



**AGENDA NO.  
6.4**

## **BOARD PAPER**

<b>Paper no:</b>	<b>2018/06/1253</b>
<b>Meeting date:</b>	15 June 2018
<b>Prepared by:</b>	Prasad Tala, Senior Transport Planner
<b>Recommended by:</b>	Vanessa Browne, Acting General Manager System Design & Delivery
<b>Board function:</b>	Significant planning, investment and operational matters
<b>Subject:</b>	<b>State Highway 1: Papakura to Bombay Project – Approval of Detailed Business Case and Funding</b>



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# It is recommended that the NZ Transport Agency Board resolves to . . .

- **Support** the Detailed Business Case for long term improvement for the NZ Transport Agency's State Highway 1 Papakura to Bombay Project.
- **Note** that the total cost of construction of the State Highway 1 Papakura to Bombay improvements project is estimated to be \$1.016 - \$1.173 billion (50<sup>th</sup> – 95<sup>th</sup> percentile range), with an investment assessment profile of HL (BCR 1.0-2.9) (High Results alignment and a Benefit Cost Ratio of 2.5).
- **Approve** \$46.5 million (50<sup>th</sup> percentile) for pre-implementation, including route protection works, for the NZ Transport Agency's State Highway 1 Papakura to Bombay Project.
- **Approve** \$44 million for net property for the Stage 1 - Papakura to Drury section.
- **Approve** \$316 million (50<sup>th</sup> percentile) for implementation, for the total cost of construction of the Stage 1 - Papakura to Drury improvements; subject to, as condition precedent, approval of the final key performance indicators and scope of works for the investigation and delivery of multi-modal solutions at pre-implementation.
- **Delegate** final approval of the implementation funding to the NZ Transport Agency Chief Executive per the conditions precedent above.

# The Supporting Growth Programme is well aligned to the draft Government Policy Statement on Land Transport (GPS) and the Auckland Transport Alignment Project (ATAP)

- The State Highway (SH) 1 Papakura to Bombay Project represents a key intervention in the broader Supporting Growth Programme
- It is intended to improve accessibility, increase transport choice and support the liveability of planned growth areas in the South of Auckland, along with:

## Public Transport (PT) Rail improvements:

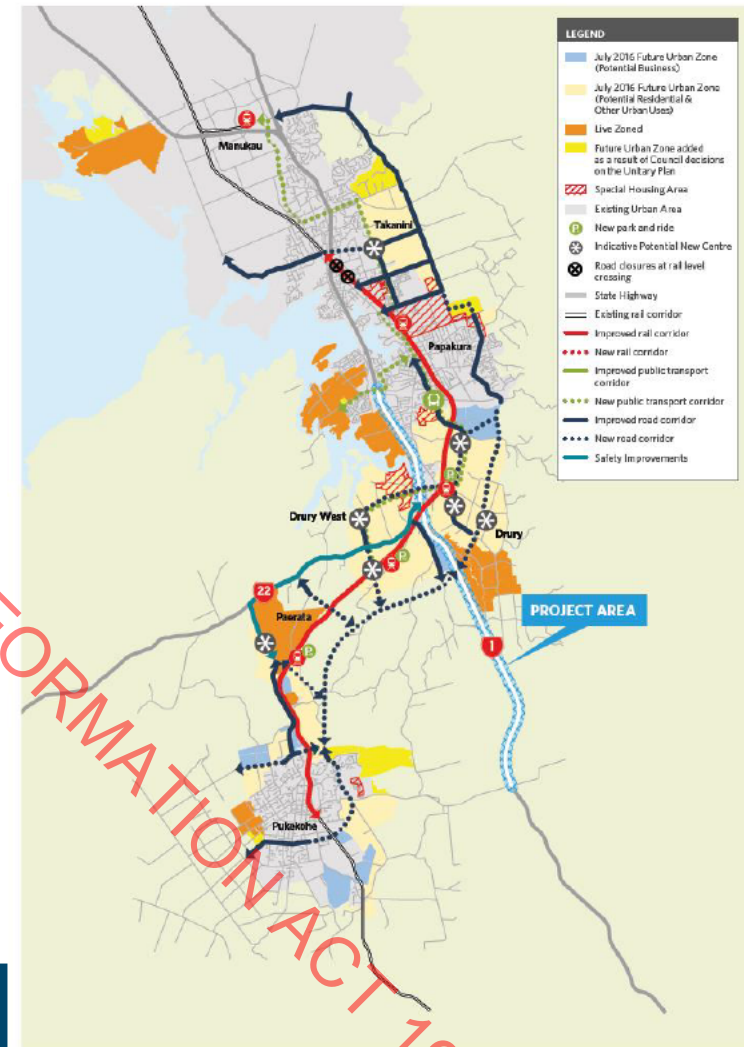
- electrification of rail to Pukekohe
- new stations at Drury, Drury West and Paerata
- third main between Papakura and Pukekohe

## Mill Road and Pukekohe Expressway

- provision of a new north/south route (Mill Road)
- connects Pukekohe and Mill Road (Pukekohe Expressway)

## SH22 Safety Interventions

- addresses road safety issues
- responds to significant planned growth along corridor
- GPS 2018 supports investment in projects aligned to the ATAP Package released in April 2018. ATAP 2018 confirmed the importance of the SH1 Papakura Project, along with the Mill Road Corridor, in improving access for South Auckland



# The preferred option improves access and provides more transport options

The preferred option will improve the SH1 corridor between Papakura and Bombay, increasing transport choice and accessibility for the rapidly developing Southern Growth Area. The Project includes:

- **Accessibility:** Supports planned greenfield growth and the critical freight and tourism function of SH1
- **Walking and cycling spine:** Connects with new local networks and provides multi-modal accessibility
- **Wide shoulders for buses:** Supports PT investment and complements the rail rapid transit network
- **Travel Demand Management:** Includes a managed special vehicle lane (northbound) to prioritise high occupancy vehicles, electric vehicles and/or freight
- **Enabling Shared Mobility:** Explores opportunities, at pre-implementation, for new growth areas to encourage use of the managed lane and shared mobility services



# The preferred option represents an opportunity for an integrated response to new GPS strategic priorities including Environment, Safety and Access

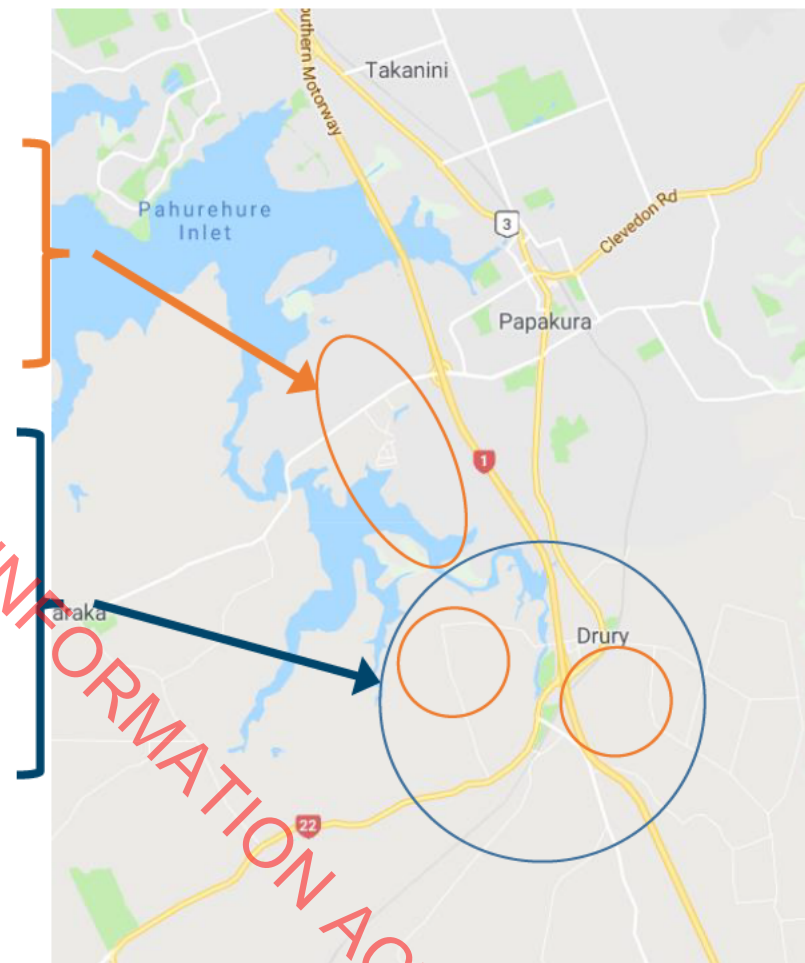
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- **Integrated Stormwater:** Seek to treat all stormwater runoff from the SH1 corridor and a 'green corridor'. Currently, there is no treatment of runoff from this section of motorway
- **Minimising Vehicle Emissions:** Support network operating plans with SMART Motorway Infrastructure and Technology for the optimisation of the network, which along with demand management measures, will minimise any increase in vehicle emissions
- **Variable Speed Limits:** Set the right speed for the conditions to improve customer safety
- **Fixing the alignment:** Apply the "Safe Systems" approach to fixing existing deficiencies
- **Resilience:** Improve resilience to the effects from flooding by upgrading the Slippery Creek Bridge, lifting the road out of the flood plain at Drury and investing in the Drury interchange
- **New and improved Interchanges:** Meet demand from planned growth areas and improve the function of the local network with upgrades at Papakura, Drury, Ramarama and Bombay and the construction of a new interchange at Drury South (Mill Road/ Pukekohe Expressway)
- **Unlocking rail rapid transit network:** Remove the key constraint to the electrification and expansion of the North Island Main Trunk Line at Drury interchange
- **Supporting planned growth:** Explore, at pre-implementation, extending the managed lane to SH22 and walking and cycling integration and opportunities for Shared Mobility Services

# A staged approach to the corridor provides flexibility to implement the project and respond to changing demand, technology and societal choices

The urgency, for this Business Case to proceed to the next stages, is due to the need:

- **for Route Protection:**
  - heavy development of surrounding areas
  - preferable to prevent the corridor being built out
  - require flexibility to implement the project and be responsive to changes in projected growth
- **for Supporting Growth Programme integration:**
  - new Interchange at Drury will enable rail electrification between Papakura and Pukekohe
  - interchange design will:
    - integrate with a new station at Drury
    - future proof for third (and potential fourth) main
  - integrated with the SH22 project, will respond to higher levels of growth
- **to enable Growth and Accessibility**
  - majority of land released for the 50,000 dwellings by 2026 and delays may affect take-up



# Key opportunities will be scoped and developed during the pre-implementation stage of the Project

Opportunity	Description	Key Stakeholder(s) or Partner(s)
Land use and transport integration at Drury Interchange	<ul style="list-style-type: none"> <li>Exploring opportunities for a multi-modal transport interchange that better integrates with future land use development</li> <li>Ensure integration with SH22 Safety improvements (Safe Roads Alliance project)</li> <li>Integrate with the rail electrification works to Pukekohe, and future proofing for additional third and fourth lines on the NIMTL at Drury interchange</li> </ul>	<ul style="list-style-type: none"> <li>Transport Agency</li> <li>Auckland Transport</li> <li>Auckland Council</li> <li>KiwiRail</li> <li>Landowners</li> </ul>
Walking and cycling connectivity	<ul style="list-style-type: none"> <li>Capitalise on the walking and cycling spine and the increasing uptake of E-Bikes to provide more connections and grade separated connections at the interchanges</li> <li>Deliver a local walking and cycling network that provides greater choice of travel</li> </ul>	<ul style="list-style-type: none"> <li>Auckland Transport</li> <li>Local Boards</li> <li>Iwi</li> <li>Bike Auckland</li> <li>Landowners</li> </ul>
Use and pricing of managed lane	<ul style="list-style-type: none"> <li>Capitalise on the proposed managed lane (northbound) to further consider its use, pricing policy and implementation at a regional level</li> <li>Support policy objectives through the investigation of HOT lanes, distance based pricing or access pricing</li> </ul>	<ul style="list-style-type: none"> <li>Auckland Council</li> <li>Auckland Transport</li> <li>Ministry of Transport</li> <li>Transport Agency</li> </ul>
Stormwater Management	<ul style="list-style-type: none"> <li>Develop an integrated approach to the catchment management (flooding) and stormwater treatment</li> <li>Reduce environmental impact to waterways, improves transport resilience</li> </ul>	<ul style="list-style-type: none"> <li>Auckland Council</li> <li>Iwi</li> </ul>

# The Project and the next phases are affordable and provide good value for money

- The Project represents good value for money as a whole of corridor project, and each stage of the Project is economically viable in its own right
- The project and the next phases are included in the draft Transport Agency Investment Proposal (TAIP) for an implementation start in 2018-2021 period
- Stage 1 has been identified in ATAP as a first decade priority under the 'Proposed Strategic Road Network Improvements' package
- The implementation funding for Stage 2 and Stage 3 will be sought in the future, to align with growing travel demands in the corridor and wider system improvements

Option	Expected Estimate (P50)	95th Percentile Estimate	Benefit cost ratio (BCR)	Assessment Profile
Stage 1: Papakura to Drury (including Drury interchange)	\$366M	\$430M	3.1	HM (BCR 3.0-4.9)
Stage 2: Drury to Drury South (complete in 2036)	\$246M	\$291M	1.7	HL (BCR 1.0-2.9)
Stage 3: Drury South to Bombay (complete in 2046)	\$379M	\$423M	1.0	HL (BCR 1.0-2.9)
Papakura to Bombay by 2046 (entire corridor)	\$991M	\$1,144M	2.5	HL (BCR 1.0-2.9)



# The following information will be made available on the Transport Agency website

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If the Board agrees to the recommendations in this paper the following information will be made available on the Transport Agency website:

- *The preferred option for the State Highway 1 Papakura to Bombay corridor will be implemented over stages, and is consistent with the strategic approach recommended through the Supporting Growth Programme, and Auckland Transport Alignment Project.*
- *The preferred option supports the liveability of the communities in the Supporting Urban Growth Area (south of Papakura), by improving the walking and cycling access to key destinations and allowing the local road network to function as intended.*
- *The preferred option will improve the capability of the motorway between Papakura and Bombay, and supports the growth of the communities by enabling better access to employment opportunities, markets, core services and amenities.*
- *The investment assessment profile for the preferred option for the entire corridor has been assessed to be HL(BCR 1.0-2.9), in accordance with the draft 2018-2021 Investment Assessment Framework.*