

The Canterbury Climate Partnership Plan

Action 4: Nature–based Solutions

Blue–Green Network Regional Inventory

Local government climate actions for Canterbury 2024–2027

It's time, Canterbury
Our climate change conversation

CANTERBURY
Mayoral Forum



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1. Introduction to the Canterbury Climate Working Group

The Canterbury Climate Change Working Group (CCWG) was established in 2017 by the Canterbury Chief Executives Forum to progress thinking and planning across the region on climate change mitigation and adaptation. The group's role is to build a shared understanding of how climate change may affect the region and to identify ways to manage the risks and opportunities it creates. It also works to provide communities with clear, consistent, reliable information and advice about climate change. Current members are as follows:

Name of organisation	CCWG member	Contact details
Te Ngāi Tūāhuriri Rūnanga	**Rachel Puentener** Senior Environmental Advisor – Climate Change	rachel.puentener@ngaitahu.iwi.nz
Environment Canterbury	**Jesse Burgess** Senior Strategy Manager **Angie Scott** Team Leader, Climate and Air Quality Science	
Ashburton District Council	**Richard Mabon** Senior Policy Advisor	richard.mabon@adc.govt.nz
Christchurch City Council	**Tony Moore** Principal Advisor – Climate Resilience	
Hurunui District Council	**Haojin Tan** Planner – Climate Adaptation	haojin.tan@hurunui.govt.nz
Kaikōura District Council	**Daniel Hirst** Policy Planner	daniel.hirst@Kaikōura.govt.nz

Name of organisation	CCWG member	Contact details
Mackenzie District Council	**Murray Dickson** GM Strategic Financial Management and Commercial Services	murray.dickson@mackenzie.govt.nz
Selwyn District Council	**Joe Gentilcore** Climate Change Lead	joe.gentilcore@selwyn.govt.nz
Timaru District Council	**Troy Titheridge** Climate Change Advisor	troy.titheridge@timdc.govt.nz
Waimakariri District Council	**Veronica Spittal** Principal Policy Analyst – Climate Change and Sustainability	veronica.spittal@wmk.govt.nz
Waimate District Council	**Dylan Murray** Regulatory & Compliance Group Manager	dylan.murray@waimatedc.govt.nz
Waitaki District Council	**Mandy McIntosh** Strategy & Commissioning Lead	mmcintosh@waitaki.govt.nz



New Brighton, Christchurch

2. Introduction to the Canterbury Climate Partnership Plan (Action 4)

The Canterbury Climate Partnership Plan (CCPP) was developed in 2024 by the Canterbury Climate Working Group and sets out how all Canterbury Councils will work together, with others, to support the transition to ***"a thriving, climate-resilient, low-emissions Canterbury"***.

The CCPP contains ten primary actions with supporting sub-actions. In June 2024, councils agreed to fund these regional collective climate actions through their 2024–34 Long Term Plans and a total of $1.47 million was confirmed for the first 3 years.

This Canterbury Blue-Green Network Inventory has been developed to inform CCPP Action 4: Nature-based Solutions.

'Facilitate the development of a Canterbury blue-green network to increase natural capital, indigenous biodiversity and offer nature-based solutions to climate change effects.'



Rakaia River, Canterbury



Waimakariri River, Canterbury

Sub action 4.2: Develop a blue-green network plan for Canterbury and accompanying guidance to support locally led implementation.

Action 4.2a

Maximise opportunities to collaborate with key stakeholders to provide guidance on blue-green infrastructure placement and hazard resilience investment.

Action 4.2b

Collaborate and align with Greater Christchurch Partnership and key stakeholders to deliver a blue-green network.

Action 4.2c

Investigate the feasibility of establishing blue-green infrastructure on council-owned land, including identifying priority locations for implementation across Canterbury.

The inventory accompanies the Blue-Green Network Literature Review completed in mid-2025. Its purpose is to identify what work already exists in the region to enable us to connect the dots, minimise duplication, and build on the efforts of others. Once finalised, the inventory will guide the development of the blue-green network plan, ensure local priorities are reflected, and help avoid potential conflicts with existing initiatives.

Overview of initiatives undertaken by CCPP member organisations

3.1 Te Rūnanga o Ngāi Tahu and Ngā Rūnanga

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Climate Change Strategy – Te Tāhū o te Whāriki	Outlines responses to climate risks and opportunities, focusing on resilience, cultural identity, ecosystem protection, education and economic adaptation. It sets short-term goals for 2025 and long-term actions for 2050 to safeguard whānau and taonga.	Strategy		**Rachel Puentener** Senior Environmental Advisor – Mauri Climate Change rachel.puentener@ngaitahu.iwi.nz
Climate Change Action Plan https://ngaitahu.iwi.nz/te-runanga-o-ngai-tahu/our-work-pou/strategy-and-environment/climate-change/	Te Kounga Paparangi, climate change action plan sets goals to manage climate change, founded in mātauranga and grounded in science. Focus areas are GHG emissions, climate resilience, wai (water) protection, biodiversity protection, elimination of waste and communication.	Plan		**Rachel Puentener** Senior Environmental Advisor – Mauri Climate Change rachel.puentener@ngaitahu.iwi.nz
Ōnuku Rūnanga – Te Kori a te Kō	Plan integrating mahinga kai management and climate change adaption and mitigation for Akaroa Harbour. Integrates top-down and bottom-up frameworks, is whanau focused, and looks at protecting landscapes of cultural and natural significance.	Plan		**Debbie Tikao**
Te Taumutu Rūnanga – Climate Strategy	Focuses on enhancing water quality and flows and building resilience to climate change.	Strategy		**Faye White**
Te Rūnanga o Koukourarata	Marae-centred climate action plan under development.	Plan		**Carl Crofts**

3.2 Environment Canterbury

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Braided River Revival/ Whakahaumanu Ngā Awa ā Pākihi	Outlines Environment Canterbury's long-term, intergenerational plan to restore and manage braided rivers across Waitaha Canterbury. It emphasises partnership with mana whenua, climate resilience, integrated outcomes, and sustainable, place-based river management to protect ecosystems, communities, and cultural values.	Strategy	Contains map modelling river network derived from topographic river lines.	**Sarah Worthington** Principal Braided Rivers Advisor
Canterbury Biodiversity Strategy (2025)	Contains five goals with a series of associated actions, and a guiding priority principle to first protect and maintain the indigenous biodiversity that remains, followed by restoring what has been lost, and enhancing the resilience of indigenous biodiversity. It has a strategic action (SA1.1) around working with others across the region to identify a network of priority biodiversity areas and biodiversity corridors for protection, maintenance, and restoration at a landscape scale, ki uta ki tai.	Strategy		**Verity Halkett** Senior Strategy Advisor – Regulatory Strategy **Kate Lindsay** Strategy Advisor – Regional Strategy
Canterbury Ecosystem Climate Risk and Vulnerability Assessment 2025	Climate change risk and vulnerability assessment for Waitaha Canterbury ecosystems. Provides spatial modelling of exposure, sensitivity, and adaptive capacity to inform blue-green network planning, prioritising at-risk habitats like wetlands, alpine zones, and coastal ecosystems for resilience under mid- and late-century climate scenarios.	Project	Maps of different unique Canterbury ecosystems, species richness, cumulative risk and exposure of ecosystems to climate hazards, adaptive capacity, sensitivity, and vulnerability.	**AnaCapri Mauro** Strategy Advisor
Draft Regional Policy Statement	Draft on hold pending changes to government legislation. Contained reference to Nature-based Solutions and blue-green networks.	Policy		

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Eco–Index	Environment Canterbury engaged Eco–Index to provide digital biodiversity data and information for Canterbury. Also, Navigator X for Waitaha Canterbury, the online mapping tool that helps people decide where to focus native ecosystem reconstruction. The digital data is run in GIS software (and can generate tables, maps and other summary metrics and statistics about biodiversity reconstruction opportunities) and include: Navigator GIS tool (identify locations for reconstructing native ecosystems (related but different to Navigator X for Waitaha Canterbury); Land Cover Snapshot (understand current landcover (2018); Ecosystem Projection (understand potential indigenous landcover); Ecosystem Services Valuer (for ecosystem benefits in monetary terms); Reconstruction and Maintenance Costings (to estimate reconstruction project costs).	Project	Free public GIS maps by Eco–index.	**Kirsty Johnston** Principal Science Advisor – Environmental Data Insights **Helen Greenep** Senior Scientist – Land Ecology Science
Mātauranga Māori – Waitaha flood protection	Discusses Canterbury's flood protection challenges under climate change, highlighting co–investment for river works, infrastructure upgrades, and ecological restoration (such as planting and weed control).	Article		**Maree Willetts** Principal Strategy Advisor – Regional Strategies

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Nature–based Solutions Coastal Flood Mitigation Feasibility Studies – Ōpihi Ōrāri and Muriwai	Environment Canterbury received funding from the Ministry for the Environment to investigate ways of working with nature to build resilience and better protect communities from current and future coastal flooding along the Opihi–Orari coast, and the coastline between Muriwai (Coopers Lagoon) and Taumutu. The reports (prepared by Jacobs Ltd) consider how the coastal geomorphology, groundwater, and ecology within the study areas may respond to coastal hazards with sea level rise over the next 100 years if no further interventions are undertaken to manage risks of erosion and flooding to adjacent wetlands and farmland. They then assess a spectrum of NbS options, compare the possible future outcomes of the options with the non–intervention scenario and undertake a high level SWOT analysis to highlight the differences between options across a range of criteria which can be used in future engagement with mana whenua and key stakeholders on the presented options.	Project		**Justin Cope** Principal Science Advisor – Climate and Air Quality Science
Ongoing River Projects	Range of projects within Regional Infrastructure Funding (RIF) programme from central government.	Projects		**Anna Ivanova** Regional Lead Rivers Delivery
Regional Coastal Environment Plan (2020)	No direct references to blue–green networks but contains related concepts such as stormwater management, preserving and protecting the natural environment and encouraging plantings. Chapter 9 discusses natural buffers with green infrastructure, advocating for dune protection and natural features, such as dune conservation using native species.	Plan		**Terri Huxtable** Senior Coastal Management Advisor



Avon River, Christchurch, Canterbury

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Reviewing river-based gravel extraction (with Ngā Papatipu Rūnanga)	Sets a framework for sustainable gravel extraction in Waitaha Canterbury rivers, balancing flood resilience, biodiversity, mana whenua values, and community needs. It outlines outcomes, objectives, actions, and decision-making criteria for planning, permissions, and compliance.	Strategy		**Jolene Irvine** Team Leader Rivers Planning
Room for the River	Promotes flood and erosion risk management by giving rivers space through stop bank retreat, floodplain reconnection, and erodible corridors. It integrates Te Mana o te Wai principles, legislative frameworks, and practical methodologies, aiming for sustainable, cost-effective, and climate-resilient river management consistent with blue-green networks. Mentions how analysing aerial photographs and digitising river movements over time can help identify recent channel behaviour.	Proposal	Contains geological mapping of river deposits, digitisations of historic riverbank edges, surface elevation from LiDAR, etc.	**Shaun McCracken** Regional Lead River Engineering
Shovel ready projects (2020-2023)	At least eight projects as part of the Climate Resilience Programme, which relate to blue-green networks. For example, exotic vegetation clearance, fish remediation pathways, weed barriers, planting of native species alongside rivers, new inlet grates, etc.	Projects	Planting of native species alongside river is shown using ArcGIS mapping of site locations using polygons.	**Anna Ivanova** Regional Lead Rivers Delivery

3.3 Ashburton District Council

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Climate Change & Sustainability Strategy	Twenty year climate change and sustainability action plan, with Goal 2: Nature-based Solutions referring to creating a spatial layer, supporting development of micro forestry projects, food forests, and community gardens. It also involves advocating for extensive native plantings to reduce runoff and hold stop banks, supporting wetlands, developing stormwater design with nutrient filters, education, maintaining vegetation etc.	Strategy	Looking at developing a district spatial layer to support blue-green networks, including investigation of potential council land use for an ecological connectivity model.	**Christian Chukwuka** Ecologist & Biodiversity Advisor christianc@adc.govt.nz, biodiversity@adc.govt.nz **Femke van der Valk** Policy Advisor femke.vandervalk@adc.govt.nz **Richard Mabon** Senior Policy Advisor richard.mabon@adc.govt.nz **Mark Low** Strategy and Policy Manager mark.low@adc.govt.nz
Open Spaces Strategy 2016–26 (2016)	Discusses the ongoing management of open spaces. This strategy notes that special projects will include a review to assess opportunities to improve connections and relationships between waterways and neighbouring urban areas.	Strategy	Contains maps of potential open space locations.	**Bert Hofmans** Open Spaces Planner bert.hofmans@adc.govt.nz **Ian Soper** Open Spaces Manager ian.soper@adc.govt.nz

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Our Natural Place – Ashburton District Biodiversity Strategy 2023–43 (2024)	The strategy's stated purpose is *"to ensure that our current and future biodiversity is protected, restored and enhanced; and to encourage people to value, care and respect it"*. The term blue–green network is not used in the document but is supported by Goal 2 which aims to *"restore and interconnect for the benefit of the community"*. Contains actions on ecological connectivity to support BGN.	Strategy		**Christian Chukwuka** Ecologist & Biodiversity Advisor christian.c@adc.govt.nz biodiversity@adc.govt.nz
Surface Water Strategy 2018–28	Guides sustainable management of lakes, rivers, wetlands, and stormwater. It balances ecological, cultural, and community needs, addresses climate change, urban growth, and flood risks, and promotes collaboration with Ngāi Tahu and stakeholders to protect water resources for future generations. Focuses on both urban and rural areas.	Strategy	Ashburton Water Race Network and existing stormwater systems for Ashburton, Methven and Rakaia have been mapped.	**Andy Guthrie** Assets Manager andrew.guthrie@adc.govt.nz **Christian Chukwuka** Ecologist & Biodiversity Advisor christianc@adc.govt.nz, biodiversity@adc.govt.nz



Ashburton Lakes, Canterbury

3.4 Christchurch City Council

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Area plans https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/area-plans	Area plans for Southwest, Belfast and Akaroa Harbour. The purpose of an area plan is to promote sustainable development. They identify future land use options and facilitate integrated planning of Council managed services.	Plan	Individual planning maps are provided including maps for ecological habitats and corridors, public open space network, landscape features and character and cycle network.	**Sarah Oliver** Team leader City Planning
Biodiversity Strategy https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/strategies/biodiversity-strategy	The Christchurch City Biodiversity Strategy 2008–2035 sets out a vision of what could be achieved for biodiversity across Christchurch and Banks Peninsula. Central to the strategy is the protection and enhancement of threatened ecosystems and habitats for threatened species. A high level implementation plan is provided.	Strategy		**Dave Newey** Principal Advisor Policy – Biodiversity
District Plan https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/christchurch-district-plan	The Christchurch District Plan identifies areas of natural hazards and natural and cultural heritage. It provides land use zones including open space coastal zones, open space natural zones and open space community park zones.	Plan	District Spatial Plan.	**Mark Stevenson** Head of Planning & Consents
Christchurch sand dune/coastal restoration activities	This project involves restoring natural coastal buffers like sand dunes and coastal planting/wetlands and could be used to develop a good practice guide for councils and landowners in Canterbury wanting to enhance these areas to boost climate resilience and other outcomes.	Project		**Tom Simons-Smith** Principal Advisor Coastal Adaptation

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Climate Resilience Strategy 2021	The strategy sets four climate goals and ten action programmes to achieve net zero emissions, prepare for climate impacts, ensure a smooth transition, and protect natural environments. This was developed with local communities, central government, businesses, and other stakeholders across the city and Banks Peninsula.	Strategy	Developing a spatial plan to provide better integrated land use planning for sustainable transport and development in Christchurch. Also has a map of 12,000 fruit and nut trees in public places.	**Tony Moore** Principal Advisor – Climate Resilience
Coastal Hazards Adaptation Planning Programme (CHAP)	Addresses sea level rise impacts through community-led adaptation pathways. It uses hazard assessments and the Ōtautahi Risk Explorer to guide decisions, prioritising public wellbeing, sustainability, and Nature-based Solutions. Engagement with rūnanga and communities shapes flexible, long-term strategies for vulnerable coastal and inland areas.	Plan	Risk Explorer (REx) overlays hazard data over asset data.	**Jane Morgan** Team Leader Climate Hazards Adaption Planning **Ruby Clark** Senior Adaptation Advisor
Healthy Lyttelton Harbour Plan https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/whaka-ora	The Healthy Lyttelton Harbour Plan and community partnership provides for ecological enhancement of hillsides, rocky outcrops, waterfronts and the harbour.	Plan		**Roslyn Kerr** Manager Parks Programmes & Partnerships
Integrated Water Management Strategy https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/strategies/te-wai-ora-o-tane-integrated-water-strategy	The Integrated Water Management Strategy provides a vision for surface water, water supply and wastewater.	Strategy		**Dianne Shelander** Senior Advisor Climate Resilience
Otakaro Avon River Regeneration Plan https://ccc.govt.nz/parks-and-gardens/regenerationareas/otakaro-avon-river-corridor	Otakaro Avon River Regeneration Plan and Implementation. Provides a long-term vision and implementation plan for the Avon Regeneration Area.	Plan		**David Little** Manager Residential Red Zone

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Ōtautahi Christchurch Planning Programme (ŌCPP) 2024	This plan guides the development of a resilient, liveable city that meets the needs of residents and businesses and is intended to work in partnership with the Greater Christchurch Partnership (GCP). The plan works on a range of spatial scales from city wide to site level and recognises the importance of connections and networks for people and nature.	Plan	The potential connections between green infrastructure, including street trees, have been mapped within the document.	**Sarah Oliver** Team Leader City Planning
Our Urban Forest Plan for Ōtautahi, Christchurch 2023	The plan aims to grow and protect a diverse, resilient tree canopy across the city. It sets four goals: *Plant, Nurture, Protect, Involve, to enhance biodiversity, mitigate climate impacts, and engage communities*. Trees are treated as vital infrastructure for a sustainable urban environment.	Plan	Includes map of tree canopy cover across city.	**Toby Chapman** Manager Urban Forest
Parks and Foreshore Activity Management Plan https://ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Plans/Long-Term-Plan/LTP-2021-final/LTP-2021-Activity-Plan-Parks-and-Foreshore.PDF	The Parks and Foreshore Activity Management Plan describes the location, form and management of parks within Christchurch District.	Plan		**Kelly Hansen** Manager Parks Planning & Asset Management
Park management plans https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/park-management-plans	These park management plans are long-term master plans for natural areas throughout the Christchurch District.	Plan		**Kelly Hansen** Manager Parks Planning & Asset Management
Public Open Space Strategy https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/strategies/public-open-space-strategy	The Public Open Space Strategy provides a vision, form and function of open space in Christchurch District.	Strategy		**Kelly Hansen** Manager Parks Planning & Asset Management

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Sports Field Network Plan https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/sports-field-network-plan-2	The Sports Field Network Plan describes the location, form and management of Sports Parks within Christchurch District.	Plan		**Kelly Hansen** Manager Parks Planning & Asset Management
Resilient Greater Christchurch Plan 2015	Outlines a collaborative strategy to strengthen the region's ability to withstand and adapt to future shocks and stresses. Contains eleven programmes within four goals focused on: *community resilience, infrastructure, innovation, environmental sustainability, and risk management*.	Plan	Black Maps show the history of settlement in Christchurch.	**David Griffiths** Head of Strategic Policy & Resilience
Reserve Management Plans https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/park-management-plans	Specific reserve management plans that contain detailed plans for specific reserves.	Plan		**Kelly Hansen** Manager Parks Planning & Asset Management
Tree Policy https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/policies/trees-policies/tree-policy	Tree Policy providing guidance for the management of urban trees.	Policy		**Toby Chapman** Manager Urban Forest
Waterways, Wetlands and Drainage Guide https://ccc.govt.nz/environment/water/water-policy-and-strategy/waterways-wetlands-and-drainage-guide	The Waterways, Wetlands and Drainage Guide provides practical guidance about the form and function of stormwater treatments.	Guide		**Kevin McDonnell** Team Leader Asset Planning

3.5 Hurunui District Council

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Coastal Adaptation Plans	Most of the agreed actions are around hard protection/ moving people away from hazard areas. The Leithfield Beach CAP mentions dune restoration as a short-term option. The CAPs provide information on flooding etc.	Plan	Has GIS layers showing hazards at different climate change scenarios. In shape files and not yet loaded on council system.	**Andrew Mactier** Planning Manager andrew.mactier@hurunui.govt.nz
District Plan	Has information and guidelines about freshwater, outstanding natural features/ landscapes, biodiversity, coastal environment and natural hazards.	Plan	Relevant GIS layers available in Council system, including in District Plan.	**Andrew Mactier** Planning Manager andrew.mactier@hurunui.govt.nz
Reserves Management Plan	Refers to CCPP and climate change.	Plan		**Andrew Mactier** Planning Manager andrew.mactier@hurunui.govt.nz
South Ward Spatial Plan (2024–2054)	Non-statutory plan that will inform the District Plan, and Long Term Plan. The South Ward Spatial Plan (SWSP) sets the blueprint for how and where the South Ward will grow and develop over the next 30 years.	Plan	Contains spatial maps showing potential future moves for South Ward (e.g. improving connectivity, waterways enhancement, improvement to parks, etc.	**Andrew Mactier** Planning Manager andrew.mactier@hurunui.govt.nz
Walking and Riding Action Plan	Aims to create safe, accessible and connected networks for walking, cycling, and horse riding, while enhancing outdoor recreation.	Plan		**Andrew Mactier** Planning Manager andrew.mactier@hurunui.govt.nz
Walking and Riding Strategy	Aims to unify walking and riding facilities and infrastructure.	Strategy		**Andrew Mactier** Planning Manager andrew.mactier@hurunui.govt.nz

3.6 Kaikōura District Council

Name/link to document	Description	Project type	Relevant spatial data	Key contact
A to B Carbon Free – Kaikōura Walking and Cycling Strategy 2009	Promotes active transport for health, sustainability, and community connectivity. It outlines infrastructure improvements, education, and policy integration to support walking and cycling. It sets measurable targets and prioritises safe, accessible networks to reduce car use and improve wellbeing across the district.	Strategy	Contains a map of the walking and cycling network plan and includes census data showing where residents walk to work in Kaikōura.	**Daniel Hirst** Policy Planner daniel.hirst@Kaikōura.govt.nz
Move Kaikōura Forward concept 2024 Kaikōura District Council (2024) Kaikōura Spatial Plan	The plan vision is to create *"a diverse and welcoming intergenerational community with a strong whakapapa and thriving future that sustains nature on the raw edge from tall mountains to deep sea"*. The plan identifies development areas and development constraints and is based on principles of ecosystem services such as, *"valued and interconnected landscapes are protected and enhanced"*. Within the plan, the Council refers to a BGN as *"a planning and design concept that connects natural water systems (blue) with green spaces to create a sustainable and resilient urban environment"*. It aims to manage water flow, reduce flooding, improve water quality, enhance biodiversity, and provide recreational and aesthetic benefits to the community. The concept of *"mountains to sea; ki uta ki tai"* is referred to as a guiding concept with indigenous vegetation plantings along recreation trails.	Plan	Spatial plan.	**Daniel Hirst** Policy Planner daniel.hirst@Kaikōura.govt.nz

3.7 Mackenzie District Council

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Draft Climate Change Strategy Mackenzie District Council (2024a). Responding to Climate Change. Retrieved January 2025	The Mackenzie District Council is currently drafting the Climate Change Strategy and Plan following consultation to discover the vulnerabilities of the area and what can be done, such as increasing health and connection to the natural environment, restoration surrounding river corridors and using floodable green infrastructure (Mackenzie District Council, 2024a; Mackenzie District Council 2024b). The document will align with other regional actions including those set out by the Canterbury Climate Change Partnership and it is anticipated that a spatial planning component, such as BGN, will be incorporated.	Strategy		**Murray Dickson** GM Strategic Financial Management and Commercial Services murray.dickson@mackenzie.govt.nz
Adapting to the impacts of climate change in the Mackenzie District 2024	Factsheet. Outlines climate trends. Used to inform public consultation for the Climate Change Strategy.	Guide		**David Adamson** Project Lead
Mackenzie Spatial Plans https://www.mackenzie.govt.nz/council/plans-reports-and-strategies/strategies/mackenzie-spatial-plans	Your Town, Your Future – The Mackenzie Spatial Plans. Provides a 30-year vision for the future development of Fairlie, Tekapo and Twizel. Used to inform zoning in the District Plan review.	Spatial Plans	Provides maps for Fairlie, Tekapo and Twizel.	**Murray Dickson** GM Strategic Financial Management and Commercial Services murray.dickson@mackenzie.govt.nz

3.8 Selwyn District Council

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Biodiversity strategy (2024)	Aims to protect and restore indigenous biodiversity through partnerships with mana whenua, communities, and agencies. It sets a vision of thriving ecosystems *"from mountains to sea"*, outlines four goals, identifies threats (habitat loss, pests, pollution, climate change), and provides targets, actions, and monitoring for long-term resilience.	Strategy	References the need to map spatial features of indigenous biodiversity that have significant cultural value.	**Andrew Spanton** Environmental Team Manager andrew.spanton@selwyn.govt.nz
Community Facilities Activity Management Plan (2024–34)	A key asset planning document that reports on the management of green space consisting of parks, reserves and streetscapes.	Plan	Data on various open space assets is stored on AMIS and GIS platforms.	**Ronwyn Coulson** Facilities Asset Manager ronwyn.coulson@selwyn.govt.nz
Dang, A. (2024) Rolleston Ecosystem Services Case Study. Retrieved January 2025 from: https://storymaps.arcgis.com/stories/a693e0ee284b41a888fa529cb6792ff2	Case study on Rolleston ecosystem services. Looks at areas such as runoff retention, erosion prevention, daytime shade provision, tree ultraviolet protection factor, viewshed, number of bird species, distance to green infrastructure, air pollution removal, and carbon stock in trees.	Case study	Contains maps of each area studied (as listed in the description). Mapping of tree height and canopy cover for urban areas.	
Future selwyn (2024)	Emphasises sustainable and connected environments, referencing the blue-green network.	Strategy	Contains an interactive map (District Picture) using ArcGIS. Provides a long term spatial picture of the strategic direction of Selwyn. Also shows green corridors.	
Selwyn District Council (2024). Mapping the blue-green benefits of ecosystem services in Rolleston.	Developing maps of 10 different ecosystem services in partnership with Manaaki Whenua.	Strategy	ArcGIS maps of 10 different ecosystem services.	

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Open Spaces Strategy (2015)	Primary guiding document for the provision, management and development of public green space for Selwyn District.	Strategy		**Derek Hayes** Strategic Open Space Lead derek.hayes@selwyn.govt.nz
Play Active Recreation and Sport Spaces and Places Plan (2024)	A work plan to address facility provision specific to the needs and demands for play, active recreation and sport.	Plan		**Derek Hayes** Strategic Open Space Lead derek.hayes@selwyn.govt.nz
Reserve Management Plans (Various)	Provides detailed plans for specific reserves.	Plan		**Derek Hayes** Strategic Open Space Lead derek.hayes@selwyn.govt.nz
Tree policy (Draft)	Provides guidance for the management of urban trees on Council land.	Policy		**Mason Walker** Arboriculture Advisor mason.walker@selwyn.govt.nz



Lake Ellesmere, Selwyn District

3.9 Timaru District Council

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Infrastructure Design Standard – Stormwater and Land Drainage	Council's technical design requirement document for new subdivision and capital works infrastructure in the Timaru District. It sets out the detailed engineering design standards that developers, engineers, consultants, contractors and Council staff must follow when designing infrastructure.	Guide		**William Ching** Infrastructure Planner william.ching@timdc.govt.nz
Parks Projects	The Council is working on planting programmes, removal of pine trees for native flora to recolonise, improvements to stormwater, etc.	Projects		**Garth Nixon** Parks Operations Officer garth.nixon@timdc.govt.nz
Parks Strategy (2011).	The Parks Strategy maps and classifies the district's network of parks, reserves, river and coastal open spaces, and linear linkages, providing the core spatial framework of green spaces and water–adjacent reserves. Native planting and weed control programmes will be undertaken if revegetation is required.	Strategy		**Garth Nixon** Parks Operations Officer garth.nixon@timdc.govt.nz
Stormwater Management Plans	Sets out the framework for enhancement of the primary drainage functions of the stormwater network and to ensure that effects on receiving environments are minimised.	Plan		**Kevin Kemp** Stormwater Team Lead kevin.kemp@timdc.govt.nz
Stormwater Strategy 2018–2048	Acknowledges with climate change that stormwater management systems need to be adaptable and resilient but does not reference Nature–based Solutions.	Strategy		**Kevin Kemp** Stormwater Team Lead kevin.kemp@timdc.govt.nz

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Timaru City Town Masterplan.	The town's masterplan outlines a strategic framework including *"Healthy Timaru. Te taiao hei whakamaru. Kaitiaki of natural environment"*. This outcome along with *'sustainable mobility'* and *'visible identity'* leads to actions called *"green weave and coastal connection"*. The underlying concepts are consistent with a BGN; connecting people and nature across the landscape via *"greenways"* to create resilient ecosystems and communities. A *"green edge"* or *"high amenity green network"* is also mentioned making the town more attractive and supporting the natural character.	Spatial Plan	The Timaru City Town Masterplan contains spatially relevant material that doesn't yet constitute a full BGN plan but provides: • Corridor concepts (greenways) that can act as green links in a network. • Urban–natural edge linkages supporting urban–to–blue connections. • Site–specific trials and spatial analysis that offer real–world footprints of potential green infrastructure.	**Rosie Oliver** Programme Office Lead rosie.oliver@timdc.govt.nz
Timaru District Active Transport Strategy (2024).	A strategy to grow walking and cycling infrastructure across the district. It identifies priority routes and connections that often align with parks, riparian corridors, and open spaces. Many of the proposed and existing routes traverse or sit alongside open space areas, stream corridors, coastal edges and reserve land, making them well–suited to function as multi–purpose blue–green corridors.	Strategy		**Suzy Ratahi** General Manager –Land Transport suzy.ratahi@timdc.govt.nz
Timaru District Climate Change Adaptation and Mitigation Response Plan (2024).	A working draft plan that sets out actions for Council to reduce emissions and adapt to anticipated climate impacts such as more intense rainfall, coastal and river flooding. It guides future activity management planning and helps frame infrastructure decisions that can include natural systems as part of resilience responses.	Plan		**Troy Titheridge** Climate Change Advisor troy.titheridge@timdc.govt.nz

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Timaru District Urban Street Trees Policy	The Urban Street Trees Policy is a Council policy that guides the planting, management and maintenance of street trees in the urban areas of the district. Acknowledges that urban street trees deliver environmental, health and social benefits, while also noting potential concerns, for example, interference with infrastructure and allergens.	Policy		**Suzy Ratahi** General Manager – Land Transport suzy.ratahi@timdc.govt.nz
Timaru Proposed District Plan	The Proposed District Plan is still in process and is not yet operative. However, its proposed stormwater, subdivision, natural environment and strategic provisions indicate a shift toward more integrated management of land, water and open space.	Plan		**Aaron Hakkaart** Planning Manager aaron.hakkaart@timdc.govt.nz



Caroline Bay, Timaru

3.10 Waimakariri District Council

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Accessibility of Greenspace in Waimakariri Urban Areas	This study provides an assessment of the abundance, distribution and equity of greenspace within the urban centres of the district. Distinctions are made between the amount of greenspace located on public and private land, and between the tree canopy and other vegetation less than 0.5m tall such as ground covers/grass.	Report	Maps showing tree canopy using LIDAR and NDVI data plus greenspace on public and private land.	**Dr Bex Dollery** Biodiversity Team Leader rebecca.dollery@wmk.govt.nz
Arohatia te Awa – Cherish the River project (2021)	The vision for this project is based on the concept of BGN, and it aims to offer a range of ecosystem services across the district by using waterways as corridors.	Project	To enable strategic focus for the project, a GIS biodiversity project viewer has been developed to map features of interest to see how they could link up to form a BGN. These include protected habitats and ecosystems, pest and rare species records, biodiversity projects, such as restoration projects, existing parks, greenspaces, and waterways.	**Dr Bex Dollery** Biodiversity Team Leader rebecca.dollery@wmk.govt.nz
Greenspace contracts map	Map showing stormwater channels, reserves/ parks, trees, and other green space, etc in Waimakariri.	Spatial plan	ArcGIS map.	**Michael Fletcher** Geospatial Specialist michael.fletcher@wmk.govt.nz
In stream biodiversity project planning and implementation	Zone Implementation Programme Addendum (ZIPA) implementation under the Canterbury Water Management Strategy, Cam River Enhancement Fund, stormwater management plans and stormwater improvement projects.	Projects		**Sophie Allen** Water Environmental Advisor – 3 Waters sophie@wmk.govt.nz

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Northern Pegasus Bay Bylaw Implementation plan https://www.waimakariri.govt.nz/environment/beaches-and-estuary	The Northern Pegasus Bay Bylaw 2024 Implementation Plan helps to give effect to the Northen Pegasus Bay Bylaw 2024 objectives. The vision for the plan is that *"the Northern Pegasus Bay coastal strip is valued; protected and enjoyed by all"*. Projects include monitoring the breeding of shorebirds around the Ashley/Rakahuri Estuary, and the impact of vehicles on the dune system, and generally supporting community groups to protect the coastal environment, including predator control efforts.	Plan		**Mike Kwant** Greenspace Community Projects Officer michael.kwant@wmk.govt.nz
Partially Operative Waimakariri District Plan	Policy ECO-P8 encourages nature-based indigenous biodiversity solutions to promote resilience to climate change. ECO-P7 recognises that ecological corridors are important. Objective ECO-01 states that indigenous biodiversity is maintained so there is no overall loss throughout the district (while ensuring SNA's are protected and enhanced). EI-P4 encourages green infrastructure as part of environmentally sustainable outcomes. In the subdivision section SUB-03 references esplanade strips contributing to protection of conservation values, and SUB-P10 for natural hazard mitigation.	Plan	Public facing natural hazards interactive viewer developed for the District Plan has natural hazards and SNA layers.	**Matt Bacon** Development Planning Manager matt.bacon@wdc.govt.nz
Significant Natural Areas	Biodiversity staff work with private landowners supporting protection, maintenance and restoration of Significant Natural Areas listed in the District Plan.	Projects	WDC holds ecological data for each managed ecological area site including significance assessments against the Canterbury Regional Policy Statement significance criteria, species lists, and management recommendations. Significant Natural areas are mapped in the District Plan.	**Dr Bex Dollery** Biodiversity Team Leader rebecca.dollery@wmk.govt.nz

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Waimakariri District Climate Change Policy 2020 https://www.waimakariri.govt.nz/council/documents-bylaws-plans/policies	The policy is an initial statement in relation to Council's role in climate change mitigation and adaptation. One of the policy principles is *'Kaitiakitanga/Stewardship – Council shares in a collective duty to safeguard the natural environment'*. Another is the *'conservation of biological diversity and ecological integrity'*. A policy statement says Council will 'Focus on the significant impacts climate change will have on the district's natural assets and ecosystems'.	Policy		**Veronica Spittal** Principal Policy Analyst – Climate Change & Sustainability veronica.spittal@wmk.govt.nz
Waimakariri District Council Engineering Code of Practice 2025 – Part 10 Reserves, Landscapes and Open Spaces https://www.waimakariri.govt.nz/consents-and-licences/engineering-code-of-practice	This requires landscape design for reserves, streetscapes and open spaces to be carried out at all levels of the subdivision process to promote environmental wellbeing, including increasing the region's biodiversity. Overall objectives can include providing for wildlife corridors, connecting open spaces and protecting wetlands and existing valued vegetation. Section 10.5.2.4 requires developers to identify opportunities to use waterway corridors, recreation reserves and street trees to form *'green corridors'* linking existing and proposed habitats.	Guidelines		**Grant MacLeod** Community Greenspace Manager grant.macleod@wmk.govt.nz



Waimakariri River, Canterbury

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Waimakariri District Council Infrastructure Strategy https://www.waimakariri.govt.nz/council/documents-bylaws-plans/strategies-and-plans	The Council's Infrastructure Strategy for the 2024–2034 LTP includes key themes of *'planning for natural hazards and climate change'* and *'transitioning to a sustainable future'*. The strategy states that *"green infrastructure solutions such as swales, stormwater retention basins and naturalised drainage systems are increasingly being used to manage stormwater better and have the added benefit of helping to reduce greenhouse gases. The district's reserves, street trees, forestry, wetlands and waterways also have a significant role to play in providing a more sustainable environment"*. Priority projects include carrying out indigenous biodiversity enhancement, ecological improvement of waterways, investigating opportunities for turning low-return forestry areas into natural habitats and carbon sinks and managing flooding risk.	Strategy		**Veronica Spittal** Principal Policy Analyst – Climate Change & Sustainability Veronica.spittal@wmk.govt.nz
Waimakariri District Council Street and Reserve Tree Policy https://www.waimakariri.govt.nz/council/documents-bylaws-plans/policies	The Council's 2017 Street and Reserve Tree Policy recognises the contribution trees make to environmental health, including climate control. It provides for protecting, planting and effectively managing trees and supporting community based initiatives on council land.	Policy		**Grant MacLeod** Community Greenspace Manager grant.macleod@wmk.govt.nz
Waimakariri Natural Environment Implementation Plan 2024	The plan aims to protect and restore Waimakariri's ecosystems, integrate biodiversity into planning, connect people with nature, improve knowledge, and build climate resilience. It includes 124 actions over 30 years, such as development of a regional blue-green network and integrating nature-based solution in policies, strategies, and plans. Increasing indigenous planting, pest control and monitoring for long-term sustainability are also provided for.	Plan	Working with ECan to complete mapping of indigenous biodiversity, focussing on highly mobile fauna. Additionally, there will be discussions with Ngāi Tūāhuriri Rūnanga to map taonga species, and mapping of SNA's.	**Dr Bex Dollery** Biodiversity Team Leader rebecca.dollery@wmk.govt.nz

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Waimakariri Natural Environment Strategy 2024	The strategy's vision is *"Our healthy and resilient natural environment sustains our ecosystems, our communities and our future"*. One of the desired outcomes is that *"The District's natural ecosystems are self–sustaining, healthy, resilient and connected from the mountains to the sea"*. The document describes how climate change impacts the district's natural ecosystems and provides direction for Council's future investment in protecting and enhancing these. It provides options for rebuilding nature including reintroducing indigenous vegetation in rural and urban areas, increasing urban tree canopies, improving connectivity and utilising Nature–based Solutions.	Strategy	Public natural environment, wetland, SNA and asset layers shown on Resilience Explorer. District biodiversity projects layer in GIS biodiversity viewer.	**Veronica Spittal** Principal Policy Analyst – Climate Change & Sustainability Veronica.spittal@wmk.govt.nz **Dr Bex Dollery** Biodiversity Team Leader rebecca.dollery@wmk.govt.nz
Waimakariri Natural Environment Strategy State of Environment Report – Biodiversity https://www.waimakariri.govt.nz/council/documents–bylaws–plans/strategies–and–plans	This report informs the Waimakariri Natural Environment Strategy and describes current state of biodiversity within the district, the pressures and threats it is facing and ways of addressing this including Nature–based Solutions, urban wild and living cities.	Report		**Dr Bex Dollery** Biodiversity Team Leader rebecca.dollery@wmk.govt.nz
Waimakariri Natural Environment Strategy State of Environment Report – Reserves	This report informs the Waimakariri Natural Environment Strategy and provides an overview of the Council's Greenspace portfolio. It identifies opportunities for increasing natural values in reserves and streetscapes including increasing ecological connectivity and providing wildlife corridors.	Report		**Veronica Spittal** Principal Policy Analyst – Climate Change & Sustainability Veronica.spittal@wmk.govt.nz

3.11 Waimate District Council

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Waimate District Biodiversity Strategy (2025)	Te Taiao o Waimate: A collaborative strategy for indigenous biodiversity. Facilitated and supported by Waimate District Council but led by the Waimate Biodiversity Action Group. A strategic roadmap that guides decisions, aligns efforts and inspires collective action toward a district that values and thrives on its biodiversity.	Strategy		**Andrew Oliver** Chair of Waimate Biodiversity Action Group (WaiBAG)
Waimate District Council Climate Resilience Strategy (2025).	Waimate District Council (2025) acknowledges that *"working with nature to build resilience"* when facing the impacts of climate change is an option for mitigation and adaptation. The Council discussed climate change issues relating to transport, water management, land use and the built environment, carbon sequestration and natural restoration, waste and circular economy, education and empowerment, and leadership and collaboration at community workshops. Sub action 4 involves developing a district biodiversity strategy that promotes and enhances native biodiversity across the district. This includes identifying and connecting blue–green networks to improve ecosystem health and strength while ensuring species/ecosystems have room to move and less human pressure.	Strategy		**Dylan Murray** Regulatory & Compliance Group Manager dylan.murray@waimatedc.govt.nz

3.12 Waitaki District Council

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Ōamaru Weston & Kakanui Spatial Plan 2022	The council's spatial plan is mainly a planning tool, but staff considered legislation, census data, soils data, accessibility and community facility locations, natural hazards and climate change predictions and impacts in conjunction with community views to develop a map showing the spatial arrangement of features, including green and blue infrastructure. BGN is not cited in the document but reference to multi-functional corridors, particularly along riparian margins, is discussed.	Strategy	Spatial plan showing location of Blue-Green Infrastructure in the region.	**David Campbell** Heritage and Planning Manager dcampbell@waitaki.govt.nz
Waitaki District Indigenous Biodiversity Strategy	The biodiversity strategy outlines goals for indigenous biodiversity. BGN is not noted within the document but the concept of ki uta ki tai is stated as a guiding principle and the importance of providing connections for ecosystems and preventing fragmentation is discussed. Action 2.3 mandates a Spatial Biodiversity Protection and Enhancement Plan to be created in conjunction with the regional council and other stakeholders (Waitaki District Council, 2014).	Strategy		**David Campbell** Heritage and Planning Manager dcampbell@waitaki.govt.nz



Elephant Rocks, Duntroon, Canterbury

4. Overview of initiatives undertaken by Canterbury community groups

4.1 Ashburton District

Name of organisation	Main function/tasks	Location/activity area
Ashburton Branch of Forest and Bird	The Ashburton Branch of Forest and Bird is a volunteer–run group focusing on protecting Mid–Canterbury's native ecosystems. They manage wilding pines removal around the district, lead the management of Harris Scientific Reserve, conduct the annual Winter Bird Count in the Ashburton Lakes area, and advocate for braided river protection.	Ashburton District
Ashburton Community Conservation Trust	Guardians and managers of the Harris Scientific Reserve, an 11–hectare area dedicated to restoring native dryland vegetation on the Canterbury Plains.	Ashburton
Awa Awa Rata Reserve Society	Volunteer group dedicated to maintenance of indigenous Beech Forest, walking tracks, and picnic areas within the Awa Awa Rata Reserve and DOC Pudding Hill Forest.	Pudding Hill, near Methven
Foothills Landcare Group	Manages and protect several hectares of naïve beech forest at the Ashburton Foothills. They are also fostering sustainable land management and enhancing biodiversity.	Ashburton Foothills
Hakatere Ashburton River Trail Users Group	Track maintenance, pest trapping and biodiversity planting along Ashburton trail network to the coast.	Ashburton
Kanuka Mid–Canterbury Regeneration Trust	Protect and regenerate biodiverse ecosystems in Mid–Canterbury through education and collaboration.	Ashburton District
Lake Heron Conservation Society	An environmental group focused on predator control and habitat protection for threatened species at Lake Heron, Mid–Canterbury.	Lake Heron
Methven Birdsong Trust	Restoring native birdlife and biodiversity in the Methven township by creating a 2–hectare native bird sanctuary and undertaking comprehensive predator control.	Methven
Methven Lions	Undertaking extensive planting along Methven Walkway and rest areas.	Methven

Name of organisation	Main function/tasks	Location/activity area
Mid–Canterbury Catchment Collective	An umbrella organisation that unites, supports, and coordinates multiple smaller farmer–led catchment groups in the area between the Rakaia and Rangitata Rivers. Also coordinates several biodiversity/planting projects around the district.	Ashburton District
Mt Bike Club Methven	Undertaking restoration and revegetation planting at Canterbury foothills.	Methven
Mt Somers Walkway Society	Predator trapping, weed control, habitat protection, walking track and bridge development and maintenance at Mt Somers.	Mt Somers
River bridge Native Species Trust	Manages 8.3 hectares of wetland and adjoining native forests (Langdon Wetlands) in Lagmhor, Ashburton.	Ashburton
The Fantail Trust	Has a vision of establishing a native bird and plant sanctuary on the Rakaia River to encourage repopulation and protection of native birds, animals, and plants.	Rakaia River
Upper Rangitata Gorge Landcare Group	Passionate group of landowners that are protecting and restoring the biodiversity of the Upper Rangitata River catchment through coordinated weed and animal pest control, specifically focusing on keeping the riverbed free of gorse and broom.	Upper Rangitata River Catchment
Whitcombe Landcare Group	Managing wilding pines, elderberry, willow, blackberry, sycamore, Russell lupins, and cotoneaster contributes to maintaining the Rakaia River's ecological integrity and function.	Rakaia Gorge



Ashburton Lakes, Canterbury

4.2 Christchurch

Name of organisation	Main function/tasks	Location/activity area
Avon–Heathcote Estuary Ihutai Trust	Aims to preserve the estuary's natural and historic resources, involve community groups, provide education, etc.	Avon–Heathcote Estuary
Avon–Ōtākaro Forest Park	Aims to transform Avon River Red Zone into a city–to–sea native forest park.	Avon Red Zone
Avon–Ōtākaro Network	Advocates for a city–to–sea river park with maximum possible restoration of indigenous ecosystems.	Christchurch Red Zone (Avon River corridor)
Banks Peninsula Conservation Trust	Works with landowners, agencies, sponsors, and community to promote the conservation of indigenous biodiversity and sustainable land management in Banks Peninsula.	Banks Peninsula
Cashmere Stream Care Group	Carries out water clarity monitoring programme, aims to involve community to protect and enhance cashmere stream and its catchment.	Cashmere stream
Christchurch Envirohub	Connects different environmental groups together to achieve better collaboration. Also offers education programmes.	Christchurch
Friends of Cracroft Reserve	A small group of local residents which restore the 3.2ha Cracroft Reserve.	Cracroft Reserve
Mt Vernon Park Trust	Owns and preserves/enhances the natural environment of Mt Vernon Park.	Mt Vernon Park, Port Hills
Otakaro Avon Living Lab https://www.otakarolivinglab.org.nz/	Community partnership supporting innovation and learning through the regeneration programme.	Avon Red Zone
Predator Free Riccarton	Aims to eradicate pests through backyard trapping.	Riccarton
Rod Donald Banks Peninsula Trust	Goal is to foster appreciation and stewardship of Banks Peninsula for future generations. Purchased a 500 hectare block of land with a goal of restoring native ecosystems.	Banks Peninsula
Steam Whalf Stream Reserve	Maintains stream plants and habitats, holds workshops to train community members to identify and record whitebait spawning sites, conducts spawning surveys.	Steam Wharf Stream



Christchurch Central City

Name of organisation	Main function/tasks	Location/activity area
Styx Living Laboratory Trust	Runs volunteering, river events, education programmes, and worked on river restoration projects.	Styx River catchment
Summit Road Society	Owns 3 different reserves, maintains tracks, plants trees, conducts predator control.	Banks Peninsula
Trees for Canterbury	Strongly linked to local community. Provides environmental education, training, trees (over 150,000 annually), and conducts planting.	Christchurch
Waitaha Biosecurity Collective	Cross sector initiative which brings together biosecurity champions to encourage and support the protection of taonga species, people, land and livelihoods from biosecurity threats. Lead by Biosecurity NZ,MPI.	Waitaha/Canterbury
Westmorland Ecology	Trapping and planting with the aim of bringing back native species back into Westmorland.	Westmorland

4.3 Hurunui District

Name of organisation	Main function/tasks	Location/activity area
Amuri Irrigation Company	Manages irrigation and environmental planning, catchment work; supports water-efficient farming and community initiatives.	Amuri Basin (Culverden, Rotherham, Waiau area)
Balmoral Lookout Project	Revegetation project carried out by the Hawarden-Waikari Lions and Hurunui College.	Balmoral Fire Lookout Reserve
Birdsong Project	Wetland stream restoration, native planting, walking track development, willow removal, public engagement.	Scargill Motunau Reserve
Blythe Valley Catchment Group	Predator control (490+ pests removed), installation of automatic traps, landowner collaboration; native planting.	Blythe Valley
Boyle Base Stoat Trapping Project	Predator trapping, bird surveys, coordination with DOC in alpine Lewis Pass region.	Boyle Base Hut area, Lewis Pass region
Boyle Village Conservation Group	Predator control across ~50 ha around Boyle River Settlement; technology trials, partnerships for local conservation efforts.	Boyle Village / Settlement near Lewis Pass
Bring on the Birds	Community-led predator trapping, education via schools, volunteer-built trap infrastructure (~150 traps).	Coastal zone between Jed River and Hurunui River mouth, Gore Bay
Conway Landcare Biodiversity Group	Native bush protection, weed and predator control, ecological restoration supported by grants.	Conway catchment area
Doubtless Conservation Trust	Predator control in inland valleys, habitat protection for native species, kiwi restoration project, hut and track maintenance.	Lewis Pass region (Nina/Doubtful Valleys and adjacent ranges)
Greening Waipara	Large-scale native plantings for biodiversity and eco-tourism in vineyards, shelterbelts, roadsides.	Waipara Valley
Hurunui Biodiversity Trust	This group serves as a 'connector' and 'facilitator' for other smaller groups within the district working on restoration and trapping etc.	Hurunui District
Hurunui District Landcare Group	Farmer-led environmental planning guidance, funding facilitation, catchment support for 300+ farmers.	Entire Hurunui District
Hurunui Weedbusters	Volunteer weed removal (e.g., lupins, old man's beard) across varied ecosystems, sharing knowledge on weed control.	Hurunui District-wide (riverbeds, reserves, covenants)

Name of organisation	Main function/tasks	Location/activity area
Jed River Catchment Project	Chemical free willow removal, native planting (~3,000 plants), education & engagement.	Woolshed Creek / Hutchison Reserve, Jed River tributary, near Cheviot to coastal hapua at Gore Bay
Kiwi Conservation Club – North Canterbury	Youth environmental education through magazines, outings, camps; expanding programs into Hurunui.	Hurunui District, plus Christchurch
Lottery Bush Conservation Group	Access infrastructure development, possum control, long-term fencing planning in rare old-growth forest reserve.	Lottery Bush Scenic Reserve, north of Waiau
Mandamus Reserve Charitable Trust	Predator trapping, habitat protection, walking track, fundraising events, kiwi release preparation.	Mandamus Reserve at Island Hills Station
Nina Valley Restoration Group	Student-led conservation research (Kiwiwatch), applied learning, funded by WWF and collaborating with DOC.	Nina Valley / Hurunui College area
North Canterbury Farm Forestry	Emphasises habitat and natural vegetation enhancement, collaborating with local forestry and environmental education and research institutions to monitor how tree establishment supports bird diversity and habitat quality in agricultural landscapes.	North Canterbury (Hurunui District)
Northern Pegasus Bay Coastcare Inc	Coastal ecosystem preservation: rare plant habitat fencing, shorebird nesting protection, predator trapping operations.	Northern Pegasus Bay coastline
Port Robinson Reserves	Coastal revegetation (700 native plants/year), weed and predator control, reserve infrastructure development.	Coastal reserves between Gore Bay and Point Gibson
Te Tihi o Rauhea Conservation Trust	Habitat restoration, including kanuka planting for lizard species, funded gecko and skink enhancement.	Te Tihi o Rauhea (Conical Hill), Hanmer Springs
Tipapa Stream Reserve	Willow removal, identification of planting zones, installation of seating, planting 6,000 wetland plants (Carex spp.), and future eco sourced planting (~4,000 plants/year).	Tipapa Stream gully, Greta Valley / Glenmark
Tiromoana Bush	Conservation of native bush/wetland/coastal area, restoration, and public access over 407 ha.	Tiromoana Bush near Waipara
Waiau Rivercare	Extensive planting, predator and weed control, biodiversity corridor creation, experimental restoration blueprint across river corridor.	Waiau-Uwha River from Twin Bridges to Waiau township
Waipara Rivercare Group	Willow removal, weed control (e.g., old man's beard), ecology education, recreational stakeholder liaison.	Waipara River corridor

4.4 Kaikōura District

Name of organisation	Main function/tasks	Location/activity area
Te Tau Wairehu o Marokura Predator Control Project	Predator control organisation, has planted over 10,000 plants.	Kaikōura

4.5 Selwyn District

Name of organisation	Main function/tasks	Location/activity area
Arthur's Pass Wildlife Trust	The Trust maintains a network of 107km of trap–lines containing 1504 predator traps in the Arthur's Pass area.	Arthur's Pass area
Banks Peninsula Conservation Trust	Works with landowners, agencies, sponsors and the wider community to promote the conservation and enhancement of indigenous biodiversity and sustainable land management on Banks Peninsula.	Port Hills, Tai Tapu and Taumutu areas
Coleridge Habitat Enhancement Trust	Removes weeds across braided rivers, lakes, and wetlands, traps predators, installs signs around vulnerable habitats, engages with communities, etc.	Lake Coleridge
Craigieburn Basin Restoration Trust	Committed individuals united in their desire to restore the area damaged by the fire and increase indigenous biodiversity in the wider Basin.	Craigieburn Basin
Craigieburn Trapping Alliance	A dedicated group of volunteers working to protect and restore the unique biodiversity of the Craigieburn/ Upper Waimakariri Basin in the Canterbury High Country.	Craigieburn/ Upper Waimakariri Basin

Name of organisation	Main function/tasks	Location/activity area
Ellesmere Sustainable Agriculture	Farmer led group to promote sustainable practices. Has facilitated riparian and wetland plantings, and continues to run a trapping programme and trap library.	Leeston and surrounding farming area (between Selwyn and Rakaia Rivers, below SH1)
Kakariki Greenway Canterbury Trust	Has planting days for volunteers, groups, colleagues, etc.	Selwyn District – linking Canterbury Foothills to Port Hills
Lincoln Envirotown Trust	Dedicated to creating a sustainable future, through education, support, research, and partnering with other organisations. 6 main projects.	Lincoln/Selwyn
Pest free Banks Peninsula	Working towards the goal of making Banks Peninsula Pest Free so that native plants and animals thrive.	Banks Peninsula
Predator Free Kirwee	Dedicated to the eradication of mammalian pests. Provide traps, knowledge, support, and training.	Kirwee township and surrounding rural area
Predator Free West Melton	A group actively engaged in the removal of pests from their township.	West Melton and surrounding area
Summit Road Society	Working to enhance, preserve and protect the nature, beauty and open character of the hills of Te Pātaka o Rākaihautū Banks Peninsula.	Port Hills – Omahu Bush and Gibraltar Rock
The Fantail Trust	A charitable organisation for the protection and enhancement of the biodiversity in the Rakaia Gorge. Carries out extensive trapping.	Rakaia Gorge
Upper Waikirkiri Catchment Collective | UWCC	A collective of upper Selwyn foothills landowners who support and educate the local agricultural community. Projects include community wetland and riparian planting.	Upper Waikirikiri/Selwyn River and foothills
Waihora Ellesmere Trust	A community organisation dedicated to the improvement of the health and biodiversity of Te Waihora/Lake Ellesmere and its catchment. Focus on education, recreation and trapping.	Te Waihora/Lake Ellesmere and its catchment
Waimakariri Ecological and Landscape Restoration Alliance	WELRA was established in 2008 by landowners, managers, local residents, DOC, Environment Canterbury and the Canterbury Environmental Trust to tackle the wilding conifer problem.	Craigieburn area, the Castle Hill Basin, the Torlesse Range and surrounds.

4.6 Timaru District

Name of organisation	Main function/tasks	Location/activity area
Climate Action Timaru	About connecting people in the region to gain knowledge and reduce carbon footprint.	Timaru
Orari River Protection Group	Supports wildfire through trapping programmes, aims to extend protection programme along the length of river.	Orari River
Friends of Claremont Bush – Timaru	A volunteer group protecting native species and habitat of Claremont Bush remnant just outside Timaru.	Claremont Bush, Timaru
Kakahu Bush Volunteer Group (Forest & Bird)	A volunteer effort by the South Canterbury Forest & Bird branch, to weed and restore native habitat at Kakahu Bush.	Kakahu Bush, South Canterbury
Talbot Forest Working Group	A community-focused restoration group working on predator trapping and native forest enhancement.	Talbot Forest
Blandswood Road Bush Restoration Group	A small community group working on restoring native vegetation along roadside bush remnants and connecting corridors.	Blandswood Road Bush
Kelcey's Bush Restoration	A volunteer group focused on restoring Kelcey's Bush, another native forest remnant near Geraldine.	Kelcey's Bush, Geraldine
Project Peel Forest Catchment Projects	Restoration initiatives in the Peel Forest catchment that bring together volunteers, landowners, iwi, councils, and DOC.	Peel Forest Catchment
Ōrāri-Temuka-Ōpihi-Pareora (OTOP) Water Zone Committee	A water management group to support sustainable freshwater outcomes across four key catchments in South Canterbury.	South Canterbury water catchment areas
South Canterbury Eco Centre	Provides a range of different ecosystem services, ranging from education, business engagement, biodiversity protection etc.	Timaru

4.7 Waimakariri District

Name of organisation	Main function/tasks	Location/activity area
Arohatia te Awa	Community based environmental group.	Waimakariri District
Ashley Gorge Reserve Advisory Group	Council approved advisory group. Carries out predator control and track maintenance.	Ashley Gorge, Oxford
Ashley Rakahuru Rivercare Group	Primary goal is to reverse decline in endemic braided river species by trapping, advocating for, etc. Conducts regular pest trapping, bird monitoring, and public education.	Ashley–Rakahuri River
Braided River Aid	Supports research and on the ground action to restore braided river ecosystems through practical initiatives.	Waimakariri District
Enviroschools	Education programme where children learn to connect and explore the environment.	Waimakariri District
Matawai Park Advisory Group	Formed to oversee the management of Matawai Park.	Matawai Park, Rangiora
Northern Pegasus Bay Advisory Group	Is responsible for overseeing implementation of NPBB plan, monitoring progress, encouraging education, etc.	Pegasus Bay (Waimakariri District)
Pest Free Waimakariri	Works with community to protect and enhance biodiversity, mainly though predator control programmes.	Waimakariri District
QEII trust	Works with landowners to protect native biodiversity on their properties.	Waimakariri District
Silverstream Reserve Volunteers	More than 50,000 native plants have been replanted on the 52 hectare area, along the stream and under trees. Predator control programmes have also been undertaken.	Silverstream Reserve
Te Kōhaka o Tūhaitara Trust	Dedicated to the rehabilitation and management of the 700ha Tuhaitara Coastal Park.	Tūhaitara Coastal Park
Upper Waimakariri Weeds Working Group	Discusses, coordinates, and increases efficiencies of weed control in the area.	Upper Waimakairi River

Name of organisation	Main function/tasks	Location/activity area
Wai–Connection/EOS	Connects different groups (councils, community, iwi, etc) in addressing local catchment challenges.	Waimakariri District
Waimakariri Biodiversity Trust	Engages with landowners to improve habitats for biodiversity. Also does lectures in ecological research and restoration.	Across Waimakariri
Waimakariri Landcare Trust	Farmer–led initiative to support long–term sustainable agriculture.	Waimakariri District
Waimakariri Water Zone Committee	Joint committee of WDC and ECan working to implement water management programmes.	Waimakariri District

4.8 Waimate District

Name of organisation	Main function/tasks	Location/activity area
Friends of Kelceys Bush Incorporated	Works to preserve and improve public assets alongside DOC.	Kelceys Bush
Friends of Studholme Bush Scenic Reserve Society Incorporated	The ecological restoration and continued protection of Studholme Bush Scenic Reserve that results in a flourishing native, self–sustaining, predominantly forest ecosystem with supporting native habitats.	Studholme Bush
Hakataramea Sustainability Collective | HSC | Hakataramea Valley	A community–driven platform, which helps with the protection and enhancement of the Hakataramea Valley environment by promoting profitable and sustainable farming practices and supporting our community to thrive.	Hakataramea Valley
Point Bush Ecosanctuary	Our vision for the future is to create a predator–proof fenced Ecosanctuary, with a goal of securing the area for more native bird species to make their home here and to regenerate more of the land into native forest.	Waimate North
Waihao Wainono Catchment Group	Aims to achieve sustainable environmental and economic outcomes for the Waihao River catchment, an 80,000–hectare area from the mountains to Wainono Lagoon.	Waihao River Catchment

4.9 Waitaki District

Name of organisation	Main function/tasks	Location/activity area
North Otago Sustainable Land Management	Educate, assist and encourage the North Otago Farming Community to farm in conjunction with sustainable land management objectives and practices.	Waitaki
East Otago Catchment Group	Working to deliver environmental outcomes such as improved water quality, soil health, biodiversity, climate change resilience and adaptation.	Waitaki, East Otago, Otago
Oamaru Blue Penguin Colony	Hands on approach to conservation and protection of the Blue Penguins.	Oamaru
Te Runanga o Moeraki	Mana whenua of Moeraki and the Waitaki North Otago region.	Moeraki & Waitaki North Otago region
Friends of Oamaru Harbour	Group dedicated to enhancing the heritage, natural and wildlife appeal of Oamaru Harbour.	Oamaru
Mountain Biking North Otago	Build and maintain the mountain bike tracks around Waitaki. These tracks may be shared walking tracks.	Oamaru
Ohau Conservation Trust	Promote awareness of, and protect, restore and enhance the Lake Ohau area's natural environment.	Lake Ohau
Kurow Island Restoration Group	Continued restoration of Kurow Island recreational and ecological area.	Kurow
Enviroschools	Education programme where children learn to connect and explore the environment.	Waitaki



Lake Benmore, Canterbury

5. Overview of initiatives undertaken by other Canterbury organisations

5.1 Greater Christchurch Partnership

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Greater Christchurch Spatial Plan 2024	Provides direction for future growth in the greater Christchurch region and contains a BGN action to develop an integrated BGN strategy. A blue–green network is defined as *"a series of spaces and corridors that follow and connect water bodies, parks, green areas and the coast. Blue elements include rivers, streams, storm water drains and basins, wetlands, freshwater, and coastal water; while green elements include trees, parks, forests, reserves and greenways"*. Contains a high–level spatial plan of existing ecological areas and areas to be investigated.	Plan	Provides spatial maps of Christchurch, showing green belts, future urban areas, priority areas for development and areas subject to hazard risk.	**Jenny Wilkinson** Programme and Relationship Advisor jenny.wilkinson@greaterchristchurch.org.nz
Greater Christchurch Spatial Plan – Blue–Green Network Strategy	Stated intention to develop an integrated blue–green network strategy reflecting the blue–green network principles and environmental directions in the GCSP. Options for establishing a Green Belt Action Plan are to be investigated.	Strategy		**John Bartels** Director Greater Christchurch Partnership john.bartels@greaterchristchurch.org.nz

5.2 Canterbury University

Name/link to document	Description	Project type	Relevant spatial data	Key contact
The Effect of Blue-Green Infrastructure on Habitat Connectivity and Biodiversity: A Case Study in the Ōtākaro/Avon River Catchment in Christchurch, New Zealand (2021)	Case study on blue–green infrastructure.	Report	Contains spatial mapping. BEETLE tool used to assess habitat connectivity, LUCI helped model land–use scenarios.	**Colin Meurk** Research Associate colin.meurk@canterbury.ac.nz
Invigorating latimer and south east through Blue–Green infrastructure		Plan	Spatial maps of green areas, street and cycle networks, location of amenities, etc.	

5.3 Lincoln University

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Climate Adaptation White Paper	Lincoln University is preparing a climate adaptation white paper to inform the Selwyn District Adaptation Plan. Table 1 of the white paper (see appendix 1) lists the projects completed over the last decade relevant to BGN.	Report		**Wim de Koning** Director Strategic Partnerships wim.dekoning@lincoln.ac.nz
Mai Tauwharekākaho ki Waihora – Rolleston to Lake Ellesmere Blue-Green Pathway. https://www.lincoln.ac.nz/news-and-events/shared-vision-for-sustainable-futures-through-selwyns-blue-green-pathway/ https://selwyn-district-council-selwyndc.hub.arcgis.com/pages/selwyns-blue-green-strategy	GIS platform mapping restoration and research areas across a data rich BGN corridor in Selwyn District that includes a range of ecosystem types. A project outcome is to establish best practice that can be applied across Canterbury.	Spatial plan	Interactive web GIS platform bringing together research and data in one place. Allows current data to be compared with historic data to understand changes over time.	**Wim de Koning** Director Strategic Partnerships wim.deKoning@lincoln.ac.nz
	Flammability of native plants expert.			**Tim Curran** timothy.curran@lincoln.ac.nz
	Indigenous knowledge systems related to Nature-based Solutions within the Kāika Institute of Climate Resilience.			**Paora Tapsell** paora.tapsell@lincoln.ac.nz **Merata Kawharu** merata.kawharu@lincoln.ac.nz

5.4 Department of Conservation – Canterbury Conservancy

Name/link to document	Description	Project type	Relevant spatial data	Key contact
Rakitata River revival programme (2024)	Restoration Plan for 6 priority sites relating to the restoration of rivers and waterways, with project goals of developing a network of habitats that connect from the mountain to the sea.	Projects		
https://www.doc.govt.nz/about-us/our-policies-and-plans/statutory-plans/statutory-plan-publications/conservation-management-strategies/canterbury/	The Canterbury (Waitaha) Conservation Management Strategy describes the conservation values present in Canterbury. A vision, objectives, policies and outcomes are provided to guide DOC's work. It covers all public conservation lands and waters in Canterbury.	Plan	Volume II contains maps and a public conservation land inventory.	
https://www.doc.govt.nz/about-us/our-policies-and-plans/statutory-plans/statutory-plan-publications/national-park-management/aoraki-mount-cook-national-park-management-plan/	The Aoraki/Mount Cook National Park Management Plan outlines the overall management intentions for the park.	Plan		
https://www.doc.govt.nz/about-us/our-policies-and-plans/statutory-plans/statutory-plan-publications/national-park-management/arthurs-pass-national-park-management-plan/	The Arthurs Pass National Park Management Plan provides for the management of the park in accordance with the National Parks Act, the General Policy for National Parks (2005) and the Canterbury Conservation Management Strategy.	Plan		
https://www.doc.govt.nz/about-us/our-policies-and-plans/statutory-plans/statutory-plan-publications/conservation-management-plans/te-waihora-joint-management-plan/	Te Waihora Joint Management Plan is a joint management plan between the crown and Ngāi Tahu. It contains long-term objectives and detailed policies and methods for effective integrated management of Te Waihora/Lake Ellesmere and the natural and historic resources within the area.	Plan		

Appendix 1 – Climate Adaptation White Paper (table 1) Lincoln University

Table 1. Current and recent projects (completed in the last decade) undertaken by Lincoln University that are relevant to the Blue–Green Network (BGN). BGN = Blue–Green Network, LU = Lincoln University, SDC = Selwyn District Council.

Freshwater management

Project	Challenge or problem & relevance to BGN	LU contacts	Status	Output/publication
Effectiveness of riparian planting	Riparian planting is a common restoration strategy undertaken by SDC, but little monitoring is undertaken to assess its effectiveness on water quality and biodiversity. This study explored its effectiveness in the Te Waihora catchment (after 2–3 years). A student 698 project surveyed the plantings in 2021, but no water quality outcomes were recorded.	Assoc. Prof. Hamish Rennie, Prof. James Ross, Dr Crile Doscher	Completed, but excellent opportunity to revisit effectiveness a decade on.	The Effectiveness of Riparian 'Restoration' on Water Quality—A Case Study of Lowland Streams in Canterbury, New Zealand Phillipson, R 2021 Variables affecting outcomes of community supported riparian restoration plantings. ERST 698 student project.
The impact of past land use and in–lake activities on the health of high–country lakes	This study used a paleolimnological approach to explore how and why the health of our lakes has changed. The project sampled over 300 lakes across Aotearoa New Zealand, including lakes in the Selwyn region. Resourcing and budget constraints meant that not all sediment cores were analysed in detail, but they are all archived and provide a unique opportunity to use the past to inform future management of our high–country catchments.	Prof. Susie Wood	Project complete, but resourcing is required to provide in–depth analysis of sediment cores from the Selwyn high–country.	https://ourlakesourfuture.co.nz/lakes/

Project	Challenge or problem & relevance to BGN	LU contacts	Status	Output/publication
Lake Tourism	Recreational use of Lake Ellesmere/Te Waihora and environs. 400 surveys completed on values and recreation. Data under analysis. Recreation/visitor monitoring and planning.	Dr Ramzi Tubbeh, Assoc. Prof. Hamish Rennie, Assoc. Prof. Stephen Espiner	Paper about to be submitted to journal on recreational interest in Te Waihora.	Paper in preparation: • Waitatari/Harts Creek Bird Hide Exploring Visitor Book Data (2017–2019) • WCFM Report 2020–001 • Oral Histories of the Selwyn Waikirikiri River • WCFM Technical Report 2019–002 • Stakeholder perspectives on the implications of increases in tourism on local users of nature–based recreation settings in the Selwyn District, New Zealand • 2020 Investigation of a Recreation Monitoring Programme for Lake Ellesmere / Te Waihora • Espiner, S., Stewart, E., Lizamore, C. 2017 Recreation Demand Study: Te Waihora/Lake Ellesmere. A report prepared for the Department of Conservation—Te Papa Atawhai
In stream habitat enhancement to aid in stream/ river restoration	Restoration work with Taumutu Rūnaka.	Dr Issie Barrett	Ongoing.	
Diversity of *Phytophthora* species in Canterbury waterways	The genus *Phytophthora* includes many species of concern due to their potential to invade and severely impact agriculture, forestry and natural ecosystems globally. Waterways can act as pathways for *Phytophthora* dispersal into new ecosystems. This study examined the *Phytophthora* communities in waterways from the South Island of New Zealand, including rivers in the Selwyn region. A diverse range of *Phytophthora* species were recovered, including several new undescribed taxa.	Prof. Eirian Jones	Project (MSc) mostly complete, but further work currently being carried out on describing the new species. Opportunity to conduct further sampling and investigate the potential pathogenicity of the recovered species on riparian planting species.	Master's thesis https://hdl.handle.net/10182/11401 Initial paper submitted to Journal of Applied microbiology

Project	Challenge or problem & relevance to BGN	LU contacts	Status	Output/publication
Hydrological drivers of weed invasion in braided rivers	By examining multiple lowland river catchments in Canterbury (including Selwyn) we highlighted how the extent of weed invasion in braided rivers was strongly driven by river flow characteristics and that the low flow regimes have led to a worsening weed problem in these rivers.	Prof Philip Hulme	Project completed but an opportunity exists to follow up at the survey sites.	Brummer TJ, Byrom AE, Sullivan JJ & Hulme PE (2016) Cover and richness of alien and native plants respond differently to climate, land–cover, flow regime and substrate characteristics across multiple gravel floodplain ecosystems. Diversity & Distributions 22, 823–835.
Toxic algae in rivers in the Selwyn District	Toxic algae in rivers in the Selwyn District restricts recreational activities and impact some drinking water supplies. River and catchment management plays an important role in regulating their abundance. This study explored the role of nutrients and flow.	Prof. Susie Wood	Completed, but more research required.	Spatiotemporal dynamics of Phormidium cover and anatoxin concentrations in eight New Zealand rivers with contrasting nutrient and flow regimes.



Cass, Selwyn District

Parks and open space planning

Project	Challenge or problem & relevance to BGN	LU contacts	Status	Output/publication
New district park in Rolleston – design	New district park in Rolleston – design.	Dr Nada Touier Dr Andreas Wesener, Dr Stephen Espiner	Students in SoLA are working with SDC to prepare master plans for the new district park. MLA student *"Major design project"* on Selwyn district park. The focus is on economic quantification of qualities connected to green spaces and parks, and how that could translate into spatial design.	Currently underway. LASC215/DESN699 presented their work to SDC on 9 June 2025 (at LU in SoLA studios).
Park and open space planning	Various biodiversity and land management student research projects.	Dr Nada Touier Dr Andreas Wesener, Dr Stephen Espiner		Currently underway.
Highlands Ski–field Park Masters student research		Prof. Emma Stewart, Assoc. Prof. Hamish Rennie	Sir Bill Harrington funded research.	Currently underway.
Future land management for Gravel Reserves	Distributed network of sites for potential to contribute more to the BGN.	Don Royds	Currently underway for PhD study.	Output to be two papers.



Hagley Park, Christchurch

Biodiversity and pest management

Project	Challenge or problem & relevance to BGN	LU contacts	Status	Output/publication
Riparian restoration: Challenges and barriers	Riparian plantings in and around farmland can help reduce agricultural pollution by improving water quality, enhancing habitat for beneficial species and minimizing stream erosion. However, invasive weeds often compromise these restorations, reducing their efficacy. The current study investigates ways to improve restoration success through species selection and weed barriers. This study also seeks to understand the extent to which riparian plantings affect pest mammal populations.	Drs. Tom Maxwell and Lauren Waller, Student: Sammi Stewart	PhD in progress.	
Grazing management effects on plant diversity and beneficial fungal abundance	Farmers use a range of grazing regimes to optimise and improve their pasture quality. This project explores how mixed–species rotational grazing (i.e., grazing with a combination of sheep and cattle, as opposed to single species) can boost legume growth, nitrogen fixation, and beneficial fungi in New Zealand pastures.	Drs. Tom Maxwell and Lauren Waller, student: Nicole Parnell	Masters in progress.	
Reducing the environmental impact of pest mammal monitoring options in New Zealand	Much of the monitoring around mammal pest control requires using plastic devices in the local environment. This project has tested biodegradable alternatives in Windwhistle and Tai Tapu to make pest control cleaner and greener.	Prof James Ross, Assoc Prof Adrian Paterson, student: Katie Pitt	PhD in progress.	First paper https://www.tandfonline.com/doi/full/10.1080/03014223.2024.2407335
Reducing the environmental impact of pest mammal monitoring options in New Zealand	Much of the monitoring around mammal pest control requires using plastic devices in the local environment. This project has tested biodegradable alternatives in Windwhistle and Tai Tapu to make pest control cleaner and greener.	Prof James Ross, Assoc Prof Adrian Paterson, student: Katie Pitt	PhD in progress.	First paper https://www.tandfonline.com/doi/full/10.1080/03014223.2024.2407335
Black–backed gull colony dynamics	Black–backed gulls are the only native bird pest species. This project looks at Waimakariri River colony survival as well as bird movements (using transmitters) to understand how these birds interact with the local environment (especially Dairy areas).	Assoc Prof Adrian Paterson, Dr Jon Sullivan, Student: Wendy Fox	PhD in progress.	

Project	Challenge or problem & relevance to BGN	LU contacts	Status	Output/publication
Variation drives response to urbanisation: Evolutionary ecology of two introduced birds within anthropogenic environments.	Bird species live in landscapes that are increasingly urbanised. This project looked at how passerine species behaviour (and morphology) changes across the urban to rural landscape.	Assoc Prof Adrian Paterson, Dr Jon Sullivan, student: Sahar Firoozkoohi	PhD completed.	https://researcharchive.lincoln.ac.nz/entities/publication/09d4c495-1dd0-4c9f-a40f-cb8925008b8f
Investigating the influence of soil microbial legacies on restoration in New Zealand: effects on native and exotic plant performance and competition	This study will examine how soil microbial communities differ among remnant forest sites, restored natural areas, and disturbed sites dominated by exotic plants, and how these differences influence native and exotic plant growth and competition.	Drs. Lauren Waller, William Godsoe and Jon Sullivan	Masters in progress.	
Wilding pine invasion in high altitude ecosystems	Examined the structure of lodgepole pine invasion at the treeline in Craigieburn pointing out the high risk to native plant communities on screes.	Prof Philip Hulme	Project completed.	Tomiolo S, Harsch MA; Duncan RP & Hulme PE (2016) Influence of climate and regeneration microsites on Pinus contorta invasion into an alpine ecosystem in New Zealand. AIMS Environmental Science 3: 525–540.
Adaptation in riparian weeds in relation to elevation and climate	The widespread ripariaquatic invader, monkeyflower, was shown to be able to perform well at high elevation at Cass as a result of high plasticity highlighting the potential risk of its spread more widely in Selwyn with detrimental effects of aquatic ecosystems.	Prof Philip Hulme	Project completed.	Williamson M, Gerhard D, Hulme PE, Millar A, & Chapman H (2023) High performing plastic clones best explain the spread of yellow monkeyflower from lowland to higher elevation areas in New Zealand. Journal of Evolutionary Biology 36,1455–1470
Biosecurity risks posed by international tourists to New Zealand national parks	International tourists, especially those from Europe pose an increasing risk to our national parks by bring material in from overseas on tents etc. The study highlighted that Arthur's Pass is an important tourist hub and likely exposed to a higher level of risk than many other national parks in New Zealand.	Prof Philip Hulme	Project completed.	Hulme PE (2024) Networks of risk: International tourists as a biosecurity pathway into national parks. Biological Invasions 26, 4317–4330

Project	Challenge or problem & relevance to BGN	LU contacts	Status	Output/publication
Techniques for improving ground–based control and monitoring of the brushtail possum	New lures (audio, collection device design) are required to better interact with our mammal pests, especially in anthropogenic landscapes. Possum control is essential if we are to bring back remnant forest areas.	Prof James Ross, Dr Brittany Graham, Dr Elaine Murphy	PhD completed 2025 (but several ongoing projects with postgraduates)	Graham, B., Ross, J., & Murphy, E. (2023). Novel audio lures to improve interaction and encounter rates of possums (Trichosurus vulpecula) with control methods in New Zealand. In M. Zaccaroni, E. Mori, & J. Jacob (Eds.), *13th European Vertebrate Pest Management Conference: Book of abstracts* (pp. 61). University of Florence, Italy: Julius Kühn–Institut. doi:10.5073/20230614–085259–0
Effects of urbanisation on bird diversity and abundance in Greater Christchurch	Using a 23–year high frequency bird monitoring dataset between Christchurch and Lincoln, we are exploring what happens to birds when farmland is converted to housing.	Dr. Jon Sullivan	Masters in progress (Dee Patel)	



Christchurch Central City

Remedial solutions

Project	Challenge or problem & relevance to BGN	LU contacts	Status	Output/publication
Effect of native trees and their soil microbial communities on the nitrogen cycle	Whether the roots of native trees such as manuka and kanuka release compounds that could affect urease activity, or the nitrification process (inhibition or stimulation), or could kill Escherichia coli will be investigated. The microbial communities involved in nitrous oxide production under each tree will also be investigated. The aim of this study is to determine whether use of these trees in riparian plantings could contribute to reducing Escherichia coli numbers, greenhouse gas emissions and nitrate leaching from pasture soils.	Dr Hossein Alizadeh, Professor John Hampton	Experiment regarding the reduction in E. coli number was completed in collaboration with ESR. Effect of native trees on nitrate leaching is about to start with engaging a MSc student in collaboration with Manaaki Whenua.	https://www.sciencedirect.com/science/article/pii/S0929139321001608
Microbial bioinoculants for mitigating nitrous oxide and nitrate leaching (beneficial microbes with different mechanism of action)	The aim is to isolate microbes involved in dissimilatory nitrate reduction to ammonium. These microbes could convert nitrate to ammonium which could be retained by soil particles to avoid leaching to waterways. The aim will be to develop a microbial formulation which will be able to reduce nitrate leaching to waterways from farmlands.	Dr Hossein Alizadeh, Professor John Hampton	Not yet started, subject to funding.	



Ōtepatotu Scenic Reserve, Banks Peninsula

Project	Challenge or problem & relevance to BGN	LU contacts	Status	Output/publication
Waste water treatment with bioactive compounds	Winery wastewater (as an example) will be treated with TanflocTM and bioactive compounds from black wattle and the wastewater will be cleaned.	Dr Hossein Alizadeh, Professor John Hampton	Not yet started, subject to funding. We have established a water lab in LU and have all equipment (chemical oxygen demand, biochemical oxygen demand, turbidity meter, Quanti–Tray system and Colilert) needed. This will be done in collaboration with Bragato Research Institute.	
Bio–inoculants to reduce nitrate leaching (beneficial fungi)	Nitrogen losses from urine patches or following urea application contribute to global warming and water contamination and result in major economic losses for farmers. In this study, beneficial microbes have been isolated and are being formulated to be applied by farmers to reduce nitrous oxide (a greenhouse gas) emissions and nitrate leaching following urea application or urine deposition.	Dr Hossein Alizadeh, Professor John Hampton	A patent has been filed for microbes, the formulation is being commercialised by Ravensdown Ltd which will be available for farmers.	https://www.newshub.co.nz/home/politics/2022/07/govt–and–ravensdown–invest–22m–on–seeking–ways–to–reduce–nitrogen–loss.html?utm_source=dlvr.it&utm_medium=twitter https://www.ravensdown.co.nz/expertise/microbial–game–changer https://www.lincoln.ac.nz/news–and–events/new–research–harnesses–soil–fungus–for–environmental–mitigation/



Waimakariri River, Canterbury

