



NZ TRANSPORT AGENCY
WAKA KOTAHI

PUHOI TO WELLSFORD

Project Summary Statement

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ROAD OF NATIONAL SIGNIFICANCE: PUHOI TO WELLSFORD

1. PURPOSE OF DOCUMENT

This paper provides information on the context, strategic benefits and implementation plan for the completion of the Puhoi to Wellsford project, one of the seven Roads of National Significance (RoNS).

2. STRATEGIC CONTEXT

2.1 Population, employment and growth

The Auckland Regional Growth Strategy and the Rodney District Plan both anticipate significant growth occurring in the northern part of the Auckland Region.

Within the next 25 years, the Auckland region is projected to grow to two million people, an increase of over 40% in the current population. This includes growth of around 100,000 people (or a 30% increase) in the current Rodney and North Shore District Council areas. In Northland, the population was 148,500 in 2006. This is forecast to grow by between 20,000 and 38,000 people by 2031, with the majority of growth occurring in Whangarei.

To date, growth in employment in Northland, the Rodney District and North Shore City has been high, ranging between 7% and 22% within individual districts in the area. Overall employment has increased by around 5,000 jobs per year between 2001 and 2006. Rodney District, the area most directly influenced by the Puhoi to Wellsford project, has experienced growth of more than 22% (or 1,000 jobs) between 2001 and 2006.

Within the area of influence of the Puhoi to Wellsford route, the main growth centres are Orewa, Albany, Warkworth and Wellsford, with new business development areas likely to emerge at Silverdale North and Silverdale South.

This existing and anticipated future regional growth will provide opportunities for economic and social development in Northland and the Rodney District. To ensure that these opportunities can be optimised, it will be essential that the regions are well supported through improvements to infrastructure, such as road access.

The key planning document for determining future population growth in Auckland over the next 50 years is the Regional Growth Strategy. This is supported by The Rodney District Plan and associated Structure Plans including ones for both Wellsford and Warkworth. Population projections for northern part of Rodney District and Kaipara South and East forecast a 53% growth in population between 2001 and 2021. Most of this growth would occur in Rodney District. Growth in light industrial activities and retail is forecast to accompany this population growth.

The development of the Puhoi to Wellsford RoNS is generally consistent with supporting the growth forecasts for the region. However opportunities for further economic growth will also be actively pursued through the development of a complementary network plan. In particular the network plan will be able to look for

opportunities to build off the infrastructure investment in a way that will increase employment growth within the Rodney District.

2.2 Existing routes

State Highway 1 (SH1) is the main inter-regional route between Northland and Auckland. It connects the Far North, to Whangarei and Auckland, and beyond. In addition to SH1, several other state highways also support the Northland region. During peak traffic periods SH16 between Wellsford and Auckland is used as a main alternative route, which helps to ensure that SH1 operates as efficiently as possible.

During the past 10 years, significant investments have been made to upgrade SH1 from Auckland north and establish a four-lane, median-treated, grade separated highway. Specifically, these upgrades have included:

- The Northern Busway;
- Albany to Silverdale; and
- Silverdale to Puhoi (Northern Gateway Toll Road).

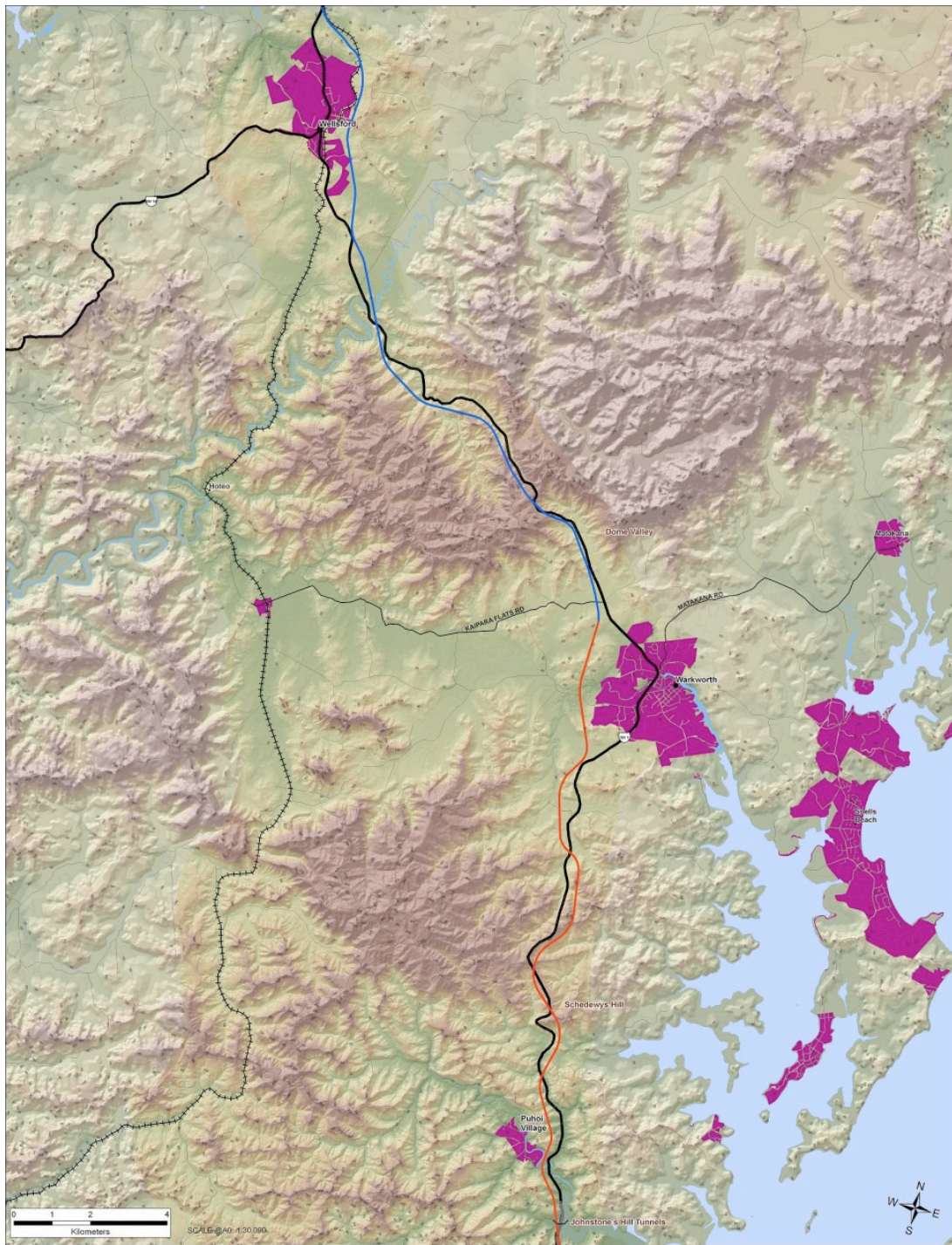
The Puhoi to Wellsford project extends from the end of the existing Northern Gateway Toll Road at Puhoi, to immediately north of Wellsford. When complete it will comprise approximately 38km of additional, motorway/expressway between Auckland and Northland.

2.3 Objectives of the Puhoi to Wellsford RoNS

Within this context, the objectives of the Puhoi to Wellsford RoNS project are:

- To enhance inter regional and national economic growth and productivity;
- To improve movement of freight and people between Auckland and Northland;
- To improve the connectivity between the medium to long term growth areas in the northern Rodney area (Orewa, Warkworth & Wellsford); and
- To improve the reliability of the transport network through a more robust and safer route between Auckland and Northland.

Map 1: Proposed and existing routes



3. BENEFITS

3.1 National network benefits

The Puhoi to Wellsford project is expected to deliver several significant benefits to the national network when it is complete by:

- Improving journey time reliability between Auckland and Northland;
- Reducing congestion during peak periods due to extra capacity; and
- Providing a safer, more reliable and efficient road transport link, which will improve the mobility of both people and freight between the Auckland and Northland regions.

Currently, there is significant variation of SH1 alignment standards between Puhoi and Wellsford. Delays are often caused by a combination of factors related to the difficult terrain, steep gradients, a high number of Heavy Commercial Vehicles travelling at low speeds, lack of overtaking opportunities and the urban sections in Warkworth and Wellsford. The net effect of these conditions means that journey times are often unreliable, particularly during periods of peak demand, or when an incident has occurred on the road.

The proposed Puhoi to Wellsford project will deliver travel time savings of approximately eight minutes between Puhoi and Warkworth, and seven minutes between Warkworth and Wellsford on a standard day. However, during the 10 major public holiday weekends it is anticipated that travel time savings will be more significant because of the congestion currently experienced on this route.

From a safety perspective, there are two accident black spots along the existing SH1, at Schedewys Hill (south of Warkworth) and Dome Valley (north of Warkworth). The crash rates at these locations currently far exceed the national average. Five fatal crashes have occurred between Puhoi and Warkworth in the past five years, four of which were head-on collisions. A further 14 fatal crashes have occurred between Warkworth and Wellsford, 10 of which were head-on collisions.

The Puhoi to Wellsford project will reduce these safety risks by providing a dual carriageway and improved road geometry.

3.2 Regional growth benefits

The Puhoi to Wellsford project is expected to deliver several significant growth benefits to the region when it is complete by:

- Improving economic development opportunities in Northland;
- Enhancing connections between industry and major urban transport links;
- Reducing costs for commodity transport between Northland and Auckland; and
- Improving opportunities for the tourism industry in Northland.

It is anticipated that the biggest regional growth benefit will be the improved economic development opportunities that better access will bring to the region, particularly in Warkworth and Wellsford, as well as more broadly throughout the Northland region.

From an industry perspective, improving transport connections and travel times between the main producing activities in Northland, particularly dairying, forestry and mining, and the major transport hubs at the Ports of Auckland and Tauranga will deliver significant benefits for businesses in these industries.

Additionally, the reduced costs of commodity good transportation to Northland (either for consumer consumption or input to the manufacturing industries in the

area) is expected to make Northland a more attractive place to live from a cost point of view, and will help to create employment opportunities.

Reduced journey times and improved travel time reliability for business and personal trips to and from Auckland will make tourist destinations in Northland more accessible to the large domestic and international visitor market in Auckland region.

3.3 Local network connectivity

There are a number of other NZTA and local authority projects that will make the overall transport system in the Puhoi to Wellsford corridor function efficiently, and which will complement the development of the Puhoi to Wellsford RoNS. They include improvements around Warkworth that provide better access to key industrial areas to the west via a western collector route and improvements to the existing state highway which will allow better access to the eastern beaches. They will also improve the flow and capacity along the existing state highway as well as enhancing safety and enabling provision of walking and cycling facilities.

4. PROJECT SCOPE AND ECONOMICS

This project is currently in the development phase, with the focus on project data collection and planning for public consultation on route options and then project consenting.

In broad terms, the project scope is a four-lane, divided highway between the current terminus of the Northern Gateway Toll road and Wellsford, with bypasses built around the towns of Warkworth and Wellsford.

For planning purposes we have assumed the corridor will be developed in two sections because the growth strategy and traffic volumes change significantly at Warkworth.

Section 1: A new motorway running parallel to the old highway featuring a high standard of construction, including grade separation of connections with the existing roads, starting from the terminus of the Northern Gateway Toll Road and ending just north of Warkworth.

Section 2: A new expressway parallel to the old highway with lower geometric and access standards than Section 1, running from north of Warkworth to just north of Wellsford.

During the development phase we will be investigating options for tolling Section 1, as a means of bringing forward the construction of the road.

The forecast outturn costs of the RoNS corridor (in 2009 dollars) at the most likely level is \$ 1.38 billion within a confidence range of \$ 1.24 billion to \$ 1.52 billion.

The final costs of the RoNS corridor will include future years escalation (normally three percent) due to increases in input costs largely following national economic inflationary pressures. The actual amount of escalation attributed to individual projects depends on the time frame for the construction. If a project is constructed earlier than predicted then the amount of escalation would be lower. Equally if construction is later than predicted the cost of escalation would be higher. However, at a RoNS corridor level the individual project effects are less marked. Thus the forecast outturn cost of the RoNS corridor would be \$ 1.69 billion with a confidence range of \$ 1.53 billion to \$ 2.04 billion.

The standard benefit cost ratio (BCR), as currently calculated is based on an 8 percent discount rate. Some would argue that this discount rate leads to investment that is too focussed on short term projects at the expense of large long term infrastructure. To review the impact of the discount rate the BCR with discount rates at 6 percent and 4 percent were also tested.

The standard BCR measures the direct transport benefits arising from the road. The scale of these corridor investments means that it is appropriate to include wider economic benefits (WEBs); that is, the flow-on effects from the transport improvements. The result is to increase the BCR. The results of the analysis are set out in the table below.

Discount Rate	Standard NZTA BCR	BCR inc WEBs
8%	0.8	1.1
6%	1.1	1.5
4%	1.6	2.0

5. IMPLEMENTATION PLAN

5.1 Current status

We are currently in the project scoping phase, which involves investigation of various options for the two sections of this RoNS. This will be followed by a comprehensive public engagement process. We anticipate both sections will be called in under the Resource Management Act once public consultation is complete, expected to be in 2012.

Section 1 of the Puhoi to Wellsford project will be built first, followed by Section 2. With this in mind, it may be possible to stage delivery of section one to release benefits earlier than originally anticipated by progressing the Warkworth bypass first.

5.2 Stretch targets

The key stretched target is to lodge the "call in" application for both section one and two by the end of 2011. This involves completion of the investigation, public consultation and consent documentation by mid 2011.

A potential construction stretch target may be to either extend a portion of the Northern Gateway Toll Road to the Puhoi Interchange, or to speed up the construction of the Warkworth Bypass.

To reach these stretch targets, revisions would need to be made to the consenting and construction programme. For example, the extension to Puhoi interchange could be accelerated through a traditional consenting path, while the main works are progressed as one package.