NOTICE OF MEETING

Notice is hereby given of a Great South Letter of Expectation 2025 – 2026 Workshop to be held on Thursday, 10 October 2024 at 3.30pm in Council Chambers, Civic Theatre, 88 Tay Street Invercargill

Great South

Letter of Expectation Council Workshop
10 October 2024

Invercargill
CITY COUNCIL

Purpose of Workshop

- Agree priority areas for 2025/2026 to be provided to the Shareholders Committee
- Shareholders Committee will provide the letter to Great South in November
- The Draft Statement of Intent will be provided by Great South to the Shareholders Committee and Council by 1 December
- (This year the process will change slightly in that Councils will not review the Draft Statement of Intent – this will be done only by the Shareholders Committee)

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Council Priorities
The Last Five Years

- Last Letter of Expectation did not set priorities – instead it asked Great South to set priorities

- Funding was increased in response to Great South feedback of increased funding requirements

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Great South Key Priority Areas – Current Statement of Intent

- Data and Insights
- Advocacy and Submissions
- Housing
- Aquaculture
- Agriculture
- Forestry
- Connectivity
- Communication
- Business in Southland regional guide
- Consumer Marketing
- Content Development
- Media
- Showcasing the region
- New experiences
- Business events
- Destination Development
- Unmissable regional events
- Regional marketing of events
- Monitor emissions
- Energy planning

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Great South Presentation

Councillor Discussion

- What would successful economic development over the next few years mean to Council?
- Where does Council want Great South to focus and prioritise its efforts?
- In additional to economic development where does Council want Great South to focus – e.g. regional spatial planning/housing

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Next Steps

November	JSC LOE
December	Great South Draft SOI
Mar/ Apr	JSC Response to SOI
June	Great South SOI

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Great South Workshop with Invercargill City Council Letter of Expectation 2025/26

10 October 2024

Today’s Presentation…

1. Our Priorities
2. GS Board directives
3. Tourism & Events
4. DISH – Data & Insights, Housing, Aquaculture
5. Sustainability & Spatial Planning

Our priorities

Regional development leadership

Regional promotion

Business support and diversification

Net Zero Southland (Decarbonisation)

GS Board Directives

- DISH – Data & Insights
  - Continued development
  - Shared services opportunities
- Housing coordination
  - Subject to **additional** funding
- Aquaculture
  - Strategy implementation
- Tourism & events
  - Concentration on building business events
- Regional emissions & decarbonisation
  - Subject to external funding
  - Continue outreach programmes with local businesses
- What's our next big thing?
  - New business opportunities

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Tourism & Events
Mark Frood
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Strategy - Focused

- Murihiku Destination Strategy - Bluff, support existing assets (walking, cycleways, museums etc), support growing infrastructure (Hotels)

- Business Events and Events programs and Invercargill City Centre service agreement

- Regional Connectivity – Grow and improve – Invercargill hub (airport), Te Anau/Manapouri as a hub to grow Southland (sea and roading)

- Data – develop our regional data for better business decision-making

- Strengthen our communities via the visitor economy - Attracted to live, work, invest and educate in our vibrant communities

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Focus FY 25/26 Opportunities

Deliver on SOIs

Building year-round travel to our region (non-peak shoulders) – align with TNZ's off-peak strategy

Trade and PR - Famils – Demand focus.

Business Events - Incentive and grow future pipeline

We have got momentum....keep it going

- Southern Way - Airports Alliance – partnerships
- Trade - Tourism Export Council Conference was excellent for our region – keep the momentum
- Events - starting to have a strong portfolio of IVC/regional events – keep building awareness
- MOP - Where to next? What is the opportunity for us?

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Increasing business events in IVC/region supports:

- Reduce Seasonality – Year-round attraction
- Economic Growth – Higher yielding, higher productivity sector (wider asset base eg Stadium, Civic Centre etc
- Regional Profile – Enhances our regions capabilities, industries
- Improved Connectivity – Airline and regional
- Improved Social Outcomes – Employment and community (live, work, invest educate)
- Diversification – Opens opportunities to nontraditional tourism businesses, arts, cultural, creative sectors

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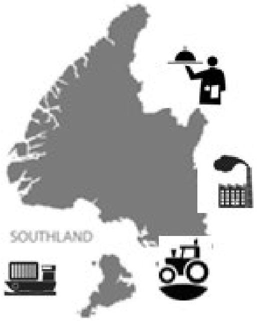
Regional Development Leadership
Bobbi Brown
GREAT SOUTH


Housing
GREAT SOUTH

Great South’s Role with Housing (current Business Year)

Great South has been requested by its shareholders (including the region’s Councils) to prioritise housing alongside other economic development aspirations. To date this has included:

1 Industry Liaison & Support



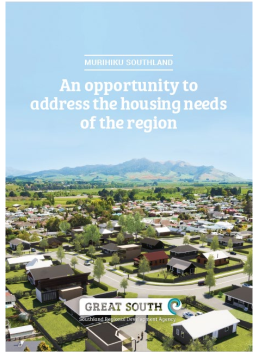
Being a conduit and connector with **existing and new industry, key stakeholders, businesses and developers** regarding current and future housing demand and supply.

2 Council Support & Alignment

Invercargill City Council | Environment Southland Regional Council Te Taiao Tonga | Southland District Council | Go Rural Go Re City Living

Support for individual councils to understand their role and aspirations regarding housing – *enablers, providers, regulators*.

3 Government Liaison, Advocacy & Funding



Advocacy, regional representation of housing issues and identification of **funding** opportunities.

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4

Regional Strategic Planning & Implementation

Action Plan identifies13 key actions, of which **five** enablers will be implemented by Great South by July 2025 (resourced in SOI).

Regional Housing Charter

Regional Housing Group

Project 1: Regional Framework and Structure

OUTCOME:

A discussion document is developed for consideration by regional leaders, outlining options for structuring and enabling the regional approach to housing. This will include how we govern and drive the implementation of the Murhiku Southland Housing Action Plan.

Project 10: Planning Review to ensure we are "Development Ready"

OUTCOME:

Planning rules are fit for purpose to not only regulate, but enable our community and private sector to deliver quality homes (both retrofit and new builds).

Project 2: Housing Data Dashboard

OUTCOME:

Development of a digital housing dashboard which provides 'easy to access', trusted and up to date housing data and insights.

DISH Data Insights Southland Hub

Project 9: Alignment of Housing with Spatial Planning and Infrastructure Provision

OUTCOME:

There is a lined-up approach through spatial planning and infrastructure provision to ensure homes are built in the right places to meet current and future demand.

Project 4: Digital Housing Portal

OUTCOME:

A "One Stop Shop" website is developed making it easy for people to find information on housing.

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Next 12 months from 1 July 2025…

	Area of Focus	Current Business Deliverables (2024-25)	Proposed Next Year Deliverables (2025-26)
1	**Industry Liaison & Support**	1. Linking developers, "the market" with Councils, data on the region etc. 2. Feeding potential housing needs of new business' into modelling (to understand housing supply/demand) 3. Investigating how to be more 'development ready' to support the market to provide housing we need.	1. Continued 'conduit' role but will **increase** due to increased new industry and business interest in the region. 2. "Development Ready" Regulatory Review project will be finished mid Nov 2024 and next steps to be discussed with Councils.
2	**Council Support & Alignment**	1. Range of support, expertise and services provided for individual Councils e.g. data for District Plan reviews; new Council Housing Planning; individual subdivision support; connection to Spatial Planning. 2. Be a connector for councils to wider market, central Govt and industry. 3. Continually looking for efficiencies across all Councils and with a regional lens.	1. Continued varied support to be provided for each Council as resource permits. 2. New 'Regional Housing Group' will be serviced by Great South. 3. <u>Increased focus on ensuring alignment of localised spatial planning with housing approach.</u>

Next 12 months from 1 July 2025…

	Area of Focus	Current Year Deliverables (2024-25)	Proposed Next Year Deliverables (2025-26)
3	**Government Advocacy, Liaison and Funding**	1. Fed into review of Kāinga Ora, hosted Ministers, Govt officials and provided briefings on Housing. 2. Key relationships established with staff at MHUD, KO, MSD, TPK and Public Service Commissioners. 3. Prepared submissions on Granny Flat MRU proposal etc. 4. Supporting local runanga alongside Te Puni Kōkiri to look at papakāinga/	1. Same as last year with Govt briefings. Suspect increased focus as Govt Housing position becomes more defined. 2. More focus on PPPs – linking private sector and Govt e.g. Aquaculture workforce housing requirements? 3. Identify new funding opportunities and support Govt to develop and align where possible with Southland's needs e.g Regional Infrastructure Fund (RIF). 4. Advocate for rules which enable Southland to meet our housing challenges e.g. Housing Growth Fund. Continued preparation of submissions & use of relationships to ensure Southland's voice is heard.

Next 12 months from 1 July 2025…

	Area of Focus	Current Year Deliverables (2024-25)	Proposed Next Year Deliverables (2025-26)
4	**Housing Data**	DISH has been developed and will provide consistent datasets & reporting from multiple data sources - allows the region to monitor changes in housing demand and supply.	1. Ongoing maintenance of DISH (sourcing datasets i.e. QV); technical oversight & governance; analytical expertise etc. 2. Regular development and distribution of Housing Reports e.g. quarterly. 3. Development of the “Annual Housing Situation Report” in line with regional economic scenario modelling etc. <u>Will feed into council spatial planning.</u>
5	**Regional Strategic Planning & Implementation**	Draft Regional Action Plan has been developed and GS will have delivered 5 projects. - Regional Housing Charter developed - Regional Housing Group established - “Development Ready” Regulatory Review - Regional Housing Website/Portal - Housing Data Dashboard & Reporting	1. Consideration of the recommendations from the 5 projects already completed. 2. Consideration of new projects to be delivered e.g. focus on elderly housing; heating options, short term accommodation. 3. GS to coordinate, be secretariat and be a part of the “Regional Housing Group”. 4. GS to maintain and look after the Regional Housing Website/Portal.

Aquaculture

Great South's Role with Aquaculture (current year)

1

Industry and Iwi Liaison & Support

- Being a conduit and connector with existing and new industry, key stakeholders, businesses and iwi.
- Partnership with Te Rūnaka o Awarua, Ngāi Tahu.
- Regional Infrastructure Fund.
- Fast Track Consenting process.
- Individual contracts with private sector.

2

Government Liaison, Advocacy & Funding

Kānoa
Regional Economic Development & Investment Unit

Ministry for Primary Industries
Manatū Ahu Matua

3

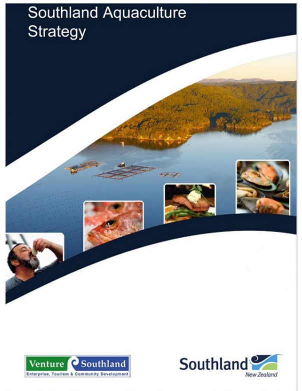
Council Support & Alignment

Support for individual councils to look at:

- Localized spatial planning (connection with Stewart Island & Bluff).
- Infrastructure & water considerations and possible PPPs.
- ES and Coastal Plan review and alignment.

4

Regional Strategic Planning & Modelling



- Strategy to be refreshed in line with national strategies & iwi planning.
- Export, housing, workforce, supply chain considerations.

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Scenario Planning and Contribution to Wider Economy

Scenario 3: Aquaculture

This scenario is based around the rapid development of the aquaculture sector known as 'farming in water,' which is the aquatic equivalent of agriculture or farming.

Key assumptions:

- Assumes timely consenting approvals of key aquaculture projects and in particular open ocean farming of salmon.
- That the sector will be supported with increased processing facilities, inland smolt breeding and raring, and increased shellfish, seaweed and whitebait production.
- This scenario assumes that some financial assistance will be given to support research and development, upgrades to infrastructure and training of the required workforce.
- This is modelled on the assumption that most of the smolt is bred out of the region.
- Aquaculture was modelled to reach $1 billion in sales revenue by 2035 and then continue to grow to $2.6 billion by 2054. Note that GDP is only a small proportion of the overall figure of sales as it removes all the inputs to the processes that are either generated by other industries or in other regions.

EMPLOYMENT	+2,940
POPULATION	+5,310
HOUSEHOLDS	+2,110
ANNUAL GDP	+$190 M

The above figures relate to the 2054 projections

Key take outs:

- The major impact is within the Invercargill City Council area due to the location of the fishing industry in Motupōhue Bluff.
- The fishing industry accounts for 1,970 jobs and manufacturing (processing of seafood) accounts for another 970 jobs.
- The GDP impacts are similarly distributed with $130 million to fishing and $60 million to processing.

$1 billion by 2035

Currently aquaculture is worth $670 million to the Aotearoa New Zealand economy and employs approximately 3000+ FTEs. Murihiku Southland currently farms 22% of Aotearoa New Zealand salmon and 3% of Aotearoa New Zealand mussels.

NZ Aquaculture Strategy 2019

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Fast-track Approvals Bill, Regional Infrastructure Fund & Significant Policy Changes

Three aquaculture projects proposing to be fast tracked under the new Fast-track Approvals Bill

1. Sanford Ltd – Makarewa Hatchery (land-based recirculating water salmon hatchery on 24ha site)
2. Ngāi Tahu Seafood Resources Ltd – Hananui Aquaculture Project (2,500 ha marine finfish farming)
3. Impact Marine Ltd – Land based salmon farm (including processing facility)

Desire is for the Regional Infrastructure Fund to line up with projects in the Fast-track Approvals Bill process.

Significant review of regulation and policy associated with Aquaculture at the moment – local and central Govt

1. ES Coastal Plan review
2. National Environmental Standards for Marine Aquaculture (goal for it to be more flexible and enable innovation and adaptation)
3. Marine Farming extension permits (have happened in a relatively rapid process)
4. New Zealand Coastal Policy Statement (goal for it to be more enabling of aquaculture and other outcomes relating to other industries)

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DISH – Data & insights

DISH
Data Insights Southland Hub

Our Councils | Wellbeing | Tourism | Economy | Housing | Environment | Fun

Haere mai

Welcome to DISH

The Data and Insights Southland Hub is a 'one stop shop' for data and insights relating to Murihiku Southland, New Zealand's second largest and most southern region.

Home to 100,143 people, find out more about this spectacular place including its' unique environment and thriving economy. DISH provides regular data on housing, which will enable this region to achieve its aspirations as outlined in the Beyond 2025 Regional Long-Term Plan.

Key statistics about Murihiku Southland:

- 12% of Aotearoa New Zealand's land mass
- 3,612 kms of coastline
- 58% of land is public conservation estate
- 5 of the 11 Great Walks are located in the region
- $8.27 billion in GDP
- $80,148 GDP per person which is the third highest in New Zealand after Wellington and Auckland

DISH is a work in progress and will have more dashboards added as they are developed. It has the most recent available data which varies across areas of focus.

- Will be formally launched on 12 November 2024.
- Aims to create a 'one stop shop' for Southland data and a conduit to other dashboards.
- Reflects partnerships with a number of suppliers of data i.e. SDC and number of people travelling to Stewart Island paying the Levy.
- Great South is accessing some key data sets on behalf of the region e.g. QV (house, rent prices).
- Provides data on areas of focus which are a priority for the region and from Beyond 2025 i.e. Housing, Tourism, Environment and the Economy.

Economy Commentary

+ Gross Domestic Product (GDP)

− Exports

- Southland's key physical exports are dairy products, sheep & beef products, and aluminum as well as fish/aquaculture, forestry, and other manufactured goods.
- Southland also produces non-physical exports through tourism (international tourists, predominately visiting Fiordland and dispersing throughout Southland), data, space, and education (international students attending SIT).
- Current statistics do not accurately represent the value of Southland's export sector, as exports are typically attributed to a region based on the last New Zealand exporting port that handles the goods. As most of Southland's exports are not exported directly from Southland's ports, Great South have undertaken analysis as reflected in the above graph which provides a more accurate picture of the export sector. By using the region's production measures (e.g. milk solids, livestock numbers), Great South have estimated that:
  - Southland exports make up **8.1%** of New Zealand's Tradeable exports.
  - Southland produces an estimated **11.7%** of New Zealand's Pastoral exports (land-based farming products like meat, dairy), reflecting Southland's significant agriculture and manufactured contributions to New Zealand's exports.
  - Southland exports make up **8%** of New Zealand's Primary exports.

Please see the Technical Glossary for more information including definitions of Tradeable, Pastoral and Primary exports.

+ Key Industries

+ Number of Businesses

+ Number of Employees

+ Unemployment Rates

+ Participation and NEET Rates

Key Links to other Dashboards

The Government's Regional Data Portal has been developed by the Social Investment Agency in partnership with Regional Public Service Leaders. It brings together a range of social sector and economic data from Government agencies which users can drill down to a local level and even by age and ethnicity. For the Economy, data is provided on Kiwisaver and Employment.

Government Regional Data Tool

Aotearoa Data Explorer (Stats NZ)

- The MVP of DISH provides key insights and trends from the graphs.
- Next step involves the development of a number of reports using the analytical functions of DISH e.g. Housing, Tourism, Economy etc.
- To be developed in partnership with key users (i.e. Local and Central Govt) and a schedule established (e.g quarterly).

Next Steps beyond MVP – New areas of focus; Geospatial data sets to support spatial planning and housing

- Partnering with ES regarding identification and agreement on required datasets e.g. who has them, how are they managed/maintained, shared and modelled.
- What are the data gaps required to support localised spatial planning and regional housing.

Maintenance	**Action 1:** Maintain and refresh data sets as per the Master Technical Notes document. **Action 2:** Maintain the integrity of the cloud-based processing system including all dashboards. **Action 3:** Maintain and update the Website.
Analytics and Reporting	**Action 4:** Maximise the functionality and benefits of the analytic functions. **Action 5:** Schedule and deliver a range of reports to meet identified demand.
Enhancements	**Action 6:** Enhance existing MVP dashboards. **Action 7:** Develop new dashboards and areas of focus on the website. **Action 8:** Investigate Geo-spatial data to support spatial planning.
Data Governance	**Action 9:** Develop an Overarching Data Governance Policy & Procedures Framework **Action 10:** Investigate shared governance to ensure consistency.

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Sustainability & Spatial Planning
Steve Canny

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Why is a Low Carbon Economy Important for Invercargill and Southland

- **70% of Southland's Economy is dedicated to exports** and Export supply chain
- **Over 80% of New Zealand's exports by value** are going to countries that have mandatory climate related disclosures*(***Protecting NZ's Competitive Advantage Global Sustainability Reporting & Trade Trends April 2024***)
- **40% already have Carbon Boarder Adjustment** Mechanisms – EU, UK, US, Australia, Taiwan
- **Governmental and Customer Expectations and environmental factors are being reflected in Free Trade Agreements** and in other non-tariff interventions(chemical residues).
- **Southland Exporters and supply chains need to respond** to the Export Market change to maintain a competitive advantage and maintain and grow access into high-value markets.
- **This affects all export products** including meat, dairy products, food, ingredients, manufactured goods, and metals such as aluminum.

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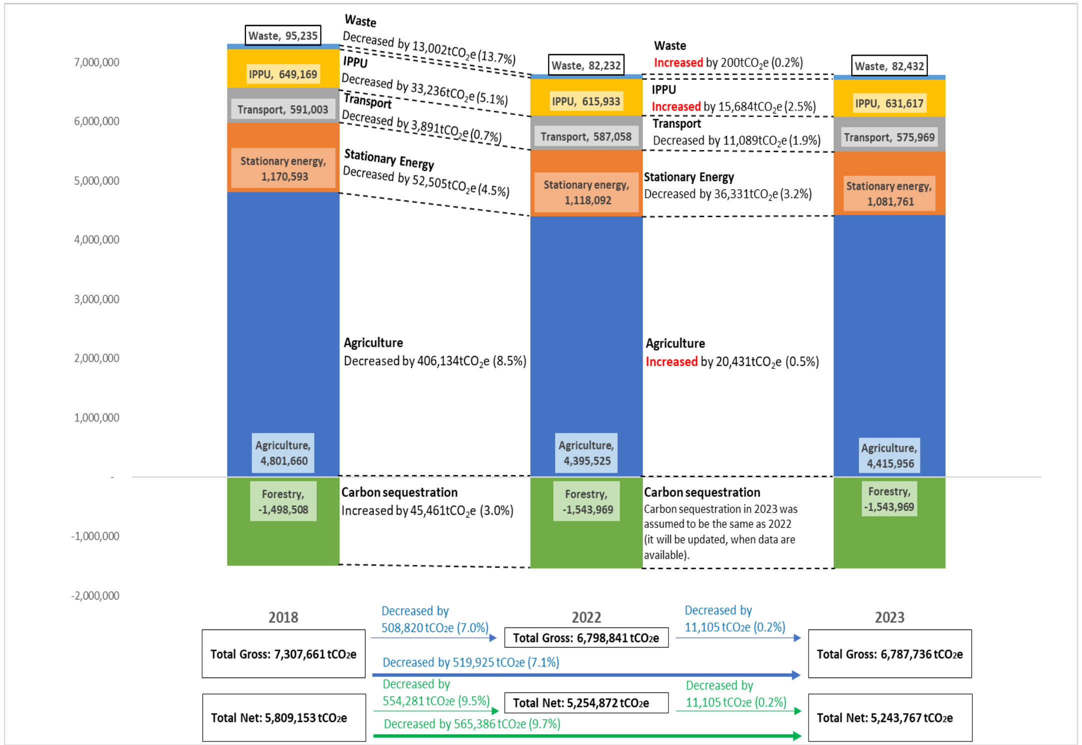
Net Zero Southland 2018 – 2023 (provisional)

- **Between 2018 & 2023* Southland's Net Emissions reduced by 9.7%**

(*Final figures from forestry Carbon Sequestration is awaiting harvest and planting data from MPI)

- Emissions reduction have occurred in the following activities: **Waste, Industrial Processing, Transport, Stationary Energy, Agriculture (stock reduction but increased emissions factors for dairy cows).**

Livestock	2018	2023	Total Change
Sheep	3,737,512	3,069,684	- 667,828 less
Dairy Cows	681,011	661,014	- 19,997 less
Beef Cattle	173,770	184,702	+ 10,932 inc'
Fertilizer	253,133	194,876	- 58,257 less



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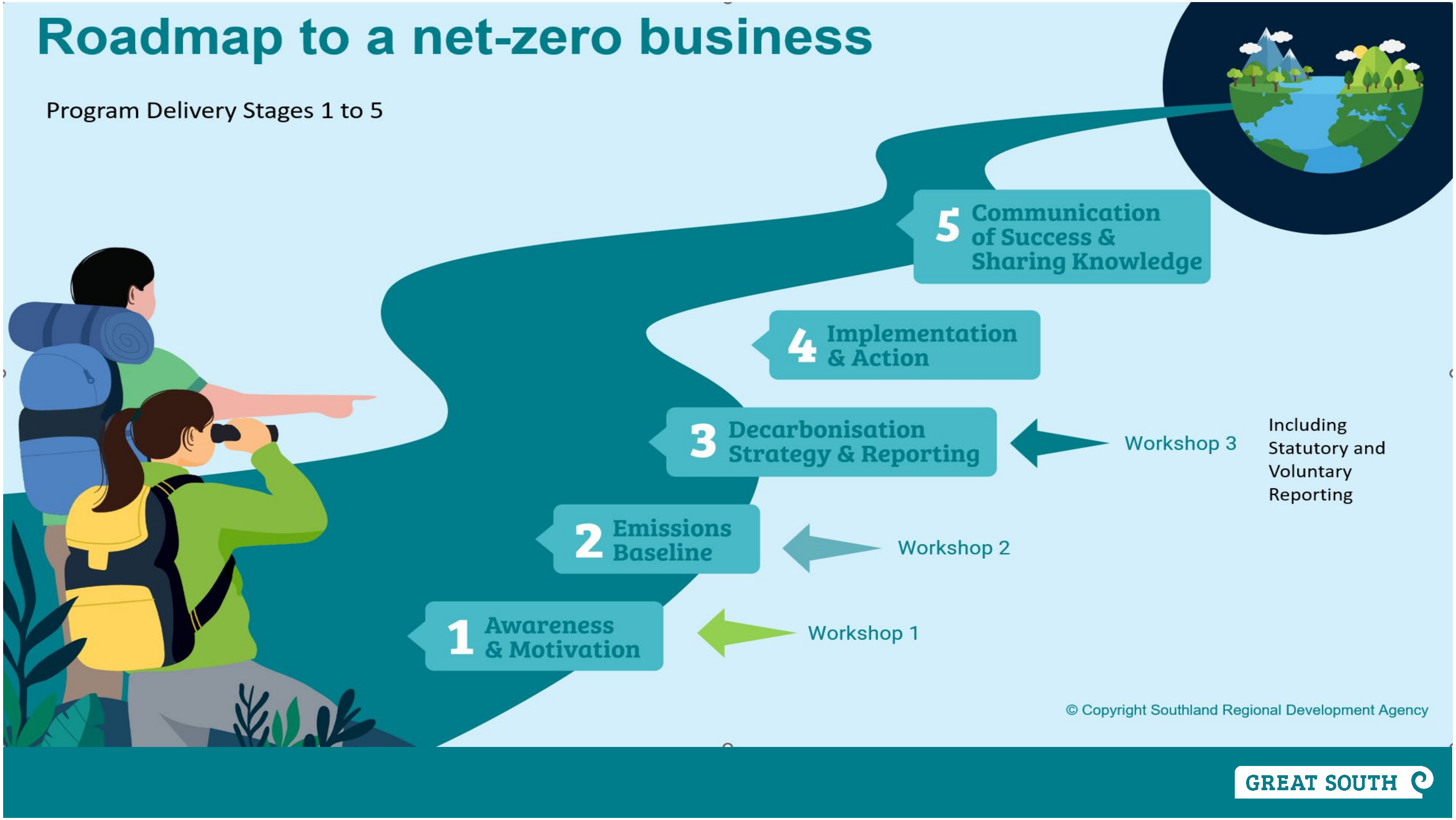
Roadmap to a net-zero business
Program Delivery Stages 1 to 5
5 Communication of Success & Sharing Knowledge
4 Implementation & Action
3 Decarbonisation Strategy & Reporting
Workshop 3
Including Statutory and Voluntary Reporting
2 Emissions Baseline
Workshop 2
1 Awareness & Motivation
Workshop 1
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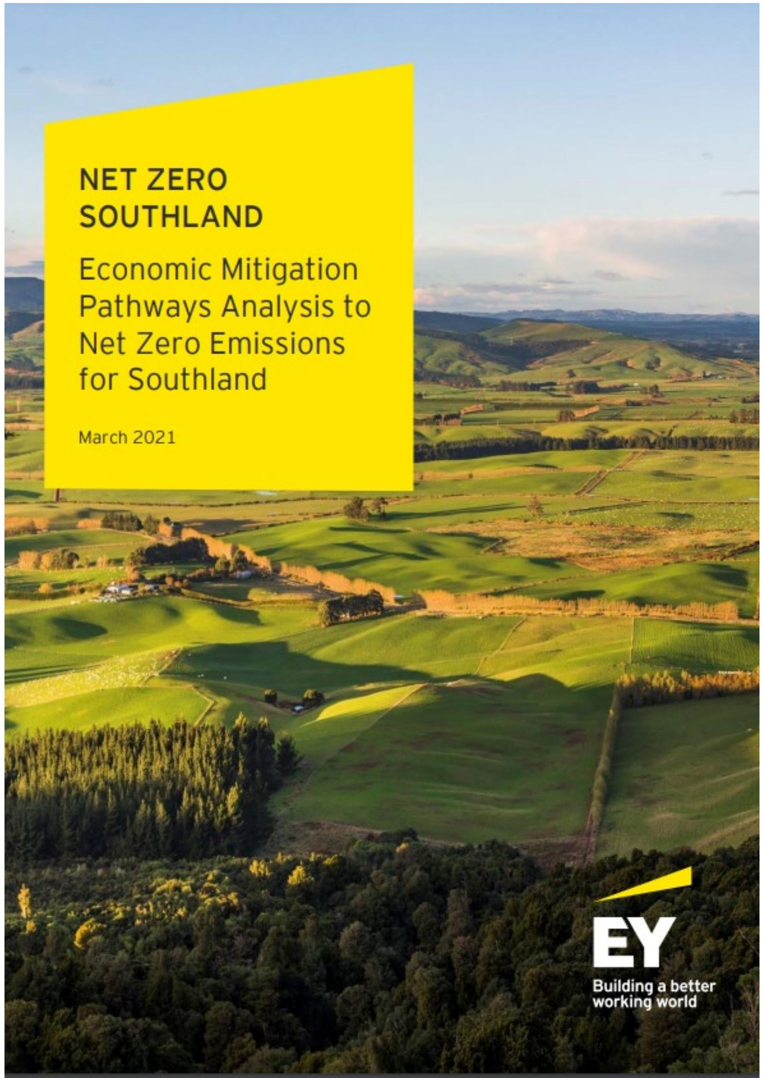
Net Zero Southland report 2025 Review

Funded under the Carbon Neutral Advantage project

Ernst & Young engaged by Great South (mid-2020)

Outcomes:

- Southland not on track to reach net zero by 2050
- Southland can achieve net zero by 2050 with a positive net financial outcome and avoiding social shock.
- Flexibility in the portfolio of options Southland can take.
- The pathway will require action across all sectors.



Funded by Carbon Neutral Advantage Project

Our commitment to sustainability

Great South is a carbon conscious organisation (EKOS accredited)

We aim to:

- Integrate sustainability consideration in all we do
- Reduce waste and water consumption
- To date has reduced its emissions by 31% reducing operating costs by $60,000 p.a.
- Be a carbon neutral organisation by 2026

CARBON CONSCIOUS Organisation ekos

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Invercargill Decarb Project 50 Conversions to date

	Business	Location	Fuel		The number of boilers
			from	to	
1	Bowmont Meats	Invercargill	LPG	Woodchip	1
2	Donovan Primary School	Invercargill	Coal	Woodchip	1
3	Environment Southland	Invercargill	Coal	Woodchip	1
4	Invercargill City Council (Parks and Reserves)	Invercargill		Woodchip	1
5	Invercargill City Council (Splash Palace)	Invercargill	Coal	Woodchip	1
6	Makarewa School	Invercargill	Coal	Woodchip	1
7	McCallums	Invercargill		Woodpellets	2
8	New Rever School	Invercargill		Woodpellets	1
9	Ruru School	Invercargill	Coal	Woodchip	1
10	Tisbury School	Invercargill	Coal	Woodchip	1
11	Waihopai School	Invercargill	Coal	Woodchip	1
12	Southland Hospital	Invercargill	Coal	Pellets	2
13	Southern Institute of Technology	Invercargill	Coal	Electric	2
14	Invercargill Prison	Invercargill	Coal	Pellets	2
15	Aurora College	Invercargill	Coal	Woodchip	1
16	Bluff School	Bluff	Coal	Pellets	1
17	Fernworth Primary School	Invercargill	Coal	Pellets	1
18	Invercargill Middle School	Invercargill	Coal	Pellets	1
19	James Hargest College (Jnr & Snr)	Invercargill	Coal	Woodchip	2
20	Murihiku Young Parents' Learning Centre	Invercargill	Coal	Pellets	1
21	Newfield Park School	Invercargill	Coal	Pellets	1
22	Otago University (Invercargill Campus)	Invercargill	Coal	Pellets	1
23	Southland Boys' High School	Invercargill	Coal	Pellets	1
24	Southland Girls' High School	Invercargill	Coal	Pellets	2
25	Southland Girls' - Enwood House	Invercargill	Coal	Pellets	1
26	Te Wharekura o Arowhenua	Invercargill	Coal	Pellets	1
27	Waverley Park Primary School	Invercargill	Coal	Woodchip	1
28	Windsor North School	Invercargill	Coal	Pellets	1
29	Ascot Park hotel	Invercargill	Coal	Woodchip	2
30	Bainfield Park Residential Care	Invercargill	Coal	Pellets	1
31	Great South	Invercargill	Diesel	Heat pump	1
32	Habitat for Humanity	Invercargill	Diesel	Pellets	1
33	IBIS Hotel	Invercargill	Diesel	Electric	1
34	Mitre 10 MEGA	Invercargill	LPG	Heat pump	1
35	Railway Station	Invercargill	Coal	Pellets	1
36	Southland Adventist Christian School	Invercargill	Coal	Pellets	1
37	South Port	Bluff	Diesel	Heat pump	1
38	Alsco Ltd	Invercargill	Coal	Pellets	1
39	Downers Roading	Bluff	Diesel	Diesel+Electric	1
40	Open Country Dairy	Awarua	Coal	Electric+Heat pu	1
41	Prime Range Meats	Invercargill	Coal	Coal	Energy efficiency and technology upgrades to reduce coal use by 50%
42	South Pacific Meats	Awarua	Coal	Biogas+Electric	1
43	Distinction Hotel (Ex Menzies Building)	Invercargill	Diesel	Heat pump	1

- The programs have delivered 50 boiler conversions, reducing carbon emissions, airborne particulates and accordingly delivering significant health benefits to residents.
- Reducing the risk of hospitalization & premature deaths from airborne particulates in ICC area alone, estimated by Stats NZ* as causing 124 premature deaths per annum

*Stats NZ cite the lower South Island had higher rates of premature deaths from human-made air pollution, with the highest rate in Invercargill City (219 premature deaths per 100,000 people, 30+ years).

Funded through EECA and Private sector Partnerships

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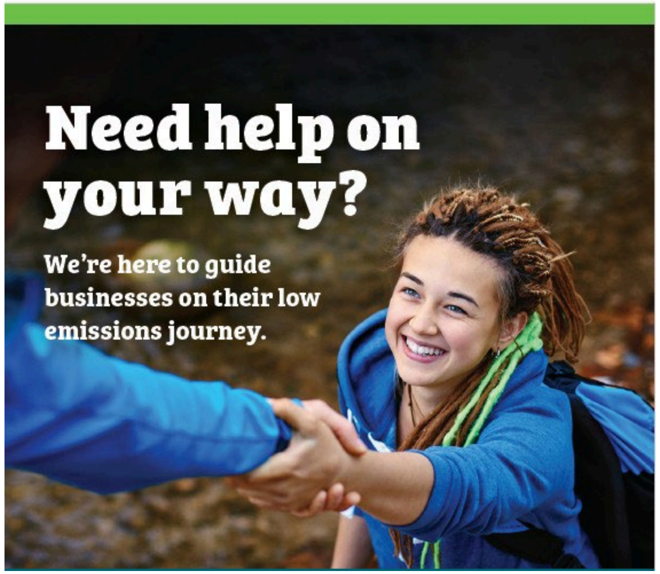
Net Zero Southland – 56 Invercargill Businesses



Decarbonisation Workshops

- 4 NES powerlines
- Accelerate Physiotherapy
- Active Southland
- Am Subritzky
- Ashlar Motel
- Backcountry Cuisine
- BDO Invercargill
- Beauty Batch
- Blue River Dairy
- Centre for Social Impact
- Chamber Music NZ
- Chamber of Commerce Southland
- Coin South
- Community Trust South
- Department of Internal Affairs
- EEScience
- Environment Southland
- Fortuna Group
- Green Yard Veges
- Habitat for Humanity
- Heritage South
- Invercargill Airport
- Invercargill City Council
- Invercargill City Youth Council
- Jubilee Budget Advisory Service LTD
- Lewis Windows Ltd
- Lighthouse Southland
- McCullough Partners
- Murihiku Kai Collective
- Nind electrical services
- Picture Caskets
- Pipe Band Nationals
- Powernet
- Presbyterian Support Southland
- Prime Range Fresh
- Redworks Studio
- SCES Education
- Southland District Council
- Shark Experience Ltd
- Southern Institute of Technology
- South Alive - The Pantry
- South Port NZ
- Southern MG
- Southern Steam Train Charitable Trust
- Southland Help
- Southland Labour Party
- Sport Southland
- Talent Development Southland CT
- Te Kōhaka Reo O Murihiku
- Thriving Southland
- Thwaites Aluminium Ltd
- Tribe
- Vet South
- Xcell Engineering
- Youthline Southland
- Yunca Group

Sustainable Tourism Workshops

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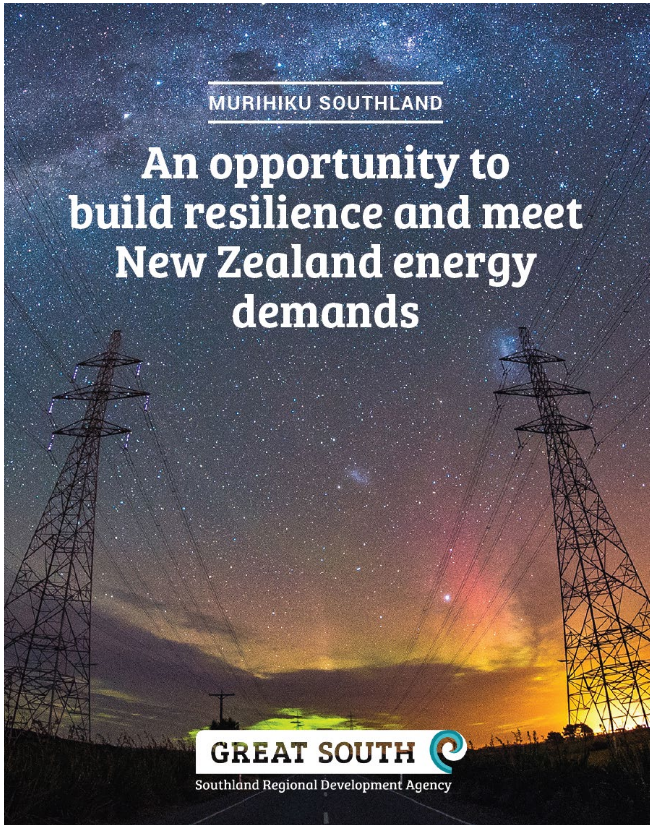
Energy Planning - Net Zero Southland



- **Energy Planning and the availability of renewable energy at an affordable price** is critical to industry decarbonization and infrastructure transmission planning.
- **Spatial plans** have been developed for - 112 potential wind sites in Southland, 10 Run of River hydro electric sites have been evaluated as has the solar potential
- **Biomass boiler fuel** availability has grown from 15,000 tons p.a in 2015 to 215,000 p.a. 2024 and is projected to grow to 550,000 by 2028.
- **Biogenic methane** will progressively be a substitute for LPG from 2027 onwards.
- **There is an expected demand 1,150 MW** of renewable electricity and there is **2,600 MW of wind energy** in the consent processes and further 200 MW being evaluated.
- **Streamlining consent processes** by incorporating energy into Spatial Plans is critical.
- **Public education**, energy efficiency and initiatives better insulation standards are a must.

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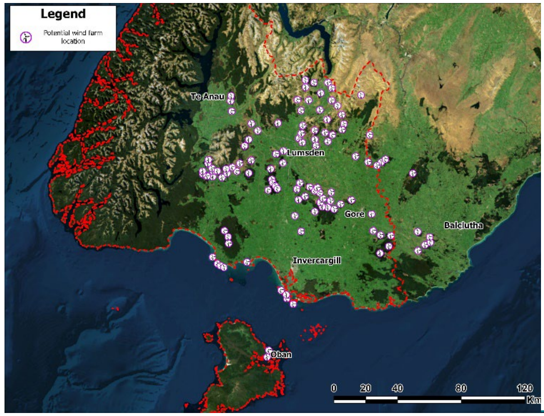
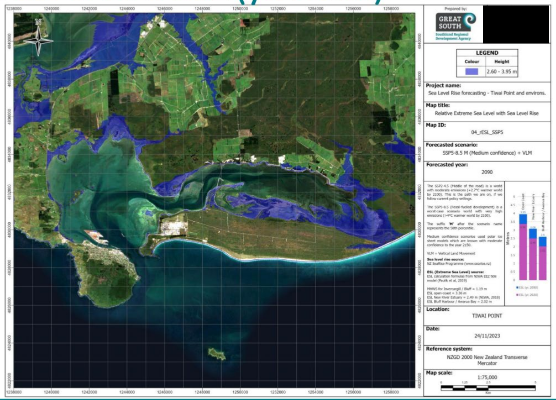
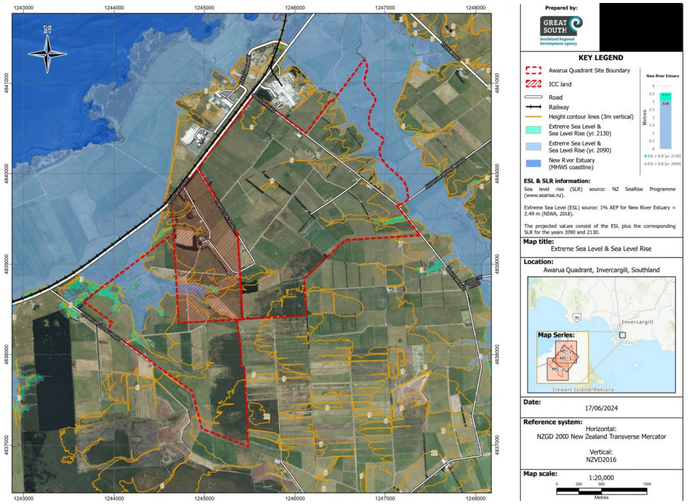
Spatial Planning



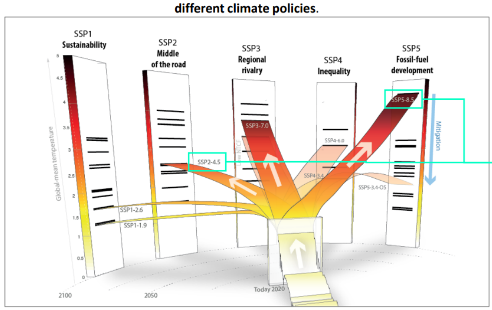
Relative SSP5-8.5: ESL (yr. 2090)





Forecasted SSP-RCP scenarios

The SSP change scenarios describe the **possible greenhouse gas emissions from different climate policies**.



The labels enumerate five scenarios, which are defined by the socio-economic challenges for mitigation and adaptation (Source: Meinshausen et al., 2020).

SSP2-4.5 climate change scenario.

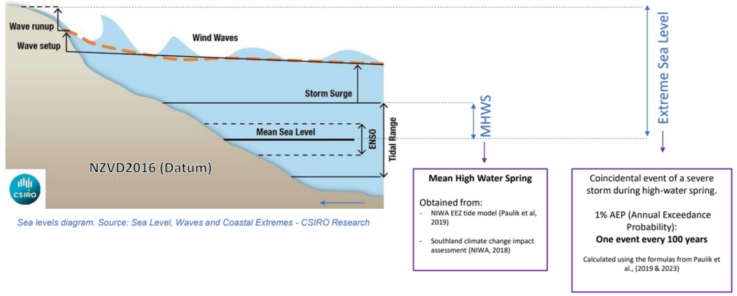
Correlation between the Shared Socioeconomic Pathways SSP2 (Middle of the road) and the Representative Concentration Pathway RCP 4.5. This is the path we are on, if we follow current policy settings. It is a **world with moderate emissions with an expected increase in the global temperature of 2.7°C by 2100**.

SSP5-8.5 climate change scenario.

Correlation between the Shared Socioeconomic Pathways SSP5 (fossil-fuelled development) and the Representative Concentration Pathway RCP 8.5. This is a **world with very high emissions with an expected increase in the global temperature of >4°C by 2100**.

- LIDAR,
- Sea level Rise
- Geotechnical/soil
- Bathymetry
- Gamma Ray Spectrometry
- Energy Planning
- Land use
- Coastal Planning

Forecasted sea-levels



Sea levels diagram. Source: Sea Level, Waves and Coastal Extremes - CSIRO Research

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Thank you
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