



Hutt Corridor Plan

Adopted October 2011

Quality for Life



greater WELLINGTON

REGIONAL COUNCIL

Te Pane Matua Taiao



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For more information:

Greater Wellington
142 Wakefield Street
PO Box 11646
Manners Street
Wellington 6142
T 04 384 5708
F 04 385 6960

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info@gw.govt.nz
www.gw.govt.nz

The Hutt Corridor

The Hutt Corridor is the transport corridor formed by State Highway 2 and the Wairarapa railway line from Ngauranga in the south through to Te Marua, Upper Hutt in the north, as well as east – west connections between State Highway 2 and State Highway 1, including State Highway 58 and Akatarawa Road. It includes major arterial routes and key routes for public transport, walking and cycling connecting with this corridor.

Strategic Context

Regional strategic framework

This corridor plan has been developed consistent with the strategic policy framework provided by Regional Land Transport Strategy (RLTS) 2010 – 2040.

The RLTS sets out the following long term ideal vision for this corridor:

Along the Hutt Corridor from Ngauranga to Upper Hutt, State Highway 2 and the Wairarapa railway line will provide a high level of access and reliability for both passengers and freight. These primary networks will be supported effectively by local and regional connector routes. High quality rail and bus services will accommodate the majority of people using passenger transport to commute along this corridor during the peak period. Maximum use of the existing road network will be achieved through measures giving priority to buses and addressing severe traffic congestion. Comprehensive bus services and adequate park and ride facilities will provide additional access for the community. Effective safety measures on the road and rail networks will ensure that no one is killed or injured when travelling in this corridor. East-west connections between this corridor and other corridors and regional centres will be efficient, reliable and safe.

The RLTS sets out objectives and outcomes for the region's transport network and these were considered when developing the objectives and the proposed improvement measures for this corridor.

Role of other regional plans

This corridor will not achieve the objectives of the RLTS on its own. It is very important to recognise the role of the other regional transport plans that complement and support this corridor plan.

For example, the Regional Walking Plan and Regional Cycling Plan include detailed action programmes that identify a range of improvements for those networks. This includes actions for NZTA and local councils to systematically review their pedestrian and cycle networks to identify problem areas and pinch points, and implement improvements consistent with best practice guidance.

Another example is the Regional Rail Plan which provides the planning framework for development of the region's rail network over the long term – providing alternative pathways or scenarios for responding to reliability, frequency, capacity, and reach.

Some projects, such as the link road from Petone to Grenada, and improvements along State Highway 58, feature in both the Hutt and Western Corridor Plans.

Corridor plans are the only place where the development of the region's strategic road network is considered in our regional planning. So, while corridor plans are multi-modal, proposed roading improvements are consequently a significant aspect of these.

Fit with the national strategic framework

The Government Policy Statement (GPS) on Land Transport Funding identifies economic growth and productivity as a key priority. It seeks a transport system that can move people and freight as quickly, efficiently and safely as possible. The GPS recognises the importance of better access to markets, employment and areas that contribute to economic growth. These priorities are particularly relevant to the Hutt Corridor which has a critical role in the movement of people and freight between key markets and employment areas for the region.

Another key priority of the GPS is improving road safety. Road safety is a major concern throughout the Hutt Corridor and the need to improve road safety has been a key consideration in development of this plan, consistent with the direction provided by Safer Journeys 2020.

Other NZ Transport Agency (NZTA) documents such as the State Highway Network Strategy and draft State Highway Classification also contribute to the context within which this plan has been developed.

Why is the Hutt Corridor so important?

The Hutt Valley is a key contributor to the region's prosperity and economic growth. The strategic transport network through the Hutt Corridor is crucial for the movement of both commuters and freight.

There are around 56,000 full time employees and about 12,000 businesses operating in the Hutt Valley, contributing over \$3billion GDP, around 20% of the regions total GDP.

We are expecting a doubling of freight volumes over the next few decades. Our region was built around the port in Wellington and we consequently have a key advantage as a multi-modal sea, road and rail hub. We need to maintain this advantage and maximise the economic value to the region as a result of projected freight growth. A first class transport system which supports key freight routes will be vital to do this.

The Hutt Valley is home to the region's primary industrial and logistics centre at Seaview/Gracefield. This area has around 6000 employees in about 700 businesses and generates a significant volume of freight traffic travelling to/from CentrePort and Wellington City CBD to the south, and connecting with SH2 and SH1 to the north.

Industrial and distribution activity out of this area are expected to grow strongly in future. Hutt City Council's 'Vision Seaview Gracefield' strategy document seeks to enhance and build on the area's industrial character, by supporting existing businesses and creating suitable environment for business growth.

Some key large companies are also investing in the future of the Seaview/Gracefield area.

- CentrePort has signalled that it plans to significantly increase the role of Seaview as an inland port.
- BP is constructing a new bulk fuel storage terminal at Seaview which will significantly increase the volume of fuel stored at this location to serve the region's fuel needs.
- Dulux New Zealand is investing \$28M in their Gracefield site to upgrade manufacturing facilities and infrastructure and is likely to continue to be a key employer in the area in future.
- The "Science Village" in Gracefield is a key employer and growing (with Industrial Research Limited and GNS Science).

Freight flows within the Wellington region are focused on a key 'freight triangle' between Seaview/Gracefield - Wellington Port/CBD - Porirua. CentrePort is currently working to attract importers to set up national distribution centres in the region, with a focus on Seaview and Porirua areas. Good transport links between these key freight destinations are crucial to continued regional economic growth.

Learning institutions within the Hutt Valley have an important role in providing employment and attracting people to the region, particularly the WelTec campus in Petone. In Upper Hutt, the NZ Defence Force has a strong and growing presence that benefits the region as a large employer, with associated demand for housing and spending in the region.

While population growth in the Hutt Valley is projected to be relatively slow and steady, there are several key sites where significant future development is planned.

- In Upper Hutt, a draft structure plan for the Maymorn area outlines provision for around 1800 new households. There are several other large new development sites located with good access to transport infrastructure in Upper Hutt that have potential to generate new employment activity.
- Hutt City Council plans to encourage more intensive residential development close to commercial centres and public transport nodes, and to enable more large multi-use development (including residential) at the western end of Petone.
- Wellington City Council's Lincolnshire Farm development - located north of Grenada Village and west of Horokiwi - is expected to accommodate 1000 new dwellings and over 30 hectares of employment activity.

The development at these locations will generate significant new trips and activity that will need to be accommodated by the transport network.

Around 66% of residents both live and work within the Hutt Valley. Encouraging more local employment opportunities is a key theme supported through local planning documents. However, for residents who do not work within the Hutt Valley, Wellington City is the primary employment destination. The region's capital relies on a significant labour force commuting from outside the city and 70% of those commuters come from the Hutt Valley.

What are the significant transport network issues?

The strategic transport network through the Hutt Valley has come under significant pressure due to increasing demands over past decades, and this is expected to continue with further increases in freight volumes and new land development over coming decades. There are particular sections of the network experiencing some serious pressures and issues as a result.

Petone to Ngauranga

The only land based access between the Hutt Valley and Wellington City is via the narrow stretch of land between Petone and Ngauranga, where there are serious constraints on all transport modes.

SH2 south of Petone experiences the heaviest traffic volumes of the whole corridor – around 67,000 vehicles per day. Congestion along this stretch of SH2 is severe.

The rail network south of Petone must accommodate services from the converging Melling and Hutt/Wairarapa lines. Rail speeds on this part of the network are constrained by the track alignment. Even with the new Matangi rail carriages, rail services are expected to reach capacity (during peak times) within the next 5 years.

The walkway/cycleway along this section of the corridor consists of a low quality, off-road track between Ngauranga and Horokiwi, and an uncompleted section between Horokiwi and Petone. Alternatively, cyclists can use the road shoulder alongside traffic travelling 100km/h. Provision for pedestrians and cyclists along this stretch presents significant safety and level of service issues.

Both commuters (road, bus and rail) and freight compete for the limited space provided through this section of the corridor during peak times.

This narrow low-lying stretch of transport corridor is particularly susceptible to earthquake, landslide, storm surges and tsunamis. SH2 and the Wairarapa railway line along this stretch (along with water and power) are identified as regionally significant lifelines services. These services are expected to be severely affected following an earthquake or tsunami and may be subject to extended closures following a major storm or landslide.

Seaview/Gracefield to SH2

Another part of the corridor that is experiencing significant pressure is the transport network linking the Seaview/Gracefield industrial area with SH2. At present, the primary route for both freight and commuter traffic is via the Petone Esplanade. The Esplanade carries significant volumes of traffic – about 30,000 vehicles per day. Around 10% of this traffic is heavy commercial vehicles, transporting freight to SH2 and then carrying on south or north via SH2 initially. CentrePort estimates that of the 11M tonnes of freight coming through the Port¹, 4.4M tonnes comes via the Hutt Corridor and over half that – 2.5M tonnes – comes from Seaview/Gracefield.

Severe congestion affects the Esplanade during peak times, making access between Seaview/Gracefield and key freight destinations and markets very difficult. Part of the issue is the need to merge with SH2 traffic at the western end and the way the current Petone interchange functions. There are also issues with intersections along the Esplanade itself. However, the ability of this two-lane road to cope as a regionally strategic connector is limited. This is an issue that could severely affect the ability for the region's primary industrial and logistics area to grow and contribute to the region's economic prosperity in future.

Heavy traffic volumes and large trucks along the Petone Esplanade are not consistent with community vision for the Esplanade which - as set out in the 'Petone Vision Statement' - seeks to protect and enhance the amenity values of the foreshore and to increase walking, cycling and other recreational uses.

The Petone Esplanade is another area that is highly vulnerable to the impacts of climate change, including storm surges, sea level rise and flooding, and could be badly affected in a large seismic event. Given that the Seaview area houses the region's principal fuel storage facilities, access to this area after an earthquake/tsunami event will be critical to the region's response and recovery efforts.

¹ Not including domestic inter-regional freight on the Cook Strait ferries.

East – west links between SH2 and SH1

The region's topography has created a largely north-south linear shape to our urban form, converging at Ngauranga (in Wellington City). While this has many benefits in terms of transport infrastructure efficiency, limited east-west connections between SH2 and SH1 has been identified as an issue for strategic regional planning and connections between key destinations for people, goods and services.

Existing east-west connections are SH58/Grays Road and Akatarawa Road, located to the northern end of the Hutt Corridor.

The problem is towards the southern end of the Hutt Corridor where there is no direct link between the key freight and employment centres of Lower Hutt/Petone/Seaview and Johnsonville/Porirua. These trips are generally made using SH2 and SH1 via Ngauranga interchange – placing more pressure on the sections of the region's transport network that already suffer severe congestion and high levels of demand for north-south trips into and out of Wellington City. This leads to longer travel times and trip distances.

Limited east-west connections between SH2 and SH1 also create significant network resilience issues. An incident (such as a traffic accident or slip) on SH2 between Wellington City and Hutt Valley can cripple the entire state highway network for hours, even on a weekend, due to the lack of alternative routes and a necessary long diversion via SH58. In a major event such as an earthquake or tsunami, having an alternative east-west link at the southern end of the Hutt Corridor will be vital to re-instating access between the Hutt Valley, Wellington City and other centres.

North – south safety and access issues

Traffic volumes on SH2 through the Hutt Corridor start at around 18,000 vehicles per day at the northern end (at Brown Owl) through to around 67,000 vehicles per day at the southern end (between Petone and Ngauranga).

In addition to connecting urban centres through the Hutt Valley and providing commuter access to/from Wellington City CBD, this route forms an important connector between the rural production sector in Wairarapa and the Wellington Port and urban centres. In particular, significant increases in log exports are expected over the next 10 years.

There are some specific spots along SH2 that suffer congestion during peak times – in addition to the southern end between Petone and Ngauranga. In many cases the congestion issues relate to the capacity at intersections, such as at Melling and Kennedy Good Bridge. The two-lane stretch of SH2 through Upper Hutt between Silverstream and Moonshine Bridge (west of the Hutt River) and between Moonshine Bridge and Maoribank (east of the Hutt River) also suffer congested conditions at peak times and is approaching capacity – although the impact of this congestion affects fewer vehicles than the congestion at the south end of the Hutt Corridor.

The key issue for this section of the corridor is the serious risk of traffic accidents along SH2. There are many at-grade intersections (both signalised and non-signalised) which are, in many cases, not designed to safely accommodate a 100km/hour travel speed or the level of demand now experienced along this corridor.

Safe provision for cyclists travelling north-south through the corridor on SH2 is inadequate in places – with many pinch points and hazards. Off-road facilities for cyclists and pedestrians are available using the Hutt River Trail - however this will not suit some types of commuter cyclists.

Rail services through the Hutt Valley are very well utilised, accounting for around half of all passenger numbers on the region's rail network. However, reliability has been a significant issue for rail commuters over recent years and addressing this is a priority for the region. Many park and ride facilities are at or nearing capacity and many rail stations in the Hutt Valley have issues relating to access, amenity and personal security.

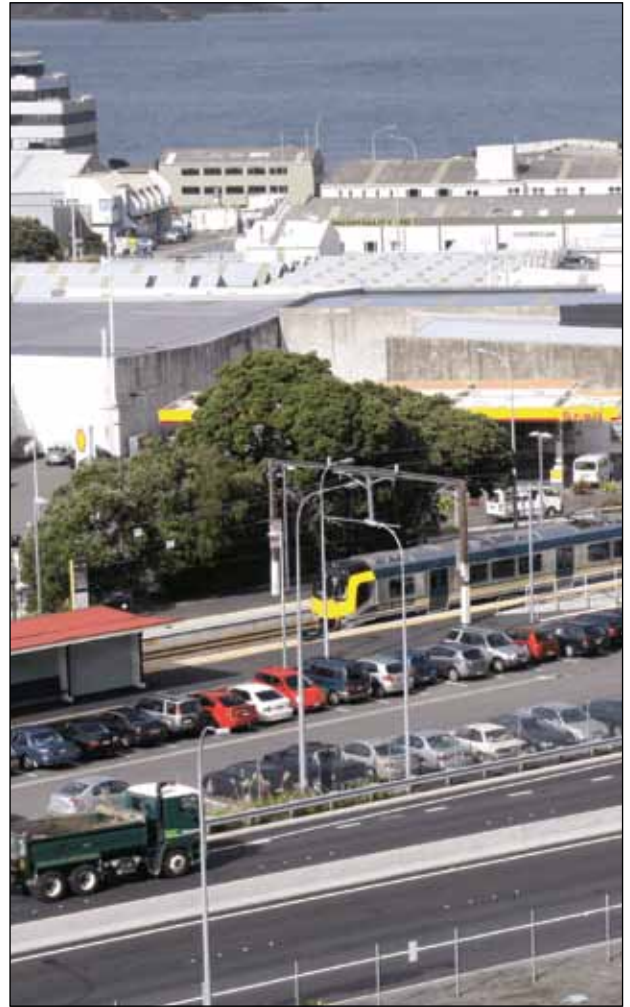
Flood risks associated with the proximity to the Hutt River through the valley have the potential to significantly affect this part of the corridor. There are also potential impacts on the river and river management as a result of the transport corridor development.

Key objectives for this corridor...

The key objectives developed for this corridor plan respond to the significant issues and opportunities relating to this specific transport corridor. These objectives are derived from the key outcomes of the Regional Land Transport Strategy (RLTS) 2010-2040. Progress against the RLTS outcomes is monitored through the Annual Monitoring Report on the RLTS.

They are:

- Provide for current and future growth pressures (population/employment/freight) in the Hutt Corridor in accordance with Wellington Regional Strategy and Regional Policy Statement
- Reduce severe congestion on the road network, including focussing on congestion 'hotspots' between Ngauranga and Petone, the Ngauranga Interchange, and the Petone Esplanade /SH2 intersection
- Improve the mode share of walking, cycling and public transport
- Improve accessibility for all modes and between modes
- Improve route security and network resilience
- Improve road safety throughout the corridor.



What we plan to do as a priority

Strategic Road Network Projects

Petone Package

A new road is proposed to connect SH2 at Petone and SH1 at Grenada North – known as the Petone to Grenada Link Road. This project has benefit across multiple objectives and issues including:

- A direct connection for freight, commuters and other trips between Lower Hutt and Porirua/ North Wellington providing for more efficient freight trips (expected to accommodate around 2,500 freight vehicles per day) and improved access between employment and markets (with trip length saving of about 7 km and travel time saving of around 8 minutes).
- Reduced congestion on SH2 south of Petone, and SH1 south of Tawa – by attracting around 25,000 vehicles per day to the new link road.
- Significantly improved transport network resilience through provision of a new alternative east-west connection that can be used in the event of a traffic accident or natural hazard/ earthquake event affecting SH2 between Ngauranga and Petone.
- Potential to create a new direct east-west bus service between Porirua/Johnsonville and Lower Hutt.
- Integrating land use and transport by supporting proposed development at Lincolnshire Farm, Petone west and Seaview/Gracefield.

Other elements of the Petone package include a new Petone interchange and measures such as ramp metering which will help to smooth the flow of merging traffic – these will help to reduce congestion around Petone and get more efficiency out of the existing road network. The Petone interchange upgrade will enable the creation of a 'beach to bush' walk and cycle link between Belmont Regional Park and the Petone foreshore.

Investigation of the Petone package of improvements will start in the 2011/12 financial year and will continue through the 2012 – 2015 Regional Land Transport Programme. Construction is likely to be substantially completed during the 2015 – 2018 Programme.

Gracefield Package

Addressing access between SH2 and the Seaview/ Gracefield industrial and logistics hub is a priority for the corridor.

In the short term, Hutt City Council plans to investigate options for maximising traffic efficiency, and improving pedestrian and cycling access along and across the Esplanade. This does not involve any major capacity increase or significant widening. The proposed improvements are expected to focus on intersection upgrades and changes to parking layout - to achieve improved traffic flows and enhanced pedestrian and cyclist access. These improvements will be investigated in the 2011/12 financial year, and would be substantially implemented during the 2012-15 RLTP period if found to be effective.

Finding a way to fund the preferred long term roading solution (an inland cross valley link) that provides the required level of service to accommodate future increases in freight and support economic growth - which is also consistent with the community vision for the Petone Esplanade - is a crucial piece of work. To date, low benefit/cost ratios have made it unlikely that such a solution would receive funding support from NZTA. Further work is now proposed to investigate the wider economic benefits and consideration of end to end freight trips, the regional and national significance of this route, projected freight volume data, and the allocation of benefits from such a project. Potential funding options will also be a key part of this work. This work is proposed to be completed within the 2012-15 Programme.

Rail is a further option for improved freight access between Seaview/Gracefield and CentrePort. However it is recognised that this is not an alternative to roading solutions. Advocating for the retention of the Gracefield rail corridor is an important ongoing measure in the Plan. CentrePort and KiwiRail both have a key role in investigating the feasibility of reinstating the Gracefield rail line, including consideration of commercial viability.

SH2/58 Interchange

A 'grade separated' interchange is proposed for the intersection of SH2 and SH58 (Haywards) - to address the poor road safety record at this intersection. The new interchange will also provide safer access to the Manor Park area.

This project has been through the detailed investigation stage and is essentially ready for final design and construction. It is expected that construction of this project will commence during the 2012-15 RLTP period and be substantially completed within the 2015-18 RLTP period.

Melling Package

Safety and congestion issues are the key drivers behind the need to improve both the Melling and Kennedy Good intersections.

Investigation work carried out during 2009/10 by NZTA, Greater Wellington and Hutt City Council found that full grade separation at these intersections is not economically viable within the next ten years.

In recognition of the urgent need to make some improvements at Melling, options are being investigated to alleviate safety and congestion issues through less significant, short term measures. Implementation of any suitable improvements is expected to be completed within the 2012-15 RLTP period.

Grade separation remains the preferred long term solution for addressing the safety and congestion issues at these two intersections, with Melling the priority for construction. The future design of this project will need to be coordinated with flood protection requirements in the vicinity and with access to Melling railway station. Further investigation and scheme assessment stages of the full interchange project are signalled to be completed during the 2018-21 RLTP period.

State Highway 58 capacity

The short-medium term priority for SH58 is to improve the safety of this route by implementing a package of road safety improvement works as outlined in this plan. However, we also need to investigate the need and feasibility for increasing capacity on SH58, including consideration of four-laning the current alignment between Transmission Gully and SH2. Any short-medium term safety improvements should not be contradictory to potential long term capacity upgrades.

Road Safety improvements – SH2, SH58 and Grays Road

A package of road safety improvements are proposed for SH2, SH58 and Grays Road.

The improvements along SH2 will comprise some minor work to protect or remove roadside hazards between Petone and Ngauranga, and improvements between Melling and Moonshine Hill Road to improve road friction at intersections and install a medium barrier.

Along SH58, a long list of safety improvements are proposed to be completed based on priority need and as funding allows. These include measures such as intersection improvements, passing lanes, road realignments, seal widening, median barriers, and roundabout improvements. Wherever possible, these improvement works will be designed to improve safety for all road users including pedestrians and cyclists.

The timing for the improvements to SH2 and SH58 are expected to be commenced during the 2012-15 RLTP period, and substantially completed within the 2015-18 Programme.

The Grays Road safety improvements involve road alignment and road surface improvements at high risk locations. These works are planned to commence during the 2011/12 financial year, and be completed within the 2012-15 RLTP period.

Action Table 1 – Strategic Roding Projects

Action	Lead responsibility	Indicative implementation cost
Petone package		
Complete scheme assessment to comprise of: <ul style="list-style-type: none"> • A new link road between SH2 at Petone and SH1 at Grenada² • Demand management measures such as ramp signalling at Ngauranga and Petone • ‘Beach to Bush’ walking and cycling connection at Petone interchange. 	NZTA HCC WCC	\$6M
Implement the recommended Petone package from the Scheme Assessment	NZTA	\$254M
Gracefield package		
Investigate short-term options for upgrades to The Esplanade, Petone to maximise traffic efficiency. Includes investigating a dedicated walkway/cycleway	HCC	TBC
Implement appropriate upgrades to The Esplanade identified as a result of investigations	HCC	Approx \$13M
Investigate the wider economic benefits of a new Cross Valley Link connecting Gracefield with SH2 (including consideration of ‘end to end’ freight trips, the regional and national significance of this route, and projected freight volume data)	HCC NZTA	TBC
This work should include consideration of the allocation of those benefits and potential funding options to support a Cross Valley Link as a long term solution		
Advocate for the retention of the Seaview/Gracefield rail corridor for potential future freight movements	GWRC HCC	Administrative
SH2/58 Interchange		
Upgrade the SH2 / SH58 intersection to a full grade-separated interchange to address congestion issues and safety risks Includes providing safer access to Manor Park	NZTA	\$40M
Melling package		
Complete investigations into short-medium term improvements at Melling and Kennedy Good Bridge intersections with a focus on improving traffic flow and safety	NZTA HCC GWRC	\$2.1M
Construct any identified short- medium term improvements		TBC
Longer-term, complete a scheme assessment for the grade separation of Melling and Kennedy Good Bridge intersections	NZTA	Scheme assessment – TBC
Implement the recommended upgrade option	NZTA	Melling – approx \$72M (2010) Kennedy Good – approx \$54M
SH58 Capacity Investigations³		
Investigate the need and feasibility of increasing capacity on SH58, including considering 4-laning the current alignment from the proposed intersection of SH58 and Transmission Gully to the SH58/SH2 intersection in order to inform the development of the RLTP 2015-18 and subsequent plans	NZTA	To be determined

² Also identified in the Western Corridor Plan 2006.

³ Also identified in the Western Corridor Plan 2006.

Action	Lead responsibility	Indicative implementation cost
Strategic Road Safety Package		
SH2 Safety Improvements Package: Protect or remove roadside hazards on SH2 between Petone and Ngauranga to address current safety risks to road users	NZTA	Approx \$0.5M
Implement safety improvements on SH2 from Melling to Moonshine Hill Road, including: improving road friction at traffic signal controlled intersections and installing a median barrier between Moonshine and Silverstream	NZTA	\$10M
SH58 Safety Improvements Package⁴: Short-medium term: <ul style="list-style-type: none"> • Spinnaker Drive intersection treatment • Moonshine to Pauatahanui Minor Safety Improvements • Extending uphill passing lane on Haywards Hill. And longer term: <ul style="list-style-type: none"> • Haywards Hill to Moonshine Road seal widening and median barrier • Improve road alignment on Haywards Hill • Moonshine Road roundabout • Flightys Road roundabout. Improvements should include features that also improve safety for pedestrians and cyclists wherever possible	NZTA	Approx \$10 – 15M
Grays Road Safety Improvements Package: Implement safety improvements along Grays Road, including geometric and road surface improvements at high risk locations identified through local road safety investigations work	PCC	Approx \$0.2M

4 Also identified in the Western Corridor Plan 2006.

Strategic Public Transport Projects

Rail package

The short-medium term priority for rail in the region is to get the current network running reliably and effectively – by completing essential track, signal and rolling stock upgrades. We also want to improve our existing railway stations (particularly in terms of access, amenity and security), continue to upgrade park and ride provision, and to get real time and integrated ticketing systems implemented.

Decisions about which stations throughout the region’s rail network will be upgraded first will be based on a prioritisation criteria currently being developed by Greater Wellington.

Longer term, a number of potential rail enhancement projects to improve capacity, frequency and reach may be considered. Many of these long term enhancement projects are identified in the Regional Rail Plan. The priority, as funding becomes available, will be to progress those projects identified in Rail Scenario 1 of the rail plan – the most significant of which for the Hutt Corridor is double tracking between Trentham and Upper Hutt.

The Regional Rail Plan is likely to be reviewed over coming years to reflect the outcomes of the agreed Wellington Rail Package (July 2011). As part of that agreement Greater Wellington will now own the rolling stock and station buildings, with Government retaining ownership of the track, signals, power supply etc.

Public Transport Service Review

A review of public transport services within the Hutt Valley - and service connections in and out of the corridor - is proposed to be completed within the 2012-2015 RLTP period.

Regular detailed reviews of public transport within the region are an important measure to ensure that services are optimised and improved to reflect the changing needs of communities. These reviews include looking at timetables, bus-rail connections, potential new or extended services, potential changes to increase efficiency or to optimise services.

The Hutt Public Transport Service Review should include consideration of the most effective location for Hutt City’s central bus terminal.

Action Table 2 – Strategic Public Transport Projects

Action	Lead responsibility	Indicative implementation cost
Rail package		
Implement the outstanding improvements in the base case scenario of the Regional Rail Plan as a priority, including: <ul style="list-style-type: none"> Refurbishing existing Ganz Mavag carriages Station upgrades (including pedestrian and accessibility improvements) and park and ride upgrades. 	GWRC	\$80M for Ganz Mavags \$2.5M per year for station upgrades (region-wide)
Longer-term, implement further improvements to the rail system through the corridor, consistent with the region’s rail plan Improvements identified under Rail Scenario One, such as double tracking between Trentham and Upper Hutt, are likely to be amongst the priorities as funding becomes available	GWRC	TBC
Public Transport Service Review		
Undertake a review of public transport services within the Hutt Valley in accordance with the Regional Public Transport Plan The review should include consideration of the most effective location for Hutt City’s central bus terminal	GWRC HCC	Administrative
Real Time and Integrated Ticketing		
Ensure continued roll-out of real time information throughout the public transport network, including the Hutt Valley	GWRC	TBC
Develop integrated ticketing systems for the public transport network, including the Hutt Valley	GWRC	TBC

Strategic Walking and Cycling Projects

Ngauranga to Petone walkway/cycleway

Providing a good quality walkway and cycleway along the entire stretch between Ngauranga and Petone – with links to networks to the north and south – is a high priority for this plan. This is an identified significant gap in the regional strategic cycle network - with inadequate provision for people to walk or cycle between the region's two largest cities.

Ideally the timing for detailed investigations of this project would be to commence as soon as possible. However, NZTA has signalled that the earliest funding is likely to be available is in the 2012-2015 RLTP period. Consideration will be given as to the best way to achieve funding for this project from the available activity classes.

An opportunity has also arisen in relation to work that KiwiRail will be carrying out in the near future. KiwiRail will be replacing the rail traction poles along the Ngauranga to Petone section over the next 1-3 years. This work could involve moving the current track and pole alignment - either a small amount at no additional cost, or a larger distance at some cost.

This would enable one of two possibilities - providing an improved width along the existing walk/cycle path on the SH2 side of the rail between Ngauranga and Horokiwi - or developing a shared, sealed pathway on the seaward side of the rail from Ngauranga to Horokiwi and on to Petone (that could also be utilised for rail maintenance vehicles when required).

The latter would remove the need for crossing the rail at Horokiwi by bridge or level crossing. While crossing points to the south and north would still need to be investigated, there is more space and more options at those locations. This approach would also be more consistent with the vision of the Greater Harbour Way.

We need to urgently carry out initial investigation work with KiwiRail - to establish whether sufficient space can be created (at reasonable cost) by moving the track to accommodate the seaward option. We need to do this work before KiwiRail commence their pole replacement work and before we commence detailed investigations into options for crossing the rail at Horokiwi.

Hutt River Trail

It is proposed to continue to improve and upgrade the provision for cyclists and pedestrians along the Hutt River Trail – as a key north-south strategic link through the Hutt Corridor. Investigation is timed to take place in the 2011/12 financial year, with implementation of improvements to be completed within the 2012-2015 RLTP period.

It is recognised that this facility will not suit all types of cyclists, and some cyclists who travel at higher speeds or wish to take a more direct route will still use SH2. However the Hutt River Trail does provide a safe off-road option for those cyclists who choose not to use SH2. Improvements to SH2 and the local road networks to provide safely for cyclists (and pedestrians where appropriate) is a key measure for those road controlling authorities identified in the Regional Walking and Cycling Plans and will be carried out as part of ongoing programmes.

Upper Hutt Rail Corridor Cycle Link

Creating a new walking and cycling path in available space within the Upper Hutt rail corridor is proposed to provide direct off-road access between Upper Hutt CBD and schools along the route from Maoribank to Silverstream. Timing for implementing this project is within the 2012 – 2015 RLTP period.

Great Harbour Way

The Great Harbour Way concept is to ultimately have a continuous, safe, signposted walkway and cycleway facility around the whole perimeter of the Wellington Harbour (Te Whanganui-a-Tara). Looking for any opportunities to progress towards this long term vision is part of this corridor plan (together with the Regional Cycling Plan and Ngauranga to Airport Corridor Plan). Key opportunities in this plan relate to the Petone to Ngauranga walkway/cycleway and planned improvements along Petone Esplanade.



Action Table 3 - Strategic Walking and Cycling Projects

Action	Lead responsibility	Indicative implementation cost
Ngauranga to Petone walkway/cycleway		
Investigate options to complete and upgrade the off-road cycleway / walkway between Ngauranga and Petone	NZTA	To be determined
Implement improvements to the off-road cycleway / walkway between Ngauranga and Petone	NZTA	Approx \$14M – but to be determined through next investigation stage
Hutt River Trail		
Upgrade the Hutt River Trail between Upper Hutt and Petone to provide a good level of service for commuter cyclists and pedestrians as an alternative to SH2	UHCC HCC	To be determined
Upper Hutt Rail Corridor Cycle Link		
Implement a walking and cycling route within the Upper Hutt rail corridor to provide direct access for these modes between Upper Hutt CBD and schools along the route from Silverstream to Maoribank	UHCC	To be determined
Great Harbour Way		
Continually look for opportunities to improve walking and cycling facilities in the corridor consistent with the vision of the Great Harbour Way	NZTA HCC WCC	To be determined
SH2 cycling improvements		
Remove pinch-points and safety hazards for on-road cyclists as part of ongoing minor safety improvements programme	NZTA	To be determined

Secondary priority projects and studies – within ten years

There are a number of other pieces of work that we want to progress over the first ten years of the plan. These are:

- **Climate Change and Natural Hazard Impacts Study:** Bringing together the various studies done to date about the risk and likely impact of climate change, storms, flooding, earthquake and tsunami on this corridor – the study will then identify the likely impacts on the strategic transport network, address any knowledge and information gaps, and provide recommendations about what things need to be included in local and regional planning and asset management in response. This project will be lead by Greater Wellington, with input from regional partners, and is planned to be completed within the 2012 – 2015 RLTP period.
- **SH2 North of Maoribank:** Investigate proposed improvements to SH2 north of Maoribank in response to current safety issues and planned future growth. This work was not included in the scope of NZTA's SH2 Strategic Study and needs to be completed so that improvements can be identified and planned for. This work will be lead by NZTA and UHCC, to be completed within the 2012 – 2015 RLTP period if possible.
- **Akatarawa Hill Upgrade:** Investigate the funding feasibility of advancing the preferred option for upgrading Akatarawa Hill Road. This project will be lead by Upper Hutt City Council, to be completed within the first ten years of the plan. Any implementation measures coming out of this work are expected to be beyond ten years.
- **SH2 Moonshine Bridge to Maoribank Capacity:** Investigate the funding feasibility of advancing the preferred option for a four-lane road arrangement on SH2 between Moonshine Bridge and Maoribank. This project will be lead by NZTA, to be completed within the first ten years of the plan. Any implementation measures coming out of this work are expected to be beyond ten years.

What we plan to do – beyond ten years

Silverstream package

Beyond ten years, it is proposed to four-lane the section of SH2 between Silverstream and Moonshine Bridge – consistent with NZTA’s long term strategy for the corridor to be of expressway standard. This package would also include intersection improvements at the Silverstream exit, and enhancing walking and cycling access in this area.

This package is timed beyond ten years due to the greater urgency and priority around other large projects in the plan and the need to be realistic about available funding. Initial investigation work is signalled to commence within the 2018 – 2021 RLTP period.

Ngauranga to Petone capacity

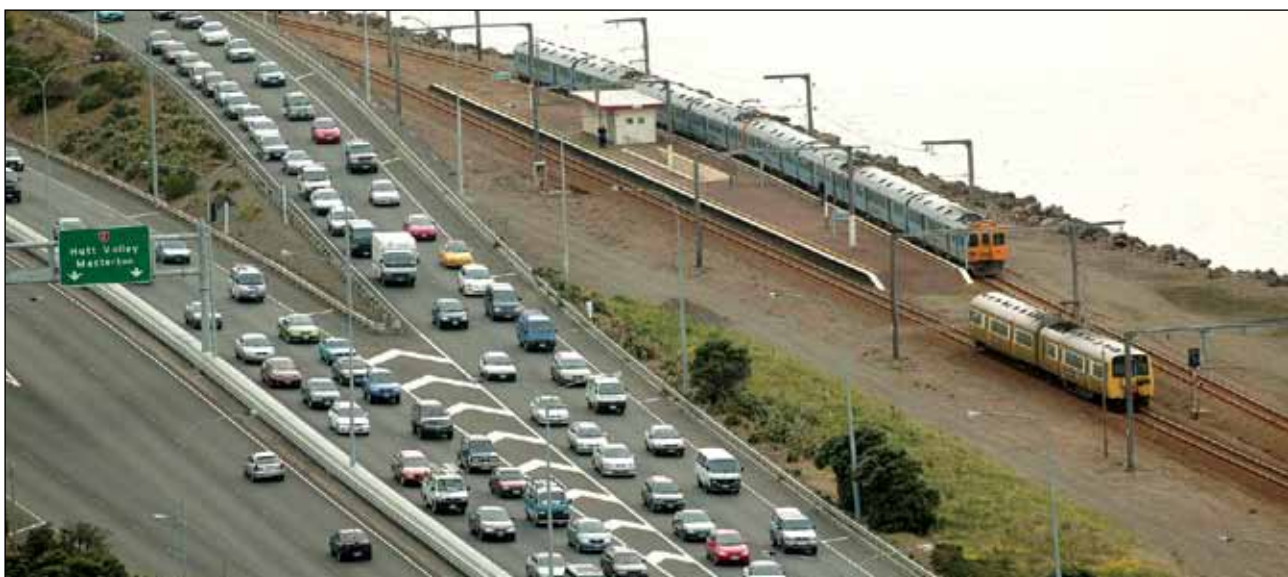
In the short-medium term there are a number of measures proposed to address the issues on the section of the corridor between Ngauranga and Petone.

The severe congestion on SH2 along this stretch is largely due to the form of intersections at each end and the number of merges required, rather than simply the number of lanes or amount of road space. A combination of a new Petone to Grenada link road, a new Petone interchange, ramp metering at Petone and Ngauranga, and Ngauranga ‘hard shoulder running’ provision is expected to help with congestion relief, and improved travel times and traffic flows along this stretch. Planned measures to increase rail capacity and reliability will also help.

Once we have seen the impact of these other projects, or if these projects do not proceed, we will need to consider further solutions to address capacity issues along this part of the corridor. This would include significant reclamation and excavation works to build in both additional capacity and extensive natural hazard protection.

Consideration was given to whether some form of high occupancy vehicle (HOV) lanes would be feasible and effective for this section of the corridor. However, initial work showed that there are some significant operational, safety, and enforcement problems associated with such a proposal, and this quickly negates any benefits that might be obtained over this relatively short distance (even when extended north to Dowse Interchange and south along Hutt Road). Successful HOV lane schemes work best over long distances and where a completely separate HOV facility can be provided. Investigation of such a scheme should form part of the planning of any additional capacity built along this stretch in the longer term.

It is likely that we will also need to seriously consider some form of congestion charge or road pricing scheme in future to manage demand on the road network during peak times. At present, legislation does not allow for such a scheme.



Action Table 4 - Projects beyond ten years

Action	Lead responsibility	Indicative implementation cost
Silverstream package		
Complete a scheme assessment of the Silverstream package to comprise of: <ul style="list-style-type: none"> • 4-lane arrangement of SH2 from Moonshine Bridge to Silverstream • Intersection improvement at Silverstream exit. To include walking and cycling access along and across SH2	NZTA	To be determined
Implement the recommended Silverstream package	NZTA	\$100M+
Petone to Ngauranga capacity		
Upon completion of improvements between Ngauranga and Aotea, the implementation of the Petone package, and planned short-medium term rail improvements (or should these measures not proceed) consider the need for further investigation of measures to improve road and rail level of service between Petone and Ngauranga, including land reclamation options	NZTA HCC WCC	To be determined

Indicative Programming Diagram – next ten years

PROJECT/PACKAGE	Regional Land Transport Programme period			
	2009-12	2012-15	2015-18	2018-21
Petone package				
Ngauranga to Petone capacity (<i>should Petone to Genada not proceed</i>)			★	
Gracefield package:				
Esplanade improvements				
Cross Valley Link		★		
SH2/SH58 interchange				
Melling package:				
Short-term safety and capacity improvements				
Full grade separated interchange				
Road Safety Improvement package:				
SH2 Road Safety Improvements				
SH58 Road Safety Improvements				
Greys Road Safety Improvements				
SH58 Capacity Investigations		★		
Strategic walking and cycling projects:				
Ngauranga to Petone walkway/cycleway	★			
Hutt River Trail				
Upper Hutt Rail Corridor Link				
Rail package:				
Refurbish Ganz Mavags				
Station and 'park and ride' upgrades				
Further rolling stock & infrastructure upgrades		★		
Public Transport Service Review				
Real Time Information roll-out				
Integrated Ticketing Systems				
Silverstream package				

KEY:

Initial strategic/feasibility investigations	★
Project investigation stage	
Project construction stage	

Important note about timing and funding

Key things to note about the indicative timing set out in the above diagram:

- Timing is indicated in three-year blocks within which a stage might expect to be substantially completed. These relate to the period of each Regional Land Transport Programme / National Land Transport Programme.
- This is the optimal project timing that might be achieved, according to the lead agency for the project. However in every case this timing is dependant on the ability to obtain funding for the project. Projects within this corridor plan compete with other projects throughout the region, and other projects throughout New Zealand for funding through the NLTP.
- Some projects have a 'star' to indicate the need for some initial strategic work before the project is commenced. The full investigation stages for these projects, indicated later in the diagram, will be dependant on the outcome of this initial work. The commentary of projects in the plan provides more information in relation to these cases.

Overview diagrams

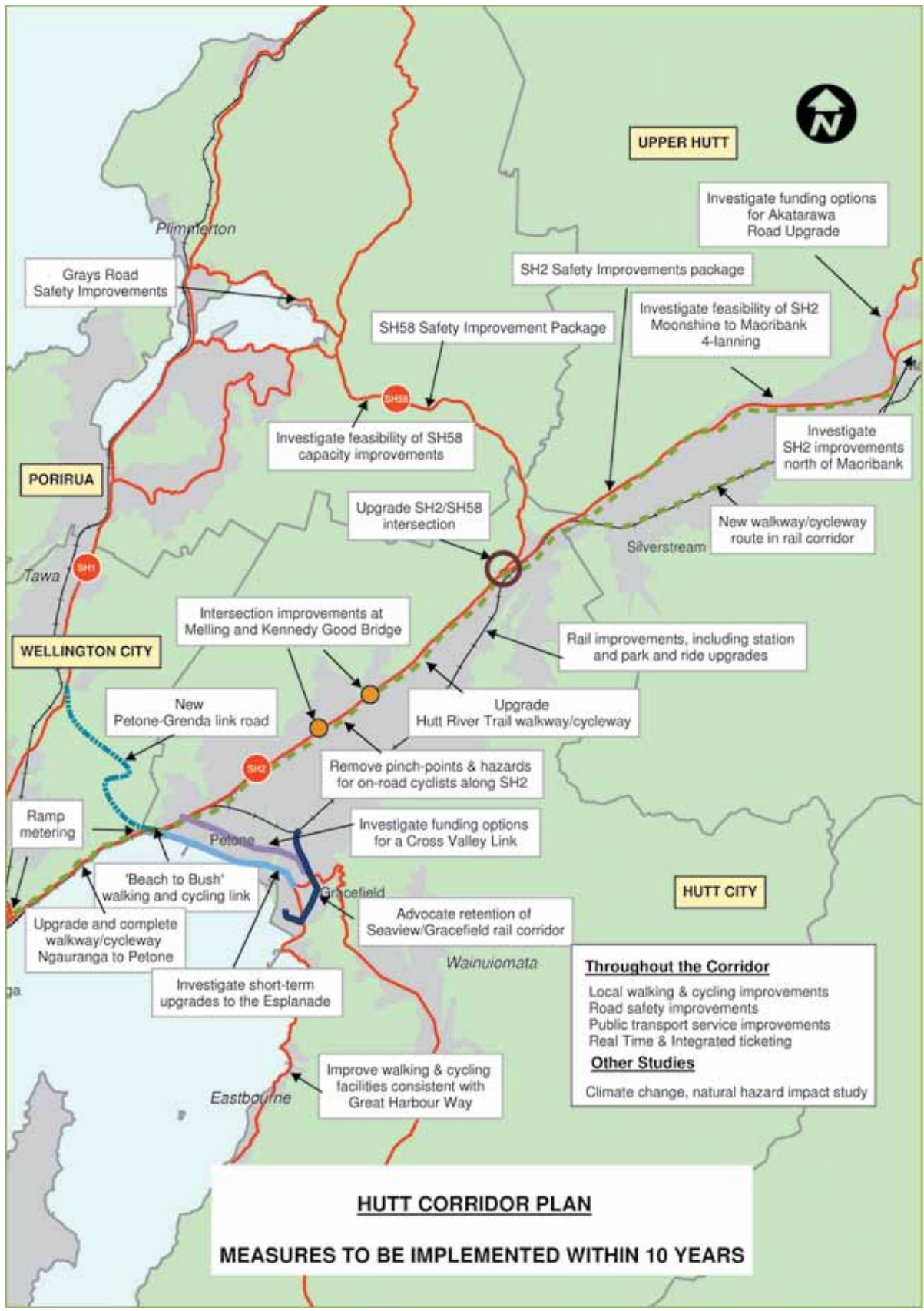


Figure 1: Hutt Corridor - within ten years

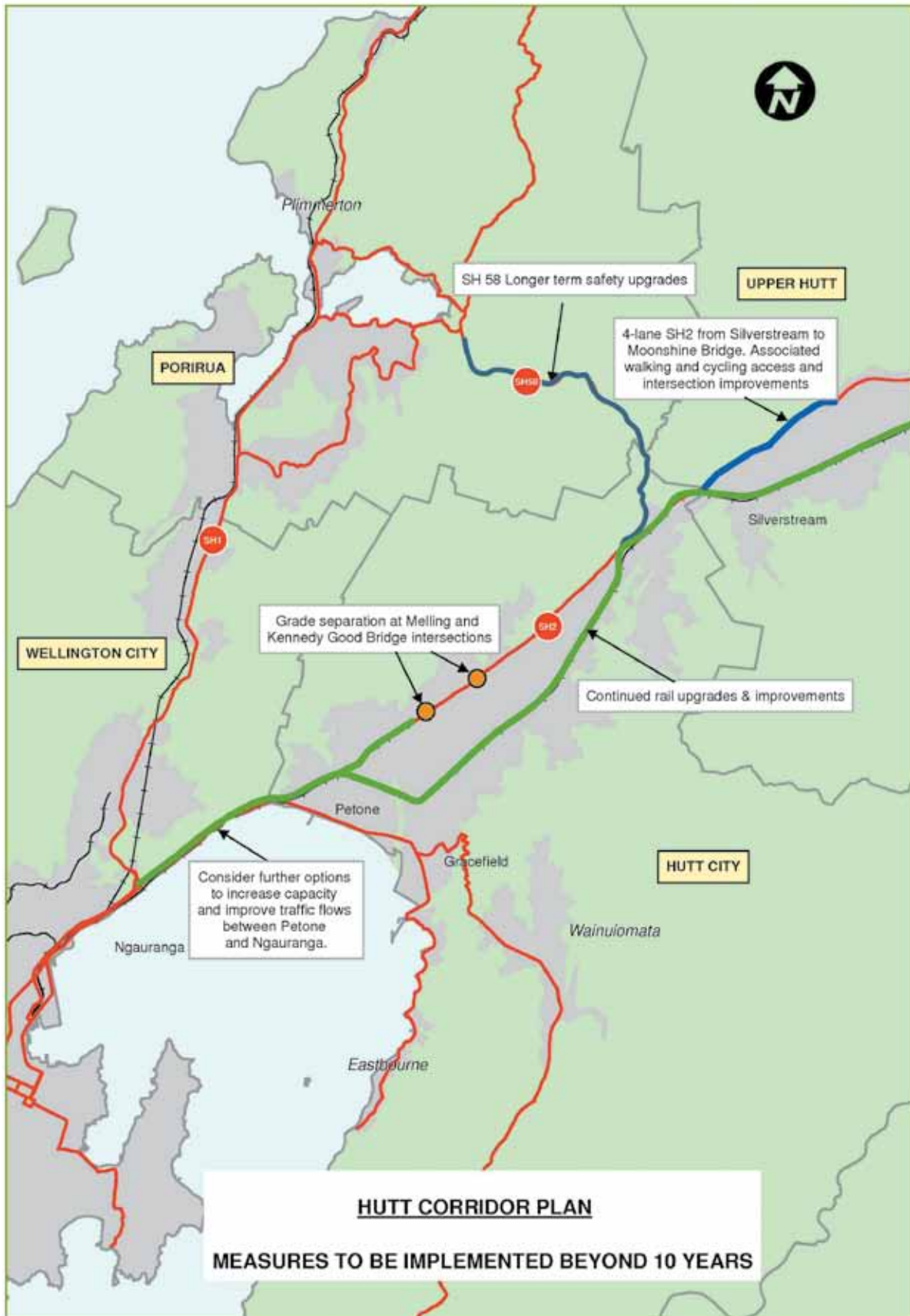


Figure 2: Hutt Corridor - beyond 10 years

