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91935R

Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

# Level 1 Geography 2026

## 91935 Demonstrate understanding of decision-making in response to a geographic challenge in the wider Pacific region

Credits: Five

RESOURCE BOOKLET

Refer to this booklet to answer the questions for Geography 91935.

Check that this booklet has pages 2–17 in the correct order and that none of these pages is blank.

**YOU MAY KEEP THIS BOOKLET AT THE END OF THE EXAMINATION.**

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**INSTRUCTIONS**

Use these resources to complete the assessment for Geography 91935.

Note: Resources A–G (pages 3–8) are **the same as** the material supplied to you in class.

Pages 9–16 contain **new resource material**. Make sure you read this before beginning your answers.

# NORTHLAND/TE TAI TOKERAU

## RESOURCE A: Introduction

Northland/Te Tai Tokerau is the northernmost of New Zealand's 16 local government regions. New Zealanders sometimes refer to it as the "Winterless North" because of its mild climate throughout the year. The major population centre is the city of Whangārei.

The land is predominantly rolling hill country. Farming and forestry occupy over half of the land and are two of the region's main industries.

The "Far North" is the name given to the northern half of Northland/Te Tai Tokerau.



**Map 1:** Northland/Te Tai Tokerau settlements.

| Settlement | Population (2025) | Percentage of Northland region | Settlement | Population (2025) | Percentage of Northland region |
|---|---|---|---|---|---|
| **Whangārei** | 56,100 | 27.9% | **Ruakākā** | 2,890 | 1.4% |
| **Kerikeri** | 8,380 | 4.2% | **Mangawhai Heads** | 2,760 | 1.4% |
| **Kaitaia** | 6,170 | 3.1% | **Moerewa** | 1,930 | 1.0% |
| **Dargaville** | 5,170 | 2.6% | **Paihia** | 1,660 | 0.8% |
| **Kaikohe** | 4,720 | 2.3% | **Hikurangi** | 1,640 | 0.8% |
| **One Tree Point** | 3,350 | 1.7% | **Opua** | 1,250 | 0.6% |

**Table 1:** Settlement size.

## RESOURCE B: History

### Arrivals from Polynesia

Māori elders say that when the Polynesian explorers Kupe and later Toitehuatahi reached Aotearoa New Zealand, their waka landed first in the north, or soon sailed there. Northern descendants trace their lineage to one or more of these waka.

### Settlements

Some of the migrants moved south, but a number stayed in the warm, fertile north, which had abundant food sources and provided the best chance of survival for tropical plants brought on the waka.

By the eighteenth century, the Far North had possibly a quarter of the total Māori population. Archaeological evidence from places such as Pouērua, inland from the Bay of Islands, reveals much about their way of life. Many settlements were on shores and harbours, and in river valleys. Middens (rubbish heaps) show the extent to which Māori enjoyed the abundant fish and seal supplies. Pā were built for defence, scattered along the headlands and carved into strategic hill sites and volcanic cones.

Māori and Pakeha came together to sign the Treaty of Waitangi / Te Tiriti o Waitangi on 6 February, 1840. This date is observed every year at the Waitangi Treaty Grounds – a place where all New Zealanders can come together to discuss, debate, and celebrate the past, present, and future of Aotearoa New Zealand.

## RESOURCE C: Things to see and do



**Cape Reinga/Te Rerenga Wairua** is the north-westernmost tip of the North Island. *Te Rerenga Wairua* means the *leaping-off place of spirits* and refers to the Māori belief that the cape is the point where the spirits of the dead enter the underworld.



**Ninety Mile Beach/Te-Oneroa-a-Tōhē** is on the western coast of the Far North. The beach is officially a public highway and is used as an alternative to State Highway 1, mainly by tourists or when the main road is closed due to landslides or floods on the eastern side of Northland/Te Tai Tokerau.



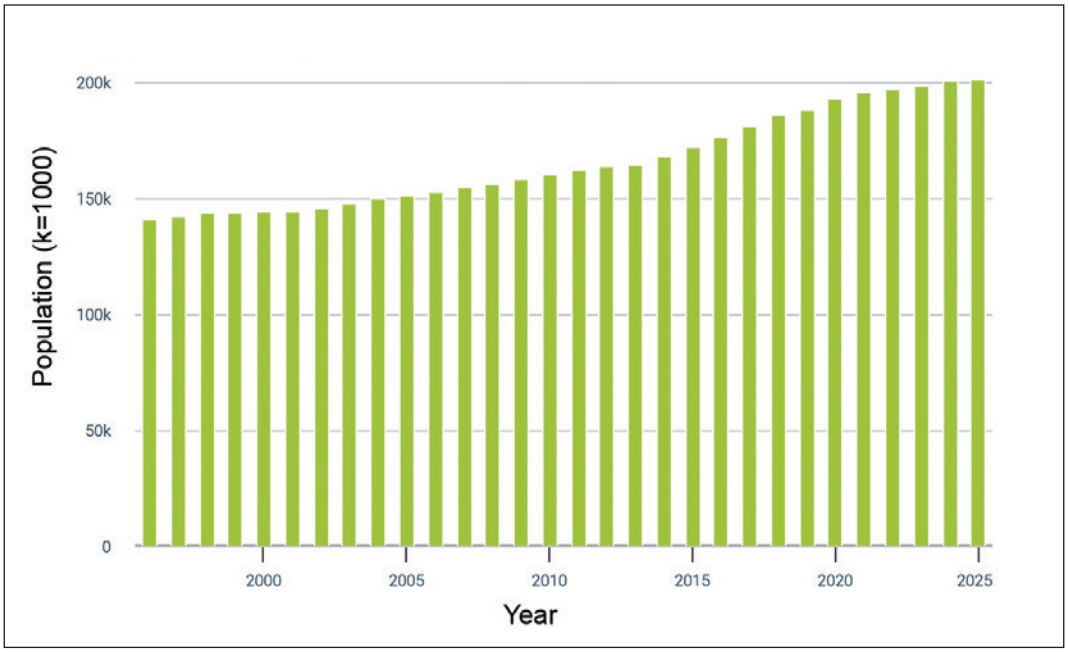
**Waitangi Treaty Grounds** are the country's most important historic site. The Treaty of Waitangi/Te Tiriti o Waitangi was signed by Māori chiefs and the British Crown on 6 February, 1840, marking the start of New Zealand as a bicultural nation.



**Russell's** original name is **Kororāreka**, and it was a thriving Māori settlement well before Captain Cook arrived in 1769. Located just across the harbour from Waitangi, the settlement was chosen as New Zealand's first capital soon after the Treaty of Waitangi was signed.

## RESOURCE D: Population

Northland / Te Tai Tokerau region's total population was 201,100 in 2025, up 0.3% from a year earlier. The country's total population grew by 0.7% over the same period. Population growth in the Northland / Te Tai Tokerau region averaged 0.9% per year over the 5 years to 2025, compared with 1% per year in New Zealand as a whole.




**Graph 1:** Northland / Te Tai Tokerau population (1996–2025).

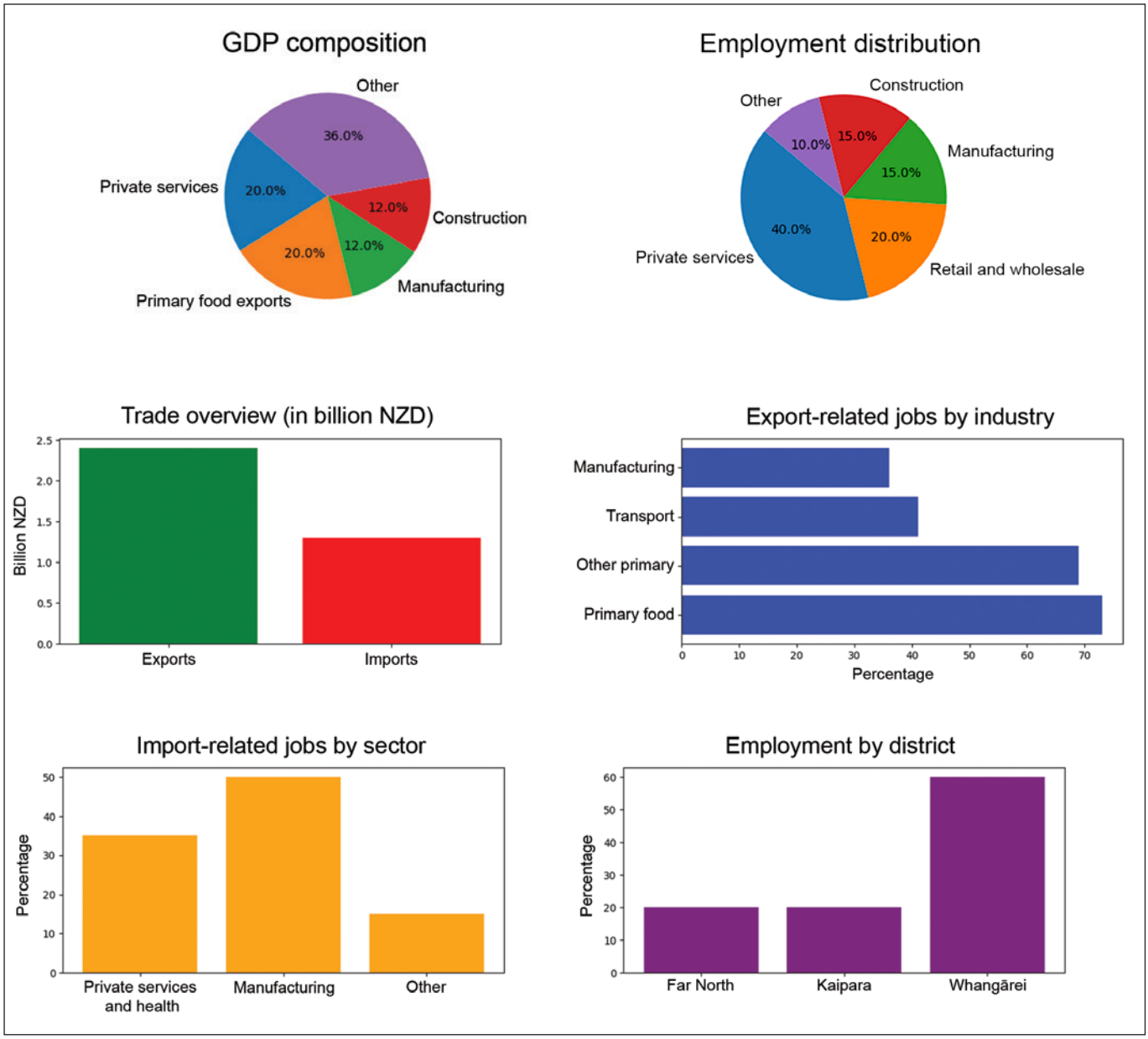
| Ethnic group | Number of people |
|---|---|
| European | 141,594 |
| Māori | 72,612 |
| Pacific peoples | 9,486 |
| Asian | 9,345 |
| Other ethnicity | 3,471 |

**Table 2:** Northland / Te Tai Tokerau population ethnicity (2023). Note: some people chose to identify with more than one ethnicity.

## RESOURCE E: Economy

Northland / Te Tai Tokerau contributes 3% of New Zealand's total gross domestic product (GDP), employing about 3% of all New Zealand's workers. Primary food exports, private services, construction, and manufacturing contribute the most to the region's GDP.

Northland / Te Tai Tokerau exports $2.4 billion (17%) of its total output, and imports $1.4 billion (18%) worth of goods. The places that are key import sources are the United Arab Emirates, Europe, Malaysia, Australia, and China.



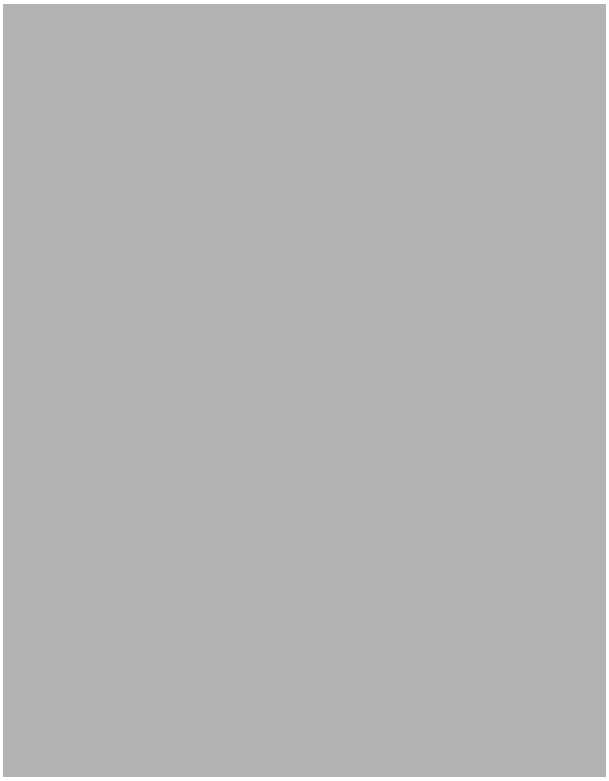

**Graph 2:** Northland / Te Tai Tokerau regional economic snapshot, 2025.

## RESOURCE F: Natural hazards

The main natural threats to Northland / Te Tai Tokerau are:

- **Landslips** – landslips are the result of soils becoming unstable because of heavy rainfall. The geology of the Northland / Te Tai Tokerau region is such that slippage is common after rain events. These slips can affect people in many ways, such as loss of grazing land and damage to transport networks, the national power grid, and housing.
- **Flooding** – on average, one ex-tropical cyclone passes close to Northland every year, putting it more at risk from these storms than the rest of New Zealand. Examples of tropical storms to hit Northland / Te Tai Tokerau include Gabrielle (2023), Tam (2025), and Vaianu (2026).
- **Tsunami** – four moderate tsunami inundation events have impacted Northland's east coast in the last 150 years.

## RESOURCE G: Climate



**Map 2:** Northland / Te Tai Tokerau annual rainfall.

Northland / Te Tai Tokerau is a narrow peninsula with no part more than 50 kilometres from the sea. This causes winds to be very moist with abundant rainfall throughout the region. Distribution patterns are related to relief: rainfalls range from about 1000 mm per year in low-lying coastal areas, to approximately 2000 mm at higher elevations.

# NEW RESOURCES

Despite its proximity to Auckland, Northland's economy lags behind other regions. This is largely due to its poor transport accessibility. Because the region depends so heavily on State Highway 1 (SH1) and an inadequate railway, it is left in a vulnerable position with an unreliable link to the rest of the country.

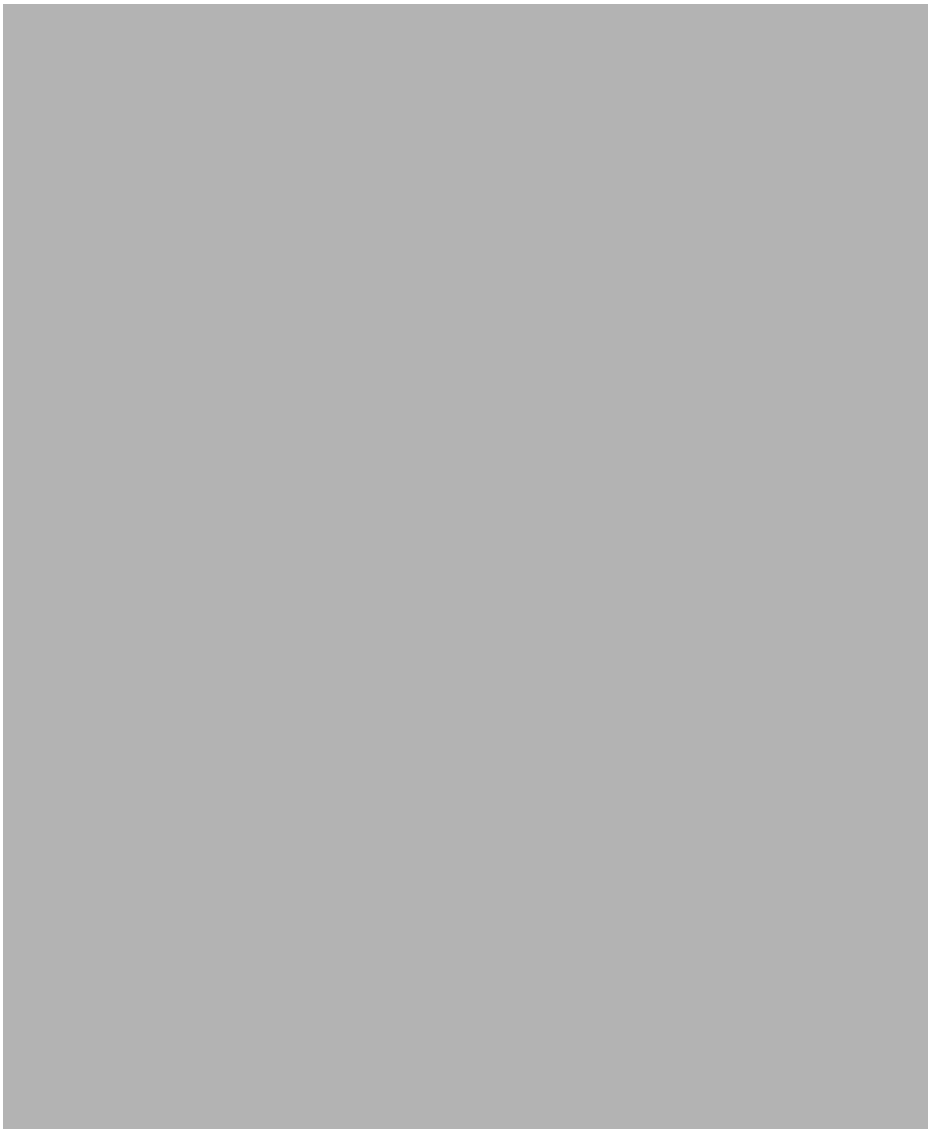
This lack of resilient infrastructure means frequent closures of SH1 act as a major barrier to progress. Communities, particularly in the Far North, often end up isolated and it is harder for goods and people to move efficiently. This ongoing issue severely limits economic growth, hinders access to jobs and healthcare, and ultimately holds back the region's potential.

The **Northland Corridor** is an upgrade of SH1 that is focused on creating a safer, more efficient, and resilient transport link between Auckland and Whangārei. This major project involves constructing a new 100-kilometre four-lane motorway. It aims to boost economic growth, cut down on traffic congestion, improve safety, and support new housing. Construction is scheduled to begin in late 2026.



**Image A:** An artificially generated impression of what part of the Northland Corridor between Northland and Auckland might look like.

## Northland Corridor



**Map A:** Three key phases of the Northland Corridor project (2026–2034).

| Section | Distance (approximate) | Current cost estimate |
|---|---|---|
| Warkworth to Te Hana | 26 km | $2–3 billion: designed, built, and maintained by private companies but owned by Government, which pays the companies over time (and allows a toll to be collected by the companies). |
| Te Hana to Port Marsden Highway | 45 km | $15.3–18.3 billion |
| Port Marsden Highway to Whangārei | 26 km | |

**Table A:** Details of the Northland Corridor.

While this investment promises to be a game-changer for the region, it raises an important question: **what about the communities and industries in the Far North, beyond Whangārei?**



**Map B:** Main Northland transport routes.

The road and rail infrastructure in the Far North (north of Whangārei) is poor. However, its low population results in low traffic volumes. Therefore, the question is whether the Government should be extending the SH1 Northland Corridor project into the Far North.

The current cost estimate of the Northland Corridor ($20 billion) does not compare favourably to other major road projects in New Zealand. For example, Transmission Gully (a 27 km highway into Wellington) had an estimated cost of $1.25 billion. Some argue it would be better to invest any further money in a wide range of smaller projects to improve roads and rail across the entire Far North region.

## SH1 and the Mangamuka Gorge



**Image B:** The Mangamuka Gorge, a steep relief and highly erosion-prone area.

An extension of the Northland Corridor, which would involve a complete rebuild of the Mangamuka Gorge, is currently considered impractical due to the massive cost of stabilising the geologically unstable land, and the low traffic volume (1,300 vehicles per day). These issues mean it doesn't meet national funding criteria. The current strategy is therefore limited to ongoing maintenance.





**Images C and D:** Mangamuka Gorge main slip, 2023.

This leaves Far North communities vulnerable to significant risks from frequent closures, including:

- economic disruption and losses for industries like tourism, horticulture, and forestry
- community isolation from essential services like healthcare and education
- compromised emergency response.

The gorge's instability was highlighted by a more than two-year closure from August 2022 to December 2024, and weather events continue to cause issues. Officials acknowledge the route is a "critical lifeline" and a "crucial social and economic connection" but managing it remains a major ongoing challenge. This current strategy needs to be re-evaluated, and a permanent, resilient solution for the gorge must be included as a key part of the wider Northland Corridor project to secure the Far North's future.

### State Highway 10: The Far North's critical lifeline

When the slip-prone Mangamuka Gorge on SH1 closes, State Highway 10 (SH10) becomes the Far North's only viable detour. However, it is an inadequate alternative. This alternate route adds up to 40 minutes to journeys. It also puts immense pressure on the small communities along its path, as it was not designed for the heavy freight it is forced to carry, a problem highlighted during the gorge closure.



**Map C:** SH1 Mangamuka Gorge official detour map (adapted).
The topography and local environment in this area means that SH1 and SH10 are susceptible to closures, cutting off access to Kaitaia and further north.

To address this, the current strategy is to improve SH10's resilience and capacity by replacing its bottleneck one-lane bridges with modern, two-lane structures. The goal is to strengthen SH10 for both daily local use and as an effective detour to prevent the Far North from being isolated.

However, for SH10 to become a genuinely viable alternative route that can safely and efficiently handle all traffic during SH1 closures, it must be treated as part of an extended Northland Corridor project. This would require more substantial funding and further improvements in the future.

## Northland Rail: Upgrades, storms, and future plans

Major upgrades to Northland's railway in 2021 lowered tracks in 13 tunnels and replaced five bridges. But 2023 storms caused damage to 35 sites, forcing a 20-month closure. Even after repairs, only one daily train runs, while the wider network is in poor condition, with the Dargaville and Otiria lines north of Whangārei no longer functional. The biggest issue is the lack of a rail link to Northland's main port at Marsden Point.

A long-term solution is the Marsden Point Rail Link, which would extend towards the Bay of Islands in the Far North. This would create a modern network, letting industries like forestry move freight by rail directly to port instead of using costly road transport.

The upgrade is important for Northland's future, with freight projected to grow to 23 million tonnes by 2042. Shifting freight from road to rail could cut emissions by up to 70%, reduce congestion and road maintenance costs, and eventually allow passenger services to return.

The survival of rail in Northland depends on this solution. Without it, the region's rail network could face permanent closure.




**Map D:** Northland railway lines.



**Image E (left):** A large slip fell over the main railway freight line between Auckland and Northland during Cyclone Gabrielle.
**Image F (right):** This section of the Far North's railway hasn't seen a train since 2016 – and plans to reopen the line are now on hold.

## Viewpoints on the Far North transport problems

**Councillor Hana Davidson, Far North District Council**

"As a local councillor, I believe the problem with our main road is a major issue of fairness. It's about our region's ability to survive and succeed economically.

Our region's future is at risk because our whole economy is completely dependent on that one weak spot in the road through the gorge. We simply can't keep putting all our eggs in one basket.

When that single route closes, it hurts our reputation, threatens local businesses, and stops anyone from wanting to invest here. The people of this community hold me responsible for getting this fixed, and the current situation just isn't good enough. We need serious government investment in a complete fix for our transport links.

For our region, a complete fix means having a genuinely viable alternative – a resilient, high-capacity route that ensures the Far North is never cut off again. That is the only fair and lasting solution."



**Kaumātua, Matua Ropata Williams, Ngāti Kahu**

"For Māori, the impacts of a closed road are felt not just in our wallets, but in our wairua – our spirits. These connections are fundamental to our identity.

The road is more than just asphalt. It is the vein that connects us to our whānau, our marae, our tūrangawaewae (our place to stand). But a community cannot survive with just one fragile vein. The ability to travel is essential for maintaining our kinship ties, our whanaungatanga (sense of relationship, connection, and belonging).

When that single connection is cut, we can be blocked from attending a tangihanga (funeral). To miss that, to be unable to grieve with your people and fulfil that cultural responsibility, is a pain that cuts deeper than any economic loss. We are becoming disconnected from ourselves.

On top of this, many of our communities are in remote areas, so these closures hit us the hardest. It worsens the struggles we already face in getting to healthcare, getting our kids to school, and finding good jobs. It's a deep cultural wound and a major issue of fairness for our people.

True fairness for our people means having a resilient SH1 lifeline that can never be severed, ensuring our whānau can always find a way to come together when it matters most."



**Dave Johnston, Kaitaia business owner**

"You can't run a business on 'maybe,' but this transport uncertainty is a major handbrake on Northland's entire economy.

When the Mangamuka Gorge closes, my costs go through the roof. It's money straight out of my pocket, paying drivers to sit idle while a truck full of fresh fish loses value by the minute. The alternative, SH10, is a temporary patch, not a real solution. It's too narrow and windy for heavy traffic, and the wear and tear on our trucks is a huge hidden cost.



This isn't just my problem; it affects the entire supply chain, from Fonterra tankers to supermarket groceries. Frankly, we've pushed our roading network to its limit. We can keep pouring money into patching up roads, but we'll always be one storm away from being cut off. For a genuine long-term solution that allows our economy to grow, we must think differently. If the government is serious about a reliable supply chain, they need to get serious about extending the rail line. It's the only dependable, all-weather backbone for heavy freight so our region can function properly."

**Sarah McGregor, local practice nurse from Kerikeri**

"For us living in the Far North, this isn't just a news story; it's a constant source of stress that affects our daily lives, our safety, and our wellbeing.

Every time there's a heavy rain warning, you feel this knot in your stomach. My mum has specialist medical appointments in Whangārei, which are often booked months in advance. A slip in the gorge reveals just how fragile our connection is. Relying on a single, vulnerable road for a potentially life-saving check-up is an unacceptable risk. It is vital that we have another roading option when SH1 is closed.



As a nurse, that's what worries me most. A community's health is only as strong as its connections, and there is currently no guarantee an ambulance can always get through in a situation when every second counts.

But it's also the daily grind. It's the challenge of getting kids to school, getting to work, or even just doing the supermarket run. You really do feel physically cut off from the rest of the country. It's like we're living on an island, completely at the mercy of the weather and a road we can't depend on."

**Acknowledgements**
Material from the following sources has been adapted for use in this assessment:

**Resource A**
https://www.newcops.govt.nz/sites/default/files/maps/northland_800.jpg
https://www.freeworldmaps.net/oceania/new-zealand/northland/where-is-northland.jpg
https://en.wikipedia.org/wiki/Northland_Region

**Resource B**
https://teara.govt.nz/en/northland-region/page-5
https://www.waitangi.org.nz/whats-on/waitangi-day

**Resource C**
https://www.istockphoto.com/photo/stunning-wide-angle-aerial-drone-view-of-cape-reinga-lighthouse-at-cape-reinga-the-gm926533068-254220973
https://sheiswanderlust.com/destinations/oceania-guide/new-zealand/attractions/ninety-mile-beach/
https://www.aa.co.nz/travel/must-dos/waitangi-treaty-grounds-and-the-museum-of-waitangi/
https://northlandferries.co.nz/northland-destination-guide/about-russell/

**Resource D**
https://regions.infometrics.co.nz/northland-region/population/growth
https://figure.nz/chart/PqDmkiHQEl4SXHfC

**Resource E**
https://www.mfat.govt.nz/assets/Trade-General/Trade-Market-reports/STORM-Analysis-Regional-Summaries-Northland-28-September-2020-PDF.pdf

**Resource F**
https://www.nrc.govt.nz/resource-library-archive/environmental-monitoring-archive2/state-of-the-environment-report-archive/2011/state-of-the-environment-monitoring/our-place/natural-hazards/

**Resource G**
https://niwa.co.nz/climate-and-weather/northland

**New resources**
**Image A:** https://www.acciona.com/updates/news/acciona-ends-revenue-aligned-eu-taxonomy-sustainable-activities

**Map A:** https://www.newstalkzb.co.nz/news/national/the-benefits-are-huge-18b-northland-expressway-set-to-transform-road-travel/

**Map B:** https://www.nzta.govt.nz/assets/projects/whangarei-to-auckland/SH1-Auckland-to-Whangarei-programme-business-case.pdf

**Images B, C, and D:** https://www.nzta.govt.nz/projects/sh1-mangamuka-gorge-slip-repairs/gallery

**Map C:** https://www.nzta.govt.nz/media-releases/long-term-closure-of-sh1-through-mangamuka-gorge-likely

**Map D:** https://commons.wikimedia.org/wiki/File:NorthIsland_rrMap_v02.svg (Public domain)

**Image E:** https://www.rnz.co.nz/news/national/485164/some-freight-railway-lines-will-remain-closed-for-months-due-to-cyclone-gabrielle-damage-kiwirail

**Image F:** https://www.rnz.co.nz/news/national/519415/millions-spent-reopening-mothballed-northland-railway-line

**Pages 15–16 silhouettes:** https://stock.adobe.com/nz/366787827