

BUSINESS TRANSITIONS RESEARCH REPORT

JUST TRANSITION SOUTHLAND [29 July 2022]

CONTENTS

Executive Summary	3
Business Transitions: NZAS Supplier Research Report	4
• Introduction	5
• Southland Data Insights	6
• NZAS Qualitative Research	10
• What's The Plan? Cluster Development	22
• Engineering and Manufacturing Services Cluster Funding	44
• Recommendations	49
• Appendix 1: International Cluster Development	53
• Appendix 2: Southland Data Insights Report (end of report)	76
Business Transitions: Startups Research Report	61
• Introduction	62
• Gap Analysis	63
• The Ask	66
• Ask 1: Expanded Start Up Support	67
• Ask 2: Innovation and Business Growth	68
• Ask 3: Start Up Funding	70
• Proposed Delivery Structure	71
• Road Map	73
• Project Goals	74
• The Risk of Doing Nothing	76

EXECUTIVE SUMMARY

The purpose of the Business Transition research project was to undertake an in-depth research project to identify the support businesses need to successfully navigate the transition from NZAS, with a focus on SMEs and start-ups. Two distinct research projects have been completed.

The project team engaged directly with NZAS supplier businesses to understand their challenges and the support they need to transition from NZAS and fully participate in new economic opportunities while continuing to support existing major industry. Cluster development was identified as a key initiative to assist NZAS supplier business to:

- Transition to a higher value regional economy, building on our regional strengths
- Capture the skills and competencies that have developed through servicing NZAS
- Extend our regional skills base through diversification into new economic opportunities
- More tightly connect our regional business support organisations and knowledge institutions, centred on business needs, building our regional ecosystems.

A separate research project was undertaken to inform implementation recommendations and identify changes needed to be made to existing start-up support frameworks to reduce the region's reliance on NZAS and provide a better transition for existing business into new industries. Expansion of the existing start up network, start up funding along with a regional innovation hub to facilitate regional economic diversity was identified as the key recommended initiatives.

BUSINESS TRANSITION: NZAS SUPPLIER BUSINESS REPORT

INTRODUCTION

Southland is primarily an agricultural region, with a solid manufacturing industry which is underpinned by dairy and meat processing, and NZAS. The region has a strong traded economy that is predominantly commodity based rather than value adding differentiated product. NZAS in terms of its staff, contractors and the support businesses has been a significant part of the social and economic fabric of Bluff and Invercargill for over half a century.

There are a range of **strong economic headwinds** currently bearing down on business, including the possible closure of NZAS, the ongoing impact of COVID, critical skills shortages and global economic uncertainty.

Just Transition Southland's purpose is to **identify and deliver assistance to build economic, environmental and social resilience** through and beyond the closure of NZAS. In particular, the Business Transition Workstream engaged with NZAS supplier businesses to understand their challenges and the support they need to transition from NZAS and fully participate in new economic opportunities while continuing to support existing major industry.

Cluster development was identified as a key initiative to assist NZAS supplier businesses to:

- Transition to a higher value regional economy, building on our regional strengths
- Capture the skills & competencies that have developed through servicing NZAS
- Extend our regional skills base through diversification into new economic opportunities
- More tightly connect our regional business support organisations and knowledge institutions, centred on business needs, building our regional ecosystems.

SOUTHLAND DATA INSIGHTS

Economy & Demography

REGIONAL DEMOGRAPHICS

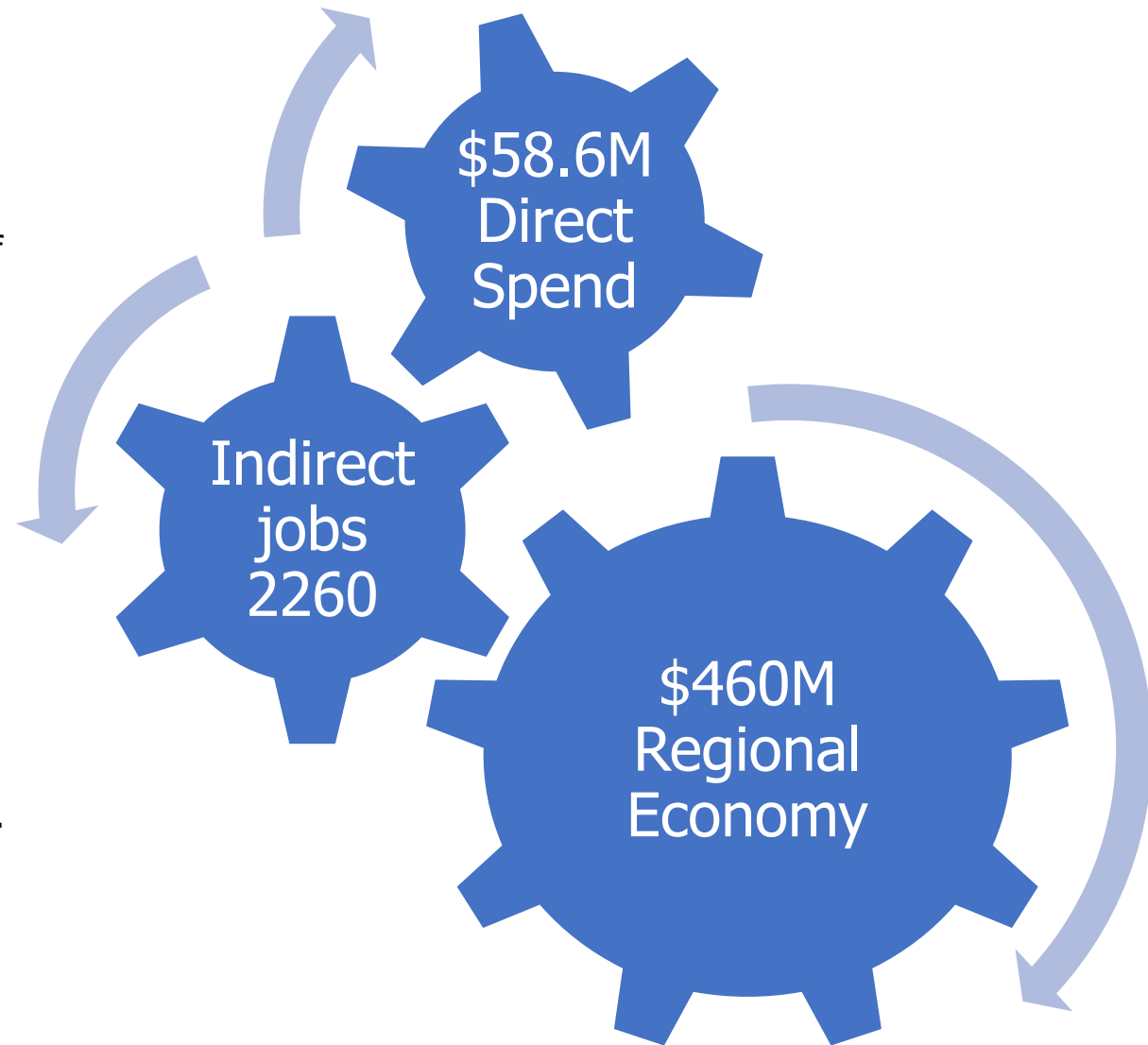
Population	At June 2021 Southland's population was 102,7850 people Southland's population accounts for 2% of the New Zealand population
Population Projection	Regional population is projected to grow at approximately 0.9% per year to reach 108,300 people by 2048*
Ageing Profile	Ageing population & workforce, looming retirement of baby boomers Average Age Southland 40yrs , New Zealand 37yrs
Youth	There was a total of 16,998 students in 2019. The region has a lower average percentage of school leavers with NCEA Level 3 or above than the national average (44.7% vs 54%) and a higher rate of excluded or disadvantaged youth 27% (4,212) vs 23% nationally – 2020 data
Māori	15.1% of Southland's population is Māori
Pasifika Asian	2.1% of Southland's population is Pasifika 3.2% of Southland's population identify as Asian, including migrants, refugees and those born in NZ who identify as Asian
Education attainment	Across Southland, 26% of the population does not have a qualification, which is materially higher than the New Zealand average at 18.2%
Employment	As at 31 December 2021, Southland and New Zealand's unemployment and under-utilisation rate were the same at 3.2% and 9.6% respectively.
Disposable Income	As at June 2021, Southland's median household gross income and household disposable income was \$77,914 and \$65,852 respectively. This equates to a household equalized disposable income after housing costs of \$30,295, which is below the New Zealand median of \$33,090

REGIONAL ECONOMY

Regional economy	Southland region is primarily an agricultural region, with a solid manufacturing industry which is underpinned by NZAS and dairy and meat processing. Commodities rather than value added, differentiated product
GDP	In 2021, Southland recorded approximately \$6.7 billion in regional Gross Domestic Product (GDP), which represents 2.06% of total New Zealand GDP
GDP per capita	For the year ended 31 March 2021, Southland's GDP per capita was \$65,468, which was the fifth highest regional GDP per capita, and above the national average of \$63,955
Tradeable Exports	According to NZTE, Southland is a highly productive region, contributing 15% of New Zealand's tradable exports, while the region only accounts for 2.0% of the country's population
Agriculture & Manufacturing	The agriculture and manufacturing industries accounted for 20% and 14% of Southland's 2020 GDP respectively. The manufacturing industry comprised the largest number of regional employees in 2021 at 17% compared to agriculture forestry and fishing at 16%
Manufacturing	The leading manufacturing sectors are food product processing (dairy & meat), followed by primary metal & metal products (NZAS) metal products (primarily NZAS but also a growing wide range of support and related manufacturing businesses)

NZAS REGIONAL IMPACT

- The smelter commenced operations in 1971 following the construction of the Manapouri Power Station
- NZAS produces around 350,000T of high-quality low carbon aluminum per year, 90% exported
- NZAS in terms of its staff, contractors and the support businesses has been a significant part of the social and economic fabric of Bluff and Invercargill for over half a century.
- NZAS is the largest single site employer in terms of employee count in Southland
- During the 2019 calendar year, NZAS contributed \$58.6 million to the Southland region through expenditure with local businesses
- Approximately 50 Southland businesses supply products and services to NZAS, many are heavily dependent on this business
- 34 NZAS supplier businesses were interviewed which represents approximately 68% of the supplier business (by number of suppliers)
- Industrial manufacturing engineering capability has been developed and expanded over the 55 years that NZAS has been in operation. 44% of the 34 businesses interviewed were engineering businesses.
- NZAS's total capital spend budgeted in 2022 is \$60m and total maintenance spend for 2022 \$29.5m (information directly from NZAS)



NZAS SUPPLIER QUALITATIVE RESEARCH

Key issues, opportunities & expected direct impacts from NZAS possible closure

THE PROCESS

April

- NZAS Suppliers – 34 companies were interviewed individually (representing over 68% of businesses supplying Tiwai, across all the main contracts)

May

- Cluster Development Seminar & Workshop that was attended by 75 NZAS suppliers, wider business, iwi and community

June

- NZAS Supplier Focus Group to test key findings and recommendations was attended by 22 NZAS Suppliers

June

- Draft report and funding proposal submitted to Just Transitions for consideration

July

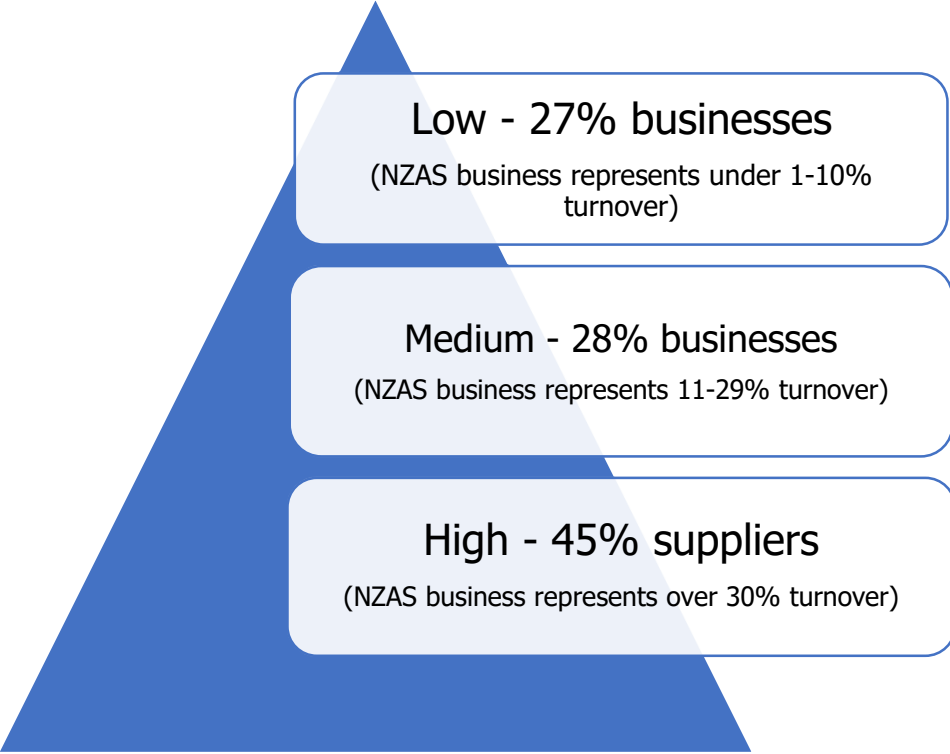
- Feedback received and final report submitted to Just Transition for consideration

NZAS SUPPLIER PROFILE

Sectors	Business Size	Skills	Dependency	Diversification
<ul style="list-style-type: none">• Manufacturing Engineering 44%• Wholesale Trade 12%• Transport & Logistics 12%• Rental & Hiring 9%• Education & Training 6%• Food Services 3%• Admin & Support 3%• Computer Services 3%• Waste collection 3%• Professional services 6%	<p>65% SME</p> <ul style="list-style-type: none">• Small (1-19 FTE) 29%• Medium (20-49 FTE) 36%• Large (50+ FTE) 35%	<p>High proportion of skilled staff, majority with a trades qualification</p> <p>Over 90% businesses skilled staff & trades oriented</p> <p>Under 10% low skilled staff</p>	<p>There is a high dependence on NZAS with 73% businesses deriving over 11% of their turnover from NZAS</p>	<p>Dependency has decreased in last 2-5 years with 34% start to reduce their reliance through businesses broadening their customer base</p> <p>Majority actively seeking further diversification market, customer, product offering</p> <p>Regional economy expansion required to absorb capacity if NZAS closes</p>

1-1 interviews were completed with 34 businesses (approximately 68% of businesses) who directly supply Tiwai. They were asked 14 questions relating to their business and specifically how Tiwai contributes to their business in the past, and today. It was agreed that no information relating to an individual business will be identified.

NZAS SUPPLIER DEPENDENCY ON NZAS



NZAS current suppliers have a relatively high reliance with 73% businesses stating that NZAS business represents at least 11% of their turnover

NZAS SUPPLIER LIKELY DIRECT IMPACTS OF NZAS CLOSING

Suppliers cited likely direct impacts of NZAS closing:

- Staff redundancies
- Loss skilled/technical capability to region
- Downsizing of business
- Downsizing of their supplier businesses
- Closing of business
- Focus of business outside of Southland
- Shift business out of Southland

Suppliers cited direct impacts of current uncertainty:

- Impacting certainty around investment and business development
- It was noted the uncertainty is causing stress and morale issues with management and staff
- Staff retention with low job security

KEY CHALLENGES NZAS SUPPLIERS IDENTIFIED

Critical skills & labour shortages – capability & capacity

Supply of materials, rising costs & inflationary pressure

Uncertainty around Tiwai closing is impacting investment and business development

Overall global uncertainty impacting business confidence

Specific gaps in business capability to drive diversification & growth

Finding the time to work on the business

Access to information & market analysis to make effective decisions

Vocational pathways not clear

Major local construction projects not using local suppliers

AREAS NZAS SUPPLIERS IDENTIFIED FOR SUPPORT



1. Building business capability



2. Driving growth, innovation & diversification



3. Finding & Retaining the right skills & talent

1. BUILDING BUSINESS CAPABILITY

Assistance in building fundamental business skills across the business – accessible, flexible delivery and customised for individual needs

- Leadership and governance
- Strategy and planning
- Exit strategy and succession planning
- Customer validation, market analysis, product development and marketing
- People and culture
- Business development and tendering to help with consistent workflow
- Procurement

2. DRIVING GROWTH, INNOVATION & DIVERSIFICATION

Expanding the regional innovation eco-system, supporting business looking to scale nationally & beyond

- Achieving productivity gains through Industry 4.0
- Digital technology for competitive advantage and enabling growth that doesn't rely on 'more people'
- Assistance with targeted grants to help access new technology
- Collaborating on bids/tenders and developing new markets; creating efficiencies through co-purchasing and drawing on specialised machinery competencies
- Information, analysis, and assistance with market, product and customer diversification

3. FINDING & RETAINING THE RIGHT SKILLS & TALENT

Building a regional workforce aligned to needs today and tomorrow

- Assistance in worker attraction
- Regional brand and consistent promotional material
- Recruitment tools and assistance to support more effective and efficient recruitment
- Building positive culture and maximising staff retention
- Local training that is accessible, relevant and aligned to future skill needs
- Building and promoting a clear vocational pathway for trades outside construction
- Skillset database for sharing resources

CLUSTER DEVELOPMENT SEMINAR & WORKSHOP

- Ifor Ffowcs-Williams, CEO, Cluster Navigators is acknowledged as one of the most influential cluster practitioners in the world, with hands on experience extending to over 50 countries
- Over 70 suppliers, business, iwi, community leaders attended the two hour evening seminar
- A workshop followed the next day with 16 key leaders to discuss potential cluster opportunities & how that could be developed in Southland
- There was clear business support for cluster development on the basis of it being genuinely led by business and supported by economic agencies

CLUSTERING FOR BUSINESS GROWTH, *an International Perspective*

Monday, 23 May | 4.00pm - 5.30pm followed by drinks & nibbles
Transport World, 491 Tay Street Invercargill

REGISTER TODAY!

International evidence is clear: Successful regional economies are based on strong clusters. Cluster development efforts move beyond clusters as a natural phenomenon, to systematically raising their competitiveness.

Over the last two decades, cluster development has become a mainstream framework for regional development, especially across Europe, but also in North America, parts of Asia, and more recently Australia, providing a centre stage strategy that addresses innovation, productivity and competitiveness.

What has emerged is clear evidence that cluster-based approaches are a powerful new tool for economic development.

This briefing provides a first opportunity for Southland to hear about international experiences with cluster development and to explore the relevance in transitioning to a stronger regional economy.

There will be adequate time for questions and answers.

Adopting a cluster approach is crucial if we are to make real inroads in building our regional economies, especially in a time of change and



Guest Speaker

**Ifor Ffowcs-Williams
CEO, Cluster Navigators**

.....

Ifor is acknowledged as one of the most influential cluster practitioners in the world, with hands-on experience extending to over 50 countries.

Clients include The World Bank, EU, UNDP, OECD and national and regional economic development agencies. Ifor is a Founder of the TCI Network (Barcelona), the global network for experts in innovation ecosystems and clusters. He has served on the Advisory Boards of the Danish Cluster Academy, European Cluster Observatory, Indian Institute for Competitiveness, Pan African Competitiveness Council and Sintonia, Mexico.

NZAS SUPPLIER FOCUS GROUP



A breakfast focus group was held, hosted by EIS. It was well attended with 22 key NZAS Suppliers



The objective:

Report back on what they told us were their main constraints and where they thought support would be helpful. Discuss the suggested way forward, a cluster development

Explain in short form, cluster development and what it could look like for them (for those who missed the seminar)

Get their feedback, on whether we got the issues/solutions right and whether we were on the right track



The businesses were asked if they would endorse a cluster development initiative

The response was overwhelmingly in support. There was strong and unanimous endorsement for the cluster initiative. An added comment was that they wanted to see practical initiatives that address the key issues facing their businesses

WHAT'S THE PLAN?

Cluster Development

The power of collaboration, building on regional strengths and the development of specialisations



SOUTHLAND ENGINEERING & MANUFACTURING SERVICES CLUSTER

- Purposefully build on the **specialised engineering & services capability** that has been built around Tiwai, and also underpins our agriculture and food manufacturing sectors
- Develop an **environment built on openness, with collaborative projects** that make a real difference to adding value and strengthen our competitive advantage
- Identify and support the businesses **aspiring to grow in NZ and beyond**, grounding them in Southland
- Provide easier access to **new business opportunities in emerging industries which would be further amplified** through establishment of other regional clusters

WHAT IS CLUSTER DEVELOPMENT?

A Cluster

A naturally occurring grouping of companies around regional specialisations

Cluster Development

An organised collaboration to upgrade a clusters competitiveness

Cluster Development common features:

- Groups of similar and related businesses within a geographic area along with relevant business support organisations
- Acts as a catalyst, a connector and a convener
- Supports companies as they engage in new areas, new markets, develop new products and processes and engage with new technologies
- Brings together and removes the clutter from supporting agencies
- Builds on what a region is good at, their competitive advantage

CLUSTER IMPERATIVES

1. Business driven, moving at the speed of business, business as the Chair, in partnership with relevant support agencies and knowledge institutions
2. Governance moves from an initial Steering Group to eventually a Board of Directors with the Cluster having its own legal identity, bank account etc
3. Cluster Manager/organisation must be located in neutral premises
4. The physical area covered by the cluster needs to be geographically close – close enough for a drink after work
5. Start broad, specialisations develop over time

ROLE OF THE CLUSTER MANAGER

This role is critical to the success of a clustering initiative

This is a senior role that must be well remunerated (Min \$160KPA) & is a permanent position with appointment for a minimum of five years

The key attributes/focus of the role include:

- A connector and a catalyst
- Building synergies where appropriate, identifying collaboration opportunities
- Leading business strategy transformation
- Building alignment amongst support organisations around the cluster's forward agenda
- A strategic guide and a critical friend to CEOs
- Trustworthy
- A 'noise' filter allowing cluster companies to focus on their business
- Technical knowledge is not nearly as important as relationship skills

CLUSTER INITIATIVES COMMON AREAS

- Strong cluster initiatives have a broad portfolio of projects that might include:
 - Cost reduction
 - Collaborative tenders and production
 - Market diversification and internationalisation
 - Business finance
 - Networking
 - R & D technology
 - Skills and capability development of staff at all levels
 - Attraction and retention of staff
 - Cluster visibility/promotion
 - Industry 4.0, Digitalisation, Circular economy
- Some projects will be open to all, others will be narrower collaborations

WHY CLUSTER DEVELOPMENT FAILS

- Lack of sufficient funding or for long enough
- The clusters' largest/loudest organisations ... or an 'Old Boy's Club' ... dominate
- Cluster's Board is composed of
 - Second level managers
 - Public and industry association officials
 - Geographically remote members
 - Members with similar backgrounds, gender, ethnicity and culture
- Fails to quickly capture attention
- Not learning and action orientated
- Narrow portfolio of projects
- The initiative is handcuffed to one funder
- Cluster Managers who are analysts rather than business developers and who serve, but fail to challenge, the cluster's stakeholders

STAGING CLUSTER DEVELOPMENT IN SOUTHLAND



1. Engineering and Services Cluster – supports NZAS suppliers and underpins capability across the traded sectors and emerging new industry



2. **Potential:** Aquaculture – leading economic opportunity and will need to build new capability to support emerging food opportunities outside dairy and meat



3. **Potential:** New Industries emerging such as hydrogen, data centres, oats



CLUSTER DEVELOPMENT WILL HAVE REGIONAL IMPACT

Building on and leveraging the existing regional economic/business development resource, delivering the practical support that business needs to succeed

Existing regional engineering capability is retained, enhanced and pivots to support and enable new economic opportunities in Southland

Shift away from low paid jobs towards a workforce that is higher skilled with internationally competitive salaries, successfully grounding our young people and high performing businesses in the region

Ability to develop stronger vocational pathways, experiential opportunities and alternative learning systems especially targeting Māori and youth participation

Supporting the establishment of Southland as a GO-TO location for high value products and services, on a NZ scale and eventually on an international scale

Cluster will lead and prioritise low carbon opportunities and practices

REGIONAL BENEFITS OF MULTIPLE CLUSTERS

International experience demonstrates that simultaneously engagement on a number of regional clusters has significant advantages:

No cluster is an island; innovation particularly develops where regional clusters meet, such as:

- Engineering & Food Processing
- Engineering & Hydrogen
- Engineering & Oats
- Engineering & Aquaculture
- Engineering & Forestry
- Engineering & Transport
- Aquaculture & Tourism...

The co-location of cluster managers also facilitates the development of common services such as IT & web site support, organising events, accounting and reception support.

A fertile base to co-locate cluster managers is often centred on a business incubation facility.

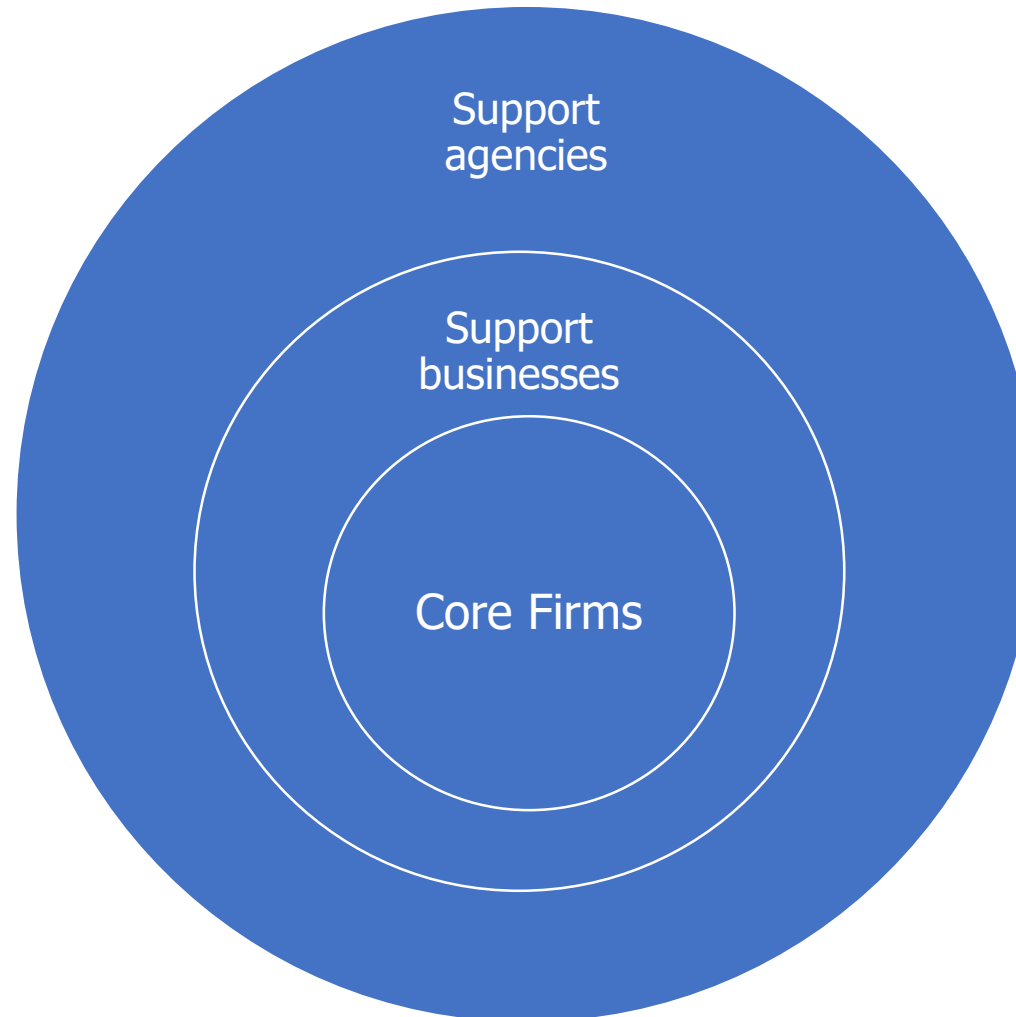
CLUSTER CORE BUSINESSES SUPPORTED BY AGENCIES

Core Businesses

Southland engineering and service based business built up around NZAS & beyond (100 target businesses)

Hot spots to be determined in next phase but could include:

- ✓ Additive manufacturing
- ✓ Agricultural applications
- ✓ Industrial automation
- ✓ Boat design & build
- ✓ Road Transport
- ✓ Aquaculture
- ✓ Oats
- ✓ Data Centres
- ✓ Green Hydrogen



Support Agencies

- Ngai Tahu, Murihiku Regenerate
- Government Agencies MBIE, NZTE, RSLG, Just Transitions, Callaghan, TPK, MSD
- Industry Associations
- Industry Transformation Plan (ITP)
- Southland Chamber
- Great South - RBP
- Coin South
- SOREC
- Education & training – SIT, ITOs, PTE, Schools, Universities
- Research institutes

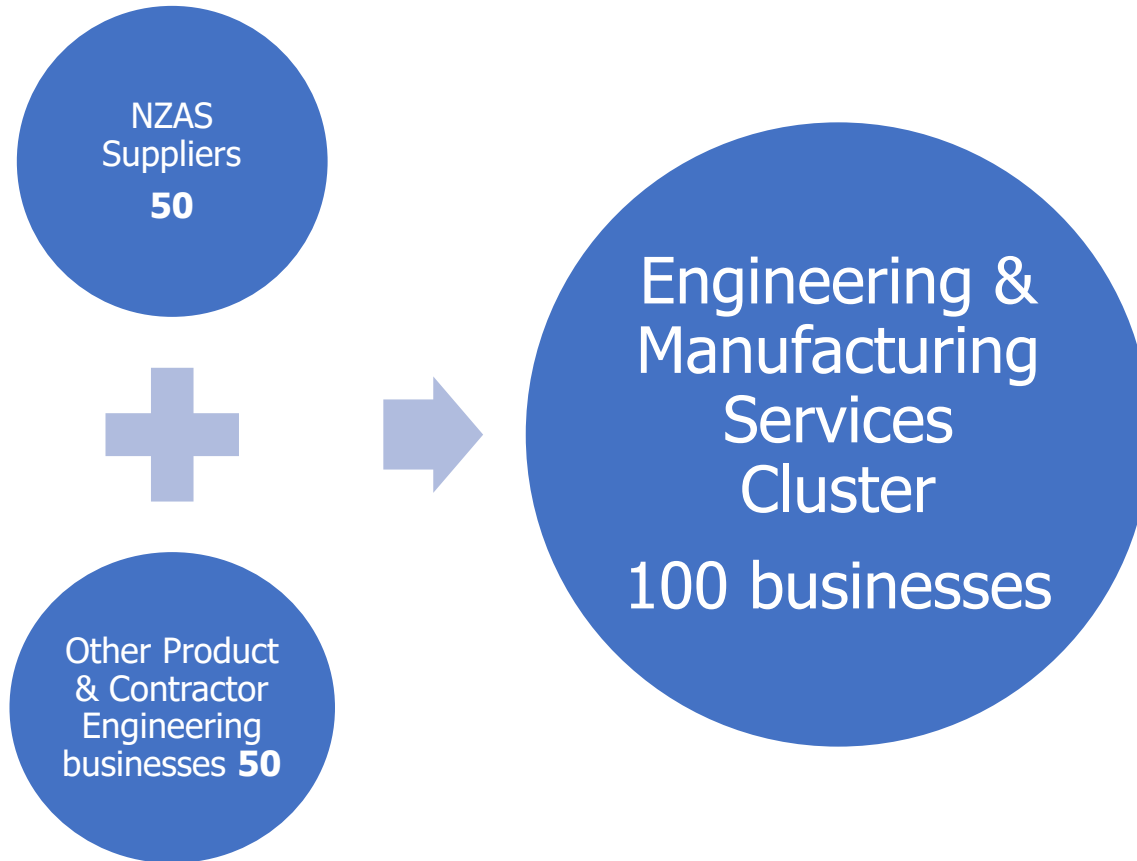
Support Businesses

- Banks & Financial Institutions
- Professional services
- Transport & Logistics
- Wholesale Trade & Suppliers

SUPPORTING AGENCIES

<p>Chamber Member-based business organisation providing member advocacy, networking, business capability training and events</p>	<p>Coin South Support for Start-Ups. Innovation hub proposed to provide innovation support to existing business</p>	<p>Great South Economic/market analysis, economic development, business capability support, business funding via Regional Business Network Partner</p>	<p>SOREC Otago/Southland Engineering Collective with a focus on vocational pathways & school leaver promotion</p>	<p>Ngai Tahu Ngāi Tahu are the Māori people of the southern islands of New Zealand – Te Waipounamu – the Greenstone Isle holding the rangatiratanga or tribal authority to over 80 per cent of the South Island.</p>
<p>MBIE Just Transition, Kanoa, RSLG, Regional, sector and business support & funding, Sector support</p>	<p>Callaghan Innovation Activate innovation and help businesses grow faster for a better New Zealand</p>	<p>NZTE International business development agency. Supporting exporters</p>	<p>Industry Associations Engineering Manufacturers Assn</p>	<p>Murihiki Regenerate collaboration between four Papatipu Rūnanga of Murihiku: to bring a regenerative economy to Southland</p>
<p>Research Organisations Universities, CRIs & other research entities</p>	<p>SIT/TePukenga Other Education & PTE Training Providers</p>	<p>ITOs Apprenticeships Training delivery and support</p>	<p>Other Govt Agencies – Te Puni Kokiri, MSD etc</p>	<p>Southland Secondary Schools SBHS, SGHS, JHC, Verdon, Aurora, Te Whare Kura o Arowhenua, CSC, Aparima College, Northern Southland, Gore HS, St Peters College, Menzies</p>

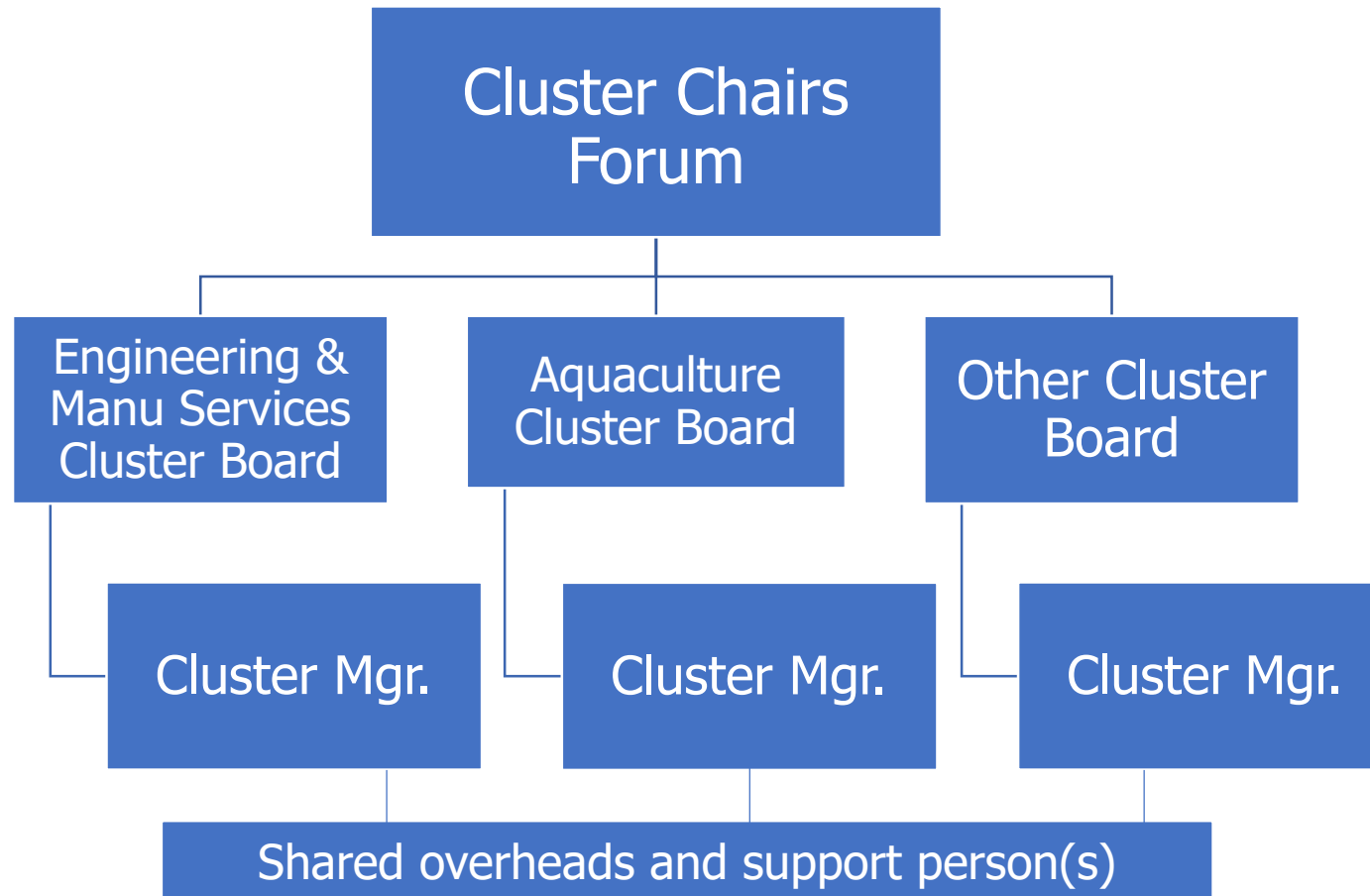
TARGET BUSINESSES TO JOIN THE CLUSTER



BUSINESS LED GOVERNANCE

- International experience has shown that strong clustering initiatives are business led, in partnership with relevant public agencies and knowledge institutions. It often takes time to assemble this team
- The Cluster Chairs forum, broadened to include e.g. SIT's CEO, Coin Chair, GS Chair, provides a senior, bottom-up mechanism, centred on Southland's traded economy, to identify and engage on cross-cluster (the systemic) issues such as youth engagement, regional worker attraction, transport...
- Ideal make-up of a governance board would be 4-5 CEO's, 1-2 Public Sector, 1 Academia/Training
- Each cluster has its own governance. As further clusters are developed in Southland, industry leaders can be identified as board members for new clusters
- Four key leaders in the engineering sector have agreed to form the initial governance group. These four leaders have the capacity to be courageous, committed and resilient – key features in all robust governance
 - **Dean Addie** – EIS <https://www.eis.co.nz/> Awards: Southland: Supreme Winner, Bus. of the Year; Innovation Award Master Electricians Exc. Awards – Overall winner, Skills Industrial Innovation Award; Innovation Award
 - **Phil McDowell** – E-Type Engineering <https://www.e-type.co.nz/>
 - **Chris Hughes** – McLeay Precision Engineering <https://www.mpeltd.co.nz/>
 - **Gareth Dykes** – Fi Innovations <https://f-i.co.nz/> Awards: Supreme Winner, Bus. of the Year – twice. Innovation Award – twice. Export Recognition Award - Winner

CLUSTER STRUCTURE



DEVELOPING THE CLUSTER, MONTHS 1-5

With a core group of companies identified, long term funding in place and a Cluster Manager (CM) appointed, **an indicative time line** for the first 12 months could be:

Month 1

- Establishing a small, informal Cluster Steering Group, triple helix based and business led.
- CM establishing an informal Cluster Ignition Team, bringing together relevant local and national support agencies and organisations, drawing on their insights and, in the longer term, to draw on their support for collaborative projects.
- A cluster-wide kick off meeting to introduce the CM and the role.

Month 2 -3

- CM holding extensive individual meetings with many of the lead 100 CEOs, reviewing opportunities and constraints.
- Establishing the cluster's base metrics, e.g. current # of firms, # of employees, % workforce with qualifications, % turnover beyond Southland

Months 4 -5

- A key cluster-wide workshop, with the CM feeding back on the individual meetings followed by discussion on the priorities in moving forwards. Establishing small project teams around priorities.
- CM supporting the workshop project teams, encouraging them to engage on early, low-hanging-fruit projects.
- CM, drawing on knowledge of individual firms, bringing together small groups to explore opportunities for private collaborations, such as joint tendering, joint purchasing, collaboration around key staff, key machinery.
- CM organising regular cluster-wide meetings with guest speakers, with the emphasis on the 'after-match' function, building the community's trust, social connections.

DEVELOPING THE CLUSTER, MONTHS 6-12

Months 6 -9

- Project activity continues, not necessarily with the CM leading each project
- Regular cluster-wide meetings continue, using local hosts and premises
- Formalising the cluster as a not-for-profit entity
- Identifying collaborative opportunities with other Southland clusters, esp. ag/food and aquaculture
- Exploring links with relevant engineering clusters from beyond Southland, e.g. Taranaki, Hunternet in Australia and marine clusters in Tasmania and Norway
- Informally benchmarking Southland's cluster v. other clusters, more fully understanding Southland's competitive position

By Month 12

- Establishing the cluster's long-term priorities/strategy, drawing in part on the learning from the project activities and understanding the cluster's competitive position
- Moving on to the more substantive & transformative projects, the heavy lifting
- Activities and projects at this stage could include:
 - Talent attraction
 - Market development beyond Southland, including exports
 - Exploring diversification options
 - Engaging with disadvantaged youth and local schools
 - Exploring new technologies, such as the use of plastic fabrication to support open ocean aquaculture
 - Identifying gaps in local capabilities that could be filled by targeted inward investment

POTENTIAL TACTICAL PROJECT AGENDA

Building Business Capability

- Targeted training for business capability building
- Sector capability mapping and baseline setting of metrics
- Cost reduction e.g.: Purchasing engineering staples such as safety gear, Insurance, Freight collaboration
- I am Capable Programme – Otago Polytechnic Work ready skills for graduates programme – potential pilot with cluster businesses

Growth, Innovation & Diversification

- Provide market analysis and identify supporting service capability requirements on key Southland economic opportunities and projects
- Joint tendering – Meridian power generation project collaboration/tendering between E-Type Engineering and EIS
- Lead generation for new business – getting ahead on new products and economic opportunities in Southland & beyond
- Working with Kanoa investigate a targeted regional grants fund for NZAS Supplier business capital investment to activate innovation, and help businesses grow and scale

Finding the Right Skills and Talent

- Co-ordinated worker attraction with a focus on highly skilled engineers and other global technical skills

POSSIBLE CLUSTER CAPABILITY BUILDING INITIATIVE

CEO Leaders Community
Big Picture thinking, Vision, Networking, Support,
Ideas, Understanding

Managers - Operational Leaders
Learning skills via workshops. Helping to build
relationships -> cluster succession planning

Trade Qualified Staff
Delivered at scale, via App. Further skills
development and specialisations

Apprentices
In time, App could become trade specific for
delivery of course learning

Attraction pathway school leavers & adults looking
for career change

- Utilise existing platforms – 'I Am Capable' and 'Farm 4 Life'
- Leverages digital technology to create "a how to for business & engineering"
- Aspirational & engaging content tailored to needs
- Visual learning where needed
- Consumed easily for those time poor
- Potential for promoting vocational pathways in engineering

DIGITAL PLATFORM FOR SKILLS DEVELOPMENT AND TRAINING

- **I am Capable' - Otago Polytech**
 - 26 units to develop soft skills in the workplace.
 - Propose to pilot with Apprentice and Trade levels through Workforce Transition team
- **The Hub – digital platform using the Farm 4 Life platform**
 - Farm 4 Life has successfully built an App and web based learning for the dairy industry
 - Delivers visual learning with high level of interactivity
 - The platform has six options: Starter; Induction; Hub; School; Scholar; Short Courses
 - Hub option, for ongoing learning, has three views – employee, employer & stakeholder. Employers can select tutorials/learning for staff and check on progress. Outcome is a culture of learning by increasing skill levels across teams, assisting in building a positive workplace culture
 - Platform would be licensed for use at \$20 per month per user with customised content created according to the Cluster brief. Price for content creation depends on amount of research, shooting days, cost of experts/tutors, post production etc.

REGIONAL INNOVATION ACCELERATION FUND

NZAS Suppliers identified that support with targeted grants would help access new technology.

Highly reliant on NZAS, Suppliers are actively seeking support to diversify and deploy new products, services or processes.

The Purpose of the Fund would be to:

- Accelerate the operational deployment of innovative solutions in order to support transition away from NZAS, and alleviate the direct impacts of the closure, and
- Provide rapid short-term support to NZ Supplier business to develop and more quickly deploy a range of new products, processes, or services.

An example in Australia of an Innovation and Investment Fund in response to the downsizing of a major industry

- The Illawarra Region Innovation and Investment Fund is a competitive merit-based grants program jointly announced by the Australian and NSW Governments in response to the restructure of BlueScope Steel Limited at Port Kembla in the Illawarra Region. The Fund's purpose was to support innovative job creation projects that strengthen the Illawarra's regional economy and employment base. The \$30 million Illawarra Region Innovation and Investment Fund is jointly funded by the Australian Government (\$20 million), the NSW Government (\$5 million) and BlueScope Steel (\$5 million) over three years to 30 June 2014.

CLUSTER SUCCESS METRICS

Success metrics will be set once the Cluster Manager is in place and agreed baseline levels are established.

General metrics are likely to include: number and types of FTE jobs , salary levels, diversity, number of apprentices, numbers taking part in upskilling/acquiring new skills, % / value of sales outside Southland, evidence of innovation and diversification – new markets, new products & services, new competencies, productivity improvements

By Year Three

There should be evidence that:

- A culture of cooperation combined with competition developing between local firms, with natural competition alongside collaboration in common areas
- Business support organisations are responding more closely, and as a team, to business needs, and increasing their resources to support the cluster's priorities
- Firms attribute, in part, their success to the clustering initiative
- Several projects successfully completed, according to goals set for each project
- Overall less dependency on NZAS

By Year Five

There should be evidence that:

- The all-important firms that are scaling up are well grounded in Southland
- Co-specialisation is developing amongst the businesses
- Engineering competencies are developing in new fields, perhaps plastics for the deep sea salmon industry
- An increasing % of turnover comes from beyond Southland

ENGINEERING AND MANUFACTURING SERVICES CLUSTER FUNDING

FUNDING THE CLUSTER

- Central Government
- Co-funding by business for specific projects, over time co-funding the cluster organisation
- Cluster Manager and Board supported by coaching, decreasing in intensity over 5 years
- Makes use of existing funding e.g.
 - Export trade mission funding from NZTE
 - Collaborative R & D projects, or establishing Common User Facilities, from Callaghan
 - Upgrading skills, through partnerships with Education Institutions
- If other Clusters are established in Southland, they could be co-located and share support for reception, organising seminars/itineraries, web site content/management etc
- A strong cluster has co-funding/co-resourcing from multiple sources including, over time, participating businesses. As additional funding is obtained, the development activities will be broadened.

THE RISK OF NOT INVESTING IN CLUSTER DEVELOPMENT IN SOUTHLAND

- NZAS closes and the capability built over 50 years diminishes as direct supplier businesses down scale, close or drift away from Southland
- Southland will have difficulty establishing the necessary capability for new industry opportunities, such as engineering products and services to support the developing aquaculture industry
- Without overall growth in the size in the regional economy, current suppliers and other competing businesses will be competing for a smaller share of business
- We will not have the attractive vocational pathways to attract and retain apprentices and staff, further exacerbating the already highly constrained supply of skilled labour.

RECOMMENDATIONS

Business Transition: NZAS Supplier Business

OTHER AREAS IDENTIFIED FOR SUPPORT

- NZAS Suppliers cited they are facing critical staff and skills shortages. Suppliers identified the need for a co-ordinated approach at a regional level in terms of developing a regional brand strategy to support worker attraction including:
 - Brand strategy and positioning for worker attraction and retention
 - Recruitment tools and assistance to support more effective and efficient recruitment
- This is not addressed in our proposal, and needs wider regional focus.

SUPPORTING OTHER RELEVANT JUST TRANSITION PROPOSALS

The initiatives that we are aware of which are relevant to business and would support a Cluster Development initiative include:

Coin Innovation Hub (within our workstream)

The expansion of Coin South from start-up to supporting innovation in existing business and wider industry

Aquaculture

- Cluster development for aquaculture to support current industry and proposed growth in open ocean salmon aquaculture

Worker Transition

- Pilot the 'I am Capable' programme

Food & Fibre

Support cluster development in the food sector as determined by the Food and Fibre workstream

KEY RECOMMENDATIONS

1. **Establish a pilot cluster for Engineering & Manufacturing Services** to support the transition of NZAS suppliers and other relevant businesses
 - a. Central Government
 - b. **Interim funding is considered** to enable the cluster to be developed in a timely way, while there is momentum with businesses
2. **Clusters are developed in other key areas of regional strength or economic opportunity** to maximise innovation and synergy between clusters
 - a. In particular, clusters could be developed for aquaculture and other new economic opportunities including hydrogen and data centres
3. **Cluster Managers are co-located at the new Chamber/Coin South** premises, to facilitate the development of common services while providing a fertile base in a business centric and agile environment
4. **Regional Innovation Acceleration Fund** is explored through Kanoa
 - a. A Regional Innovation Acceleration Fund Proposal is developed for consideration by Just Transition

APPENDIX 1

INTERNATIONAL CLUSTER DEVELOPMENT

Relevant Examples and Their Success

INTERNATIONAL SUPPORT FOR CLUSTER DEVELOPMENT

Across Europe, and now globally, long term public support for cluster development is in place. In spite of the difficulty in directly attributing results to the clustering interventions being supported (such as growth in jobs, productivity and innovation, export performance, inward investment), a wide range of public agencies around the world are renewing, and often extending, their cluster support

- In **Norway, Sweden, Denmark, Germany and France**, public support by national agencies has been in place for close to two decades
- In **Catalonia and the Basque Country**, despite changes in government and ministers, three decades of public support has been in place
- Many regional governments in Sweden, Austria, Germany, Belgium, Netherlands and Switzerland have been proactive in financially supporting their clustering initiatives for two to three decades
- **Canada** has been a late starter on cluster development. Five years ago, the national government offered Canada \$950 million to support five 'super clusters'. In Ottawa's recent budget, \$750 million has been offered to these five clusters for the coming five years
- **Australia** has been an even later starter on cluster development. Three of the Canberra-funded Industry Growth Centres now have regional cluster programmes in place. The first mover has recently doubled the number of regional food clusters being supported <https://www.fial.com.au/building-capability/clusters> .



FIAL

The Food and Agribusiness Growth Centre

“Clusters are a key delivery mechanism for igniting innovative ideas and building the capabilities of the Food and Agribusiness sector to unlock innovation. FIAL is fostering clusters in key Food and Agribusiness regions, running several initiatives and programs to grow the sector.”

“Australia and Canada are net exporters of food, with both countries turning to clustering as an intervention to address the impediments and opportunities for growth ... Canada [has an] aspirational goal to become the favourite protein supplier in the world by utilising clustering.”

Examples of clusters supported by FIAL:

Fermen Tasmania - Focus on fermentation technologies.

Food & Fibre Gippsland - Driving value adding, collaborative on-line trading platforms, and brand awareness of the region whilst protecting provenance through intelligent traceability technologies.

FAN – Food and Agribusiness Network, Queensland. Over 300 companies but with geographical sub clusters

Greater Whitsunday Alliance – Agtech Cluster

Limestone Coast - Food and Agribusiness Cluster

Fials' 2021 grant programme received applications from 17 clusters across Australia



The HUNTERNET cluster example

A network of over 200 manufacturers, engineers, IT providers, electrical & consulting firms in the Hunter Valley. 1700+ employees. Established 1992.

HunterNet, in the Hunter Valley, NSW, Australia, was born out of adversity and necessity

- The recession, demise of shipbuilding & pending steel industry crisis in the early 1990s
- Realising they needed to diversify to survive

People were sceptical and even pessimistic about how a 'network' of supposed competitors could work

After a year, gained understanding & agreed on a co-operative structure with three goals:

1. To develop capabilities
2. Grow market opportunities
3. Reduce the costs of supplying services

HunterNet's stated purpose is to help businesses grow, innovate and thrive – and say this begins with collaboration. By sharing ideas, developing capabilities, delivering support, and stimulating opportunities, HunterNet sparks industry synergy, builds strong work communities, unlock business acumen and creates brighter futures for all

Over the last 30 years, membership has thrived & evolved

- From first pivot away from shipbuilding and steel to supplying the defence industry, many more specialisations have developed and it is active in national and international infrastructure & asset management, energy & resources, defence and advanced manufacturing supply chains.
- HunterNet has also become active in recruiting, training and developing the human resource to build a quality, skilled workforce and ensure success and succession
 - HunterNet Career Connections - source, manage & develop high-quality apprentices, trainees & other early-career talents
 - HunterNet Future Leaders programme



"Our innovation network has several distinct 'clusters' or 'hubs' each focused on critical areas of business and industry."

Choose an area you want to grow and succeed in



Defence



Energy



Manufacturing



Infrastructure



Environment



Export



Medtech



Agribusiness

OTHER AUSTRALIAN EXAMPLES

- H2TCA - Network of Hydrogen Clusters across Australia
- METS (Mining, Equipment, Technology, Services) Ignited back clusters across Australia, with Cluster Development Managers in Queensland, Western Australia and South Australia supporting these clustering initiatives:
 - Queensland Robotics – vision is to be a highly competitive automation and robotics cluster generating tens of billions of dollars per year in domestic and export revenue and creating new jobs across Queensland and Australia.
 - Tailings TEQ - over 40 METS businesses collaborating to deliver innovative, commercial solutions to the challenges of mine rehabilitation, contaminated tailings and mine-affected water.
 - Bowen Basin - anticipated to create more than 3000 additional mining technology jobs in the next decade.
 - Space Technologies (Qld, SA + WA – in development)
 - RoboWest (WA – in development)
 - Innovation (Mackay – in development)

INTERNATIONAL CLUSTER EXAMPLES, ENGINEERING RELATED

Location	Focus, specialisations	Web site
Hunternet, Newcastle, NSW	Engineering and supply companies	https://hunternet.com.au/
Mining clusters, Australia	Machinery & services	https://metsignited.org/clusters/
Paper Province, Varmland, Sweden	Forestry, including engineering	https://paperprovince.com/en/
Oceans Technology, Bergen, Norway	Oil & Gas, Seafood	https://www.gceocean.no/
Global Centre of Excellence NODE Kristiansand, Norway	Offshore energy, Drilling	https://gcenode.no/about-node/
Process Industry Cluster, Yorkshire, UK	Chemical process engineering	http://www.nepic.co.uk/
Electric Mobility South West, Baden Wurttemberg, Germany	Mobility, rail traffic systems	https://www.emobil-sw.de/en
EMC2, Nantes, France	Manufacturing technology cluster	https://www.pole-emc2.fr/the-emc2-competitiveness-cluster/
CIMES, Clermont-Ferrand, France	Integrated mechanical systems	https://www.cimes-hub.com/en/cimes-competitiveness-cluster-dedicated
FEMAC, Catalonia, Spain	Agricultural machinery	https://www.femac.org/introduction/
Railgrup, Catalonia, Spain	Transport engineering, Rail	https://www.railgrup.net/
Vehicle Technology, Winnipeg, Canada	Vehicle, Transportation equipment	https://vtci.ca/about-us/

STIIM AQUA CLUSTER IN NORWAY

- Technology transfer is the cornerstone and differs from other aquaculture clusters in that it has an arena where strong technology environments in oil and gas, automation & electronics, robotics, maritime advanced mechanical industry & IT work closely with the established aquaculture industry to accelerate growth globally.

- **Five areas of priority:**

1. **Smart farming**
2. **Green value chains**
3. **Entrepreneurship & capital**
4. **Infrastructure for innovation**
5. **Market.**



Stiim Aqua Cluster has members in five categories: research and education, established companies, public authorities, entrepreneurs and investors. Together, our members form a strong and innovative ecosystem for technology development and growth.

EUROPEAN CLUSTER IMPACT

European Commission

- 3,000 clusters in Europe
- 1 in 4 jobs
- Half of all exporting jobs



THE ECONOMIC VALUE OF PARTICIPATING IN CLUSTERS

Clusters matter



in specialised clusters than in other locations

Companies active in clusters are:

- Four times more likely to innovate compared to similar companies, who are not involved in cluster activities.
- Obtain productivity growth which is 3,6 pct. higher other similar companies not involved in cluster activities.
- Normally only 5-6 pct. of SMEs are active international. By participating in clusters 14 pct. of SMEs have international activities.

7



A large yellow triangle is positioned in the bottom right corner of the page, pointing towards the top right.

Appendix 2: SOUTHLAND BUSINESS TRANSITION DATA INSIGHTS, MAY 2022– 46 Degrees

This information is available at the end of this Report

BUSINESS TRANSITION: STARTUPS RESEARCH REPORT

INTRODUCTION.

Just Transition Southland's purpose is to identify and deliver assistance **to build economic, environmental and social resilience through and beyond the closure of NZAS**. The Business Transition workstream is to deliver a research project to identify the support businesses need to successfully navigate this transition, with a focus on small and medium enterprise (SME') and startups. In particular, the Business Transition Workstream undertook research to inform implementation recommendations and identify changes needed to be made to **existing start up support frameworks** to reduce the region's reliance on NZAS and provide a better transition into new industries.

Startups and high growth businesses can contribute significantly to the growth and diversification of the Southland economy and are crucial to support the transition to emerging industries, adapting to change and future-proofing the local economy. If resourced well, the opportunities from the recommendations in this report would be transformative for Southland, providing the platform to support industries, businesses and individuals to not only adapt to future changes but to thrive with a competitive advantage in national and global markets.

Innovation has the potential to create meaningful change in our region, bringing money, employment and new industries south. As individuals and businesses prepare to transition to new industries which can support regional economic resilience, the startup ecosystem is expected to experience an exponential increase in demand for support and is currently under resourced to deal with this increase. The uncertainty of the transition thrust upon the region demands a collaborative approach to diversify local income streams and help identify existing innovation opportunities to help lift the economic, environmental, and social resilience of Southland.

GAP ANALYSIS.

The findings of COIN South's 3-year pilot have demonstrated that there is a well recognised and globally proven startup methodology, based on the principles of design thinking, that can be applied effectively to Southland founders' ideas and innovations so that they are more likely to progress towards becoming a profitable business. This research project involved a deep dive into the local start-up ecosystem to identify the **barriers, opportunities and resources needed to support transformational change** and whether there is an opportunity to extend any value of the ecosystem beyond startups to existing businesses and industry clusters.

The research is based on:

- founder surveys from the last three years of incubator and accelerator programmes within the regional start-up hub
- qualitative interviews with founders, industry champions and feedback from professional services.
- feedback from other Just Transitions work streams such as Business Transitions (SMEs) and Land Use.

Based on our research, the table below sets out the most commonly identified opportunities for accelerated growth for startups which are challenging to access in Southland. It is important to note that while many of these may be similar to gaps seen in other startup ecosystems around the country, these are exacerbated by Southland's geographical isolation (distance from market/customer), lack of scale and risk of NZAS closing.

IDEAS/CONCEPT DEVELOPMENT

- Exposure to market trends and opportunities which can influence idea generation
- Opportunities for group creative development and ongoing peer support
- Capability around entrepreneurial methodology for existing businesses
- Access to local new product development support
- Support infrastructure for idea validation
- Clear pathways for industries and businesses with ideas to connect with entrepreneurs to develop concepts

MOTIVATION AND LEADERSHIP

- Capability building around how to grow and scale a venture
- Communications to profile and encourage those with the ability to innovate and create the future
- Access to experienced mentors

CAPITAL

- Easy and equitable access to early-stage and later stage capital investment (geographical bias against Southland).
- Local accelerator programs with seed funding
- Access to small value grants which can accelerate ideas into firm investible propositions (pitch preparation and prototyping to get to Minimum Viable Product)
- Establishment of a local private capital fund providing a more accessible capital pathway for local startups and businesses. This could be supported as part of the regions long-term plan to support high growth potential startups not suited to traditional angel investor networks. Existing businesses looking for growth capital who may not fit the Invest South/Community Trust mandate or require a co-investment model alongside Invest South.

TECHNICAL AND DELIVERY

- Access to talent density in most verticals to provide technical expertise, mentors, and talent for startups – they have no choice but to look outside the region for these connections
- Capable guidance around recruiting skilled early employees
- Access to local connections and links to other startup ecosystems that can expedite learnings
- Limited founder know-how, startup and scaleup experience – you can't be what you can't see
- Help maintaining relationships in markets with customers and commercial partners
- Pathways for scalability
- Southland youth are lacking in exposure to innovation in education and training is required to upskill and support the education system to build capability.

FOOD AND FIBRE

- Local contract manufacturing infrastructure
- Pilot/product development facilities
- Testing laboratories
- Local food culture/industry to pilot new food products
- Connection across the broader food system and exposure to international food trends
- Resource consent process and MPI regulations can be difficult to navigate

MANUFACTURING AND ENGINEERING

- Limited installation and use of automatic programming (Industry 4.0)
- Skills and staff shortages. There isn't the baseline of tradeskills and the automation tradeskills.
- Logistics costs due to location.
- Lack of scalable capacity. Businesses have been created to service Tiwai and this base and scale has enabled them to innovate and grow.

SUSTAINABILITY

- Application of circular economy principles incorporated into product design

TECHNOLOGY

- Accessibility of tech talent coming out of SIT/secondary schools
- Connecting business/accounting/software students to startups

THE ASK

Three key recommendations are highlighted as a focus of this research report:

RECOMMENDATION	HOW	WHO
1. Expanded startup services	Facilitate economic diversity through entrepreneurial capability building across the region.	<ul style="list-style-type: none">• Early stage founders/startups
2. Innovation and Business Growth	Facilitate economic diversity through entrepreneurial capability building across the region.	<ul style="list-style-type: none">• Existing companies looking to grow and future proof their businesses• Industry clusters looking to transition to a higher value regional economy.
3. Startup Project Funding	Establishment of project funding for startups to be administered by COIN South.	<ul style="list-style-type: none">• Early stage startups looking to progress from idea to investible proposition.

ASK 1: EXPANDED STARTUP SUPPORT.

As individuals and businesses prepare to transition to new industries which can support regional economic resilience, **the start-up ecosystem is expected to experience an exponential increase in demand for support and is currently under resourced to deal with this increase.**

The uncertainty of the transition thrust upon the region demands a collaborative approach to diversify local income streams and help identify existing innovation opportunities to help lift the economic, environmental, and social resilience of Southland.

Innovation has the potential to create meaningful change in our region, bringing money, employment and new industries south (aquaculture, hydrogen, datacenters, oat processing). Each of these new industries will bring with it a latent demand for new supporting businesses and ideas.

The strength in the current startup ecosystem is that it is agile, founder first and facilitates connections. It is recognised that the development of a strong start-up ecosystem takes time to establish and this can be accelerated by ensuring that there is sufficient resource to provide opportunities across the region.

Research indicates that there will be a significant increase in the number of people starting their own businesses as the region transitions its reliance from NZAS. The increase in startups is anticipated to support

1. Individuals impacted by the closure of NZAS. Initial research indicates that there could be 200 plus Tiwai employees and NZAS supplier employees who may need new employment, who are interested in starting their own business if NZAS was to close.
2. A significant number of new businesses starting up to support new industries (land use change, aquaculture, datacentres)

The recommendation of this report is that COIN South be resourced to support startups

ASK 2: INNOVATION & BUSINESS GROWTH.

COIN's overarching goal is to diversify Southland's economy and make it possible to grow a successful and sustainable business from this region. It focuses on coaching individuals and teams using a lens of design thinking and investment, connecting start-ups with the right people, tools, resources and funding opportunities at the right time. This is delivered through community events, founder incubation, acceleration support and design thinking workshops. Established with government support in 2019, COIN South is now an integral part of the Southland startup and innovation ecosystem and works closely with partners and other support agencies regionally and nationally.

The business case that was developed for COIN South as part of the Southland Regional Development Strategy described COIN as a "success pathway for emerging business... [providing a] wrap around support network for connection, innovation and investment partnering". That business case maintained that COIN should not be restricted to the startup space but should also provide resources and capital for existing businesses with high growth potential who are looking to accelerate their business through its next growth phase or pivot."

The COIN South team has focussed solely on building a connected startup and entrepreneurial ecosystem during the period of the pilot. There has been limited capacity to address the innovation needs of the wider community despite clear signals from existing business and industry that this would be hugely beneficial as the region transitions away from reliance on NZAS. While COIN continues to evolve to build entrepreneurial capability in the region, it is currently under resourced to more effectively address the gaps in the ecosystem that have been identified through this research.

A new innovation hub team will work alongside startups, businesses and industries to create new opportunities quickly through tested techniques and tools to create a solution that meets their needs, using universally recognised and locally proven methodologies, processes and tools of innovation to unlock their potential, grow revenues, drive innovation, enabling them to stay relevant despite the significant headwinds that our region faces.

In the way that both Creative HQ (www.creativeHQ.co.nz) in Wellington and Soda Inc (www.sodainc.com) in Hamilton have evolved from startup ecosystem players to provide business growth support across startups, SMEs and businesses, our research suggests that a similar innovation framework is critical to support the Southland region builds improved social, economic and social resilience.

Consultation with and feedback from existing businesses and professional advisors who have been exposed to COIN South’s way of working through community education events, customer validation sessions or as corporate members have indicated that there is a strong appetite for this methodology and mindset to be applied to problems that existing businesses and industries are trying to solve.

Both Business Transitions (SMES) and the Land Use work stream have both validated the need for a regional innovation hub to facilitate entrepreneurial capability building and mechanisms/infrastructure accelerating conceptual ideas through to investible proposition. COIN South is actively working in this space with emerging businesses and is well positioned to help facilitate economic diversity through entrepreneurial capability building and accelerating early-stage startups.

The uncertainty of the transition thrust upon the region demands a collaborative approach to diversify local income streams and help identify existing innovation opportunities to help lift the economic, environmental, and social resilience of Southland. This further supports the expansion of the innovation ecosystem in Southland, through the creation of an innovation hub.



The recommendation of this report is that COIN South be expanded to deliver innovation and business growth accessible to individuals, businesses and industry, where they can be supported while they explore how innovation methodology and support systems can transform their ideas into sustainable future proofed businesses.

ASK 3: STARTUP FUNDING.

Similar to the funds available as part of Soda Inc, we recommend the establishment of a fund that is available to very early-stage businesses or businesses looking to pivot (with a tolerance for failure) to support the initial capital barrier Southland entrepreneurs need to grow and thrive nationally and beyond. Long-term this funding could be part funded in collaboration with existing local funders wishing to support innovative endeavours in the region.

All startups and businesses are challenged by expensive small batch runs for prototyping new ideas. While Callaghan Innovation can help at this early stage, there is a small Innovation Fund here in Southland (run by COIN South and administered by Chamber of Commerce) to support this work. This Innovation Fund is specifically for those founders who wish to manufacture a new product in the South but need the cash to prove it with a prototype first. This fund also comes with valuable tear-down feedback from an expert team of engineers.

We recommend that the existing Innovation Fund be supplemented to address more general but equally important founder needs.

This would be funding administered by COIN South. Each startup can apply for up to:

- \$3000 for prototyping and validating MVPs
- \$1000 for pitch deck / pitching support
- \$5000 discretionary (application based) for isolated startup costs.

It is anticipated that this will then flow on to more validated, robust and investible businesses.

Recommendation: 5 years for Startup funding support

PROPOSED DELIVERY STRUCTURE

SECTOR EXAMPLE	DELIVERY MODE		PARTNERS	KEY CHALLENGE
Start-Up/ Transition to self employment	1: Many, systemised support	Develop an information hub specifically for Southland businesses, drawing on resources that are already available. Focus on quality, not quantity i.e. deciphering and distilling the huge amount of information that is already out there. Focus on value proposition, business model, business basics, ecosystem/value chains and promotion and marketing. Option of online training with modules that are completed, a certificate at end and microcredentials. Includes 1:1 at the beginning of course and at the end. Plus wider creation of a community where people can come and meet each other e.g. speed networking/show and tell events/listen to speakers/general online forums about what is working/what isn't etc	Great South, Chamber, Ngai Tahu, Murihiku Regeneration, Thriving Southland, business mentors, professional services, industry champions, Kuma, Ministry for Pacific people, SIT/TePukenga, MBIE, Callaghan Innovation and research organisations.	Systemise to move to scalable model. Pivot to include all wanting to transition to self employment/execute a new idea.
Expand and transition through innovation	1:few	Businesses need to qualify. Existing service offer but moved up a notch. To be developed alongside businesses and Cluster Manger	Partners above and working with Cluster Managers to identify and support businesses who are looking to innovate and pivot. Initially supporting eng & manuf services cluster with businesses that are motivated to pivot and diversify.	Establishing programmes and systems that suit the time constraints of businesses
Go Big/Global	1:1, small cohort (Maximum of 8 companies, 1 cohort per year)	This is about developing global businesses from Southland	Partners above alongside specific expertise required by the particular businesses /cohorts.	External partnerships to create success.

CUSTOMER TYPE	CUSTOMER NEED	DELIVERY
Industry specific	For example, farmers with revenue driven businesses looking to diversify and add to the economy in a sustainable way. Have business know how and need help adding value to commodities to move from behind the farm gate to commercialisation.	To work alongside land use change workstream with Thriving Southland: COIN South facilitates a cohort of highly driven individuals, connecting them with the coaches they need to level up. We'll work closely to help facilitate learning around Value Prop / Competitive Advantages / Propositions and Messaging. For example: Connecting into Future Foods at Great South, Thriving Southland, Education and research institutions and national Startup networks.
Existing businesses with product development or ambition to innovate	Revenue driven businesses looking into new product development. Need help with customer segmentation, validation, value prop and channels.	To work alongside Cluster Engineering & Manufacturing Services Manager (from Business Transitions workstream): COIN South facilitates design thinking workshops within existing businesses, connecting teams with experts they need to level up. We'll work closely with Cluster Managers to help facilitate learning around Value Prop / Competitive Advantages / Propositions and Messaging.
Workers leaving Tiwai to become self-employed. Or skilled workers solving customer problems.	Tiwai staff, and any redundant NZAS supplier employees using prior skills to start a self-employed business. Need help with business modelling and validation. Individuals in other industries (Engineering) creating solutions with a competitive advantage based on industry	Lead by COIN South - Continue to work alongside organisations within the start-up ecosystem: COIN South teaches design thinking, connecting individuals to mentors and facilitates learning around Value Prop / Competitive Advantages / Propositions and Messaging. Funding for prototyping is available for driven individuals.
Early-stage startups	Individuals who are looking to take an idea and commercialise it. Often small scale and needing help in everything from business modelling to business 101, messaging and value propositions, process and channels.	Lead by COIN South - Continue to work alongside organisations within the start-up ecosystem including Great South and Kuma locally and other accelerators nationally: COIN South adds value coaching, connecting and sharing these stories. Introducing the concepts of Value Prop / Competitive Advantages / Propositions and Messaging.
Rangatihi	Individuals aged between 13-18 years who have interest in entrepreneurship and/or a great idea they would like to explore.	To work alongside Worker transitions workstream lead by Murihiku Regeneration: Working with stakeholders and supporting leading education providers to seed entrepreneurialism and design thinking with Rangatihi. Connecting students with local businesses.

ROAD MAP.

SEPTEMBER 2022 - SEPTEMBER 2023

Months 1-6

- Delivery of BAU start-up support, events and accelerator programmes
- Further validation around the delivery of business growth and industry support programmes
- Ecosystems mapping
- Securing the strategic partnerships and corporate memberships
- Implementation of internal process to continue to solidify delivery
- understand what is required to support the transition to ensure that there is limited duplication with existing service providers and that the services provided meet the needs of SMEs looking to transition away from reliance on Tiwai and explore other areas of innovation or industry
- Continued engagement with local business entities to determine needs
- Identifying key staff requirements prior to onboarding
- Development of theory of change and monitoring and evaluation plan with key metrics for economic, social, environmental impact
- Establishment of a co-located premise for Chamber, COIN and Cluster Managers

Months 6-12

- Development of expansion of COIN including marketing and brand development for additional services
- Employment of staff
- Establishment of startup fund process
- Identify partners and expertise required to deliver programmes
- Monitoring and evaluation framework established
- Further development of CRM to establish transitional journey of each engagement

Beyond September 2023

- Delivery of expanded startup support
- Pilot of delivery of business growth programmes
- Startup funding available to founders who meet set criteria

PROJECT GOALS.

As part of the transition phase of the expansion of startup and Business services delivered by COIN there will be the development of an extensive monitoring and evaluation plan including the performance of the overall programme, Individual programmes, individual startups and businesses. Metrics will include both quantitative and qualitative data (examples: numbers of founders, impact of founders, evidence of innovation and diversification). A theory of change will be developed alongside key measures for understanding the impact of not only economic benefits but of social resilience and environmental.

SHORT-TERM

By end of 2025 (3 years) we expect to see:

- Widening and growing the Southland Start-up and innovation ecosystem to support all transition pathways
- Create a toolkit of validated methods for building entrepreneurial capital and skills
- Support Southland entrepreneurs with strong, local community-building and educational activities that are well-resourced
- Developed understanding of the start-up and innovation ecosystem
- Strong partnerships across the start-up ecosystem locally and nationally
- Easily accessible capital pathway
- Facilitating and growing the connectivity across the regional ecosystem

MEDIUM-TERM

By 2033 (10 years) we expect to see:

- Thriving and connected startup ecosystem
- Startups established and supporting new industries
- Businesses growing and using innovation to pivot and diversify reliance from NZAS
- High growth businesses starting and scaling from Southland
- Increasing the scale, frequency and reach of incubators, accelerators and events across the region.

LONG-TERM

By 2033+ (10 years +) we expect to see:

- Strong connection into the national start-up and innovation ecosystem
- Specialists in delivering design thinking and start-up methodology to support start-ups, existing businesses, industries and Rangatihi to innovate and grow
- and the development of an "entrepreneurial mindset" that contributes to an innovative region.

THE RISK OF DOING NOTHING

- Developing industries don't have the supporting businesses needed to execute at scale
- People will leave the region to find employment
- Existing businesses can't innovate and pivot fast enough to transition their reliance on NZAS
- Workers leaving Tiwai and wanting to establish their own business don't have the support they need
- Commercialisation doesn't happen beyond the farm gate to support the food and fibre sector
- Innovation and design thinking for youth will be harder to access
- The ability to provide an enhanced and supportive business environment could be lost
- Connections between founders, startups and business are likely to be missed/lost without assisted collaboration



Just Transitions – Southland Business Transitions Data Insights

May 2022

1. Contents

2.	FOREWORD	3
3.	GLOSSARY	4
4.	SUMMARY	5
5.	DEMOGRAPHIC PROFILE	5
5.1.	POPULATION PROFILE AND ESTIMATES	6
5.1.1.	<i>Population growth profile</i>	6
5.1.2.	<i>Age profile</i>	6
5.2.	HOUSEHOLD	7
5.3.	DWELLINGS	7
5.4.	BUILDING ACTIVITY	8
5.5.	EDUCATION	9
6.	ECONOMIC PROFILE	10
6.1.	TRADABLE EXPORTS	10
6.2.	GROSS DOMESTIC PRODUCT	10
7.	EMPLOYMENT, OCCUPATION, AND INCOMES	13
7.1.	LABOUR FORCE	13
7.2.	FIRM SIZE BY EMPLOYEE COUNT	15
7.3.	INDUSTRY EMPLOYEE COUNT	16
7.4.	HOUSE INCOMES AND HOUSING COSTS	16
8.	SOUTHLAND INDUSTRY AND BUSINESSES	17
8.1.	INDUSTRY BREAKDOWN	18
8.1.1.	<i>A - Agriculture, forestry and fishing industry – Industry total</i>	18
8.1.2.	<i>C – Manufacturing industry – total</i>	21
9.	REGION FUNDING	27
9.1.	CALLAGHAN GRANTS	27
9.2.	MBIE - MANAGEMENT CAPABILITY TRAINING FUNDING	27
10.	NEW ZEALAND ALUMINIUM SMELTER	28
10.1.	NZAS BACKGROUND	28
10.2.	NZAS KEY INSIGHTS	28
10.2.1.	<i>Expenditure</i>	28
10.2.2.	<i>NZAS employee impact</i>	29

2. Foreword

This document provides supporting statistical evidence for the Just Transitions – Business transition research project.

Some commentary is provided but the majority of the content is presented in graphs, charts and tables.

Included within this research report is:

- A glossary of terms related to the content with this document
- Southland's demographic and population profile
- Southland's economic profile
- Southland's employment, occupation, and income profile
- Southland's industry and sector analysis
- New Zealand Aluminium Smelter insights

The evidence of this document is to date as of April 2022 and should be regarded as a snapshot of Southland at the time of publication.

For further information, please contact:

Mike Wyeth

4 Six Degrees Limited Principal

Mike@4sixdegrees.co.nz

3. Glossary

CAGR	Compounded annual growth rate
GDP	Gross domestic product
Geographic units	A separate operating unit engaged in New Zealand in one, or predominately one, kind of economic activity from a single physical location or base.
NZAS	New Zealand Aluminium Smelter Limited
TA	Territory Authority
Underutilisation	Reflects people who are unemployed, underemployed (employed part time and want to increase their hours), available potential job seeks, and available job seeker.
Unemployment	All people in the working-age population who, during the reference week, were without a paid job, available to work, and has looked for work in the past four weeks or has a new job to start in the next four weeks.

4. Summary

Southland's population has modestly grown by approximately 0.7% per year since 2007 to 102,750 at 30 June 2021; this is below the New Zealand average growth rate of 1.39% over the same period.

Southland's population is projected to grow at approximately 0.9% per year to reach 108,300 people by 30 June 2048.

Southland's Gross Domestic Product (**GDP**) accounted for 2.06% of total New Zealand GDP at March 2021, a percentage that has modestly risen since 2016 from 2.0%; albeit materially below the 2002 peak of 2.47%. For the year ended 31 March 2021, Southland's GDP per capita was \$65,468, which was the fifth highest regional GDP per capita, and above the national average of \$63,955.

According to NZTE¹, Southland produces 15% of New Zealand's tradable exports, while its population represents only 2.0%² of the total New Zealand population.

The region is primarily driven by the agriculture and manufacturing industries, which accounted for 20% and 14% of Southland's 2020 GDP respectively. The manufacturing industry comprises the largest number of regional employees in 2021 at 17% compared to agriculture forestry and fishing at 16%.

The Meat and Meat Product Manufacturing sub-industry is the largest employer in Southland, comprising 7.3% of all regional employees, while the Dairy Cattle Farming sub-industry is the second largest employer, accounting for 5.8% of total regional employees in 2021.

During the 2019 calendar year, New Zealand Aluminium Smelter (**NZAS**) contributed \$58.6 million to the Southland region through expenditure with local businesses³. This represents approximately 1% of Southland's total GDP in 2019.

NZAS operations in 2019 supported 1,580 equivalent employees in the Southland region. Retail trade was the largest sector benefiter, with 454 jobs being supported.

5. Demographic profile

At June 2021 Southland's population was 102,7850 people, with 55% of people living in Invercargill City (57,000 people), 32% in Southland District (32,700 people), and 13% in Gore District (13,050).

Southland accounts for approximately 2% of the total New Zealand population.

Table 1

Population profile

Year end June	
Area	2021
Invercargill City	57,000
Gore District	13,050
Southland District	32,700
Southland regions	102,750
<i>% Of New Zealand population</i>	<i>2.0%</i>
New Zealand	5,122,600

¹ Source: <https://www.nzte.govt.nz/page/southland>

² Source: Stats NZ – June 2021

³ GDH Report for New Zealand Aluminium Smelters – Socio-Economic Impact Assessment December 2021

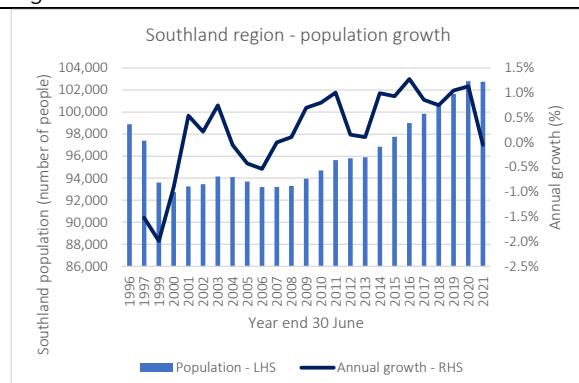
Source: Stats NZ

5.1. Population profile and estimates

5.1.1. Population growth profile

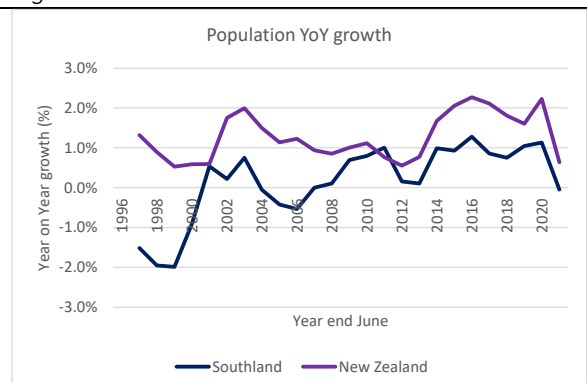
As detailed in **Figure 1** Southland’s population declined from 98,900 at 30 June 1996 to 92,750 by 30 June 2000, before steadily increasing to 102,750 by 30 June 2021. Since 1996, Southland’s year-on-year population growth has been below New Zealand’s population growth for 24 out of the 25-year periods (refer to **Figure 2**).

Figure 1.



Source: Stats NZ, 4Six Degrees analysis

Figure 2.



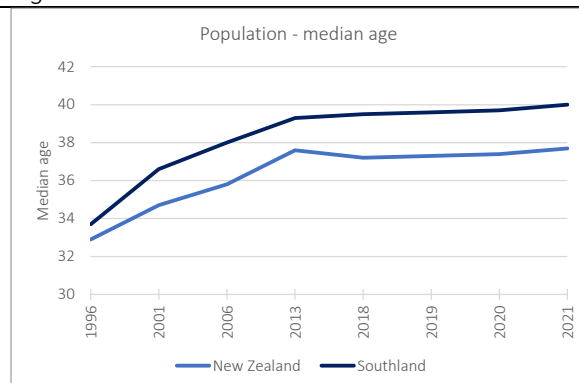
Source: Stats NZ, 4Six Degrees analysis

5.1.2. Age profile

As detailed in **Figure 3** below, Southland has exhibited an increasing age profile, with the median age increasing from 33.7 years at 30 June 1996 to 40 years at 30 June 2021. At 30 June 2021, Southland’s median age is 2.7 years above the New Zealand median at 37.7 years.

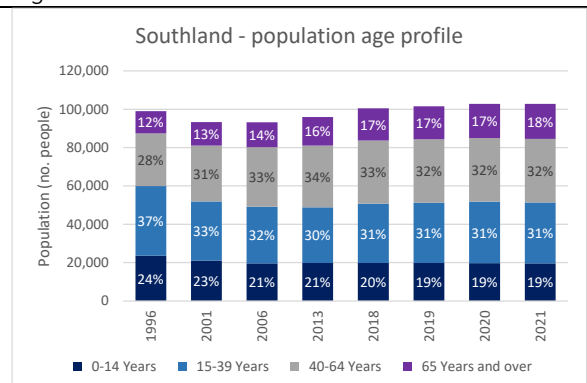
Since June 1996, the proportion of Southland’s population 65 years or older has increased from 12% to 18% at June 2021. Furthermore, the proportion of Southland’s population that is 14 years or younger has reduced from 24% at June 1996 to 19% at June 2021, reflecting a decreasing birth rate trend, similar to the trend observed across wider New Zealand.

Figure 3.



Source: Stats NZ, 4Six Degrees analysis

Figure 4.

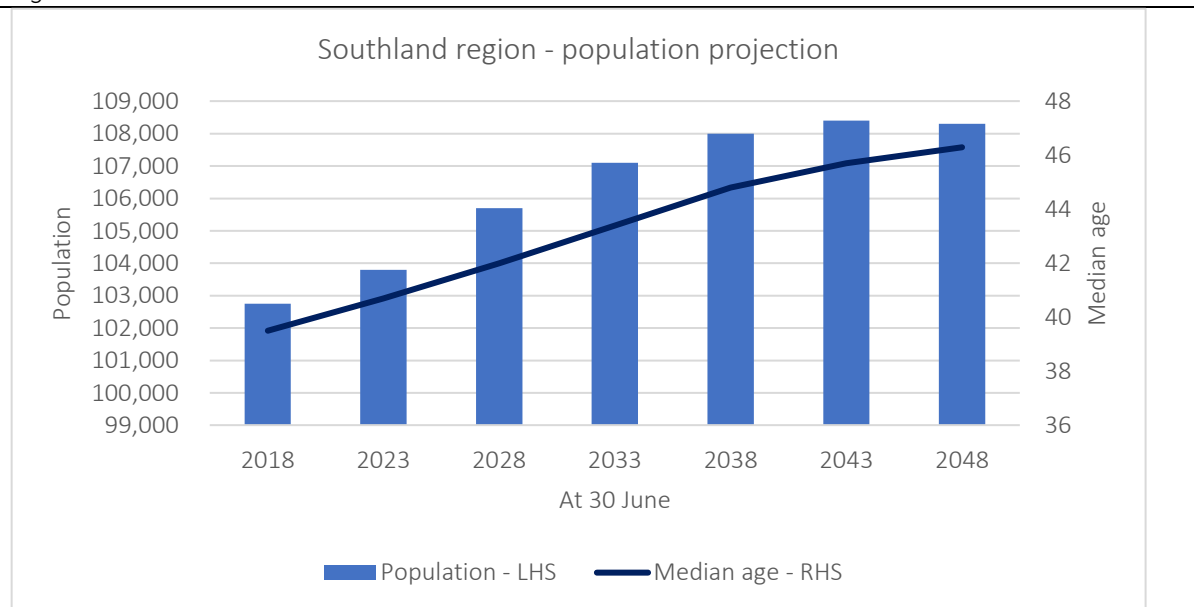


Source: Stats NZ, 4Six Degrees analysis

As detailed in **Figure 5** below, Southland’s population is estimated to increase from 102,750 at 30 June 2021, to 108,300 at 30 June 2048, representing a 0.88% average annual growth rate.

Southland’s median age is estimated to continue to increase from 40 years at June 2021 (current date), to 46.3 years by 20 June 2048.

Figure 5.

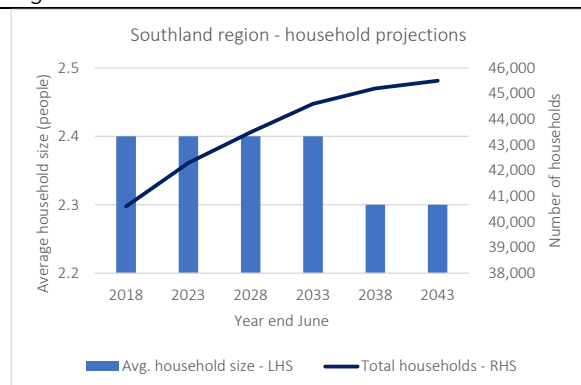


Source: Stats NZ, 4Six Degrees analysis

5.2. Household

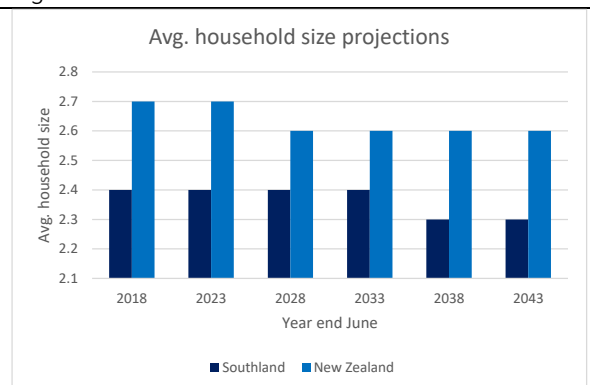
Southland’s average household size of 2.4 people is below the New Zealand average of 2.7 people (refer to **Figure 6**). The average Southland household size is estimated to decrease to 2.3 by 2043, which is a similar decrease estimate to occur across wider New Zealand (refer to **Figure 7**).

Figure 6.



Source: Stats NZ, 4Six Degrees analysis

Figure 7.



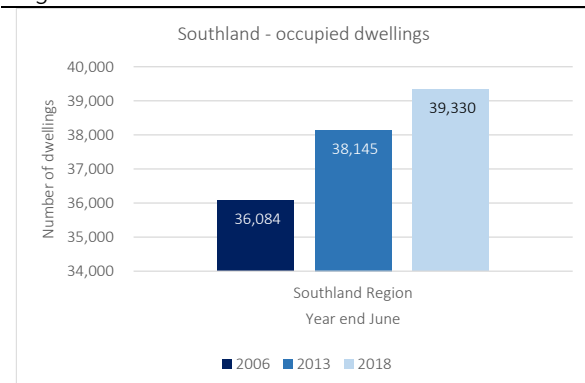
Source: Stats NZ, 4Six Degrees analysis

5.3. Dwellings

The number of dwellings across Southland has increased from 36,084 in 2006 to 39,330 in 2018 (refer to **Figure 8**). Assuming that the housing stock and regional population was at equilibrium in 2006, the additional Southland dwellings-built post 2006 appear to offset the population growth to 2018 (refer to **Figure 9**). Arguably the number of new builds has not kept pace with Southland’s population growth

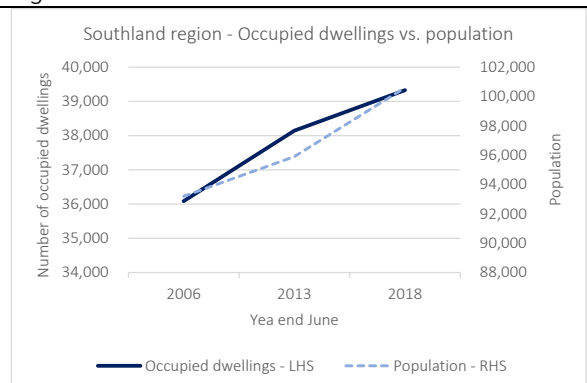
post 2018; however, there is currently no data available post 2018 on Statistics NZ to support this statement.

Figure 8.



Source: Stats NZ, 4Six Degrees analysis

Figure 9.



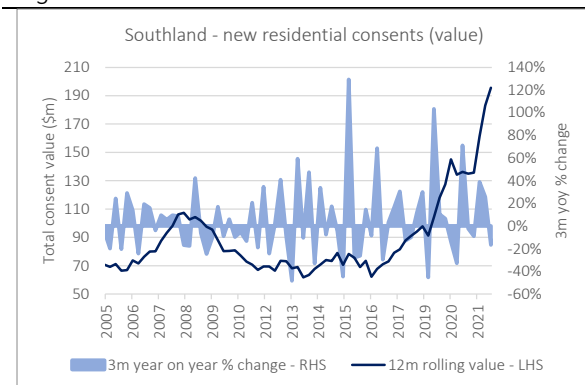
Source: Stats NZ, 4Six Degrees analysis

5.4. Building activity

Southland’s new residential consents by value (rolling 12 months) has risen materially since September 2016, increasing from \$62 million to \$196 million at 31 December 2021 (refer to **Figure 10**).

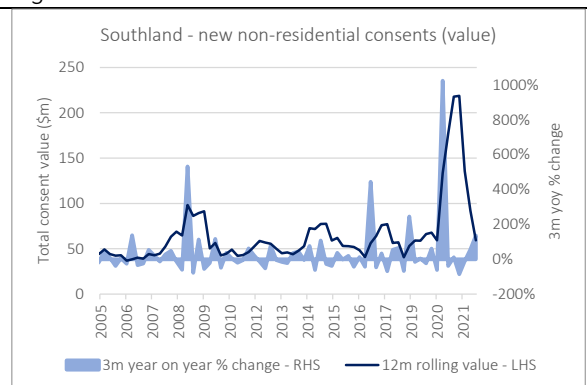
Southland non-residential consents by value have remained broadly flat from 2009 to 31 March 2020 at approximately \$55 million (rolling 12 months); although increased materially to \$219,000 by 31 March 2021, before retreating to \$60 million at 31 March 2022. The significant increase in 2020 likely relates to the Invercargill CBD development that is currently being undertaken (refer to **Figure 11**).

Figure 10.



Source: Stats NZ, 4Six Degrees analysis

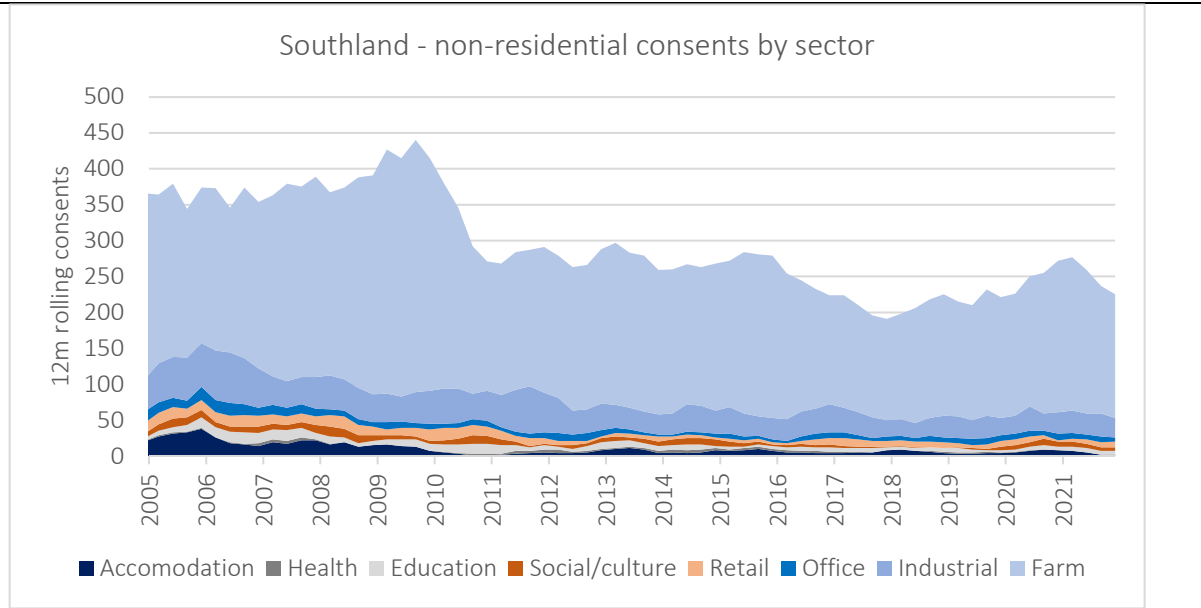
Figure 11.



Source: Stats NZ, 4Six Degrees analysis

As detailed in **Figure 12**, Southland’s new non-residential consents are largely made up from consents relating to the farm and industrial sectors - At 31 December 2021, the proportion of consents that related to these two sectors was 83% and 8% respectively.

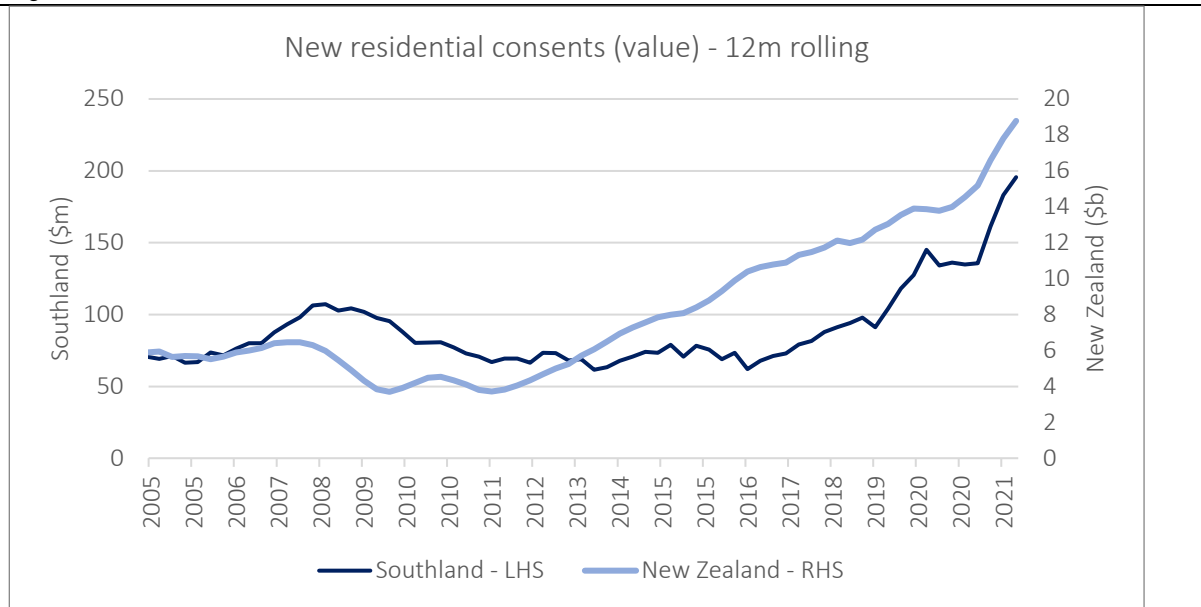
Figure 12.



Source: Stats NZ, 4Six Degrees analysis

As detailed in **Figure 13** below, New Zealand’s new residential consents value (12 month rolling) exhibited a similar trend, albeit slightly higher, to that exhibited across Southland - New Zealand consents by value increased 28% annually since 2005, compared to Southland at 25%.

Figure 13.



Source: Stats NZ, 4Six Degrees analysis

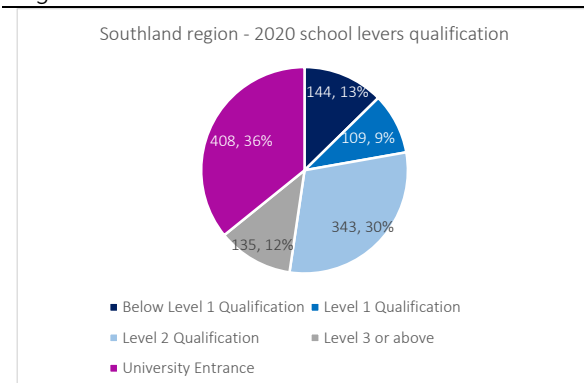
5.5. Education

As detailed in **Figure 14** below, 36% of Southland’s 2020 school leavers attained university entrance, 12% level 3 and above, and 30% a level 2 qualification.

Across Southland, 26% of the population does not have a qualification, which is materially higher than the New Zealand average at 18.2%. Within Southland, Gore District has the largest percentage of

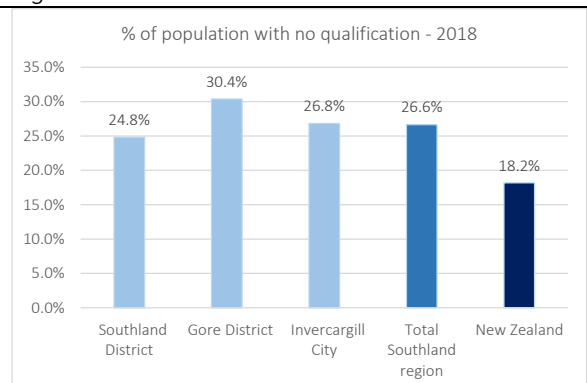
population with no qualification at 30.4, while Southland District has the lowest at 24.8% (refer to Figure 15).

Figure 14.



Source: Stats NZ, 4Six Degrees analysis

Figure 15.



Source: Stats NZ, 4Six Degrees analysis

6. Economic profile

6.1. Tradable exports

Pe NZTE, Southland is a highly productive region, contributing 15% of New Zealand’s tradable exports, while the region only accounts for 2.0%⁴ of the country’s population.

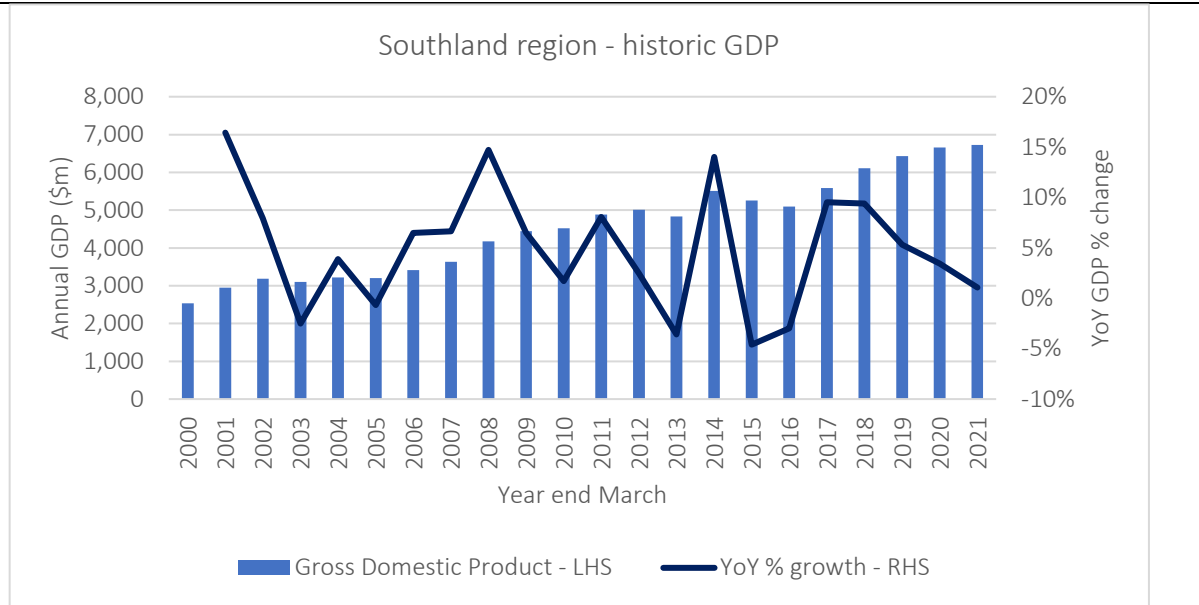
6.2. Gross Domestic Product

In 2021, Southland recorded approximately \$6.7 billion in regional Gross Domestic Product (GDP), which represents 2.06% of total New Zealand GDP.

As detailed in Figure 16 below, Southland’s GDP increased from approximately \$2.5 billion in 2000 to approximately \$6.7 billion in 2021, representing a compounded annual growth rate of 4.8%.

⁴ Source: Stats NZ – as at June 2021

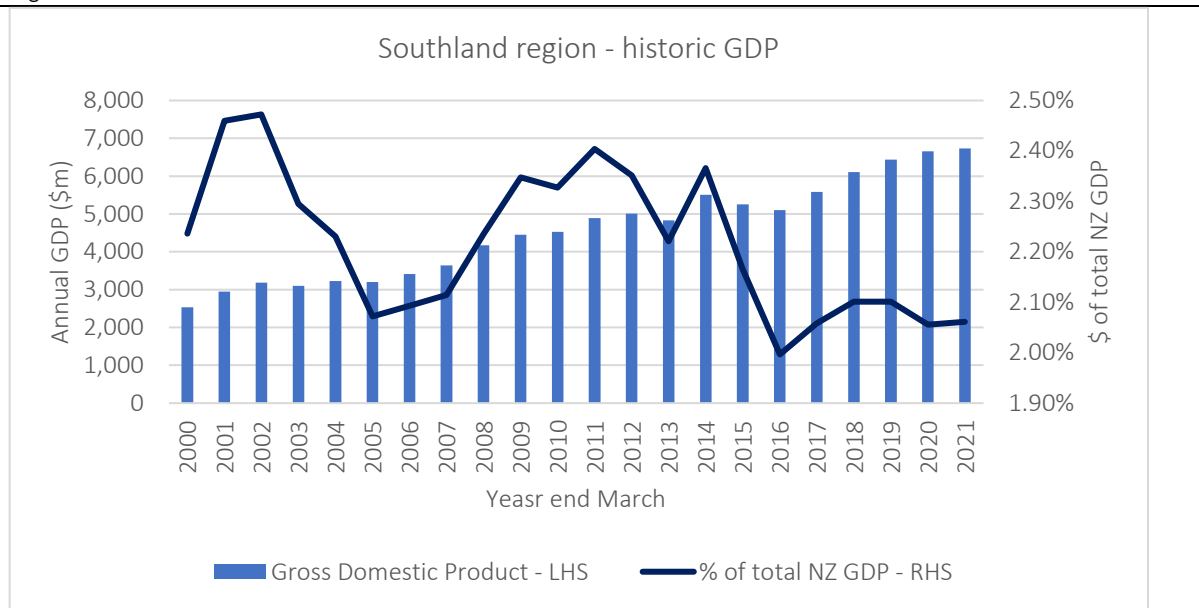
Figure 16



Source: Stats NZ, 4Six Degrees analysis

Southland accounted for 2.47% of total New Zealand GDP in 2002, which declined to 2.09% by 2006, before increasing to 2.40% by 2011. Since 2011, Southland’s GDP as a percentage of total New Zealand GDP has fallen to 2.06%

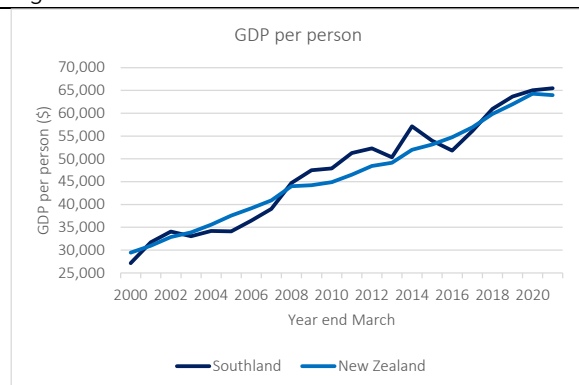
Figure 17



Source: Stats NZ, 4Six Degrees analysis

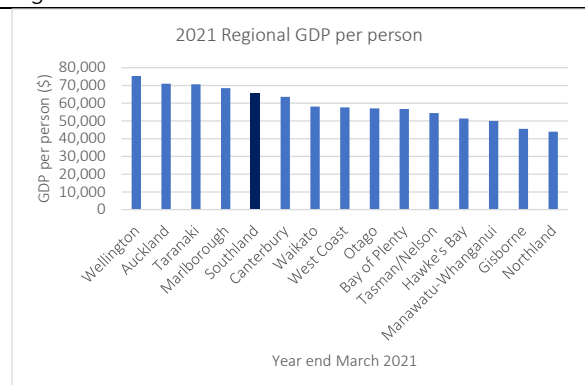
As detailed in **Figure 18** and **Figure 19** below, Southland’s GDP per person increased from approximately \$27,000 in 2000 to \$65,000 in 2021. Southland’s GDP per person at 2021 is higher than the New Zealand average at \$64,000 and is the 4th highest regional GDP per person across New Zealand, behind only Wellington, Auckland, Taranaki, and Marlborough.

Figure 18



Source: Stats NZ, 4Six Degrees analysis

Figure 19



Source: Stats NZ, 4Six Degrees analysis

As detailed in **Table 2** below, agriculture, manufacturing, and electricity & gas⁵, are the largest contributors to Southland regional GDP, at 18.0%, 13.2% and 6.8% respectively.

Table 2
Southland - 2021 GDP by industry - year end March

ANZSIC Industry Classification	GDP (\$m)	% of total GDP
Agriculture	1,199	18.0%
Manufacturing	879	13.2%
Electricity, Gas, Water, and Waste services	452	6.8%
Owner-Occupied Property Operation	375	5.6%
Construction	353	5.3%
Rental, Hiring and Real Estate Services	331	5.0%
Health Care and Social Assistance	321	4.8%
Forestry, Fishing, and Mining	310	4.7%
Transport, Postal and Warehousing	297	4.5%
Retail Trade	267	4.0%
Other	1,872	28.1%
Total GDP	6,656	100.0%

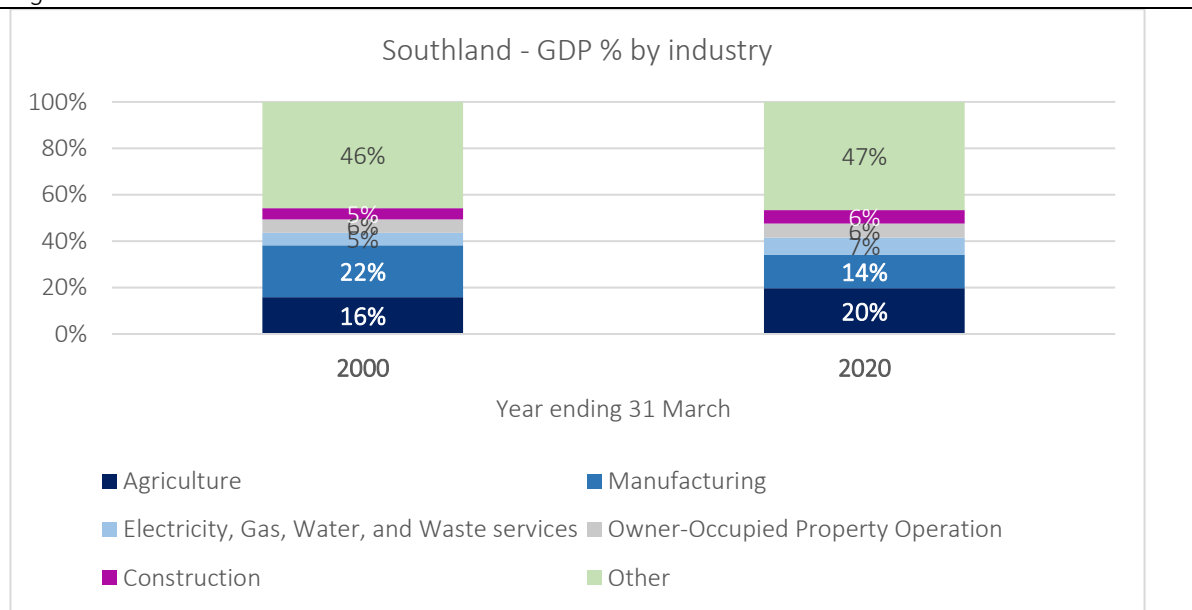
Source: Stats NZ, 4Six Degrees analysis

As shown in **Figure 20** below, the contribution of manufacturing to Southland's regional GDP decreased from 22% in 2000 to 14% in 2020, while the contribution from the agriculture sector increased from 16% to 20%.

The declining manufacturing regional GDP contribution is due to the sector exhibiting the lowest industry growth rate over the 20-year period at 2.06%, as detailed in **Table 3**.

⁵ Including waste and wastewater services

Figure 20



Source: Stats NZ, 4Six Degrees analysis

Table 3
Southland - Historic industry GDP amount - 2000 to 2020

Amounts in \$ million
Year ending March

ANZSIC Industry Classification	2000	2005	2010	2015	2020	CAGR
Rental, Hiring and Real Estate Services	91	140	216	267	331	6.7%
Electricity, Gas, Water, and Waste services	127	90	305	306	452	6.6%
Agriculture	375	485	894	741	1199	6.0%
Construction	116	195	254	275	353	5.7%
Forestry, Fishing, and Mining	105	130	163	201	310	5.6%
Health Care and Social Assistance	110	185	249	248	321	5.5%
Owner-Occupied Property Operation	136	181	206	266	375	5.2%
Other	769	1056	1336	1578	1880	4.6%
Manufacturing	526	510	568	935	879	2.6%
Total all industries	2,355	2,972	4,191	4,817	6,100	4.9%

Source: Stats NZ, 4Six Degrees analysis

7. Employment, occupation, and incomes

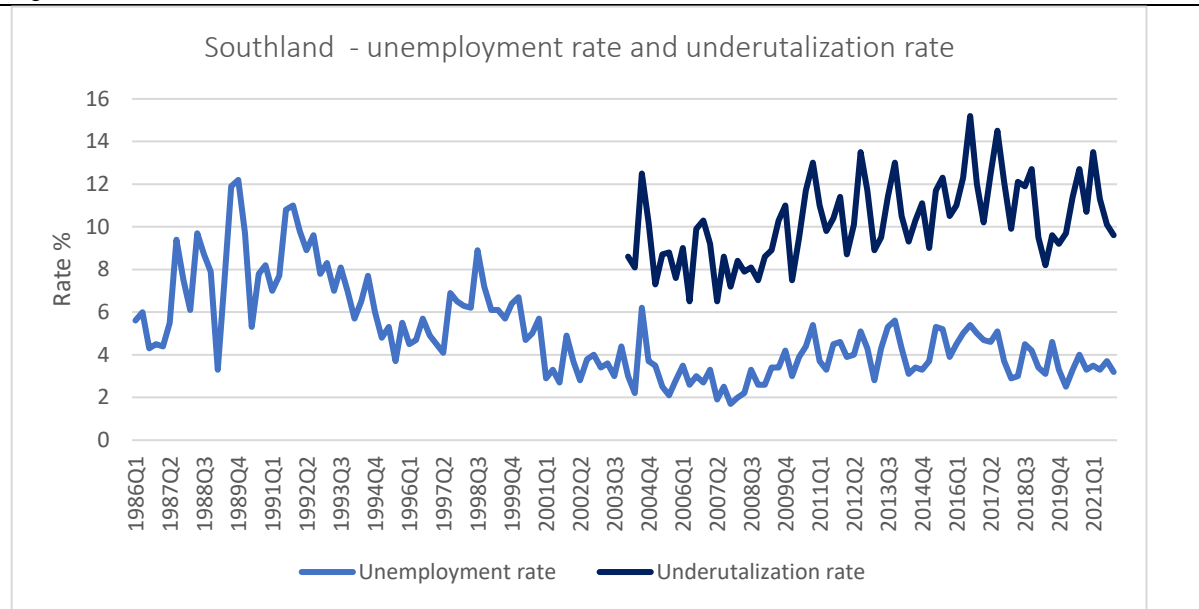
7.1. Labour force

Southland's unemployment rate has exhibited a long-term declining trend, decreasing from a peak of 12.2% in 31 December 1989 to 3.2% at 31 December 2021.

Southland’s underutilisation rate⁶, which provides a broader measure of untapped capacity in the labour market, exhibited an increasing trend from June 2006 to September 2016, rising from 6.5% to a peak 15.2%. Since September 2016, the rate has fallen to its current rate of 9.6% at 31 December 2021.

The underutilisation rate has more volatility compared to the unemployment rate, likely reflecting the seasonal nature of the agriculture and tourism sectors in the region.

Figure 21



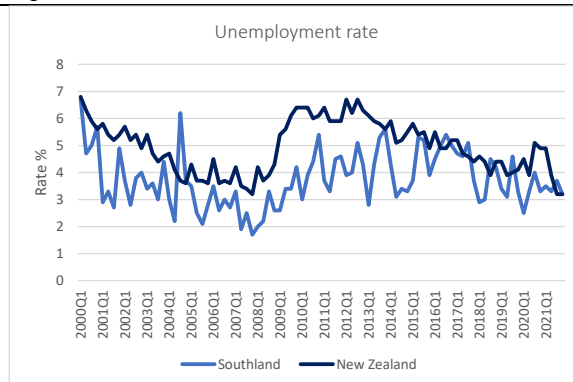
Source: Stats NZ, 4Six Degrees analysis

Unemployment and underutilisation rates have historically been lower in Southland compared to New Zealand, as detailed in **Figure 22** and **Figure 23** below. However, since 2016 both the unemployment and underutilisation rates between Southland and New Zealand have broadly aligned, albeit the seasonal volatility across Southland is higher due to reasons explained above.

As at 31 December, Southland and New Zealand’s unemployment and underutilisation rate were the same at 3.2% and 9.6% respectively.

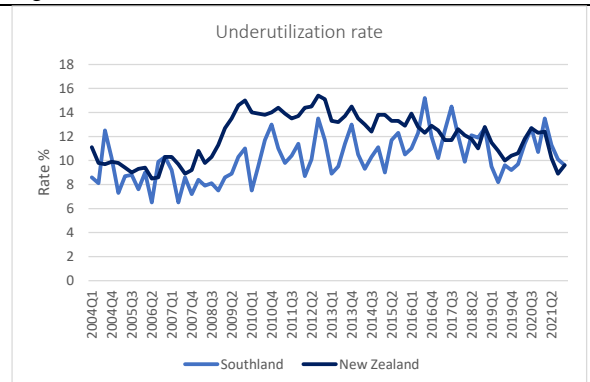
⁶ Reflects people who are unemployed, underemployed, available potential job seekers, and available job seekers (can start work in the next month)

Figure 22



Source: Stats NZ, 4Six Degrees analysis

Figure 23



Source: Stats NZ, 4Six Degrees analysis

The Southland region Labour Market Assessment 2014-2031 (Roskrige and Pawar, 2015) estimated with sustained economic growth, demand for labour in Southland is projected to add between 4,000 and 12,000 new positions by 2030. Together with both flat population growth, and an aging population, there would be an estimated labour force shortage of approximately 5,000 people by 2023, and 12,000 by 2031.

7.2. Firm size by employee count

Southland contains 501,000 firms⁷ (geographic units) at February 2021, and is largely made up from small to medium enterprises. self-employed firms make up the majority of Southland businesses, at 62%, while firms with 1 to 19 employees account for 30% of firms.

Southland has a lower percentage of self-employed firms (62%) compared to the NZ average at 67%, although the percentage of firms with 1 to 19 employees is larger at 30% compared to 25%.

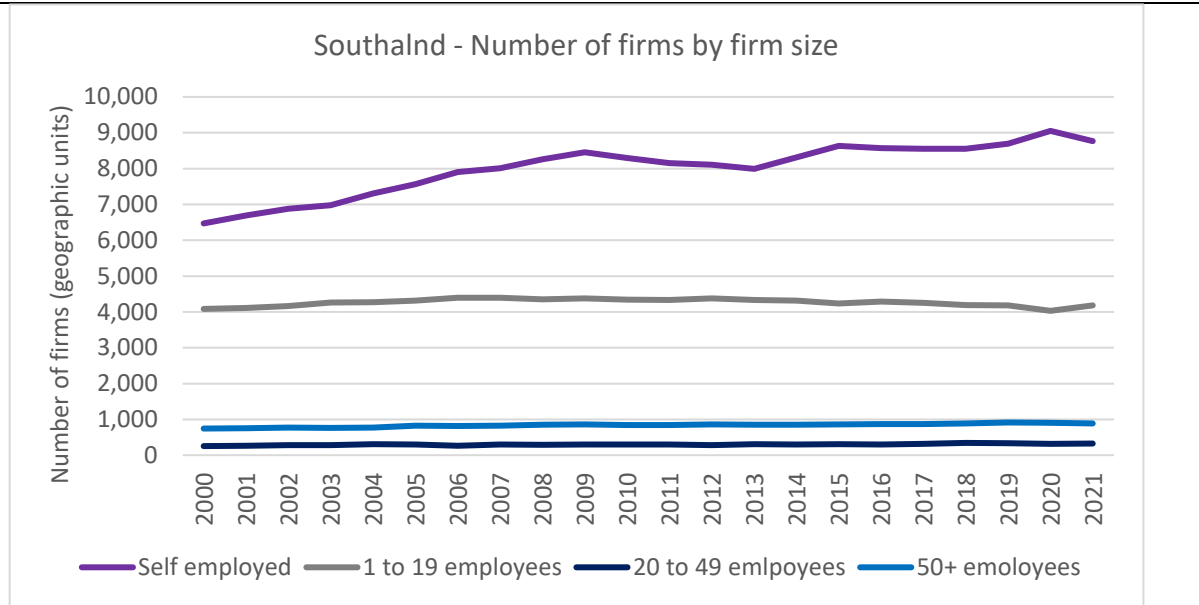
Table 4
Southland -Number of firms by size

Firm Size	Number of firms	% of region	NZ average
Self employed	8,769	62%	67%
1 to 19	4,182	30%	25%
20 to 49	324	2%	2%
50+	885	6%	5%

Source: Stats NZ, 4Six Degrees analysis

⁷ Source: StatsNZ business demography statistics

Figure 24



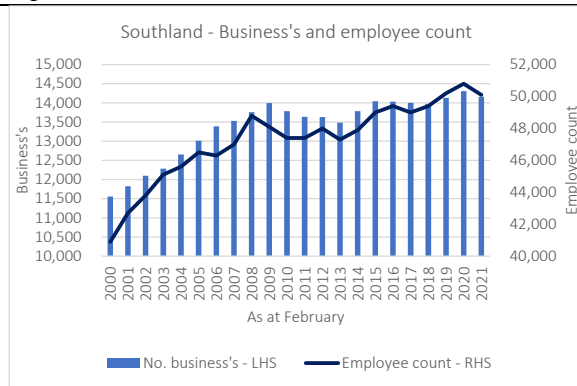
Source: Stats NZ, 4Six Degrees analysis

7.3. Industry employee count

As detailed in **Figure 25** below, the employee count across Southland increased from 40,900 at February 2000 to 50,100 at February 2021, representing a 1.02% average annual growth rate.

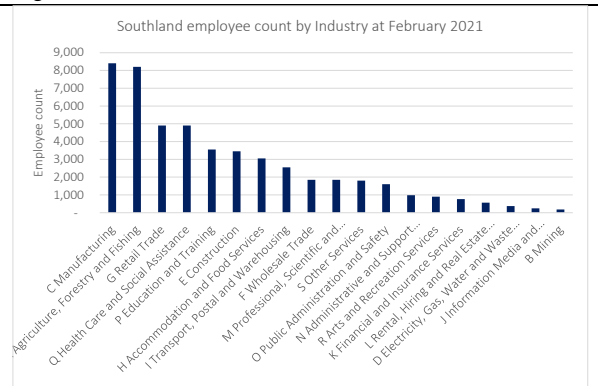
At February 2021, the manufacturing and agriculture industries had employed the largest number of employees at 8,400 and 8,200 respectively, representing 33% of total employees across the region (refer to **Figure 26**).

Figure 25



Source: Stats NZ, 4Six Degrees analysis

Figure 26



Source: Stats NZ, 4Six Degrees analysis

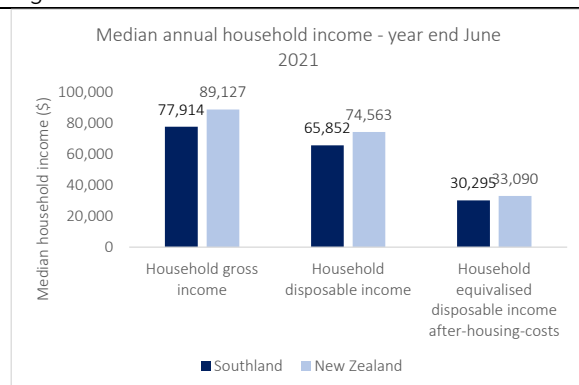
7.4. House incomes and housing costs

As at June 2021, Southland's median household gross income and household disposable income was \$77,914 and \$65,852 respectively. This equates to a household equivalised disposable income ⁸ after housing costs of \$30,295, which is below the New Zealand median of \$33,090 (refer to **Figure 27**).

⁸ Before housing costs are deducted

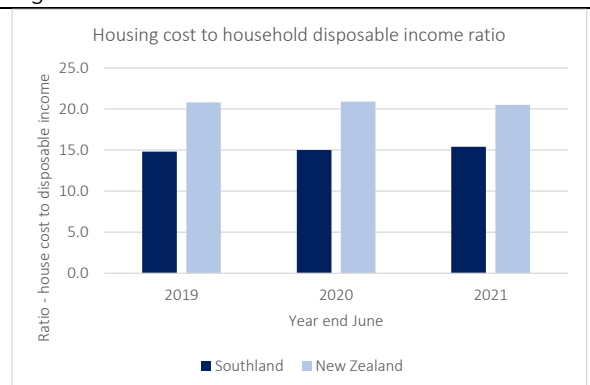
As shown in **Figure 28** below, from June 2019 to June 2021, Southland’s housing cost to household disposable income ratio has increased from 14.8 times to 15.8 times, while the New Zealand median ratio decreased marginally from 20.8 times to 20.5 times.

Figure 27



Source: Stats NZ, 4Six Degrees analysis

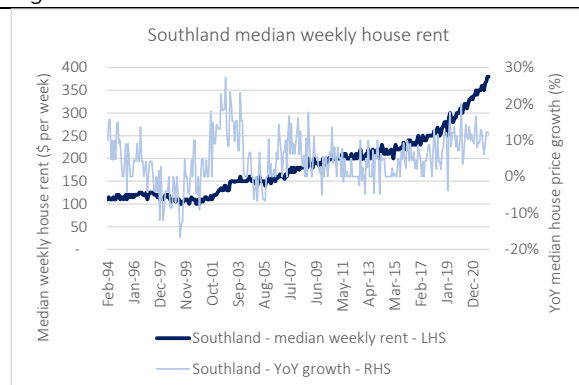
Figure 28



Source: Stats NZ, 4Six Degrees analysis

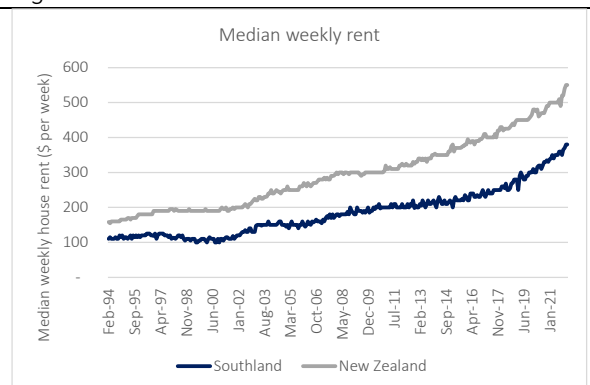
As shown in **Figure 29** and **Figure 30** below, Southland’s median weekly house rent has increased from \$110 at February 1994 to \$380 at February 2022, representing an annual growth rate of 4.70%. While the New Zealand median weekly rent is above that of Southland, it experienced a similar annual growth rate of 4.73% over the 28 year period, increasing from \$158 to \$550.

Figure 29



Source: Stats NZ, 4Six Degrees analysis

Figure 30



Source: Stats NZ, 4Six Degrees analysis

8. Southland industry and businesses

As detailed in **Figure 31** below, Agriculture⁹ and ‘rental, hiring and real-estate’ industries had the largest number of geographic units¹⁰ across Southland at 4,485 and 2,850 respectively, which represents 52% of the total Southland market.

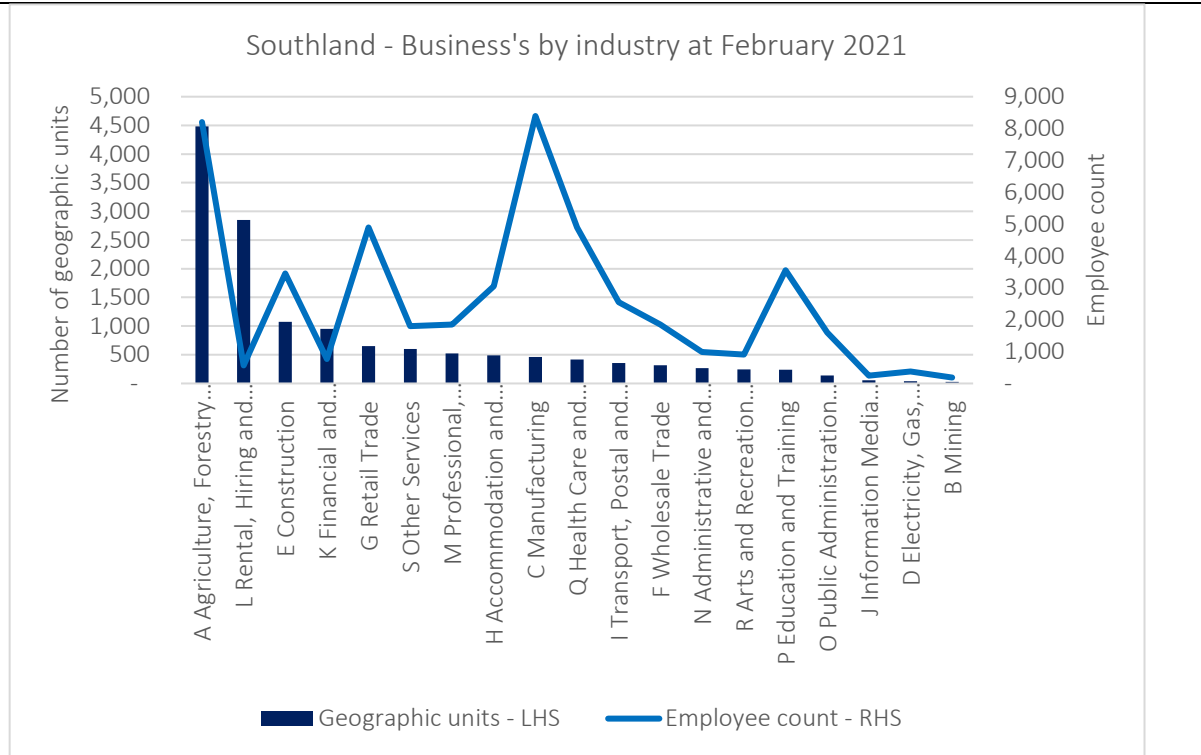
However, manufacturing and agriculture industries account for the largest number of employees at 8,400 and 8,200 people respectively¹¹.

⁹ Including forestry and fishing

¹⁰ A separate operating unit engaged in New Zealand in one, or predominately one, kind of economic activity from a single physical location or base.

¹¹ At February 2021

Figure 31



Source: Stats NZ, 4Six Degrees analysis

8.1. Industry breakdown

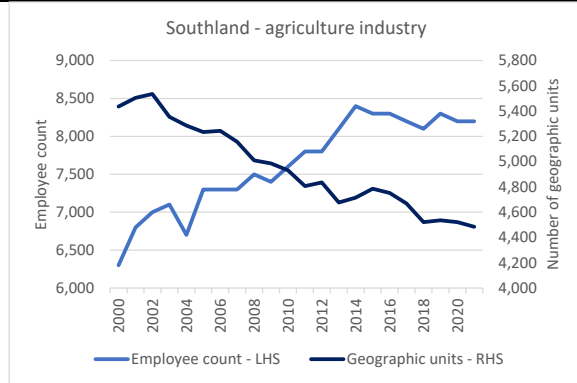
As mentioned above, the agriculture and manufacturing industries employ the largest number of people across Southland and generate the largest GDP for the region.

We provide further detailed analysis of the agriculture and manufacturing industries in the section below.

8.1.1. A - Agriculture, forestry and fishing industry – Industry total

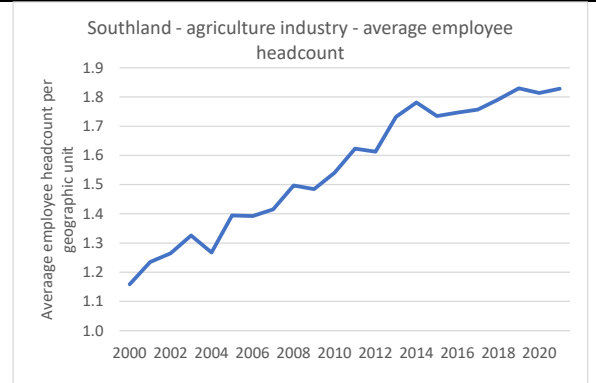
As detailed in **Figure 32** below, Southland’s agriculture industry employee count increased from 6,300 at 2000 to a peak of 8,400 at 2013, before declining to 8,200 at 2021; however, the number of geographic units declined from 5,436 to 4,485 over the same period. This has resulted in the average employee count per geographic unit increasing from 1.2 to 1.8 from 2000 to 2021 (refer to **Figure 33**), likely suggesting that the agricultural industry has grown while undergoing a period of consolidation. This relationship also suggests that employees are not, for the most part, being replaced by technology.

Figure 32



Source: Stats NZ, 4Six Degrees analysis

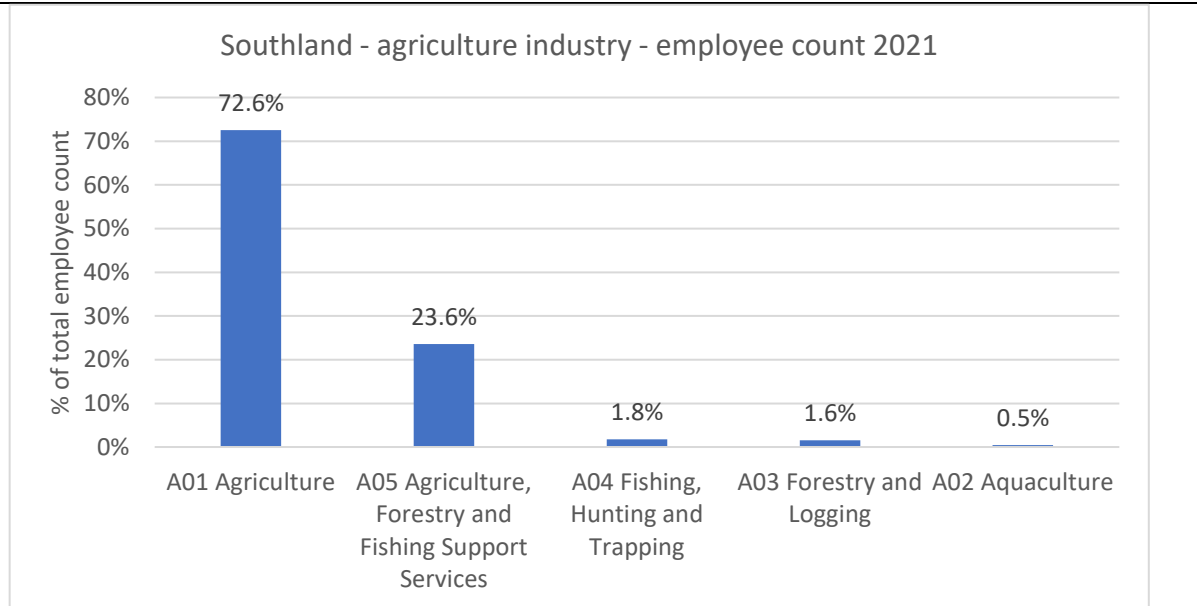
Figure 33



Source: Stats NZ, 4Six Degrees analysis

As detailed in **Figure 34** below, the agriculture (A01) subsector employed the largest proportion of industry employees in 2021 at 72.55%, while ‘agriculture, forestry and fishing support services’ (A05) accounted for 23.58%.

Figure 34



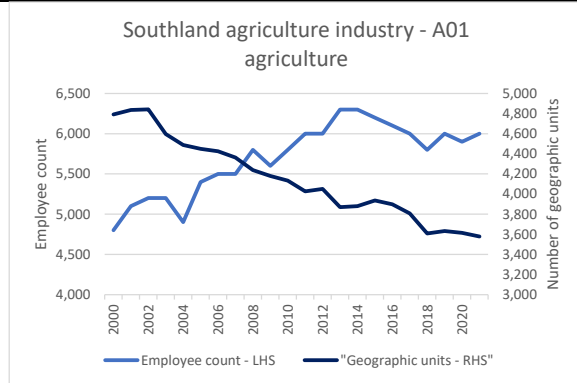
Source: Stats NZ, 4Six Degrees analysis

A01 - Agriculture, forestry, and fishing industry – Agriculture

As detailed in **Figure 35** below, the number of geographic units across the agriculture subsector A01¹² decreased from 4,791 at 2000 to 3,579 at 2021, while the employee count increased from 4,800 to 6,000 over the same period. As detailed previously, this relationship is likely due to agriculture growth and agriculture consolidation. This is reflected in the average employee count per geographic unit increasing from 1.0 in 2000 to 1.7 in 2020 (refer to **Figure 36**).

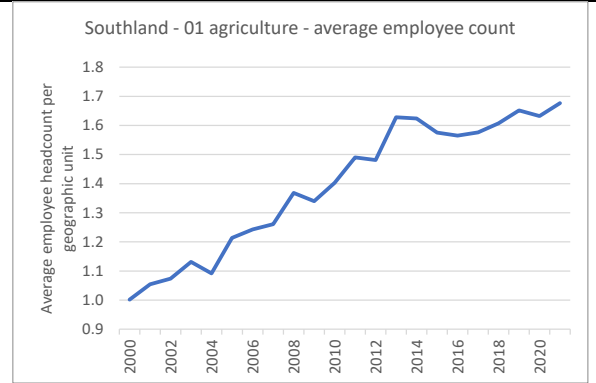
¹² ANZSIC06 industry classification

Figure 35



Source: Stats NZ, 4Six Degrees analysis

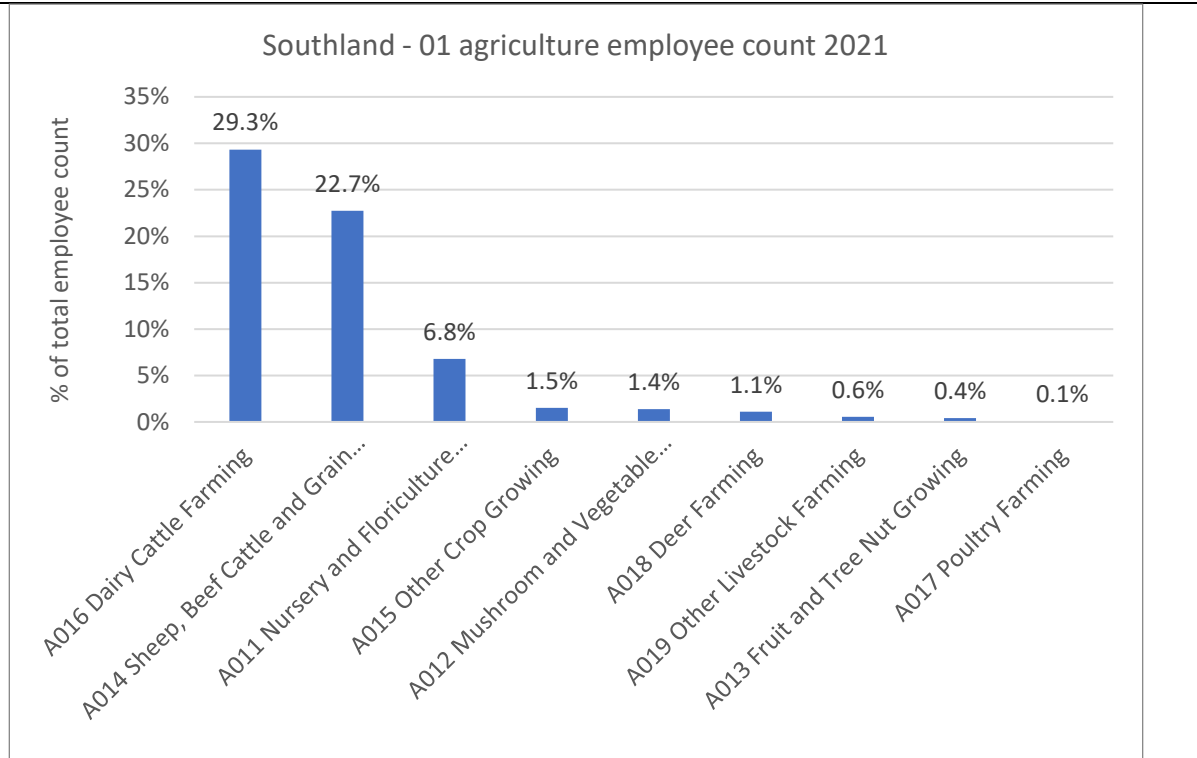
Figure 36



Source: Stats NZ, 4Six Degrees analysis

As detailed in **Figure 37** below, the ‘dairy cattle farming’ subsector (A016) and ‘sheep, beef cattle and grain’ subsector (A014) employed the largest proportion of agriculture industry employees in 2021 at 29.3% and 22.7% respectively.

Figure 37



Source: Stats NZ, 4Six Degrees analysis

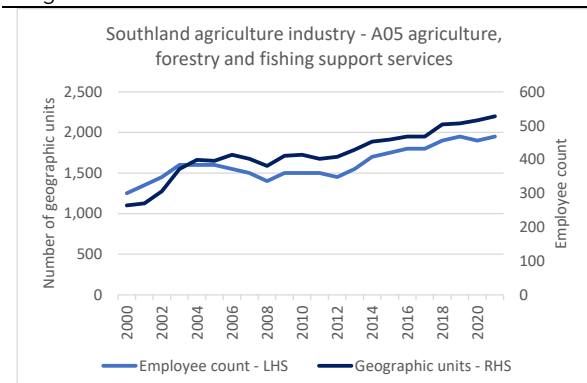
A05 - Agriculture, forestry, and fishing industry – Agriculture, forestry and fishing support services

The employee count and number of geographic units across the ‘agriculture, forestry, and fishing support services’ both increased from 2000 to 2021. The employee count increased from 1,250 in 2000 to 1,950 in 2021, while the number of geographic units increased from 264 to 528 over the same period (refer to **Figure 38**).

Unlike the agriculture (A01) subsector, the average employee count across the agriculture, forestry, and fisher support services subsector (A05) decreased from 4.7 in 2000 to 3.7 in 2021 (refer to **Figure**

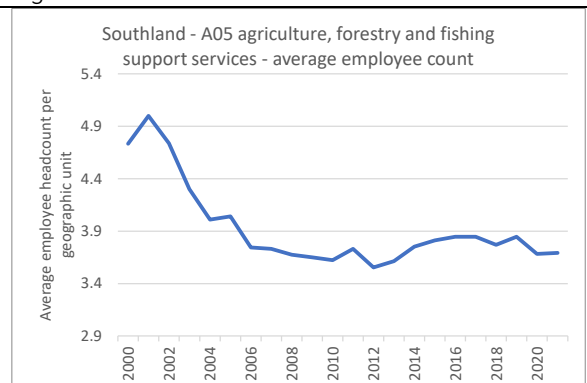
39). This decrease either reflects a shift toward improved technological capabilities (at the cost of employees), or improved employee output efficiencies.

Figure 38



Source: Stats NZ, 4Six Degrees analysis

Figure 39

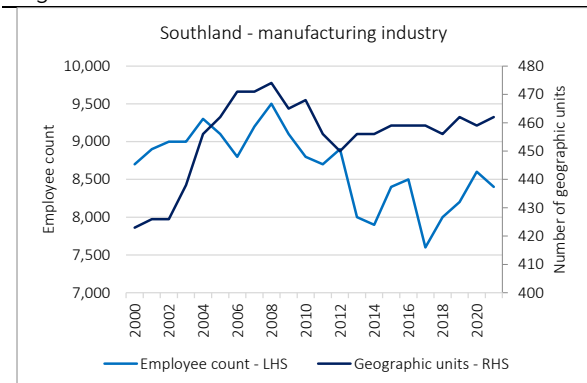


Source: Stats NZ, 4Six Degrees analysis

8.1.2. C – Manufacturing industry – total

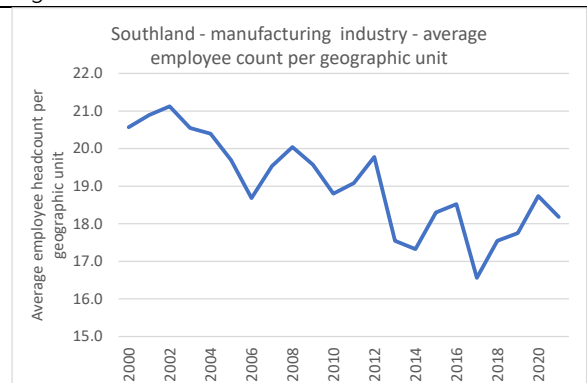
As detailed in **Figure 40** below, Southland’s manufacturing industry employee count decreased from 8,700 in 2000 to 8,400 at 2021 (3% decline), while the number of geographic units also increased from 423 to 462 over the same period (9% increase). This has resulted in the average employee count per geographic unit decreasing from 20.6 to 18.2 from 2000 to 2021 (refer to **Figure 41**), likely suggesting a shift toward improved technological capabilities (at the cost of employees), or improved employee output efficiencies.

Figure 40



Source: Stats NZ, 4Six Degrees analysis

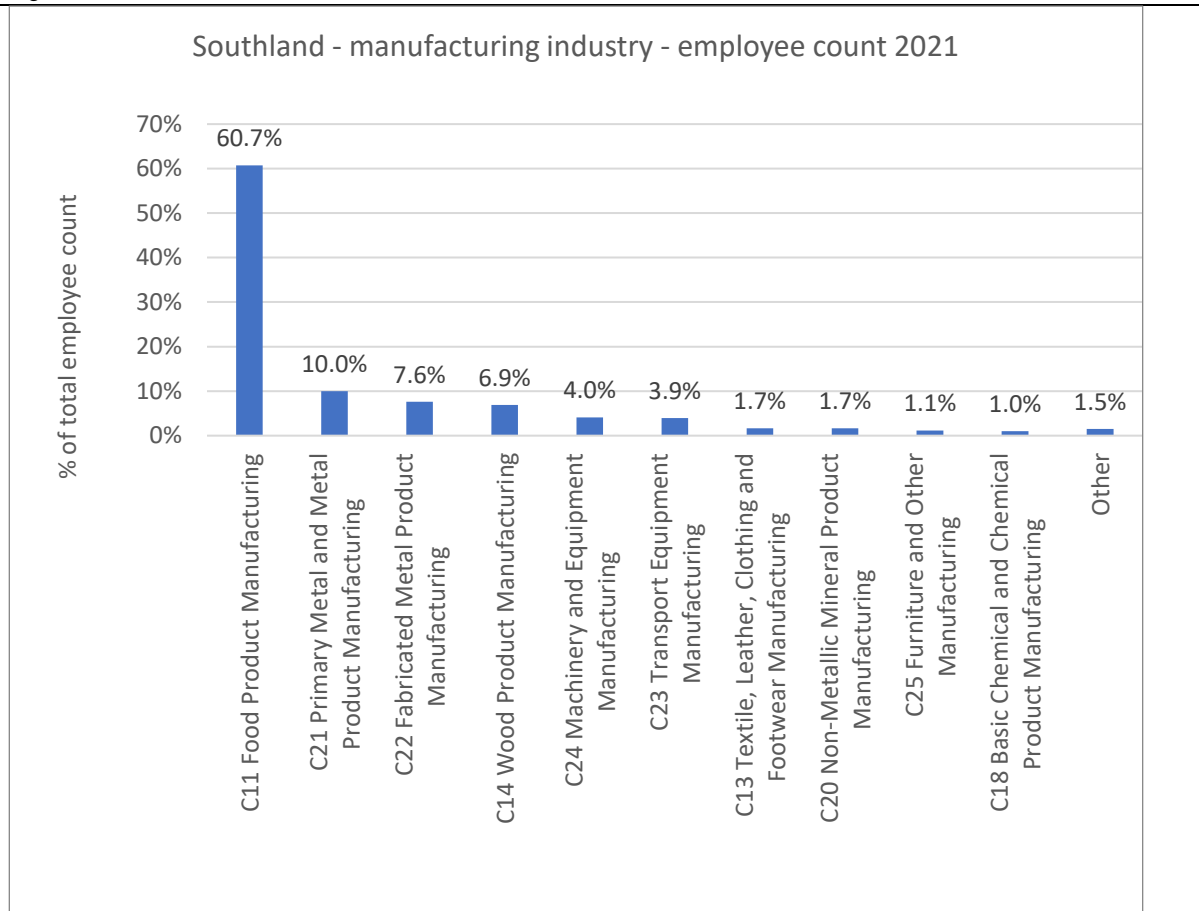
Figure 41



Source: Stats NZ, 4Six Degrees analysis

As detailed in **Figure 42** below, the ‘food product manufacturing (C11) subsector employed the largest proportion of industry employees in 2021 at 60.7%, while the next largest subsector employer was ‘primary metal and metal product manufacturing’ (C21) which accounted for 10.0%.

Figure 42

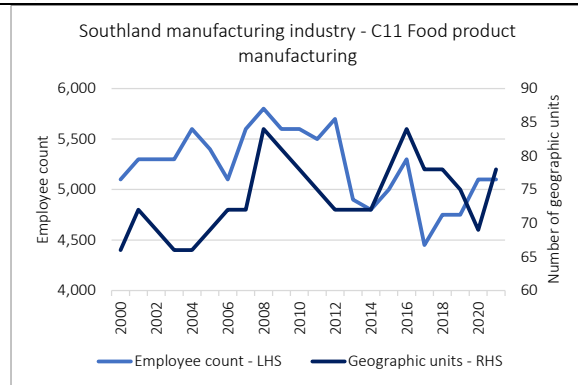


Source: Stats NZ, 4Six Degrees analysis

C11 - Manufacturing – Food product manufacturing

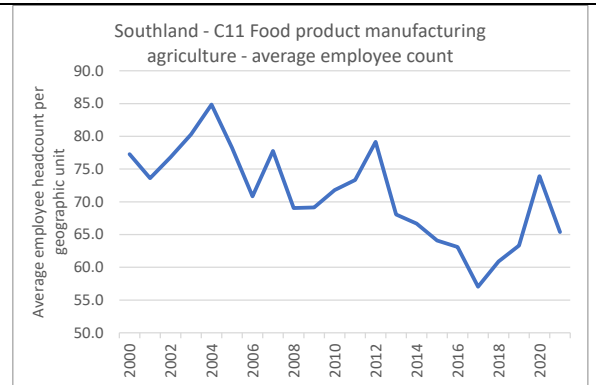
As detailed in **Figure 43** below, the number of geographic units across the ‘food product manufacturing’ subsector C11¹³ increased from 66 at 2000 to 77 at 2021, while the employee count marginally remained flat at 5,100 over the same period. This is reflected in the average employee count per geographic unit decreasing from 77 in 2000 to 65 in 2021 (refer to **Figure 44**).

Figure 43



Source: Stats NZ, 4Six Degrees analysis

Figure 44

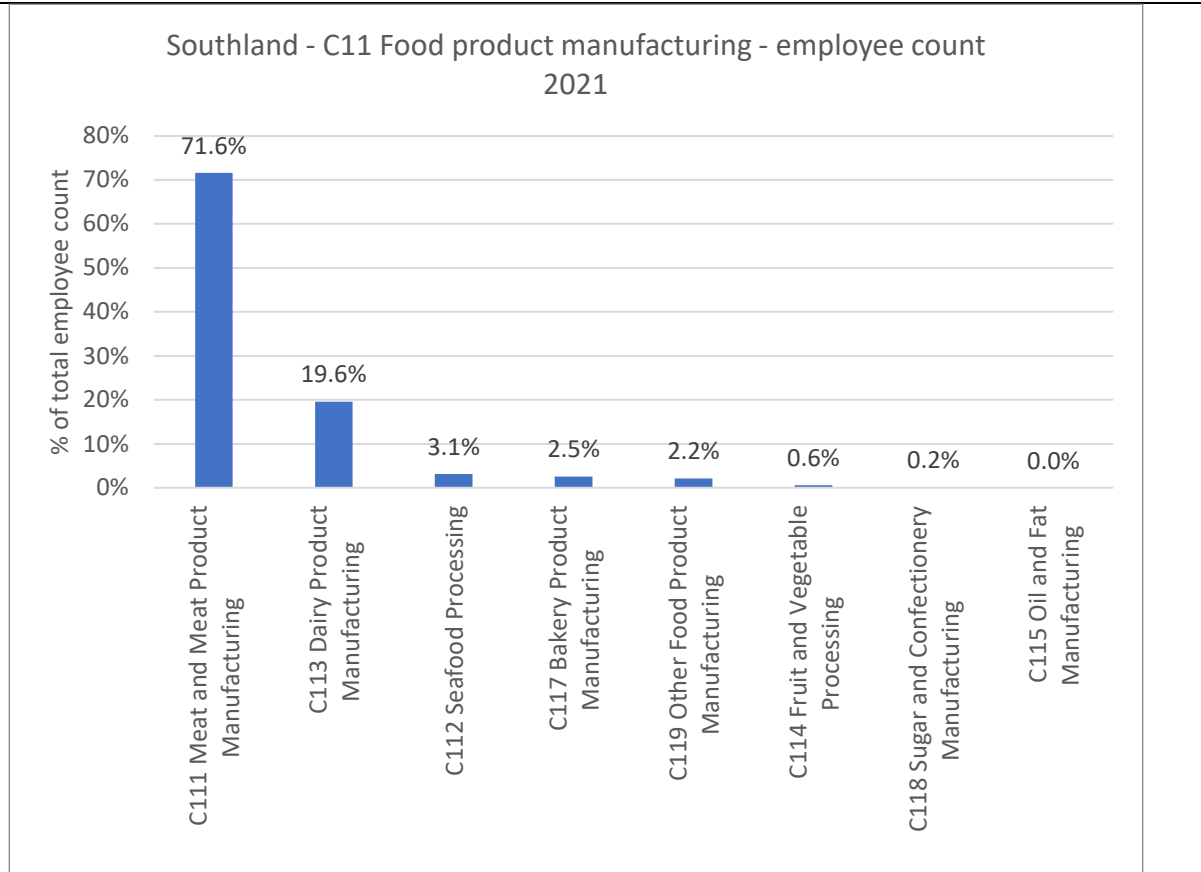


Source: Stats NZ, 4Six Degrees analysis

As detailed in **Figure 45** below, the ‘meat and meat product manufacturing (C111 ANZSIC06) subsector employed the largest proportion of the ‘food product manufacturing’ (C11) industry employees in 2021 at 71.6%, while the ‘dairy product manufacturing’ (C113) accounted for 19.6% of total subsector employees.

¹³ ANZSIC06 industry classification

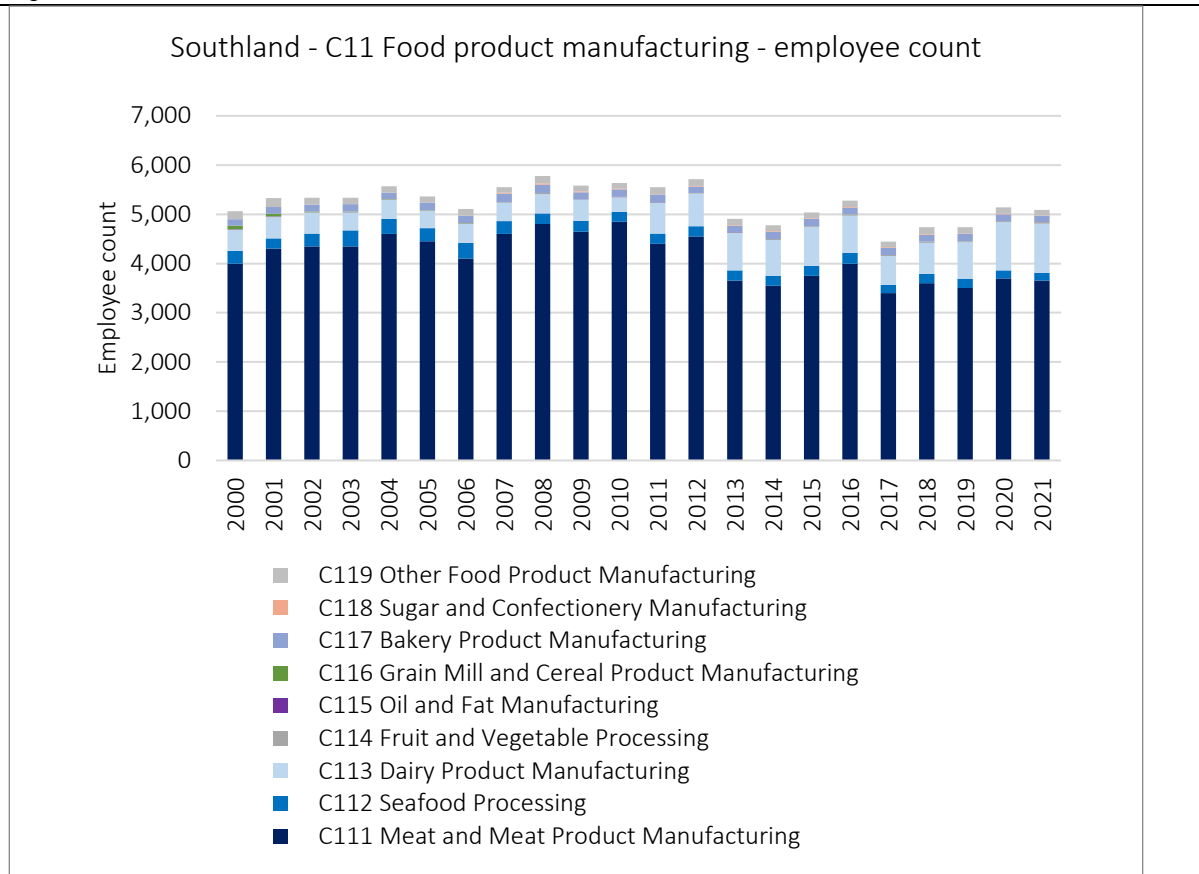
Figure 45



Source: Stats NZ, 4Six Degrees analysis

As illustrated in **Figure 46** below, since 2000, Dairy Product Manufacturing (C113) and Fruit and Vegetable Processing (C114) exhibited the largest CAGR (**Compounded Annual Growth Rate**) at 4.2% and 3.4% respectively, while Seafood Processing (C112) and Meat and Meat Product Manufacturing (C111) decline at a CAGR of -2.3% and -0.4% respectively.

Figure 46

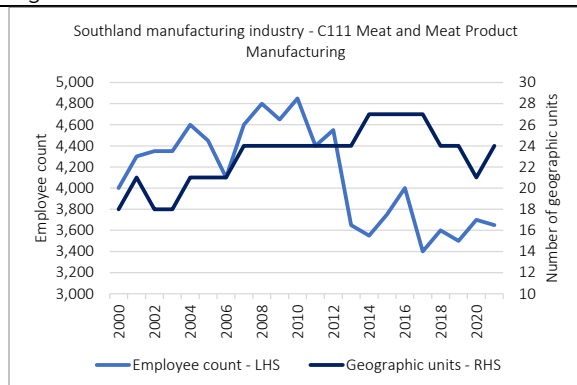


Source: Stats NZ, 4Six Degrees analysis

C111 - Manufacturing – Food Product Manufacturing - Meat and Meat Product Manufacturing

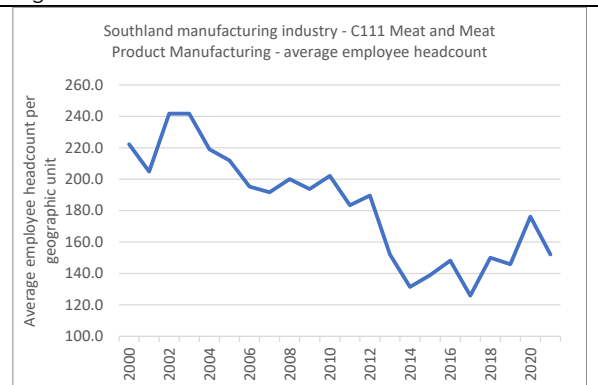
As detailed in **Figure 47** below, the number of geographic units across the ‘Meat and Meat Product Manufacturing subsector C111¹⁴ increased from 18 at 2000 to 24 at 2021, while the employee count reduced from 3,850 to 3,650 over the same period. This is reflected in the average employee count per geographic unit decreasing from 222 in 2000 to 154 in 2021.

Figure 47



Source: Stats NZ, 4Six Degrees analysis

Figure 48

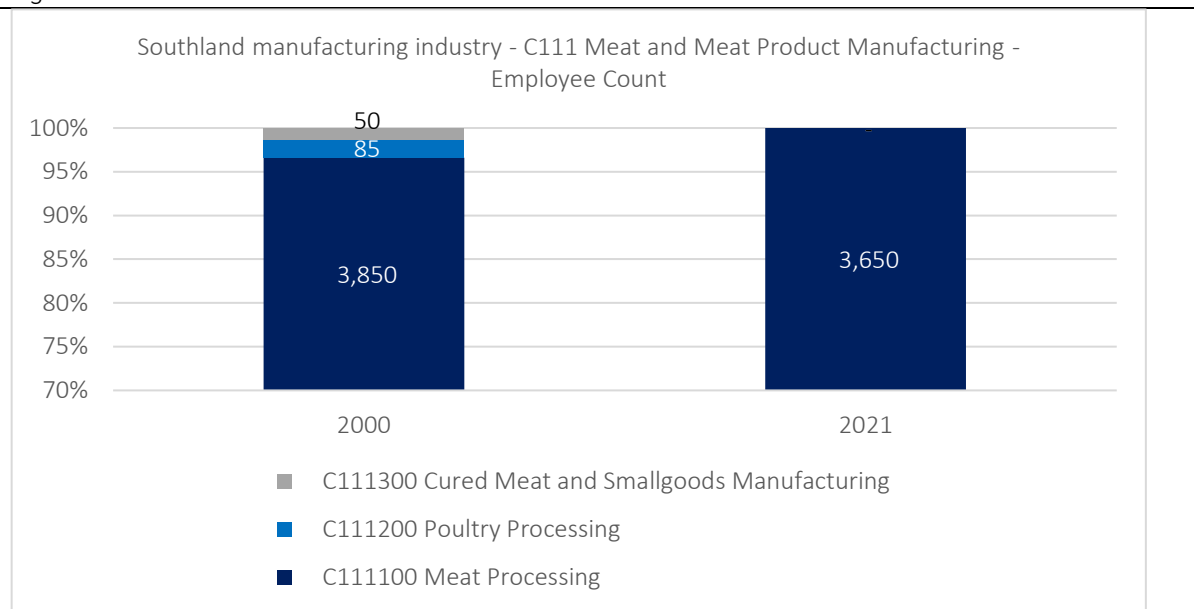


Source: Stats NZ, 4Six Degrees analysis

¹⁴ ANZSIC06 industry classification

As detailed in **Figure 49** below, Meat processing accounted for 100% of the Meat and Meat Product Manufacturing employee count in 2021. While Cured Meat and Smallgoods Manufacturing (C111300) and Poultry Processing (C111200) for 2.1% and 1.3% respectively of the total Meat and Meat Product Manufacturing head count in 2000, they no longer feature at 2021.

Figure 49

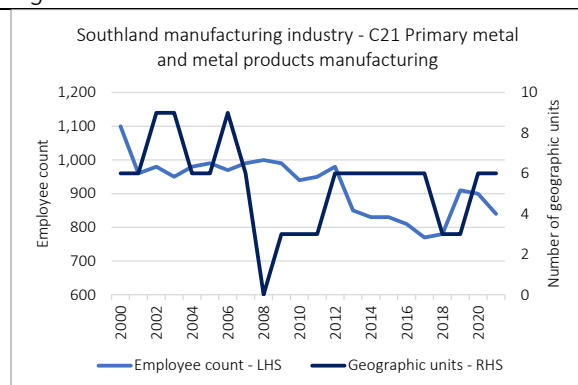


Source: Stats NZ, 4Six Degrees analysis

C21 Manufacturing – Primary metal and metal product manufacturing

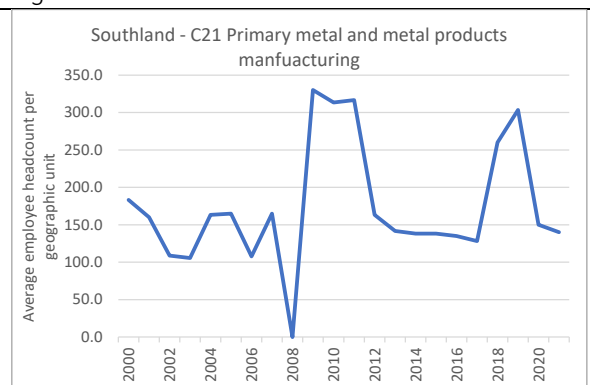
As detailed in **Figure 50** below, the number of geographic units across the ‘primary metal, and metal product manufacturing’ subsector C21¹⁵ was flat from 2000 to 2021 at 6; albeit there was volatility in between with the number falling to zero at 2008 –this may reflect a data integrity issue. The employee count reduced from 1,100 to 840 over the same period. The average employee count per geographic unit has remained broadly flat over the period from 2000 to 2021.

Figure 50



Source: Stats NZ, 4Six Degrees analysis

Figure 51

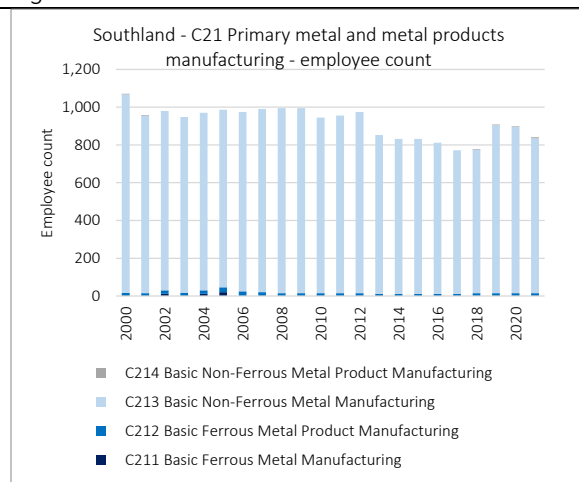


Source: Stats NZ, 4Six Degrees analysis

¹⁵ ANZSIC06 industry classification

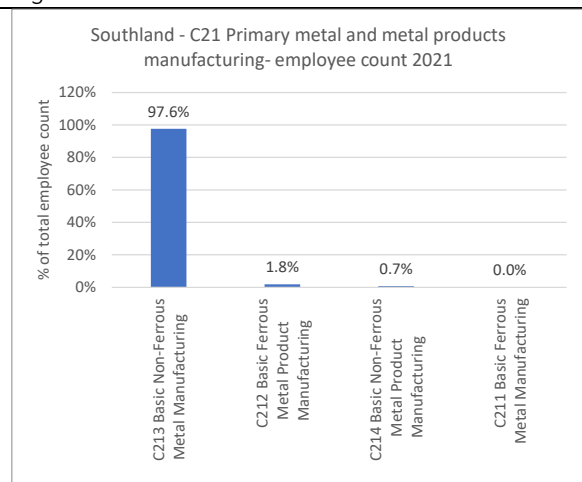
As detailed in **Figure 52** and **Figure 53** below, the ‘basic non-ferrous metal manufacturing (C213 ANZSIC06) subsector employed the largest proportion of employees in 2021 at 97.6%. This solely relates to aluminium smelting (C213200 ANZSIC06).

Figure 52



Source: Stats NZ, 4Six Degrees analysis

Figure 53



Source: Stats NZ, 4Six Degrees analysis

9. Region funding

9.1. Callaghan grants

Callaghan Innovation, New Zealand’s innovation agency, invests in research, development, and commercialisation activities and capabilities to increase New Zealand business’s investment in research and development to support long term economic growth.

Grants include Student Grants, Project Grants and R&D Tax Incentives.

Southland has received approximately \$3.1 million¹⁶ worth of grants since the agency was established which represents approximately 0.6%¹⁷ of total grants issued across New Zealand, which is significantly below Southland’s GDP and population, as a percentage of the New Zealand total, at 2.06% and 2.0% respectively.

9.2. MBIE - management capability training funding

MBIE, through the Regional Business Partner Network, issues vouchers to subsidise management capability training. The voucher is a co-funding arrangement, whereby businesses pay at least half of the training costs.

Through discussions with Great South, Southland’s regional development agency who process the funding applications, we understand that around 119 businesses have received funding at an average funding amount of approximately \$1,400.

¹⁶ Source: <https://www.callaghaninnovation.govt.nz/grants/grant-recipients>

¹⁷ Source: Callaghan Innovation. Total issued grants at 30 April 2021 was \$502.1 million.

The majority of business that received funding (approximately 25%) operated in the agriculture, forestry and fishing industry, while business related to the professional scientific and technical sector accounted for approximately 19%.

10. New Zealand Aluminium Smelter

10.1. NZAS background

New Zealand Aluminium Smelter is a joint venture company owned 79.36% by Rio Tinto New Zealand Limited, and 20.64% by Sumitomo Chemical Company of Japan. NZAS operates New Zealand's only aluminium smelter that is located at Tiwai Point.

The smelter was opened in 1971 following the construction of the Manapouri Power Station and produces low carbon aluminium. The company operates 24 hours a day, 7 days a week smelting and casting primary aluminium and its alloys in the form of ingot, billet, rolling block and t-bar.

The smelter currently has annual plan capacity of 370,000 tonnes of aluminium per annum (Rio Tinto, 2019). Approximately 90% of the aluminium produced is exported, with the largest market being Japan.

NZAS is the largest single user of electricity in New Zealand at around 13% of New Zealand's electricity supply. When it is operating the quarter potline Line 4 it uses up to 622 MW per year and without Line 4 572MW. To put this energy use into context, it is a similar amount to the electricity used by all the residential households in Auckland. NZAS is powered by hydroelectricity from Manapōuri Power Station, which means it has one of the lowest carbon footprints per tonne of aluminium in the world (NZAS, 2020b).

In October 2019, Rio Tinto announced a Strategic Review of NZAS, in response to the high costs of energy and transmission NZAS faces in a challenging aluminium market. Following the review, the NZAS determined that the business was no longer viable given the high energy costs and challenging outlook for the aluminium industry. Rio Tinto intended to close the smelter in August 2021.

In January 2021, Rio Tinto announced that a new electricity supply agreement with Meridian Energy had been reached and that, as a result, operations at NZAS were extended by four years to the end of 2024.

In early 2022, NZAS signalled that it would like to stay open post December 2024 given the favourable aluminium prices and trend toward decarbonisation. However, Meridian Energy has stated that they would not provide the smelter any more discounted electricity prices.

10.2. NZAS key insights

10.2.1. Expenditure

During the 2019 calendar year, NZAS contributed \$58.62 million to the Southland region through expenditure with local businesses¹⁸. This represents approximately 1% of Southland's total GDP in 2019. The industry sectors (by ANZIC industry classifications) that received the largest NZAS expenditure were manufacturing, construction, and Transport¹⁹ at \$17.86 million (30% of total NZAS

¹⁸ GDH Report for New Zealand Aluminium Smelters – Socio-Economic Impact Assessment December 2021

¹⁹ Including postal and warehousing

expenditure, \$14.73 million (25% of total NZAS expenditure) and \$7.58 million (13% of total NZAS expenditure) respectively.

Table 5
NZAS - direct industry expenditure in the Southland region (2019)

ANZSIC Industry Classification	Expenditure 2019 (\$M)	%
Manufacturing	17.86	30%
Construction	14.73	25%
Transport, postal, and warehousing	7.58	13%
Professional, scientific, and technical services	6.73	11%
Wholesale trade	5.09	9%
Financial and insurance services	2.59	4%
Electricity, Gas, Water and Waste Services	1.51	3%
Other services	2.53	4%
Total spend	58.62	100%

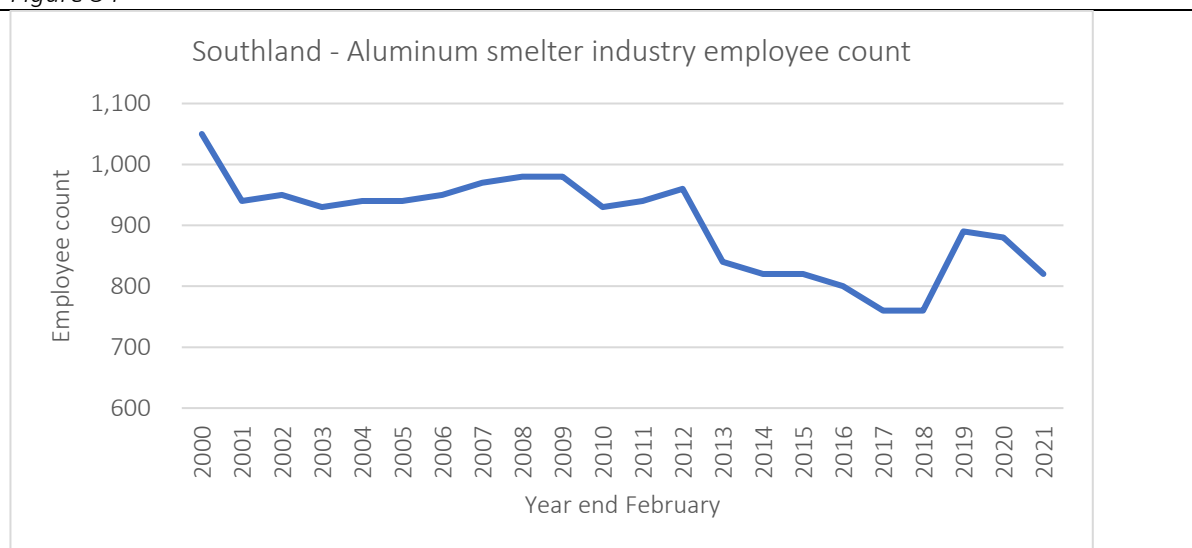
10.2.2. NZAS employee impact

In 2019, NZAS directly employed 751 employees of which 732 employees reside within the Southland region, and the remaining 19 residing throughout NZ ²⁰.

In addition, NZAS supported 235 contractors, with 229 of these contractors residing within the Southland region, and the remaining 6 throughout New Zealand. ²¹

Data provided by Statistics NZ details that the Southland aluminium smelter industry employee count reduced from 1,050 in February 2020 to 820 in February 2021, representing a 22% decline.

Figure 54



Source: Stats NZ, 4Six Degrees analysis

²⁰ GDH Report for New Zealand Aluminium Smelters – Socio-Economic Impact Assessment December 2021

²¹ Ibid

Per the Report for New Zealand Aluminium Smelters – Socio-Economic Impact Assessment December 2021 (**The NZAS Report**), GHD estimate that the total expenditure by NZAS employees by industry (ANZIC classifications) is \$43.7 million, as detailed in the table below:

Table 6		
Total expenditure by NZAS employees by Industry expenditure in the Southland region (2019)		
ANZSIC Industry Classification	Expenditure 2019 (\$M)	%
Retail Trade	20.06	46%
Electricity, Gas, Water and Waste Services	9.80	22%
Healthcare and Social Assistance	1.99	5%
Other Services	6.83	16%
Information media and telecommunications & other services	1.31	3%
Education and Training	0.34	1%
Accommodation and Food Services	3.38	8%
Total Expenditure	43.71	100%

Source: - GHD for NZ Aluminium Smelters - Socio-Economic Impact Assessment Report December 2022, GHD analysis

As detailed in the table below, NZAS operations in 2019 supported 1,580 equivalent employees in the Southland region.²²

Table 7					
Employment supported from NZAS operations in Southland - 2019					
	Indirect employment (FTE)	Flow on employment (FTE)	Total employment (FTE)	Equivalent employees	%
NZAS operations					
NZAS expenditure	208	331	539	664	42%
NZAS employee expenditure	346	220	556	697	44%
NZAS contractor expenditure	108	69	117	219	14%
Total NZAS operations	662	620	1,212	1,580	100%

Source: - GHD for NZ Aluminium Smelters - Socio-Economic Impact Assessment Report December 2022, GHD analysis – Appendix A

As detailed in the table below, the Southland industries that have the largest employment support derived from NZAS operations is retail trade, other service, profession and technical services, manufacturing, and accommodation & food services, with equivalent employees of 454, 150, 139, 120 and 119 respectively.

²² The results from the GHD's input-output modelling provide estimates based on full time equivalent employees (i.e., a person working full time for one year). These results do not necessarily translate to the number of people in jobs, as it converts part time/ casual positions up to their full-time equivalent jobs. To account for this, and to identify the potential number of employees, GHD adopted a conversion approach which is explained in more detail in the NZAS Report

Table 8
Employment supported from NZAS operations in Southland by industry- 2019

ANZSIC Industry Classification	Indirect employment (FTE)	Flow on employment (FTE)	Total employment (FTE)	Equivalent employees
Retail trade	284	86	371	454
Other services	86	35	121	150
Professional, scientific & technical services	37	76	113	139
Manufacturing	39	57	97	120
Accommodation & food services	56	41	97	119
Construction	51	42	94	115
Transport, postal, & warehousing	27	39	67	83
Wholesale trade	21	39	61	75
Health care & social assistance	25	36	59	73
Financial & insurance services	8	33	41	52
Other	28	136	161	200
Total	662	620	1,282	1,580

Source: - GHD for NZ Aluminium Smelters - Socio-Economic Impact Assessment Report December 2022, GHD analysis – Appendix A

Report December 2022, GHD analysis – Appendix A