

Social impact assessment of Northland's pipeline of major infrastructure projects.

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Glossary

Word	Descriptor
Broader outcomes Social procurement Community wellbeing	<p>Globally, social procurement has been defined as using buying power to deliver value beyond the value of the goods, services or works being purchased. The New Zealand Government uses the term broader outcomes to mean the same thing. In New Zealand, Local Government can also use the term community well-being to mean the same thing.</p> <p>Components in this SIA include:</p> <ul style="list-style-type: none"> • per cent local business hire • per cent Māori-owned local business hire • per cent Pacific-owned local business hire • work-readiness, employment training and pastoral care of individuals during lead in, while constructing and for operational roles, including for local Māori, Pacific, women, people with disabilities, and young people not in employment • business mentoring and capability uplift for all small local businesses.

Acronyms

Acronym	Descriptor
ECE	Early Childhood Education
ED	Emergency Department
FTE	Full time equivalent
GP	General Practice
SIA	Social impact assessment
IAIA	International Association for Impact Assessment
TLA	Territorial Local Authority
WDC	Construction and Infrastructure Workforce Development Council Waihanga Ara Rau
WIP	Workforce Information Platform



Executive Summary

The purpose of the Social Impact Assessment (SIA) is to understand the social impacts which may arise from the pipeline of major infrastructure projects in Northland. Ways to maximise opportunities and reduce potential negatives are recommended.

The areas of focus are the towns/cities (and surrounding areas) of Whangarei, Kaitiaki, and Dargaville; (i.e., where many of the projects might be located) and a regional assessment. Potentially affected communities of interest in this SIA were:

- Construction workers
- Sensitive receptors i.e., Māori, Pacific, and low income
- Small and medium businesses and their workforces, including Māori and Pacific businesses.

Social topics included within this SIA were:

- Generating local wealth (with consequent employment)
- Building education, skills and capacity (also with consequent employment)
- Affordable and quality housing
- Access to healthcare services.

This SIA draws on international best practice for SIA. The SIA method included scoping (determining topics of interest; geographical areas of focus, determining potentially affected communities, data collection (review of background documents; social baseline, literature review, interviews with internal and external stakeholders), site visit, analysis and reporting. The SIA was undertaken in late 2023 to early 2024.

Overall findings

The SIA has identified several social impacts which may arise from major infrastructure projects. These are both positive and negative. With further action, positive effects can be further strengthened, and potential negative effects reduced and mitigated. As such, the SIA has described several ways to maximise Northland's opportunities arising from major infrastructure projects. ***Other regions in New Zealand are facing similar workforce undersupply issues (see Figure below) but through this report, Northland is uniquely placed to respond to the challenges and maximise opportunities from future infrastructure investments.***

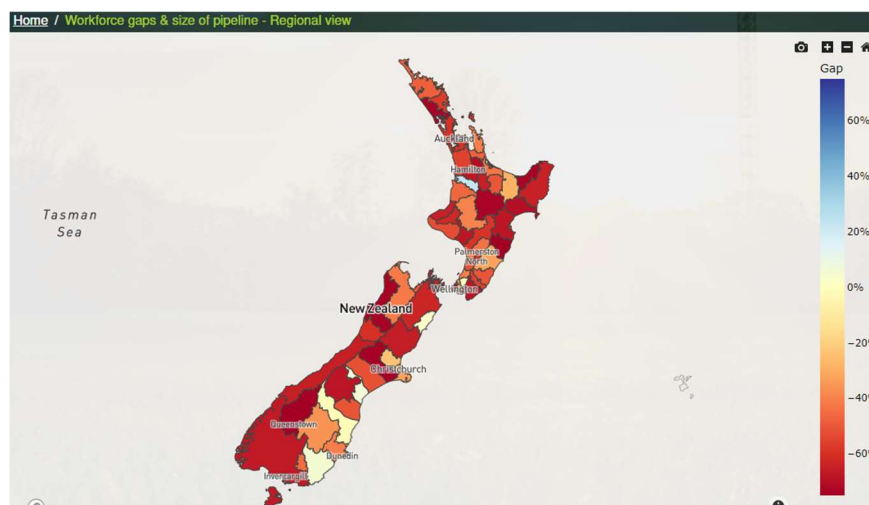


Figure 1. Workforce undersupply by region (Workforce Development Council, 2024)

Why is this work important (Social baseline findings)

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Generating local wealth, and Education skills and training</p>	<ul style="list-style-type: none"> Nearly all of Northland's census areas are categorised as somewhat deprived or most deprived. Northland has a higher proportion of younger people, and older people, than the rest of NZ. At least one in every two babies born in Northland are Māori and many areas have more than half of the population who are Māori. The Pacific population in Northland is expected to more than double to 7.4 per cent by 2048, and will remain the youngest ethnic group. Health, construction and education are all large employment sectors in Northland. There has been a large decline in the percentage of people in Northland with no qualifications (2006 to 2013, and 2013 to 2018), especially of Māori. Despite these substantial gains, Northland has a higher proportion of manual worker types and fewer professionals than the rest of NZ. Northland has a higher proportion of people unemployed and not in the labour force than the rest of NZ. Northland has the second highest proportion of people receiving Jobseeker Support. Attracting young people into training opportunities has been difficult in Northland. Northland has several strategies to attempt to address negative outcomes and promote equal opportunities.
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Access to health services</p>	<ul style="list-style-type: none"> The people of Northland have poorer status for most health measures compared with the rest of the country. For Māori, the proportion experiencing poorer health outcomes are worse again. Very high population growth (2013 to 2018) and high population growth (2018 to 2023) has put substantial pressure on access to health services, and the number of health staff has not kept up with population growth. The increased complexity of health needs within the Northland community also exacerbates access issues. Most of the 28 medical centres in Northland are not accepting new patients. Children and adults in Northland are significantly worse off when it comes to accessing primary health care than those in the rest of New Zealand. At the hospital level, across ten nationally monitored clinical performance measures, Northland has the worst performance in New Zealand for three clinical measures; and second worst for a fourth measure.
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Affordable and quality housing</p>	<ul style="list-style-type: none"> The Northland population is growing from migration and births. All Districts need many more houses by 2048 (11,000 homes in the Whangarei District, 4,000 homes in Kaipara District, and 7,000 homes in the Far North District). Northland's socioeconomic deprivation weighs heavily on housing outcomes, including being able to heat and cool homes, overcrowding, and mould/damp. Residential housing is highly cyclical and affected by national and global factors. Housing affordability in Northland is worsening unlike the rest of NZ, yet the quality of Northland's housing stock is lower. Public housing demand outstrips availability in Northland. There is little temporary or rental accommodation in Northland, especially in summer. Home-land packages are available, but further residential housing development in Northland is substantially constrained by a need for water infrastructure. Most developments are for three-bedroom homes on the outskirts. Residential housing developments take at least two to three years from concept to delivery

“Most babies born in Northland are Māori, so if interventions don't work for Māori, interventions don't work for Northland” (Skills/Education representative).

What do we know about what happens/works (Literature review findings)

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Generating local wealth, and Education skills and training</p>	<ul style="list-style-type: none"> • There are major social benefits of employment from infrastructure projects. These include boosting living standards, a route out of poverty, improved physical and mental health, improved lives of children, enhanced social connections, shapes who we are and makes lives more satisfying. • At the community level jobs contribute money and resources to communities, help us to get on better with each other, contributes to social gradients and contributes to society via meaningful products and services. It is not clear whether employment opportunities or the benefits of employment from infrastructure projects are distributed equally among different types of people. • New Zealand case studies (Waikeria Prison Development and Dunedin Hospital Build) provide evidence that local hire and workforce training can be influenced, but only with substantial ongoing focus. The hospital rebuild also worked to ensure that completed health facilities would enable future health workforce education/training opportunities. This work occurred with senior level leadership buy-in, and dedicated staff to drive outcomes. It does not just happen. • Local hire is already a heavily weighted tender evaluation metric in New Zealand. Co-Lab evaluates tenders, by location, using a 30 per cent weighting. • United Kingdom evidence shows that community wealth building changes procurement behaviour and improves community outcomes such as household wealth and community rates of depression. Effects improved year on year as the intervention continued. A backbone organisation was established, and anchor institutions changed procurement practices, shared learnings amongst each other and monitored change. • Provision of increased choice and different character schools are valued by communities and can lead to excellent outcomes. For example, a far higher proportion of Māori children leave kura with NCEA Level 2 compared with Māori children in mainstream schools (differences of 15 to 20 per cent are common). This is not a parent/student effect as social factors were controlled for in the studies. • Major mining projects in rural Australia support local hiring, training, education, ECEs, housing, health services, NGOs, and transport initiatives in nearby townships.
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Access to health services</p>	<ul style="list-style-type: none"> • Regional New Zealand is often challenged by under-resourced health systems, a situation resulting from a combination of factors including small populations, difficulties in attracting and retaining staff, poor access, and worse population health status compared to New Zealanders residing in major cities. • There is no NZ data on whether health services are affected by construction workforces. However, Australian data from small town/small-city health services and construction/mining workforces exists. It shows that workers disproportionately use primary care services for accidents and other acute needs, and emergency departments for accidents and acute mental health incidents.

“A 30 per cent weighting for local hire is already used in New Zealand Local Government settings, just not in Northland” (Business representative).

Affordable and quality housing	<ul style="list-style-type: none"> • The social benefits of housing are many and substantial. At the most basic level, housing provides shelter, stability and safety. Similarly, duration of housing tenure and housing affordability are critical drivers for positive social outcomes. • Building housing where people want to live, in town/city centres, creates even greater social and community benefits. These include: <ul style="list-style-type: none"> ○ Improved affordability of house ownership and rentals ○ Increased talent via reduced outward migration and increased inward migration (with working age people, 25-64 years, over-represented) ○ Increased productivity as workers live near/access their most suitable job/best earning prospect, boosting the regional economy ○ Increased access to services, employment, childcare, education, social networks and consequent improvement in opportunities and outcomes ○ Decreased risk of overcrowding, insecure accommodation and homelessness ○ Increased spend available for food, power, education, health, etc. • The literature on community and individual benefits arising from public/social housing is also substantial. But public/social housing also carries a small risk due to anti-social behaviour from a very small number of public/social housing tenants. • In Australia, mining companies include multiple strategies to protect against swings in housing affordability including rental caps on any subsidies to workers; provision of company housing/rental subsidy to people in the town providing key roles (e.g. childcare, business owners, health staff etc.) and/or making company houses available on public rental market; and monitoring housing affordability and availability. • Only one NZ study of construction worker effects on housing was identified. The Waikeria Prison Rebuild housing study provides evidence that while one-third of the construction workforce moved to the local towns, there was no discernible impact on the affordability of housing, house prices, or tenancy churn in the towns near to the build. This held for all quartiles of data, e.g., lower and upper quartile rents. Instead, housing metrics moved in parallel with national and global trends, showing that the modest numbers of construction workers within a growing district are not the key drivers of house price rises/falls, rental affordability or churn. Of the workers who moved to the local towns, 85 per cent were accommodated in short term house rentals. House rentals were organised by the subcontracting companies, or by the workers themselves. As such, about three construction workers were accommodated in each rental. This reduced the overall demand on rental properties.
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“The whole reason we build infrastructure is to grow our region’s products, services and economy. You’d be mad not to grow those while you’re building the infrastructure too” (Business representative).

Infrastructure pipeline findings (Section 3 of report).

The SIA has collated and analysed information on the infrastructure pipeline in Northland, the most likely construction worker supply/demand gap, and the types of workers required. Despite this, a recommendation to improve the quality of regional information about the construction pipeline is made.

The next three years of construction projects has an estimated build value of \$7.3 billion:

- Whangarei District, \$3.6 billion
- Kaipara District, \$1.9 billion
- Far North District, \$1.8 billion.

This is likely an underestimate due to the information on build projects becoming less certain as time extends. Therefore, an 18-month peak was used to calculate the most likely demand and supply for the construction workforce by District (presented in Table 1).

Table 1. Construction workforce supply and demand (2024)

Area	Workforce demand	Workforce supply	Workforce undersupply gap
Far North	3,540	1,921	1,619
Kaipara	2,400	886	1,514
Whangarei	5,120	4,752	368
Taitokerau total	11,060	7,559	3,501

It is important to understand that Northland already has a construction workforce shortage. Therefore, the SIA is considering the social effects of any increase in demand when compared with this existing situation.

Examples of planned¹ construction projects over the next few years are:

- Project Pihi Kaha (Whangarei Hospital rebuild) (Te Whatu Ora)
- Residential housing (coming off a high, residential housing makes up a large proportion of all construction) (Kāinga Ora, private developers)
- Whangarei Port and Marsden Maritime developments
- Power transmission lines (Central Government, Transpower and private operators)
- New schools, resilience to storms (Ministry of Education)
- Buildings for tertiary education providers
- Brynderwyn's resilience (NZTA)
- Whangarei to Wellsford four laning, in parts (NZTA)
- Stormwater, wastewater, drinking water (Three waters has stopped, the need remains).

"It's quite hard to find for an ordinary household to find a tradie, but for the projects I manage, it's doable. If this pipeline of work comes online, it could get really hard" (Construction project manager).

¹ As per Scope Total Project Partner's November 2023 report and/or Central Government's 100-day plan.

Local wealth findings (Section 4 of report)

The least-cost solution to building a piece of infrastructure is to use the local workforce. This avoids travel and accommodation costs being included in project costs. As such, it is not uncommon for projects to attempt to hire local staff wherever possible. However, such work is not happening consistently or intentionally at the procurement level. It occurs to differing degrees depending on the procuring agency, contract manager or project manager. Other broader outcomes, such as training and skills development, or upskilling of the Pacific community, are considered project by project, but usually not at all. Percent hire of Māori businesses as a Government procurement target has led to good support for certain Māori businesses. Across other broader outcomes there is little regional coordination. Most participants recognised that all agencies needed to do things differently, including their own.

Though piecemeal, the quality of consideration to broader outcomes in some Northland projects is good (as it is elsewhere in NZ for certain projects). This includes aspirations for Northland regarding the proportion of local hire, and for achieving the Government target of five per cent spend with Māori businesses. These successful Northland projects present a good source of information about how to include broader outcomes, and to build from their existing work.

Much of the underpinning work to generate local wealth is underway, for certain ethnic groups, in particular geographic areas, for certain projects, and within existing plans such as the Regional Workforce Plan. This points more to a 'drawing together' of existing knowledge/skills/capability.

A clear finding from the SIA, from nearly all participants, was 'the need to do things differently' and to 'plug the gaps'. This was fuelled by a desire to turn around the negative health, social, employment statistics for Northland; an acknowledgement that past/existing interventions had not delivered as well as hoped; and that demographics demand strong inclusion of Māori and Pacific populations in structures/solutions. As such, attempting to solve the wicked problems facing Northland requires multiple agencies/sectors to work together in innovative ways. Such innovation requires focus. The frequency/size of major infrastructure projects, together with their injection of skills, hope and capital, provides a realistic way to maintain focus over the short and long term.

Changing usual procurement practices at anchor institutions (not just of major projects) cements a long term way to generate local wealth, in effect changing the ecosystem projects are procured within. A thirty per cent weighting for local hire is already used for evaluating proposals in a New Zealand setting. Recommendations are presented in Table 2 below. Together with major infrastructure projects, this creates an opportunity to create a Te Tai Tokerau Model. Not all agencies/ companies need to sign up for this enterprise to succeed.

The Te Tai Tokerau Model (Figure 1 below) moves from consideration of single infrastructure projects procuring one Tier One provider, to multiple agencies/organisations setting procurement expectations with multiple providers.

Table 2. Recommendations to generate local wealth

Major projects are undertaken in an ecosystem which is supportive of generating local wealth:

- Increase clarity of the pipeline of major infrastructure projects to enable improved planning by all.
- Engage purchasers and suppliers to describe the purpose of generating local wealth and give confidence in the systems and outcomes.
- Support early contractor involvement wherever possible and consider whether larger projects can be delivered in a suite of smaller packages.

Create a hub to carry out day to day work:

- A 'generating local wealth hub' is required to operationalise this ecosystem. The hub can provide day to day problem solving, and coordinate efforts at a regional and local level via.
- Drawing on the Dunedin Hospital case study, the hub could be led by a consortium of agencies working together. Northland Inc providing an overview of impact on the regional impact via monitoring and reporting, NorthChamber as a skills/training lead, Whāriki, Amotai and Te Hiringa bringing small business, procurement and mid-Far North expertise, alongside District Councils, MSD, Te Whatu Ora, Education, Te Pūkenga, Kāinga Ora and so on.

Create focus via procurement and training for major projects:

- To ensure focus, initial work could support the Broader Outcomes Strategy for Project Pihi Kaha which has a good aspirations document, and action plans under development. Aligning the hub to a major project can also help budget bids for initial work because it is tangible.

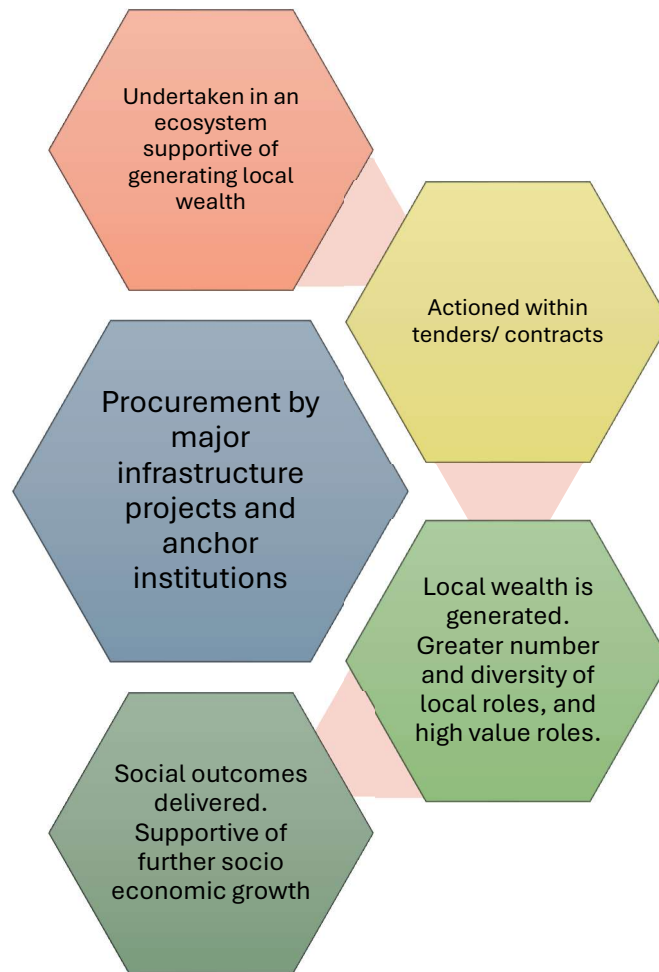
Extend reach via all procurement by Anchor Institutions:

- Regional effect can occur via multiple methods, but one proven example is the Preston Model, where anchor institutions agree to key principles, shared their training and learning, changing their procurement behaviour and monitoring their local spend. One local government agency in New Zealand already uses a 30 per cent local hire weighting when evaluating proposals, and similar evaluation metrics could be used in Northland.
- Anchor institutions could form a core within the generating local wealth hub, which the other agencies wrap around to support. Such work will require all participants to work differently.
- Anchor institutions can mandate standardised procurement policies which: Lead to the hire of local businesses including Māori/Pacific businesses; Build skills and capacity of local people including young people, women, Māori, Pacific and people with disabilities; Build skills and capability of small to medium enterprises and ensure providers of these services are resourced.

The hub can coordinate support all businesses, and ensure there are clear pathways for education/training:

- The hub can coordinate support for all small and medium businesses, but especially Māori and Pacific businesses, to:
 - Bid for Tier One and Government contracts
 - Create capability statements
 - Achieve necessary certification
 - Support networking between suppliers and with purchasers.
- The hub can coordinate businesses, education providers, training organisations and NGOs collaborate to develop clear pathways for all individuals to prepare/train for upcoming major infrastructure projects (lead-in, while constructing and operational roles). Creating such appropriate pathways for Māori, Pacific and people with disabilities, and those in the mid- to far-north are critical.

Figure 1. Te Tai Tokerau model



“If we’re serious about creating equal opportunities for businesses, we need to do more than just say “here it is, come get it” (Māori business representative).

“If you’re training for anything in the Mid- to Far-North, you’re nearly always travelling for all or part of it” (Skills/education representative).

“Unpaid training with fees and costs on top is not an option for most of our young people” (Skills/education representative).

“Pacific people are the fastest growing demographic in Northland, yet the services to support them are underdeveloped” (Pacific representative).

Health sector findings (Section 5 of report)

The relationship between major projects and health services occurs because construction workers (and any family members) will use local health services, which may be limited.

The people of Northland have poorer status for most health measures compared with the rest of the country. Across the 28 General Practices in Northland, most have closed rolls and wait times can be two-three weeks for an adult. At the hospital level, across ten nationally monitored clinical performance measures, Northland has the worst performance in New Zealand for three clinical measures, and second worst for a fourth measure.

About half of construction workers are projected to live locally. Of the remaining construction workers that may move to the area (50 per cent), most are short term workers. These workers are highly unlikely to be enrolled at a General Practice near the build site. Evidence suggests that short term workers are over-represented in use of General Practices and Emergency Department services e.g., accidents and injuries, acute mental health, and refilling prescriptions.

The most pressing issue is to address health sector workforce shortages, as the health workforce numbers are not keeping up with high population growth. While there is strategy for attracting tourists to Northland, there is no strategy for attracting workers (for any sector) to Northland. Training pathways for local people into work in the health sector is considered in Section 4. While the ideal scenario is to train and hire locally, such an approach will be insufficient to meet workforce supply. Given workforce shortages are chronic and not acute, attracting skilled workers to move and live to the area is preferable to a short term approach.

For the construction companies themselves, there will also be issues getting their workers seen by General Practices.

Recommendations regarding access to health services

Alongside future pressures from projected population growth, the assessed significant negative effect from construction workforces is another challenge to the health sector in Northland. As such, the following recommendations are made (Table 3).

Table 3. Recommendations arising from health sector findings

Consideration of a strategy to attract health workers (and others, e.g., construction workers, IT, etc) to Northland is recommended. Examples exist in New Zealand of other regions doing the same, as do Australian States advertising in the New Zealand market.

For construction companies, the Mahitahi Hauora Primary Health Organisation has offered to assist construction workers achieve access to primary care, and to help companies/workers understand when and how to access services appropriately.

To assist with health workforce shortages, recommendations about training pathways are included in the skills/education development recommendations above.

Housing findings (Section 6 of report)

The relationship between major projects and affordable and quality housing occurs because construction workers (and any family members) require housing, be that temporary or long term. As such, this usage has the potential to put pressure on local housing markets.

High population growth in Northland from 2013 has put substantial pressure on Northland housing. By 2048, the estimate for the number of homes required is an additional 11,000 homes in the Whangarei District, 4,000 homes in Kaipara District, and 7,000 homes in the Far North District. This demonstrates why a large proportion of future construction worker requirements (via the Workforce Development Council's Workforce Information Platform) is to build residential housing.

Northland's socioeconomic deprivation weighs heavily on housing outcomes such as overcrowding, damp and mould, and resilience to price rises. At the same time, residential housing measures are highly cyclical and affected by national and global factors. Public housing demand outstrips availability in Northland and housing affordability in Northland is worsening unlike the rest of NZ, yet the quality of Northland's housing stock is lower. The SIA has identified there is little temporary or rental accommodation in Northland, especially during summer. While home-land packages are available, these are out of the price range for many. Further residential housing development in Northland is substantially constrained by a need for water infrastructure and any residential housing development takes at least two to three years from concept to delivery when budgets have not already been set aside for such work. As such, planning between major infrastructure projects, at a regional level, is required if house building is to be tied to an infrastructure project.

The best available data (Waikeria Prison Development housing study) shows no discernible impact on affordability metrics of nearby townships arising from a construction workforce. This includes the affordability of housing, house prices, or tenancy churn. This holds for all quartiles of data, e.g. lower and upper quartile rents. Instead, housing metrics moved in parallel with national and global trends, showing that modest numbers of construction workers moving to a growing district are not the key drivers of house price rises/falls, rental affordability or churn.

Despite that, houses are used by construction workers, so efforts to minimise the number of houses used are recommended. This has the potential to reduce housing pressure for those on low incomes or are unemployed and are least able to afford market rents. In the Waikeria Prison Development, aggregating workers into houses was left to the construction companies and sub-contractors, and a good result was achieved. Closer analysis of the data shows that further efficiencies were possible and so greater oversight of data may have resulted in even fewer houses being used by construction workers.

Monitoring major infrastructure projects in Northland to better understand the actual effects by each location, and/or coordination to maximise the number of construction workers per dwelling, is also worthwhile. A further possible intervention is to investigate if the booking of Airbnb-style accommodation can be coordinated (Sunday to Thursday nights, outside of summer months).

Regarding temporary workforce villages, construction interviewees did not want to rule out such options, but said the major infrastructure projects in Northland lacked scale to warrant

such measures, unless the infrastructure pipeline could be coordinated. Council interviewees noted such villages would still require connection to water infrastructure etc, which was limited. In the Waikeria Prison Development, the Tier One constructor investigated the leasing of a nearby campground and cabins.

Rather than accommodation villages, providing quality housing that meets the needs of some workers, particularly the lower paid workers for whom the market is unlikely to supply homes is an option. If houses are built in the right locations and typologies, the buildings could be sold once the construction projects are complete. Such work requires conversations between key players such as landholders (e.g., iwi, Marsden Maritime Holdings, private landholders, Council, etc.), agencies procuring major projects (e.g., government agencies) and house/apartment constructors (e.g., Kainga Ora, private developers, etc.). One participant suggested something similar, regarding engagement with iwi about whether iwi might fund, build and lease back accommodation to a Tier One provider or procuring agency.

Two to three years is a typical lead in time from concept to delivery for any quality housing. Also, most timeframes for infrastructure builds are relatively modest i.e., two to four years. Together with the lack of coordination between different projects, such timeframes hamper long term solutions like new builds unless there is significant coordination across multiple infrastructure projects and procuring agencies. To support such work, procuring agencies need to consider the full benefits of housing now and in the future, and not just see it as a project cost. Care about the quality of any new housing built was required to ensure it was suitable for long term use.

Recommendations regarding affordable and quality housing

The affordability and quality of housing in Northland is already poor compared with other parts of New Zealand. Alongside future pressures from projected population growth, the assessed medium negative effect from construction workforces is another challenge to the housing sector in Northland. As such, the following recommendations are made (Table 4).

Table 4. Recommendations arising from affordable and quality housing findings

Many agencies have a role of improving housing outcomes for Northland. From the perspective of major projects however, levers to pull include the need to train/hire as many local construction workers as possible (See Table 2), to minimise any potential housing effects.

Table 2 also recommends work to increase the clarity of the pipeline of major infrastructure projects. Improved planning by local and central government around major infrastructure projects has the potential to minimise effects on housing if workforce supply can be better planned and coordinated. With such coordination, investigation of temporary workforce villages would become a potential solution. Investigation of whether iwi may fund the construction of quality housing, and lease back accommodation to Tier One providers and/or the procuring agencies is warranted. Only with such long term thinking can procuring agencies, Tier One providers and other stakeholders move away from seeing the provision of housing as a cost. Instead, providing housing as part of a major infrastructure pipeline can be seen as an opportunity.

For construction companies, coordination of worker rental accommodation can be used to maximise the number of short-term and long-term workers per house.

Coordination to access Airbnb-style accommodation Sunday to Thursday nights (outside of summer months) is also worth exploring to help address the potential housing impact of short term construction workers.

Monitoring the long term impact on housing by construction workforces will provide evidence of actual effect (if any) to inform future management decisions.

“No matter what anyone tells you, you can’t go from concept to finished housing in less than two to three years when budget has not already been set aside, which means tying housing to infrastructure projects can’t be project by project” (Housing sector participant).

1. Introduction

1.1 Social impact assessment

The purpose of the SIA is to understand the potential positive and negative social effects arising from the pipeline of major infrastructure projects in Northland, and suggest ways to maximise any opportunities and reduce potential negatives.

The International Association of Impact Assessment (IAIA) defines SIA as the processes of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions².

Northland Inc contracted Quigley and Watts Ltd to undertake a logic model (available separately from author) and SIA for regarding the potential impacts of major infrastructure projects.

1.2 Population estimates

Throughout the SIA, a set of population estimates for specific groups are used (Table 5).

Table 5. Population estimates of specific groups

Whangarei and surrounds	People living in Whangarei and surrounds: Approximately 51,000, of which approximately 35 per cent (18,000) are Māori.
Whangarei District	Whangarei District's 2023 population: Approximately 102,000 people.
Dargaville and surrounds	People living in Dargaville and surrounds: Approximately 10,000 people, of which 31 per cent (3,100) are Māori.
Kaipara District	Kaipara District's 2023 population: Approximately 27,000 people.
Kaitaia and surrounds	People living in Kaitaia and surrounds: Approximately 8,000 people, of which 63 per cent (5,000) are Māori.
Far North District	Far North District's 2023 population: 75,000
Northland (Whangarei District, Kaipara District, and Far North District combined)	Approximate 2023 population: 204,000
Māori and Pacific businesses	Approximately 220 Māori businesses and 10 Pacific businesses ⁴

The following social determinants are addressed in the SIA:

- Generating local wealth, with consequent employment outcomes
- Building education, skills and capacity in the local population, also with consequent employment outcomes
- Affordable and quality housing
- Access to healthcare services.

To show the importance of these factors, imagine no one in your household had a job for the next two years, combined with insecure/unaffordable housing, and low prospects for employment due to low education status. How might those circumstances affect you and your family's future? Empirical research shows that employment, education and housing are the three most critical social determinants of health and wellbeing³, and are therefore worthy topics of study for this SIA.

² International Association of Impact Assessment (2015). Social impact assessment: Guidance for assessing and managing the social impacts of projects. IAIA.

³ Canadian Institute for Advanced Research (2002). Estimated impact of determinants of health on the population. Ottawa: Canada.

⁴ Amotai database of Northland businesses which are at least 50 per cent Māori or Pacific owned.

2. SIA method

SIA is typically an assessment of impacts from proposed/actual projects in a specific location, timeframe, including a proposed design, approach and outcomes. In contrast, this SIA is assessing many major infrastructure projects (many of which are not yet funded or consented), aiming to achieve a variety of outcomes, across a potential start time of ten years, and across the whole region of Northland. As such, three location-based scenarios have been developed to help determine if there is the potential for different sub-regional effects (Appendix 1).

For something more tangible to base an assessment on, the scale of the potential construction activities and workforce required in Northland's three Districts has been determined, given available data. A summary of these findings is presented in the scenarios and in greater detail in Section 3.

2.1 Scope

The Areas of Interest include the towns/cities (and surrounding areas) of Whangarei, Kaitaia, and Dargaville. These were chosen to represent the three District Councils, where either a substantial proportion of construction staff currently live/commute from daily, or may live in the future. A regional assessment was also scoped in, recognising that potential impacts might be region-wide rather than specific to any one location.

Potentially Affected Communities (PACs) of interest in this SIA were:

- Whangarei, Dargaville and Kaitaia communities
- Construction staff (current and future)
- Sensitive receptors (i.e., Māori, Pacific, and low income populations)

- Small and medium businesses and their workforces, including Māori and Pacific businesses.

Social topics included within this SIA were:

- Generating wealth locally - focusing on small and medium businesses and their workforce
- Building education, skill development and capacity in the local population
- Stable homes - Access to affordable housing for locals and the imported workforce
- Health and wellbeing - Access to health services for locals and the imported workforce.

Regarding potential social effects, 'local' would typically relate to the townships/city which are geographically nearest to where the major project is located. A 30km radius is not uncommon. However, in this situation, the SIA is not only about the locations of Whangarei, Dargaville and Kaitaia, but also considers the region of Northland. Interviewee's often commented on topics regarding 'Northland as a whole', rather than by specific location. As such, 'local' in this SIA will include the region of Northland, as well as the three scenario locations. Where appropriate, the SIA will name the specific location.

2.2 SIA approach

A social baseline report was developed and is available in a separate report⁵, though summaries are presented in each of the findings sections of this report. A literature review of the evidence regarding major infrastructure projects and social outcomes has been produced and is available in a separate report⁶. A summary of the literature evidence is also presented in each of the findings sections of this report. Desk based research of published

⁵ Quigley R (2024). Social Baseline Report for Northland's Major Infrastructure Projects SIA. Wellington: Quigley and Watts Ltd.

⁶ Quigley R (2023). A review of evidence regarding social impacts of major projects. Wellington: Quigley and Watts Ltd.

documents and interviews with stakeholders and community members also informed the assessment. Two case studies of past New Zealand efforts to manage construction workforce housing (Waikeria Prison Development) and generate local wealth (Dunedin Hospital rebuild) were also completed.

2.2.1 Interviews

The SIA included 25 interviews with the following stakeholders:

- Jamie Rosemergy, Regional Labour Market Manager, Ministry of Social Development
- Carol Barnett, Regional Lead, Taitokerau Regional Skills Leadership Group, Kanoa Regional Economic Development Unit
- Jude Thomson, Northland Inc for a detailed discussion about plans and strategies in Northland
- Trevor Griffiths, Scope Project Management
- Steve Smith, Retired, past-CEO of Northland Chamber of Commerce
- Kylie Bourke Higgins, RSLG, CCNZ Chair Northland
- Missy Armstrong, Supplier Diversity Lead for Northland, Amotai; and Project Lead of Whāriki Te Tai Tokerau
- Ngaire Wilson, General Manager, Te Hiringa Trust
- April Erueti Chair and Director, Te Hiringa Trust
- Alison Thompson, Infrastructure Development Manager, Whangarei District Council
- David Finchett, Commercial Manager, Northport
- Darryl Jones, Economist, Northland Regional Council
- Graham Macpherson, Regional Commissioner, Ministry of Social Development
- Tiana Epati, Lead H&S and Broader Outcomes for Project Pihi Kaha, Northern Region, Te Whatu Ora
- Jeff Murray, Regional Director, Northland, Kāinga Ora
- Naushaba Todd-Jones, Relationship Manager, Northland, Kāinga Ora
- Tony Collins, District Development Manager, Whangarei District Council
- Darryn Fisher, CEO, North Chamber
- Carol Berghan, CEO, Te Hiku Iwi Development Trust
- Serena Curtis, General Manager Pacific and Community Capability, MSD
- Darrell Trigg, Director, Trigg Construction Partners
- Adam Dade, Northable Matapuna Hauora
- Kris Finlayson, Northable Matapuna Hauora
- Sandra Wilkinson, Partnerships Services Manager, Mahitahi Hauora Primary Health Organisation
- Mark Williams, General Manager, Strategy and Insights, Construction and Infrastructure Workforce Development Council
- Hanipale Galo, Construction and Infrastructure Workforce Development Council
- Briar Macken, Manager Strategy Development, Far North District Council.



Questions of interviewees sought to:

- build on the social baseline data by reality checking published data
- understand how major infrastructure projects are procured and identify if and how broader outcomes should/can be promoted
- understand how construction workforces are housed
- understand how workforces (construction and health in particular) are educated, trained and further developed, and
- consequently, understand potential positive and negative effects on potentially affected communities.

Other engagement has occurred with Pihi Kaha's Pacific Working Group who are investigating ways to support Pacific providers, Pacific businesses and individuals, via the Pihi Kaha Whangarei Hospital rebuild.

2.3 Assessment method

For potentially affected communities, information about programmes already underway was available. Together with the interview data and literature on potential social effects, there was sufficient information to make an assessment on likelihood and consequence for social impacts.

For each potential negative impact, two characteristics determine overall significance (Figure 2):

- Likelihood i.e., the probability the negative social impact will occur for a proportion of the population. For example, the likelihood of an impact on housing affordability across the construction span of the major projects being considered (i.e., next ten years). Likelihood has been assessed using a categorisation scale presented in Appendix 2.
- Consequence i.e., the severity of a negative social impact or impact on a negative social risk factor. For example, increasing rental costs may cause a modest change to a family's financial position, or lead them to seek alternative accommodation within the town, or away from the town. The social consequences are quite different between the three options. The consequence scale is presented in Appendix 3.

For positive health impacts, overall significance (Figure 3) is again determined by likelihood and consequence.

The positive scales for likelihood and consequence are presented in Appendix 4 and Appendix 5.



Figure 2. Significance scale for negative impacts

	Consequence level (negative impact)				
Likelihood	Insignificant	Minor	Moderate	High	Major
Almost certain					
Likely					
Possible					
Unlikely					
Rare					

Significance Low Medium Significant High

Figure 3. Significance scale for positive impacts

	Consequence level (Positive impact)				
Likelihood	Insignificant	Minor	Moderate	High	Major
Almost certain					
Likely					
Possible					
Unlikely					
Rare					

Significance Low Medium Significant High

2.4 Method limitations and potential ways to address those limitations

The following limitations of the SIA reflect the practical nature of the research undertaken:

- Much of the data which underpins the assessment of ‘likelihood’ and ‘consequence’ is qualitative, and/or based on academic literature which is also typically qualitative. While there is nothing wrong with that per se, it is helpful when there is some quantitative data to complement the qualitative data. An example of that is the data from the social baseline and literature review. Future monitoring would be particularly helpful in topics which have been assessed as having a high consequence.
- The number of topics assessed, across three locations, is large for a SIA, and that has meant the effort expended has been spread across these many topics. Future efforts will have the benefit of this SIA in scoping out topics, and hence allowing more resource to look deeper into each individual topic.
- The locational scenarios are very broad, meaning that location-specific data has also been difficult to identify. Participants were unable to articulate many differences between specific localities, likely because the specificity of the scenarios was low. Future impact assessments on individual major projects would be able to remedy this issue, and potentially identify area-specific effects or options to mitigate/maximise.
- The timing of SIA interviews was undertaken during the first 100 days of New Zealand’s sixth National Government, in coalition with ACT New Zealand and New Zealand First. As such, some Government agencies/funded sectors did not engage with requests to participate as they were undergoing restructures and/or attempting to deliver information to Ministers. Three important agencies that did not participate were NZ Transport Agency, Northland Transportation Alliance, and Te Pūkenga.
- Census 2023 data regarding population/ethnicity were released the week before finalisation of this report. The main report has been updated to reflect the new data. The headline summaries for the 2013 to 2018 data do not alter when considered against the new 2023 data.

3. What is known about the pipeline of major infrastructure projects in Northland

3.1 Introduction

In a typical SIA, the project being assessed is known, with the project having a specific location and footprint, detailed function and purpose to the project, a known time frame and a construction workforce requirement. In this situation, little was known about the pipeline of major infrastructure projects. Therefore, Northland Inc chose Scope Total Project Partners Ltd to undertake a survey of future major infrastructure projects (described in more detail in Section 3.2).

As part of the SIA, and to build on Scope's work, the author contacted the Workforce Development Council to further interrogate their Workforce Information Platform which attempts to collect data on all construction projects, not just major infrastructure projects.

3.2 Scope's survey of future major infrastructure projects

Of 78 potential builders/procurers of infrastructure, 34 responded with data on their plans. Data collected included project scope, location, funding, consenting, time frame and cost. Data on existing baseline projects/infrastructure spend was not included. The report showed a potential future spend of \$10.7 billion over a 12-year period⁷.

Underpinning the report was an excel spreadsheet which was provided to the SIA. Further analysis of the spreadsheet by the SIA summarised the geographical spread to the projects, and the proportion funded/unfunded (presented in Table 6). Some of the data in the spreadsheet is

questionable, e.g., a \$660 million spend on wastewater by Far North District Council and \$600 million spend on water infrastructure by Kaipara District Council (both unfunded). Long Term Plans have figures less than \$10 million.

The further analysis shows nearly 90 per cent of the \$10.7 billion dollar spend is projected to occur in Whangarei, Dargaville, and further south. Just 10 per cent is projected to occur in the mid to far north. Ninety one per cent of the Whangarei value was unfunded at the time the report was written (November 2023).

While the potential dollar value for the Far North (\$1,000 + \$188 + \$70 million) is just 10 per cent of the total spend, \$1.258 billion is still a large number. There is however a low confirmed proportion of funding for the \$1,000 million projected in Kaitaia/Far North.

And finally, in the Kaipara District, Dargaville has a substantial projected dollar value (\$639 million), and a high proportion of confirmed funding compared with elsewhere. Whereas Brynderwyn and surrounds has a low level of confirmed funding.

Finally, Scope's report estimates 2,550 construction workers per year. This contrasts with an existing Northland construction workforce of 7,559 (Far North District: 1,921; Kaipara District: 886; Whangarei District: 4,752). As such, Scope's estimate appears to underestimate workforce requirements.

⁷ Scope Total Project Management (2023). Built Environment Pipeline Report. Te Tai Tokerau.

Table 6. Scope’s future infrastructure projects, by area and funding

Area	Total (million \$)	Funded (million \$)	% funded
Kaitia/Far North	1,000	127	13%
Kerikeri, Waipapa, Rawene, Kawakawa, Kaeo, etc/Far North	188	74	39%
Kaikohe and surrounds/Far North	70	35	50%
Dargaville and surrounds	639	600	94%
Whangarei and surrounds	5,276	458	9%
Brynderwyn and surrounds	1,740	120	7%
Taitokerau wide	1,062	703	66%
Unclear which area	95	0	0
Totals	10,070	2,117	21%

3.3 Workforce Development Council’s database on the construction pipeline

After analysing Scope’s excel spreadsheet, the SIA contacted the Workforce Development Council for a more accurate estimate of total construction in Northland via their Workforce Information Platform (WIP).

The Workforce Development Council also provided bespoke data on Territorial Level undersupply of construction workers, from which the SIA calculated a most likely scenario.

The estimated value of construction projects from WIP (across three years) starting in the next three years is:

- Whangarei District: \$3.6 billion (WIP). Project examples (taken from Scope) include road repairs, new commercial buildings near the port, water infrastructure, rail line repair, new CBD University buildings, new schools and new housing developments (Kāinga Ora and private developers).
- Kaipara District (including Dargaville): \$1.9 billion (WIP) Project examples

(taken from Scope) include road repairs, sports facilities, water infrastructure, energy projects, water storage, new schools and new housing developments (Kāinga Ora and private developers).

- Far North District: \$1.8 billion (WIP) Project examples (taken from Scope) include road repairs, new commercial buildings, aged care facilities, water infrastructure, new schools and new housing developments (Kāinga Ora and private developers).

Note three years of WIP data (total of \$7.3 billion) is three-quarters of Scope’s data from 12 years. Also, WIP data for the next three years is likely an underestimate due to a horizon of information. Instead, WIP data shows the pipeline projections act like a wave, usually maintaining or building in later years. The project pipeline does not fall away appreciably in future years. Watch a video representation of that [here](https://wip.org.nz/assets/videos/pipeline_html5_video.mp4)⁸. As such, the best available data to inform a scenario is from the peak, about one to two years in the future.

8

https://wip.org.nz/assets/videos/pipeline_html5_video.mp4

3.3.1 Annual building and construction value (2023, Northland)

Unfortunately, access to the infrastructure projects which sit behind the WIP data is not available (due to IP protection from the infrastructure project information supplier, Pacifecon NZ Ltd). Therefore, to get a more detailed description, the SIA analysed publicly available 2023 building and construction activity in Northland. This was valued at \$2.421 billion, made up of:

- \$1.283 billion from residential building (forecast) (53 per cent)
- \$523 million from construction, non-residential (intentions) (22 per cent)
- \$615 million from civil infrastructure (intentions) (25 per cent)⁹.

The relative importance of residential buildings at 53 per cent of all activity cannot be underestimated. The same is true nationally, with residential buildings the largest contributor (56%) to total construction activity in 2022. The last two years have been very strong for new dwelling consents, with 49,003 new dwelling consents issued in 2021 and a further 49,537 consents in 2022. However, Stats NZ data on Code Compliance

Certificates suggests that the number of completions, and therefore, the capacity of the industry to deliver, is well below that number. As the backlog of building consents are worked through, activity levels will fall away across the country⁹.

3.3.2 Building and construction pipeline value (five-year, Northland)

Taking a five-year time frame, the building and construction pipeline (from December 2023 for ongoing and scheduled projects via WIP) is approximately \$8,191 million dollars of work¹⁰. A breakdown of the type of projects is also presented, for civil infrastructure and construction in Table 7.

Note how residential building is a far lower proportion in the pipeline (\$1,565 million out of \$8,191 million; 19%). This is due to optimism bias in the private sector, which can lead to intentions (and pipeline) falling away in the medium term. There is less long-term visibility of intention to spend in the private sector (compared with local and central government), but greater certainty of short term spends due to private funding⁹.

Table 7. Five-year Northland pipeline value by building type

Civil infrastructure	Pipeline value	Construction	Pipeline value
• Water pipelines	\$141 million	• Commercial	\$384 million
• Stormwater	\$6 million	• Health	\$478 million
• Roothing (new)	\$324 million	• Heavy industry /energy	\$1.332 billion
• Roothing (maintenance)	No data provided	• Industrial	\$629 million
• Land development and general civils	\$456 million	• Multi category	\$2.204 billion
• Energy transmission	\$0.5 million	• Residential	\$1.565 billion
• Rail	\$672 million	• Sport	\$38 million
Civil infrastructure total: \$1.559 billion		Construction total: \$6.632 billion	
Northland civil infrastructure and construction total: \$8.191 billion			

⁹ MBIE (December 2023). National Construction Report 2023.

¹⁰ https://wip.org.nz/pipeline-time-series?region=Northland+Region&building_type=All+types

3.4 Implications for construction workforce

As with the wave of projected construction projects, there is matching wave of workforce required. The wave declines from late 2025 as seen in Figure 4. This reflects an available information horizon from the pipeline of projects, rather than a true decrease.

Increased requirements for construction workers are on top of an already undersupplied workforce in Northland. Figure 5 shows an estimated construction workforce size in Northland of 7,201, but with an undersupply of workers by 63 per cent (over three years). Most regions in New Zealand have a similar undersupply of workers relative to project pipeline value.

Figure 4. Projected number of workers required in Northland over time

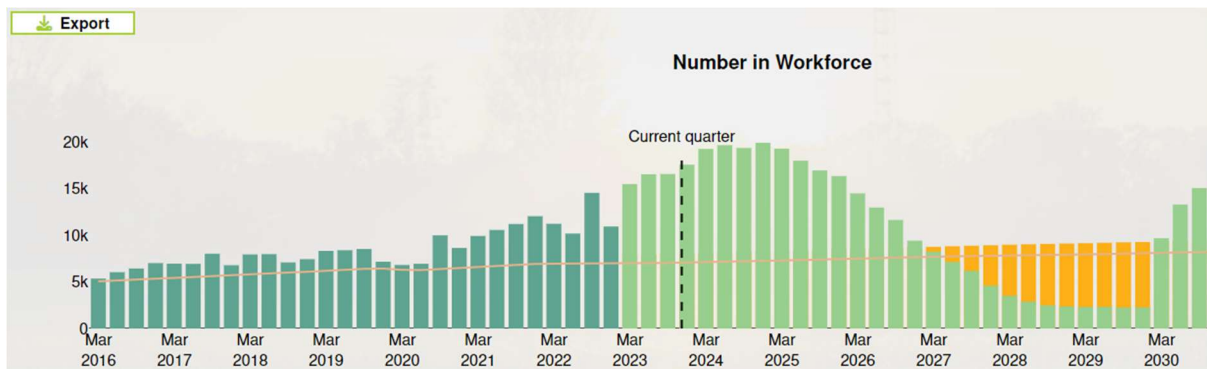
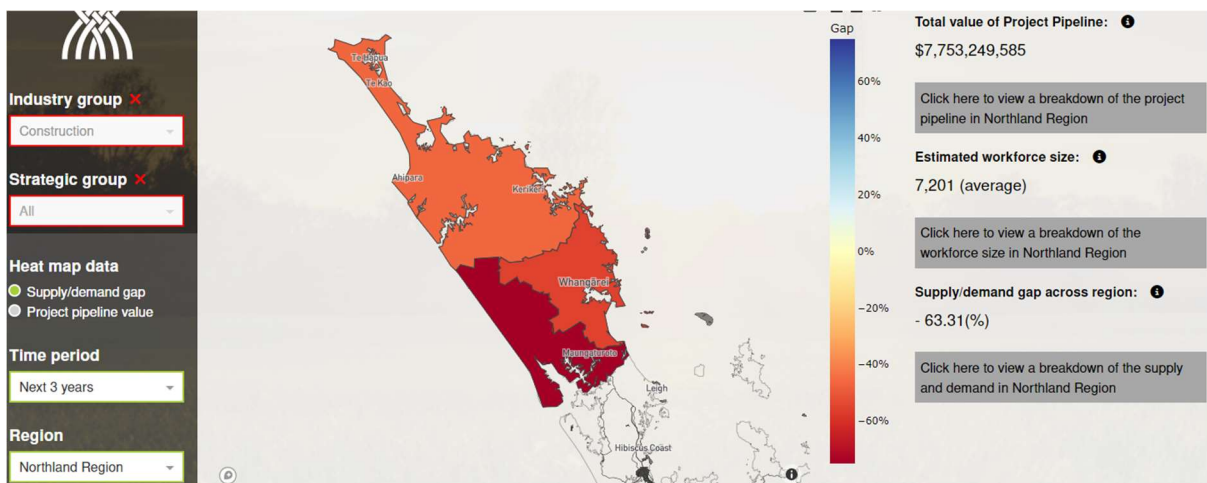


Figure 5. Workforce, workforce gap, and size of pipeline for Northland



3.5 Demand/supply gap per worker type

The type and number of workers is knowable. Using data in WIP¹¹, labour supply and project pipeline demand for each construction professional is presented in Table 8. The data is best considered a “worst-case scenario”, based on the full project pipeline requiring >20,000 workers in Northland.

Table 9 shows that some professions are in greater shortage than others, both by absolute count and/or percent of unmet need. The relative proportion of each type of worker is relatively constant at a regional/Northland level but may fluctuate at a local level as individual projects move through their build cycle.

Table 8. Demand/supply gap by worker type (worst case scenario)

Construction professional	Northland labour supply estimate	Northland projected demand estimate	Absolute gap by count	% of unmet need
Carpenter	2,001	5,240	3,239	-62%
Concrete worker	511	2,403	1,892	-79%
Painter	259	1,507	1,248	-83%
Project manager	260	1,457	1,197	-82%
Steel framing worker	162	1,029	867	-84%
Roofer	222	1,064	842	-79%
Electrician	248	1,083	835	-77%
Quantity surveyor	162	971	809	-83%
Building installation services	101	903	802	-89%
Plasterer	533	1,315	782	-59%
Plumber	338	1,002	664	-66%
General labourer	616	1,200	584	-49%
Machinery operator	121	563	442	-79%
Bricklayer	126	415	289	-70%
Drainlayer	147	344	197	-57%
Wall and floor tiler	97	243	146	-60%
Interior designer	75	181	106	-59%

¹¹ Peak quarter in the project pipeline within next three years

Flooring worker	68	166	98	-59%
Mechanical tradesman	26	114	88	-77%
Traffic management labour	297	353	56	-16%
Welder	9	60	51	-85%
Heavy plant operator	314	358	44	-12%
Glazier	17	54	37	-69%
Stonemason	11	43	32	-74%
Crane operator	8	39	31	-79%
Hammer hand	5	34	29	-85%
Leading hand	46	60	14	-23%
Foreman	54	66	12	-18%
Construction supervisor	50	62	12	-19%
Tunnel worker	6	15	9	-60%
Skilled labourer	224	232	8	-3%
Truck driver	198	204	6	-3%

3.6 Number of construction workers needed (worst-case).

For Northland, WIP predicts there are 7,300 construction workers employed at December 2023. Despite the availability of these 7,300 workers, the WIP shows that Whangarei District has had insufficient construction workers for some time. The same is true in other Northland areas beyond Whangarei. So having too few construction workers is not a new issue.

However, the gap between demand for workers and local supply of workers is projected to further widen. When looking at the projected peak in demand from WIP (Figure 4, December 2024), WIP has an upper estimate of another 12,700 construction workers would be needed (total of 20,000).

3.7 Number of construction workers needed (most likely scenario)

The SIA considered the worst-case scenario data to be highly unlikely, and so with the assistance of the Workforce Development Council, the SIA calculated a 'most likely' scenario for each of the three Districts (Table 9). The number of construction workers required in Whangarei decreased substantially but remained at relatively high levels for Far North District and Kaipara District. Interviewees for the SIA noted that some

of the Kaipara construction workforce demand could be met by staff in Whangarei commuting daily. This has the potential to ease the supply/demand gap for Kaipara but worsen it for Whangarei. Interviewees did not believe the Far North District's supply/demand gap would be materially impacted by daily commuting of construction workers from Kaipara or Whangarei Districts.

Table 9. Number of construction workers needed (most likely scenario) by TLA

Area	2024 demand	2024 supply	Undersupply gap
Far North	3,540	1,921	1,619
Kaipara	2,400	886	1,514
Whangarei	5,120	4,752	368
Taitokerau total	11,060	7,559	3,501



4. Generating local wealth and education/skill development

4.1 Introduction to generating local wealth and education/skills development

Stakeholders requested the SIA assess how major infrastructure projects might generate local wealth, or not. Similarly, stakeholders requested assessment of potential effects on education and skill development outcomes. These two topics could be separate chapters, but for the purpose of this report they have been combined. This is because there are several overlaps between the topics, and overlap between project procurement and operational practices. As such, this section includes consideration of:

- Local hire policies/outcomes
- Contracting of local Māori and Pacific businesses
- Education/skill development outcomes.

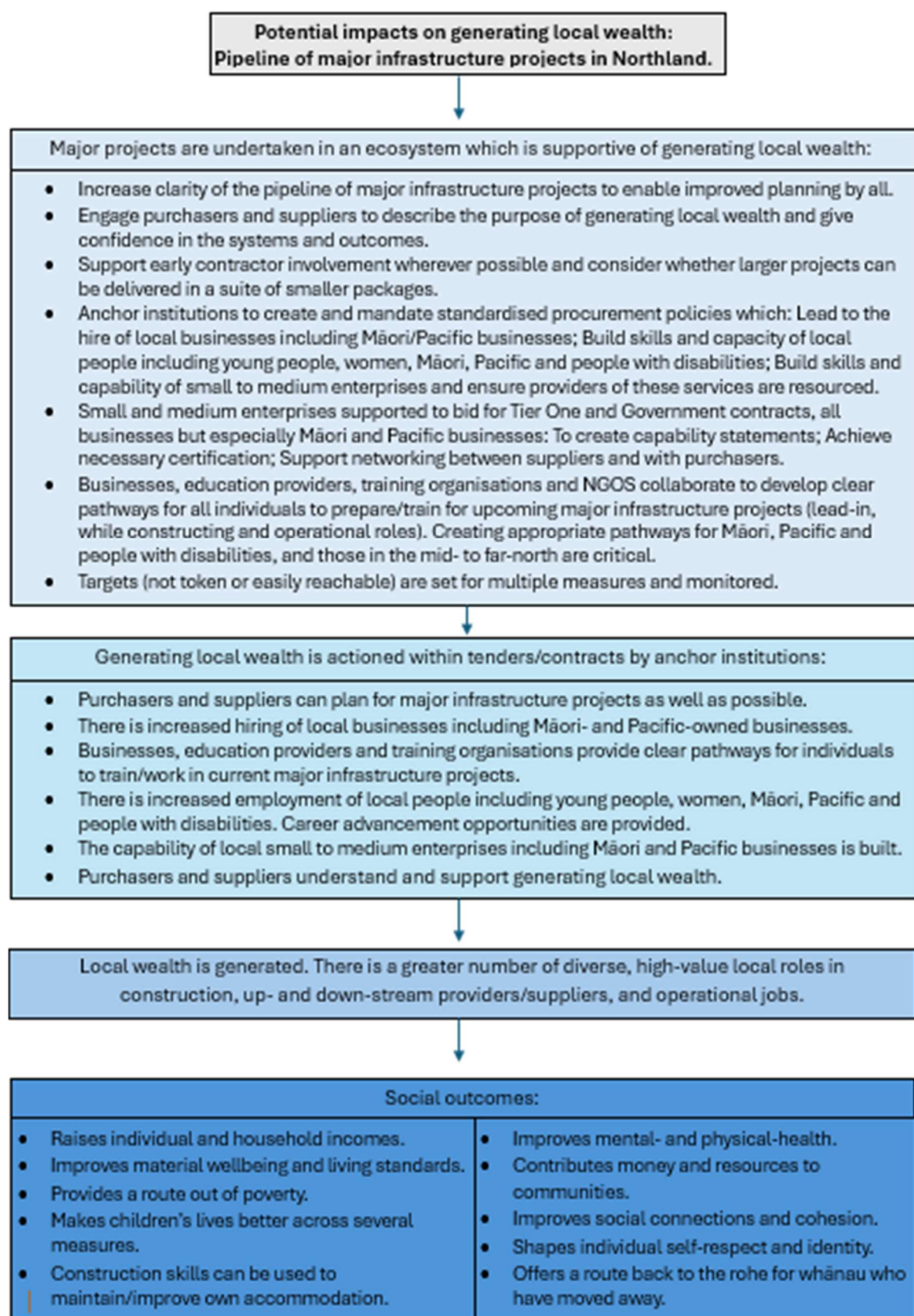


4.1.1 Generating local wealth and skill development/education causal path

The potential social outcomes under assessment are caused by many factors. A simplified causal path describing how major infrastructure projects might generate local wealth and other outcomes is below (Figure 6 below).



Figure 6. Causal path for generating local wealth



4.2 Findings for generating local wealth and skills/education development

Major infrastructure projects have the potential to generate local wealth and many positive social and health outcomes. Generating local wealth can also independently lead to further positive social and health outcomes (Figure 6). Skills and education development is but one determinant of generating local wealth, but an important one, and is included within Figure 6.

Interviewee's described multiple potential positive effects from major infrastructure projects, but also highlighted how existing context and local challenges required overcoming. To maintain the readability of this SIA report, these detailed findings are presented in Appendix 6.

The potential for local wealth generation and positive outcomes is already realised, to some extent, within existing procurement and construction behaviours. For most geographic areas including Northland, interviewee's described the least-cost solution to building a piece of infrastructure is to use the local workforce. This is simply to avoid travel and accommodation time costs for the workforce being included in project costs. As such, it is not uncommon for projects to attempt to hire local staff wherever possible. However, if such work was happening intentionally and consistently, this SIA would not have been requested. Instead, local hire occurs to differing degrees depending on the procuring agency, contract manager or project manager. Other broader outcomes, such as training and skills development are considered project by project, if at all. Across all broader outcomes there is little to no regional coordination.

Though piecemeal, the consideration to broader outcomes in some Northland

projects is good (as it is elsewhere in NZ for certain projects). This includes good outcomes for Northland regarding the proportion of local hire when project managers prioritise this outcome, and for achieving the Government target of five per cent spend with Māori businesses, and capability uplift for certain Māori businesses.

However, there are typically no broader outcomes target for other vulnerable groups such as Pacific, people with disabilities, females, or people not yet employed. There is typically no target for building education, skills and capacity, for individuals or small businesses. There is often no target for local hire. It is not unusual for private sector infrastructure projects to have no broader outcomes targets, though that does not mean local hire is not well implemented in some cases. The Capability Uplift Programme for Māori businesses is excellent, but is only available for Government procurement, not for supporting businesses as they procure from Tier One or private contracts. There is little support for Pacific businesses as potential providers are under-resourced. Support for people with disabilities into employment experience is led by Northable, but most businesses do not engage.

The successful Northland projects present a good source of information about how to include broader outcomes. But they do not answer the question about how to make this type of work more intentional and coordinated across a wider range of broader outcomes. Figure 6 (middle sections) outline the findings of the SIA regarding potential ways to achieve such intentionality. As can be seen above, much of the work required is underway, for

particular groups/businesses, in particular geographic areas, for particular projects, for particular broader outcomes. This points more to a 'drawing together' of existing skills/capability and plugging of gaps Northland wide.

For example, there are many organisations doing good work in helping people become work ready, train and wrap around pastoral care. However, most participants still commented on the need for businesses, education providers and training organisations to collaborate to develop clearer pathways for all individuals to prepare/train for upcoming major infrastructure projects (lead-in, while constructing, and operational roles). This includes construction and support roles, and operational roles such as healthcare workers. Several aspects were seen as important: Creating appropriate pathways for Māori, Pacific and people with disabilities; Including pastoral care alongside training or employment programs; and involving those in the mid-to far-north to provide sub-regional input. Participants also did not want to cap

expectations for people at a level 2 certificate, with career advancement being seen as important.

A clear finding from the SIA, from nearly all participants, was 'the need to do things differently' and to 'plug the gaps'. Participants recognised that not only would other people/sectors need to do things differently, but so would they/their sector. This was fuelled by a desire to turn around the negative health, social, employment statistics for Northland; and an acknowledgement that past/existing interventions had not delivered as well as hoped. As such, attempting to solve the wicked problems facing Northland requires multiple agencies/sectors/NGOs to work together in innovative ways. Such innovation requires focus however, otherwise good intentions can drift in the face of day to day management and/or new challenges. The frequency and size of major infrastructure projects, together with their injection of skills, hope and capital, provides a realistic way to maintain focus over the longer term.



4.2.1 Potential to generate local wealth and develop skills/education from major infrastructure projects

Assessment for generating local wealth and skills/education development

Likelihood of generating local wealth: Generating local wealth and skills/education development is a consequence of major infrastructure projects due to an inherent desire to hire local to manage labour costs. Participants noted several examples in Northland where local hire was above 60 per cent, and skill development programmes exist. There are several examples of Broader Outcomes being pursued in Northland, including Pihi Kaha’s Broader Outcomes strategy, Far North District Council’s Sustainable Procurement Strategy, and NZTA’s Broader Outcomes Guidelines. The Preston and Dunedin Hospital cases studies demonstrate that with coordination and intention, the likelihood of generating local wealth further increases. But these interventions are sporadically applied in Northland, in totality, when compared to the likelihood criteria (Appendix 4), there is a likelihood of *unlikely* across major infrastructure projects within 10 years.

Consequence of generating local wealth and skills/education development: The literature is clear that *intentional and coordinated* generation of local wealth improves wages, life satisfaction, reduces prescribing of antidepressants, decreases prevalence of depression, and improves wellbeing. Positive effects increase year on year as the intervention develops. Effects occur across all geographic areas, but are greatest in most deprived areas. The literature is also clear on the impact of skill/education development and consequent employment on health and social outcomes. These include the main route out of poverty; improved physical and mental health; contribution to better lives for children; enhances social connection; and helps people gain meaning from life. When compared to consequence descriptors (Appendix 5), the social impact of generating local wealth and skills/education development is therefore assessed as *major positive*¹².

Overall significance of generating local wealth and skills/education development: Overall, with reference to the significance scale, the significance of social impacts of generating local wealth and skills/education development, for local and regional Northland, is high positive. If recommendations are enacted, significance improves to high significance (Table 10).

Table 10. Northland Major projects potential impact on generating local wealth and skill/education development

Criteria	Local areas and Northland Region
<i>Likelihood</i>	Unlikely
<i>Consequence</i>	Major positive
<i>Overall significance (pre-recommendations)</i>	Significant positive
<i>Overall significance (post-recommendations)</i>	High positive

Generating local wealth and skill/education development recommendations

While generating local wealth and skill/education development is an existing outcome of major infrastructure projects, as per Figure 6, several preconditions to create an ecosystem supportive of generating local wealth are required to maximise potential positive impacts, and not repeated here.

¹² 'long-term injury, ... long-term treatment for more than one person'

To operationalise this ecosystem, coordination of efforts at a regional and local level via a 'generating local wealth hub' is required. Such work does not just happen, and requires a dedicated backbone team to work on the tasks on a day-to-day basis. Much of the work is problem solving and working collectively, so having the right people in these roles is important. For example, Tier One companies often run internal training courses for their own staff, but making these available to smaller businesses could be easily done if agencies are willing and communication is clear.

Drawing on the Dunedin Hospital case study, the hub could be led by a consortium of agencies working together. Northland Inc providing an overview of impact on the regional impact via monitoring and reporting, NorthChamber as a skills/training lead, Whāriki, Amotai and Te Hiringa bringing small business, procurement and mid-Far North expertise, alongside District Councils, MSD, Te Whatu Ora, Education, Te Pūkenga, Kāinga Ora and so on. A prominent role is needed for Māori businesses, iwi and Māori/Pacific organisations in the structure. This is to ensure any interventions are fit for purpose for Māori and Pacific populations, who already dominate younger age demographics and are growing rapidly¹³. While some may see targeting a proportion of Māori businesses procured as 'race based policies', without such an intentional focus, interventions aimed at 'everyone' have been proven over and over again to have low effectiveness. That is unacceptable on many levels, not least because Māori and Pacific populations are large proportions/ fastest growing populations for the existing and future workforces, and future business owners. These populations also have the most to gain from generating wealth locally and hence can shift the dial for Northland's wealth. A strong consideration on interventions that work for Māori will also help keep a focus on interventions that work in the mid- to far-north. Working collectively is difficult as it risks bloat and inefficiencies, so constant questioning is required: 'Does this make Northland's waka go faster?'

To ensure focus, initial work could support the Broader Outcomes Strategy for Project Pihi Kaha which has a good aspirations document, and action plans under development. Aligning the hub to a major project can act like a catalyst and might also help budget bids for initial work because it is tangible. But the ultimate goal must be a regional effect. One proven example is the Preston Model, where anchor institutions agreed to key principles, shared their training and learning, and changed/monitored their procurement behaviour for all procurement, not just large projects. For example, one local government agency already uses a 30 per cent local hire weighting when evaluating proposals, and similar evaluation metrics could be used in Northland. Anchor institutions could form a core within the generating local wealth hub, which the other agencies wrap around to support. Such work will require all participants to work differently.

While there is no bespoke funding for such a hub, removal of the RSLG's frees up Government spending, the Provincial Growth Fund may also support, and the Broader Outcomes Strategy of Project Pihi Kaha acknowledges the need for coordination to achieve its goals.



¹³ At least one in every two babies born in Northland are Māori and many areas have more than half of the population who are Māori. The Pacific population in Northland is expected to more than double to 7.4 per cent by 2048, and will remain the youngest ethnic group.

5. Access to health services

5.1 Introduction to access to health services

The relationship between major projects and health services occurs because construction workers (and any family members) will use local health services. When construction projects are in small centres or remote locations, local health services are limited.

The availability of health services was a concern for nearly all stakeholders and interviewees. As such, stakeholders requested the SIA assess how major infrastructure projects might affect access to health services, or not. This section mostly focusses on access to primary care, though also includes consideration of some hospital services.

Work on the social determinants of health shows that the health system contributes up to one-quarter of the health status of a population (Canadian Institute for Advanced Research, 2002). Being able to get access to health services can be critical for avoiding disabling or life threatening outcomes which sometimes arise from conditions which are relatively simple to diagnose and treat.

Furthermore, access to healthcare is a complex concept because access is not

just the first contact by a patient, but is relevant to a continuum of care. For example, a patient sees a GP, needs imaging and blood tests, sees a specialist, further imaging and blood tests, requires surgery, post-surgical follow-up, physiotherapist required, back to GP), and for each time a person tries to access any source of care.

Like other countries, access to health services is a major issue throughout New Zealand. Global factors are driving increased demand via an ageing population; the rise of non-communicable diseases e.g., obesity, physical inactivity, mental ill-health; a shortage of healthcare workers; and an increasing ability to treat more conditions with a greater complexity of care.

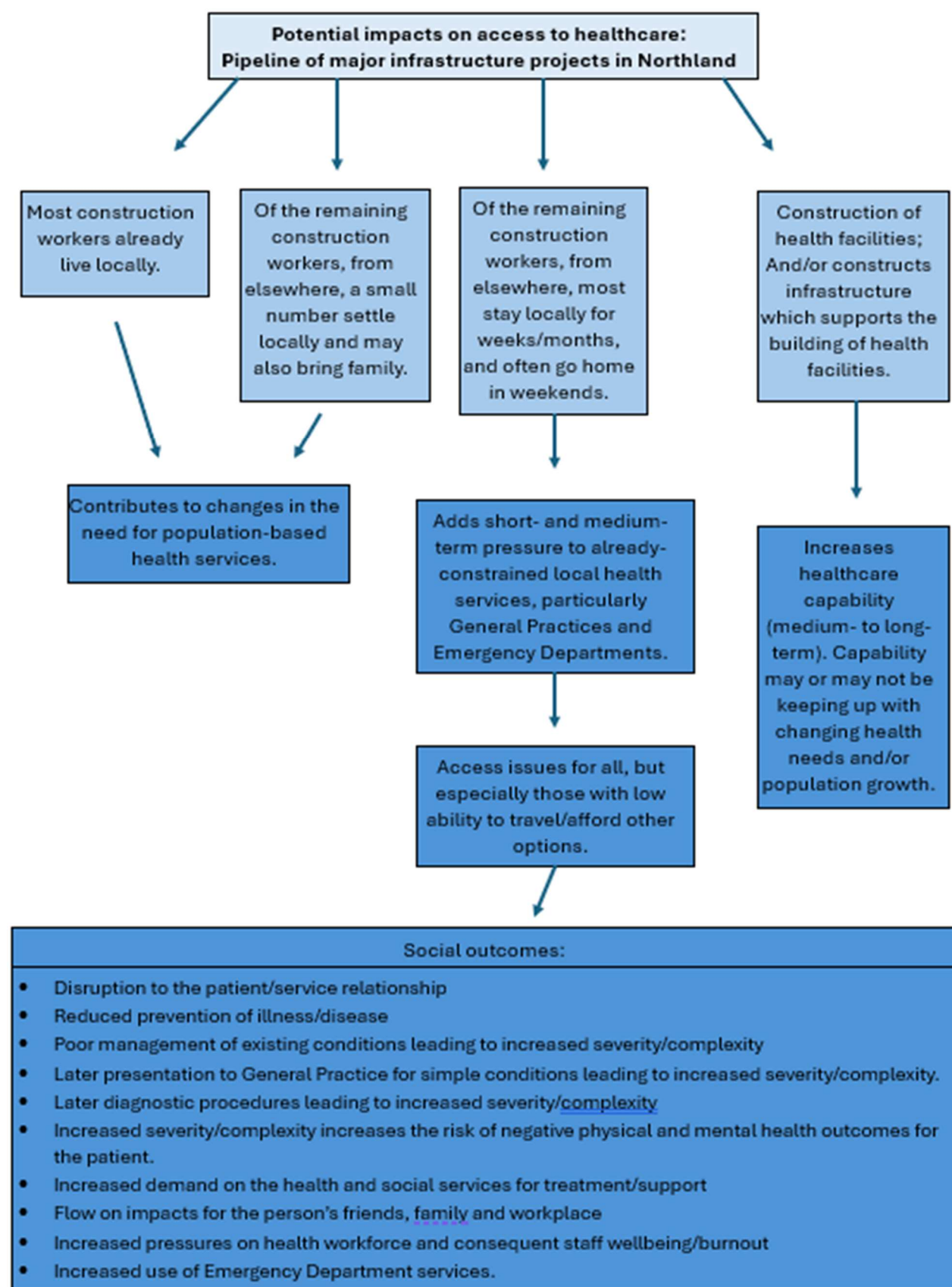
Finally, the organisation and funding of the healthcare system is highly complex and many diverse organisations are involved, e.g., public, private and NGOs.

5.1.1 Access to healthcare causal path

The potential social outcomes under assessment are caused by several factors. A simplified causal path describing how major infrastructure projects might affect access to health services and other outcomes is below (Figure 7).



Figure 7. Access to healthcare causal path



5.2 Findings for access to health services

Major infrastructure projects have the potential to effect health services in two main ways. Firstly, through construction workers need for access to health services impacting on access for the local population and access for other construction workers. And secondly through the development of infrastructure e.g., water infrastructure, which supports the building of health infrastructure, and/or the direct building of health infrastructure e.g., Pihi Kaha hospital build (Figure 7).

5.2.1 Existing services and performance

The Social Baseline Report shows many geographic areas of Northland have a high proportion of people who are categorised as deprived, while the proportion who are privileged is under-represented. Such deprivation is known to cause poor health outcomes. Consequently, the people of Northland have poorer status for most health measures compared with the rest of the country. For Māori in Northland, the proportions experiencing poor health outcomes are worse again. For example, amenable mortality is defined as deaths under age 75 years that could potentially be avoided, given effective and timely healthcare. The amenable mortality rate for Māori and Pacific people is more than double that for non-Māori and non-Pacific people in Northland.

The high population growth rate experienced by many of Northland's areas over the past five years has put substantial pressure on access to health services, and a shortage of staff including GPs and healthcare assistants.

Regarding access to GP services, interviewees from the health sector (and most other interviewees who are users of health services) described that most of the

28 medical centres in Northland have closed rolls i.e., are not accepting new patients. A few practices are still accepting patients, in Ruakaka/Bream Bay area, and select centres in Whangarei, Dargaville and Paihia. The major issue holding back greater access is workforce shortages. For example, doctors have a reluctance to shift to regional areas citing poor access, housing, employment opportunities for partners, and education options for children. A further issue holding back development of primary care is insufficient physical space within existing building footprints.

Mahitahi Primary Health Organisation were unable to provide an average wait time for a GP appointment across the region, due to large variation between clinics. However, other interviewees regularly describe priority of appointments for children, while adults can expect to wait two to three weeks for appointments. According to the NZ Health Survey, children and adults in Northland are significantly worse off when it comes to accessing primary health care than those in the rest of New Zealand.

At the hospital level, across ten nationally monitored clinical performance measures, Northland has the worst performance in New Zealand for three clinical measures (cancer treatment wait times; patients waiting for first specialist appointment; patients waiting more than one year for a procedure); second worst for a fourth measure (childhood immunisations), below average performance for two further measures (number of days in hospital post-acute admission; time to treatment after a commitment to treat was given), and about average performance for the remaining four measures (one of which is admission, discharge or transfer from an Emergency Department within 6 hours). Given there are 20 health areas in New

Zealand, scoring worst or second worst for four of ten measures shows clinical performance in Northland is well out of step with national norms.

Health sector interviewees described that the building of Whangarei Hospital is hoped to improve clinical performance measures. However, the number of health workers needed has not kept up with the population growth and the increased complexity of needs of Northland communities, so improvement will remain a challenge while workforce shortages exist.

5.2.2 Literature on access to health services from construction workforces

The literature review identified several NZ infrastructure project SIA where access to health services was potentially affected by an influx of construction workers.

However, empirical evidence on whether such effects occurred was not available. The best available evidence therefore is Australian, where mining projects have seen an influx of workers into small rural areas. In those situations, studies have considered the actual effect on health services. They show that workers do put pressure on local healthcare via several pathways:

- Use of primary care services for pharmacy script renewal, minor accidents and injuries
- Use of ambulances, emergency departments and X-ray facilities for accidents and injuries
- Use of emergency departments for acute mental health presentations.

Regional New Zealand is often challenged by under-resourced health systems, a situation resulting from a combination of factors including small populations, difficulties in attracting and retaining staff, poor access, and poorer health status compared to New Zealanders residing in major cities. The lack of empirical NZ data means it is difficult to determine if interviewee comments about potential impacts on health services is related to existing inadequacies in the provision of health care services to regional communities, or specifically related to construction workers. However, given the Australian data on the effect of mine workers, any effects on health services are assessed to be a combination of both increased demand and current access issues.

Regarding the building of health infrastructure, the literature review identified several hospital rebuilds. Perhaps not surprisingly, positive operational effects were projected for the provision of health services, particularly regarding capacity, efficiency and resilience.

5.2.3 Potential impacts on access to health services from major infrastructure projects

Figure 7 (above) sets out the potential impacts on access to health services that might arise from major infrastructure projects in Northland. Drawing on the literature, social baseline and participant interviews, the following assessments have been made.

Assessment for access to primary care and emergency department services

Likelihood of affecting access to health services: About half of construction workers are likely to live locally. Of the remaining construction workers that may be imported (50 per cent), most are short term workers. This is because the workers who do the initial groundwork are different to the workers piling, from those laying concrete, to those framing, and so on. Therefore, most of the imported workforce stay as near to the building site as possible for short periods (e.g., one to three months). Only a very small proportion of the workforce move locally for longer periods, e.g., project management, administration teams, etc. As such, there is low influx of family members.

The construction workers who temporarily move to a Northland area are highly unlikely to be enrolled with local health services. Firstly, because most General Practices have closed rolls, and secondly it is expected that the worker will already be enrolled in their hometown/city. As such, any use of local primary care or hospital services will be ad hoc/on demand. As the literature review describes, certain health presentations show greater demand when workforces temporarily move to rural areas e.g., accidents and injuries, acute mental health, and refilling prescriptions.

Therefore, when compared to the likelihood criteria (Appendix 2), there is a likelihood of *almost certain across major infrastructure projects within 10 years*.

Consequence of impact on local health services: Access to 24 hour Emergency Departments in Northland is limited to Whangarei and Kaitaia only. The clinical performance of Northland’s Emergency Departments is about average when compared to the rest of New Zealand. Regarding access to primary care, the social baseline is clear that access is more difficult for children and adults in Northland than those in the rest of New Zealand. Interviewees describe the wait time for adults to see a primary care doctor is up to three weeks. Most General Practices are not enrolling new patients, though it is still possible to gain enrolment at some health centres in Whangarei and Dargaville. Access to primary care is a key determinant of physical and mental health. A quality relationship between a patient and with a General Practice means improved prevention, earlier diagnosis and consequent improvements in treatment/lifelong health outcomes. When compared to consequence descriptors (Appendix 3), the social impact of access to primary care is therefore assessed as *moderate negative*¹⁴.

Overall significance of impact on access to primary care and emergency department services: Overall, with reference to the significance scale, the significance of social impacts of access to primary care and emergency department services, for local and regional Northland, is potential significant negative. If recommendations are implemented, the assessment is reduced to a potential medium negative impact (Table 11).

Table 11. Northland Major projects potential impact on access to primary care and emergency department services

Criteria	Local areas and Northland Region
<i>Likelihood</i>	Almost certain
<i>Consequence</i>	Moderate negative
<i>Overall significance (pre-recommendations)</i>	Significant negative
<i>Overall significance (post-recommendations)</i>	Medium negative

¹⁴ 'ongoing issue, complaints from community members and stakeholders'

Access to primary care and emergency department services recommendations

The most pressing issue is to address health sector workforce shortages. While there is strategy for attracting tourists to Northland, there is no strategy for attracting workers (for any sector) to Northland. Training pathways for people into employment, including the health sector is discussed in Section 4.

For the construction companies themselves, there will also be issues getting their workers seen by General Practices. Mahitahi Primary Health Organisation has offered to assist lead contractors identify General Practices who can provide services. This serves two purposes, to provide advance notice and allow planning for a potential uptick in service usage, and to help ensure construction workers receive appropriate health treatment when required. The Australian research on usage of Emergency Departments by temporary mine workers in rural Australia noted that most of the Emergency Department presentations could have been dealt with by a General Practice. This adds a third reason for brokering between construction companies and General Practices, to help companies understand what primary care services are available, to reduce unnecessary use of Emergency Departments.



5. Affordable and quality housing

6.1 Introduction to affordable and quality housing

The relationship between major projects and affordable and quality housing occurs because construction workers (and any family members) require housing, be that temporary or long term. As such, this usage has the potential to put pressure on local housing markets. A second relationship is that construction workers are building the infrastructure required to underpin new housing/intensified housing e.g. water infrastructure, roading, etc. Similarly, a large proportion of the projected infrastructure build in Northland are large scale housing developments.

Affordable and quality housing was a concern expressed by nearly all stakeholders and interviewees. As such, stakeholders requested the SIA assess how major infrastructure projects might affect access to affordable and quality housing, or not.

Any impact on access to housing is important not just because housing is a

basic need, but the flow on ramifications for other sectors is substantial. Housing underpins the economic wealth of a household, and is a determinant of critical life outcomes such as health and education.

Like other developed countries, access to affordable and quality housing in New Zealand is a major issue, at an individual household level, at a community level, national level and politically.

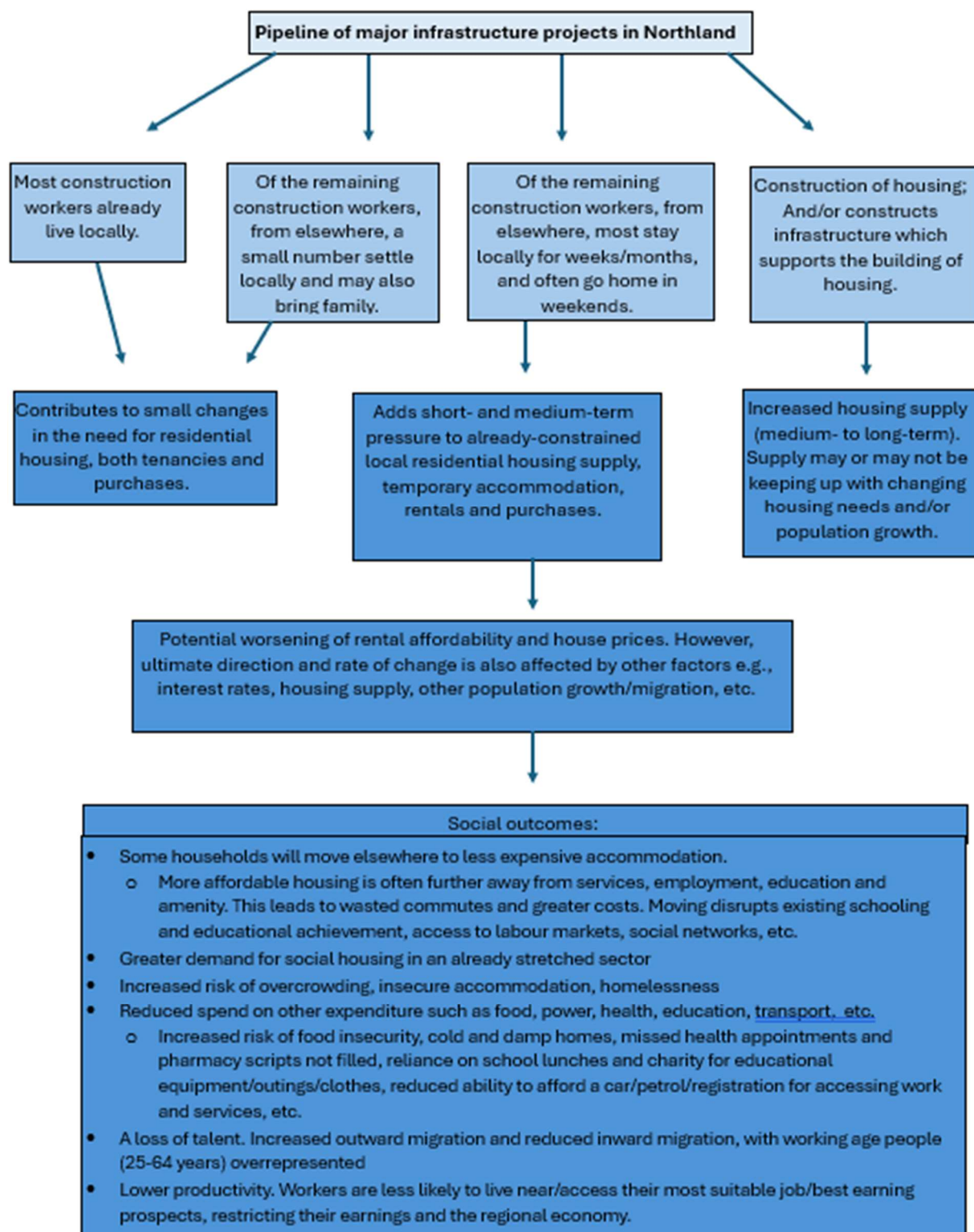
Finally, the availability of land, the building of new residences, the rental or purchase of housing, and social housing, involves multiple stakeholders from Government, Local Government, NGOs, private companies and individuals.

6.1.1 Access to affordable and quality housing causal path

The potential social outcomes under assessment are caused by several factors. A simplified causal path describing how major infrastructure projects might affect access to affordable and quality housing is below (Figure 8).



Figure 8. Access to affordable and quality housing causal path



6.2.1 Housing context

Northland population is growing and needs many more houses

The Social Baseline Report shows Northland experienced slow population growth (and some SA2 areas declined) between 2006 and 2013, and then rapid growth from 2013 to 2018. Over a 12 year period, such growth would be categorised as moderate growth, but over a five year period (2013 to 2018) as high population growth. Many of those new people have moved to Northland from other parts of the country. The proportion of the population who identify as Māori is growing faster than the total population. Interviewees agreed, as they identified in-migration and population growth as contributors to housing pressure in Northland. Interviewees were unaware of any data on the potential impact of Airbnb-style accommodation contributing to the housing shortage or not.

For future growth, areas around Whangarei projected to experience the highest growth include Kamo, Tikipunga, and Marsden Point/Ruakākā. For the Far North District, Kerikeri has experienced higher growth in the past than other areas in the Far North District. Taking an average of 2.5 people per household, this would equate to an additional 11,000 homes in the Whangarei District, 4,000 homes in Kaipara District, and 7,000 homes in the Far North District by 2048. This demonstrates why a large proportion of future construction worker requirements (via the Workforce Development Council's Workforce Information Platform) is to build residential housing. As such, constraints on construction workforces have the potential for an outsized effect on residential housing construction.

Northland's socioeconomic deprivation weighs heavily on housing outcomes

The Social Baseline shows many geographic areas of Northland have a high proportion of people who are categorised as deprived, while the proportion who are privileged is under-represented. Māori make up a high proportion of populations living in the most deprived areas.

The deprivation index is composed of several housing related measures, giving a clear indication of the type of issues experienced: No internet at home; not living in own home; living in a home with relatively fewer bedrooms for the number of people; living in dwellings with mould or damp. Household deprivation is also known to increase the risk of households being able to afford good quality housing or a house large enough for their family; afford to heat/cool their house adequately or insulate it; and/or afford routine maintenance/repair damages.

Census data in the Social Baseline shows Northland has a slightly higher proportion of households who own or partly own their dwelling or held by a family trust (67.9%) than the rest of New Zealand (64.6%). However, there are many smaller geographic areas in Northland which have a very low proportion of home ownership and a very high rate of tenancies.

Several interviewees described how low income households had the least resilience to price rises, and feared any further movement of people into the area i.e. construction workers, might further widen inequalities.

Residential housing measures are highly cyclical and affected by national and global factors.

The Social Baseline shows that housing measures e.g., residential consents and house prices, have varied widely in the past. Following the Global Financial Crisis, housing metrics took eight years to recover. In the past five years, the annual number of dwellings consented in Northland has also varied significantly. Consenting has been affected by COVID-19 labour shortages in 2020, then by inflation pressures on construction costs since 2021, and rising interest rates from 2022. Council interviewees have described a halving of resource consent applications compared with this time last year (February 2023). Statistics NZ data shows that the number of houses built is well below the number of houses consented, and Whangarei District Council experience matches that.

Public housing demand outstrips availability in Northland

The Social Baseline describes public housing provides families, individuals and whānau with a stable, affordable place to live. Public housing is owned or leased by Kāinga Ora or Community Housing Providers. It is targeted at households that are most in need of housing, who can't access or sustain a tenancy in the private rental market for a range of reasons. While there is over 2,400 public housing units in Northland and more are being added, the public housing register of household groups eligible for public housing has grown rapidly since September 2018 (454 applications), to 1,180 applications at September 2023. This is a national trend and not solely experienced by Northland.

Several interviewees were concerned that any additional pressure on housing might

lead to price increases which would eventually lead to an impact on low income households, and consequently drive more need for public housing.

Housing affordability in Northland is worsening unlike the rest of NZ, yet the quality of Northland's housing stock is lower

The Social Baseline shows the median in Whangarei rent matches national rents, with Kaipara District just 10% lower and Far North District 12 per cent lower than the national median rents. Rental prices have increased rapidly in Northland over the past decade, which combined with lower growth in household disposable income, has led to a decline in rental affordability across all three Northland TLAs. This contrasts with New Zealand data, where household disposable income has grown somewhat faster, and rental prices have grown somewhat slower, leading to a recent improvement in rental affordability. Interviewees describe that this national pricing (or near) does not reflect the lower quality of rentals in Northland. The Social Baseline confirms that the proportion of houses with damp or mould is higher in Northland (about ¼) than in the rest of New Zealand (about 1/5).

The price of new homes and deposit affordability has matched national trends. Affordability peaked post Global Financial Crisis and declined continuously until 2022, since when some small improvements have occurred. Nearly all interviewees described housing as unaffordable for many people in Northland, especially given low average household incomes.

There is little temporary or rental accommodation in Northland, especially during summer

Several interviewees described few options for temporary accommodation in Northland, especially in summer when tourists are also at their peak. Interviewees described tourist information centres sometimes advising tourists not to travel further north due to no available spaces, and that some motels are being used as emergency accommodation. Data in the Social Baseline indicates 249 places were used as temporary accommodation in Northland (not specified by housing type). Interviewees did not know where construction workers might live if they attempted to move to Whangarei, Dargaville or Kaitaia. Several said there was little to no housing capacity. One participant was concerned construction workers might further constrain tourist accommodation.

Home-land packages are available, but further residential housing development in Northland is substantially constrained by a need for water infrastructure

There are several already consented/started residential property developments near Whangarei, but less so elsewhere in Northland. Council interviewees described plenty of District Plan-enabled land for residential housing, but prices will be relatively high given Northland's low average income. More recently, some developments are experiencing slower build times due to slower sales, but the capability to build exists. The developments are typically 3- to 4-bed house and land packages starting at \$750,000. There are far fewer smaller/apartment style options (only by

Kāinga Ora). As such, for private developments the finances do not stack up for most landlords and the homes are instead purchased to live in, and only by those with reasonable incomes or equity. MSD confirms the accommodation supplement is capped and does not support low-income people into high value rentals. But building new homes remains critical for everyone, including low-income people. There is evidence that new (even expensive) homes in desirable areas slow the price/rental growth of older homes. To stop price and rental growth on older homes, more building of newer homes is required¹⁵.

Kaitaia interviewees noted that housing development around Kaitaia is severely limited due to wastewater system limitations. There is land/capacity around some of the smaller towns like Kerikeri and Paihia.

There is uncertainty about which water infrastructure projects may be taken forward given the Government's recent decision to stop three waters. What is certain is that without these water infrastructure projects, interviewees described a substantial constraint on residential, commercial and industry development.

Residential housing developments take at least two to three years from concept to delivery when budgets have not been set aside already

Because of the lead in time required for any type of housing development, be that modular housing or build to lease, housing interviewees described that any solutions requiring new housing for the construction workforce are medium to long-term if budgets have not already been set aside. This means any projects in the next 3

¹⁵ NSW Productivity Commission (2024). What we gain by building more homes in the right places.

years would not benefit from such approaches, but later major infrastructure projects could. If projects are not thinking about housing when they are first proposed, new builds are highly unlikely to be an option.

6.2.2 Literature on housing and major infrastructure projects

The Literature Review shows that the social benefits of housing are many and substantial. At the most basic level, housing provides shelter, stability and safety. Similarly, duration of housing tenure and housing affordability are critical drivers for positive social outcomes.

Similarly, the literature on societal benefits (and individual benefits) arising from public/social housing are substantial. But public/social housing also carries a small risk for potential negative social effects on neighbours – due to anti-social behaviour from a very small number of public/social housing tenants. Because of this risk, social housing can sometimes be viewed as a contagion by some members of surrounding communities, rather than as a positive.

Sometimes, the infrastructure project is a residential housing development. There are several residential developments in Northland's infrastructure pipeline. The Literature Review identifies several potential impacts including:

- impacts on existing property values, especially now housing is seen as an asset in New Zealand
- whether the new housing might be affordable
- loss of rural amenity
- creation of a new and positive sense of place
- greater/lesser access to services and facilities
- the risk of creating dormitory suburbs with little social amenity, where people sleep in a suburb but work elsewhere,

send their children to school elsewhere, and access services and entertainment elsewhere.

In Australia, the effect of mining projects on housing has been well studied. These projects share some similarities due to a large construction and operational workforces being required in rural areas. High proportions of fly-in fly-out or long-distance drive-in drive-out workers are common. Such workers are on-shift for up to 14 days and live in semi-permanent worker accommodation camps. For existing townships, mining companies include multiple strategies to protect against swings in housing affordability including rental caps on any subsidies to workers; provision of company housing/rental subsidy to people in the town providing key roles (e.g. childcare, business owners, health staff etc.) and/or making company houses available on public rental market; and monitoring housing affordability and availability.

One NZ resource consent application proposed a large influx of construction workers, but due to effects on the housing market was on the verge of refusal by decision makers. Ultimately, resource consents were granted when the proponent greatly increased the timeframe for the build, thereby reducing the peak workforce number. A condition to provide on-site workforce accommodation for fifty workers was also made. Interviewees to the Northland major infrastructure projects SIA suggested such a consent condition in Northland would be difficult to achieve given District Plan provisions about the suitable location of housing, especially for connection to water and sewerage.

The literature review identified several other NZ infrastructure project SIAs where local housing was potentially affected by an influx of construction workers. However, empirical evidence on whether

such effects actually occurred was rare, with just one follow up study identified. This was work carried out as part of the Waikeria Prison Development. Over 11 surveys across five years, the Waikeria Prison housing study identified:

- Just over 1/3rd of construction workers (38% weighted average) moved to the local area to work on the build. The proportion moving locally was higher through 2021/2022 as Covid-19 lockdowns prevented inter-region movement, yet lower before and after (between 30 and 34 per cent).
- Of the workers who moved to the local towns, 85 per cent were accommodated in short term house rentals. House rentals were organised by the subcontracting companies, or by the workers themselves. As such, there were some efficiencies. On average, about three construction workers were accommodated in each rental. This reduced the overall demand on rental properties. The remaining workers moving locally (15 per cent), either flatbed, boarded, stayed in campground cabins or at motels. Three subcontracting companies purchased an old motel, an old hotel, and a large lifestyle block with cabins, to house workers.
- The timing of the construction workforce entry into the housing market, and the relative ups and downs of proportions of construction workers living locally throughout Covid-19, have had no discernible impact on the affordability of housing, house prices, or tenancy churn in the towns near to the build. This holds for all quartiles of data, e.g. lower and upper quartile rents. Instead, housing

metrics have moved in parallel with national and global trends, showing that the modest numbers of construction workers within a growing district are not the key drivers of house price rises/falls, rental affordability or churn.

- The transferability of this evidence to Northland is mixed. Waikeria is a rural area flanked by the small townships of Te Awamutu and Otorohanga (10 to 15 minute drives). But Waikeria also has the large centres of Hamilton and Cambridge nearby (both about 40 minutes drive). Workers from Te Awamutu, Otorohanga, Cambridge, Hamilton (and other nearby small towns) made up 66 to 70 per cent of the workforce. Therefore such data may hold for building projects near Whangarei, but less so for the Far North District.

Interviewee's noted that for the Far North District, most workers were/had to be local, as the ability to drive in/out; or find accommodation, was low. Construction sector interviewee's described that importing a construction workforce, no matter which District the work is occurring in, greatly increases costs, meaning local hire is beneficial.

Housing interviewee's were concerned that those on the lowest incomes or unemployed would be most affected by any increase in housing demand from major infrastructure projects. Interviewees described that with enough forewarning, the market will supply homes for those who can afford it, but at the lowest income levels, negative impacts are more likely.



6.2.3 Potential impacts on housing from major infrastructure projects

Assessment for affordable and quality housing

Likelihood of affecting housing supply and demand: About half of construction workers are likely to live locally. Of the remaining construction workers that may be imported (50 per cent), most are short term workers. This is because the workers who do the initial groundwork are different to the workers piling, from those laying concrete, to those framing, and so on. Therefore, most of the imported workforce stay as near to the building site as possible for short periods (e.g., one to three months). These short-term workers will attempt to stay anywhere within a 45 minute to one hour drive, including motels, Airbnb-style accommodation, short term house rentals, flatting, boarding, and campground cabins. The absolute number of construction workers seeking short term accommodation or semi-permanent accommodation, when calculated using the Workforce Development Council's most likely scenarios are: Whangarei and surrounds (180 workers); Dargaville and surrounds (750 workers); Kaitaia and surrounds (800 workers). Interviewees describe how some of the Dargaville construction workforce undersupply will be serviced by workers driving in/out from Whangarei, so the Dargaville estimate is a worse-case, and Whangarei a modest underestimate.

In comparison, the population growth for each of the three Districts between 2013 and 2018 was: Whangarei District 14,000; Kaipara District 4,000; Far North District 10,000. Growth is also projected to continue for these areas. So relative to the size of each geographic area and the growth projections, the number of construction workers seeking short term and semi-permanent accommodation is low to modest.

Regardless, when compared to the likelihood criteria (Appendix 4), there is a likelihood of *likely across major infrastructure projects within 10 years*.

Consequence of impact on affordable housing and housing quality:

The best available data (Waikeria Prison Development housing study) shows no discernible impact from a large construction workforce on affordability metrics of nearby townships. Therefore, when compared to consequence descriptors (Appendix 5), the social impact of affordable and quality housing is therefore assessed as *minor negative*¹⁶.

Overall significance of impact on affordable and quality housing: With reference to the significance scale, the significance of social impacts of affordable and quality housing, for local and regional Northland, is medium negative. If recommendations are implemented, the assessment reduces to low negative (Table 12).

Table 12. Northland Major projects potential impact on affordable and quality housing

Criteria	Local areas and Northland Region
Likelihood	Likely
Consequence	Minor negative
Overall significance (pre-recommendations)	Medium negative
Overall significance (post-recommendations)	Low negative

¹⁶ 'some impacts, may change back'

Affordable and quality housing recommendations

The affordability and quality of housing in Northland is already poor compared with other parts of New Zealand. Alongside future pressures from projected population growth, the assessed medium negative effect from construction workforces is another challenge to the housing sector in Northland.

Many agencies have a role of improving housing outcomes for Northland. From the perspective of major projects however, levers to pull include the need to train/hire as many local construction workers as possible, to minimise any potential housing effects. Recommendations related to generating local wealth and training local people to work in the construction sector are discussed in Section 4.2.

For the construction companies themselves, there will be issues getting their workers into accommodation. In the Waikeria Prison Development case study, monitoring showed that no housing interventions by the Tier One construction company were needed. Similar monitoring could be undertaken on major projects in Northland to better understand the actual effects by each location, and then identify solutions relevant to that location if required. Modest organisation by subcontractors and workers meant an average of three workers were accommodated per dwelling in the towns nearest Waikeria. Scrutiny of the Waikeria housing data showed that further efficiencies could be achieved. This raises the possibility of stronger coordination of construction workforce tenancies by the Tier One constructor in partnership with local stakeholders.

A possible intervention is to investigate if the booking of Airbnb-style accommodation can be coordinated (Sunday to Thursday nights, outside of summer months).

Regarding temporary workforce villages, construction interviewees did not want to rule out such options, but said the major infrastructure projects in Northland lacked scale to warrant such measures, unless the infrastructure pipeline could be coordinated. Council interviewees noted such villages would still require connection to water infrastructure etc, which was limited. In the Waikeria Prison Development, the Tier One constructor investigated the leasing of a nearby campground and cabins.

For Northland however, the building of quality worker accommodation remains worth exploring. Rather than accommodation villages, it might make more sense to provide accommodation that meets the needs of some workers, particularly the lower paid workers for whom the market is unlikely to supply homes. If built in the right locations and typologies, the buildings could be sold once the construction projects are complete.

In this model, debt would be raised to build the accommodation, the debt would be (at least in part) funded by renting to construction workers, and at the end of the construction project the accommodation could be sold to recover (at least some of the outstanding debt). Whether this makes financial sense could be assessed against a longer build period involving a smaller workforce in response to a lack of market-provided accommodation. The worker accommodation might be one and two bedroom apartments, terraces or townhouses.

Buildings should be designed to meet construction worker needs and be saleable in the housing market or for social housing. These buildings could be spread across relevant neighbourhoods reflecting eventual sales expectations as well as worker-locational needs. Such locations could be focused on Whangarei, Ruakākā and Kerikeri as they are likely to have the best re-sale opportunities and are well located to serve the bulk of construction projects.

Such work requires conversations between key players such as landholders (e.g., iwi, Marsden Maritime Holdings, private landholders, Council, etc.), agencies procuring major projects (e.g., government agencies) and house/apartment constructors (e.g., Kainga Ora, private developers, etc.). One participant suggested something similar, regarding engagement with iwi about whether iwi might fund, build and lease back accommodation to a Tier One provider or procuring agency. Housing interviewees noted that two to three years is a typical lead in time from concept to delivery for any quality housing, so major infrastructure projects beginning in the next three years have already missed this deadline. Also, the modest timeframes for most infrastructure builds i.e., two to four years, and the lack of coordination between different projects, will hamper such long term solutions unless there is significant coordination across multiple infrastructure projects and procuring agencies. To support such work, procuring agencies need to consider the full benefits of housing now and in the future, and not just see it as a project cost. Other interviewees noted that past construction of worker accommodation had led to the development of lower quality housing which was not fit for long term usage.

6. Conclusion

The purpose of this HIA is to understand the potential social impacts arising from major infrastructure projects in Northland. The SIA has made suggestions about how to prevent, mitigate or manage any potential social impacts, and for future work.

The method for this SIA aligns with best practice SIA internationally. This SIA includes a logic model, literature review, social baseline, and interviews with Northland stakeholders and desktop work. Significance of social impacts was assessed using a risk management

significance scale. The SIA's social baseline and literature review are available separately. This SIA was carried out in late 2023 and early 2024.

Findings

Several potential impacts on social outcomes have been identified in this SIA. These include both positive and negative impacts. A summary of the potential impacts is presented in Table 13.

Greater detail on findings and recommendations is within each section.

Table 13. SIA findings for Northland communities

Topic	Potential impact (pre-recommendations)	Recommendations	Potential impact (post-recommendations)
Generating local wealth and skills/education development	The pipeline of major infrastructure projects in Northland is assessed to have a significant positive impact for all three of the assessed geographic areas.	To maximise potential positive effects, the development of Northland Principles for Procurement to support an ecosystem supportive of generating local wealth and skills/education development is required (See Figure 6). To operate, such work requires coordination, and a hub to generate local wealth/develop skills is recommended. The hub would consist of anchor institutions, other key stakeholders and potentially chaired by the Chamber of Commerce. An initial focus by the hub on Project Pihi Kaha is desirable to provide immediate focus, and this dovetails into Project Pihi Kaha's existing work/aspirations to achieve broader outcomes. To reflect the unique nature of Northland's demographics, the work must maximise outcomes for Māori and Pacific populations. To demonstrate effectiveness, tracking of achievement across multiple measures in the ecosystem is recommended.	The pipeline of major infrastructure projects in Northland is assessed to have a high positive impact for all three of the assessed geographic areas.
Access to primary care and emergency department services	The pipeline of major infrastructure projects in Northland is assessed to have a significant negative impact for all three of the assessed geographic areas.	To assist with health workforce shortages, recommendations about training pathways are included in the skills/education development recommendations above. Consideration of a strategy to attract workers to Northland is recommended. For construction companies, the Northland Primary Health Organisation has offered to assist workers achieve access to primary care, and to help companies/workers understand when and how to access services appropriately. Other interventions by constructors are recommended to reduce potential impacts on services too.	The pipeline of major infrastructure projects in Northland is assessed to have a medium negative impact for all three of the assessed geographic areas.
Affordable and quality housing	The pipeline of major infrastructure projects in Northland is assessed to	To minimise the need for an imported construction workforce, training pathways are included in the skills/education development recommendations above. For construction	The pipeline of major infrastructure projects in Northland is assessed to have a

	have a medium negative impact for all three of the assessed geographic areas.	companies, coordination of worker rental accommodation can be used to maximise the number of workers per house, minimising housing impacts. Coordination to access Airbnb-style accommodation Sunday to Thursday nights outside of summer months, is also worth exploring. The placement of temporary accommodation and/or building of quality worker accommodation is worth exploring. For building, debt would be raised to build high quality accommodation, and at the end of the project the accommodation can be sold, but ideally would be available for other construction projects.	low negative impact for all three of the assessed geographic areas.
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Appendix 1. Scenarios to assess

Taitokerau major infrastructure projects: Social Impact Assessment Scenarios to be assessed.

A social impact assessment (SIA) considers how a project or strategy might impact on people, organisations and communities in the future. Usually, there is a good level of detail available about the project or strategy to allow communities and stakeholders to comment on the potential impacts from their perspective.

The three locational scenarios (in grey boxes below) need to be simple enough so that people can understand them quickly, with just enough differences in detail between locations to identify major potential social effects, work out ways to prevent negative effects and promote positive effects. Most SIA participants will only want/be able to comment on one locational scenario, though some people will be better placed to provide a regional/all three locations perspective.

A very small amount of contextual data is included after the scenarios too. More context data will be collected throughout the assessment and presented in the social baseline.

SIA questions for participants after reading the scenarios

1. What potential impacts might future major construction projects have on:
 - a. the people in your community?
 - b. the services provided by your organisation?
 - c. access to affordable homes for locals and construction workers?
 - d. access to health services for locals and construction workers?
 - e. small businesses/Māori and Pacific businesses and their workforce?
 - f. skills development and employment of local people, especially for Māori, Pacific and youth?
2. Are there any groups who might be more or less affected by potential impacts?
3. What are tangible and practical ways to prevent/reduce any negative effects from occurring; or promote/maximise positive effects? Please consider short- and long-term options; and who might contribute to making these happen?

Locational scenario one (Kaitaia and surrounds):

Location: Kaitaia and surrounds (population 7,941; within Far North District's 2023 population of 75,000).

Projects: Far North District has several infrastructure projects planned, with a collective value of \$1.8 billion in the next three years. To name a few of the projects, they include new schools, road rebuilding, housing and wastewater infrastructure.

Likelihood of the infrastructure projects going ahead: While it is difficult to project the pace at which large projects might proceed, projects in the next five years have been assessed. For this scenario, bespoke analysis was undertaken using the Workforce Information Panel to understand the potential size of the workforce demand, supply and consequent gap.

Workforce projection: Far North District already has a current shortage of construction workers. Far North District has a current supply of 1,921 construction workers. A 'most likely' scenario of construction project pipeline requires a demand of 3,540 construction workers, leaving an undersupply gap of 1,619 workers. Put another way, Far North District needs 1.84 times more construction workers than it currently has.

The need for construction workers is not a short-term issue. Projects which are not able to be built in the next five years still need to be built. As such, infrastructure- and workforce-demand compounds over time.

Locational scenario two (Dargaville and surrounds):

Location: Dargaville and surrounds (population 10,284; within Kaipara District's 2023 population of 27,000).

Projects: Several infrastructure projects are projected to begin at a similar time near Dargaville. The collective value is \$1.9 billion in the next three years. To name a few of the projects, they include new sub-divisions, sporting facilities, energy projects and water storage.

Likelihood of the infrastructure projects going ahead: A large proportion of the Kaipara District pipeline projects are consented and/or funded. For this scenario, bespoke analysis was undertaken using the Workforce Information Panel to understand the potential size of the workforce demand, supply and consequent gap.

Workforce projection: Kaipara District already has a current shortage of construction workers. Kaipara District has a current supply of 886 construction workers. A 'most likely' scenario of construction pipeline projects requires a demand of 2,400 construction workers, leaving an undersupply gap of 1,514 workers. Put another way, Kaipara District needs 1.7 times more construction workers than it currently has.

The need for construction workers is not a short-term issue. Projects which are not able to be built in the next five years still need to be built. As such, infrastructure- and workforce-demand compounds over time.

Locational scenario three (Whangarei and surrounds):

Location: Whangarei and surrounds (population 50,778; within Whangarei District’s 2023 population of 102,000).

Projects: Several infrastructure projects are projected to begin at a similar time within the Whangarei District. Their collective value is projected to be \$3.6 billion in the next three years. To name a few of the projects, they include the Whangārei Hospital redevelopment, roading repair, commercial buildings near the port, rail line repair, new CBD University buildings, new schools and new housing developments (Kāinga Ora and private companies).

Likelihood of the infrastructure projects going ahead: While it is difficult to project whether very large projects such as the Wellsford to Whangarei four laning may go ahead, other projects in the next five years have been assessed. For this scenario, bespoke analysis was undertaken using the Workforce Information Panel to understand the potential size of the workforce demand, supply and consequent gap.

Workforce projection: Whangarei District already has a current shortage of construction workers. Whangarei District has a current supply of 4,752 construction workers. A ‘most likely’ scenario of construction pipeline projects requires a demand of 5,120 construction workers, leaving an undersupply gap of 368 workers. Put another way, Whangarei District needs 1.08 times more construction workers than it currently has.

The need for construction workers is not a short-term issue. Projects which are not able to be built in the next five years still need to be built. As such, infrastructure- and workforce-demand compounds over time.

Number of construction workers needed

Using WIP data, the SIA undertook a bespoke analysis to calculate the 2024 demand/supply ‘most likely’ prediction of pipeline workers required, and to provide that data per TLA. As described in each of the locational scenarios above, here is the data in one place:

Area	2024 demand	2024 supply	Undersupply gap
Far North	3,540	1,921	1,619
Kaipara	2,400	886	1,514
Whangarei	5,120	4,752	368
Taitokerau total	11,060	7,559	3,501

Based on WIP’s past experience, they project the gap between demand for workers and local supply of workers will further widen over time.

Appendix 2. Likelihood descriptors for negative impacts

Likelihood has been assessed using the categories below. To reflect social determinants, likelihood for risk factors has also been considered (Table 14).

Table 14. Negative likelihood descriptors

Level of likelihood	Descriptor
Rare	<p>There is a very low probability for the unwanted event to occur within the construction timeframe of the major projects (i.e., next 10 years). In the case of repetitive/frequent tasks there are no records of the event occurring or it is highly unlikely that it will occur within the next 10 years. In terms of major events, as also the case of long term social, environmental or health impacts, there is a very low probability for the event to ever happen.</p> <p>Risk factor: Implausible impact on a single risk factor or several risk factors and little evidence in support of an impact.</p>
Unlikely	<p>There is a low probability for the unwanted event to occur within the construction timeframe of the major projects (i.e., next 10 years). In the case of repetitive/frequent tasks, the unwanted event has occurred sometime or is likely to occur not more than once every 10 years. In terms of major events, as also in the case of long term social, environmental or health impacts, there is a low probability for the event to happen within the construction timeframe of the major projects (i.e., next 10 years).</p> <p>Risk factor: Plausible impact on a single risk factor or several risk factors but weak evidence in support of an impact</p>
Possible	<p>It is possible that the unwanted event can occur within the construction timeframe of the major projects (i.e., next 10 years). In the case of repetitive/frequent tasks, the unwanted event has occurred or is likely to occur in order of once every 5-10 years. In terms of major events, as also in the case of long term social, environmental or health impacts, there is a low probability for the event to happen within the construction timeframe of the major projects (i.e., next 10 years).</p> <p>Risk factor: Quality evidence of an impact on a single or several risk factors.</p>
Likely	<p>There is a high probability that the unwanted event will occur within the construction timeframe of the major projects (i.e., next 10 years). In the case of repetitive/frequent tasks the unwanted event has occurred or is likely to occur in order of less than once per year. In terms of major events, as also in the case of long term social, environmental or health impacts, it might happen once within the construction timeframe of the major projects (i.e., next 10 years).</p>
Almost Certain	<p>The unwanted event is almost certain to happen within the construction timeframe of the major projects (i.e., next 10 years). In the case of repetitive/frequent tasks the unwanted event has or will occur in order of one or more times per year. In terms of major events, as also in the case of long term social, environmental or health impacts, it may happen only once within the construction timeframe of the major projects (i.e., next 10 years).</p>

Appendix 3. Consequence descriptors for negative impacts

Negative consequences have been assessed using the categories below.

Table 15. Negative consequence descriptors

Consequence	Negative descriptor
Insignificant	Social outcome: Minor disturbance of culture/ social structures. Risk factor: No clear evidence of impact
Minor	Social outcome: Some impacts on local population, mostly repairable. Risk factor: Modest impact on a single risk factor.
Moderate	Social outcome: On going social issues. Isolated complaints from community members/ stakeholders. Single stakeholder complaint in reporting period. Risk factor: Modest impact on several risk factors
High	Social outcome: Significant social impacts characterised by organised community discussion/protest of impacts. Risk factors: Major impact on one or more risk factors
Major	Social outcome: Major widespread social impacts characterised by community reaction affecting construction. "License to operate" under jeopardy.

Appendix 4. Likelihood descriptors for positive impacts

Likelihood has been assessed using the categories below. To reflect social determinants, likelihood for risk factors has also been considered.

Table 16. Positive likelihood descriptors

Level of likelihood	Descriptor
Rare	<p>There is a very low probability for the desirable event to occur within the construction timeframe of the major projects (i.e., next 10 years). In the case of repetitive/frequent tasks there are no records of the event occurring or it is highly unlikely that it will occur within the next 10 years. In terms of major events, as also the case of long term social, environmental or health impacts, there is a very low probability for the desirable event to ever happen.</p> <p>Risk factor: Implausible impact on a single risk factor or several risk factors and little evidence in support of an impact.</p>
Unlikely	<p>There is a low probability for the desirable event to occur within the construction timeframe of the major projects (i.e., next 10 years). In the case of repetitive/frequent tasks, the desirable event has occurred sometime or is likely to occur not more than once every 10 years. In terms of major events, as also in the case of long term social, environmental or health impacts, there is a low probability for the desirable event to happen in the construction timeframe of the major projects.</p> <p>Risk factor: Plausible impact on a single risk factor or several risk factors but weak evidence in support of an impact</p>
Possible	<p>It is possible that the desirable event can occur within the construction timeframe of the major projects (i.e., next 10 years). In the case of repetitive/frequent tasks, the desirable event has occurred or is likely to occur in order of once every 5-10 years. In terms of major events, as also in the case of long term social, environmental or health impacts, there is a low probability for the desirable event to happen in the construction timeframe of the major projects.</p> <p>Risk factor: Quality evidence of an impact on a single or several risk factors.</p>
Likely	<p>There is a high probability that the desirable event will occur within the construction timeframe of the major projects (i.e., next 10 years). In the case of repetitive/frequent tasks the desirable event has occurred or is likely to occur in order of less than once per year. In terms of major events, as also in the case of long term social, environmental or health impacts, the desirable event might happen once in the construction timeframe of the major projects (i.e., next 1 years).</p>
Almost Certain	<p>The desirable event is almost certain to happen within the construction timeframe of the major projects (i.e., next 10 years). In the case of repetitive/frequent tasks the desirable event has or will occur in order of one or more times per year. In terms of major events, as also in the case of long term social, environmental or health impacts, the desirable event may happen only once in the construction timeframe of the major projects (i.e., next 10 years).</p>

Appendix 5. Consequence descriptors for positive impacts

Positive consequences have been assessed using the categories below.

Table 17. Positive consequence descriptors

Consequence	Positive descriptor
Insignificant	Social outcome: Minor improvement of culture/ social structures. Risk factor: No clear evidence of impact
Minor	Some impacts on local population, may change back. Risk factor: Modest impact on a single risk factor.
Moderate	Continuing positive social change experienced by community members/ stakeholders. Risk factor: Modest impact on several risk factors.
High	Social outcome: Significant social impacts characterised experienced by diverse parts of the community. Risk factors: Major impact on one or more risk factors.
Major	Social outcome: Significant and permanent improvements in multiple important social outcomes for diverse parts of the community.

Appendix 6 – Detailed findings regarding generating local wealth and building education, skills and capacity

A6. 1 Relevant region/district-level baseline data on generating wealth locally and skills/education development

The SIA social baseline report (available separately) collated existing baseline data and won't be repeated here except in summary:

- **Nearly all of Northland's census areas are somewhat deprived or most deprived:** Some SA2 census areas¹⁷ in Northland have NZ Deprivation Index scores which are less deprived than average (e.g. areas around Kerikeri), but all other SA2 census areas in Northland range from somewhat-deprived to most-deprived. This is further reflected by lower median incomes, higher unemployment, higher proportions with no qualifications, and lower proportions of houses owned by occupiers in those deprived areas. Deprivation scores of 9 and 10 (most deprived) are seen in the Far North District areas in- and around-Kaitaia and Kaikohe, two out of three areas in- and around-Dargaville, and 13 out of 21 areas in- and around-Whangarei. This matters, as such populations can sometimes be less resilient to shocks, but at the same time, such populations have much to gain from well-prepared opportunities.
- **Many areas in Northland have a high proportion of the population who are Māori:** SA2 areas around Whangarei have a high proportion of residents who are Māori including Otangarei (78%), Tikupunga South (44%), Tikupunga South (63%), Kamo East (45%), Morningside (44%), Tarewa (63%) and Raumanga (58%). The SA2's with the highest proportion of Māori around Dargaville are Dargaville (36%) and Kaipara Coastal (30%). Around Kaitaia, the SA2's with the highest proportion of Māori are Kaitaia East (67%), Kaitaia West (65%), Tangonge (60%), and Rangitahi (49%).
- **Northland has a higher proportion of younger people, and older people, than the rest of NZ:** The Northland Region has a higher proportion of young people (0-14 years) and older people (>65 years) than the national population. The higher proportion of older people is due to retirees moving to Northland. In contrast, the young demographic for the Northland population is due to the very young demographic for Māori in the Northland Region.
- **At least one in every two babies born in Northland are Māori:** The proportion of births which are registered as Māori children are between 70-80 per cent in the Far North District, 50-60 percent in Whangarei District, and 40-50 per cent in the Kaipara District. Getting the settings right for young Māori is therefore critical for the future of Northland.
- **Northland has a higher proportion of manual worker types, and fewer professionals, than the rest of NZ:** Census data shows a higher proportion of labourers in Northland (14.4%) vs the rest of New Zealand (11.3%); similar proportions of machinery operators (Northland 6.6%, New Zealand 6%) and technicians and trade workers (Northland 12.7%, 12.1%), and lower proportions of professionals (Northland 18.6%, New Zealand 23%).
- **Northland has a higher proportion of people unemployed and not in the labour force, than the rest of NZ:** Northland also has a higher proportion of people unemployed (5.0%) and lower labour force participation rate (63.3%) compared with the rest of New Zealand (4.3% and 71.5% respectively)¹⁸. The same trends are true for Ministry of Social Development data regarding the rate of people on the Jobseeker Support benefit versus the rest of NZ¹⁹.
- The proportion of people in Northland with higher incomes is far lower than the rest of New Zealand, and the opposite is true for lower incomes (< \$35,00).
- **Northland is the region in NZ with the second highest proportion of people receiving Jobseeker Support** (5.9%), with the highest region being Gisborne at 6.3 per cent.

¹⁷ In larger urban areas, a SA2 often approximates a single suburb. In a small town, a single SA2 might include the whole population up to 5,000 residents. In a rural area, a SA2 would include a rural settlement and surrounding rural area.

¹⁸ <https://www.stats.govt.nz/information-releases/labour-market-statistics-march-2024-quarter/>

¹⁹ <https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/statistics/monthly-reporting/>

- **Health, construction and education are all large employment sectors in Northland**, with large and regular increases over time for each. The exception is the construction sector which had a major contraction in 2013 (due to the long-lasting effects of the 2007/08 Global Financial Crisis). By 2018, construction sector employment had recovered strongly. However, in 2006 the construction sector had the same number of employees as the health sector, but was 1,300 fewer by 2018.
- The proportion of people engaged in study in Northland is slightly lower for full-time study, and similar for part-time study, when compared to the rest of New Zealand.
- **There has been a large decline in the percentage of people in Northland with no qualifications** from 32% in 2006 to 23% in 2018. For Māori the decline was even larger from 45% in 2006 to 28% in 2018. There has been a corresponding increase in the percentage of people with qualifications. For Māori there has been a doubling of those with a level 3 certificate from 7.1% in 2006 to 15.7% in 2018 (Statistic NZ, Census data). There was a similar increase in level 7 certificate or bachelor's degree qualifications for Māori from 3.5% in 2006 to 6.7% in 2018.
- **Attracting young people into training opportunities has been difficult in Taitokerau.** The costs of training along with the cost of living rises make working a necessary and more attractive option for many young people.
- **Northland has a higher rate than the national average of young people not in employment, education or training.** By 2023 the NEET rate for Taitokerau reached 14.5% (compared to the national rate of 11.7% in the June 2023 quarter). The percentage of students enrolled in tertiary education one year after leaving school is lower than the rest of the country, 53.4%, compared to 59.3% nationally

A6.2 Relevant strategies

Te Rerenga²⁰ is Taitokerau Northland's long-term economic strategy. The strategy has an intergenerational view which outlines ways to improve the wellbeing of the region - environmental, social, cultural, economic. There are three key future states, themes, missions, and respective owners. Several have direct links to the key topics of the SIA:

THEME	TE TAIAO OUR ENVIRONMENT	TE TANGATA OUR PEOPLE	TE OHANGA OUR ECONOMY
FUTURE STATE	Sustainable environmental stewardship (protect and restore)	Skilled, resilient workforce and workforce pipeline	Fit for purpose, resilient infrastructure and technology that enables productivity
KEY MISSION	Drive innovative solutions building environmental resilience	Grow skills and talent to ensure our people match our exciting growth opportunities	Boost infrastructure and investment to address Northland's infrastructure deficit
OWNER/S	<ul style="list-style-type: none"> • Central and local government • Private sector • Māori/business/community 	<ul style="list-style-type: none"> • MBIE, industry, government, community working together, including tertiary providers, Regional Skills Leadership Groups 	<ul style="list-style-type: none"> • Collaborative and cohesive commitment between the region, Iwi, central and local government and private interests.

Several high level actions, again highly relevant to this SIA, are proposed to drive Te Tangata Our People:

²⁰ Northland Inc, Far North District Council, Northland Regional Council, Whangarei District Council, Kaipara District Council (2024). Te Rerenga Taitokerau Economic Wellbeing Pathway.

- A united voice when it matters for the best of everybody
- An ecosystem developed which grows good leaders
- Empowered local decision making in place – a locally led, regionally enabled, centrally supported approach
- Transformative education and workforce development so our people can stand connected with confidence and competence anywhere in the world
- Healthy, secure and affordable housing solutions appropriate to our people's needs
- Taitokerau Northland Hauora Health Strategy 2040 implemented.

Te Rerenga also provided a priority pipeline for Northland:

- A multi decade Resilience Plan for multi modal transport infrastructure, digital connectivity, and energy.
- A four-lane highway Warkworth to Mid-North
- Resilient State Highways Whangārei to Te Hiku
- Multi modal access from Northport to Auckland
- Roding network across Northland improved and resilient
- New Whangārei Airport development confirmed
- Rail link Auckland north with mid-north logistics hub
- Other infrastructure Renewable energy generation including an upgraded power transmission line Bream Bay to Kaitaia, and support for a regional network of power generation and distribution
- Security of water supply for industry and towns/community, primary sector, and wastewater and waste improvements
- Improved digital connectivity and affordable coverage across Northland
- Install infrastructure to support the growth of marine manufacturing such as the Dry Dock Project
- Developments in Marsden Point area
- Knowledge precinct in Whangarei
- Deliver on economic development aspects from the Whangarei Hospital rebuild and social impact assessment.

A6.3 Literature relevant to generating wealth locally and skills development and education

A6.3.1 There are major social benefits of employment from infrastructure projects

Evaluation/research about major infrastructure projects, or past SIA assessing potential effects of major infrastructure projects, have considered the potential positive social benefits for employment (and consequent income) associated with those projects. Assessments typically consider both direct jobs (i.e. people who directly construct the project and people who will hold operational staff roles) and indirect jobs (i.e. people who have employment due to providing materials or services to the construction and/or operation). Some major construction projects affect local employment because they require the land of existing businesses, a potential negative effect. But generally, the social effects are overwhelmingly positive. The social value of a job has been well described elsewhere²¹, but in summary:

²¹ Quigley R and Baines J (2014). The social value of a job. Wellington: Ministry for Primary Industries.

For individuals and households	Technical details
Provides money; boosts living standards; and provides a way out of poverty or to avoid poverty	<ul style="list-style-type: none"> • Is typically the main source of household income, and consequently determines material wellbeing and living standards • Is the main route out of poverty for poor men and women • Increases the long term employability of employee
Improves our health and wellbeing	<ul style="list-style-type: none"> • Lowers death rates. • Improves physical health. • Lowers rates of long standing illness; of poor general health; of somatic complaints; of disability; of consulting a GP; of using medications; of admissions to hospital.
Helps us say no to addictive substances	<ul style="list-style-type: none"> • Lowers heavy use of tobacco, alcohol and drugs.
Improves our mental health and how we feel about ourselves	<ul style="list-style-type: none"> • Lowers rates of suicide and death from accidents. • Lowers rates of depression and anxiety. • Improves self-respect and self-esteem.
Contributes to making children's lives better, making children feel better, having better health and behaving better.	<ul style="list-style-type: none"> • Lowers rates of chronic illness, psycho-somatic illness and enhances wellbeing for children. • Lowers psychological distress and subsequent lower rates of withdrawal, anxiety, depression, aggressive or delinquent behaviour in children. • Improves social status of family members, and their wellbeing.
Helps children say no to addictive substances	<ul style="list-style-type: none"> • Lessens substance abuse in children
Enhances future job prospects for our children	<ul style="list-style-type: none"> • Children are less likely themselves to be out of work in the future.
Enhances our social circle of friends and gets us out more.	<ul style="list-style-type: none"> • Increases the frequency and number of social contacts, social outings and participation in recreation. • Increases diversity of people connected with.
Helps us feel good about ourselves	<ul style="list-style-type: none"> • Meets psycho-social needs where employment is the norm. • Is central to a person's social status. • Helps people to gain meaning from their life, by their job helping others and contributing to society.
Shapes who we are	<ul style="list-style-type: none"> • Shapes self-respect, individual identity and social identity.
Makes our lives more satisfying	<ul style="list-style-type: none"> • Boosts life satisfaction and perception of wellbeing.

Summary for community outcomes	Technical details
Contributes money and resources into communities	<ul style="list-style-type: none"> • Increases resources available to a community. • Improves community quality of housing, fundraising ability of community and increases the number of services which can be sustained.

	<ul style="list-style-type: none"> Increases salary and wage spend into community. May increase company spend on supplies (local and regional). May increase corporate social responsibility investment by company (local and regional). Increases local and regional taxes paid. Multiplier effect of additional jobs from the above local and regional spend.
Helps us get on better with each other	<ul style="list-style-type: none"> May increase trust and understanding of other people (including friends, neighbours and government). May improve social capital and sense of engagement with others. May reduce social exclusion for minority groups. May increase level of civic engagement (joining organisations and participating in civic life); and subsequent social cohesion.
Contributes to social gradients in our community	<ul style="list-style-type: none"> As job grade increases, rates of chronic disease decrease. Job networks may either include or exclude people from certain jobs.
Contributes to society	<ul style="list-style-type: none"> Jobs can contribute to society by producing meaningful, safe and environmentally sustainable products and services.

Positive outcomes from having a job assume the workplace is safe and the job is satisfying. The security of the job, work practices, workplace culture, work-life balance, injury management programs and relationships within workplaces are key determinants, not only of whether people feel valued and supported in their work roles, but also of individual health, wellbeing and productivity²². Unfortunately, work-related disease and injury is responsible for considerable morbidity and mortality in New Zealand. New Zealand longitudinal evidence also concludes that job stress (excessive workload, extreme time pressures) can lead to depression and anxiety in previously-healthy young workers (two-fold risk compared to those with low job demands).

Having said all of the above, it is an argument with some nuances. Long term unemployment is worse for people's health than having what is considered 'dangerous jobs', as this quote from a comprehensive United Kingdom review describes:

"...long term worklessness is one of the greatest risks to health in our society. It is more dangerous than the most dangerous jobs in the construction industry, or [working on an oil rig in] the North Sea, and too often we not only fail to protect our patients from long term worklessness, we sometimes actually push them into it, inadvertently..."

Professor Gordon Waddell

In summary, job loss is bad for your health, long term unemployment is very bad for your health and having a job is good for your health. Debate will continue about whether any job

²² Royal Australasian College of Physicians (2011). Australian and New Zealand Consensus Statement of the health benefits of work. Position Statement: Realising the health benefits of work; Royal College of Psychiatrists (2014). Is work good for your mental health?

is better than no job. However, it is clear the greatest physical and mental health benefits come from having a safe workplace and a satisfying job. And the best jobs for society are those which not only serve the individual person, but also produce positive spill-over benefits to the community.

A6.3.2 It is unclear whether the positive employment benefits of infrastructure projects are distributed equally among different types of people

Construction-related employment is typically characterised by SIA as short term, with a high certainty of positive impact²³. It is uncommon for consideration of distributional effects, such as whether any particular groups of people might be more likely to be employed than others. Some NZ transport SIA have noted the presence of 'broader outcomes' policies that the procuring agency holds, however no quantitative number/percent is described²⁴. No follow-up/evaluations have been identified reviewing the use of Broader Outcome policies, so data about whether and how such policies are applied, and whether positive outcomes arise, is unknown.

A6.3.3 Local hire is already a heavily weighted tender evaluation metric in some New Zealand settings

Co-Lab²⁵ is a company owned by 12 Councils in the Waikato and Bay of Plenty with a goal to make councils more effective and efficient. A recent tender for a panel to provide professional services had a 30 per cent evaluation weighting regarding the location of tendering staff to provide face to face advice to council staff. Such a weighting strongly supports local procurement. While it is not directly about construction, professional services strongly support construction projects. Also, the importance of local procurement beyond procurement of large infrastructure projects is important for generating local wealth.

A6.3.4 New Zealand case studies (Waikeria Prison and Dunedin Hospital) provide evidence that local hire and workforce training can be influenced

There are two good examples of social research related to local hire and workforce training in New Zealand. The two projects were:

- Waikeria Prison development: In 2017, Corrections lodged a Notice of Requirement to amend the designation to allow for up to 3,000 prisoners to be accommodated on the Waikeria Prison site (up from a usual prison population of 750). This was to be the largest prison in the Southern Hemisphere, at a price of \$890 million. The Environment Court Commissioners approved the change to the designation, but imposed conditions. These conditions required the establishment of a community impact forum, which included an independent assessment on impacts on housing, and identifying opportunities for training of local residents for the construction and operation of the prison.
- The Dunedin Hospital rebuild is the largest health infrastructure project in NZ's history, valued at \$1.68 billion. The Southern Partnership Group was set up in September 2015 to oversee the redevelopment of Dunedin Hospital. Three years of rigorous analysis and planning saw the business case for the new hospital passed by Cabinet in 2021. Building a very large hospital in a small city meant not having an appropriate workforce was classed as a major risk, along with bringing a lot of people into a city and not having the capability to house them.

²³ For example, Western Basing dredging and disposal project SIA (Queensland, Australia)

²⁴ For example, Airport to Botany bus rapid transit SIA (Auckland, NZ)

²⁵ <https://www.colabsolutions.govt.nz/>

Waikeria Prison construction workforce effects

The Environment Court Commissioners approved the change to the designation, but imposed conditions. These conditions required the establishment of a community impact forum, which included an independent assessment on impacts on housing.

The construction of Waikeria Prison had an estimated 1,000 construction workers, in a rural area near the towns of Te Awamutu, Kihikihi and Otorohanaga. The assessment considered the potential effects on local housing during construction and operation. The SIA projected the proportion of local hires (based on interviews with the lead contractor) and the number of people who might move to the townships. In summary the SIA projected that there would be an effect on local housing, but any potential effect would not be significant/discernible alongside the substantial population growth already occurring in the District. However, the RMA decision makers were more cautious and required long term monitoring of the actual effects on housing within the three townships, and implementation of a management plan if the effects were found to be significant. Monitoring has occurred since January 2019 until November 2023 (and is ongoing). The peak construction workforce was 929 workers in one day.

Eleven construction workforce surveys identified a high proportion of local/regional hires (average of 62 per cent across all surveys). Construction workers either lived in the three towns already, or lived regionally and drove to the worksite. Drive times of 45 minutes (i.e. from Hamilton or Cambridge) were common. Less than five percent of construction workers drove longer than this (i.e., from Auckland, Tauranga, Rotorua, etc). Of the construction workers who had moved to the towns (38 per cent average across all surveys), most (nine out of ten) rented, with far fewer staying in motels, boarding or flatting. On average, about 2.5 construction workers stayed in each rental house. Such coordination was via the sub-contracting company organising the rental accommodation for workers; or the construction workers organising their own accommodation. Because of the coordination, construction workers occupied about 1 dwelling in every 100 in the three townships. According to an evaluation measure designed by community and stakeholders before the surveys were undertaken, such an impact was considered 'low to negligible'.

Of relevance to this SIA, housing turned out to not be a major issue for the nearby small towns (as evidenced by early workforce surveys). This was due to the larger urban areas of Hamilton and Cambridge taking much of the accommodation load. For those construction workers moving to the three small towns, employees naturally coalesced together (themselves or due to sub-contractor organising accommodation). This kept the impact on local housing at a low to negligible level. Because of this, no bespoke interventions were required or undertaken by the lead contractors, CPB or CIP.

Waikeria Prison skill development and training

The Environment Court Commissioners approved the change to the designation, but imposed conditions. These conditions required the establishment of a community impact forum, which included identifying opportunities for training of local residents for the construction and operation of the prison.

CPB is the project manager of the build, providing some staff, but most workers/labour on site are employed by subcontractors. Some subcontractors have further relationships with

labour supply companies, like Tradestaff, when the subcontractor themselves need additional workers.

While nothing on housing or skill development was included in contracts, social considerations were included in consent conditions which provided an entry point into the project. Together with a willing purchaser (Corrections) and willing construction partners (CPB and CIP), social outcomes stayed on the agenda via a simple framework and was driven via quarterly meetings with senior managers. CIP had a desire to develop a social legacy and were fortunate that the early staff working on communications and stakeholder engagement had a skill set to able to suggest and deliver on such an approach. CIP and CPB funded bespoke assistance via a contractor with social impact skills, alongside communication with key stakeholders. Release to Work was an 'easy win' for everyone from the beginning, but from this confidence came other work. Social outcomes stayed on the agenda of the quarterly meetings.

The number of prisoners on Release to Work has exceeded Corrections expectations, and this has been achieved through Corrections usual work programme, alongside CIP/CPB's support, and subcontractors being willing to take on ex-prisoners, especially as time progressed and many had seen examples of prisoners being good employees.

However, training and development via tertiary providers e.g., Wintec, has not occurred. This is despite early engagement between Wintec and the project via the Community Impact Forum. This is likely a missed opportunity and reinforces the need for a clear focus and monitoring of outcomes. Monitoring of education/training outcomes was not a component of the resource consent conditions.

Dunedin Hospital rebuild local hire, skill development and training

Workforce development was embedded into the contract for the lead supplier via the establishment of a workforce development committee. The committee was led by the Chamber of Commerce and involved all major stakeholders. Two studies were commissioned that considered current and future workforce capacity/capability; and a pipeline of work after the hospital build. The first study estimated 900 workers needed on site, only 350 were available locally (if all current construction workers were engaged on the build). If 300 additional workers were upskilled or trained (doubling regional capacity), only 250 would be needed from outside the region. To achieve this, the workforce development group created Workforce Central Dunedin (WCD), a skills and job hub.

The objectives of the WCD were specified in the tender document, and bidders had to respond how they would meet those objectives and how they would support WCD.

From the implementation, the major learning is that there needs to be a continuous, coordinated and collaborative effort to train, support and monitor the training and use of local people. It would not 'just happen'. WCD housed community employment links, training, business links and stakeholder engagement. They had a goal of achieving a minimum of 300 trades related employment opportunities in addition to other roles such as site security personnel, drivers, administrators, cleaners and caterers. This was achieved via on site training and upskilling, school and community engagement to create pathways for trades' students, WCD induction programme for all workers, pastoral care, and personalised local Māori/Pacifica business support. WCD had weekly CEO-level meetings with the lead

contractor with the aim of building a relationship, what is working and learning from those, identifying issues/blocks and solving those, and moving towards the achieving the objectives.

Other agencies joined later, such as Kāinga Ora. WCD transformed from workforce for the hospital, to supporting other builds across the region.

A6.3.5 United Kingdom case study provides evidence that community wealth building changes procurement behaviour and improves health outcomes

Since 2013, the city of Preston (population 140,000) an economic development approach known as Community Wealth Building²⁶. It aims to build a local economy to address underlying social determinants of health. It is a multi-component programme led by coalitions of anchor institutions (e.g., large public or non-profit organisations such as the local government, universities, and housing providers). These institutions:

- change their procurement policies to support the development of local supply chains
- support the development of local enterprises e.g., cooperatives, social enterprises, charities, and small businesses) that are more accountable and responsive to the local population
- invest in local wealth (e.g., via local government pension funds)
- improve recruitment and employment conditions (e.g., Living Wage policies) of anchor institutions and their suppliers
- maximise socially productive use of land and property owned by the anchor institutions.

A publication in the prestigious Lancet medical showed that following the introduction of Preston's Community Wealth Building programme, improvements in wages and life satisfaction occurred from 2015. From 2017, the prescribing of antidepressants and prevalence of depression decreased, and wellbeing improved compared with other similar (control) areas. Positive effects increased year on year from 2017, 2018 to 2019. Effects occurred across all areas in Preston, but were greatest in the most deprived areas. The authors concluded that public sector organisations impact on health through their procurement and employment practices²⁷.

To achieve these outcomes, Community Wealth Building in Preston has undertaken the following:

- Initial engagement between the anchor organisation's lead politicians and officers to link any activities to senior leadership, willingness to change procurement and other practices, and willingness to share data and provide CLES with access to procurement officers.
- Analysed the top 300 suppliers of each institution for one financial year to identify Preston, wider Lancashire, and beyond (to provide a baseline)
- Influence procurement at an event with Chief Officers and politicians to explain the analysis findings and draw collective conclusions, and create a shared statement of intent across the organisations
- For one organisation, deeper analysis of supplier spend to understand what might be able to be spent locally and what is unlikely to be able to be moved from national providers
- Setting up a Preston procurement practitioners group, meeting quarterly to share learning about how to maximise the benefits of procurement spend
- Develop an action plan for each institution, including an emphasis on spend analysis.

²⁶ Centre for Local Economic Strategies (2017). *Community wealth building through anchor institutions*. Manchester: CLES.

²⁷ Rose T, Konstantinos D, McKeown M, et al (2023). The mental health and wellbeing impact of a Community Wealth Building programme in England: a difference-indifferences study. *Lancet*, 8, e403-10.

- Expanding the role beyond procurement to consider the supply chain of anchor institutions, physical development schemes, the impact of the Living Wage campaign on behaviour, and scope for other initiatives. A measurement framework was developed to cover these broader topics²⁶.

A “relatively loose arrangement” characterised the way activities have been undertaken by the different anchor institutions and other stakeholders, but guided/informed by the Centre for Local Economics. The nature of the anchor institutions relationship has been voluntary. Institutions have attended activities, events, and groups where appropriate.

For this Northland SIA, there is evidence that community wealth building can have far-reaching economic and health impacts on local communities. Such work requires senior-level commitment from anchor institutions, who have worked on something tangible to begin with, and then with expanded the scope once ongoing spend analysis showed positive change was possible. External European funding allowed the Centre for Local Economic Strategies to facilitate and guide each stage of the work.

A6.4 Interview data relevant to generating local wealth and building education, sills and capacity

Nearly all interviewee’s had comments on the above topics, many of which aligned but not always. A summary of interview findings is below.

Potential positive social effects of the major infrastructure pipeline include:

- Opportunities to grow small to medium sized local businesses, including Māori and Pacific businesses
- Consequent employment of all people, but especially people not yet in work, on low incomes, Māori, Pacific and people with disabilities, can lead to major social benefits. The consequent growth in household income is important given the low household average income in Northland. Many of these low income households are Māori.
- Larger projects provide the opportunity for career advancement as the worker gains new skills and proves their capability. Some employees may expand into setting up their own business with consequent growth potential from that.
- Infrastructure projects can also lead to a greater number and diversity of roles beyond construction. For example, health sector roles arising from Pihi Kaha; Horticulture roles arising from dams; Education roles from education sector builds, etc. Infrastructure also has the ability to enhance the overall economy, creating multiple different employment opportunities. For example, port infrastructure allows local businesses to create/expand their export capability; efficient roads to Auckland opens Northland to a large product/services marketplace and increases the likelihood of tourism.
- Larger infrastructure projects tend to have a number of low skilled roles that can be filled with people first entering the workforce, with the right supports. That same labour pool is the first to be let go when the job is nearing completion. As such, the construction sector can have a big impact on marginal employment i.e., the difference between being underemployed and fully utilised. Data shows that construction and healthcare/social assistance are two of four industries with the highest proportions of workers under-utilised (7 to 10% of workers²⁸). The cyclical construction sector can have a disproportionate impact on these under-utilised workers as they go in and out of full time employment, and in and out of employment. Having a smooth pipeline would make a substantial difference to this group, via consistent employment and consequent impacts on household income.

²⁸ New Zealand Work Research Institute (2022). Underutilised workers in New Zealand. Characteristics, transience and earnings trajectories

- When Māori businesses have secured substantial contracts, this has been a catalyst for attracting whanau back to the rohe, for those who have previously moved away for work.
- Potential for these major infrastructure projects to lead to a different way of working in Northland. Many participants commented on the desirability of having a coordinated approach to infrastructure projects and local hire, training, and generating wealth locally.
- Any trade/construction skills developed by individuals can be used to maintain/improve their own property, family property, or community property such as marae, kura.

Current procurement requires a ‘track record’, so Northland businesses can only be subcontractors on the largest infrastructure projects.

- There are no Tier One-level construction suppliers who have workforces based in Northland. Similarly, there are few large Māori business in Northland. Existing procurement approaches require a ‘track record’ of completing these large infrastructure projects, so Northland businesses are immediately ruled out of bidding on larger projects.
- Due to the infrequency of large infrastructure projects in Northland and the modest population base in Northland, Northland companies have had little chance to grow to a sufficient size, over time, to develop a ‘track record’ of large infrastructure projects.
- Instead, Northland businesses are typically sub-contractors/suppliers to the Tier One businesses who have won the large scale infrastructure contracts.

Northland companies have the capability and capacity for infrastructure projects

- Construction companies in Northland carry out infrastructure projects of a value size of approximately \$30 million or \$40 million. They can undertake whole (modest-sized) projects, or deliver chunks if/when a larger build was broken into parts.
- Northland businesses request the ‘track record’ question in tender documents is changed to ‘What skills have you got in your business and what are you capable of building?’

Northland companies have skin in the game

- Participants described how Northland constructors want to build high quality infrastructure because they live here and are users of the eventual service. Participants described examples where non-Northland construction companies have built buildings which have issues, and the companies which built them no longer exist.

There is support for Northland businesses who wish to bid to Tier One providers or modest-size government contracts

- There is support for Northland businesses to help them bid for work from Tier One businesses. This includes services from the Regional Business Partner Network (RBP) (managed by Northland’s Regional Economic Development Agency, Northland Inc (for all businesses); Amotai (for Māori and Pacific businesses); TPK’s Māori Enterprise team (for Māori businesses); TPK’s Capability Uplift Programme (for Māori businesses); and Pacific Business Trust (for Pacific businesses, but has limited reach in Northland).
- Amotai also helps Māori and Pacific supplier businesses create compelling capability statements, helps businesses understand how to bid for contracts from Government or Tier One businesses, and gets access to those entities. Tier one businesses and Government agencies also get access to registered Māori and Pacific businesses, and training on supplier diversity. Amotai can also work with Tier one businesses/Government agencies and their contracted Māori/Pacific business to address any perceived or actual performance issues.
- Programmes such as TPK’s Capability Uplift Programme support Māori businesses to contract directly with Government (not to Tier One providers or other private sector contracts). As described above, contracting direct to Government is a relatively high bar for any business to achieve, not only due to track record but also other rigorous requirements such as inhouse capacity and capability, and policies such as prequalification by +Impac (for

Health and Safety), etc. As such, many Māori businesses are ineligible for support from the programme, and cannot use the programme to support bids with Tier One businesses. For Māori businesses that enter the Capability Uplift Programme, the support is considered high quality. No programme of similar intensity exists for Pacific businesses. The Pacific Business Trust exists to provide support, but has a limited presence in Northland.

- There are however very few Pacific-owned businesses in Northland, so while business support is described as available (above), additional support is needed to grow Pacific people's capability to start a business in the first place. This is important because of the projected growth in the Pacific population in Northland. Project Pihi Kaha has set up a Pacific Working Group to identify opportunities arising from that project for Pacific people.

Long term, larger contracts are good for all businesses

For all businesses including Māori businesses, the lack of security from not having long term contracts on larger projects means a less certain cash flow, and reduced confidence to underpin investment in equipment, hiring of staff and investment in training. Without these larger contracts, Northland businesses also miss out on consequent referrals, and ongoing maintenance contracts.

During planning and procurement, the flow of information from large infrastructure projects is not typically helpful to Northland businesses or education/training/labour force providers

- The fact a large scale infrastructure project will occur is typically signalled well ahead of time, regardless of private- or Government funded. However, businesses who might wish to bid, and training organisations who might wish to train staff, are underwhelmed by the detail of information provided and when that information is provided.
- Design is often separate from the tender to construct the project meaning there is an inherent risk about the constructability (and consequent cost) of a project post-tender. The early involvement of the constructor in design is possible, but rare. Examples of early involvement by the constructor alongside the designer and user, in the design process, has occurred in Northland for modest-value infrastructure projects in the private sector.
- Constructors described that existing procurement processes which generate multiple bids, sometimes provide a false belief the purchaser has found the lowest cost for a project. Instead, participants described that the cost contracted for is more likely to be a start line price, not the end price. Any variations (which are inevitably required, especially since the constructor is not usually involved in design) may be on-charged at "very steep rates".
- Northland-wide, there is no coordinated pipeline of infrastructure projects. This makes it hard to 'line up businesses and workforces'. Participants described how infrastructure projects are spread across several sectors, and sectors are highly cyclical, e.g. residential housing. Sectors can also face resource consent delays and altered funding priorities. As at early March 2024, residential construction is slowing down, and Government-funded infrastructure projects such as schools are uncertain. Large roading projects, which won't start actual construction for several years, have recently had a commitment to proceed from the Government. Construction companies describe that at present, they are able to find contractors to undertake future work and if anything, there is the beginnings of a shortage of work. Construction companies describe how from their perspective, the Reserve Bank's engineered recession is constraining confidence in the sector. In contrast, some participants have described that for their own small and modest sized jobs at the household level, they have previously found it hard to get trades to be interested in the work.
- Northland businesses want to know what is being procured, when, the skills/equipment required, the granularity of workforce forecasting (number of positions, roles), and whether there are any social procurement aspects to the tender. However, the purchaser does not

know all of this information either, as the tender documents are outcome driven, with information about how the build will be delivered, when, and with what resources, only known once the tenders are received, evaluated and contract signed. The project is then due to start, and Northland businesses and Northland training providers have had little chance to prepare. The procurement process is typically not conducive to generating local wealth. Having said that, the presence, or not, about whether broader outcomes might be included in a tender could be shared well ahead of time.

- Participants described that businesses needed to be very confident regarding a pipeline of work to hire a new person because the cost/risk to the business is substantial. Businesses (and community members who might want to train) are sceptical when the Government announces new initiatives, unsure if it might be a viable option to support their aspirations, or wondering if the initiative will happen at all.
- Pihi Kaha is well-engaged with communities including Pacific (via a Pacific working group), people with disabilities (via NorthAble) and Māori (via TPK). Beyond TPK, other Māori organisations in Northland report underwhelming engagement from Pihi Kaha so far. Due to the stage of the procurement process, Pihi Kaha does not yet have the information that businesses/training providers want, and this naturally creates tension. Participants describe collection of information by Pihi Kaha, but no information shared by Pihi Kaha which is helpful to their planning.

Progressive procurement for Māori businesses is a target, has sufficient support for its achievement, and while real risks exist to the procuring business, the risks can be managed

- Central Government has a progressive procurement target (not a requirement) to spend 5 per cent of Government's total spend (including from infrastructure projects) with Māori businesses. There are no broader outcomes target for other vulnerable groups such as Pacific, people with disabilities, females or people not yet employed. There is no target for building education, skill and capacity. There is no target for local hire. Private sector infrastructure projects typically have zero broader outcomes targets.
- To achieve the five per cent target in major infrastructure projects, Tier one businesses subcontract some work to Māori businesses, typically in ground preparation- and construction-type roles rather than engineer/project management type roles. The five per cent target (not a requirement) is usually included within the header contract between the Government agency and Tier One business. Several interviewee's described the five per cent target as easy to achieve.
- Māori and Pacific businesses are often 'young' and have less experience. This creates a real risk to the Tier One business hiring them on a subcontract, as it is the Tier One business who is ultimately responsible for project delivery. However, there are many agencies which can support these young Māori businesses during such contracts. Experience has shown that if issues arise, they are typically related to documentation rather than the quality of the work. There are many examples of successful work undertaken by these fledgling businesses. Several construction sector interviewees had managed this risk in their builds, and were comfortable with the project outcomes, and in the knowledge they were growing local businesses which reduced risk for future projects.
- Some participants strongly disagree with a progressive procurement approach for Māori businesses, arguing that ethnicity should not be a reason for choosing a supplier and that everyone is treated equally at their workplace. However, research shows that treating people equally is highly unlikely to lead to equal opportunities or outcomes, because the playing field is not level. Providing equal interventions is also highly inefficient, so targeting interventions to achieve equal opportunities and outcomes is common. For example, only those children who need glasses get them, not everyone.

Northport's pipeline of work also has a degree of uncertainty. Northport has a strong commercial focus to its procurement

- Northport has been successful in building/developing a working port over the past 21 years. Despite this track record and while not having to rely on Government funding for future developments, absolute certainty of whether a project will progress is not possible. For major projects, a business case is provided to the Board for approval. If costs/project viability change (say because of a more expensive workforce), the decision to proceed or not, would be remade. Similarly, the timeframes and/or results of consenting processes are uncertain.
- Northport does not include social procurement in its tender or contract processes. It supports the concept of local hire as it is highly likely to be a lower cost, but they seek to complete the project in the most cost efficient way for Northport. As such, local hire is not a component of tenders or contracts and there is no desire to do so.
- Northport supports many staff through training/skill development while on the job. However, Northport (and other businesses across Northland) would always prefer to hire someone who already has the skills. Training and apprenticeships are seen as a cost. Northport describes how there are many organisations who already have a role/mandate to develop workforce skills and capacity, and Northport does not want to step into that role too.

Whangarei District Council also typically buys a service

- Participants described that Whangarei District Council has few formal links with training agencies and when purchasing, is generally buying a service. There are exceptions to this, as each Department can negotiate its own contract, and so social procurement aspects such as local hire, hiring Māori businesses or training, might be included, but are not a focus of the organisation.

Far North District Council has a sustainable procurement strategy

- FNDC has a current policy which considers the proportion of local hire and Māori-owned businesses when evaluating tender documents. It previously had a fixed term contractor to support the work, but is now under the general consideration of the procurement team. In the past, it created a database of small local construction businesses and supported those wishing to bid for council services to get Health and Safety compliant. It then procured from that database where appropriate.

Pastoral care of people who are training and new to employment is critical

- Many of the people who are not in employment, education or training have substantial social challenges to being work-ready/training-ready, and staying in work/training. These include intergenerational unemployment, insecure housing; physical and mental health issues; drug and alcohol use; low or no level of educational achievement; no drivers licence; no car or money to run a car; etc. As such, nearly all interviewee's said pastoral care is required to instigate training/job hunting, and to provide ongoing support while training or being in employment (at least six months). Several agencies provide such support, including via Northtec, or NGOs such as Te Matarau Trust.
- From an individual's perspective, going from employment to unemployment leads to a two week stand-down period once the application for a benefit is received.

Attracting and retaining staff has many challenges

- Several participants confirmed Northland does not have a strategy to attract skilled employees to come and live in the region. Destination Northland is tourism focussed.

- Participants noted that retaining workers in the construction industry and health sector is challenging. For the construction industry, there is a 20 per cent annual turnover, and a similarly high rate for the health sector. Creating well-rewarded, welcoming employment environments for diverse people is one way to address this issue.

The Dunedin Hospital skills hub has been/is effective at bridging the gap between the Tier One provider and local businesses, labour force providers such as MSD, and education/training providers. It now provides region-wide support for construction projects.

- The Dunedin Hospital skills hub was funded via the Provincial Growth Fund and engagement with the hub (by the lead contractor) was signalled in the tender and a requirement to do so was included in the contract. Neither has occurred in the Pihi Kaha Whangarei Hospital build project.
- The Dunedin Hospital skills hub was geographically located in Dunedin, adjacent to the build site. It initially focussed on the hospital build, but later assisted builds throughout the Otago region. A similar challenge exists for Northland, with other major infrastructure projects dispersed region-wide. Interviewees from the Far North were concerned about the level of engagement which they may have with the hub if it was sited in Whangarei. Interviewees were also unsure about the level of engagement with Māori and Pacific businesses and communities from any potential skills hub in Whangarei.

A 'Whangarei Hospital skills hub' is desirable

- Several interviewees wanted any skills hub to be run by the community, with strong engagement across local businesses. Some interviewees noted that any hub needed strong engagement with Māori businesses if it was to succeed in its goals. Several interviewees did not want Government agencies to be in charge, reflecting the belief that past interventions by Government have missed the mark for Northland.
- Te Hiku Iwi Development Trust has a social accord with Government agencies. Collectively, these agencies use a streamlined management approach to meetings/information sharing which was initially developed for consortiums of Tier One construction companies. There are potential learnings from this approach for any future hub, especially since local agencies are familiar with its use and it has its roots in the construction sector.
- NorthChamber was described as a good representative of developed businesses around Whangarei, with modest reach region-wide into Kaipara and Far North Districts. Te Haumi (a collaboration between Amotai, Te Hiringa Trust and Business Promotions, and Te Tai Tokerau Māori Business Network), and Te Hiku Iwi Development Trust, were described as good representatives of Māori businesses, providing a voice for Māori businesses in Northland, and described by one interviewee as supporting the 'developing economy'. There is no equivalent Pacific business organisation in Northland though a bespoke Pacific working group has been set up for Pihi Kaha.
- A few interviewees were ambivalent about a potential skills hub for major infrastructure projects, for example with Pihi Kaha. Their concerns were about not replicating what already exists and instead be a bringing together of existing skills and resources; And that a skills hub should be a request from the community rather than a top-down approach from the agency purchasing the project; the Tier One business could have a direct relationship with the community and businesses, rather than via a hub.

Supporting businesses is required, not just supporting individuals

- Several participants noted that social procurement often has the majority (if not all) of its focus on supporting individuals. However, participants stressed the importance of social procurement supporting businesses too. For example, Tier One businesses providing mentoring to small businesses, allowing small businesses to dovetail onto Tier One training

courses, supporting the development of small business staff who can then lead/mentor within the small business, and supporting small businesses with their documentation and systems.

Pihi Kaha's consideration of Broader Outcomes is well advanced

- In the Pihi Kaha Business Case to Cabinet, no specific funding for achieving broader outcomes was requested, though broader outcomes were to be considered within the project. To respond to this, Te Whatu Ora has set up a Broader Outcomes Advisory Group. This is a solid achievement given the modest consideration of Broader Outcomes within the business case. Since the business case, Te Whatu Ora and the Broader Outcomes Advisory Group have undertaken several pieces of work:
- Engagement with Government agencies, Māori organisations, Pacific stakeholders and disability advocates
- Information events with Northland businesses, held alongside TPK
- A Broader Outcomes Strategy document (June 2023) setting out six aspirations, with proposed actions and responsibilities. The six aspirations are: Local procurement; Local procurement targets supporting Māori and other priority groups; Industry apprenticeships and construction sector management roles for all, but particularly for Māori and other priority groups; Enhance worker engagement with the project; Pay a living wage to as many employees and subcontractors as possible.
- The Broader Outcomes Strategy seeks to develop and use SMART objectives for all aspirations. Jointly setting Māori and Pacific procurement targets with community organisations to inform the Broader Outcomes Strategy. Where a target is not set, monitoring of achievement will occur, with a desire to improve year on year.
- The development of a draft Aspirations Report (December 2023), which maintains the six aspirations from the Broader Outcomes Strategy and provides additional suggestions about how each aspiration might be actioned/proceed.

There are many Māori businesses in Northland and their success is critical for social gains for Northland

- Interviewees described there being upwards of 2,000 Māori businesses in Northland, but most are sole traders. About 230 Māori businesses (all sectors not just construction businesses) are on Amotai's Northland database of potential suppliers to Tier One providers. The CUP has approximately 14 Māori construction businesses in Northland who have applied or are receiving support. There are very few Pacific businesses in Northland, with Amotai's database having fewer than five.
- Te Hiringa Trust and Business Promotions role is to lift and support Māori small and medium enterprises, Māori owners of collective commercial assets, Māori Leadership, Mana Wahine and Rangatahi. Many of their businesses which are engaged are from the mid-North up, showing there is substantial capacity beyond Whangarei.
- Several interviewees described the only way to reduce reliance on imported workforce's is to grow the local workforce.
- More than half of all children born in Northland are Māori and over 35 percent of the total population is Māori. Therefore, any solution to growing the local workforce must work for all businesses including Māori businesses. This is because Māori businesses are 3.5 times more likely to hire a Māori worker than businesses owned by other ethnic groups.
- The social benefits of employment are numerous and significant.

Use of local labour in the Far North is important

- Participants in the Far North and constructors both described how infrastructure projects were highly reliant on local labour. Construction workers would not drive from Whangarei daily as it was time/cost prohibitive. Importing workers to stay locally worked for a small number of hard-to-fill roles (staying in motels for short periods). But for all other workers, participants described how locals needed to be hired to project manage and deliver the project. With local

project management, networks could be used to find local workers. Participants had not experienced other alternatives.

People who miss out on employment may drift further behind

- Several participants described a concern for those who are unemployed and ultimately miss out on jobs from major infrastructure projects. As household incomes rise around them, this has the potential to further marginalise those people, and widen the gap between themselves and others who gain the employment, skills and income. Participants were particularly concerned about the potential for rising property rents.
- One labour force provider described past examples where international migrants have been 'green-lit' for lower skill jobs such as builders labouring, stop-go, truck driving, etc. The participant described examples in public-, private- and iwi-led projects.
- Once migrants have completed their infrastructure project contract, they then compete with local people for future work.
- Northland has 7,500 job seekers, the highest rates in the country (out of population of 200,000).

Te Hiku Iwi Development Trust, MSD and others are working on successful interventions to bridge the gap between people and work

- Some geographic areas of Northland are more challenging to work in than others. For example, MSD notes that Kaitaia and Kaikohe have far greater levels of deprivation and intergenerational unemployment than Kerikeri. Hokianga is more remote again. Issues such as little to no cellphone reception and higher costs of living compound access to training and employment.
- An innovative wrap-around pilot programme (Tupu) sought to move people from the benefit into work in the horticulture sector had an intake of twenty people. On completion (during and through challenging Covid conditions, 15 had completed industry certifications, 14 had level 2 qualifications, and 13 were in full time off-benefit employment. Employer perceptions about hiring local people had also shifted.
- A Hauora Academy has been established in February 2024 to bridge secondary students into Māori health care.
- Kaitaia College has a Trades Academy for the following topics: Automotive; Mechanical Engineering; Agriculture; Horticulture; Forestry. It also offers vocational pathways in construction and engineering.
- The Mayor's Taskforce for Jobs, alongside the Ministry of Social Development, codeveloped a bespoke set of interventions to get young people into full time employment. MSD also provide many other initiatives:
 - An employment service
 - Investment in training and development
 - Work alongside Te Pūkenga
 - Funding for skills for industry, to get people ready for certain roles e.g. driver licensing, healthcare assistant
 - Offer a trades training fund, a Māori trades training fund, and a youth development training fund
 - Investment solutions where MSD invests in an individual to work e.g. training subsidies, wage subsidies
 - Emergency housing
 - CV design, family violence, AOD, preparing people to look for work.

There are additional challenges to training in Northland:

- Participants described how students from low income households struggle with fees and having no income while training. Participants strongly supported further development of earn as you learn options for people in training.
- Travel distances for learning and certification lead to further barriers to training. Participants described these as arising from the need for a vehicle/licence, additional (unpaid) time commitments, and consequent travel costs. Participants strongly supported further development of options for training and certification that are dispersed across Northland.
- Trainers travelling to Whangarei struggle to find affordable accommodation.
- If people travel outside of Northland to train i.e., beyond Whangarei, there were concerns expressed about the likelihood of those people staying in Northland to live and work once training was complete
- Because of low school achievement in Northland, people seek entry into tertiary education with insufficient qualifications. This is surmountable by carrying out a foundation year, but this takes time and has substantial costs for the learner, especially as they use their fees free year. Participants strongly supported further development of tertiary options for delivering foundation courses at the same time as completing year one courses.
- Once trained, there is no guarantee of employment as many employers seek experienced staff able to work on large and complex infrastructure projects. Projects need enough people who are skilled to mentor new workers, and these mentors can also be in short supply.

Education is a critical determinant of Northland's wellbeing

Several participants commented on the need for clear education pathways for children in Northland. Others noted the clear academic benefits of children attending kura kaupapa method schools over mainstream schools. The data shows approximately 60 per cent of Māori children achieve NCEA Level 2 in kura versus 40 per cent of Māori children in mainstream schools, even when controlled for socio economic status and other variables. Participants noted the low pass rates of children in Northland compared with other regions in New Zealand.

Construction workforce shortages can lead to issues for procuring agencies

Government sector interviewees had experience of construction companies showing little interest in bidding for their work. Construction interviewees said this was due to workforce shortages, especially alongside onerous bidding and contracting requirements.