						■										
		Tirau, Waikato - Option 2	SH2, SH27						■										
		Huntly, Waikato	SH1N					■											
	Hamilton, Waikato	Waharoa, Waikato	SH1, SH29, SH27	55.9					■										
		Morrinsville, Waikato	SH1, SH26	49.8					■										
		Waitoa, Waikato	SH1, SH26	50					■										
		Ngaruawahia, Waikato	SH21, SH3, SH1	47				■											
		Horotiu, Waikato	SH1	50					■				■						
		Hautapu Road of SH1B	SH1, SH1B	57.3	■				■	■			■						
		Intersection of Karapiro Road SH1	SH1	53					■										
		Te Awamutu, Waikato	SH1, SH3	57.3					■	■			■						
		Taupo, Waikato	SH1, SH32, SH1 (Via Poihipi Road)	48					■										
		BOP regional boundary SH29	SH1, SH29	57.3					■	■									
		BOP regional boundary, Mamaku, SH5	SH1, SH5	53.1									■						
		Manawatu regional boundary	Refer Route A15 & A16																
		Hampton Downs	SH1N, SH26, SH1B		■														
	Tokoroa, Waikato	Hamilton	SH1	57.3					■	■									
		Taupo - Option 1	SH1, SH5, bypass Atiamuri Bridge via Poihipi Road, SH32	51.8					■										
		Taupo - Option 2	SH1, SH30, bypass Atiamuri Bridge via Tram Road, SH1, SH1-ETA*	55.8					■										■
		BOP regional boundary SH5, Mihi	SH1, SH30, bypass Atiamuri Bridge via Tram Road, SH1, SH1-ETA, SH5	56.8					■	■									

Region	Origin	Destination	Route description – State highways listed as stated on permit applications. (Routes may contain local roads, but these are not necessarily listed on the permit applications)	Mass (tonnes)	A224	A124	A134	R12T22	R22T22	R22T23	R23T23	B1222	B1232	B1233	B1243	B2232	B2233	B2234	B2243
		BOP regional boundary SH5, Mamaku	SH1, SH5	53					■	■									
		BOP regional boundary SH30	SH1, SH30	57.3					■	■									■
		BOP regional boundary SH29	SH1, SH27, SH29	55	■				■	■			■						
		Waituhi Saddle	SH32, SH41	53					■										
		Manawatu regional boundary – Option 1	SH32, SH41, SH1	50.2				■											■
		Manawatu regional boundary – Option 2	SH1N, SH30, via private road and local road with required approvals, SH1N - ETA							■									■
		Napier regional boundary	SH5, SH1N – ETA, SH1N, via private road and local road with required approvals, SH30, SH1N, SH32						■										■
		Putaruru, Waikato	SH1N						■										■
	Taupo, Waikato	BOP regional boundary SH30	SH1, SH30 (bypass Atiamuri Bridge via Tram Road)																■
		BOP regional boundary SH30	SH1-ETA, SH1, SH30 (bypass Atiamuri Bridge via Tram Rd)	55.9					■										■
		BOP regional boundary SH29	SH32, SH1, SH27, SH29	52.8									■						
		BOP regional boundary SH5, Mihi - Option 1	SH1-ETA, SH5	55.7				■	■	■				■					
		BOP regional boundary SH5, Mihi - Option 2	SH1, SH1-ETA, SH5	58.8				■	■	■									
		BOP regional boundary SH5, Mihi - Option 3	SH41, SH1, SH1-ETA, SH5	50.5					■										
		Tirau, Waikato	SH41, SH32, SH1, SH29	50.5					■										
		Napier regional boundary	SH1-ETA, SH5	53					■										■
		Manawatu regional boundary	SH1-ETA, SH1	48					■	■									
		Rangipo	SH1N-ETA, SH1N						■										
	Kinleith	Rotorua	SH1, SH30	62					■					■					
		Taupo	SH1, SH30	62					■										
	Atiamuri	Waikato Boundary (Mihi)	SH30	56.8										■					
	BOP regional boundary SH29	Waitoa, Morrinsville, Waikato	SH29, SH27, SH26	55.9	■				■	■			■						
		Tirau SH27/SH1 junction	SH29, SH27,						■										
		Tamahere, Waikato	SH29, SH1, SH1B	49.9									■						
		Manawatu regional boundary (Southern)	SH29, SH27, SH1, SH32, SH41, SH1	49.8									■						
		Manawatu regional boundary (Western)	SH29, SH27, SH1, SH32, SH41	53					■										
		Hautapu, Waikato	SH1B, SH1, SH29	55.9					■										
		Morrinsville, Waikato	SH29, SH27	54.7					■										
		Te Awamutu, Waikato	SH29, SH1, SH3	55.9					■										
		Waharoa, Waikato	SH29, SH27	55.9					■										

Region	Origin	Destination	Route description – State highways listed as stated on permit applications. (Routes may contain local roads, but these are not necessarily listed on the permit applications)	Mass (tonnes)	A224	A124	A134	R12T22	R22T22	R22T23	R23T23	B1222	B1232	B1233	B1243	B2232	B2233	B2234	B2243
		Tirau, Waikato	SH29, SH27	55.9					■				■						
		Wood Road / Wiltsdown Road intersection SH1	SH29, SH1	54.2					■										
		4km South of Kuratau junction	SH29, SH27, SH1, SH32, SH41	50.5					■										
		Intersection of Karapiro Road SH1	SH29, SH1	49				■	■										
		Hampton Downs Road, SH1N	SH29, SH1, SH1B, SH1	62															■
		Waituhi Saddle	SH29, SH27, SH1, SH32, SH41	51.8					■										
		Karapiro, Waikato	SH29, SH1,							■									
		Matamata, Waikato	SH29, SH27, SH24							■									
		Putaruru, Waikato	SH29,SH27, SH1N						■										
	BOP regional boundary SH30	BOP regional boundary SH29, Option 1	SH30, SH1, SH27, SH29	56						■	■								
		BOP regional boundary SH29, Option 2	SH30, SH1N, SH29	57.3					■	■									■
		Mangakino, Junction with SH32	SH30	52				■											
		Putaruru, Waikato	SH30, SH1	53.8										■					
		Iwitahi, SH5	SH30, SH1N, SH5 (bypass Atiamuri Bridge via Tram Road)	49.1					■										
		Tram Road intersection with SH30	SH30	49.1					■										
		Waituhi Saddle	SH30, SH32, SH41	51.8					■										
		Napier regional boundary	SH30, (bypass Atiamuri Bridge via Tram Road), SH1N, SH1N – ETA, SH5						■										■
	BOP regional boundary SH5, Mihi	Manawatu regional Boundary	SH5, SH1-ETA, SH1	50.5					■				■						
		South of Rangipo, Waikato	SH5, SH1-ETA, SH1						■										
		Napier regional boundary	SH5, SH1-ETA, SH5	56.8	■			■	■	■									
		BOP regional boundary SH30	SH5, SH1, SH30 (bypass Atiamuri Bridge via Tram Road)	48						■									
	BOP regional boundary SH5, Mamaku	BOP regional boundary SH29	SH5, SH28, SH29	62					■										■
		BOP regional boundary SH29	SH5, SH1, SH27, SH29	51.8					■										
		Tirau, Waikato	SH5	50.2				■		■									
		BOP regional boundary SH30	SH5, SH1, SH30					■	■										
		Taotaoroa Road intersection, SH29	SH5,SH1, SH29						■	■									
		Rangipo, Waikato	SH5,SH28, SH1, SH30, SH32, SH41						■										
	Morrinsville, Waikato	Manawatu regional boundary	SH26, SH27, SH1, SH32, SH41, SH1	49.8									■						
		South of Paeroa, Waikato	SH26						■										
	Hautapu, Waikato	Cambridge, Waikato	SH1B, SH1N	48.4	■														
	Tirau, Waikato	Wood Road / Wiltsdown Road	SH27, SH1	54.2					■										

Region	Origin	Destination	Route description – State highways listed as stated on permit applications. (Routes may contain local roads, but these are not necessarily listed on the permit applications)	Mass (tonnes)	A224	A124	A134	R12T22	R22T22	R22T23	R23T23	B1222	B1232	B1233	B1243	B2232	B2233	B2234	B2243
		intersection SH1							■										
	Piarere, Waikato	BOP regional boundary SH29	SH29	50.6									■						
		Kuratau Junction	SH29, SH1, SH32	50.5									■						
	Te Kuiti, Waikato	Otorohanga, Waikato	SH3	56.8					■								■		
	Matamata, Waikato	Hinuera, Waikato	SH26, SH27								■								
	Napier Regional Boundary	South of Kuratau junction	SH5, SH1N, SH1N – ETA, SH1N, SH41						■										
	Fonterra Te Rapa factory, Waikato	Crawford St, Hamilton, Waikato	SH1D or SH1N – Te Rapa bypass						■		■								

Evidence sources reference table

Evidence sources and other information or processes (used in the absence of empirical evidence)	Format and held by	Use / application within the Upper North Island Freight Story
Critical issues: High productivity motor vehicle programme		
National		
NZTA. 2012. *Existing upper North Island HPMV routes*. Status of Applications weblink	• Tables/maps – Web, electronic, hard copies • NZTA	• Information tool within partner organisations • Communications tool for sharing with industry stakeholders
NZTA. 2012. *Guidance maps showing network capability for full and limited HPMV permits*. weblink. May	• Tables / maps – Web, electronic, hard copies • NZTA	Illustrates current network capability for various levels of HPMVs
NZTA. 2012. *Upper North Island HPMV Investment Routes*. weblink	• Tables / maps – Web, electronic, hard copies • NZTA	Illustrates SH routes that will be Full HPMV capable by 1 July 2015
NZTA. 2012. *NLTP Extract report*. weblink Transport Investment On-line (TIO)	• Tables – TIO, electronic • NZTA	Data extracted from Transport Investment On-line to cross-check Investment Routes are also in the NLTP, and to check the other routes submitted for investment
NZTA. 2012. *Bridge Improvement Programme.* Opus, Wellington	• Spreadsheet • Opus / NZTA	Provides current information on structures requiring strengthening on the HPMV Investment Routes
Auckland Transport. 2012. *2009-12 Roading - HPMV Study*. weblink. Transport Investment On-line	• Tables – TIO, electronic • Auckland Transport	Provides details of local road HPMV routes under investigation
Stimpson & Co. 2011. Monitoring, evaluation and review of the Vehicle Dimensions and Mass Rule *May 2010 – April 2011. PART A – SUMMARY REPORT.* 6 September	• Report – hard copy • NZTA	Provided detail on benefits of HPMV
Other Information/processes **All data sources listed above required upper North Island data to be extracted and manipulated for presentation in a concise and non-technical manner**		

Critical issue: **Utilisation of industrial land**

Problem definition

There is a need to understand the likely supply and demand for industrial land (amount, type and location) across the upper North Island so that land and public investment can be provided and staged at appropriate times.

Approach undertaken

Document existing and proposed industrial land developments 50 hectares and above to better understand the supply and demand of significant industrial land developments across the upper North Island including size, location, timing, staging, purpose and uptake.

Benefit to collective partner focus

Partners across the upper North Island are better informed in terms of the cross regional industrial land picture to support future planning and investment decision making.

Completed Actions

No.	What	Who	When
1	Document consistent assumptions used to develop industrial land table.	Technical Working Group	Complete (included in Shared Evidence Base)
2	Development of an 'Upper North Island industrial land table' including key information on each of the developments.	Technical Working Group	Complete (included in Shared Evidence Base)
3	Document relevant work already undertaken across the upper North Island on identifying current status of requirements for industrial land.	Technical Working Group	Complete (included in Shared Evidence Base)
4	Document key findings from the evidence and technical analysis.	Technical Working Group	Complete (included in Shared Evidence Base)

Future Actions

No.	What	Who	When
5	Scope a specific piece of work to ascertain a realistic understanding for industrial land in the Upper North Island.	Upper North Island Strategic Alliance Lead: Hamilton City Council with support from Whangarei District Council	2013 - 2014 (as part of UNISA work programme)

Evidence and analysis set

- Summary of key messages on evidence findings.
- Key assumptions used to build the evidence.
- Upper North Island industrial land table (key information on each development).
- Upper North Island industrial land maps (x5 – upper North Island and 4 regions).
- Upper North Island industrial land future demand – summary of regional work undertaken.

The industrial land evidence set is a significant amount of data that can support future work and analysis on this critical issue. However it is important to note that this is just the beginning of a conversation at this pan-regional scale.

Areas that the collective partnership is interested in having further conversations on and/or analysis include:

- Further understand for each of the sites, primarily where the land is yet to be developed, exactly what is planned for in the future i.e. some of the industrial land sites may never be developed due to being used as buffer zones for existing industry and assets.
- Work closer with industry to better understand:
  - Where we expect major growth to be in the future and what impacts, if any, this may have on freight flows.
  - What attracts industry to particular sites / areas, what is the market looking for and what are seen as barriers to industrial land development.
- Understand further the statutory rule frameworks across the various regions and local government agencies for industrial land development to determine areas of alignment or misalignment.

Upper North Island industrial land: evidence key findings

One of the issues raised in the regional workshops, related to the amount, location, infrastructure costs and limitations, and general availability of industrial land within the upper North Island.

Some Industry groups noted issues such as: the planning difficulties of sourcing new industrial sites; a lack of awareness of where industrial land is and should be located in the future; and that often industrial land is not optimally located to serve their needs. Local government representatives raised issues such as: the lack of understanding about where industry wants industrial land to be located; and the infrastructure costs of servicing such land.

The Upper North Island Technical Working Group compiled an industrial land database, which sought to identify where industrial land is currently located and at what timeframe it is expected to be provided in the future. The Group also sought to capture 'how ready' the land is to be developed should there be immediate demand.

Assumptions

Information was gathered primarily from territorial authorities who map and plan for industrial land provision. The Group needed to ensure the information received was comparable across regions and had been filtered in the same way, so agreed assumptions as to what was to be measured. A detailed note, on the assumptions used to gather the data follows.

- Only measured sites or areas with more than 50 hectares of land, being of a scale to be sub-regionally significant. Some individual land uses are this large, but in other instances, we measured the conglomeration of numerous sites within close proximity to each other. In some instances, the use of the 50ha minimum size for sites will mean a variety of smaller land parcels which would contribute to the overall availability of industrial land are not reflected in the evidence, but still an important part of the local industrial land supply.
- Measured land that existed, and that which is anticipated in the future – either given the aspirations of developers who are taking sites through planning processes such as plan changes or resource consents; or industrial land allocation such as those outlined in regional policy statements or district plans.
- Measured the timing of industrial land as per standard Resource Management Act (RMA) type timeframes of current-2021; 2021-2041; 2041+. For the purposes of this note, we call this the study period. Given it is a very inexact science to know when land might be taken up, this was more about when land could be developed given the planning framework and infrastructure availability.
- Attempted to measure the underutilised land, however many territorial authorities were quick to point out, they did not have accurate data on this.

What we found

Within the upper North Island, within the study period, there are approximately 13,000 hectares of industrial land existing or planned. Of that total, just over 10,000 hectares is existing land which is either utilised or is zoned, serviced and 'ready to go'. Of this existing land, nearly 1/3 is thought to be underutilised or not yet used at all.

Some regional snapshots:

Northland: Northland has a unique situation within the upper North Island, whereby all of the industrial land in the area, is 'existing' or ready to go now. It is acknowledged that wastewater upgrades would be required to release the full potential, but this would only happen as growth demands it. Having noted the availability of zoned and serviced land, it is important to note that

almost half of the total land available is not actually developed or has significant capacity for expansion.

Auckland: A large portion of the industrial land in the upper North Island that has been assessed is within Auckland, with approximately 4,950 hectares of land potentially available over the study period. The data collected illustrates that there is some 750 hectares of land already identified to potentially come forward for industrial purposes over this period (to 2041) and a further 370 hectares of land where the timing is unknown. It should be noted, in addition to the large sites, measured by this data there are a number of additional sites under 50 hectares, vacant business land and other potential development opportunities that are also being considered to ensure the region can provide for the expected future demands over the next 30 years. The Auckland Plan states that an additional 1,000ha of greenfield land will be required over the next 30 years to meet expected demand in the region (this will be located within the 'greenfield areas for investigation' depicted in the Auckland industrial land map).

Waikato: Within the Waikato, there are approximately 4,280 hectares of total land over the study period. Of this, 80% is to be provided in the period prior to 2021. The completion of the Waikato Expressway is the major trigger controlling the release of much of this land. Industrial land allocation is high around Taupo and the FutureProof partners of Hamilton, Waipa and Waikato Districts.

Bay of Plenty: The Bay of Plenty has a diverse range of industrial land, ranging from the Port of Tauranga; general industrial parks and forestry sites. In total, there is approximately 2270 hectares of land over the study period, of which 70% is existing land. Within the SmartGrowth area there are several large under construction or proposed developments, namely Tauriko, Wairakei, Rangiuru and Te Puke.

Summary

Total land availability over the study period.

Region	Existing industrial land	Short term (until 2021)	Medium term (2021-2041)	Long term (2041 +)	Unknown timing	Total
Northland	547	987	0	0	0	**1534**
Auckland	3829	696	54	0	373	**4952**
Waikato	2019	1444	400	421	0	**4284**
Bay of Plenty	1325	400	550	0	0	**2275**
Total	**7720**	**3527**	**1004**	**421**	**373**	**13045**

At an upper North Island scale, rough estimates would suggest of the existing industrial land which is zoned and ready to go, approximately one third could be vacant. However, further refinement of data would be required to give confidence to that figure.

Upper North Island industrial land table key assumptions

Following are the key assumptions agreed to support the development of the industrial land database.

Sites	All existing and proposed industrial areas with an area of over 50 hectares are included. Include: • Existing industrial areas. • Those areas zoned within the district plan but as yet not developed. • Industrial land allocation included in any relevant regional policy statement (RPS) that may or may not be reflected in the relevant district plan. • Any emerging proposals, where the council or a developer is known to be considering significant (i.e. more than 50ha) industrial proposals, either through a plan change or resource consent process. • Industrial land around ports, airports. • Industrial (particularly existing) land within the cities and towns, which may not be one big area, but a series of linked or proximal sites which when conglomerated, would be more than 50ha. Definition for industrial includes: heavy industry, storage and distribution, industrial manufacturing, portside land, large factories or plants, airports often have associated industrial land, processing plants, e.g. forestry, dairy factories – providing they meet the 50ha minimum. Don't include: • Large format retail areas, unless they have an industrial land zoning (i.e. they could be used for industrial land if the market desired). • Primary production such as forestry areas, quarries. • Actual airports.
Size (>/=50ha) (gross)	Sites over 50 hectares in size.
Timing: existing short term (prior 2021) medium term; (2012-2041) long term (2041+)	Outline the proposed staging or phasing of the development if known and if not then outline what could happen under the relevant planning controls. If the district plan zoning is in place and there are no limitations placed on timing through the District Plan, the land should be considered immediately available (short term).
Progress: **Existing/zoned in district plan/aspiration**	This is about how ready the land is for development. Noting a measure of whether the relevant local authority is expecting the development to happen in a particular location, and if the zoning is in place. Also an indication that some level of analysis has been done and from a planning perspective, development could occur. Sites which are not zoned, but have been granted resource consent also reflected. Land zoned and developed is listed as 'existing'. Aspiration refers to development which is potentially on the horizon but as

	yet, nothing has been formalised in the District Plan nor have the necessary resource consents been granted.
Transport infrastructure requirements and/or infrastructure strengths	Includes: • Does the area/site have access to the rail network, if so list this. • List if a new rail connection proposed as part of development. • List whether the site has or could have easy access to the state highway network. • List if there are any known constraints that impact on the use of the site and the movement of freight, such as bridge restrictions; a new major piece of infrastructure is required before the land can be used – such as an expressway, major junction or signalling improvements, conflicts between passenger and freight modes on the railway networks; issues with local road networks such as small local roads or residential opposition. If known, costs should be listed. For example, to allow industrial growth in area X, $5million bridge strengthening is required.
Key infrastructure requirements (non-transport)	This is infrastructure critical to the delivery of industrial uses on the land. • For existing sites, this column may well be blank as presumably it's all up and running and the necessary infrastructure is in place to service the site. • In terms of the 3-Waters, electricity and other network utilities, it goes without saying that these will be needed for almost any industrial development. However, we are attempting to capture those situations where there is something out of the ordinary or exceptional is required, particularly in relation to cost. For example, to allow an industrial growth cell to develop, an expensive upgrade to council's wastewater system might be required; or the council might need to spend significant investment reticulating an area for water and wastewater services. If known, costs of providing the key piece of infrastructure 'kit' can be listed.
Estimated quantum of underutilised or vacant land (ha)	• For aspiration sites, it is expected that this figure will match the size of the figure listed in the earlier column. • For existing industrial areas, some Council's will have this data in industrial land supply work. However, if no detailed information is available, then a guestimate is acceptable as long as it is marked as approximate. A drive around the area; talking to colleagues around Council perhaps related to rates or water metering, can give a rough idea of occupation of buildings
Key purpose	The rationale of this column is to try and understand if the land or site is being brought forward for a particular use – such as new dairy factory, or whether the future uses are yet to be determined or industry in general is provided for. Generic industry is a good term to use here. However, if the site is a dairy factory, or is specifically for port, heavy industry such as a factory this can be listed.

Upper North Island industrial land table

Note: All existing and proposed industrial areas with an area of 50 hectares or more are included in the shared evidence base.

Region	Name of site	Size (greater than 50ha (gross)	Timing: existing ; short term (prior 2021) medium term; (2021-2041) long term (2041 +)	Status: existing/ zoned in district plan/aspiration	Transport infrastructure requirements and/or infrastructure strengths	Key infrastructure requirements (non-transport)	Estimated quantum of underutilised or vacant land (ha)	Key purpose	Comments
NORTHLAND REGION									
Whangarei	Kauri (north of Whangarei)	55ha	Existing	Existing	Existing. Adjacent to State Highway 1	Existing	0ha	Milk Treatment Plant & waste disposal	Currently seeing changes to SH1 to improve safety and access. Also note adjacent 12 ha Timber Yard.
Whangarei	Spring Flat (north of Whangarei)	60ha	Existing 10ha Short term 50ha	Existing	Existing. Adjacent to Whangarei Bypass / State Highway 1 and close to rail line	Existing	50ha	Light and heavy industrial land.	Please note that there is some flood susceptibility in area.
Whangarei	Southdale Investments / Kioreroa	130ha	Existing 52ha and Short term 78ha	Existing	Existing. Adjacent to State Highway. Southdale Investments subject to construction of crossroads	Existing	78ha	Large scale commercial and some warehousing.	Located at the entrance to Whangarei City (south side). Some flood susceptibility in area. 2nd Harbour crossing in vicinity. Located on the edge of the fastest growing suburb in Whangarei (northern side).
Whangarei	Port Road / Kioreroa	146ha	Existing 76ha and Short term 70ha	Existing	Existing. Close to State Highway 1 and rail line although rail in area not regularly used. Short-Medium Term: Planned upgrade of the crossroads between Kioreroa Road and State Highway as part of Southdale Investment	Existing	70ha	Heavy industry	Mainly marine industry & construction materials. Some flood susceptibility in area. The 2nd Hatea River Crossing is located in vicinity and will change transport patterns in wider area. Harbour access available for marine industry.
Whangarei	Port Nikau	90ha	Short term	Zoned in District Plan	Existing. Close to State Highway 1 and rail line although rail in area not regularly used. Short-Medium Term: Planned upgrade of the crossroads between Kioreroa Road and State Highway as part of Southdale Investment	Full services available but upgrade required over time dependant on growth	90ha	Mixture of light industry, heavy industry and mixed uses	Little development has occurred and site is presently for sale. 2nd Hatea crossing in vicinity and will change travel patterns in areas. Harbour access available for marine industry.

Region	Name of site	Size (greater than 50ha (gross)	Timing: existing ; short term (prior 2021) medium term; (2021-2041) long term (2041 +)	Status: existing/ zoned in district plan/aspiration	Transport infrastructure requirements and/or infrastructure strengths	Key infrastructure requirements (non-transport)	Estimated quantum of underutilised or vacant land (ha)	Key purpose	Comments
Whangarei	Portland (Golden Bay Cement)	56ha	Existing	Existing	Existing. Short term - Planned upgrade of the SH1 and Portland Road underway. Has a small port for the shipping of cement.	Full services available		Mainly for limestone quarrying purposes.	Small residential population located nearby.
Whangarei	Marsden Point Town Centre	99ha	Short term	Zoned in District Plan	Existing (including good access to port). Short-Medium Term: Planned Rail (Designations held & land purchased but no firm commitment to construct the line)	Planned. Full services available but upgrades required over time dependant on population and business growth	99ha	Mixed uses including new town centre, but mainly light industrial purposes.	Adjacent to 32 ha Town Centre mixed zone. Reticulated water available. Ruakaka Wastewater Treatment Plan presently being upgraded using modular system to adjust to growth.
Whangarei	Marsden (Port)	170ha	Existing 60ha and short term 110ha	Existing	Existing (including good access to port) Short-Medium Term: Planned Rail (Designations held & land purchased but no firm commitment to construct the line)	Full services available but upgrades required over time dependant on population and business growth	110ha	Mainly for Port purposes - including storage	Reticulated water available. Ruakaka Wastewater Treatment Plan presently being upgraded using modular system to adjust to growth.
Whangarei	Marsden (NZ Refining)	120ha	Existing	Existing	Existing (including good access to port) Short-Medium Term: Planned Rail (Designations held & land purchased but no firm commitment to construct the line	Planned Full services available but upgrades required over time dependant on population and business growth	0ha	Mainly for refining purposes	Reticulated water available. Ruakaka Wastewater Treatment Plan presently being upgraded using modular system to adjust to growth.
Whangarei	Marsden (Heavy Industry)	446ha	Existing 46ha Short term 400ha	Zoned in District Plan	Existing (including good access to port) Short-Medium Term: Planned Rail (Designations held & land	Full services available but upgrades required over time dependant on population and business	400ha	Heavy industry	Spread across both sides of Highway 32. Reticulated water available. Ruakaka Wastewater Treatment Plan presently being upgraded using modular system to

Region	Name of site	Size (greater than 50ha (gross)	Timing: existing ; short term (prior 2021) medium term; (2021-2041) long term (2041 +)	Status: existing/ zoned in district plan/aspiration	Transport infrastructure requirements and/or infrastructure strengths	Key infrastructure requirements (non-transport)	Estimated quantum of underutilised or vacant land (ha)	Key purpose	Comments
					purchased but no firm commitment to construct the line)	growth			adjust to growth.
Whangarei	Marsden (Light Industry)	100ha	Existing 10ha, Short term 90ha	Zoned in District Plan	Existing (including good access to port) Short-Medium Term: Planned Rail (Designations held & land purchased but no firm commitment to construct the line)	Full services available but upgrades required over time dependant on population and business growth	90ha	Light industry	Adjacent to heavy industry zone. Split into 2 main areas. Reticulated water available. Ruakaka Wastewater Treatment Plan presently being upgraded using modular system to adjust to growth.
Far North District	Kaitaia North Industrial Area	62ha	Existing	Zoned in District Plan	Direct access to SH1. No railway connection planned	Some availability of wastewater/water but more connection required	20ha	General industry	Limited potential for larger industrial use. Mainly agglomeration of multiple small sites adjacent to each other.
AUCKLAND REGION									
Manukau	"Mangere Gateway Heritage Area" (Manukau: Proposed Plan Change No. 14)	210ha	110ha Existing, 100ha short term	Zoned in District Plan	Existing. Adjacent to SH 20. Also proximity to Auckland International Airport including direct access to the proposed second runway if it is built. Significant roading improvements are proposed, including alterations to George Bolt Drive. Public transport and cycle pedestrian networks. Rail connection proposed through the South Western Airport Transport Study.	Existing	210ha	Large scale warehousing and distribution activities and activities involving production of food and beverages.	Land zoned Airport Zone that lies just south of the Mangere Gateway Business Zone and is within the northern part of the Auckland International Airport designation. (Designation 231)
Waitakere / Rodney	Massey North Future Urban (PC 15)	156ha	Existing	Zoned in District Plan	Existing and planned road connections to be used. Provisions to ensure that the Oriel Road link is provided prior to 2021 and provisions to	Existing	156ha	Integrated business and employment area, including manufacturing, construction,	Part operative - appeals for Massey North Employment Special Area resolved.

Region	Name of site	Size (greater than 50ha (gross)	Timing: existing ; short term (prior 2021) medium term; (2021-2041) long term (2041 +)	Status: existing/ zoned in district plan/aspiration	Transport infrastructure requirements and/or infrastructure strengths	Key infrastructure requirements (non-transport)	Estimated quantum of underutilised or vacant land (ha)	Key purpose	Comments
					ensure that the road alongside the SH16 extension provide the main access to and from the Massey North Employment Special Area			wholesale trade, transport, storage, and ancillary commercial activities).	
Manukau	Wiri	400ha	Existing	Existing zoned in District Plan – Vacant business land	Excellent access to SH20 (and SH1) and to Auckland International Airport. Mainline rail corridor runs through area.	Existing	100ha	Mixture of light and heavy industry for various purposes	Site in question is the old Wiri Quarry
Rodney	Huapai South Structure Plan (Variation 127)	88ha	Short Term	Structure Plan Adopted. Plan change not yet notified.	Existing. Adjacent to SH 16. The construction of road across which in turn would link to a major southern access loop road.	Existing	88ha	Light industry for various purposes (mainly warehousing)	The area is a key driver for economic growth in Rodney as Kumeu and Huapai together comprise the second largest business centre in Rodney, after Silverdale.
Franklin	Waiuku (PC 23)	108ha	Short Term:	Zoning in the District Plan	Remote location, significant distance from SH1. Reliant on Glenbrook Road and Waiuku Road which adjoin SH22. .	3 Waters and recreation to be determined through structure plan process.	108ha	Expansion of adjacent existing business area (warehousing and light manufacturing and food processing)	The structure plan area is approximately 100 hectares gross and 80 hectares net in extent. It lies to the east of Waiuku and borders the existing Business Zone (as at June 2007); the location of the structure plan area adjacent to an existing business area promotes a clustering of business activity and hence promotes economies of scale.
Franklin	Drury South Private Plan Change	223ha	Long Term	Unknown	Adjacent to SH1 would require motorway interchange upgrade. No rail connection planned.	Significant storm water infrastructure required. Sited in floodplain and significant riparian corridors.	223ha	A mixture of light and heavy industry for various purposes (including construction, manufacturing, and distribution activities and possibly wholesale trade).	Private Plan change has been lodged by Stevenson Group, now notified by Auckland Council. Rezoning required.

Region	Name of site	Size (greater than 50ha (gross)	Timing: existing ; short term (prior 2021) medium term; (2021-2041) long term (2041 +)	Status: existing/ zoned in district plan/aspiration	Transport infrastructure requirements and/or infrastructure strengths	Key infrastructure requirements (non-transport)	Estimated quantum of underutilised or vacant land (ha)	Key purpose	Comments
Waitakere	PC 14 Hobsonville Corridor (first stages)	54ha	Medium Term	Existing	Existing, adjacent to SH 18 and close to SH 16.	Existing3 Waters	54ha	Employment Special Area – Light industry	Plan change is part operative – other parts not related to business land are under appeal.
Manukau	Puhinui Proposed PC 35 Southern Gateway	150ha	Medium Term	Unknown	Adjacent to SH 20 and neighbouring Auckland International Airport. Local roading improvements may be required.	3 waters	150ha	Adjunct to existing Wiri industrial area. Likely to be light industry due to proximity to sensitive land uses,	Private Plan change lodged with Auckland Council.
Manukau	East Tamaki	452ha	Existing	Existing	Existing. Linked to SH1 by Highbrook Drive (new bridge and motorway interchange provided)	Existing	160ha	Light industry and advanced manufacturing	Draft East Tamaki Business Precinct Plan outlines framework for future development. This figure includes vacant land outside of the Special Policy Area within this precinct.
Rodney	Silverdale	70ha	Existing	Existing	Existing, adjacent to SH1	Existing	70 ha	Light industry and business park	Part of Silverdale Innovation Centre development
Auckland	Penrose	175ha	Existing	Existing	Existing, adjacent to SH1 and rail corridor. Investigations are underway for improving the East West transport links through this area.	Existing	65 ha	Mixture of light and heavy industry for various purposes	Part of the industrial heartland of Auckland, vacant land estimate is largely made up of small parcels.
Auckland	Highbrook Business Park	140ha	Existing	Existing	Existing. Access from Highbrook Drive – recent motorway interchange upgrade. Adjacent to SH1 with three bus stops throughout the park.	Existing	80ha	Office, light industry and advanced manufacturing	This sits within the Waiouru Peninsula Special Policy Area which is part of the East Tamaki Precinct.
Auckland	Te Papapa	175ha	Existing	Existing	Existing. Neilson Street with connections to SH 1 and SH20. Upgrades required – subject of the Multi-Modal East West Corridor Solution project.	Existing	0	Heavy industry - includes MetroPort inland port.	Multi-Modal East West Corridor Solution project is underway to begin scoping transport improvements in this area.

Region	Name of site	Size (greater than 50ha (gross)	Timing: existing ; short term (prior 2021) medium term; (2021-2041) long term (2041 +)	Status: existing/ zoned in district plan/aspiration	Transport infrastructure requirements and/or infrastructure strengths	Key infrastructure requirements (non-transport)	Estimated quantum of underutilised or vacant land (ha)	Key purpose	Comments
Auckland	Carbine Road	146ha	Existing	Existing	Existing. South Eastern Highway with connections to SH1. Mainline rail access.	Existing	0	Heavy Industry	
Auckland	Hunua Road	130ha	Existing	Existing	Existing. Hunua Road with access to SH1 from Beach Road	Existing	0	Mixture of light and heavy industry for various purposes	Potential for expansion into surrounding Greenfield sites if there is market demand.
Auckland	Otahuhu West	126ha	Existing	Existing	Existing. James Fletcher Drive with access to mainline rail corridor. Not direct link to SH1.	Existing	0	Heavy industry	Includes the Pacific Steel site.
Auckland	Glenbrook	340ha	Existing	Existing	Existing. Direct rail access and Glenbrook Road.	Existing	0	Heavy industry	New Zealand Steel site. Potential for expansion into surrounding Greenfield sites (112ha).
Auckland	Ascot Park	325ha	Existing	Existing	Existing, with excellent access to SH20 (and SH20A) and to Auckland International Airport.	Existing	75ha	Light industry and advanced manufacturing	
Auckland	Puhinui (Wiri)	270ha	Existing	Existing	Existing, with excellent access to SH20 (and SH1) and to Auckland International Airport.	Existing	50ha	Light industry and advanced manufacturing	
Papakura	Papakura Industrial	50ha	Existing	Existing	Existing, adjacent to SH1 and rail corridor.	Existing	50ha	Mixture of light and heavy industry for various purposes	
Auckland	North Harbour Industrial Estate	168ha	Existing	Existing	Existing, Albany Highway and adjacent to SH18.	Existing	0	Office, light industry and manufacturing	
Auckland	Wairau Valley	162ha	Existing	Existing	Existing, adjacent to SH1.	Existing	0	Office, large format retail, light industry and manufacturing	
Auckland	Rosebank Road	156ha	Existing	Existing	Existing. Rosebank Road and adjacent to SH 16.	Existing	0	Mixture of light and heavy industry for various purposes	

Region	Name of site	Size (greater than 50ha (gross)	Timing: existing ; short term (prior 2021) medium term; (2021-2041) long term (2041 +)	Status: existing/ zoned in district plan/aspiration	Transport infrastructure requirements and/or infrastructure strengths	Key infrastructure requirements (non-transport)	Estimated quantum of underutilised or vacant land (ha)	Key purpose	Comments
Auckland	Southdown	119ha	Existing	Existing	Existing. Great South Road and adjacent to SH1 and rail corridor.	Existing	0	Office, light industry and manufacturing	
Auckland	Ormiston Road	106ha	Existing	Existing	Existing. East Tamaki Road and Te Irirangi Drive.	Existing	0	Light industry for various purposes (mainly warehousing)	Southern part of the East Tamaki Business Precinct.
Auckland	Henderson South	103ha	Existing	Existing	Existing, Henderson Valley Road and adjacent to rail corridor.	Existing	0	Light industry for various purposes (mainly warehousing)	
Auckland	Silverdale South	100ha	Existing	Existing	Existing. Adjacent to SH1, with direct access to the Hibiscus Coast Highway.	Existing	0		
Auckland	Plunket Avenue	86ha	Existing	Existing	Existing, with excellent access to SH20 (and SH1) and to Auckland International Airport. Mainline rail corridor runs through area.	Existing	0	Light industry and advanced manufacturing	
Auckland	Ellerslie South	78ha	Existing	Existing	Existing. Ellerslie Panmure Highway and adjacent to SH1 and rail corridor.	Existing	0	Office and light industry	
Auckland	Takanini North	74ha	Existing	Existing	Existing, adjacent to SH1 and rail corridor.	Existing	0	Mixture of light and heavy industry for various purposes	
Auckland	Lincoln Road	65ha	Existing	Existing	Existing, Lincoln road and adjacent to SH16.	Existing	0	Light industrial land for various purposes (mainly warehousing), also large format retail.	
Auckland	Otahuhu Industrial	58ha	Existing	Existing	Existing. Great South Road and adjacent to mainline rail corridor.	Existing	0	Mixture of light and heavy industry for various purposes	

Region	Name of site	Size (greater than 50ha (gross)	Timing: existing ; short term (prior 2021) medium term; (2021-2041) long term (2041 +)	Status: existing/ zoned in district plan/aspiration	Transport infrastructure requirements and/or infrastructure strengths	Key infrastructure requirements (non-transport)	Estimated quantum of underutilised or vacant land (ha)	Key purpose	Comments
Auckland	Westfield	58ha	Existing	Existing	Existing. Great South Road and adjacent to mainline rail corridor.	Existing	0	Mixture of light and heavy industry for various purposes	
Auckland	Apollo Drive	57ha	Existing	Existing	Existing. Apollo Drive and adjacent to SH1.	Existing	0	Light industry for various purposes (mainly office and warehousing)	Largely taken up by mixed office uses.
Auckland	Mt Wellington Highway	57ha	Existing	Existing	Existing. Mt Wellington Highway and adjacent to mainline rail corridor.	Existing	0	Office and light industry	
Auckland	Morin Road	55ha	Existing	Existing	Existing. Morin Road and adjacent to mainline rail corridor.	Existing	0	Light industrial land for various purposes (mainly warehousing)	Will benefit from transport improvement as part of the AMETI project
WAIKATO REGION									
Taupo	Existing industrial zoned land (Centennial Dr area, Miro Street area, Totara Street)	220ha	Short term	Zoned in District Plan	Ready access to East Taupo Arterial and Napier Taupo road	Serviced	70ha	General industry	Mix of heavy and light industrial. Most of the capacity sits within the heavy industrial area at Centennial Drive
Taupo	Proposed industrial land (State Highway 5 to Broadlands Road)	71ha	Short term	Awaiting decision from independent commissioners	Ready access to East Taupo Arterial and Napier Taupo road	Requires the three waters	71ha	General Industry	Likely to be developed for light commercial operations with some trade suppliers like M10 anticipated
Taupo	Proposed industrial land (Centennial)	65ha	Short term	Awaiting decision from independent commissioners	Ready access to East Taupo Arterial and Napier Taupo road	Requires the three waters	65ha	General Industry	Likely to be developed for heavy industrial operations
Thames-Coromandel	Thames (between Thames and Kopu)	64ha	Existing zone	Currently zoned	No rail access to Thames-Coromandel – rail corridor exists but is now a walkway / cycleway. Adjacent to State	Existing	0ha	General industry	Private

Region	Name of site	Size (greater than 50ha (gross)	Timing: existing ; short term (prior 2021) medium term; (2021-2041) long term (2041 +)	Status: existing/ zoned in district plan/aspiration	Transport infrastructure requirements and/or infrastructure strengths	Key infrastructure requirements (non-transport)	Estimated quantum of underutilised or vacant land (ha)	Key purpose	Comments
					Highway.				
Thames-Coromandel	Thames	50ha	Short to medium Term	Kopu to Thames Structure Plan	No rail access but good access to State Highway	20% Infrastructure serviced	50ha	General industry	Private
Thames-Coromandel	Whitianga	60ha	Existing (20ha) Short term(40ha)	20ha Currently zoned, 40ha proposed via District Plan Review		Existing	Existing – 0ha. New – 40ha	General Industry	Private
Matamata-Piako	Fonterra – Waitoa	96ha	Existing	Development Concept Plan in District Plan	Adjacent to State Highway 26 and railway line	Privately serviced	54ha	Dairy processing	Development concept plan makes any activity not related to dairy processing discretionary in the vacant 54 ha future development area. Only the 41 ha existing development area is developed.
Matamata-Piako	Morrinsville Industrial zone – Morrinsville Industrial zone – Bolton Road	96ha	Existing	Zoned in District Plan	Adjacent to State Highway 26 and railway lines.	59% infrastructure serviced	37ha	General industry	Private ownership.
Matamata-Piako	Wallace Corporation	132ha	Existing	Zoned in District Plan	Within close proximity to SH26 and SH27, between Morrinsville and Te Aroha	Existing	0	Meat and skins processing	Private ownership.
Matamata Piako	Inghams Enterprises	62ha	Existing	Zoned in District Plan	Within close proximity to SH26 and SH27, between Morrinsville and Te Aroha	Existing	0	Poultry processing	Private ownership.
'South Waikato	Fonterra Lichfield	62ha	No known plans for expansion of activities at site	Zoned in DP, Existing	Good access to State Highway 1. On rail line with own rail siding.	Existing	0	Processing dairy products	Large Rural Site and some of the site is used for irrigating wastewater. Private.
South Waikato	Kinleith Heavy Industrial area	414ha	Existing	Zoned in District Plan	Easy access to State Highway 1. Access to rail.	Existing	0ha	Wood / timber products	Based on aerial photos, most of the site appears to be used, although there are some small forest stands. CHH wood products site 41 ha. Pulp and paper mill,

Region	Name of site	Size (greater than 50ha (gross)	Timing: existing ; short term (prior 2021) medium term; (2021-2041) long term (2041 +)	Status: existing/ zoned in district plan/aspiration	Transport infrastructure requirements and/or infrastructure strengths	Key infrastructure requirements (non-transport)	Estimated quantum of underutilised or vacant land (ha)	Key purpose	Comments
									timber yard and buffer area 273 ha. Private.
South Waikato	Tokoroa Browning St Industrial Area	64ha	Existing	Zoned in District Plan and partly existing	Land adjacent to State Highway 1, adjacent to rail (has siding).	Majority of lots are serviced	13ha	General Industry	Approximate vacant land estimate. It's hard to estimate given it's been developed and used in the past but is now disused. Still stages of the resource consent to be implemented.
Hamilton	Rotokauri	265ha	Short term: 85ha Medium term: 90ha Long term: 90ha	Zoned in District Plan (partially deferred zoning)	Existing. Maungaharakere Drive (Te Rapa Bypass) completed – linking area to proposed Hamilton section (medium term) of the Waikato Expressway. No new rail connection planned.	3 Waters, particularly wastewater which requires significant capacity upgrades.	265ha	General and light industry.	Seen as a key industrial node to help balance Hamilton's recent residential growth in the north of the City. The whole Rotokauri growth cell includes a mix of uses, being industrial, more general commercial and residential. However, stage 1 is primarily for industrial purposes. Significant Council investment has already been made for wastewater services.
Hamilton	Ruakura	405ha	Short term: 80ha Medium: 115ha; Long: 210ha	Aspiration	Short -medium term: Waikato Expressway (Hamilton Section in particular); effective connectivity to WEx; extension of Hamilton Ring Road sections to east of City (in progress). Rail access to north and to Tauranga.	3 Waters, in particular storm water.	405ha	Employment land centred on an inland port / inter-modal freight terminal, with logistics and freight handling area in addition to other industrial activities.	This development is the subject of appeals to the proposed RPS (decisions version, Nov 2012) and Hamilton City Council District Plan, which have allocated a large amount of industrial land. The total area zoned as part of Ruakura Structure Plan is >700ha, including residential, research & innovation, neighbourhood centre.
Hamilton	Te Rapa North (proposed)	85ha	Short term: 14ha Medium term: 46ha Long term: 25ha	Zoned in District Plan	Short term: Waikato Expressway (Te Rapa Section) Medium term: Waikato Expressway No additional rail access.	3 waters	85ha	Mixture of dairy, light industry and possible service centre.	Appeals resolution has resulted in agreement signed by all parties regarding staged release of land, timed to coincide with infrastructure triggers including completion of Te Rapa Section of Waikato Expressway. To note the existing Te Rapa Dairy Factory (46ha) is adjacent.

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Hamilton	Te Rapa Industrial (including Te Rapa Straight)	300ha	Existing	Existing	Existing SH1 (until WEX). No rail connection.	Nil	45ha	Industrial but has been heavily compromised by large format retail, car yards.	Unsustainable ribbon like retail growth has added to traffic congestion on SH1.
Hamilton	Frankton	200ha	Existing	Existing	Existing road and rail connections	Nil	4.5ha	General industry, light industry and associated commercial centres zones	
Waipa District	Cambridge	58ha	Existing	Existing	Improved access to the west side of the river is required	Nil	8ha	Mixture of general and light industry	
Waipa District	Hamilton Airport	166ha	Existing: 74ha,Short term: 43ha Medium Term: 9.6ha Long Term: 40ha	Partially zoned in District Plan (Short term) but longer term aspirations are within the Proposed District Plan	Industry, co-located to the Airport runways. Improvements to SH21 including a new Airport/Lochiel Road roundabout; and road realignment. Road connections include Southern Links and existing State highway network.	Wastewater and water supply		Airport related industry.	District Plan is currently 'Proposed' and subject to hearing and appeal processes. There is considerable pressure for further industrial land release in the area. Stage 1 in the short term comprises the currently under development Titanium Park (under construction).
Waipa District	Hautapu	147ha	Existing: 51ha Short term: 20ha Medium Term: 30ha Long Term: 46ha	Zoned in District Plan	Rail extends to site (Cambridge branch line). Will have WEx connections.	3 Waters	96ha	Existing is a mixture of dairy factory, general and light industry. Proposed land is general industry.	This development is the subject of appeals to the RPS (decisions version, Nov 2012) and developable area and timing is pending appeals decisions.
Waipa District	Te Awamutu	117ha	Existing: 100ha Short term: 17ha	Existing 17ha zoned in Proposed District Plan	Poor road access to 28ha of the existing land.	As the area has poor road access, no further infrastructure requirements are currently being considered	53ha	Existing: Mixture of general and light industry. Limitations on use to protect dairy factory.	Existing: Limitations on use to protect dairy factory

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								Proposed: mixture of general and light industry.	
Waikato District	Horotiu (Existing)	53ha	Existing	Existing	Currently exits onto SH1. Rail existing but improvements required to utilise.	Existing	0ha	Heavy Industry.	This is existing Heavy Industrial Land. Affco New Zealand, RX Plastics, Holcim, and various small businesses.
Waikato District	Horotiu (proposed)	150ha	Short term: 56ha Medium term: 84ha Long term: 10ha	Zoned in District Plan	Short term: Horotiu Access to SH11 (Te Rapa bypass) Medium term: Industrial Link Road Long term: Te Rapa Section and Ngaruawahia Sections of the Waikato Expressway are open.	Water supply, wastewater disposal infrastructure.	150ha	General industry	Appeals resolution has resulted in agreement signed by all parties regarding staged release of land, timed to coincide with infrastructure triggers including completion of Te Rapa and Ngaruawahia sections of the Waikato Expressway.
Waikato District	Tuakau	116ha	short term	Zoned in District Plan	Existing	Water supply, wastewater disposal infrastructure	116ha	General industry	Industrial land to service to local community and also an alternative to Pukekohe.
Waikato District	Pokeno	92ha	short term	Zoned in District Plan	Directly connects onto the Waikato Expressway. Rail existing.	Water supply, wastewater disposal infrastructure	92ha	General industry	Industrial land to service the local town being developed and also an alternative to Industrial land in Auckland.
Waikato District	Huntly (township)	86ha	Existing	Existing	Currently connects onto SH1 will use Huntly Section of the Waikato Expressway in future. Rail existing.	Existing	23ha	General industry	The 86 hectares are small areas dotted around Huntly generally occupied. It also includes 50ha which is Huntly Quarry and Brick Works.
Waikato District	Meremere	88ha	Existing	Existing	Directly connects onto the Waikato Expressway. Existing rail access.	Existing but significant contamination issues.	88ha	General industry	This land has been capped due to part of the site being contaminated. However if someone was to come along with the money and resources it could be utilised again, If a resource consent was successful.
Bay of Plenty Region									

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Tauranga	Mt Maunganui	300ha	Existing	Existing	Existing road network in place	Infrastructure is in place	30ha	General industry	Much of the use of this site is port related.
Tauranga	Port industrial zone	160ha	Existing	Existing	Existing road network in place	Infrastructure is in place	10-20ha maybe	Port wharves, port operations and port related uses e.g. storage and distribution	Located around port wharves at Mt Maunganui and Sulphur Pt.
Tauranga	Maleme St	50ha	Existing	Existing	Existing road network in place	Infrastructure is in place	0ha	General industry	
Tauranga	Te Maunga	190ha	Underway	Existing	Existing access via Truman land. Sandhurst interchange will provide improved access (2016 completion) No planned rail access but site is alongside ECMT	No significant issues. Services to boundary exist. Borders wastewater treatment plant.	50ha	General industry	Consolidates around existing industrial zone. Vacant land likely to be developed as a joint venture between the multiple Maori owners and a developer. No immediate plans for development although a concept plan has been drawn.
Tauranga	Tauriko	250ha	Existing	Existing	No significant issues. Planned and approved upgrade of intersection to SH29 at Belk Rd will allow full site development. This might however change as the result of possible Tauriko bypass to a different roading solution. No planned rail access.	3 waters	200ha	General industry and bulk retail and sub-regional shopping centre.	Currently under construction. Developer seeking a modest extension to this industrial area in Smartgrowth review. Presently this is the only area in the Western BOP sub-region where new industrial sections are being developed.
Tauranga	Wairakei	100ha	Short to Medium term.	Existing	Initially development relies on extension of Te Okuroa Dr. This is not budgeted to occur for about 10 years. The western end of the industrial area relies on the planned Papamoa East interchange which is not budgeted to occur for at least 15 years.	3 waters	100ha	General industry	The high cost of infrastructure to service this area and resulting high development contribution charges are a significant barrier to development in this area at the moment. As is the roading access issue. Likely to play a significant role in accommodating businesses that will service the planned population growth in Papamoa.

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					No planned rail access.				
Western Bay District	Rangiuru	280ha	Some historic development. Otherwise medium term.	Existing	Interchange to TEL and upgrade of intersection with current SH2 alignment required. Internal roading infrastructure being reviewed. Rail connection available if required.	3 waters	230ha	General Industry	Private development, currently owned by BOPRC CCO. The current planned servicing arrangements for Rangiuru are being reviewed because the infrastructure costs, and resulting financial contributions, are a significant barrier to development occurring. Sub-regional industrial land remote to the closest population centres of Te Puke and Papamoa. Uncertainty around the level of demand for industrial land in this location.
Western Bay District	Te Puke	170ha	Some existing development. Otherwise Short to medium term.	Existing	New access road needs to be constructed with extensive work at a new intersection with SH2, before development can commence. Existing intersection (SH2 and No 3 Rd) needs to be upgraded. High upfront costs to upgrade intersections with SH2 make the industrial area development currently unfeasible.	3 waters	110ha	General industry	General industrial development to service the Te Puke area.
Western Bay District	Katikati	70ha	Short to medium term	Existing	Existing transport network	3 waters	40ha	General industrial development to service the Katikati area.	
Rotorua District	Fairy Springs industrial area	190ha	Existing	Existing	Access to State Highway 5. Access to Rotorua branch line	Nil	0ha	General industry	

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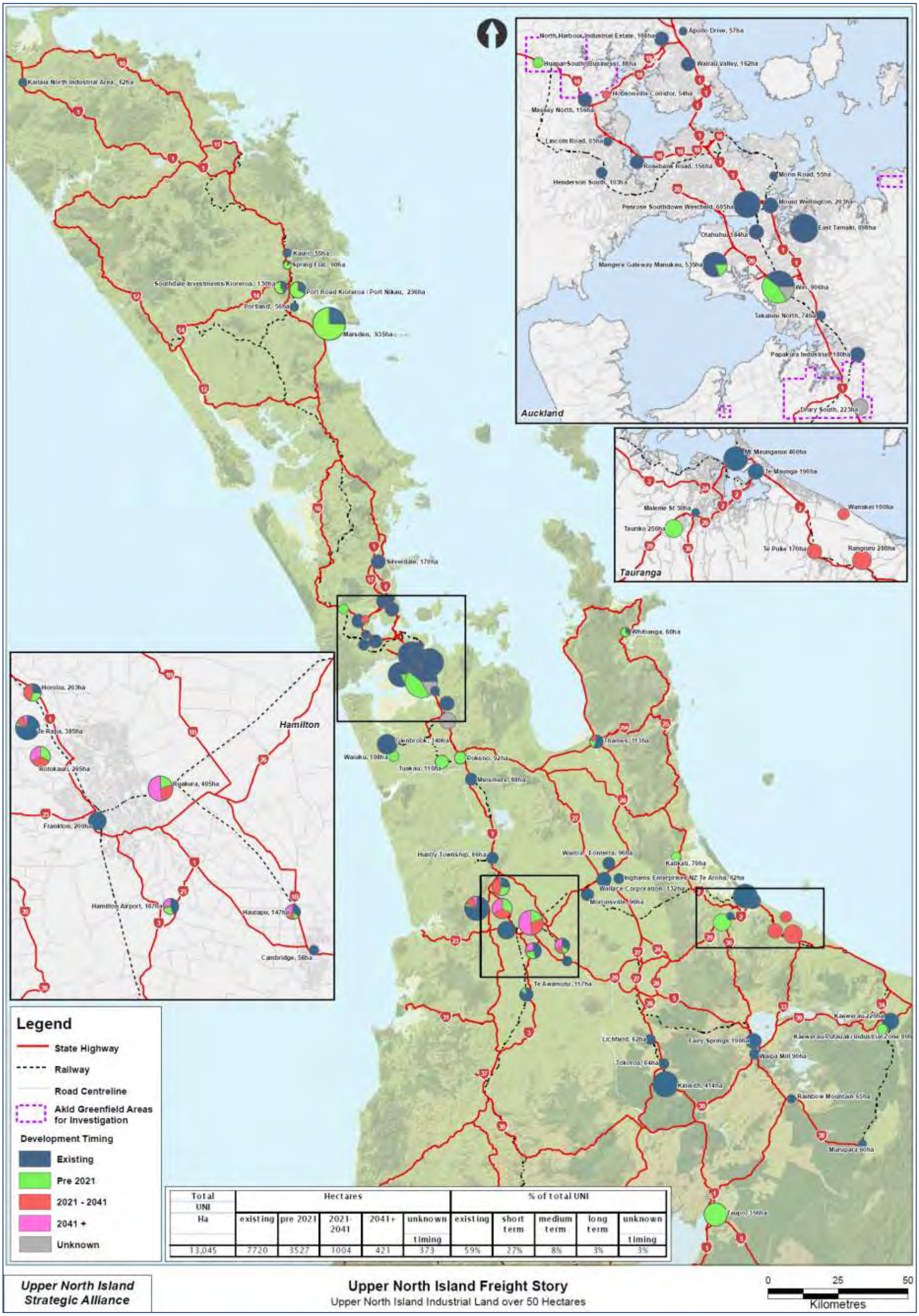
					rail corridor (currently mothballed)				
Rotorua District	Waipa Mill Site	90ha	Existing	Existing	Local road access to State Highway 5	Nil	0ha	Wood processing	
Rotorua District	Rainbow Mountain	65ha	Existing	Existing		Nil		Wood processing	
Whakatane District	Murupara	60ha	Existing	Existing	Access to rail, State Highway 38	Nil	0ha	Log handling and storage	
Kawerau District	Industrial Zone. North east of town	220ha	Existing	Existing	Access to rail, State Highway 34 and 30	Nil	20ha	Tasman Mill, rail head and log storage and some general industry.	
Kawerau District	Putauaki Industrial Zone	80ha	Short Term	Notified Zone Change process currently in progress. . Decisions on submissions released 15/11/12	Road - Defined access points are shown to SH34 to provide new access to all new activities within the Industrial zoned part of the Structure Plan area. Upgrades required. Rail - Future crossing place. Defined level crossing location identified to provide access across existing ECMT railway siding - rail crossing will be an 'at grade' crossing controlled by a light and barrier system	Water & wastewater. (extend existing reticulated mains);	80ha	General industry	Putauaki Trust is geared up to proceed when statutory zone change is completed. The plan change is to address an identified shortage of available industrial land supply in the Kawerau area.

Upper North Island industrial land map



Northland region industrial land map