Otago Construction Labour Forecasting

Ancillary Report

July 2020

Prepared by:

BCITO buildingpeople

Infometrics

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For the following Key stakeholders:

Ngāi Tahu
Ministry of Social Development
Enterprise Dunedin
Waitaki District Council
Clutha District Council
Otago Chamber of Commerce
Otago Southland Employers Association
Central Otago District Council
Queenstown Lakes District Council

Important note regarding this document and its connection to other project resources.

This ancillary report provides detailed insights, case studies and supporting information in support of the Otago Construction Labour Forecasting Post COVID-19 Update and Executive Summary report.

This report was written prior to the COVID-19 Lockdown on March 25th 2020, some sections on the impacts of COVID-19 on venerable groups has been added and graphs and associated text relating to forecast figures has been updated but the full narrative and language of the report has not been updated in light of COVID-19 impacts. The findings continue to be highly relevant but should be read in conjunction with the Post COVID-19 Update and Executive Summary which includes:

- COVID-19 Update
- Opportunities for the construction sector
- Supply of and demand for labour
- Recommendations for next steps

Also part of the project documentation and deliverables are:

- Construction activity and demand for workers in Otago: a 15-year February 2020
- Otago Construction Workforce Forecasting tools *project* and *contracted* versions July 2020

Contact details for primary research and data sources

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Section 1 – Context

Background

Construction in Otago is booming with significant commercial, residential and infrastructure projects planned for the next decade. But the sector is already working near capacity with labour, particularly skilled labour, in short supply. This creates a real risk that there will not be the amount of workers required to put planned projects in place.

In this context a consortia of the five local councils and five economic development agencies that make up the Otago region, together with Ngāi Tahu and the Ministry of Social Development, initiated a project to examine the demand for construction labour. The project aimed to:

- Create a complete picture of significant construction projects in Otago from 2020 – 2035
- Forecast demand for labour, at both a local and occupational level
- Provide options for meeting forecast demand

Subsequently, the project was expanded to include forecast supply of labour into the sector. This report summarises the findings from the project. This section provides background about the construction industry in Otago. Subsequent sections examine and discuss:

- Major projects
- Opportunities for the construction sector
- Supply of and demand for labour
- Recommendations for next steps

Regional Consultation

Underpinning the research and findings presented in this report were four significant rounds of regional consultation supported by a project webpage, regular email updates and strong support from the project governance group. The project team would like to thank all those who gave their time to ensure the success of this project.

The four rounds of consultation included:

1. Multiple in-depth discussions with council, industry and community stakeholders across the Otago and Southland regions from August – October 2019. Stakeholder meetings identified current and future project as well as exploring barriers and opportunities facing the construction sector locally and across the region;
2. In November 2019 three regional presentations of provisional project lists' construction workforce demand forecasts and across the Otago and Southland regions;
3. In January 2020 an opportunities framework (see *Figure 2 Options framework for meeting workforce needs* on page 32) was workshopped with stakeholders to identify four key areas of opportunity; and
4. In February 2020 two regional workshops, both attended by over 20 regional representatives, were held in Coastal and Inland Otago to develop the overarching solutions and four focus areas discussed in Section 2 of this report and captured in *Figure 1 Focus areas* on page 9.

The Otago region

The Otago region is home to 225,000 people and five local councils – Dunedin City with 130,000 people, Queenstown Lakes District with close to 50,000 people and Waitaki, Clutha and Central Otago districts with around 20,000 people each.

Geographically, the region has two main parts:

Coastal Otago

Dunedin City, Waitaki District, and Clutha District

Inland Otago

Queenstown Lakes District and Central Otago District

While there are labour flows between different parts of the region, Coastal and Inland Otago function as two distinct labour markets with different labour pools, types of construction projects and financial and industry drivers. The Coastal Otago labour market is centered around Dunedin with education, health and government being key industries with agriculture also playing a significant role. Queenstown is the largest hub in the Inland Otago labour market and tourism is the dominant industry, with primary industries again playing a significant supporting role.

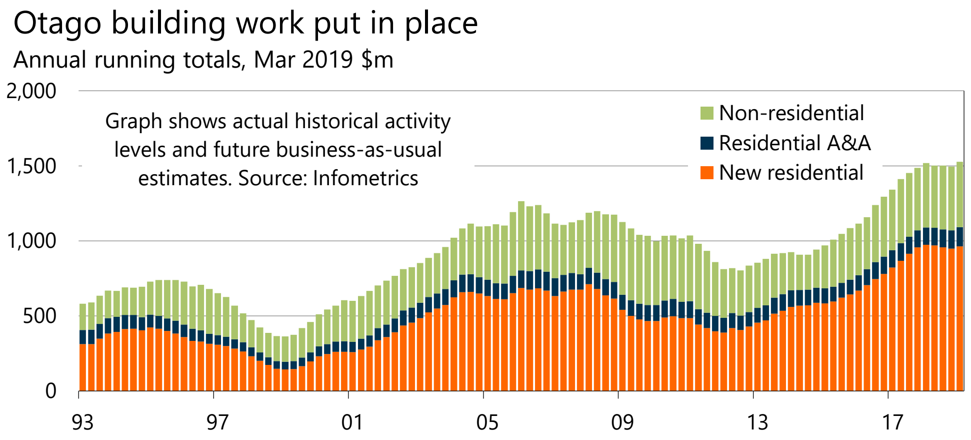
Inland Otago has seen some of the strongest population growth in New Zealand over recent years with more than 20% growth from 2013 – 2018, more than double the national average of 10%. Coastal Otago has seen much more modest growth with just under 3% growth from 2013 – 2018.

The challenges and opportunities therefore also differ between these two parts of the region. Information is broken down into these two areas where possible in this report.

Construction in Otago

Construction in Otago is at historically high levels with over $1.5 billion worth of building work put in place in the year to March 2019. Over the last 20 years the region has seen two periods of strong growth, 1998 – 2008 and 2012 – 2019, with a short period of decline due to the global financial crisis in between. New residential builds, along with some increase in non-residential construction, have been the primary drivers of strong growth in the region. Graph 1 shows building work put in place over the past 25 years.

Graph 1.



From December 2012 to March 2019 there has been a 64% increase in total construction activity in the region, equating to an average growth rate of 8.3% per annum. This rate is well in excess of nationwide growth in construction activity, which has averaged 5.7% per annum over the same period.

New residential construction has made the biggest contribution to growth in activity since 2012, increasing at an average of 13.8% per annum and representing 72% of the lift in total construction since December 2012. Average growth rates for other building types in Otago over this period are 4.6% per annum for residential alterations and additions (A&A), 5.6% per annum for non-residential work, and 2.5% per annum for infrastructure activity.

Inland Otago

Queenstown Lakes

Growth in new residential building activity in Queenstown-Lakes is responsible for 73% of the increase in new residential building activity across the entire Otago Region since December 2012. Even more astoundingly, Queenstown-Lakes' new residential building activity accounts for 52% of growth in all construction activity across Otago since 2012.

New dwelling consent numbers reiterate the extent of growth in residential building activity in Queenstown-Lakes. Annual dwelling consent numbers in the District totalled just 314 in 2011, but had more than quadrupled to 1,293 in the year to February 2018. This peak represented an increase of more than 50% on the previous record reached in May 2004.

This focus on Queenstown-Lakes' residential construction is not to say that non-residential activity has not grown as well. In fact, non-residential work put in place in the District has expanded by an average of 20% per annum since December 2012, outpacing the 18% per annum growth in new residential activity. However, the volume of new residential construction in Queenstown-Lakes is about three times the volume of non-residential work. In other words, the sheer size of the residential subindustry in Queenstown-Lakes means that its growth has far outweighed the influence of non-residential activity in the District.

Central Otago

Changes in construction activity in Central Otago largely reflect the pattern of growth seen in Queenstown-Lakes' construction industry. In fact, since the end of 2012, growth in new residential building activity in Central Otago has slightly outpaced growth in Queenstown-Lakes. However, Central Otago's smaller size means that the District's increase in new residential building only represents about 12% of the lift in total construction activity across Otago during this period.

Coastal Otago

Dunedin

The difference between Queenstown-Lakes and Dunedin, in terms of construction activity, could not be much starker. Even with residential consent numbers in the City reaching a 24-year high in 2017, new residential building activity has only grown by an average of 5.2% per annum since December 2012. New residential work put in place has so far failed to surpass the peak reached in 2007 before the Global Financial Crisis. Growth in residential additions and alterations work has been even more muted.
In late 2018, the volume of non-residential work put in place dipped below its 2012 level, as recent significant building projects at the University of Otago were completed.

Waitaki

Growth in construction activity in Waitaki has been sedate during recent years. New residential activity lifted 24% between December 2012 and March 2019, but non-residential construction has been relatively steady, rising by just 1.7% over the same period. As a result, total construction (excluding infrastructure) in Waitaki has expanded just 9.2% since 2012.

Clutha

Growth in Clutha’s new residential construction activity over the last 7 years has been stronger than in Waitaki, with work put in place increasing by 56% (or an average of 7.9% per annum) between December 2012 and March 2019. However, this increase has been outweighed by a 46% drop in non-residential activity in the District over the same period.

Section 2 – Major Projects

Otago has a large number of major non BAU construction projects planned over the next 15 years. There are a few very large projects, most notably the new Dunedin Hospital, which have a high public profile. Sitting alongside these high profile projects are a number of projects that are over and above what might be built during business as usual.

Included projects

For this project, we identified and examined major construction projects which were valued at $20 million or more. This includes work programmes with a number of smaller components that collectively are worth more than $20 million. We then applied a risk rating to each project to determine the likelihood of proceeding. The analysis in table 1 excludes a small number of projects we deemed very unlikely to be put in place.

In total, there are 88 projects planned over the next 15 years with a value of $20 million or more. This includes 14 projects with a value of $200 million or more. The two largest projects – Dunedin Hospital and Lakeview – are profiled on the following pages.

Collectively, projects worth over $20 million have a combined value of just under $10 billion. Coastal Otago has $3.3 billion of projects, almost all in Dunedin City, while Inland Otago has $6.4 billion worth of projects, located primarily in Queenstown, Wanaka and Cromwell.

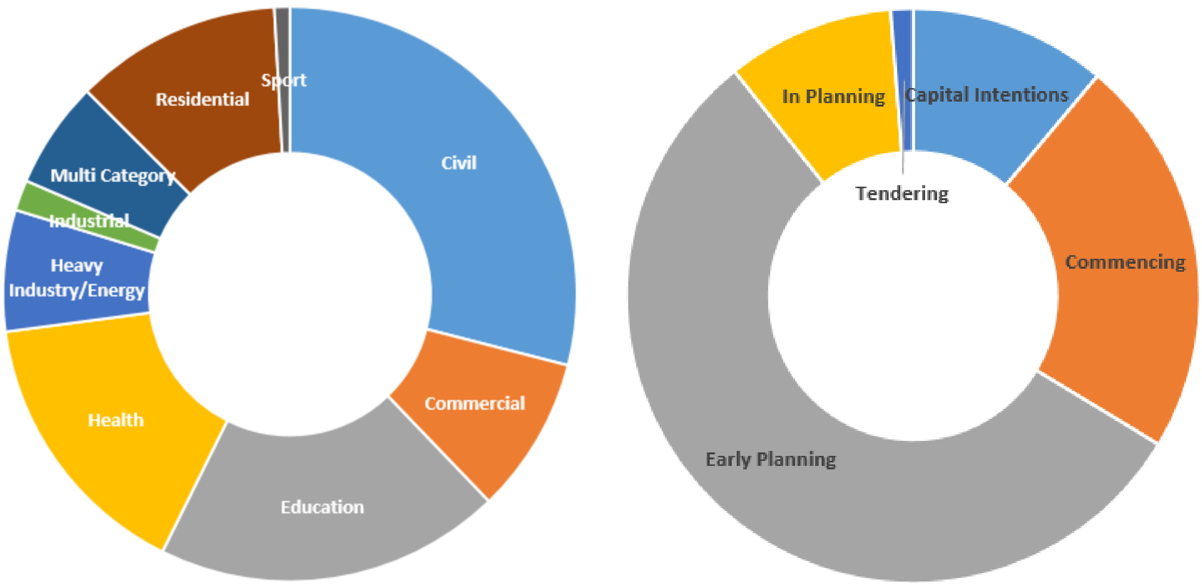
Nature of projects

The types of non BAU construction projects are very different between the two parts of the region. In Coastal Otago the new hospital makes up 42% of total project spending with Education adding another 28% and infrastructure a further 21%. This means that more than 90% of project funding is publicly driven. In contrast, in Inland Otago 50% of project spending is commercial and 39% is residential, meaning almost 90% of funding involves private or commercial investment. These different drivers mean that solutions to meeting labour demand need to be different. There is also considerably higher risk of projects not happening in Inland Otago as commercial investors are more likely to delay or change plans if economic or labour market conditions deteriorate.

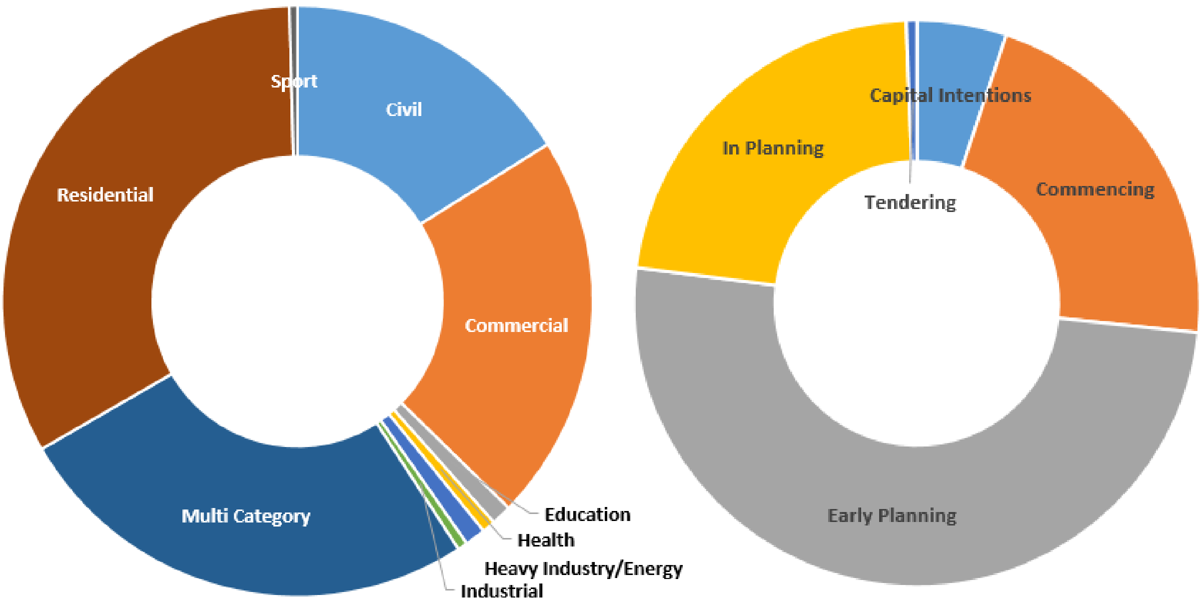
Graph 2.

Planned major construction projects in Coastal and Inland Otago by type of work and stage

Coastal Otago



Inland Otago



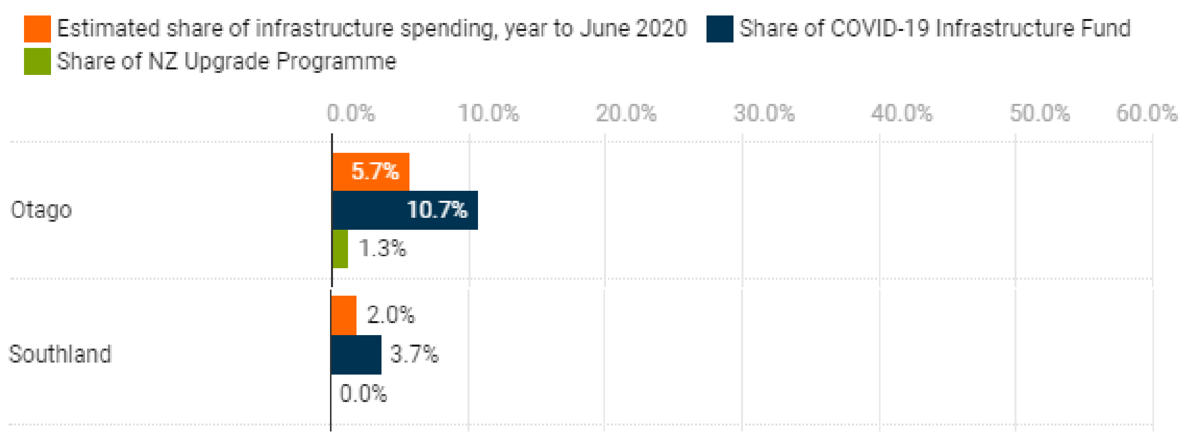
“Shovel-ready” infrastructure work

The government has provided details of the regional split of funding across the 150 projects that have been approved as part of the $2.6b post-COVID energiser.

Graph 3 compares the regional split of the new package with Infometrics estimated regional breakdown of infrastructure spending over the year to June 2020. Unlike the NZ Upgrade Programme announced in January and prior to COVID-19, this new package has much broader regional coverage.

Graph 3.

2020 shares based on Infometrics Infrastructure Pipeline Profile



Source: Infometrics https://portal.infometrics.co.nz/Articles/Article/11310

This outcome aligns with the government’s aim of funding a wide range of relatively small projects that will benefit a wide range of businesses across the country. It is a significant contrast to the NZ Upgrade Programme, which will benefit only the small number of firms that are eventually awarded the contracts – much like the previous government’s Roads of National Significance.

The fact that the average project size in the post-COVID fund will be about $17m, as opposed to the $402m average for the projects in the NZ Upgrade Programme, reinforces this difference.

Looking at the regional breakdown shows that there is something of a provincial bias in the government's distribution of spending. Waikato, Wellington, and Auckland contain three of the country's four largest cities but are set to receive the smallest amount of funding relative to their baseline infrastructure spending. Seeing Otago feature towards the top of the list is reassuring, given the massive effect that the border closures and loss of international tourism is having on this region.

Optimism Bias

It is important to bear in mind that there is typically a significant "optimism bias" when future projects are discussed. At any given point in time, there is likely to be a large number of potential projects in the planning pipeline, but it is unlikely that many of these projects will go ahead, at least in terms of the timeframes that developers or project backers are publicly asserting.

This issue is one that is regularly grappled with by BRANZ and Pacifecon when preparing the National Construction Pipeline Report for the Ministry of Business, Innovation and Employment[1]. In particular, the expected timing of private sector projects tends to be biased towards them being built sooner than actually occurs, creating a "hump" of expected projects in the near term, with fewer projects in later years when there is less certainty about economic and market conditions.

[1] See www.mbie.govt.nz/dmsdocument/6795-national-construction-pipeline-report-2019.

New Dunedin Hospital

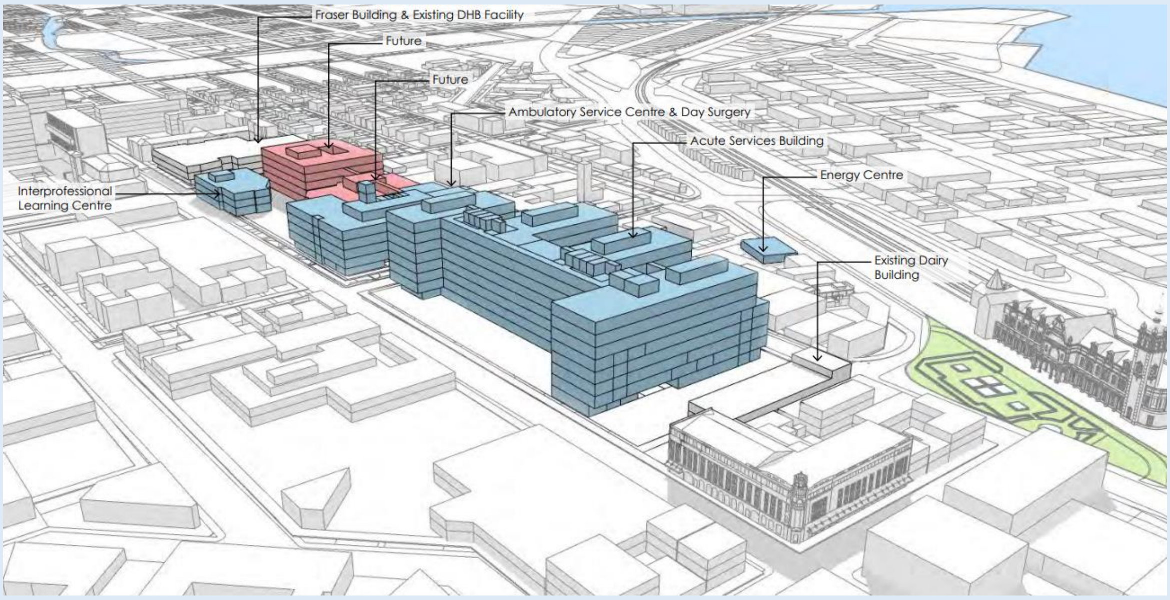
Construction of a new hospital in Dunedin begins in March 2020. This new hospital will completely replace the existing hospital that was no longer fit for purpose. The hospital will be located over two city blocks in central Dunedin, close to the existing hospital, Otago University and the city centre. When built, the new hospital will be the most modern hospital in New Zealand, and will serve the whole of the lower South Island.

The hospital build is the single largest hospital build ever in New Zealand and has been called one of the most complex and challenging constructions projects ever seen in New Zealand. The total build is estimated to cost around $1.4 billion and at the peak of the build around 1,000 construction workers will be needed.

The hospital is being built in two main, overlapping stages:

- Ambulatory Services Centre – due for completion in 2024 for an estimated cost of $300 million
- Acute Services Building – due for completion in 2028 for an estimated cost of $1,100 million

Indicative Preliminary Masterplan of the new Dunedin Hospital



Lakeview Precinct

The Queenstown town centre is relatively constrained due to topography and in recent years hasn't kept up with growth in visitors or population. To accommodate this growth, the Queenstown Lakes District Council rezoned a 10 hectare block of land adjacent to the existing town centre and formed a partnership with developers to create the Lakeview Precinct.
The Lakeview Precinct will consist of residential buildings, hotels, co-working and co-living spaces, hospitality, retail, and a hot pools attraction. Construction begins in 2020 and will be phased in seven stages over the next 10 years. Total build cost for the whole project is expected to be over $1 billion.

Artist impression of Lakeview Precinct

Section 3 – Opportunities

It is unlikely that the natural supply of labour in Otago will meet construction industry demand in the near term. Therefore, solutions need to be developed to ensure that there are enough workers, with the right skills, to deliver projects as planned.

Given the size of the shortfall, and the wider economic context, there is unlikely to be any one solution that will solve the labour demand challenge. Instead, a range of solutions need to be put in place to meet labour demand.

During the course of the project BCITO worked with a wide range of stakeholders to identify and develop potential solutions. This process involved:

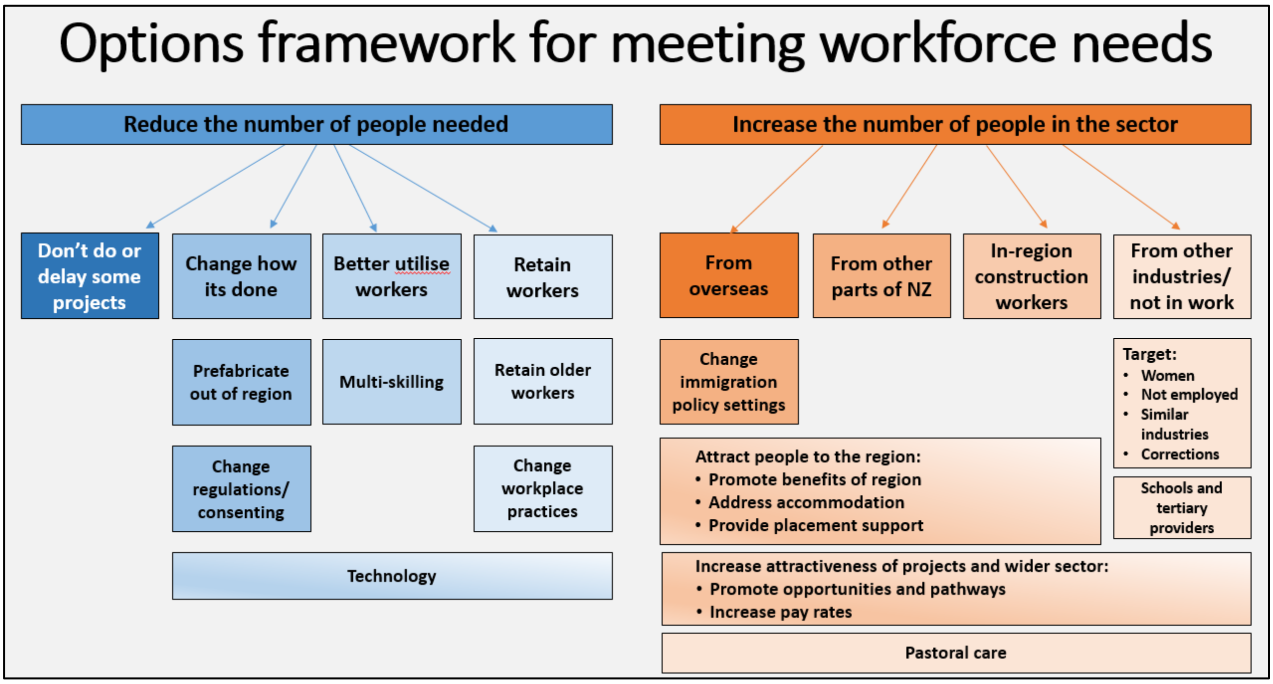
- developing a framework with a long list of options to meet workforce needs
- workshopping this framework with industry stakeholders
- working with key stakeholders to identify a small number of focus areas
- developing more detailed solutions for four focus areas through workshops with industry stakeholders

The framework of options to meet workforce needs is shown in the diagram below.

The rest of this section looks at some overarching considerations followed by detailed consideration of the four focus areas.

Figure 1

Options framework for meeting workforce needs



Overarching solutions

The theme that has emerged most strongly through all solutions is connectedness. This includes connections between people, businesses, agencies, programmes, and even physical connectedness through transport and infrastructure.

Many of the barriers people identified arose when these connections broke down.

Overarching considerations that people identified all aim to increase this connectedness, and should be taken into account regardless of which individual initiatives or solutions are put in place. These include coordination in initiatives, planning and information sharing, and using local and central Government levers.

There is a growing recognition that the construction sector needs to get better at working collaboratively to meet future need. The Government and some major construction firms are attempting to respond to this challenge through the Construction Sector Accord. The impact of this is yet to be seen and will be dependent on how much of the thinking can be put into practice.

Construction Accord

The Construction Sector Accord is a joint commitment from government and industry to work together to create a high performing construction sector for a better New Zealand. The Accord was launched in April 2019 and created a platform for industry and government to work together to meet some of the key challenges facing the sector including skills and labour shortages, unclear regulations, a lack of coordinated leadership, an uncertain pipeline of work and a culture of shifting risk.

Following the launch of the Construction Sector Accord, industry and government leaders worked with the wider sector to develop a transformation plan to put the Accord into action. One of the streams of the Transformation Plan is People Development. This workstream aims to build capability through addressing skills gaps, helping shape the reforms in vocational education, and creating a long-term workforce plan.

https://www.constructionaccord.nz/

At a local level there are a number of things that could be done to improve connectedness, including better coordination of initiatives, information sharing, and collective lobbying of Government.

MahiQL

The **MahiQL working group** is a collaboration between QLDC, employers, Chambers of Commerce and social agencies with the common goal to attract, retain and optimise the workforce in Queenstown Lakes. It was established in 2019 and has a vision of:

A thriving business community in the Queenstown Lakes driven by talented people (from all over NZ and the world) who love living and working here.

This will be achieved by the group:

1. Formulating and implementing a labour market strategy by sub-region and sector
2. Influencing central government policy decisions and practices to meet the unique needs of the sub-region
3. Supporting settlement of new arrivals

MahiQL has three workstreams, each focusing on one of these goals. These are:

1. **Employer Levers** - Goal: Formulate and implement a workforce development plan by district and sector with input from employers and stakeholders
2. **Immigration Policy / Action** – Goal: Influencing immigration policy decisions and practices to meet districts unique needs and upskilling employers around best practice
3. **Community Settlement & retention** – Goal: Support settlement of new arrivals to ensure integration and support within the community and retention in district

During the course of the project, people identified a number of programmes, initiatives, and solutions that were already in place but were being done on a small scale. Similarly, there were some good things happening that were being replicated with considerable effort in multiple places. There could be real gains by coordinating initiatives and better connecting things that are happening. This could potentially be an important function of a skills hub, which is discussed in more detail in the following section.

Improved information sharing would also have significant benefits. A number of government agencies and local councils, as well as private companies, have information that is highly relevant to work happening in construction. However, there often aren't mechanisms or motivation to share this information. This means that each organization has knowledge about a particular aspect of the construction labour market but nobody has a complete picture. One of the positive outcomes of this project is that there has been more sharing of this information. There would be real benefit in having a more coordinated means of sharing and disseminating information to employers, career seekers, organisations involved in planning, and other interested parties.

Effective use of Government policy levers could make it easier for the Otago region to meet peak construction demand. Government levers include migration, procurement of public sector building projects, incentives for employers, and provision of secondary and tertiary education. As a region, Otago could collectively lobby Government to put in place programmes and initiatives that will increase the supply of labour. In addition, Dunedin Hospital is a flagship project for the current Government. This means they have a prime opportunity to put in place measures that develop the workforce and the region at the same time as building the hospital.

Four focus areas

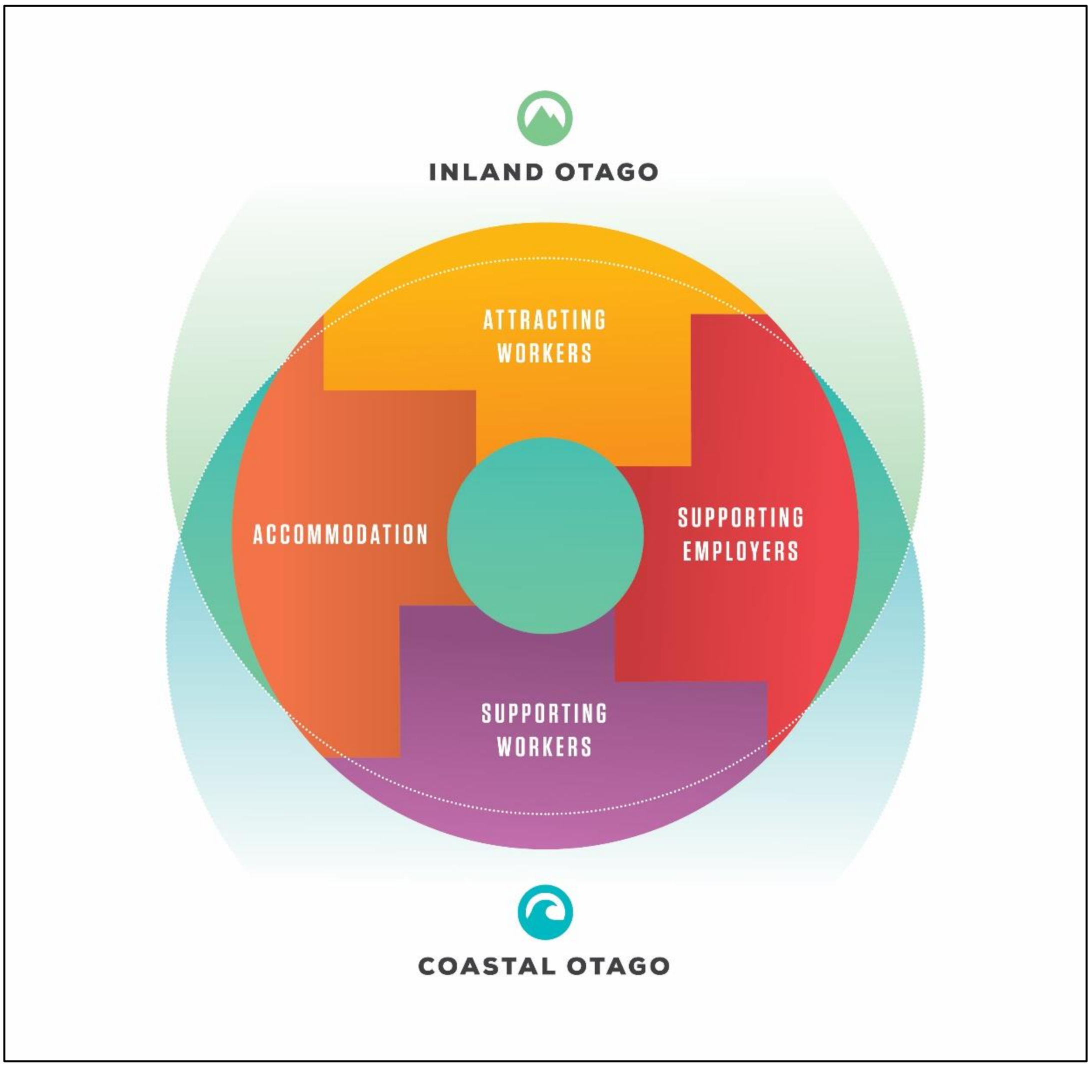
Stakeholders identified four focus areas with the biggest potential to help meet the demand for construction labour. These were:

- Attracting workers
- Supporting employers
- Supporting workers
- Accommodation

Each of these areas are interlinked and cannot be done in isolation. Many solutions or actions fit within one of the four focus areas but have connections to one or more of the other areas.

Figure 2.

Four focus areas for meeting construction demand in Otago



Attracting Workers

The issue

To meet the demand for construction workers in the region the sector needs to attract a significant number of new workers. Some of these workers might come from within Otago while others will need to be attracted from other parts of New Zealand or overseas. There is relatively limited scope for in-region attraction of workers due to the very low unemployment rate, particularly in inland Otago, and the relatively slow growth in young people entering the workforce.

Considerations

Attracting workers needs to have a focus on regional development and employing local people first where possible. Employing local people will benefit the local economy both in the short-term and also in the long-term as local people will be more likely to stay in the region post-build.

At the same time, from a regional development point of view it is important not to decimate local industries by attracting all their workers. For example, if a large number of hospitality workers were to move to construction in Queenstown there might be enough workers to build new hotels but nobody to staff them. Similarly, manufacturing and primary sector employers in towns surrounding Dunedin could struggle to operate if a significant number of their workers decide to work on the hospital build.

There also needs to be careful consideration about how many workers need to be attracted for a short-term basis and how many for more long-lasting employment. Being clear about how long roles are needed on a particular project, and in the region more generally, will enable better-targeted recruitment.

To meet the significant different gap between labour supply and demand, businesses need to consider hiring people from more diverse backgrounds than they usually employ. In particular, the sector needs to get better at attracting women. Nationally women make up only 3% of people in core construction trades roles. Otago has a higher percentage of female apprentices than the national average with women making up more than 5% of apprentices. Attracting more women to the sector and making the sector a more appealing place for them to work would have significant benefits in terms of meeting demand but also wider benefits that come from having a more diverse workforce.

Solutions

- **Change perceptions of the sector**
- **Create better linkages with schools**
- **Create pathways for people not in work or in other industries**
- **Target immigration policy settings**

Change perceptions of the sector

The construction sector has suffered from the perception that it is not a desirable place to work, or not a sector of choice. This is especially common among parents and influencers of young people who often encourage young people to go to university instead of pursuing a career in the trades. This is often based on out of date perceptions about the sector or lack of knowledge about what it is really like to work in the sector.

One of the ways to change perceptions is to better promote the opportunities that the sector has to offer. This can focus on the range of careers available, the employment and wage outcomes in construction compared to other sectors, and the lifestyle benefits of working in the sector. In addition, celebrating real-life success stories, particularly of young people, can be a great way of changing the way people think about working in construction.

Tricky Chat

Following the success of the "A Tricky Chat" TV advertisement in 2019, BITO took a bold step to change the negative perception of the trades by influencers (parents, family member). Did it work? Yes, not only with influencers but we saw a positive shift by career seekers wanting to explore the opportunities in building and construction. We also saw a rise in social media engagement, with people wanting to know what happened next. Did Michael the young career seeker pursue a career in the trades or did he follow what his parents wanted, which was for him to go to university?

This year's campaign answered the question, and on February 16 BCITO launched "Tricky Chat II – The Stake Out". One year on we saw Michael enjoying the "tradie" life, and promoting the key benefits of an apprenticeship, such as the work life balance, receiving a qualification, career progression and more importantly the demand for jobs in construction. The campaign this year also promoted diversity to the wider audience, that an apprenticeship in the trades is an option for anyone. Tricky Chat 2 has seen the conversation ignite again, with more people commenting on the benefits of vocational education.

Another focus area is the way that construction has, and continues to, change. Most people think of working in construction as working in a small number of roles in traditional settings. The reality is that there is an increasing range of roles in a wide variety of settings. Technology is transforming many roles in the sector. This will make them more attractive to many young people as well as enabling a wider range of people to work in the sector. Promoting these roles and opportunities will attract more people to the sector and also change the way that it is viewed more widely.

Continuing to improve the sector itself will also change perceptions. Historically there have been some poor employment practices and workplace conditions in some businesses in the sector. While this is starting to change, more could be done to make the sector a safer and more desirable place to work. This is covered in more detail in the section on supporting workers.

Considerate Construction Scheme
The UK Considerate Constructors Scheme is a not-for-profit, independent organisation founded in 1997 to raise standards in the construction industry.
Construction sites, companies and suppliers voluntarily register with the Scheme and agree to abide by the Code of Considerate Practice, designed to encourage best practice beyond statutory requirements. The Scheme is concerned about any area of construction activity that may have a direct or indirect impact on the image of the industry as a whole. The main areas of concern fall into three categories: the general public, the workforce and the environment.
Considerate constructors seek to improve the image of the construction industry by striving to promote and achieve best practice under a Code of Considerate Practice. There are five key parts to the Code of Considerate Practice:

- **Care about Appearance** - Constructors should ensure sites appear professional and well managed
- **Respect the Community** – Constructors should give utmost consideration to their impact on neighbours and the public
- **Protect the Environment** – Constructors should protect and enhance the environment
- **Secure everyone's Safety** – Constructors should attain the highest levels of safety performance
- **Value their Workforce** – Constructors should provide a supportive and caring working environment

Create better linkages with schools

One of the in-region sources of potential workforce is young people coming out of school. In Coastal Otago the number of school leavers has been relatively static for more than a decade and is forecast to continue to remain at a similar level in the foreseeable future. In Inland Otago school leaver numbers are increasing, in line with general population increases, but the absolute numbers are still relatively small. In addition, Otago has the highest rate in the country of school leavers transitioning directly to university. To attract more school leavers the sector could change perceptions of influencers, as covered above, get more school students involved in construction programmes, or create better linkages between schools and industry employers.

There are a number of school-based programmes that already exist that give students a taste of construction, and in some cases an initial entry point into the sector. Gateway and BCATs are two long-standing programmes in this space. Students that participate in these programmes are considerably more likely to enter the construction sector when they leave school. However, some schools do not actively encourage these programmes, or don't offer them at all, and there are also constraints around funding, finding employers, and perceptions of teachers. Increasing the number of people involved in programmes like gateway or BCATS could drive more school leavers to transition into the sector.

Another solution is to improve the linkages between schools and employers in the industry. There are a range of things this could involve such as work-placements, partnering for projects, or holding careers events. Creating these linkages benefits young people as they can understand the sector better and benefits employers as they can connect with young people prior to employing them. There are some existing one-to-one relationships between schools and employers. There is scope for doing this more collaboratively as a sector which would give young people exposure to a wider range of options, and make more efficient use of employers time.

Create pathways for people not in work or in other industries

Another source of potential construction workers is people who are already in Otago who are either not in work or who are working in other industries.

Otago has one of the lowest unemployment rates in the country with an official rate of 3.8% in the December 2019 quarter. This means there are very few people who are actively looking and available for work. Unemployment is especially low in Inland Otago. In that part of the region there are only 293 people receiving the job-seekers benefit in June 2019. Coastal Otago has slightly higher rates of unemployment and numbers of people receiving the job-seekers benefit. In the June 2019 quarter there were 4,305 people in Coastal Otago receiving that benefit. Low unemployment means that there are not large numbers of people that could be attracted to construction and also that many people who are currently unemployed are likely to need higher levels of support to enter employment. There are some existing programmes and incentives that are already having success in assisting people who are unemployed or on benefits to enter the workforce. The construction sector could work with agencies offering these programmes and incentives to actively target and support more people through these channels.

Mana in Mahi

Mana in Mahi is aimed at upskilling New Zealand jobseekers into industries with recognized skills shortages. It offers employers financial incentives for employing either a Work and Income job seeker, or someone not on a benefit but with barriers to employment, with the intention of offering either an apprenticeship or industry related qualification.

Most jobseekers who partake in Mana in Mahi will start their paid employment on day one and work towards a relevant industry training qualification. Work and Income offers the employer a wage subsidy of $9,580 for 52 weeks plus job training costs of up to $2,000.

Work and Income also assists new workers to seamlessly commence work by meeting other needs such as:

- Upgrading from a restricted to full drivers' license
- Purchase of appropriate footwear
- First aid training and certification
- Other employment related training ie Site Safe certificate, safety at heights, etc.

There are also groups of people in the Otago labour market who are not captured in the unemployment rate or the benefit numbers but who are not in the workforce. This includes people such as those who are retired, caring for children, playing professional sport, or full time studying. Some of these people might choose to enter the labour market if employment options are attractive enough. Attracting these workers could involve targeted recruitment campaigns as well as more flexible work practices such as reduced hours or a different scope of work. Some of these options are explored in the section on supporting workers.

Building a future outside of rugby

In the Southland Rugby Academy players are literally building a future for themselves. The players are working on dual careers by doing apprenticeships while participating in the rugby academy programme, similar to other Academy players across the country. The New Zealand Rugby Players' Association has teamed up with BCITO and developed a special programme to offer professional players the option to start apprenticeships while still playing.

In Southland there is nearly a full house of Academy players doing building. Eight players are doing their building apprenticeships, while another is doing a boatbuilding apprenticeship. As many of these young players have found out, the most challenging aspect of being in an Academy and doing an apprenticeship or working is learning to balance work, study and training. However, like many former Academy players have found out, learning the valuable skill of good time-management and developing a good work ethic has set them up well for their career both in rugby and outside the game.

This opportunity is open to players playing professional rugby for a Super Rugby, National Sevens, Black Ferns or All Blacks team. These athletes are able to make a start on their apprenticeship theory studies while still playing, which up until now hasn't been practical under the traditional apprenticeship scheme. Meanwhile, players at the Academy and Mitre 10 Cup level are able to undertake standard apprenticeships.

Another in-region source of potential construction workers is people working in complimentary industries. There are many skills that are transferrable across industries and could be applied to construction. This is particularly true for lower skilled roles. Construction employers could actively look for people working in these similar roles. From a regional development perspective, this solution could potentially be problematic if large numbers of workers leave other industries to work in construction. However, there could be some innovative solutions for making use of workers in seasonal industries, for example employing viticulture workers in the winter months. There could also be solutions involving employing workers from other industries as they have downturns.

Target immigration policy settings

Immigrant labour is increasingly becoming critical to the construction workforce. This is especially true in Inland Otago where people on short term work visas make up a significant part of the sector. In Coastal Otago the number of migrant workers is considerably lower but there are opportunities for this to increase.

Both temporary and long-term migrants could be attracted to the Construction sector. Temporary migrants are especially useful for meeting short-term workforce needs, often at the peak of major projects. There is also scope for using short-term migrants in highly specialised roles that are required for a short part of a project. Long-term migrants are an option where there the level of work is sustained beyond the lifespan of a particular project. Long-term migrants often bring family and settle in the community which has benefits for regional development as well as the construction sector.

For businesses to be willing to take on migrants there needs to be favourable immigration settings. Businesses also need to have confidence that the migration settings are not going to change or be applied unevenly. Many businesses believe that recent migration settings have made it more difficult to attract the migrants needed to complete the volume of building work needed. In addition, many employers have voiced frustrations about what they see as processes that change frequently or are unduly difficult to navigate. Central government could use immigration policy settings to enable and encourage construction businesses to make use of migrant labour when it is required.

Supporting employers

The issue

Employers, particularly trades employers, are at the core of the construction industry. Companies frequently referred to as *Tier One* contractors often tender for and lead projects but they are not always the ones who employ workers on site.

Employers, particularly small business employers felt the most venerable and least able to influence the construction ecosystem. National data in 2018 showed 62% of businesses in the construction industry were sole traders, 26% employed 1-5 staff, 9% employed between 6 and 20 staff, 3% between 21 and 100 staff and 0.3% or 207 companies employed more than 100 people (see Graph 11).

Considerations

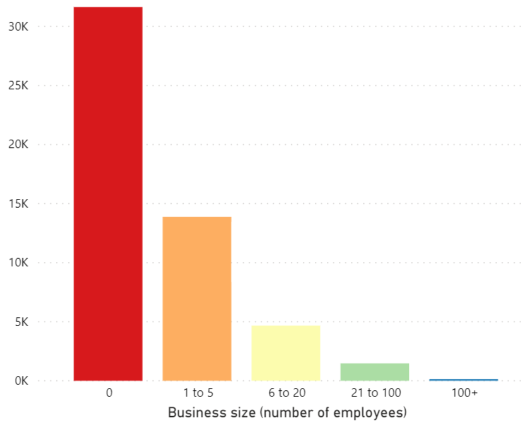
As noted in the 'overarching solutions section', the theme that has emerged most strongly through all solutions is connectedness. In the employer context this includes connections between people, businesses, local and national government. Connectedness and the ability to be heard and influence gives employers agency.

The construction industry is reasonably mature in the Otago region (see Graph 12) with 49% of companies employing staff having been in business for over nine years. This points to the sector having established informal networks which can be used as a building block for future collaboration.

There is a growing recognition that the construction sector needs to get better at working collaboratively to meet future need. The Government and some major construction firms are attempting to respond to this challenge through the Construction Sector Accord. The impact of this is yet to be seen and will be dependent on how much of the thinking can be put into practice and the agency it gives to SME employers. The goal for all concerned should be having long term, capable and profitable companies.

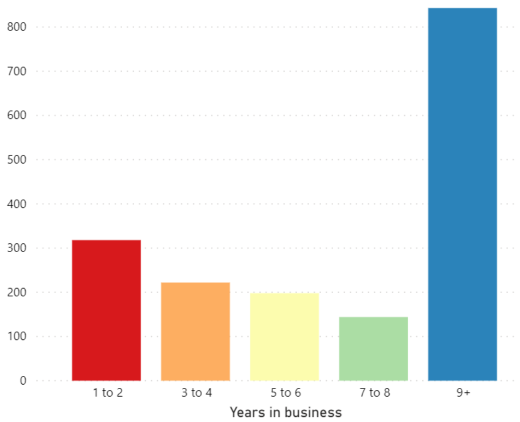
Graph 4.

Business count by size all construction companies in New Zealand (2018)



Graph 5.

Business count by maturity in the Otago region (2018)



The Construction Accord group described the challenges for various employer groups as shown in the table below. This highlights that there are different issues facing different types of employers in the sector, and solutions need to be tailored to meet differing needs.

TABLE 1.

Challenges facing construction employers by type of business

Employer groups	Challenges
Large Operators	• The pipeline of work isn't clear to me so I don't know if it's worth taking on new staff or investing in new technology • Margins are small and have been decreasing and the risk I take on has increased • The legal and commercial side of the business is too complex • I have to deal with pages of non-standard terms in contracts • It's a hassle working in different regions where the council building regulations aren't the same
Residential Builders	• I need to squeeze my margins in order to secure work – competitors are bidding too low and clients don't understand the impact • It's difficult juggling cash flow when my client doesn't pay on time • I'm often held up by the consent and inspections process – and some of the inspections aren't needed • The Resource Management Act creates a lot of headaches and hold ups • Working in different regions, the BCA regulations aren't the same • I am worried about the poor health and safety culture • Young people don't want to get into this work • I'm worried about the insolvencies I keep seeing around me
Subcontractors	• My prices are undercut • There are not enough people being trained – it's hard to get skilled staff • We are often waiting months to get paid • The head contractor seems to want to pass the risk from the client onto me • I am worried about the poor health and safety culture • Young people don't want to get into this work • There is limited ongoing skills development for me or my staff and I don't know where to go for information • Working in different regions, the BCA regulations aren't the same • There's a lot a stress and worry in this work and I see people struggling to cope

Solutions

- **Procurement models**
- **Make skills and training part of procurement**
- **Collaborative approaches to employment and skills**
- **Align training to skill needs**
- **Focus on retention**

Procurement models

There is a perception in the vertical construction sector that the procurement models in the non-residential sector disconnect people and businesses and that the tendering and contracting model has been the cause of many high profile construction company collapses over recent years.

There is a perception by some stakeholders that there is a more collaborative business model in the horizontal construction sector. The contracting relationship used by NZTA is an example of this more collaborative approach. The vertical construction sector could enhance procurement by adopting some of these practices.

In some cases, contracting models similar to the one used by NZTA were in place but contractors were not always aware the model was used. If organisations in the Otago region have similar partnering contract models in place it would be helpful to communicate it more widely so contractors know and organisations putting contracts into the market have a reference place to go for partnering models.

New Zealand Transport Association procurement model

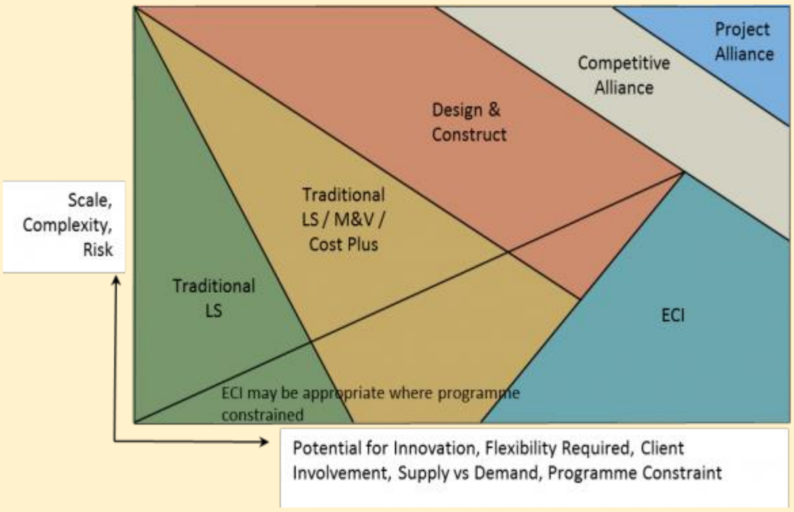
The Transport Agency's capital project contract types are traditional, design and construct, alliance and early contractor involvement. The selected contract type is a function of the project's delivery structure.

Project risk and the potential for innovation are the key criteria for selecting a projects delivery structure. While there is no definitive point for moving from one delivery method to the next, the trend is to move towards full delivery as the risk and potential for innovation increases. There is also room within each of the delivery models to develop alternative methods which best suit the complexity and risks associated with a particular project.

Project alliancing is an approach aimed at creating mutually beneficial relationships between all parties to ensure best project outcomes. Unlike traditional forms of contract where risk is allocated to different parties, under a 'pure' project alliance, the alliance participants take collective ownership and equitable sharing of all risks associated with the delivery of the project.

Figure 3

Delivery model selection diagram



The risk/reward arrangements are designed so that exceptional performance will deliver excellent outcomes for all parties while poor performance will result in poor outcomes for all parties. Alliance principles are founded on the following core principles:

- Primary focus on business outcomes whereby all parties either win or all parties lose.
- Collective responsibility for performance with an equitable sharing of risk and reward.
- A peer relationship where all participants have an equal say.
- All decisions must be best for the project.
- Clear responsibilities within a no-blame culture.
- Full access to the resources, skills and expertise of all parties.
- All transactions are fully transparent.
- Innovative thinking with a commitment to achieve outstanding outcomes.
- Open and honest communication - no hidden agendas.
- Visible/unconditional support from all levels of each participant.

<u>Make skills and training part of procurement</u>

There is an opportunity, particularly with large public projects, to add value to the procurement process by having allowances for core aspects of the project like staff welfare and development and still allow for contestable elements such as services and materials. This has the ability to set expectations for all those tendering. This is intended to provide a stronger incentive to train not just including it as a weighted attribute.

Government funded projects are subject to procurement rules which require skills and training to be considered as part of the procurement process. The challenge is to ensure that this requirement flows through to all businesses working on public projects, rather than just main contractors. Private sector projects could also benefit from adopting some of these procurement practices to more explicitly consider a wider range of factors, rather than focusing solely on price.

Government Procurement Rules

NEW ZEALAND GOVERNMENT PROCUREMENT

The New Zealand Government has developed rules for government procurement to support sustainable and inclusive procurement through the promotion of good practice for procurement planning, approaching the supplier community and contracting. The Government Procurement Rules help to support good market engagement, which leads to better outcomes for agencies, suppliers and New Zealand taxpayers.

These Rules also align with the Government's expectations that procurement can be leveraged to achieve broader outcomes. One of the current priorities for the Government is to grow the capability and capacity of the construction workforce. Government is committed to working with industry to deliver the right people, at the right time, with the right skills, to meet current and future needs in the construction sector.

Increasing the size and skill of the construction workforce will benefit the construction industry (by equipping it to better meet New Zealand's current and future demand for construction work), as well as the Government (by enabling the industry to deliver on priority government initiatives). Evaluating a supplier on their skills development practices gives an incentive to suppliers to invest in and increase their workforce by employing and training more apprentices. It can also encourage suppliers to create employment opportunities (or opportunities to upskill) for targeted groups such as Māori, Pasifika and women, to increase the diversity of the construction industry. This also means that suppliers who do not invest in developing the workforce are not able to undercut those who do.

<u>Collaborative approaches to employment and skills development</u>

Construction has historically relied on traditional employment and apprenticeship models where a single employer employs an apprentice. The employer is then responsible for their full scope of training. As businesses are becoming more specialised, this creates challenges as apprentices often aren't exposed to the full scope of work needed to gain trades qualifications. In addition, these traditional models mean the employer takes on the full risk and cost of employing an apprentice but may not see the benefit, particularly if the apprentice leaves their employment in the early stages of the apprenticeship.

One way to address some of these challenges is to take a more collaborative approach to skills development. This could range from informal arrangements such as employers sending their apprentices to work on particular jobs with other employers to gain particular skills or do particular tasks, to more formal models of group training schemes directly employing apprentices. These types of arrangements are happening in some places and in some parts of the sector but could be used more widely. This might require increased coordination or possibly making funding rules more flexible to encourage such arrangements.

ETCO

The Electrical Training Company, Etco, is a wholly owned subsidiary of Master Electricians (previously ECANZ) established to provide employment and training for the electrical industry in New Zealand.

Their two main areas of activity are:

- The employment and placement of electrical apprentices via their group apprenticeship scheme.
- The provision of training courses for apprentices and tradespeople.

Since their establishment in 1991, their commitment to producing the best has helped thousands of Etco apprentices and students achieve outstanding results and successes in industry competitions, national examinations and the industry itself.

How they do it

Training of apprentices is a combination of on-the-job training through placements with electrical companies and contractors and off-the-job training. This involves study at home, attending night classes and block courses at one of four training centres.

Apprentices receive extensive instruction, supervision and support throughout all stages of their training, which involves a series of assignments, assessments and examinations. Tradespeople are practically assessed, learn theory and regulations, and take competency courses.

Etco’s stakeholders include schools, parents, electrical companies and contractors, partners, sponsors and government. Through sharing information, receiving feedback and consultation they secure the best candidates, ensure that work placements are available and deliver the highest standards of training to prepare apprentices to make a positive contribution to the industry.

Align training to skill needs

Demand for workers is across a range of occupations and skills. Ensuring that training delivers the right skills at the right time is important to meet demand and put projects in place.

One of the ways that training can be aligned to skill need is by better articulating what skills people already have and then targeting training accordingly. Each person that wants to come and work in the sector, or on a particular project, brings with them a range of skills. For some people these skills are credentialised, through qualifications, or demonstrated through work on similar sites, for example on other large builds in New Zealand. Other people may have some of the skills needed from working in other sectors, have skills but lack New Zealand experience, or have had construction related training but no on-site experience. In each case employers, and workers, would benefit from having a coordinated approach to triaging people based on skills and experience, and targeting training accordingly. This could include a range of solutions from basic things like site induction for people who have most of the skills and experience needed, to New Zealand specific regulations and customs for overseas migrants, to training courses for people who need further upskilling.

Targeting training will work most effectively if used in conjunction with micro-credentials or bite-sized learning. Historically, most Construction industry qualifications are long in duration and target the full package of skills a person needs for an occupation. For example, a carpentry apprenticeship usually takes 3-4 years and to qualify people need to be able to complete the full scope of work of a carpenter. However, the industry is increasingly relying on sub-contracting, and businesses and workers often specialize in particular skills. Therefore, there is a growing need for bite-sized training and credentialising these skills. On a big project workers could work on one particular task and then use bite-sized learning to pivot into other tasks.

Some training practices or regulations create barriers to employers having access to the skills needed to put projects in place. Some examples are training programmes for things like HVAC that have block courses in only one place in New Zealand which means there are considerable travel costs or plumbing registration board requirements for the ratio of supervisors to apprentices. Identifying and mitigating these barriers could enable more employers to train staff for skilled roles.

Technology is changing education and training but the construction sector has been relatively slow to adapt to this change. There are opportunities to use technology more effectively to provide pre-training, give people exposure to work they might not come across very often, help people overcome learning difficulties, or allow people to train in their own time and space. There are some great technology initiatives already happening that could be adapted and applied to the construction sector or put in place on a bigger scale.

Using technology to meet skill needs

The University of Otago, Methodist Mission Southern and Dunedin company Animated Research Limited have revolutionsised the way training is being done at the Otago Corrections Facility through the use of virtual reality. This work is improving prisoners' reading and writing skills by using virtual reality technology to emulate being inside an automotive workshop.

The organisations have developed a prototype virtual reality application using a setting that is both familiar and motivating to the learner - a simulated car workshop. The prototype is a 360-degree virtual world programme that involves car assembly in an automotive workshop. Consulting with an actual automotive repair business made sure the virtual world represents a realistic environment.

The prototype model has already been showcased at an education conference in Los Angeles with hopes that eventually this programme will be used in literacy and numeracy education with prisoners inside prisons across New Zealand.

The more interesting and relevant environment can help learning, and improved literacy skills for prisoners in this case improve rehabilitation and integration into the community. Outside of prisons, there is significant potential to revolutionise learning, particularly for those who have struggled to engage with more traditional learning methods.

Retention

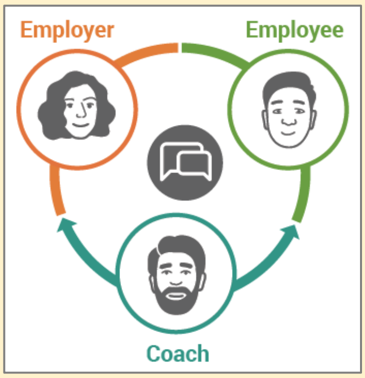
Staff retention is a significant issue in New Zealand businesses in general, and the construction industry in particular. This is a significant issue because staff turnover is expensive for businesses, leads to a loss of skills and experience, and adds further pressure to an already stretched workforce. Government agencies and industry leaders can support employers by providing information, tools, and assistance to retain their staff. This could focus on times when people are most likely to leave employment, such as the first few months, or on key occupations and positions.

Retention is linked strongly to workplace culture and support for workers. This is explored in more detailed on the section on supporting workers.

Te Heke Mai

Te Heke Mai is an online in-work support programme targeted at people starting new jobs which aims to increase staff retention. The MSD programme was piloted in Auckland and now rolled out nationally. There are two main parts to the programme:

- Providing in-work support for people going into work or an apprenticeship after being on a benefit.
- Providing support to employers who have recently hired MSD clients to help them with long-term staff retention and reduce turnover



A team of Te Heke Mai coaches, who work with employers and employees, deliver the programme. Te Heke Mai Coaches find the best way to support and contact employers and employees during the programmes using workplace visits, phone, text, instant messaging, and video chat.

The programme can be accessed using an app or a website and includes a range of functions:

- Keys to Success – for workers and employers to set mutual goals and expectations to work towards
- Self-reporting functions – for workers and employers to track their progress against the 'Keys to Success', and for employers to provide encouragement to workers
- Work support content – including inspirational stories/case studies based on other workers' experience, and general resources to help with employment-related issues.

Using the app means the coaching team is able to track the progress of workers and employers throughout the programme, and step in where needed (e.g. where worker/employer expectations don't align, or where workers have employment-related questions, etc).

Supporting workers

The issue

Expectations around the role that businesses play in supporting their workers are changing rapidly. Businesses increasingly have a duty of care for their workers, particularly around their wellbeing and mental health. Workplace culture in parts of the construction sector has contributed to the sector's high rates of mental health-related issues. Business owners need to actively consider the wellbeing of their workers and ensure their workplace culture is positive and supportive.

In addition, many workers, particularly younger workers, are putting a stronger emphasis on work-life balance. This emphasis can show through in a desire for flexible working arrangements that accommodate factors outside work such as caregiving for children, travel, or other priorities. Flexible work arrangements can also enable older workers to remain engaged in the workplace for longer. If businesses, and the sector as a whole, support workers it will be easier to attract workers and also easier to retain workers they already have.

Considerations

The individual needs of each worker vary considerably. Therefore, solutions need to be targeted to meet individual needs. This might mean having different solutions in place for groups of people or having solutions that are flexible and can be applied differently in different contexts.

Solutions also need to balance the need to support workers with business imperatives. These are often closely aligned with things that are good for staff being good for business in terms of attracting, retention and productivity. Businesses do, of course, need to consider impacts of decisions around supporting workers on profit, work scheduling and other staff.

Solutions

- **Focus on mental health**
- **Provide tailored placement for staff**
- **Create better work environments**

Focus on mental health

Issues around suicide and mental health are gaining attention in New Zealand and there is an increased recognition that employers have a duty of care to consider the mental health and wellbeing of their staff as well as their physical health and safety. Improved staff mental health has obvious benefits for workers but also benefits employers through less staff sick time, better retention, and higher productivity. These all make it easier for businesses to meet peak building demand.

Construction has the highest rate of suicide of any industry in New Zealand. There are a number of ways that businesses can respond to the mental health needs of their staff. One way is to raise awareness about and de-stigmatise mental health. There are a number of good programmes that are in place, but often on a small scale, that make people aware of mental health issues, signs to look out for, and places to go for help. These types of programmes can improve the working environment for people who are struggling with mental health and can also lead to people getting help before mental health issues become more serious.

MATES in Construction

MATES in Construction was launched in New Zealand in October 2019. Naylor Love is a premium partner and launched one of the first MATES sites in New Zealand at their Sylvia Park project.
MATES in Construction started in Australia in 2008 in response to the over-representation of construction workers in Australia's suicide toll. New Zealand is unfortunately in the same position, with the construction industry having the highest proportion of suicides across all industries.
"There are so many factors that contribute to suicide risk in the industry, including work-related stress, long hours, job insecurity and things outside work like relationship breakdowns. One of the biggest factors is our men being stoic, and not seeking help. It's ok to talk to your mates about it."
Victoria McArthur, General Manager of MATES In Construction NZ
The MATES programme focuses on opening up communication channels, changing on-site culture and improving knowledge of what can be done to prevent suicide. It starts with a one-hour General Awareness induction for all workers on a site, providing the skills to help workers start discussions with someone who may be struggling on-site or even in their community. Volunteers can also be trained as Connectors (trained to help keep someone in crisis safe, while at the same time connecting them to professional help), with some also receiving ASIST advanced intervention training.

Another way the sector can respond is by creating or promoting resources for employers in the sector. Many employers are aware of the need to support their staff's mental health and wellbeing but are unsure of what to do or lack tools and resources. Giving employers practical things they can do or where they can go or direct people for more help will empower employers and help them to support their workers.

One part of the sector where there are particular mental health challenges is middle-aged men who are leaders, managers or business owners. These people shoulder considerable responsibility and stress, often without much support. This can lead to burn out, more serious mental health issues, and critical business leaders leaving the sector. The sector could respond by creating support mechanisms targeted at people in these positions before mental health becomes a serious issue. This could include establishing mentoring networks, creating connections between people in similar situations, and resources about where to go for help.

Finally, a number of employers have identified a lack of professional mental health support capacity, particularly in smaller communities. This means that when people do seek help it can be difficult to access it or they can face long delays or both. From an industry point of view, this means people may be unable to fully function at work. The construction sector could collectively lobby government to increase these services to help tackle mental health in the sector.

<u>Provide tailored placement support for staff</u>
As the industry looks to attract more people from either overseas or from other parts of New Zealand, it needs to consider ways to provide placement support so that people transition to the region more easily. This could also result in people being more attached to the region and so being more likely to remain long term.

The placement support needed is different for each new staff member depending on their background and situation. For people coming from overseas this could involve English language classes, making connections to local sport and community groups, and providing insight into New

Zealand culture and workplace practices. For people coming from other parts of New Zealand, this may be more limited but could still include connecting people with local networks and services like schools and doctors. In both cases, support in terms of finding accommodation could significantly benefit staff.

Another option for placement support is to focus on partners. People who migrate to the region to work are more likely to stay long term if their partner, and wider family, can settle easily into the region. One of the most important ways to support partners is to help them find employment that matches their skills and aspirations. In some cases employers can do this directly, otherwise they could connect people to networks or form a relationship with career placement specialists. Other ways to support partners would be through connecting them to social and community networks.

For people who are from in-region but in other industries, placement support could focus on preparing them for work in the industry. This could include things like giving them a realistic idea about what work in the industry will really be like, providing them with a 'navigator' through entering the sector, and providing upskilling to make them more work-ready.

Create better work environments

One of the ways that businesses can attract potential workers and retain current workers is by creating better work environments. This includes focusing on workplace culture. The construction industry has historically often been seen as having a negative workplace culture. This is starting to shift but there are more things that could be done. Making workplaces more inclusive and positive places to work will benefit workers and businesses. One of the ways this can happen is by breaking down barriers between office staff and those on the tools. This can help shift perceptions as well as creating positive change.

Better work environments go hand in hand with increasing diversity in the industry. The construction sector, particularly trades roles, has been dominated by men and those from European backgrounds. Creating more positive workplace culture and practices will encourage females and people from other ethnic groups to enter the sector and to remain there. Having people from more diverse backgrounds can also contribute to positive workplace culture. One of the ways employers can support this is by upskilling their existing staff to be more accepting of diverse staff.

Businesses can also improve the workplace by offering more flexibility. Flexibility can include reduced hours, different working schedules, and offering a wider range of work opportunities. Flexibility is challenging in some construction contexts but identifying and creating opportunities for flexibility can encourage a wider range of people into the sector and enable people to stay in the sector for longer.

Creating a culture where opportunities and career progression are encouraged can retain staff and also help meet changing skill needs. Part of this is around profiling the many opportunities that exist in the sector and making them clear to potential and current workers. Employers can also consider ways to give their staff opportunities and consider projects that develop both individuals and the business.

Accommodation

The issue

Accommodation is seen as a barrier in both coastal and inland Otago. In both places there is a shortage of suitable accommodation to rent or buy.

Considerations

There are potentially different solutions for people who are in the region temporarily compared to those who migrate long-term. There is likely to be demand for some workers who will be in the region temporarily or for a short-term basis. This could include people in specific occupations that are in demand only for a very short term and also people who are only needed at times of peak demand. There will also be demand for people who are going to relocate to the region long-term. These people require a longer-term solution.

Similarly, there needs to be different solutions for different family types, in particular single people compared to families, and also for people in different life or career stages. For example, people who are young and single may be looking for shared rental accommodation while families with children may be looking for houses to buy.

Any options that require building new accommodation or doing significant building work create opportunities for training workers. This should be taken into account early and be used as a means to train people for upcoming major projects, particularly the hospital. A training provider such as Otago Polytechnic could take on a project such as repurposing an existing building or building tiny houses to be used as worker accommodation. This would likely require some private investment and ownership by a lead contractor or a social agency.

Solutions

- **Better utilize existing building stock**
- **Focus on urban planning**
- **Create transport linkages**
- **Effectively target temporary accommodation**

Better utilize existing building stock

Making use of existing building stock could address accommodation issues without adding further to the demand for construction workers. This could take the form of converting buildings built for other purposes, using existing facilities for short-term accommodation, or better connecting existing housing stock to people needing accommodation.

A starting point could be a stock take of buildings not currently being used that are already set up for accommodation. These could include places like outdoor education centres, scout camps, and facilities that were previously used for other purposes such as Cherry Farm or Holy Cross in Mosgiel. Some of these facilities could possibly be used for accommodation, particularly for people wanting short-term accommodation.

A second option is converting existing building stock that has previously been used as commercial or industrial. This is already happening in places, such as the Torpedo 7 building in Dunedin, but zoning needs to be considered and impacts on noise, services, and infrastructure needs to be carefully managed.

In Inland Otago there are a large number of holiday homes that are vacant for considerable parts of the year. This stock could possibly be better utilized, particularly for shorter term accommodation. One way of better utilising it would be to create a collective of holiday homes that could be rented to either workers or businesses.

Another possibility is facilitate a centralised way for people to rent out spare rooms. The system could operate in a similar manner to those in place for international students and could include room only, room and board, or even additional pastoral care.

Dot Dot Dot

Dot Dot Dot is a UK award-winning social enterprise and a different kind of property guardian company. Property guardianship enables people to legally, and usually cheaply, move into properties that would otherwise sit empty.

Katharine Hibbert, the founder of Dot Dot Dot, recognized that empty buildings are a massive problem for people who own them, as well as those around them. No one wants a property to be empty as it could be vandalised, people could come in and take drugs, the pipes could freeze, or pigeons might move in. She believes people aren't deliberately keeping buildings empty, they don't know what to do with them while waiting for a long-term plan. These properties are more often unfurnished, and therefore unsuitable for the likes of Airbnb.

Dot Dot Dot solves a security problem but also creates social solutions. They believe that by giving someone a place to live below market rent, you can completely transform what they do with their life.

Urban planning
Local councils have a role in encouraging and enabling accommodation development through their planning, zoning and consenting.

One of the things that could make a difference is longer term planning by councils with a view about how to grow accommodation stock in a sustainable manner. Many New Zealand councils in the past have often been more reactive than proactive which has led to housing development that isn't fit for purpose, or has inadequate infrastructure and services. Some councils are getting much more intentional about how to best manage housing needed to keep up with population growth.

Another issue that urban planning needs to consider is housing density. New Zealand has historically been a country of stand alone houses and quarter acre blocks but in many places this is no longer adequate to accommodate a growing, and changing, population. Councils need to continue to look for solutions to increase density of housing. In new developments this could involve townhouses or mixed housing types. There are some great examples, such as the old Wakatipu High School site, where higher density housing is being developed with a focus on creating a community feel. In existing developments higher density could be achieved by enabling sub-division of sections or allowing minor dwellings, such as tiny houses, to be built.

Zoning and council processes could also be examined to find pinch points that slow down or inhibit development unnecessarily. Things that could be considered include zoning changes from rural residential to residential, streamlining consenting processes, fast tracking processes for developers, and being more flexible on green space.

Tiny Houses
In New Zealand and internationally the tiny houses movement has been gaining popularity. Tiny houses are self contained homes that are considerably more compact than more traditional house plans. Tiny houses have become popular in response to both high house prices and growing interest in reducing consumption and environmental sustainability. Some tiny houses are mobile and can be transported either under their own power or on a trailer while others are built in place.
However, tiny houses don't fit neatly into current legislation, including the Building Act and Resource Management Act, which can lead to legal difficulties and a reluctance of some people to embrace the tony house movement.
Making clear legislation around tiny houses and putting in place clear consenting processes could encourage more people to invest in tiny houses which could help address accommodation shortages.

Transport linkages

Existing public transport and roading can constrain where people are willing to live. Otago is the second largest region in New Zealand based on land area and there are large distances between centres creating long travel times for people who don’t live close to work. This is exacerbated by public transport with infrequent or indirect connections. Lack of transport connectivity pushes up housing costs in areas that are close to work or that do have good connections.

In the construction industry, the project-based nature of work also means that many workers need to travel to different sites on different days or on the same day, which increases the need for private transport.

In Dunedin, there is scope for developing the semi-rural areas and small towns on the outskirts of the city, supported by better transport links. This could include options such as park and ride services from a hub, such as Mosgiel, with dedicated express buses that don’t make other stops. A solution like this would work particularly well for a build like the hospital where a large number of workers are going to the same place everyday. New housing developments outside the central city would most likely appeal to families and could support regional development. This type of solution would rely on zoning and development from the council.

In Inland Otago there is the added issue of many businesses working across several centres including Queenstown, Wanaka, and Cromwell. Growing numbers of workers are moving further away from work to find affordable housing, which creates longer commute times putting pressure both on workers and also on infrastructure. Again, options like park and ride with express buses might be a solution for some workers, particularly those on longer term builds in a central spot. There could also be incentives put in place to set up and used shared transport options, for example a company operating their own minibus.

In any shared transport options there needs to be consideration given to transporting equipment and gear logistics as many tradespeople bring their own tools every day. Solutions such as on-site storage could be investigated to make shared transport options more feasible.

Temporary accommodation

In some instances, workers are only likely to be in the region for a very short time. This is particularly likely for people working on the Dunedin Hospital, either in niche roles that are only required for a limited time, or to meet demand at peak times. If there are only a small number of these workers then they are often housed in motels or other holiday accommodation but when there are larger groups of short-term workers it may make sense to arrange short-term accommodation on a bigger scale, possibly as a workers camp, hall of residence, or other similar group housing.

Workers villages have been used in a number of big builds in New Zealand in recent years, most notably following the Christchurch and Kaikoura earthquakes. This type of accommodation can be the solution to a short-term need but can also intensify a number of social issues such as high drug use, crime, and domestic violence. The lesson from recent workers villages is that they need to be well managed, with support agencies involved, and clearly be only for short-term use.

Kaikoura workers village

In the aftermath of the Kairkoura earthquake, when accommodation was at its tightest, NZ Transport Agency and KiwiRail put in place a temporary accommodation village to house workers involved in the rebuild. The village was operated by the North Canterbury Transport Infrastructure Recovery (NCTIR) alliance and at its peak housed 300 workers out of an estimated 1,000 working on the rebuild.

Having temporary accommodation enabled NCTIR to bring in a full contingent of workers to rebuild transport networks. The village, located on leased farmland near the Kaikōura township, included 300 prefabricated one-bedroom units, a large kitchen and recreation area, and administrative facilities. Each unit had a television, bed, storage, charging facilities, and an ensuite with a bathroom/shower and toilet.

Another option is to build temporary accommodation that that can be used for another purpose after it is no longer required. Some examples of this are the Sydney and London Olympic villages which were built to house Olympic athletes for a short period but had other facilities built alongside them such as supermarkets and schools, so that after the event they could be converted into permanent accommodation. In Dunedin, one option could be to build a hall of residence that would house hospital build workers in the short term and then be handed over to the university or polytechnic to use as student accommodation after the build.

Lead contractors or other major employers could also consider buying or building accommodation for their staff who are only in the region temporarily to use. This could include buying an existing motel or similar type accommodation or it could involve purpose built staff facilities. In Queenstown a number of tourism operators operate a similar model for short-term or seasonal staff with companies like NZ Ski and Real Journeys offering dedicated staff accommodation.

Skills Hub

One of the solutions that is already being progressed for Coastal Otago is a construction skills hub based around Dunedin Hospital. The concept of a skills hub can take many different forms. There have been a number of skills hubs established in New Zealand over the past few years such as Ara at Auckland Airport. These hubs have largely focused on matching potential workers to employers and providing specific training programmes to meet job needs.

Ara – Auckland Airport Jobs & Skills Hub

Ara is connecting South Auckland communities with businesses working at and around Auckland Airport to fill the thousands of jobs needed to build and run 'the airport of the future' over the next 30 years. Ara is a joint initiative between the South Auckland community, government agencies, training providers and employers.

Ara focuses on:

- Matching vacancies to suitable candidates living in South Auckland
- Training and up-skilling new employees and the current workforce on-site
- Supporting employers and new workers once they're on the job

They also work with employers and training providers to identify training needs and connect people with courses to meet those needs.

In Dunedin, the proposed skills hub is currently being called 'Workplace Central'. It is envisaged that there will be two distinct phases for this skills hub.

1. Pre-build – the primary purpose would be to sell the sector in general, and hospital build in particular, to prospective workers including young people, those not in work, and other career seekers.
2. During the build – the hub would focus on recruitment, retention, induction programmes, health and safety, culture, work skills, mental health, pastoral support and skills development.

There are a number of things that need to be considered further relating to the design, number and location of skills hubs across the Otago region. These include:

- Whether it is a physical building or something different
- Functions that it should perform during the lifecycle of significant projects
- Who will fund it?
    - Will funding channels change as the form and function of the hub changes
- Number and coverage
    - Just the hospital build or Dunedin City
    - Coastal Otago, Inland Otago or all of Otago

Physical building

To date, skills hubs have been physical buildings where people can go. This has advantages in that it creates a focal point and a place to deliver programmes but has disadvantages in that it can only provide services for people who are already in the locality and would likely focus on one project. Some alternative options, which could be used instead of or in conjunction with a physical building, include:

- An on-line hub – a virtual hub could perform some functions including marketing, matching prospective workers to employers, and providing some types of training.
- Pop-up skills hubs – having mini pop-up hubs in places outside of Coastal and/or Inland Otago could attract out of region workers, conduct pre-screening, help find accommodation, and provide some training before people actually moved to the region. This could create more certainty for prospective workers and employers.
- Mobile skills hub – similar to pop-up hubs but in something mobile so that it could be taken to different towns in Otago and further afield, similar to the Life Education trust model.

Functions

There are a range of functions that a skills hub could perform. It will be important to identify what the most important needs are and where the hub can have the most success. Some of the functions a hub could perform are:

- General marketing – promoting the sector and particular projects to the general public, career seekers, influencers, and other interested parties. This would be particularly important in early stages of projects.
- Recruitment and job-matching – providing a centralized point for recruitment for the sector and matching prospective workers to employers.
- Pre-screening – screening people based on things such as work-readiness, skills and experience. This could be used to create an 'employment passport' that would give potential employers an idea of how ready someone is for employment and also what support they might need. The hub could potentially triage people into groups such as those ready for work now, those that need short interventions, and those that need longer term support.
- Induction and pre-work training – a skills hub could provide initial training for people to be site ready. This could include a range of things such as health and safety, site induction, sessions on culture and mental health awareness.
- Pastoral care – pastoral care could be tailored for individuals with a range of services provided through the skills hub. This could include things like mentoring, peer networks, placement support, and places to go for help.
- Skills development – skills development beyond initial training could include specific programmes targeting skills that are in peak demand or training to help people pivot from one roll into another as projects progresses.

Funding

To be successful, a skills hub needs a dedicated funding stream both in the initial phase and longer-term. It is possible that some Government funding could be used including provincial growth funding, funding from relevant agencies such as MSD, or through a particular project, most likely the hospital. A skills hub would have benefits to the main contractors and others involved in the hospital build so it would be most likely to be successful if those companies can buy into the hub. There are also benefits to the sector more widely so it is worth considering how businesses can contribute to a skills hub.

Coverage

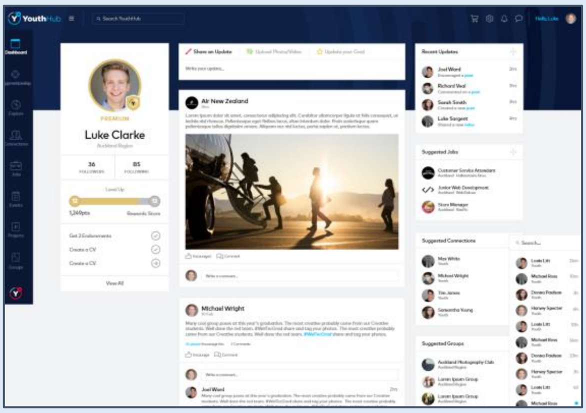
There needs to be serious consideration given to the coverage of a skills hub. Four options are:

1. Only Dunedin Hospital
2. Dunedin
3. Inland and/or Coastal Otago
4. The whole Otago region

Some functions are highly project specific, such as site induction, while others are much broader, such as marketing the sector. Deciding the coverage will have an impact on the exact functions that the skills hub should perform and also on the physical shape it should take.

Youth Hub

Youth Hub is an existing end-to-end digital platform that allows a young person to personally curate and showcase their journey from education to employment. Using a familiar user experience, the platform facilitates the engagement and connection with a vast network of stakeholders to help sculpt a skilled, informed, and engaged workforce while levelling the playing field for all young people across New Zealand. Its aim is to inform, inspire and accelerate young people to maximise their potential through opportunities, connections and jobs curated for them.



Youth Hub connects youth with various stakeholders including:

- Employers
- Schools/education/training providers
- Support organization
- Mentors

By utilising a collective impact model with a unified client relationship management system, Youth Hub is able to encourage cross-sector collaboration, allowing youth service organisations, businesses, governmental organisations, teachers, schools and tertiary providers a real time connection with the youth sector.

The platform also allows the capturing of demonstrated prior skills and learning and showcase that visually as well as through text via visual journey and projects. With over 1,200 soft skills pre-loaded onto the platform and activated when requested as a testimonial/endorsement it allows stakeholders to verify and endorse young people's achievements ranging from education and employment to volunteering and interests. It allows the stakeholders to "see" who the young person is and what they can bring to the table.

The solution also has the ability to customise content and create micro credentials that young people can access through a comprehensive marketplace. This would range in accordance to their interests including specifications from their profile.

COVID -19 Impacts and Responses

This section looks at the impact of industry contraction on venerable works as well as looking at government initiatives announced to support both employers and employees.

At Risk Workers

Drawn from the MartinJenkins Rapid Review 04 - April 2020

The COVID-19 global pandemic and state of national emergency in Aotearoa New Zealand are unprecedented events for our country and the world. While many key services and industries are still operating, including here in New Zealand, the crisis has severely curtailed much economic, social and cultural activity across the globe.

New Zealand's relatively small size and geographical isolation mean that a physical lockdown has been relatively easy to achieve. But our heavy reliance on international trade and tourism has highlighted our economy's sensitivity to changes. The national and regional economic impacts will be far-reaching and enduring. New Zealand's labour market pre-COVID-19 has been tight.

Unemployment has been trending down and businesses have been turning to migrant labour to fill skill and labour shortages. With COVID-19 and lockdown measures, some economists estimate that unemployment will increase from the current 4% to somewhere between 10 and 15% (NZIER and Westpac economists) and 15 – 30% (being in line with The Great Depression, Sense Partners economists) (RNZ, 2020).

The economic scenarios released by the Treasury on 13 April suggest that the unemployment rate may range from 13% to nearly 26% depending on the scenario (Riches & Gardiner, 2020). The scenarios modify the length of different alert levels, length of border control measures and annual average real GDP growth levels. The scenarios assume the current level of government fiscal support at $20 billion, with additional scenarios raising total support to $40 billion, and $60 billion, respectively. That is an additional 300,000 to 720,000 people left jobless across the country.

The Government swiftly introduced wage subsidies and leave support to essential workers to support businesses so they can resist laying off staff or reducing hours. As at 17 April 2020, the wage subsidy scheme had been paid out $10.07 billion, and received 510,889 applications (Stats NZ, 2020). Pre-COVID-19, JobSeeker Support (Work Ready) was paid out to around 82,000-84,000 New Zealanders. As at 17 April 2020, this rose to 110,300 people (Stats NZ, 2020).

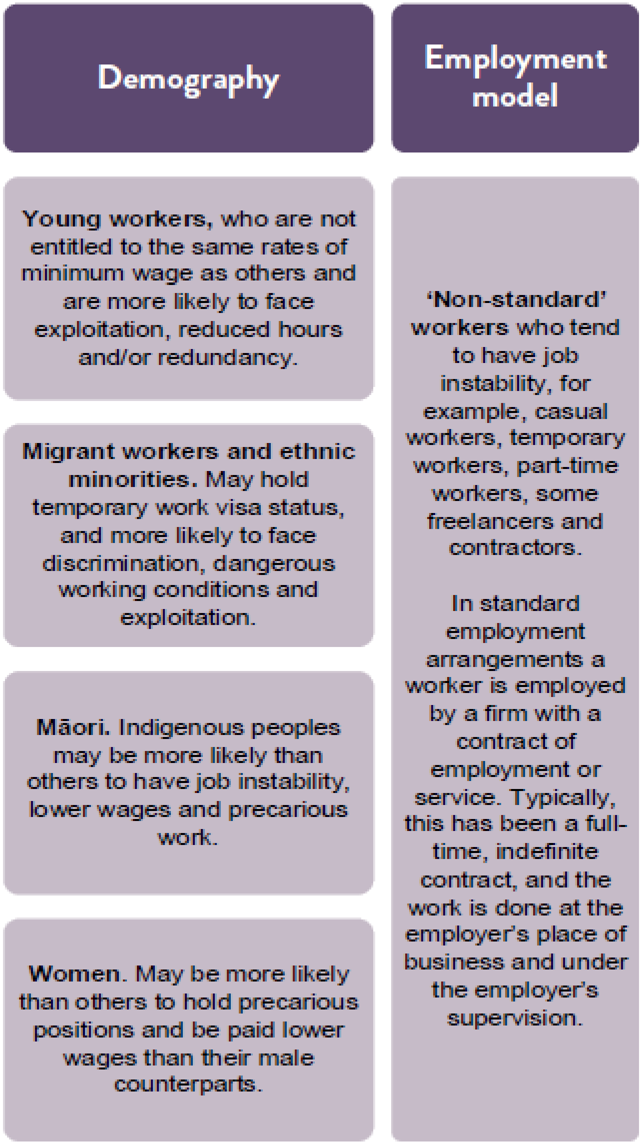
Impact on vulnerable workers The Government has swiftly introduced wage subsidies and leave support to essential workers to support businesses so they can resist laying off staff or reducing hours. As at 17 April 2020, the wage subsidy scheme had been paid out $10.07 billion, and received 510,889 applications (Stats NZ, 2020). Pre-COVID-19, JobSeeker Support (Work Ready) was paid out to around 84,000 New Zealanders. As at 17 April 2020, this rose to 110,300 people (Stats NZ, 2020).

Around half a million people are expected to be able to return to their workplaces in the coming weeks (The Treasury, 2020). The Treasury (2020) estimates that economic activity will run approximately 25% below normal levels during Alert Level 3 but higher than under Alert Level 4.

Based on what is currently occurring internationally and nationally, our series of labour market rapid reviews address the following questions:

1. What are the **likely immediate and longer-term impacts** on labour markets, based on what is occurring and what has occurred in previous economic shocks?
2. What effective **labour market policy and intervention responses** have been instituted at a national level?
3. What is the **role of regions, districts and cities**?
4. What is the situation for **vulnerable workers, and what may aid** workers who tend to be most impacted by economic shocks?

Figure 4.
Groups of vulnerable workers



In the fourth rapid review in the MartinJenkins labour market series, they **cast back to see what occurred for vulnerable workers during the global financial crisis (GFC).** The vulnerable groups of workers we examine are **young workers, migrant workers and ethnic minorities, Māori, women and non-standard workers** (Figure 4). The effects seen in New Zealand, as well as other comparative economies are outlined. We also provide an overview of the types of measures that have been applied to these vulnerable groups to soften the impact.

Unfortunately, in any economic shock, there are parts of our society who will experience the negative labour market impacts the harshest. **These groups already experience negative labour market outcomes in more economically prosperous times, and in some cases, risk severe exploitation**. The measures and initiatives identified in the literature are much the same as those that can be applied whether there is an economic downturn, or not. This suggests that **significant, and targeted, resource will be required to reverse fortunes – and there is no easy fix**.

We consider vulnerable work to be unsecure, low-paid and work that places workers at high risk of employment rights abuse, health and safety risk (usually due to uncertain and high-risk work, insufficient training and experience, economic and reward pressures, lack of engagement and voice, and unclear lines of accountability (MartinJenkins, 2019)), and reduction of hours/redundancy. In addition, there are workers who are at risk of vulnerable employment, for example, women, youth workers and ethnic minorities, who in economic shocks tend to bear the brunt of (un)employment decisions.

Why are young people vulnerable?

Young people are particularly vulnerable to the labour market impacts of economic shocks (Ayllón & Ramos, 2019; Bergin et al., 2015; Dal Bianco et al., 2015; Rafferty et al., 2013; Usher et al., 2009).

Young people are more likely to be in casual or short-term employment or employed in cyclically sensitive areas like manufacturing and construction (for males) and retail trade and accommodation and food services (especially for females).

In addition, firms become more cautious about hiring new workers. As many young people are first-time entrants into the labour market, they can find it more difficult to find work – especially when competing against a wider pool of workers with experience (Junankar, 2014).

Promoting skills development and qualification attainment Youth Guarantee was used in response to the GFC to increase the number of young people who achieved NCEA Level 2. Monitoring reports show that while the programme had some success in improving education outcomes, the employment outcomes were less clear (Earle, 2018).

Research has indicated that low level skills training programmes can be problematic when not combined with other support in transitioning to employment. It is argued that to be successful, skills-based active labour market programmes need to aligned to specific needs, and connect to post-study employment, either through work experience or Job Seeker assistance (McGirr, 2019).

Employers place high value on 'non- cognitive skills', which in business surveys often rank above academic qualifications (McGirr, 2019). Several initiatives in New Zealand have attempted to focus on these 'employability' skills, for example, through the development of employability licenses.

Supporting employers

Capelli(2014) has observed a structural shift in western economies over the past few decades from a labour market where employers hire general workers and train for specific requirements, to one where skills are expected to come largely fully formed. Concerns from the construction sector about the risks of hiring an apprentice that might be later poached, for example, are well documented (Ambler, 2017).

Employers may benefit from **support to de-risk the employment of a young person,** particularly in lower skilled roles. The IZA Institute of LaborEconomics has found wage subsidies can help address issues with labour demand, and help boost the employment probability of youth, but cautions that success is determined by **adequate targeting and profiling, as well as firm take-up** (Caliendo & Schmidt, 2016). McGirr(2019) noted that international evidence on wage subsidies is mixed, in part due to scheme differences and measurement approaches.

Other approaches to de-risking can include group employment training schemes, in which a trainee worker is employed by the training organisation, but undertakes training at a host firm, although there is limited research to its effectiveness.

Active matching and pastoral care
Some programmes can actively match young people to work, including training and developing specific skills, and supporting them afterwards. We have experience **supporting local initiatives, for example taking advantage of significant** developments within a sub-region to ensure that employment and training opportunities are felt locally.

Caliendo and Schmidt (2016) note that small-scale interventions can reduce search costs for job-seekers and have positive employment impacts. Individual case-management approaches can enhance programme success and increase the employment probability of youth. These approaches allow employment agencies to identify barriers to employment, design individual action plans, refer jobseekers to programmes and monitor the job-search.

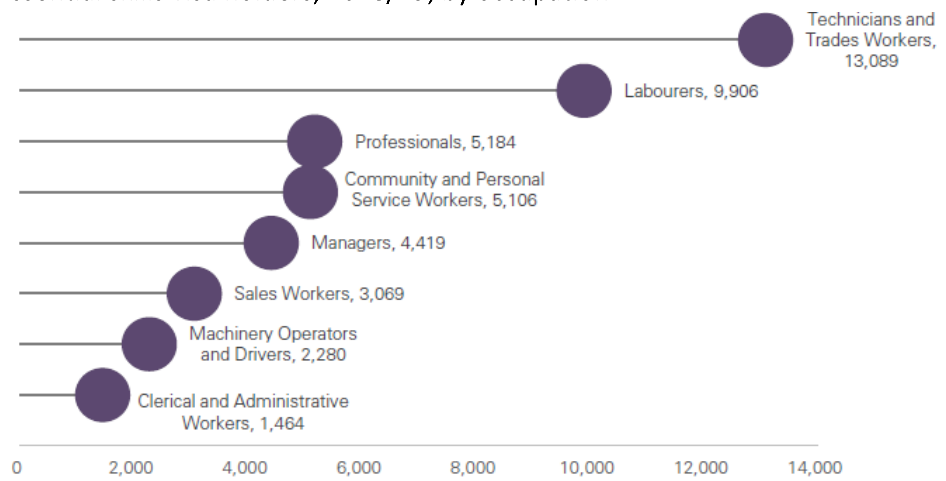
Migrant Workers and Ethnic Minorities

Research shows that migrant workers, like other groups that suffer disadvantage in the labour market we are discussing in this rapid review, are more vulnerable during economic shocks (Kingston et al., 2015; McGinnityet al., 2013). In New Zealand, where unemployment has been trending down, businesses have been turning to migrant labour to fill skill and labour shortages. With COVID-19 related reduced demand and lockdown Alert Levels meaning business-as-usual cannot take place, migrant workers are often the first to bear the brunt of cost-cutting, reductions in hours and redundancies.

Migrant workers are concentrated in certain regions and sectors around New Zealand (Figure 6 and Figure 7). In 2018/19, the majority of essential skills workers were in technicians and trades occupations and worked as labourers.

Figure 5.

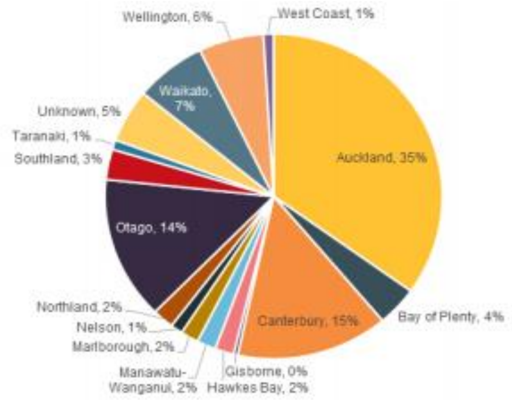
Essential skills visa holders, 2018/19, by occupation



Source: Ministry of Business, Innovation and Employment, Migration data explorer
Note: Only essential skills visa category

Figure 6.

Share of migrants on work visa by region, 2018/19



Around half of migrants on work visas are based in Auckland (35%) and Canterbury (15%). A further quarter is made up of migrants based in Otago (14%), Waikato (7%) and Wellington (6%).

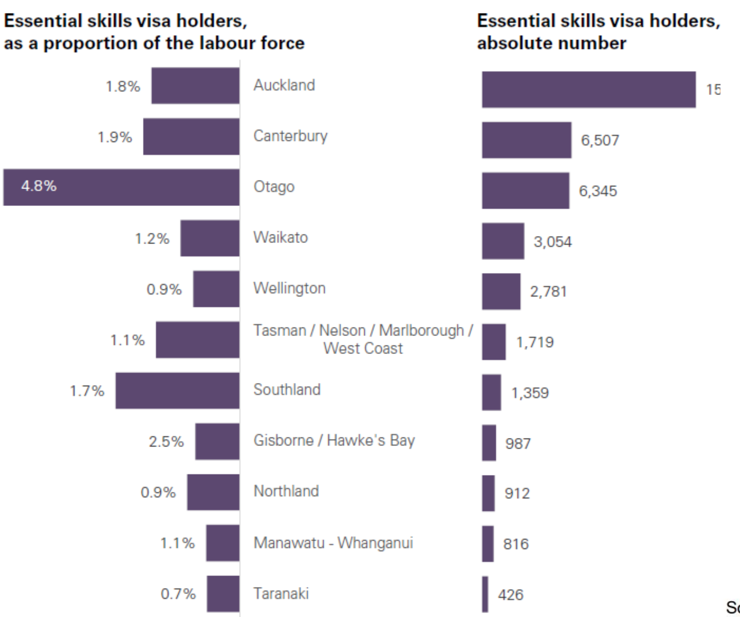
https://nzta.govt.nz/assets/planning-and-investment/docs/arataki/arataki-potential-impacts-of-covid-final-report-may-2020.pdf

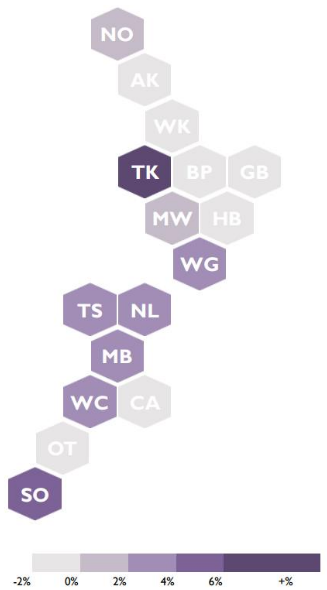
Source: Immigration statistics, Work occupations by region

Figure 7.

Essential skills visa holders by region, 2018/19

In 2018/19, while Auckland had the greatest absolute number of essential skills visa holders, Otago and Southland had the highest proportions of migrant essential skills workers.





Source: Ministry of Business, Innovation and Employment, Migration data explorer; Stats NZ Labour force statistics
Note: Only essential skills visa category

Source: Stats NZ, Labour market statistics. Compound annual growth rate

Māori

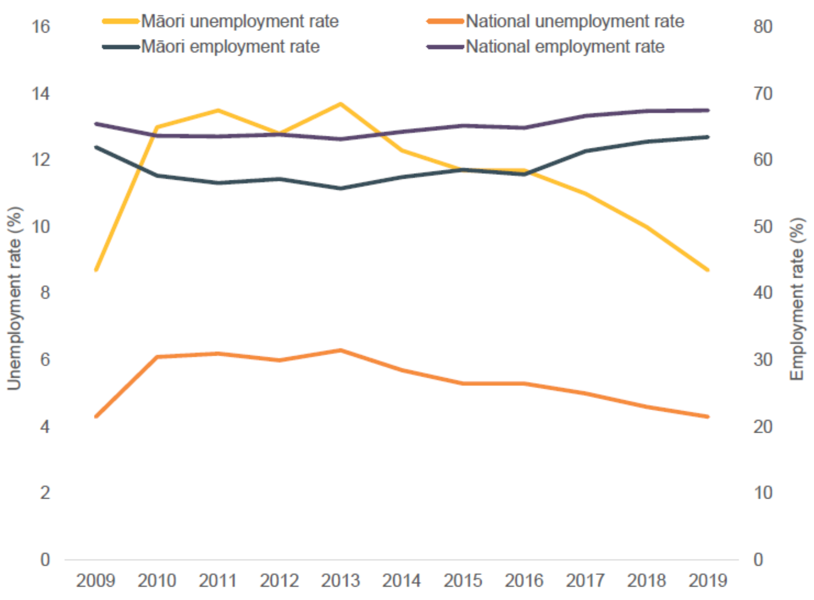
Most labour market outcomes for Māori improved over the year to June 2019 (Ministry of Business, Innovation and Employment, 2019). However, **the economic impacts of COVID-19 are expected to hit Māori one of the hardest.** There are no official statistics available yet on labour market impacts, but the Māori Council is predicting that unemployment for Māori could be higher than 30% (Māori Council, 2020). This recognises that Māori are likely to have higher unemployment than the national average in the most severe Treasury scenario of 26% unemployment. A number of commentators have recognised that Māori, and Pacific, communities did not fare well in previous economic shocks. For example:

- During the mid-1980s, Māori unemployment was four times higher than for non-Māori (Taonui, 2020)
- Māori unemployment reached 25% in 1992, and the Māori youth rate in some regions exceeded 50% (Taonui, 2020)
- During the global financial crisis (GFC), Māori were hit harder (Department of Labour, 2009 as cited in Haar& Brougham, 2011). The Māori unemployment rate was 15.5% compared to New Zealand Europeans at 4.6% (Stats NZ, 2010).

As the labour force data shows, Māori unemployment during and after the GFCis consistently above national averages (Figure 7). At its peak, around 2013, Māori unemployment was 13.7% while New Zealand's unemployment rate was 6.3%. Māori unemployment is essentially double that of national rates. Employment rates, on the other hand, are relatively similar. In 2013, Māori employment rates were 55.8% while New Zealand's was 63.2%.

Graph 6.

Employment and unemployment for Māori, 2009 –2019



Source: Stats NZ, Household labour force survey
Note: Annual data for the March year

In relation to growth Māori employment increased at a high rate in Otago, rising 6.2% per annum.

Education and training are likely to be part of the equation NZIER (2016) have stated, in relation to Māori in Auckland, that the key to closing the gap in income between Māori and the Auckland average is increasing educational attainment and making sure youth are making the right study choices.

Impact on Women

In past recessions, men have tended to lose their jobs at a slightly faster rate than women. A key reason is that men are overrepresented in cyclical sectors such as construction, agriculture and manufacturing, which tend to be more severely impacted by an economic downturn (Bergin et al., 2015; Hogarth et al., 2009; Toossi & Morisi, 2017).The impacts of a recession on women tend to be less immediate, but no less severe.

In New Zealand, the unemployment rate amongst Māori women (12%) is higher than that of Māori men (10.8%) and over double as high as the national average (Ministry of Business, Innovation and

Employment, 2019). This means that when entering a recession, Māori women are already at a significantly disadvantaged position.

Non-Standard Workers such as labour hire, temping, casual, agency work

In standard employment arrangements a worker is employed by a firm with a contract of employment or service. Typically, this has been a full-time, indefinite contract, and the work is done at the employer's place of business and under the employer's supervision. Under New Zealand employment law employees have entitlements and protections such as a minimum wage and protection against unfair dismissal (Walker, 2011).

'Agency' work – often referred to as 'labour hire' for 'blue collar' roles and 'temping' for 'white collar' roles, by contrast, is a form of 'non-standard' employment. Non-standard arrangements are varied, but they are more likely to be temporary, to involve work at multiple locations (or working off-site or away from the employer) and fewer entitlements and protections.

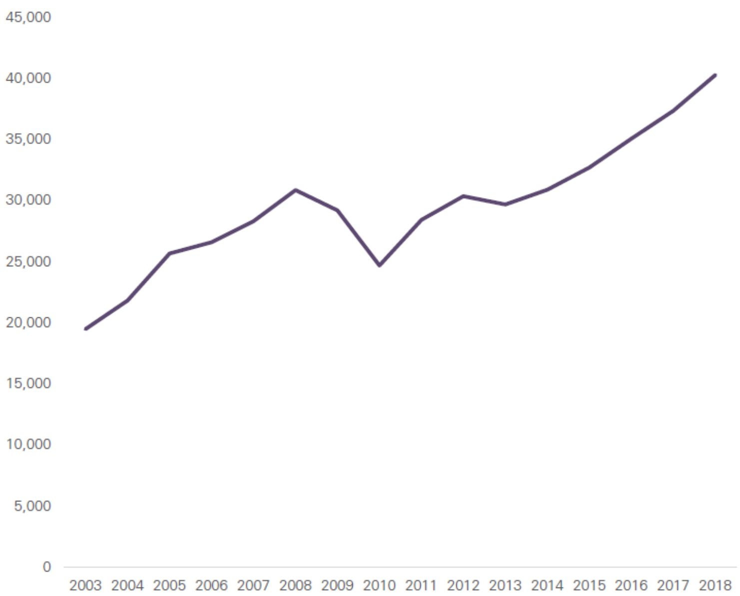
Of course, all 'non-standard' work is not necessarily vulnerable or precarious. For example, with employment and business models changing, and the rise of the contracting and gig economy, these types of arrangements can provide workers with the flexibility they require and want. And not all 'non-standard' work is in lower-paid, lower-skilled roles. These arrangements also support businesses which need to deal with peaks and troughs in demand (either seasonal or economic), or to fill short-term vacancies and absences.

In work we undertook for a Government client on the agency work industry, we found that the size of the industry is much larger than previously thought (MartinJenkins, 2019). The Household Labour Force Survey, which is used to provide many of New Zealand's labour market indicators, suggested that there were about 10,400 workers in the industry. Our work found that in 2018 there were 115,000 people working for at least one month in the industry – a ten-fold increase.

It is a youthful workforce, more likely to be male, and minority groups are over-represented. A significant proportion of the workforce are migrant workers – they made up 41% of agency workers in 2018, compared to 13% in 2001. Those with work visas make up 51% of the industry's migrant workforce, and these are predominantly under the Working Holiday scheme. The data is difficult to obtain on the sectors agency workers work in, but market analysis suggests that construction and trades is the most common sector, followed by manufacturing, transport and logistics (Allday, 2018).

Figure 8.

Annual total rolling mean employment for agency workers, 2003 –2018



Source: Integrated Data Infrastructure, Stats NZ

In New Zealand, the rise of the agency workforce post-GFC suggests a shift to a more contingent labour force (Figure 8). If history repeats, it is likely that while unemployment will increase rapidly during COVID-19 and associated lockdowns, employment during recovery may shift to a higher proportion of non-standard work. This will also be associated with employers and employees being more familiar with, and having experience of, remote-working.

Measures

Interventions will need to be aimed at both temporary employment agencies and host firms, and employers more generally who use non-standard employment models. Accreditations or a license to operate have been developed by the agency work industry, for example via RCSA (Recruitment, Consulting and StaffingAssociation of Australia and New Zealand), as a way to self-regulate the industry. The approaches of states in Australia in relation to licensing of temporary employment agencies, and penalties for using unlicensed agencies, may need to be considered.

Migrant workers are a high proportion of non-standard workers. The measures applied to their risk factors are equally applicable here:

- migrants are often not aware of their employment rights and their ability to raise concerns
- there may be cultural barriers to identifying an employment law breach and raising a concern
- there are low barriers to entry to the agency work industry, meaning that migrant employers in the industry may not be complying with New Zealand laws
- work visas are attached to employers, which makes it less likely that agency workers will raise a concern, for fear of being deported.

Government initiatives to support employers and employees.

The government has announced three new initiative to help keep apprentices in work and extended a number of others. Employers and businesses will be able to access support from either Apprenticeship Boost, Mana in Mahi, or the Regional Apprenticeships Initiative:

- Apprenticeship Boost is a $380.6 million fund to support up to 36,000 apprentices per year (including new apprentices), by providing a subsidy to around 18,000 employers;
- Targeted Training and Apprenticeship is a $320 million Fund which made a range of training and apprenticeship programmes at sub degree level free for learners from 1 July 2020;
- The new Regional Apprenticeships Initiative, funded through the Provincial Growth Fund, which will support employers in the regions to take up new apprentices;
- An expansion to MSD's Mana in Mahi programme to help people into long-term work and gain a formal industry training qualification; and
- Support for seven existing Group Training Schemes to help them continue to employ some 1,700 apprentices and trainees.

Targeted Training Apprenticeship Fund[2]

The Targeted Training and Apprenticeship Fund (TTAF) became available on July 1 2020. The fund makes training fees-free from 1 July 2020 until 31 December 2022 for all apprenticeships and for vocational programmes within targeted areas at level 3-7 (excluding degrees) at tertiary providers or workplace training.

The targeted areas are primary industries, construction, community support, manufacturing and mechanical engineering and technology, electrical engineering and road transport related to operating heavy vehicles.

Apprenticeship Support Programme[3]

This includes Apprenticeship Boost to help employers pay for new and existing apprentices in their first two years of training. This will be available from August 2020 and runs for 20 months. More information is available from the Work and Income website, see link below.

[2] https://www.tec.govt.nz/funding/funding-and-performance/funding/fund-finder/targeted-training-and-apprenticeship-fund/

[3] https://www.workandincome.govt.nz/work/apprentice-support/index.html

Apprenticeship Boost aims to provide support for employers to retain and take on new apprentices as the economy recovers from the impacts of COVID-19, so they can continue to earn and progress towards their qualifications.

This initiative recognises apprentices need more support from employers in their first two years while they are training and developing their skills.

Employers of first and second year apprentices who are in a Tertiary Education Commission approved New Zealand Apprenticeship or a Managed Apprenticeship will be able to apply for Apprenticeship Boost through the Ministry of Social Development (MSD).

Employers can apply for Apprenticeship Boost whether an apprentice has just started their training programme or is nearing the end of their first two years - right up until the apprentice has completed 24 months of their training programme (while the initiative is running).

An apprentice who is in the first year of their apprenticeship will be eligible for $1,000 per month, and an apprentice in their second year is eligible for $500 per month for a maximum period of 20 months.

Mana in Mahi extension

Mana in Mahi was launched in August 2018 and aims to help people who are disadvantaged in the labour market move into long-term work and gain a formal industry qualification. The programme includes a wage subsidy for employers, funding for pre-employment training, ongoing access to pastoral care and incentive payments for participants.

From August 2020, programme support will be extended from 12 up to 24 months. The wage subsidy will be increased - up to $16,000 for a first year participant, and up to $8,000 for a second year participant.

Currently Mana in Mahi is aimed at people aged 18-24. This will be expanded to people of all ages. It will continue to focus on people who are disadvantaged in the labour market. The expanded scheme will be available for current and new participants.

More information about the current programme:

- Mana in Mahi — for employers[4]
- Mana in Mahi — for people who'd like to take part[5]

Group Training Schemes

Group Training Schemes are existing industry-based training programmes which employ apprentices and trainees and provide related services to host employers.

Funding will be provided to the seven Group Training Schemes so they can continue to employ their apprentices. This will enable a quick restart of training once business opportunities improve for host businesses. In the meantime apprentices will undertake off-job training, working with industry training organisations and vocational training providers.

The Regional Apprenticeships Initiative

A new regional apprenticeship scheme which will provide funding for regional employers to support them to take on new apprenticeships. The scheme will initially focus on displaced workers, and Māori and Pacific Peoples.

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[4] https://www.workandincome.govt.nz/employers/subsidies-training-and-other-help/mana-in-mahi.html

[5] https://www.workandincome.govt.nz/products/a-z-benefits/mana-in-mahi.html

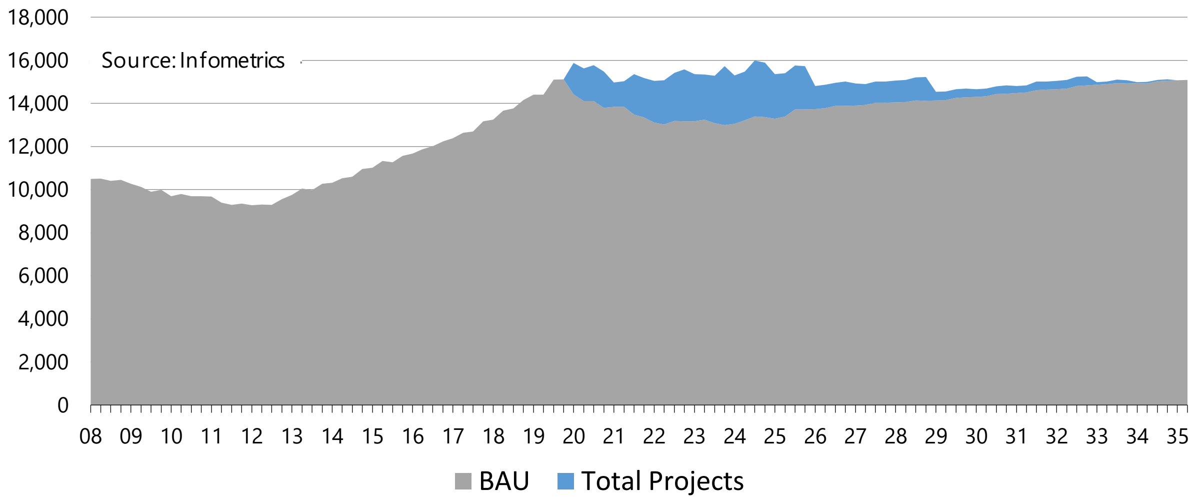
Supply of and demand for labour

Demand for labour

In the project based model the volume of major construction projects on the books in the Otago Region over the next few years drives additional demand for. Between 2020 and the end of 2025, the forecast projects would be expected to boost demand for workers in the construction industry in Otago by between 1,500 and 2,500 at any point in time. This project demand balances out the drop in business-as-usual employment. Reducing the number of new people required in the industry from a high of 2,500 in 2019 to an average of 1,000 per annum in the period 2020 – 2029.

Graph 7

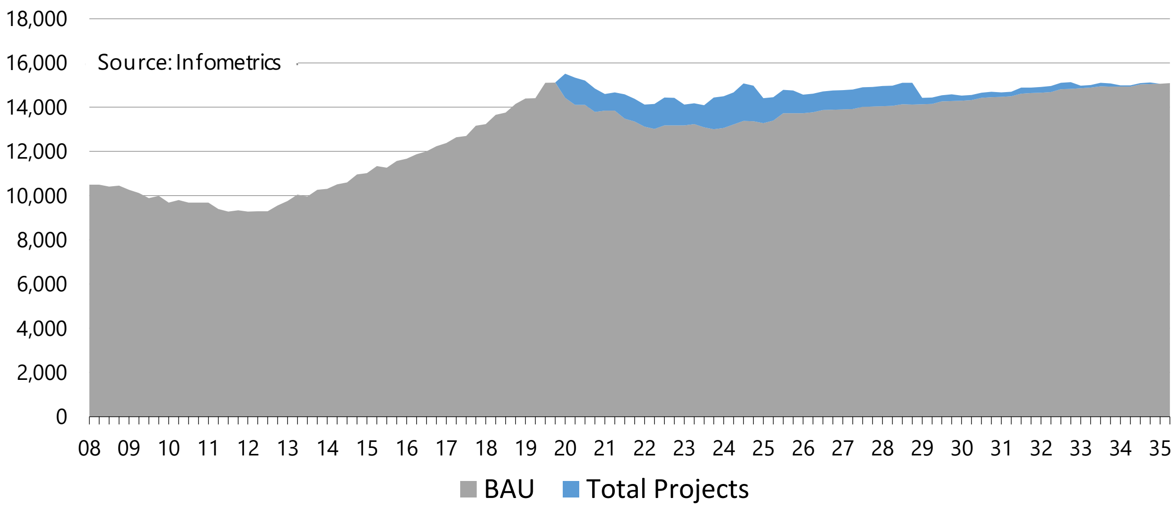
Projected construction employment in Otago Region - Project based forecast



In the contracted model the volume of major construction projects is reduced (particularly within the Inland Otago Region) with an associated reduction in labour. Between 2020 and the end of 2025, the remaining major projects are expected to need between 750 and 1,650 at any point in time which is insufficient to address the drop in business-as-usual employment under this scenario. Coastal project numbers, with retirement becoming the largest driver of employment demand reducing the number of new people required (supply Vs Demand gap) in the industry from a high of 2,500 in 2019 to a forecast surplus in 2021, though replacement staff will still need to be found.

Graph 8.

Projected construction employment in Otago based on a contracted project scenario

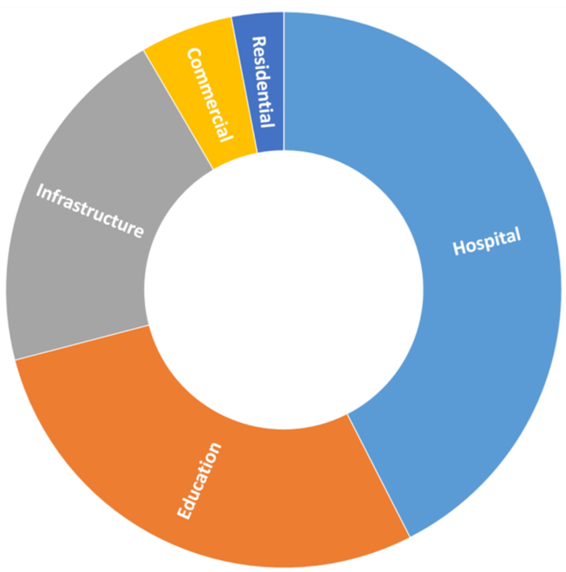


The nature of work is significantly different between inland and coastal Otago. Coastal Otago is largely publicly funded with approximately 35% linked to the new Dunedin Hospital, 35% linked to Education projects (particularly Otago University) and 20% Infrastructure, with the balance being Commercial and Residential projects. Inland Otago is almost the opposite with 50% Commercial, 30% Residential, 17.5% Infrastructure and the balance made up of Education projects.

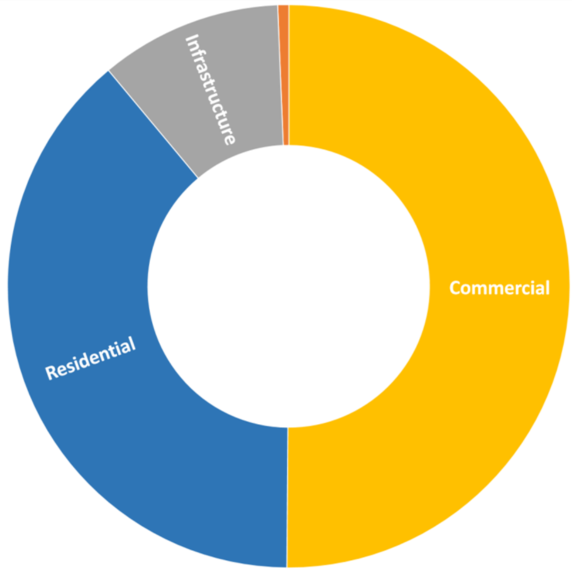
Graph 9.

Project composition comparison between Inland and Coastal Otago

Coastal Otago Dunedin, Waitaki, Clutha



Inland Otago Queenstown-Lakes, Central Otago

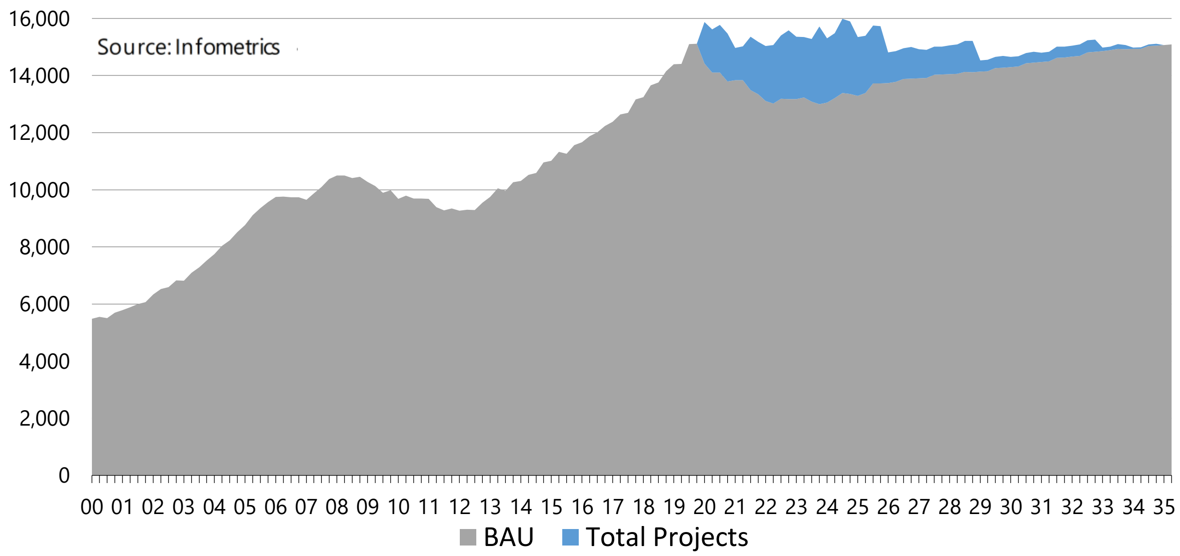


Under BAU conditions, construction activity, and associated demand for construction employment, in Dunedin is expected to gradually trend upwards throughout the forecast period. The lack of any significant cyclical downturn in this profile means the additional activity that is captured in our major project list will clearly add to demand for construction workers in the city. The lumpy demand profile for workers is likely to be most pronounced in 2023/24, when work on both the major buildings at Dunedin Hospital is expected to be in full swing.

While there is a reduction in project activity in 2025 and again in 2029 (see graph 10) this is more reflective of the lack of forecast data more than five years out rather than an actual forecast drop.

Graph 10.

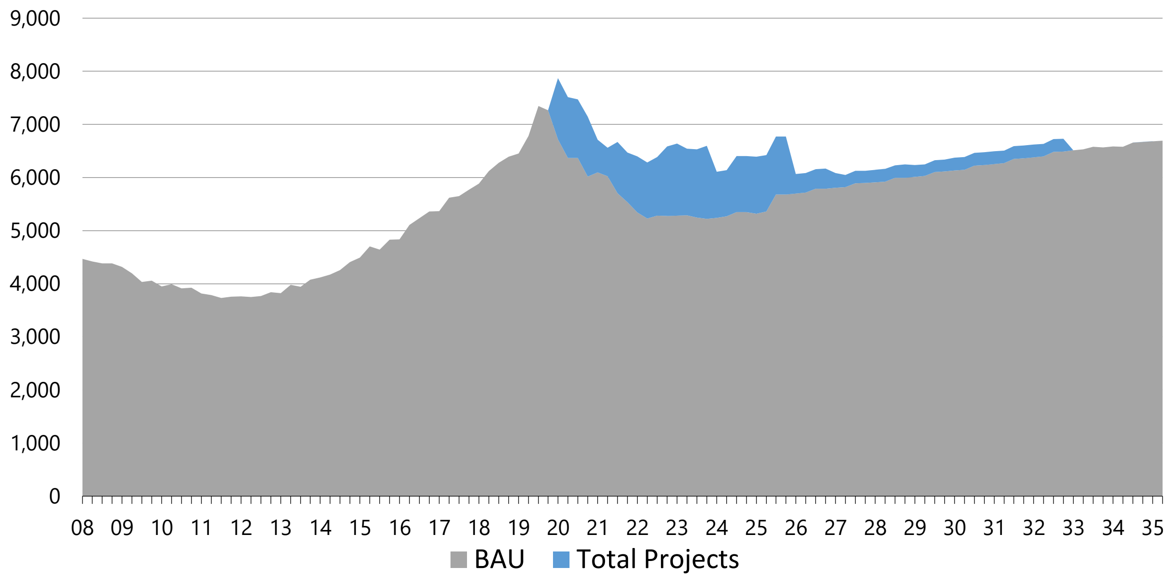
Projected construction employment in Coastal Otago



The project based forecast (see Graph 11) is based on the construction projects valued at twenty million dollars and above identified in primary research during the project in 2019 and verified by Pacifecon Ltd in July 2020.
As at the beginning of July there had been very few projects formally put on hold or cancelled so while the economic based BAU forecast shows a significant drop in 2020 the project based spike in employment still exists.

Graph 11.

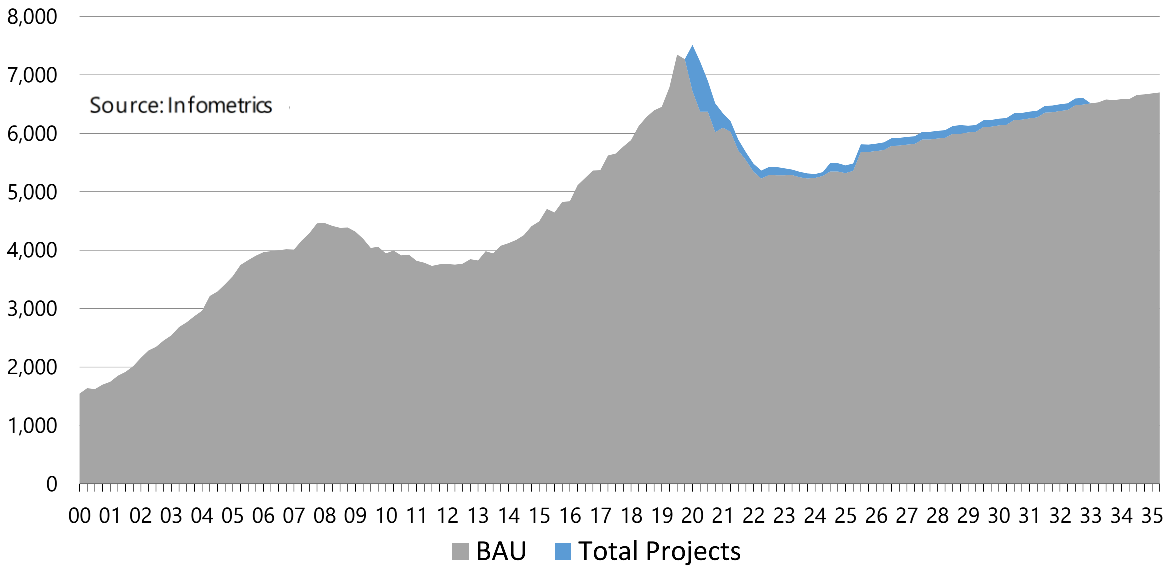
Projected construction employment in Inland Otago - Project based forecast



The contracted project scenario (see graph 12) applies an alternative logic to the project list proposing that all privately funded projects that have not started in Inland Otago will not proceed, while projects already underway will continue through to completion. Under this scenario a significant drop in employment demand is forecast between 2021 and 2025.

Graph 12.

Projected construction employment in Inland Otago - Contracted project scenario



It should be noted that the reality will probably fall somewhere between the two models (shown in Graphs 9 and 10) and two revisions of this forecast scheduled to take place in September and November 2020 will update the graphs and should show an emerging trend.

Occupational demand

If we examine specific occupations within the construction industry, we see three broad trends in the way that demand for workers will be affected by the major projects during the forecast period.

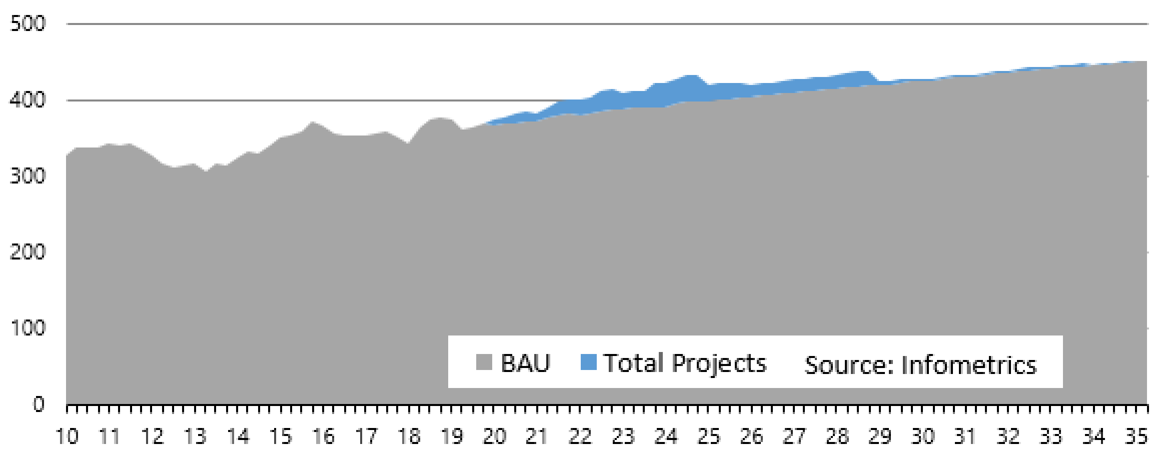
<u>Occupations with a growth trend</u>
For the first set of occupations, Infometrics modelling suggests that employment in these occupations is only moderately affected by changes in construction activity. In many cases, employment in these occupations is strongly influenced by the size of the population and building stock, and job numbers have tended to trend upwards over time in line with these variables. As a result, demand for workers in these occupations in 10-15 years' time is likely to surpass current levels and, in some cases, even exceed near-term demand levels when major projects are considered.

Occupations that fall into this grouping include electricians, plumbers, roof tilers, floor finishers, bricklayers, wall and floor tilers, glaziers, earthmoving plant operators, and paving plant operators. Our projections for electricians are shown for Dunedin (see Graph 11) and for Queenstown-Lakes (see Graph 13 and 14).

There is a significant difference in the employment forecast between the full project view and the contracted project view. While there still seems to be a post lockdown upturn in activity the actual level of activity will probably fall somewhere between the two views by the end of 2020 when the future view is expected to be more predictable.

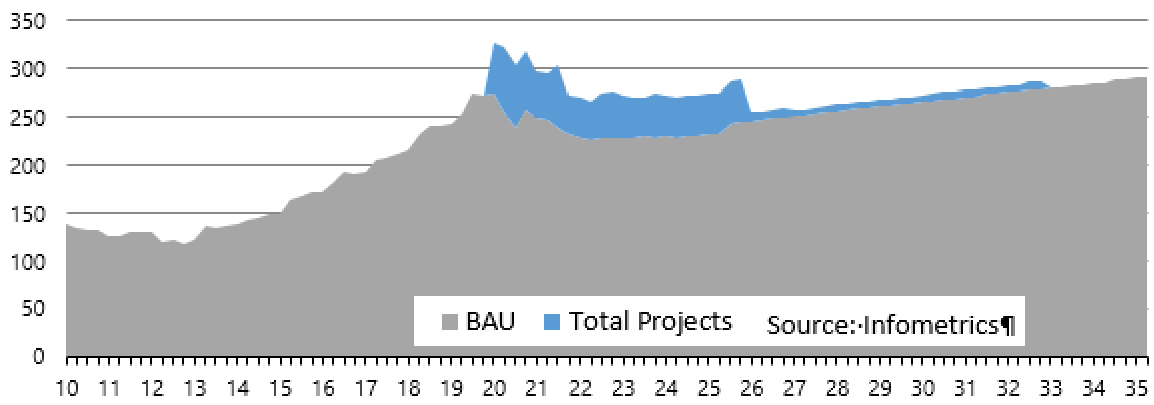
Graph 13.

Dunedin labour demand, electricians



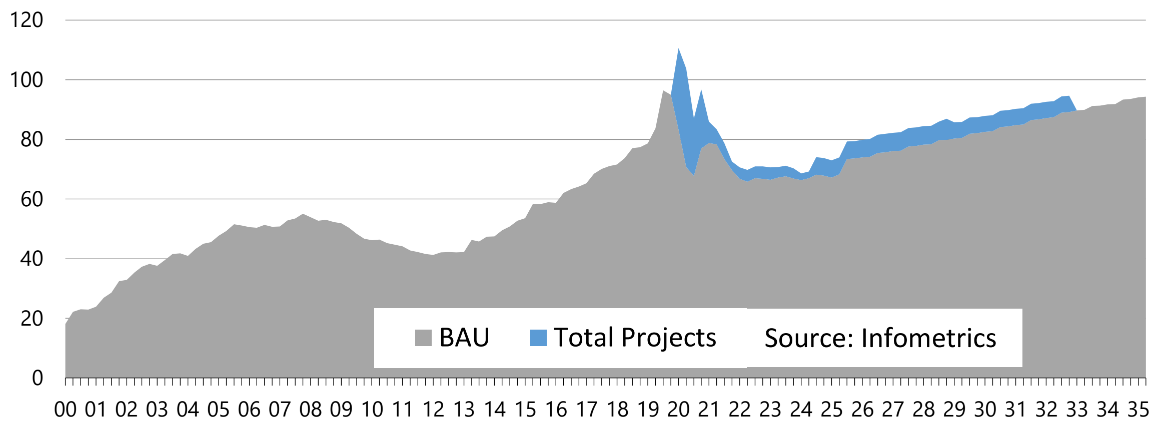
Graph 14.

Queenstown lakes labour demand based on the forecast project view, electricians



Graph 15.

Queenstown lakes labour demand based on the contracted project view, electricians



For the occupations in this grouping, these results imply that demand pressures and skill shortages associated with major projects in Inland Otago are likely to be less intense than for other occupations.

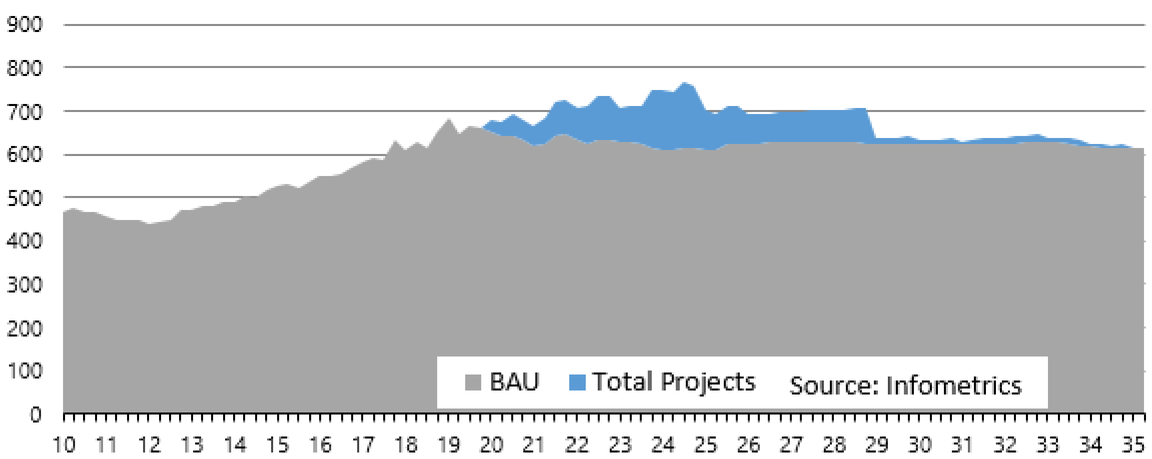
Occupations with moderate responsiveness to major projects

Demand for workers in this second set of occupations is more responsive to changes in construction activity than the first set. However, we estimate that the boost to demand for workers from the pipeline of major projects will still be below the average increase in employment across the construction industry. For these occupations, there is typically a baseline level of employment that can meet some additional demand for work before extra people need to be taken on.

Occupations that fall into this grouping include project builders, excavator operators, and drainlayers. Projections for project builders are shown for Dunedin in Graph (see graph 13) and for Queenstown-Lakes (see graph 14 and 15).

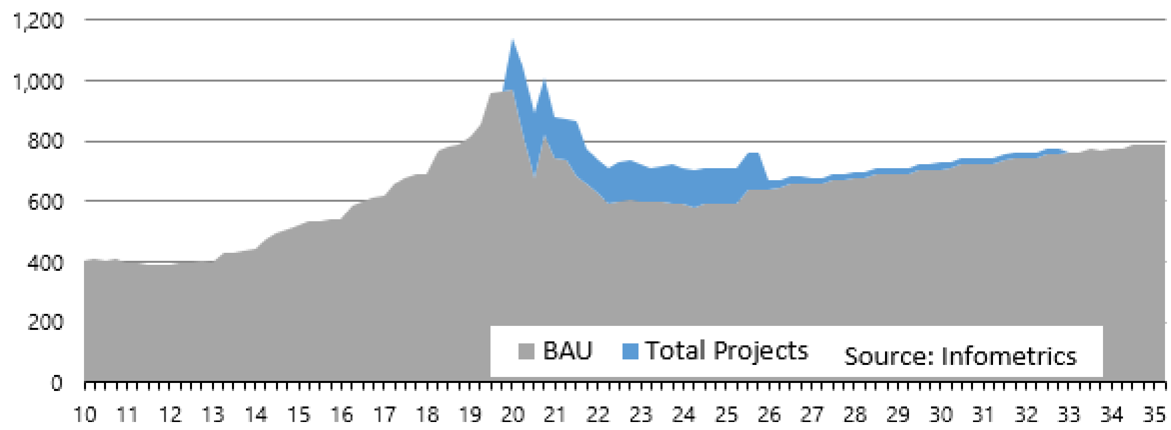
Graph 16.

Dunedin labour demand, project builder



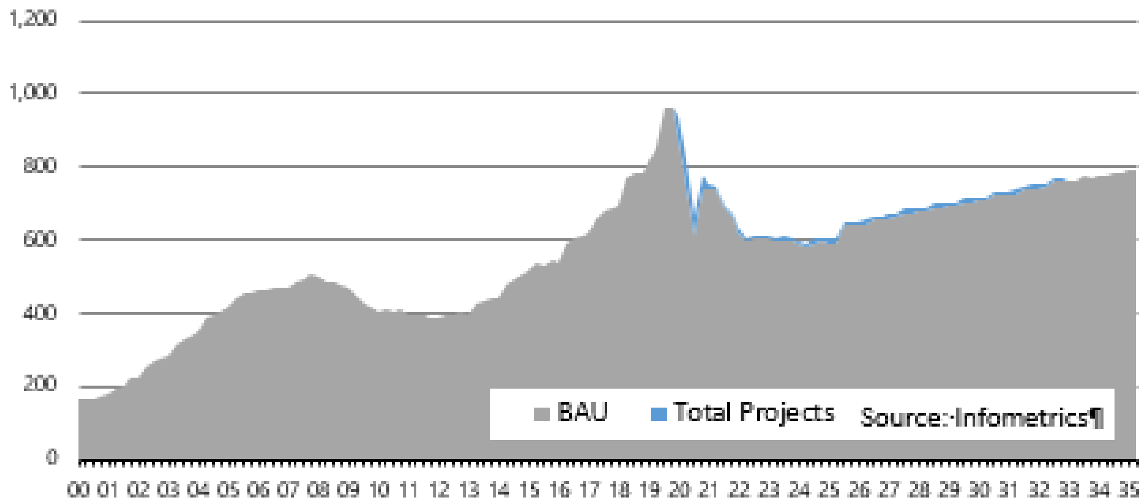
Graph 16.

Queenstown Lakes labour demand based on forecast project view, project builder



Graph 17.

Queenstown Lakes labour demand based on contracted project view, project builders



For both areas, the lift in demand for project builders due to major construction projects is smaller than the boost to industry-wide demand for workers. In Dunedin, the increased requirement for project builders averages 14% with the boost to project builder numbers caused by major projects between 2020 and 2028.

For these occupations, the results imply that demand pressures are likely to be strong in Coastal Otago, but not as intense as for some other occupations within the construction industry. People working in these occupations are potentially exposed to job losses in the future if the volume of construction work in the pipeline shrinks significantly.

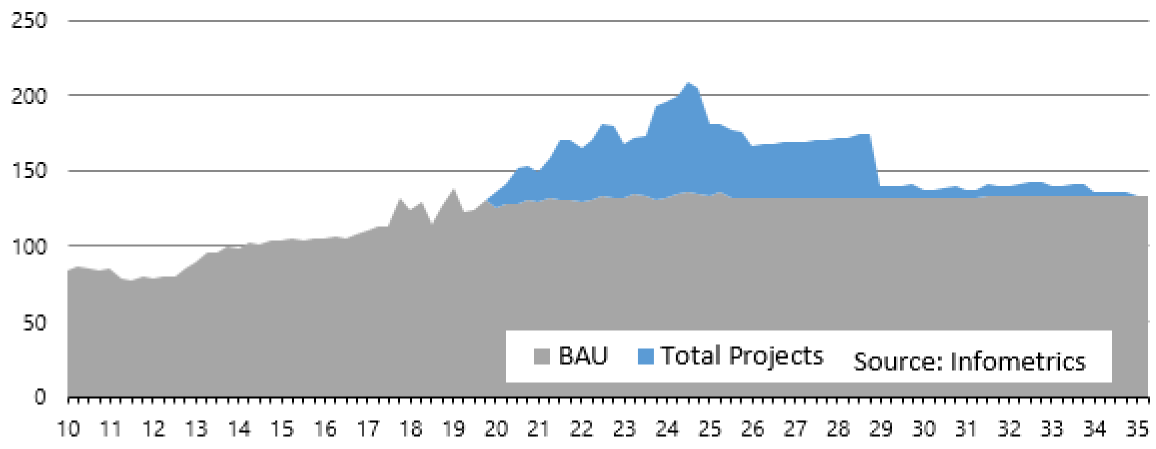
<u>Occupations with high responsiveness to major projects</u>

Our final grouping includes those occupations where demand pressures are likely to be felt most acutely. Our modelling shows that demand for workers in these occupations is highly responsive to changes in construction activity. Changes in employment associated with major projects are likely to be larger, in percentage terms, than changes in job numbers across the entire construction industry.

Occupations within this grouping include carpenters, construction project managers, solid plasterers, building associates, landscape gardeners, quantity surveyors, telecommunications technicians, scaffolders, concreters, fencers, electrical line mechanics, fibrous plasterers, air conditioning and refrigeration mechanics. Our projections for construction project managers are shown for Dunedin in Graph (see graph 185) and for Queenstown-Lakes in Graph (see graph 19 & 20).

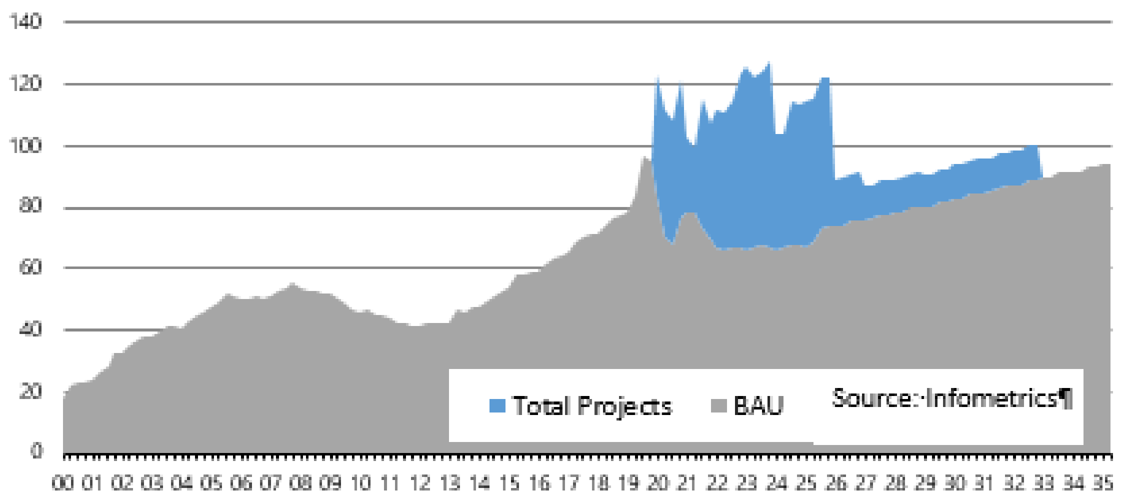
Graph 18.

Dunedin labour demand, construction managers



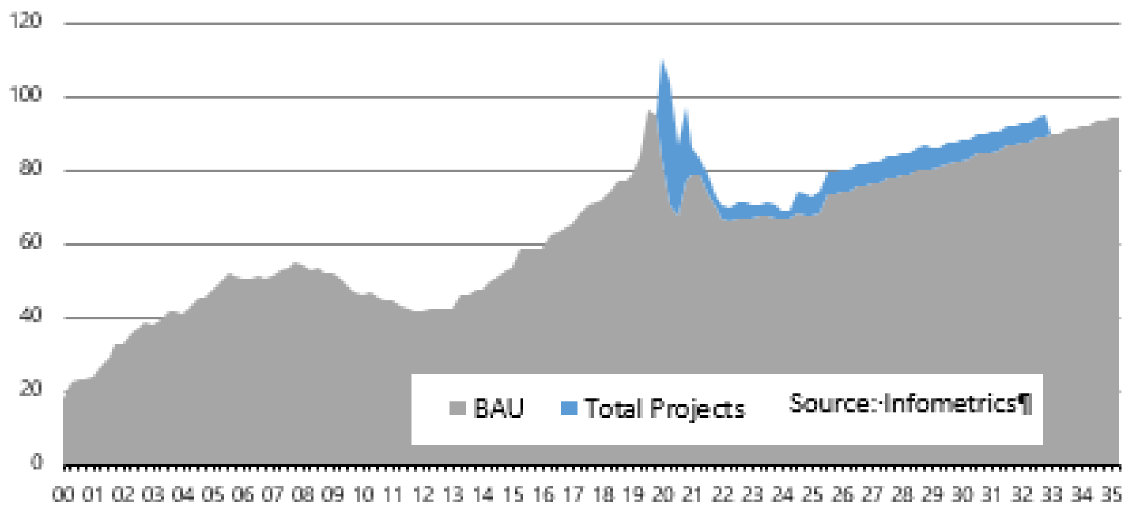
Graph 19.

Queenstown Lakes labour demand based on forecast project forecast, construction managers



Graph 20.

Queenstown Lakes labour demand based on contracted project forecast, construction managers



Major projects in Dunedin could lift required construction project manager numbers by as much as 63% in 2024, well above the 27% industry-wide lift in employment. In Queenstown, the potential response to project variations is very clearly demonstrated in the differences between Graph 19 and 20. As previously stated the final demand will probably fall somewhere between the two models.

For the occupations in this grouping, people are highly exposed to swings in construction activity that can lead to significant changes in demand for workers. Consequently, if there is a surge in demand as in the Dunedin case associated with a large project (or projects) is not expected to be sustained over the long term, it might be more appropriate to temporarily bring in labour resources from outside the region to meet demand.

Other occupations

There are some occupations that do not neatly fit into these groupings and display different trends between Dunedin and Queenstown-Lakes. These occupations include painting trades workers, builder's labourers, and building insulation installers. The variation between Dunedin and Queenstown-Lakes most likely relates to the different mix of activity that makes up the major projects in each area. Demand for painting trades workers and builder's labourers is more responsive to the lift in activity caused by major projects in Dunedin.

Labour demand for Dunedin Hospital

The sheer magnitude of the estimated $1.4b replacement of Dunedin Hospital means that the project's effects on demand for construction workers deserves its own separate discussion.

Modelling is based on separating the project into two discrete components.

- The Ambulatory Services Centre is expected to be constructed between mid-2020 and the end of 2024, at an approximate cost of $300m.
- The Acute Services Building is expected to be built between the June 2021 quarter and the end of 2028, costing about $1.1b.

For each building, we have split the work over four stages.

- Demolition, site clearance, and site establishment
- Foundations
- Structure and façade
- Internal works and completion

The results of our modelling of demand for construction workers are shown in Graph 36.[6] Table 3 splits out selected occupations where the numerical labour demand requirements of the hospital build are largest.

The greatest labour demand for the project is expected to be during late 2023 and throughout 2024. This peak in demand is driven by both buildings being in relatively labour-intensive phases – the Ambulatory Services Centre will be undergoing internal works and completion, while construction of the structure and façade of the Acute Services Building will be underway.

[6] Our modelling does not attempt to fully replicate the typical "S-curve" associated with the timeline of construction projects. For example, it is likely that activity and employment will taper off more gradually in the latter part of 2028 as the Acute Services Building nears completion.

Graph 21

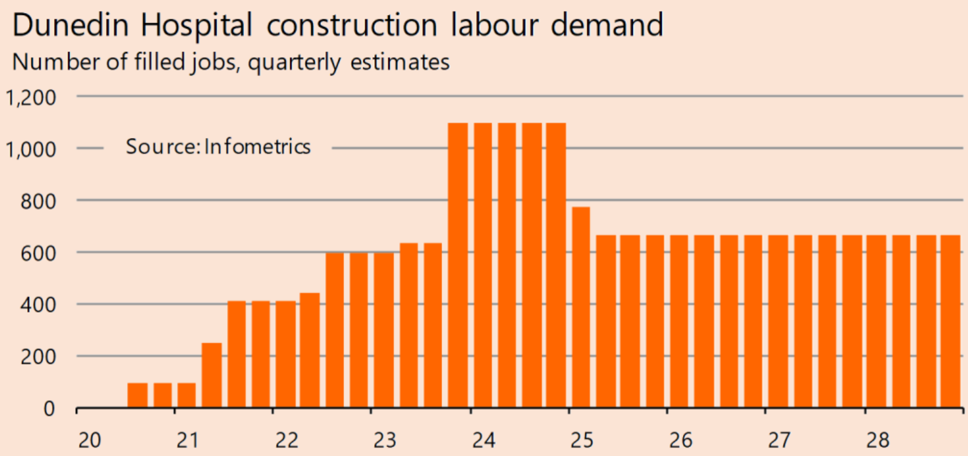


Table 3

Dunedin Hospital construction labour demand

Number of filled jobs, selected quarterly estimates

	Dec 21	Dec 24	Dec 27
Project builders	26	131	71
Carpenters	21	108	60
Construction project managers	16	64	36
Quantity surveyors	8	41	23
Builder's labourers	11	28	11
Electricians	9	12	18
Solid plasterers	0	12	20
Building associates	8	21	10
Scaffolders	0	43	0
Other	311	639	417
Total	411	1,099	666

Although Table 3 shows the occupations where we expect the greatest numerical effects on labour demand to occur, it risks missing some key areas where demand pressures will be particularly intense. For example, we estimate that the maximum number of scaffolders required for construction of the hospital at any point in time is 43, with an average of just 10 workers across the project's 8½-year timeline. However, these figures look far more significant when one considers that the number of people working as scaffolders in Dunedin under BAU conditions is forecast to be about 15, on average, between now and 2028. In other words, at its peak, construction of the new hospital could require an increase in scaffolder numbers in the city of 250-300%.

Table 4 details the 10 occupations with the most significant boost to construction labour demand in Dunedin caused by the hospital build. In some cases, such as quantity surveyors or construction project managers, both the absolute numbers required and the percentage increase to the BAU workforce are significant. But there are other occupations with a relatively small existing workforce that will require a sizable increase in numbers. Examples of these occupations include concreters and cement and concrete plant workers.

Table 4

Dunedin Hospital construction labour demand

Number of filled jobs, selected occupations

	Average, Sep 20 - Dec 28		Maximum, Sep 20 - Dec 28	
	Number	% of BAU employment	Number	% of BAU employment
Fencers	4	91%	8	160%
Scaffolders	10	66%	43	298%
Landscape gardeners	6	49%	9	81%
Quantity surveyors	21	42%	41	84%
Construction project managers	34	29%	64	58%
Fibrous plasterers	5	28%	9	49%
Solid plasterers	11	26%	20	47%
Cement and concrete plant workers	3	22%	9	66%
Concreters	5	22%	15	68%
Drillers	4	20%	10	59%

Supply of Labour

The significant demand for construction workers in Otago over the next 15 years is unlikely to be met using existing supply channels. To get a better handle on this we need to understand more about the supply of construction workers into the region. This, it turn will help us try to quantify the gap between supply and demand.

Labour supply channels

There are seven significant labour supply channels for the Otago construction sector[7]. In order of their contribution to construction labour demand in Otago in 2018 these are:

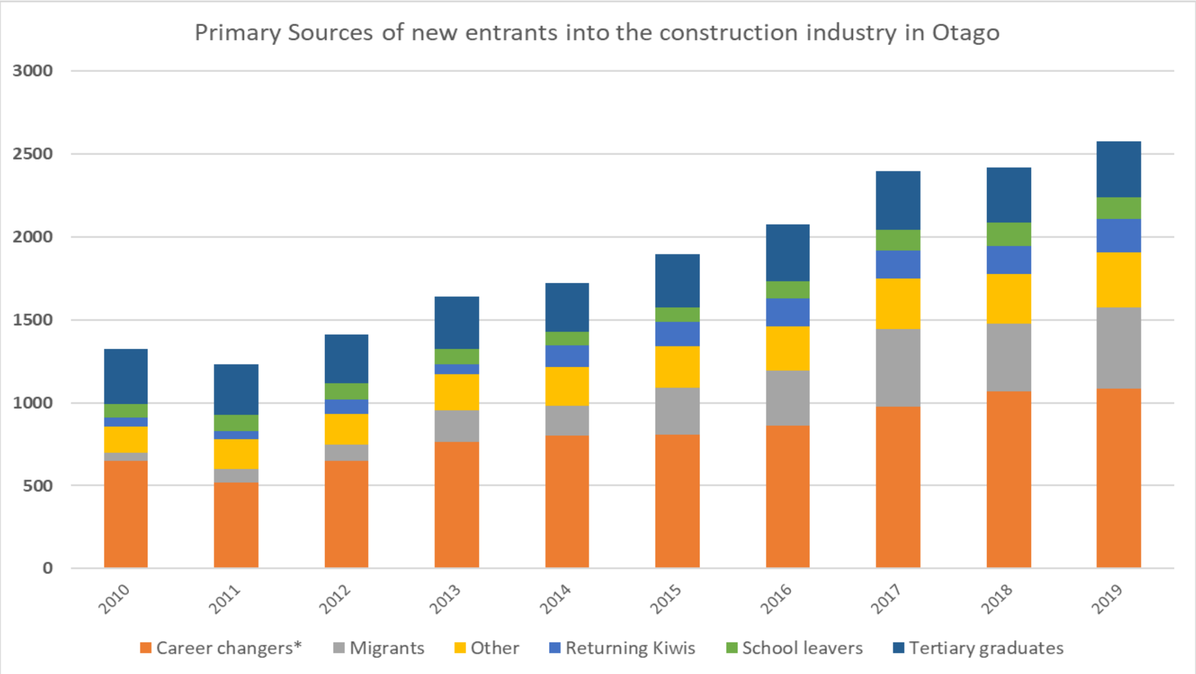
1. Career changers (50%)
2. Migrants (15%)
3. Tertiary enrolments (10%)
4. New Zealanders returning from a prolonged time overseas (6%)
5. Secondary school leavers (5.5%)
6. Beneficiaries (2.2%)
7. Other (11%) including Corrections and people with incomplete data from the categories above

Each of these channels is explored in further detail in this section.

Graph 22 shows the contribution of each of these seven labour supply channels to the supply of construction workers in Otago in each year from 2011 – 2018. The most significant supply channel in all years was career changers, this channel has contributed an average of 42% of new workers each year since 2011. The second largest, and growing supply channel is migrant labour. In 2011 the inflow of new migrant workers was at its lowest, contributing to only 4.6% of all new entrants. Since then the number of migrants has grown steadily and in 2018 made up 15.2% of all new entrants.

Graph 22

Supply Side Gap with Sources of Workers



[7] The data, graphs and narrative in this section is largely based on work undertaken by Scarlatti in the NZ Governments Integrated Data Infrastructure in 2020. https://www.sweetanalytics.co.nz/content/where-does-trades-sector-source-its-talent/

Career Changers

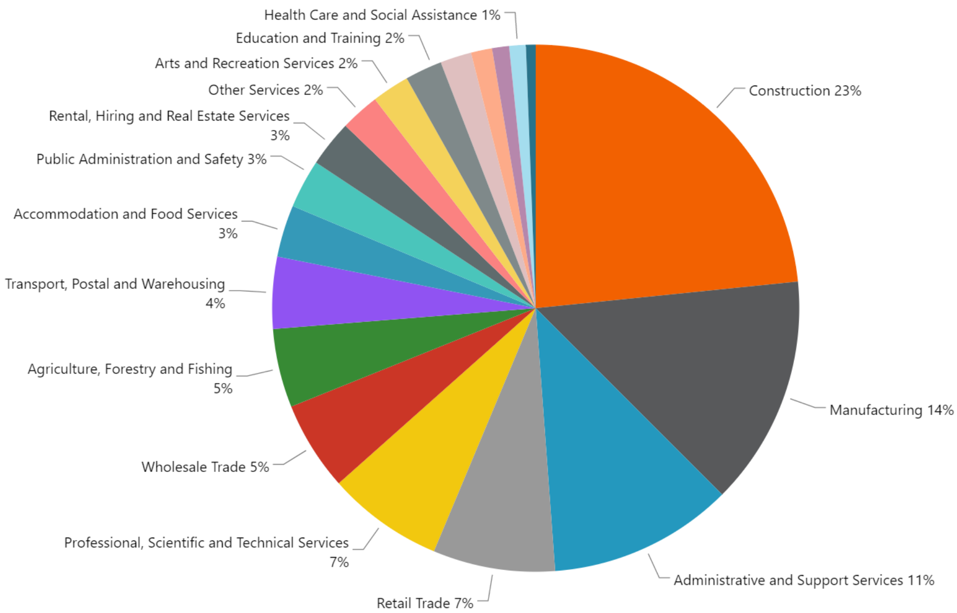
The largest supply channel for construction workers in recent years has been career changers. This channel has made up on average 42% of new entrants to the sector since 2011.

The most common sector that career changers arrive from is the wider construction sector. In other words, people who move between different industries within the construction sector. However, in total these career changers only make up about a quarter of all career changers, with the majority arriving from unrelated sectors. The percentages of career changers by source industry has remained relatively constant over the past decade. Graph 23 breaks down the industry where 2018 new construction entrants were predominantly working in 2017.

*Note that labour supply businesses will fall under 'Administrative and support services'

Graph 23.

2018 Previous sector of career changers



Otago School Leavers

School leavers are often targeted as being a significant potential source of entrants to the construction sector. In reality, only about 5% of new employees in the construction sector come directly from school. Many young people enrol in tertiary education when they leave school, while others seek employment and then change roles, sometimes several times, before landing on a longer term career. This means it is useful to look at how many people work in construction in the years after they leave school.

Senior Secondary trends

There are 29 schools in Otago that have senior secondary students (years 11+). These schools had a combined total of almost 7,000 students in years 11+ in 2019. The number of senior secondary students remained virtually unchanged in the years 2010 – 2019. This masks some underlying differences between the sub regions. Queenstown Lakes District and Central Otago District both had relatively strong growth in senior secondary numbers with increases of 38% and 12% respectively. All other districts saw decreases, with a particularly strong decrease in Clutha District (-16%). The percentage change in senior secondary rolls from 2010 – 2019 is shown below.

Table 5

Senior secondary school rolls in Otago

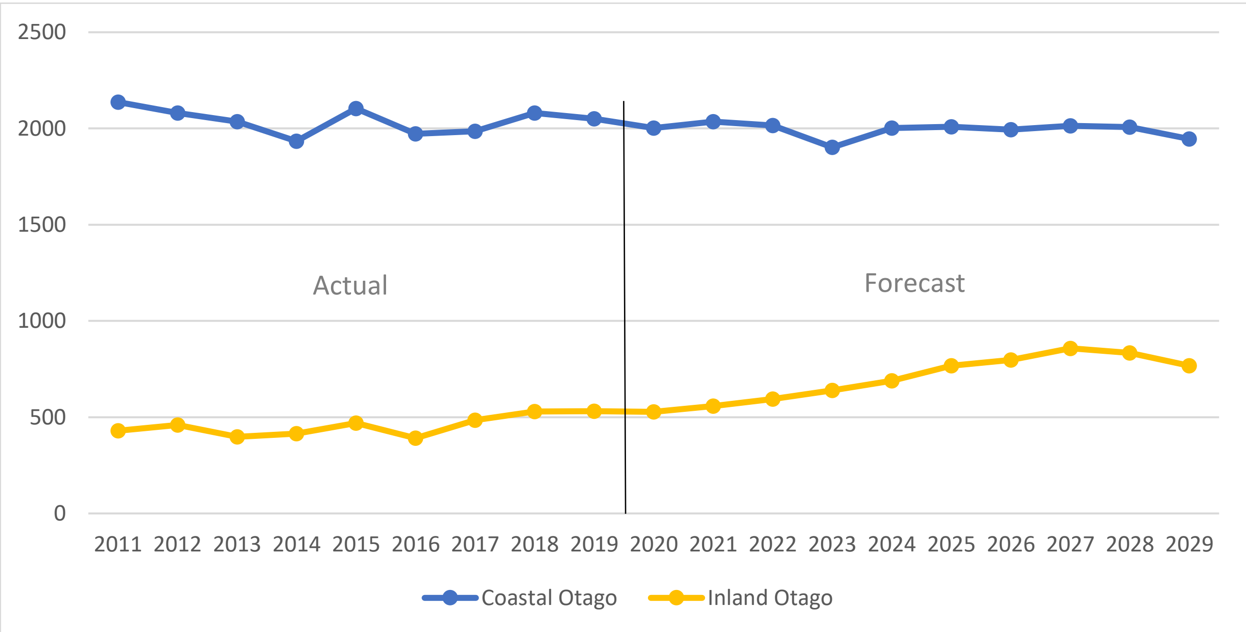
	No. of schools	2019 Year 11+ roll	Change in Y11+ rolls 2010 - 2019
Coastal Otago			
Dunedin City	14	4,161	-5%
Waitaki District	4	777	-7%
Clutha District	5	463	-16%
Total	**23**	**5,401**	**-6%**
Inland Otago			
Queenstown Lakes District	2	929	38%
Central Otago District	4	578	12%
Total	**6**	**1,507**	**26%**
Otago Total	**29**	**6,908**	**-1%**

School Leavers

On average there have been about 2,500 school leavers in Otago each year from 2010 - 2019. Based on current school rolls and retention rates the number of school leavers is expected to remain relatively similar to the average number over the last 10 years from 2020 – 2023. From 2024 the number of leavers is expected to increase, gradually rising to a peak of 2,900 in 2027. Historic and forecast numbers of school leavers are shown in Graph 39. This increase is driven entirely by an increase of leavers in Inland Otago, which should see an increase from around 500 leavers in 2019 to more than 800 in 2027. Coastal Otago should remain relatively flat with around 2,000 school leavers per year.

Graph 24.

School leavers by sub-region



School leaver tertiary destinations

The Ministry of Education collects information about the tertiary study of school leavers in the first year after leaving school. In their first year after leaving school, 37% of 2018 Otago school leavers were undertaking tertiary study at Bachelors or above level, 31% were undertaking tertiary study at certificate or diploma level, and 32% were not engaged in tertiary education. Compared to New Zealand as a whole, Otago school leavers have the second highest rate in the country of going on to bachelors or above study (Auckland has the highest) and the lowest rate of school leavers who do not engage in tertiary education.

There are considerable differences between the districts in Otago. Dunedin City and Queenstown-Lakes District both have particularly high percentages of school leavers who undertake bachelors or above study, at almost 42%. This rate is higher than anywhere in the country except some parts of central Auckland and Wellington City. Destinations by district and region are shown in Table 6 below.

Table 6

Tertiary destinations of 2018 Otago school leavers

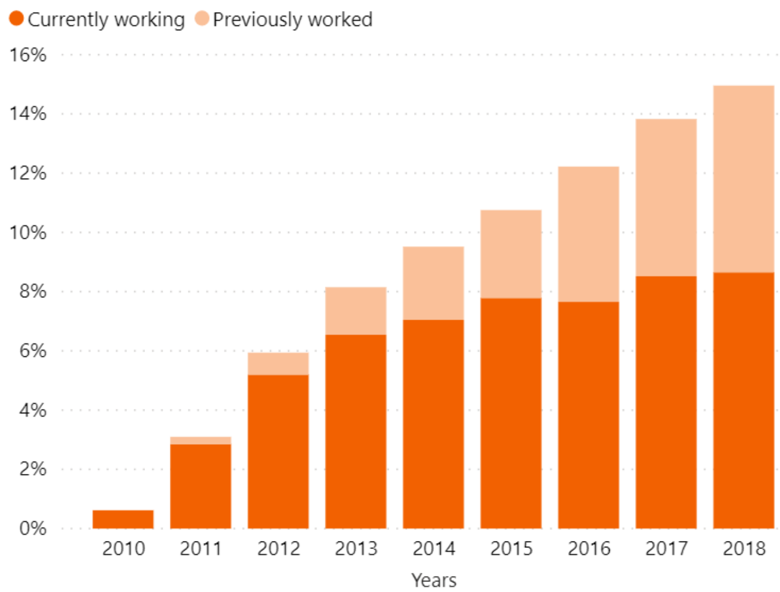
Area	Bachelors and above (%)	Certificates and Diplomas (%)	Not enrolled in tertiary education (%)
Waitaki District	28.9	26.7	44.3
Central Otago District	31.9	34.3	33.8
Queenstown-Lakes District	41.6	23.2	35.2
Dunedin City	41.7	30.7	27.6
Clutha District	18.5	45.4	36.1
Otago Region	**37.4**	**30.8**	**31.9**
New Zealand total	**32.1**	**29.1**	**38.8**

Transitions into employment

Graph 40 shows 2010 school leavers' employment in construction industries in each year since leaving school. It shows that within 10 years, 14% of leavers have held a job in construction and over half of these are still working in construction. This means that even though the numbers of young people who directly transition into the sector are small, there are significantly more people who eventually work in the sector and who could be influenced while still at school.

Graph 25.

Construction employment of 2010 school leavers

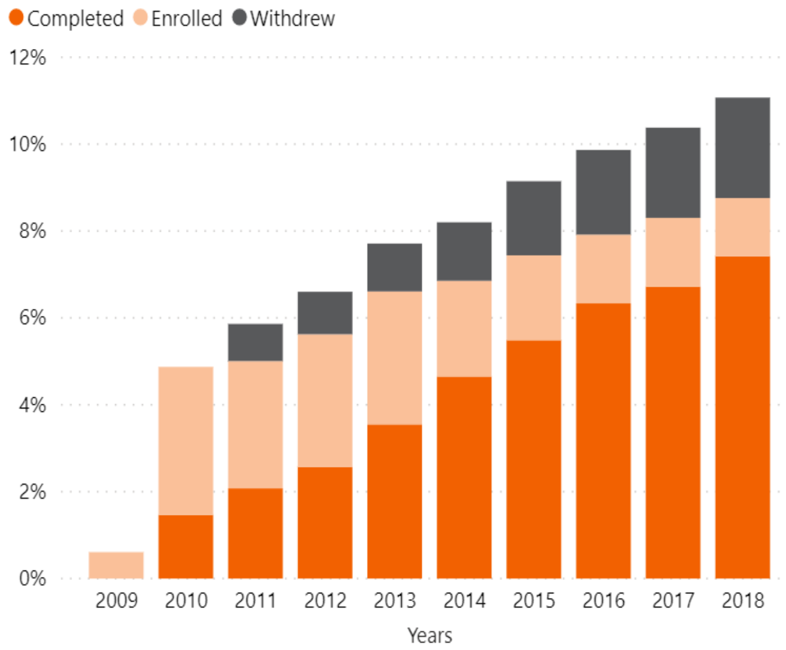


Transitions into tertiary education

There are also a number of school leavers who transition into construction related tertiary training. Graph 25 shows that within 10 years of leaving school, 10% of all Otago school leavers have been enrolled in some construction related tertiary training. Of these, 60% have completed at least one of these courses and a further 10% are still enrolled in training.

Graph 26.

Construction training of school leavers



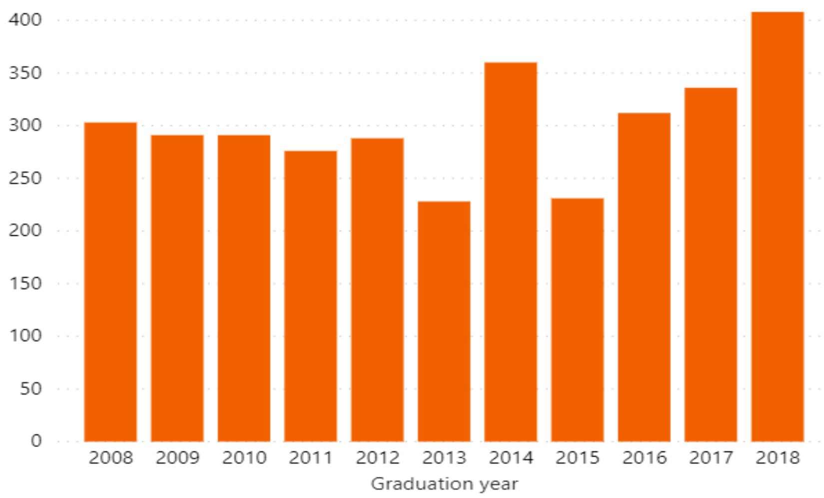
<u>Tertiary sector training</u>

People transitioning from tertiary training to the sector make up about 10% of new entrants to the sector. The majority of these new entrants come from Institutes of Technology and Polytechnics (ITPs).

The two main ITPs in the Southern region are Otago Polytechnic (OP) and Southern Institute of Technology (SIT). Each year these two ITPs produce around 300 construction graduates. In the years after graduation we find active construction employment records for only about 40% of students, however within ten years of graduating 70% have held a job in construction at some point.

Graph 27.

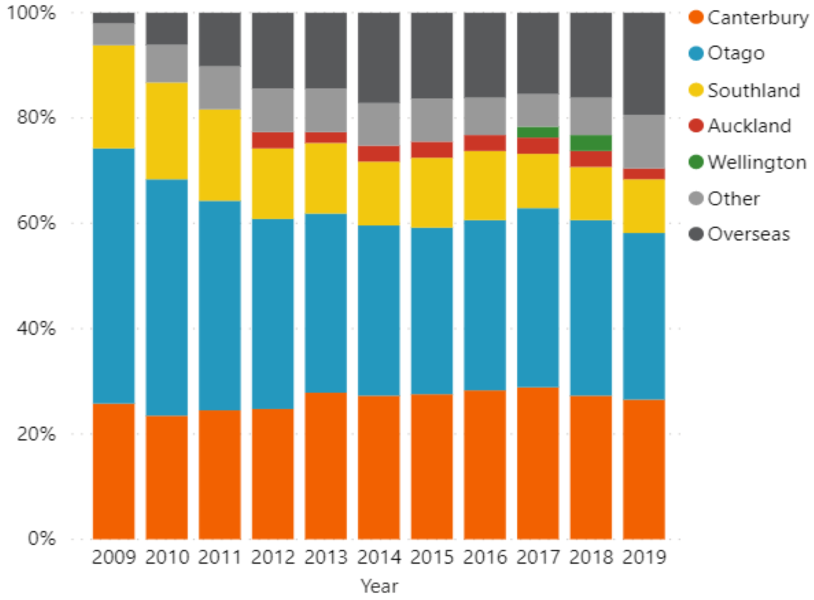
Count of Construction Graduates from SIT and OP by year



Tracking the destinations of OP and SIT construction graduates, we find that 70% remain in Otago, Southland and Canterbury ten years after graduation. Of those who are no longer in these regions, most are overseas, with almost 20% of graduates living overseas after ten years.

Graph 28.

Regional training and movement of SIT and OP Graduates



<u>Beneficiaries by Local Authority in the Otago region</u>

Beneficiaries make up just 2.2% of people entering the sector. However, while numbers are small, there are additional positive social outcomes of moving from benefits to employment so it is worth examining this group in more detail.

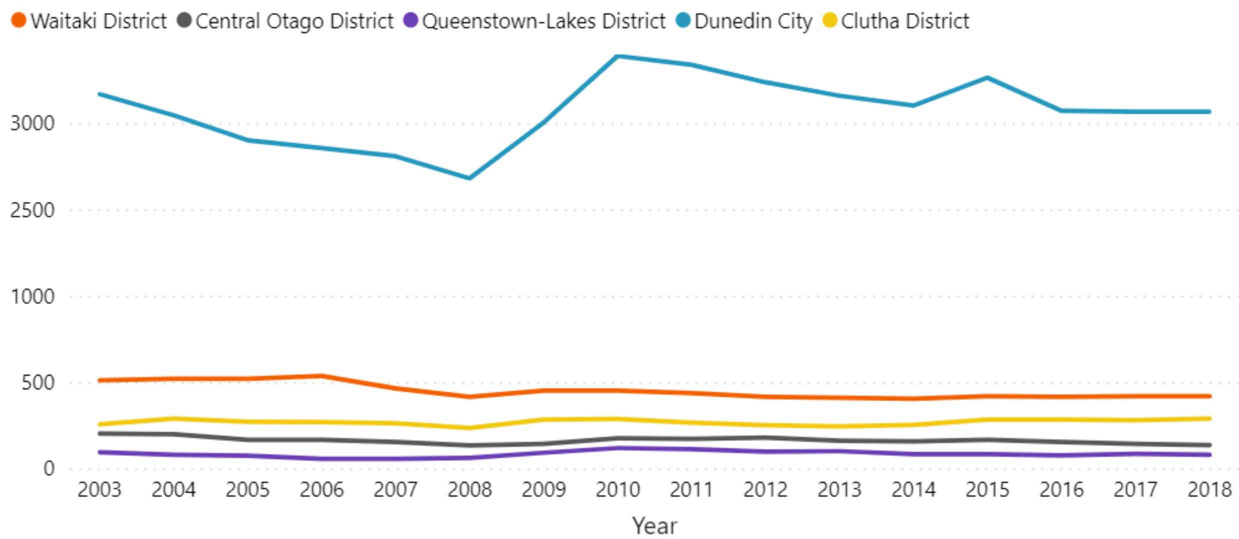
For this analysis we have looked at main working age beneficiaries, that is beneficiaries receiving more than $10,000 (CPI adjusted for years earlier than 2018) in payments, excluding student allowances and pensions.

<u>Number of beneficiaries</u>

Graph 29 shows the number of beneficiaries by Territory Local Authority over time. Dunedin City has the bulk of beneficiaries in Otago with around 3,000 per year. Other territorial authorities each have fewer than 500. A spike can be observed after the global financial crisis in 2008, particularly in the Dunedin City data, with a decreasing impact in regions with less beneficiaries. The graph has been split to allow for the wide distribution of numbers.

Graph 29.

The number of beneficiaries by Territory Local Authority in Otago over time

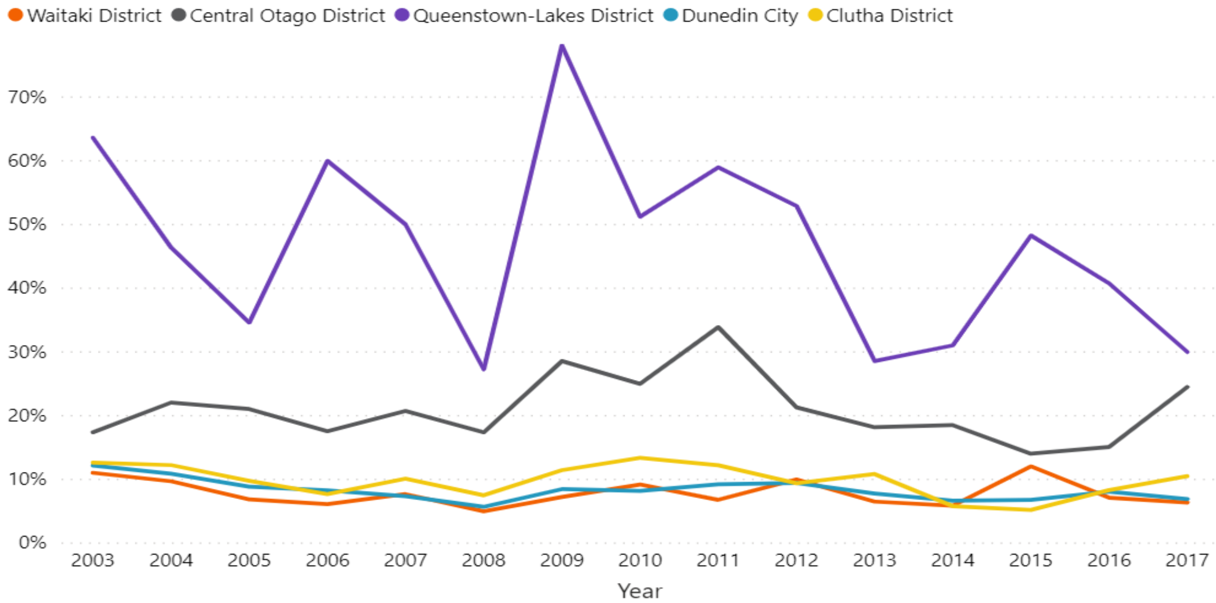


Transition into construction

Graph 30 shows the percentage of beneficiaries that transition into full time employment in the construction sector over time in each territorial authority in Otago.

Graph 30.

% of beneficiaries who are employed in construction in the following year



When breaking the chart down by Territory Local Authorities (TLA), Queenstown-Lakes District and Central Otago District demonstrate the highest proportion of beneficiaries transitioning into the construction industry. In these districts there is also significantly more fluctuation over time.

When looking at the proportion of beneficiaries that become construction workers over time, there is a sharp decline in 2008, particularly in Queenstown Lakes, which is largely due to the global financial crisis. This crisis caused there to be a sudden decrease in demand for construction workers.

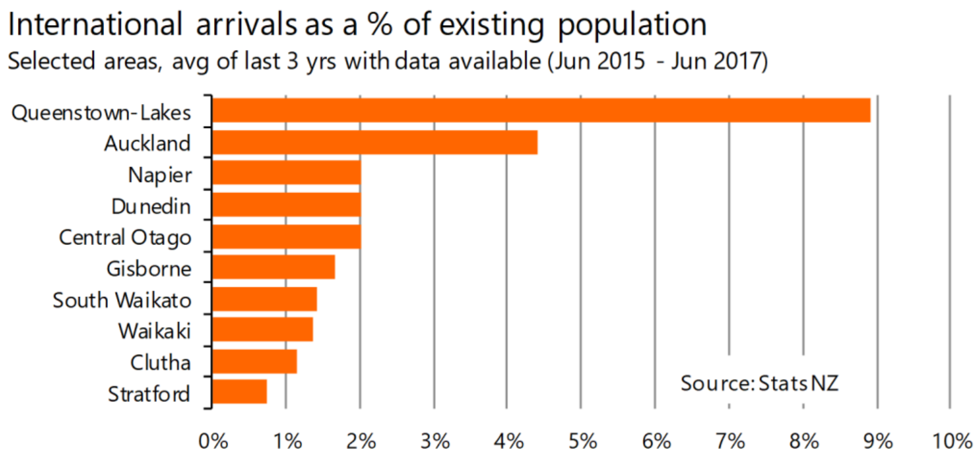
Migrant workers and NZers returning

Migrants were the second largest supply channel of workers into construction in Otago in 2018. Migration is highly variable and has been growing over the past ten years, both in New Zealand in general, and for Otago more specifically.

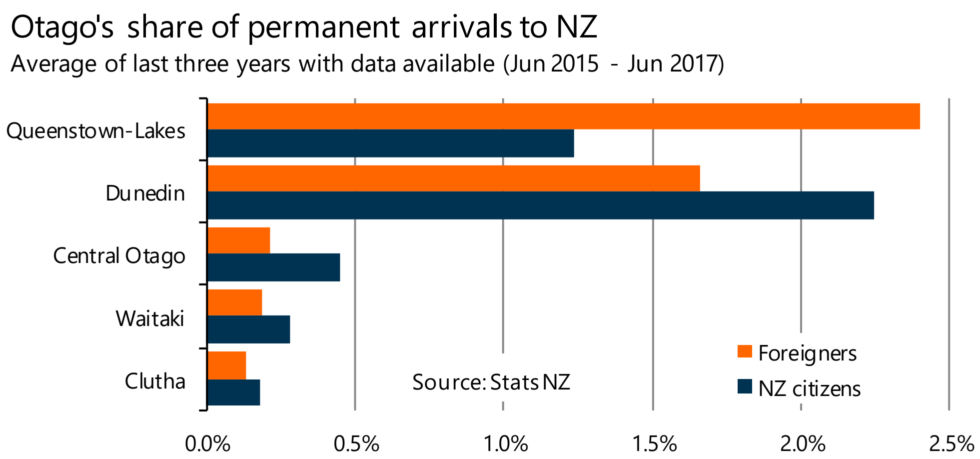
The propensity of migrants moving to New Zealand to settle in different parts of the country varies greatly. Relative to the size of its population, Queenstown-Lakes attracts more than double the number of permanent and long-term arrivals of the next-ranked local authority, Auckland (see Graph 46. The other areas that attract a relatively high number of immigrants as a proportion of their population tend to be the larger urban centres or areas where tourism makes a significant contribution to economic activity. As a result of these drivers, Dunedin and Central Otago also rank relatively highly.

If we separate out New Zealand citizens returning after living overseas for more than a year, we see that Queenstown-Lakes' share of total foreign migrants is significantly higher than its share of returning Kiwis (see Graph 33. For all other local authority areas in Otago, their shares of returning Kiwis are higher than their shares of foreign migrants, although these results are skewed by the high propensity of foreign migrants to initially settle in Auckland. If we concentrate only on immigrants choosing to settle outside Auckland, then we find that, within Otago, only Central Otago appeals significantly more to returning New Zealanders than to foreign migrants (see Graph 31).

Graph 31.

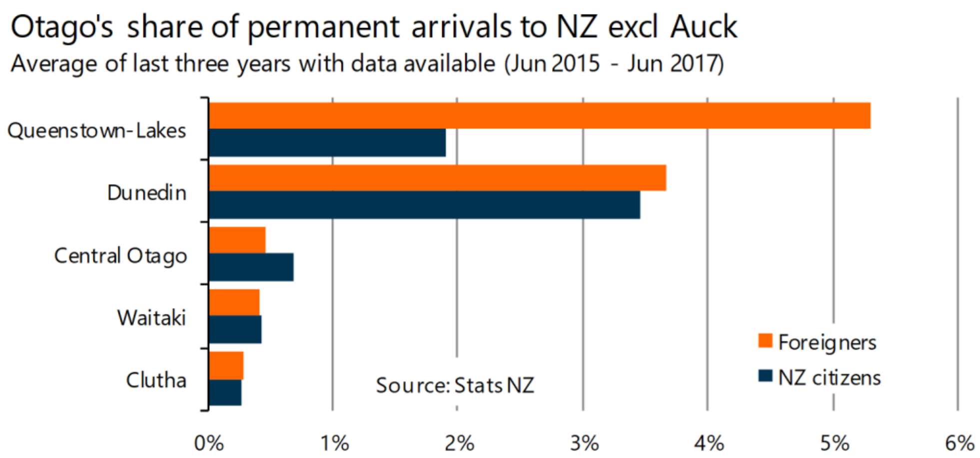


Graph 32.



These results suggest that, subject to broader migration policy settings, Queenstown-Lakes and Dunedin should experience little difficulty in attracting foreign workers if required.

Graph 33.

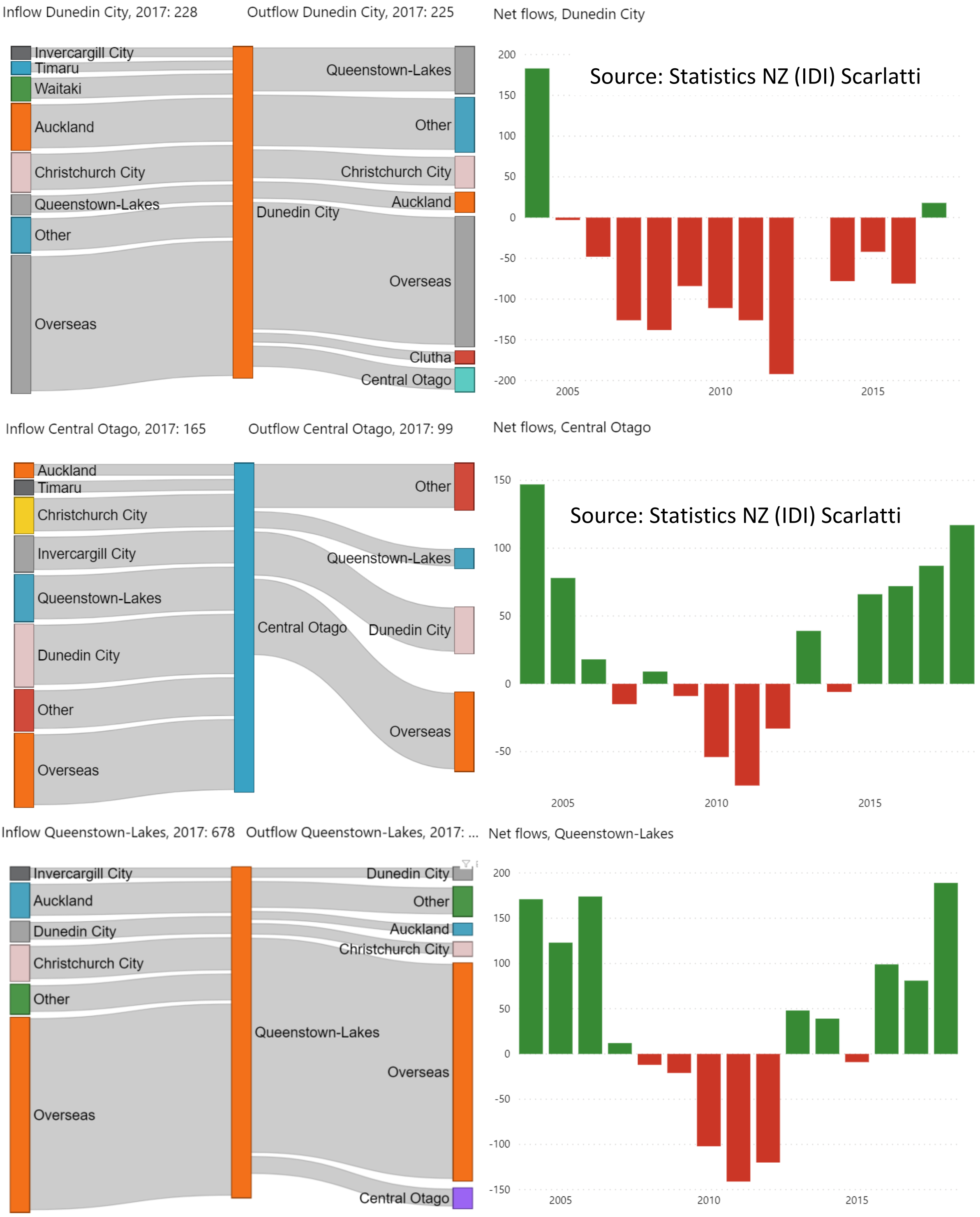


Domestic migration

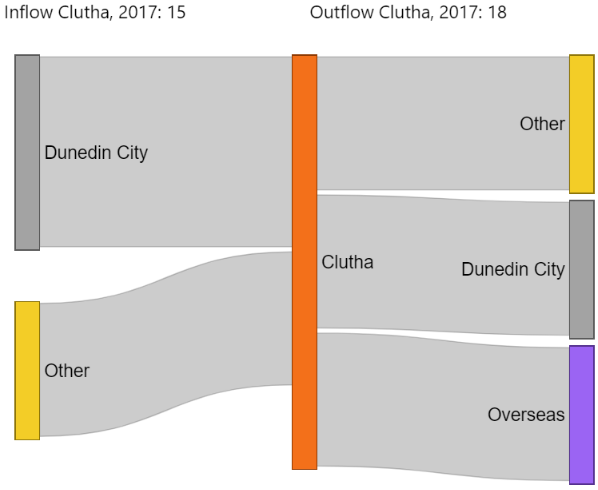
A potential source of labour supply is domestic migrants from other parts of New Zealand. However, significant numbers of people from Otago also move to other regions that can result in net outflows. The following graphs look at each of the Territorial Local Authorities in Otago and the regional and overseas migration. Most areas have seen a negative flow rate starting around the global financial crisis but increasing to the point that all areas of Otago showed a net infow in 2018.

Graph 34.

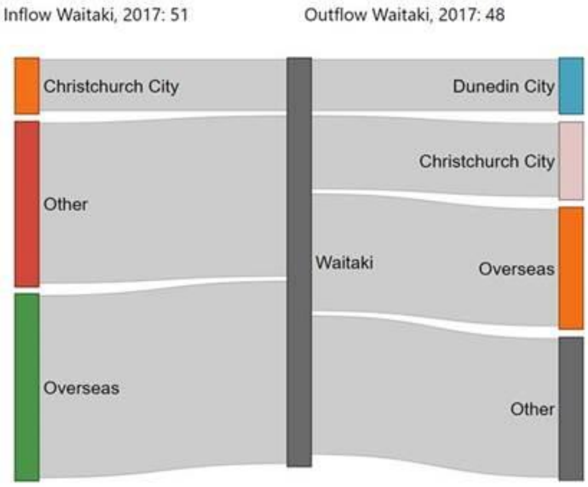
National and International Migration 2017 snapshot and time series



Source: Statistics NZ (IDI) Scarlatti



Source: Statistics NZ (IDI) Scarlatti



Source: Statistics NZ (IDI) Scarlatti

Net flows over time were suppressed for some Territorial Local Authorities due to low numbers.

<u>Other</u>

This category includes people for the previous supply channels who have incomplete data meaning they cannot be accurately reported plus sectors which are difficult to identify through the governments Integrated Date Infrastructure but could contribute to filling the gap between supply and demand.

Corrections

There are two main consideration when trying to quantify the Corrections supply channel:

- Individuals who have undertaken Vocational Education and Training with Corrections. A subset of this group are those who undertook construction related training; and
- Individuals who have been released in the Otago region.

In the 18 month period to the end of 2019, a total of 709 individual inmates undertook construction related training with many individuals undertaking more than one course. The courses inmates undertook were:

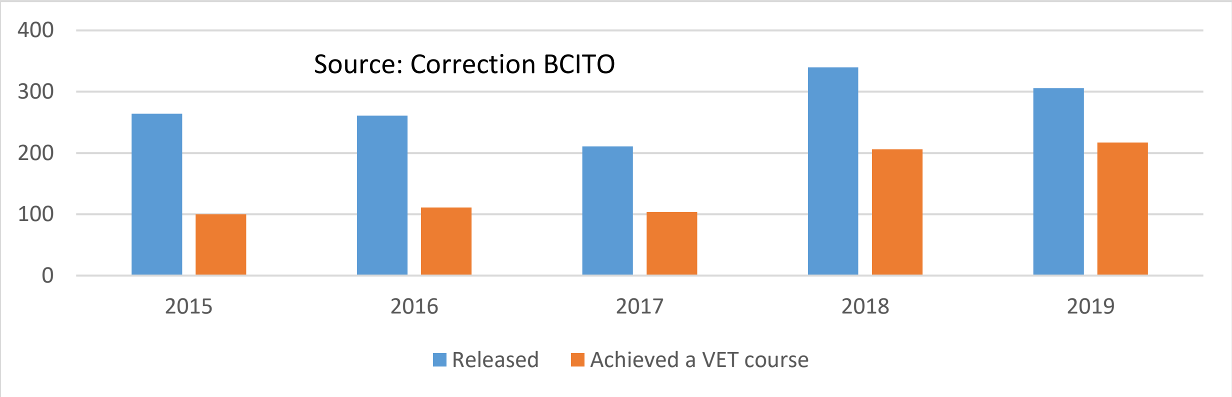
- Painting – 358 people
- Carpentry – 186 people
- Cladding, Lining & Plastering – 107 people
- Building Construction & Allied Trade Skills training – 58 people

Advanced carpentry training is limited to two sites - Rolleston Prison in Christchurch and the Spring Hill Corrections Facility in Waikato. Both of these sites undertake refurbishment work or new builds for Housing New Zealand. By comparison, almost all Corrections facilities offer paining courses as part of their local maintenance programme.

Not all inmates have the opportunity to undertake construction related courses and Corrections perspective is that any inmate that has undertaken vocational education and training in any sector could be considered a potential construction worker. The main factor highlighted by Corrections was the release location of inmates. Graph 36 shows the release rate for the past five years and the increase in the numbers who have completed vocational education and training courses prior to release.

Graph 35.

Corrections release and training data for Otago



Demographics of new workers in the Otago Construction industry

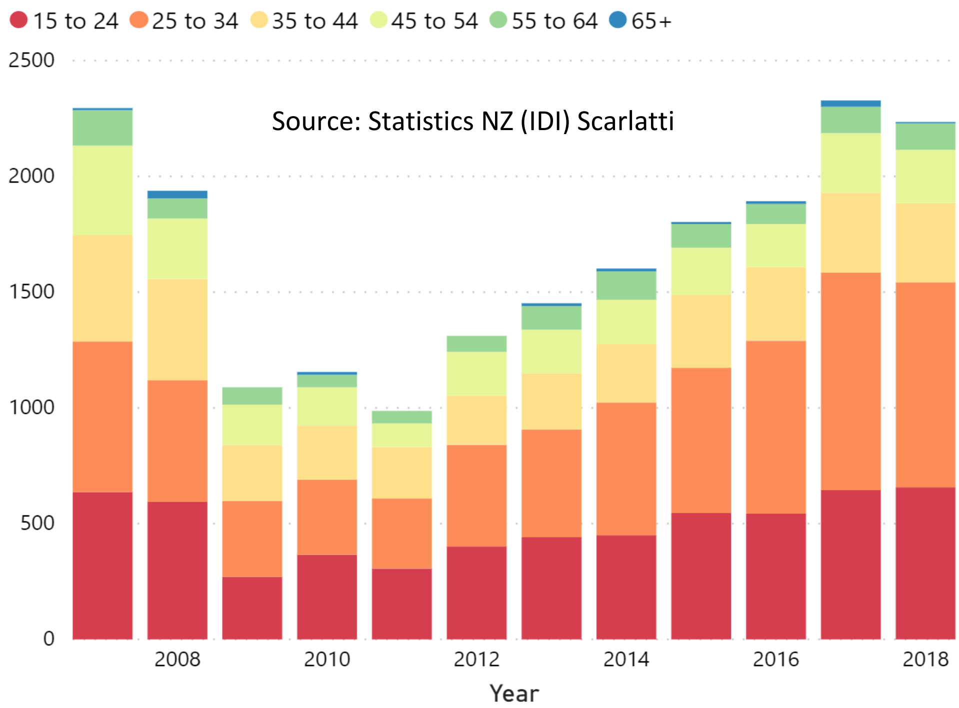
Insight on the demographics of new entrants to the Otago Construction industry can enable better targeting attracting and supporting new entrants.

Age of new entrants to the construction industry in Otago over time

The majority of new entrants to the sector in recent years have been under 35 years old. In 2018 around 30% of new entrants were aged 15-24 and a further 35% were aged 25-34.

Graph 36.

The age of new entrants to the construction industry in Otago over time

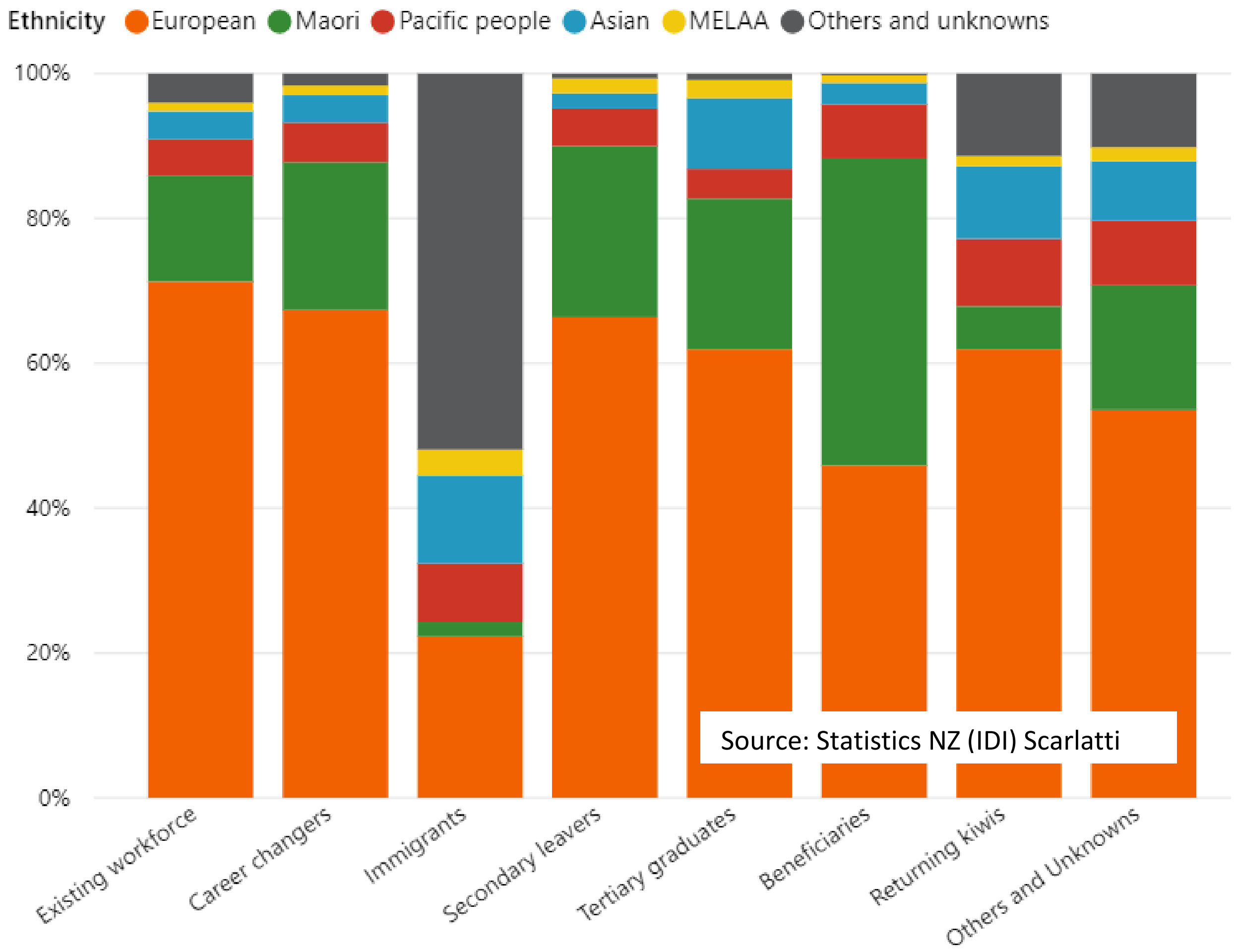


Ethnicity of new entrants to the construction industry in Otago

The existing construction workforce in Otago is 71% European and 15% Māori with smaller numbers of Pasifika, Asian and other ethnicities. There are higher proportions of non-European ethnicities in most channels of new entrants to the sector. For example, Māori make up 20% of career changers, 24% of secondary school leavers and 21% of tertiary graduates. The ethnic make up of migrants who are new entrants to the sector appears to be significantly different to the other channels due to almost half having unknown ethnic information.

Graph 37.

New construction entrants in Otago ethnicity by channel



Section 5 – Next Steps

The coming months and years will be critical to putting in place the Construction workforce needed to meet the level of work planned in Otago. Therefore, it is important that there is a plan put in place for progressing actions identified through this project. Our recommendations for next steps are:

1. Establish and maintain a regional group with a focus on construction workforce needs.
2. Build on the connections made through this project to put in place a network of anyone interested or invested in construction employment and training in the region.
3. Identify a short list of lower cost projects that will have short term impact on meeting construction workforce demand and put these in place.
4. Scope and seek funding and buy in for a short list of bigger projects that will have longer-term impacts on meeting construction workforce demand.
5. Undertake further research or investigation about the construction workforce in Otago.

Regional Construction workforce group

One of the strengths of this project is that it was undertaken by people from across Otago with an interest in the Construction workforce and a real drive to facilitate change. Having people from all local councils along with central government and iwi has given unique insights into what is happening at a local level.

Central Government is increasingly looking at the ways that regions can take ownership of skill and workforce needs, and group in Otago is ahead of the game in this regard, and seen as a model for effective engagement. Moving forward, this group has the potential to put in place change projects that go beyond what any one organization could achieve on their own. This could be strengthened further by adding employers and workers, or their representatives to the group.

Creating a regional network

The most common theme during this project was connectivity. Employers, government officials, and other stakeholders identified the need for greater connections between people, businesses, agencies, and social partners. One of the benefits of this project was that it built on existing connections between people and started to put in place networks of people with an interest in the Construction workforce. We were struck by the willingness of employers to share what they know and indicate their willingness to work together to collaboratively build the sector.

Building on these connections and good will would have a positive impact on the sector overall and give the best chance for initiatives to be successful. In practice, this could involve creating regular communications for this group, hosting functions or ‘get togethers’, or using the network for gaining insights and trialling initiatives.

Put in place projects with immediate impact

Some of the solutions identified in this project are relatively low cost and would have benefits that could be seen in the short term. Identifying and choosing some of these to put in place would both begin to address construction workforce demand and also serve as a springboard for larger projects. These projects would create visibility about the construction workforce and the work being done by a range of agencies to put this workforce in place.

Scope and seek funding and buy in for bigger projects

Other solutions identified through this project are much larger in scale and can only really be successful with adequate funding and buy-in from a range of stakeholders. The proposed regional construction workforce group could create a shortlist of these projects and get them more fully scoped. Projects could then be prioritized with funding and buy-in being secured for the ones identified as highest impact.

Undertake further research or investigation

During the course of the project, people identified several areas of further research or investigation that would provide insights into the construction sector on an ongoing basis. Some of these projects are short, stand-alone pieces of work while others are more focused on changing the way that information is collected and recorded. Progressing these projects would have value for employers and in many cases would also make it easier to measure the success of initiatives put in place following this project

1. Better data at a detailed geographical level plus more consistent definitions of regions
2. More information about immigration – detailed levels, flows
3. Research about the impact of immigration on the labour market and economy
4. Research on the mobility of construction workers – who shifts, how often, where, permanent or short-term, etc.
5. Training data at a more detailed level including coastal vs inland.
6. Collect and disseminate information about construction workforce supply and demand on a regular basis.