Executive Summary

Purpose
Let’s Get Wellington Moving (LGWM) is a joint initiative by Wellington City Council, Greater Wellington Regional Council and the New Zealand Transport Agency (the Transport Agency). LGWM is investigating the merits of investing in the transport system to improve outcomes for Wellington, with a focus on the area from Ngauranga to the airport, including the central city.

This paper outlines the transport, land use and other contexts within which the LGWM programme is set. It also describes the range of strategic transport improvements being progressed or planned across the region that are not within the scope of the LGWM programme but are important complementary initiatives.

Background
Our region is growing, with between 100,000 and 150,000 more people expected to live here 30 years from now. More than half will live in Wellington City, and the fastest growing areas will be in and around the central city. Wellington City is expected to remain the key regional economic centre, with 80% of the region’s employment growth. Much of the peak travel demand by commuters will likely continue to be on corridors and routes to and from central Wellington.

Wellington’s compact form supports an effective public transport network and high public transport use. However, overall transport capacity is constrained by narrow transport corridors that increase conflict between transport modes. Limited capacity and connections between local roads and arterial routes beyond the CBD also make the transport network vulnerable to disruptions. A number of critical lifeline locations are situated in the LGWM project area, including Wellington Regional Hospital and Wellington International Airport. The transport network needs to be resilient to the impacts of natural hazards and climate change, and able to function in the midst of disruptions caused by weather, crashes, breakdowns, and construction.

Strategic context
The overall national strategic direction for land transport is outlined in the Government Policy Statement on Land Transport 2015 (the GPS). The GPS aims to drive improved performance from the land transport system by focusing on three key priorities: economic growth and productivity, road safety, and value for money.

The Wellington Regional Land Transport Plan (the RLTP) identifies four overall problem areas: resilience, safety, economic growth and liveability. Eight strategic objectives are set out in response to these problems:

- A high quality, reliable public transport network
- A reliable and effective strategic road network
- An effective network for the movement of freight
- A safe system for all users of the regional transport network
- An increasingly resilient transport network
- A well planned, connected and integrated transport network
- An attractive and safe walking and cycling network
- An efficient and optimised transport system that minimises the impact on the environment.
Several Wellington City Council documents articulate a future vision for the central city, each highlighting the role of transport in enabling a range of desired outcomes. Towards 2040: Smart Capital envisions Wellington as a people-centred city that is healthy, vibrant, and resilient, with a strong sense of identity and place. This is to be achieved through urban form, openness and accessibility for Wellington’s current and future populations. The Wellington Urban Growth Plan 2014-43 integrates land use and transport planning. The plan aims to ensure development occurs close to employment, services, and public and other transport links. Wellington’s District Plan sets a vision for a vibrant, prosperous, liveable city with a central area comprising a commercial core with a mix of related activities.

**Wider regional transport improvements**
Significant bus improvements will be implemented in 2018, delivering a positive impact within the LGWM focus area. The improvements include a fleet of low-emission buses in the region, and a simpler bus network design in Wellington City, with better access to high frequency bus routes, more regular off-peak services, more weekend services, and more reliable bus to train connections. Free bus transfers and the ability to use Snapper on all buses across the region are proposed for implementation in 2018. Longer term, there are plans to introduce one public transport ‘ticket’ for bus, train, and ferry across the region.

Rail improvements include more trains running during off-peak times, and more regular spacing of train services during peak times. Beyond these, rail improvements are being planned to deliver trains that are more frequent and reliable, with more express and long distance services. Ongoing improvements to park and ride are planned to help more people access rail services, and interchange improvements at key stops will make it easier to connect with, and change between, public transport services.

Projects underway to improve State Highway 1 (SH1) north of Ngauranga include Transmission Gully and Peka Peka to Otaki. Also being investigated are improvements to SH1 between Otaki and Levin. These projects will deliver improved safety, reliability, and resilience, fewer traffic bottlenecks, and more efficient journeys for goods and services, but they are also likely to increase peak commuter traffic from the north into Wellington City. Projects to improve safety, resilience and efficiency along State Highway 2 (SH2) from Ngauranga through to Masterton include improvements at Melling, across the Hutt Valley, and between Carterton and Masterton.

Planning is underway on the Wellington to Hutt Valley walkway/cycleway/resilience project. This project provides important walking and cycling links between Hutt Valley and Wellington City and will provide some added resilience to this transport corridor, which is vulnerable to natural hazard events. Cycling improvements are also being proposed by the Transport Agency through the Ngauranga Gorge. The funding available via the Urban Cycleway Fund has provided an additional boost to cycling projects in the region. These include a combination of off-road commuter/recreation facilities and on-road facilities.
Improving east-west connections is an important aspect of the suite of strategic transport improvements in the Wellington region. Initial work is underway planning for a new connection between Lower Hutt and North Wellington, known as the Petone to Grenada link road. This will improve network resilience by providing an alternative east-west route, removing a proportion of trips from Ngauranga Interchange, and improving efficiency and journey times for goods and services between SH1 and SH2. A proposed east-west link across Lower Hutt is also being investigated.

A consortium of 15 parties\(^1\) collectively known as the Lifelines Organisations has partnered with GNS Science to advance the Wellington Lifelines Resilience Project. The project will identify the key vulnerabilities of the utility networks to a 7.5 earthquake event, and provide advice on a recommended programme of work to reduce vulnerability. This includes developing a regional utilities resilience strategy and producing a programme business case to support further investment in the utility networks of the Wellington region by the Lifeline Organisations.\(^2\)

Port owners, ferry operators, councils, the Transport Agency and other key partners are working together to investigate and agree a preferred option for the future of Wellington’s port, including development of a new integrated ferry terminal. This will link in with other planning processes including LGWM, and Wellington City Council’s *Our City, Tomorrow* programme.

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\(^1\) Greater Wellington Regional Council, Wellington City Council, Hutt City Council, Upper Hutt City Council, Porirua City Council, Kapiti Coast District Council, New Zealand Transport Agency, KiwiRail, CentrePort, Wellington Water, Wellington Electricity, Nova Energy, Powerco, Transpower, and Electra, collectively known as the Lifeline Organisations, are part of the Wellington Lifelines Group, established in 1993 and referred to as WeLG.

\(^2\) The Project Area covers the western side of the Wellington region including the areas within the Wellington City Council, Hutt City Council, Upper Hutt City Council, Porirua City Council and Kapiti Coast District Council boundaries plus areas outside these boundaries that are considered critical to the resilience of the Wellington region.
Contents

Executive Summary .............................................................................................................................. i
Introduction ......................................................................................................................................... 1
Wellington region .............................................................................................................................. 1
Strategic transport context ............................................................................................................... 3
Land use and urban form context ................................................................................................... 5
Wider regional transport improvements .......................................................................................... 10
Conclusion ......................................................................................................................................... 12
Glossary

**What is an intervention?**
Interventions are types of improvements, activities, policies or solutions. They range across all modes of transport. Examples are building new infrastructure, managing travel behaviour through pricing, improving public transport and reducing vehicle traffic in certain areas of the city. Interventions can be considered as levers, and these levers can be pulled to a greater or lesser degree to achieve objectives. These interventions can be grouped into combinations called scenarios.

**What is a scenario?**
Scenarios are packages of different transport and urban design interventions that will help improve the way the city looks, feels and functions, make it safe and easy to get around, and support the kind of future growth Wellington wants.

**What is liveability?**
Liveability is the sum of the factors that add up to a community’s quality of life—including the built and natural environments, economic prosperity, social stability and equity, educational opportunity, and cultural, entertainment and recreation possibilities. A key requirement for a liveable city is that people and businesses can access the destinations they need to reach safely and reliably.
Introduction

Let’s Get Wellington Moving (LGWM) is a joint initiative by Wellington City Council, Greater Wellington Regional Council and the New Zealand Transport Agency. LGWM is investigating the merits of investing in the transport system to improve outcomes for Wellington, with a focus on the area from Ngauranga to the airport, including the central city.

This paper is one of a series of papers documenting the work carried out by LGWM:

1. LGWM - Strategic Context
2. LGWM - Case for Change
3. LGWM - Strategic Response
4. LGWM - Summary of Scenarios
5. LGWM - Strategic Assessment of Scenarios

Where this paper refers to other papers in the series, their titles are shown in italics.

This paper outlines the transport, land use and other contexts within which the LGWM programme is set. It also describes the range of strategic transport improvements being progressed or planned across the region that are not within the scope of the LGWM programme but are important complementary initiatives.

Wellington region

Urban form and transport

Wellington’s urban form is relatively compact with land use development shaped largely by topography. The region’s urban centres have developed along two core transport corridors. One corridor follows State Highway 1 (SH1) and the North Island Main Trunk railways line through Porirua and Kapiti. The other follows SH2 and the Wairarapa railway line through the Hutt Valley and Wairarapa. These corridors merge at Ngauranga and continue to and through Wellington City.

This compact form supports an effective public transport network and high public transport use in Wellington. However, State Highway 58 provides the only arterial link between the SH1 and State Highway 2 (SH2) corridors. Limited east-west connectivity between the two large centres of Lower Hutt and Porirua places pressure on the Ngauranga Interchange and constrains economic activity between sub-regional centres in each corridor. Overall transport capacity is also constrained as a result of Wellington’s narrow transport corridors, increasing the conflict between transport modes.

The more rural and dispersed characteristics of some parts of the region, like Wairarapa, mean some residents rely more heavily on private vehicles and need to travel further to access the public transport network for journeys to and from the rest of the region.
Population growth
Wellington Region is the third largest region in New Zealand by population. Wellington’s current regional population stands at around 500,000 people. This is forecast to grow by 100,000 to 150,000 over the next 30 years. Over half of the forecast regional growth will be in Wellington City, and around 30% of that is likely to be focused around Wellington’s central city and northern suburbs. Outside Wellington City, regional growth will be primarily in the form of urban expansion into green field land, particularly in Porirua and Kapiti, and denser housing development in and around existing urban centres such as Hutt City, Petone and Porirua.

Employment distribution
Nearly 60% of the region’s jobs are concentrated in Wellington City, with 60% of those jobs located in the CBD. Over the next 30 years, Wellington City is expected to remain the key regional economic centre, with 80% of employment growth occurring in the city, although land prices, improved transport connections, and resilience concerns could result in a more dispersed model of business activity. This means much of the peak travel demand by commuters is likely to continue to be focused on corridors and routes to and from central Wellington City.

Resilience
The land transport network is a key lifeline for communities across the region and is vital for response and recovery after major hazard events. Transport routes provide access for communities, as well as food and other supplies. They also enable the recovery and functioning of other lifeline facilities to which they provide access. A number of critical lifeline locations for enabling recovery after disruptive events are situated in the LGWM project area. These include Wellington Regional Hospital, CentrePort and Wellington International Airport. Access to the port is particularly vulnerable and presents a significant risk which, in turn, is likely to amplify network vulnerability between Ngauranga and Thorndon.

Wellington City’s compact form contributes to a more diverse transport mode share than in many other parts of New Zealand, with comparatively high rates of walking and public transport use. However, limited capacity and connections between local roads and current arterial routes beyond the CBD means the transport network is vulnerable to disruptions (weather, accidents, breakdowns, construction).

Wellington has earthquake, liquefaction, tsunami, flood and landslide issues, as well as occasionally suffering severe storm damage. Storms occurring on top of a higher sea level will affect key infrastructure including the transport network. The transport network needs to be resilient to the impacts of natural hazards and climate change, and be able to function after extreme events.

Transport demand, demographics and technology
The Regional Land Transport Plan envisions that people in the region will need to travel less because they have access to excellent telecommunications, local job opportunities and the opportunity to live closer to their main destinations for work and play. However, despite the continued expansion of online connectivity, there is also a strong community desire to be well physically connected through a safe, effective and efficient land transport network. This includes access to a range of mobility options and is in the context of rapid leaps in transportation technology.
Current trends in land use and public policy indicate that transport technologies that are space and energy efficient are likely to have a comparative advantage in the future. Shifting demographics also have implications for travel demand, mode choice and uptake of technology. Across Wellington, Porirua and the Hutt Valley there are currently 43,000 people aged 65-plus. According to population projections, that will nearly double to 85,000 by 2033. Kapiti Coast and Carterton are among a number of districts across New Zealand that, by 2033, will have median ages over 50. Having an older population means that there will likely be an increased demand for off-peak travel, for Total Mobility and for public transport services.

Within Wellington, changing consumer expectations about mobility are beginning, especially amongst younger people. The emergence of flexible options for personal mobility, such as shared vehicles and autonomous vehicles that can be available on demand, may create a new mobility option that is neither public transport nor a private vehicle but something of each. If this proves to be attractive, it will have major implications for future levels of road use and provision of road infrastructure, as well as settlement patterns.

Strategic transport context

Government Policy Statement on land transport
The Government Policy Statement on land transport (the GPS) sets out the government’s priorities for expenditure from the National Land Transport Fund, including how funding is allocated between state highways, local roads and public transport. The overall national strategic direction for land transport, as described in the GPS 2015 is to drive improved performance from the land transport system by focusing on:

- Economic growth and productivity
- Road safety
- Value for money.

In the draft GPS 2018, these strategic priorities are retained.

The GPS also includes national land transport objectives. In the 2018 draft, the priority objectives are:

- Access to economic and social opportunities
- A resilient transport system
- Fewer fatalities and serious injuries
- Infrastructure and services delivered to the right level at the best cost.

Providing appropriate transport choice and mitigating the effects of land transport on the environment are also national objectives for land transport, but are not prioritised in the draft GPS 2018.

Wellington Regional Land Transport Plan 2015
The Regional Land Transport Plan (RLTP) is a statutory document prepared under the Land Transport Management Act that provides the agreed strategic direction for development of the region’s land transport network, and sets out a programme of proposed land transport activities over a six year period.
The RLTP is prepared by the Regional Transport Committee, a joint committee with representatives from Greater Wellington Regional Council (GWRC), each local council in the region, and the NZ Transport Agency. It must contribute to the purpose of the Land Transport Management Act ‘an effective, efficient, and safe land transport system in the public interest’ and is also required to be consistent with the GPS.

The RLTP informs the National Land Transport Programme (NLTP) by identifying the priorities and key improvement projects for the Wellington region proposed to be funded or co-funded from the National Land Transport Fund.

The Wellington RLTP 2015 vision is ‘To deliver a safe, effective and efficient land transport network that supports the region’s economic prosperity in a way that is environmentally and socially sustainable’.

The Wellington RLTP identifies four key transport problem statements for the region:

<table>
<thead>
<tr>
<th>SCENARIO</th>
<th>PROBLEM</th>
<th>BENEFIT OF ADDRESSING THE PROBLEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic growth</td>
<td>Transport inefficiencies lead to suppressed regional economic growth and productivity</td>
<td>People and freight can move around efficiently and reliably to and from key regional destinations</td>
</tr>
<tr>
<td>Road safety</td>
<td>Transport infrastructure deficiencies and poor user behaviour leads to a sub-optimal regional road safety performance</td>
<td>We have a safe road system that is increasingly free of death and serious injury</td>
</tr>
<tr>
<td>Resilience</td>
<td>Regional infrastructure that is vulnerable to disruption by unplanned events is potentially resulting in an unacceptable cost of severance and restricted ability to recover over time</td>
<td>Our core transport routes are more secure and we have good access options to and within the region, allowing the transport network to recover more quickly after an unplanned event</td>
</tr>
<tr>
<td>Liveability</td>
<td>Poor delivery of transport and land use can result in a deteriorating living environment and reduced transport choices for the region’s population.</td>
<td>People have a range of options to access work, education and other services The region is an attractive place to live, work and play.</td>
</tr>
</tbody>
</table>

The RLTP identifies eight strategic objectives in response to the above problems:

- A high quality, reliable public transport network
- A reliable and effective strategic road network
- An effective network for the movement of freight
- A safe system for all users of the regional transport network
- An increasingly resilient transport network
- A well planned, connected and integrated transport network
- An attractive and safe walking and cycling network
- An efficient and optimised transport system that minimises the impact on the environment.
The overall strategic approach in the RLTP recognises that the transport system has different roles and uses at different times of the day and week, and that there are often trade-offs between transport objectives. The goal is to have more people using public transport, walking and cycling - particularly at peak times when the transport network is in high demand. But the strategy recognises that public transport, walking or cycling will not be feasible for every trip. Multi-modal solutions are needed to effectively support the region’s economic growth and liveability.

Ngauranga to Airport Strategy
The RLTP includes a Ngauranga to Airport Strategy chapter which identifies the key problems, benefits, and strategic responses specific to the LGWM focus area. This is under review as part of LGWM, but currently promotes a multi-modal approach with four strategic principles:

- A high quality and high frequency passenger transport ‘spine’
- A reliable and accessible ‘ring’ or bypass route for vehicles
- Inter-connected, safe, and convenient local street, walking, cycling and passenger transport networks
- Highly accessible and attractive ‘activity’ or shopping streets.

New Zealand Transport Agency Long Term Strategic View
The Transport Agency has developed a Long Term Strategic View, which captures the pressure points and key economic, environmental, and population factors that will shape New Zealand’s future transport system. It has been created based on discussions and feedback from the transport sector, as well as data and information that helps identify issues, opportunities and potential solutions in each part of our transport system.

The Long Term Strategic View will be refined and updated on an ongoing basis. This next version will incorporate sector feedback and updated datasets, including population forecasts released by StatsNZ in 2017. It will also include content for new urban growth centres (identified under the National Policy Statement for Urban Development), and also additional Regional Economic Development regions that have more recently been included in the Government’s Regional Growth Programme.

Land use and urban form context
National Policy Statement on Urban Development Capacity
Councils in the Wellington region are working together in response to the National Policy Statement on Urban Development Capacity (NPS-UDC), which came into effect on 1 December 2016. The NPS requires councils to understand demand for, and supply of, residential and business land capacity in their districts. In order to do this, the NPS requires councils to prepare three yearly ‘Housing and Business Development Capacity Assessments’. Wellington is classified as a medium growth region in the NPS-UDC.

LGWM will consider a range of transport interventions that will be required to support and enable growth consistent with the NPS-UDC.
New Zealand Transport Agency Integrated Planning Strategy
This strategy sets out what the Transport Agency aims to achieve from an integrated planning approach, i.e. the integration of land use planning, transport planning, and transport investment. The aim is to deliver an affordable transport system that supports a growing economy, safe and vibrant communities and a healthy environment, now and in the future.

Along with the Transport Agency’s other high-level strategy documents, the Integrated Planning Strategy is designed to help the agency deliver on: a) long-term and intermediate outcomes b) strategic priorities c) the Land Transport Management Act 2003 (LTMA) and the Government Policy Statement on land transport funding (GPS) d) guiding frameworks such as the NZ Urban Design Protocol and Safer Journeys.

Wellington Regional Strategy
The Wellington Regional Strategy (WRS) is a sustainable economic growth strategy, developed in 2007 and refreshed in 2012. It was set up by the region’s nine councils to enhance the region by building our economy and helping develop us into an internationally competitive region. The WRS discusses the Wellington region’s central location and role as a transport hub, and comments that the region needs to recognise the importance of having a thriving transport hub and the role of the port and airports in enabling and creating economic activity.

One of the strategy’s six focus areas is building world-class infrastructure. The strategy notes that regional economic prosperity is heavily dependent on the region’s level of connectedness and resilience at local, national and international levels. It observes that this is in turn dependent on the quality of our foundation infrastructure and transport systems. The LGWM programme plays an important role in planning and delivering transport solutions to support regional economic growth.

Wellington Regional Policy Statement
This document sets out the framework and priorities for resource management in the Wellington region. The RMA requires all regional councils to produce a Regional Policy Statement (RPS) for their region and review it every 10 years. It includes policies that regional and district plans and the Regional Land Transport Plan are required to give effect to.

According to the RPS, the physical arrangement of urban and rural communities/smaller centres, the region’s industrial business areas, the port, the airport, the road and public transport network, and the region’s open space network are fundamental to a compact and well-designed regional form. The RPS identifies that there are parts of the region where growth pressures exist and where the region’s current compact form is beginning to fray at the edges, reducing transport efficiency and the ability of some centres to grow as community service and employment areas.

The RPS identifies that lack of integration between land use and the region’s transportation network can create patterns of development that increase the need for travel, the length of journeys and reliance on private motor vehicles. This can result in a range of negative outcomes including reduced opportunities for alternate means of travel (such as walking and cycling), increased community severance, and increased costs associated with upgrading roads; increased road congestion leading to restricted movement of goods and services to, from and within the region, and compromising the efficient and safe operation of the transport network; and inefficient use of existing infrastructure (including transport infrastructure).
Ensuring closely integrated planning of transport and land use/urban form are key considerations of the LGWM programme.

**Wellington City Council’s adopted land use strategies and plans**

A number of Wellington City Council documents spell out a future vision for the central city, each of which highlights the role of transport in enabling a range of desired outcomes.

**Towards 2040: Smart Capital**

Adopted in 2011, this document aims to “position Wellington as an internationally competitive city with a strong and diverse economy, a high quality of life and healthy communities.” The vision has four goals: People-centred city, Connected city, Eco-city, Dynamic central city.

The document envisages that “Wellington's people-centred city will be healthy, vibrant, affordable and resilient, with a strong sense of identity and 'place'. This will be expressed through urban form, openness and accessibility for its current and future populations.” The Dynamic central city goal imagines that the central city will be a vibrant and creative place offering the lifestyle, entertainment and amenities of a much bigger city, and the central city will continue to drive the regional economy.

**Central City Framework**

The Central City Framework was adopted in 2011 and is a supporting document to Towards 2040. The Framework contains a series of projects related to street structure, landscape and built form which will influence the future shape of the central city. The key projects fall within the following categories: boulevards, east-west connectors, laneways, open spaces and precincts.


Adopted in 2015, the plan is the Council’s growth management strategy. The plan seeks to deliver four key outcomes: A compact city, A liveable city, A city set in nature, A resilient city.

It updates and merges the 2006 Transport and Urban Development strategies, integrating land use and transport planning. The Urban Growth Plan also adds environmental and resilience considerations, and focusses intensification in the CBD and in key areas, which has significant impacts on transport planning through or around the CBD. Cycling, walking and public transport are integral to the system.

**Wellington City District Plan – Central Area**

The central area chapter of the District Plan (last amended October 2013) describes the desired future for the central city. The District Plan sets a vision for a vibrant, prosperous, liveable city with a Central Area comprising a commercial core with a mix of related activities. The plan’s central area provisions are based on a list of principles that will guide future development.
Wellington City Council’s – ‘Our City, Tomorrow’ project
The Our City, Tomorrow project is a city-wide initiative looking at the key drivers for change in the Wellington CBD - population growth, sea level rise and climate change, and earthquake risk - and what these will mean for the way people experience and use the central city. The project is an opportunity for Wellington City Council to take stock of current priorities and engage with Wellingtonians on how this aligns with their vision for the future of the central city in the context of the challenges and opportunities facing us. It also aims to bring together and inform a number of key city-shaping decisions and discussions that are currently happening such as LGWM, the housing taskforce, the future of CentrePort, and decisions around earthquake damaged buildings.

Future of the port and ferry terminal
The port of Wellington (CentrePort) is a strategic asset that contributes $2.5 billion to the NZ economy. It is co-owned by Greater Wellington Regional Council (76.92%) and Manawatu-Wanganui Regional Council (23.08%). Following earthquake damage in November 2016, CentrePort is developing a recovery plan to enable port operations to be fully re-established. Future work will include a longer-term view of the shape and operation of the port, taking into account evolving trends in international and local shipping as well as emerging opportunities for redevelopment.

A business case is being developed to redesign the current cruise terminal. Key partners, including port owners, ferry operators, city and regional councils and the Transport Agency will work together to investigate possibilities and agree a preferred option for the development of a new integrated cruise and ferry terminal. This process will link in with other wider planning processes including LGWM and Wellington City Council’s Our City, Tomorrow programme.

Wellington Airport runway extension
In 2016 Wellington International Airport Limited (Wellington Airport) sought resource consents to enable the construction, operation and maintenance of a 355 metre extension to the runway available at Wellington Airport. This would chiefly involve reclamation at the southern end of the existing airport runway into the coastal marine area at Lyall Bay. It is proposed that activities and transport movements during construction will occur during the day and at night, seven days a week, subject to restrictions as set out in the application.

The longer term impacts and opportunities for the transport corridor as a result of any future airport extension will need to be considered as part of the LGWM programme. Wellington Airport’s application is currently subject to court proceedings.

Wellington Lifelines Resilience Project
Greater Wellington Regional Council, Wellington City Council, Hutt City Council, Upper Hutt City Council, Porirua City Council, Kapiti Coast District Council, the Transport Agency, KiwiRail, CentrePort, Wellington Water Limited, Wellington Electricity Lines Limited, Nova Energy, Powerco, Transpower, and Electra (collectively known as the Lifeline Organisations) are part of the Wellington Lifelines Group, established in 1993 and referred to as WeLG. In 2017, the Lifelines Organisations and GNS Science agreed to work together to advance the objectives of the Wellington Lifelines Resilience Project.
This requires:

a) Identifying the key vulnerabilities of the utility networks in the project area to a defined 7.5 earthquake hazard event scenario, and providing evidence-based advice on a recommended programme of work to reduce this vulnerability

b) Developing a regional utilities resilience strategy and recommended programme of work

c) Producing a programme business case to support further investment in the utility networks of the Wellington region by the Lifeline Organisations.

The programme business case project area covers the western side of the Wellington region (excluding the Wairarapa) including the areas within the Wellington City Council, Hutt City Council, Upper Hutt City Council, Porirua City Council and Kapiti Coast District Council boundaries and any areas outside these boundaries that are identified as critical to the resilience of the Wellington region. Following completion of the programme business case, WeLG will collectively advocate for the proposed programmes of work to be funded, approved and implemented by individual Lifeline Organisations and government agencies.

Special Housing Areas

Special Housing Areas (SHAs) are areas where councils can offer qualifying developments a streamlined resource consenting path (through the Housing Accords and Special Housing Act (HASHAA)) and several incentives. Consenting authorities suggest SHAs to the Minister of Building and Housing for approval before they are created.

The SHAs created or approved by Wellington City Council to date have focused on Council’s existing growth areas, or sites that were generally already zoned for residential development. This was designed to ensure development is planned and contained within the overall urban area, as well as providing for a range of housing types.

Wellington City Council signed up to the Wellington Housing Accord in June 2014. Since then, 25 Special Housing Areas (SHAs) have been approved. Of these, nine are still in place: the Central Area, Adelaide Road, Kilbirnie Medium Density Area, Johnsonville Medium Density Area, Lincolnshire – Woodridge, Lower Stebbings, Reedy Land (Glenside), White Pine Avenue (Woodridge) and Arlington SHAs. The 25 original SHAs had an estimated capacity to supply 2700 new dwellings and sections. From July 2014 to July 2017, 1392 new dwellings and sections have been consented within SHAs which equates to 41% of all consents granted over this period. It is expected that development will continue to occur within the nine SHAs in place as developers take advantage of the streamlined consenting path through the Housing Accords and Special Housing Area Act.
Wider regional transport improvements

A number of transport improvements are being progressed or planned across the region to contribute to the regional objectives in the RLTP. Some of these are within the LGWM focus area (and already committed). Others are outside the LGWM focus area, but are important context to support the LGWM project objectives.

Public transport improvements

A number of significant bus improvements are in the pipeline, which will deliver a positive impact within the LGWM focus area. Committed improvements include:

- A fleet of new low-emission buses, including double-decker and electric buses in the region
- A new, simpler bus network design in Wellington City will better meet people’s needs seven days a week
- More people will have access to high frequency bus routes, more regular off-peak services, and more weekend services
- Services will be more reliable, with less bus congestion along the Golden Mile
- Bus timetable changes will deliver more reliable bus to train connections.

Further bus service improvements will be considered to build on these commitments and achieve continued patronage growth. Infrastructure improvements being considered through the LGWM programme will be critical to ensure the benefits of these planned initiatives are fully realised, and to facilitate moving towards a high quality, mass transit system.

Rail improvements will be critical to support more people using public transport for trips to central Wellington City from the north. In the shorter term this will include more trains running during off-peak times, and more regular spacing of train services during peak times.

Beyond these, rail infrastructure improvements (e.g. double track Trentham to Upper Hutt, track and signalling capacity improvements at Plimmerton, Porirua and Wellington Station), new rail rolling stock and new service patterns are being planned and considered to deliver trains that are more frequent and reliable, with more express services and more long distance services to Wairarapa, Levin and Palmerston North.

There are a number of other planned public transport improvements across the region aimed at increasing the quality of the public transport network and growing patronage:

- Free bus transfers from 2018
- Snapper available on all buses across the region from 2018
- Proposed introduction of one public transport “ticket” for bus, train, and ferry across the region
- More park and ride spaces planned for both Porirua and Waterloo Stations to help more people access public transport
- Interchange improvements at key stops/stations to make it much easier to connect with, and change between, public transport services
- Better information and promotion, and new tools to raise awareness and make using public transport simpler and easier.
State Highway 1 improvements
In addition to the MacKays to Peka Peka project (completed in February 2017), several other projects are underway to improve SH1 north of Ngauranga Gorge. These include:

- Transmission Gully
- Peka Peka to Otaki
- Also being investigated are improvements to SH1 between Otaki and Levin.

These projects will deliver a range of outcomes including improved safety, reliability and resilience, fewer traffic bottlenecks, and more efficient journeys for goods and services. However, they are also likely to result in increased peak commuter demand from the north into Wellington City, if other measures are not implemented to manage demand. This has been taken into account as part of the analytics for the LGWM programme.

State Highway 2 improvements
A programme business case was completed for the SH2 corridor in 2017 which has led to a number of projects being identified to improve safety, resilience and efficiency along SH2 from Ngauranga through to Masterton over the next three to four years. These include:

- Safety and efficiency improvements at Melling
- Travel time improvements through the Hutt Valley
- Safety improvements between Carterton and Masterton.

Planning is underway on the Wellington to Hutt Valley walkway, cycleway and resilience project. This project provides important walking and cycling links between Hutt Valley and Wellington City and will provide some added resilience to this transport corridor, which is vulnerable to natural hazard events. Some improvements have been made to the cycle facilities along the southern section along Thorndon Quay and Hutt Road. Construction of an off-road cycleway along the rail corridor between the northern Petone to Melling section is expected to start towards the end of 2017. Investigation and design is underway for middle section between Petone and Ngauranga, with consents expected to be lodged in 2018.

East-west connections
Improving east-west connections is an important aspect of the suite of strategic transport improvements in the Wellington region. A new grade separated interchange at SH2/S8 (Haywards) has been constructed. A programme of safety upgrades to State Highway S8 is also planned in the short term. A new connection between Lower Hutt and north of Wellington is being investigated, known as the Petone to Grenada link road. This would provide improved network resilience through an alternative east-west route, remove a proportion of trips from Ngauranga interchange, and improve efficiency and journey times for goods and services between SH1 and SH2. A proposed east-west link across Lower Hutt is also being investigated to provide a more efficient connection between SH2 and the Seaview/Gracefield industrial area.
Cycling network projects
A number of cycling projects are being progressed across the region outside the LGWM focus area. Some of these provide primarily local connections within communities, including links to rail stations that support public transport use by commuters travelling to Wellington City. Others provide more strategic links between the different parts of the region, including links through and to/from Wellington City. Cycling improvements are also being proposed by the Transport Agency through the Ngauranga Gorge. The funding available through the Urban Cycleway Fund has provided additional boost to cycling projects in the region. These include a combination of off-road commuter/recreation facilities and on-road facilities.

Conclusion
The strategic context described in this paper has been used as a key input to the consideration of options for central Wellington’s future transport system as part of the LGWM programme. In particular, the paper has provided an understanding of the outcomes the LGWM partners and other stakeholders want to see for central Wellington within the wider city and regional context. From this, the LGWM team has been able to identify gaps between the desired outcomes and a future where no changes are made to the current transport system. More details about this analysis of the performance gaps are set out in LGWM – Case for Change.

The strategic context described in this paper has also informed the development of LGWM programme objectives, the strategic response to addressing the gaps and four illustrative scenarios. The scenarios are designed to show how a range of different transport and urban design interventions could improve the way the city looks, feels and functions, make it safe and easy to get around and support the kind of future growth Wellington wants.

More details about the programme objectives, the strategic response and the illustrative scenarios are given in LGWM - Strategic Response and LGWM - Summary of Scenarios.