



LODDON
PLAINS
LANDCARE
NETWORK

Healthy environment . Healthy agriculture . Sustainable communities
to protect and enhance biodiversity of the Loddon Plains

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[DRAFT] LPLN Sustainable Agriculture Strategy Project Prospectus



Photo: Jade Killoran, Healthy Farming Systems
www.facebook.com/jadekilloranhfs/

Prepared by
Revision Date

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Loddon Plains Landcare Network Inc. respectfully acknowledges the Dja Dja Wurrung, Barapa Barapa and Wamba Wemba people, Traditional Owners and Custodians of the Country on which we work. We respect their rich living cultures, traditions and connections to the land and recognise the significant impact Traditional Owners have had in managing Country.



About the Loddon Plains Landcare Network

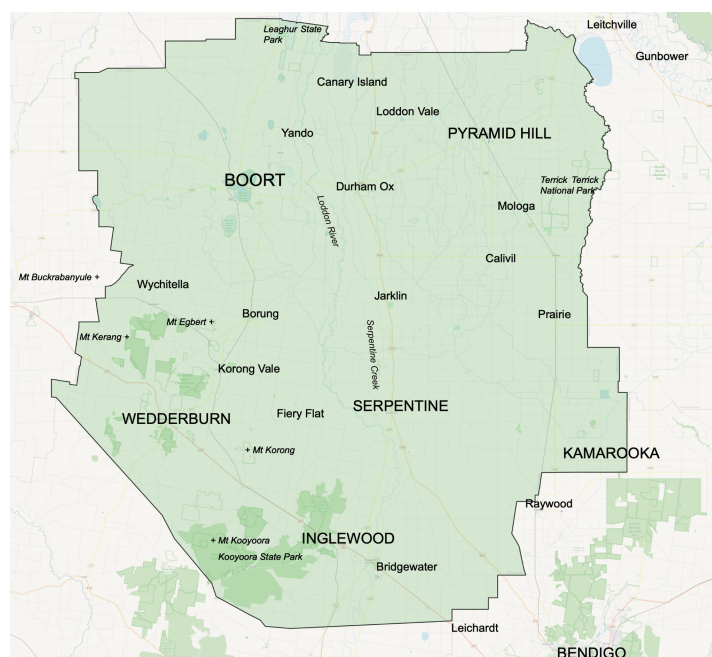
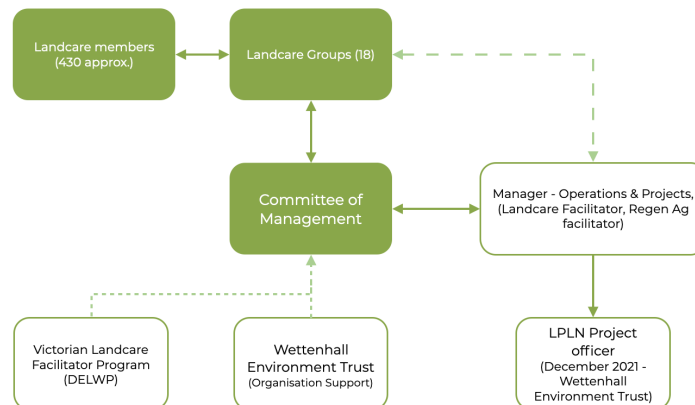
Since 2009, Loddon Plains Landcare Network (LPLN) has built its capacity and partner relationships to deliver large-scale community, landscape restoration and on-ground projects of up to \$200 000 per year.

These projects, as part of its Blueprint for Action Strategic Plan and Sustainable Agriculture Strategy, include annual community-led landscape restoration projects focussed on important environmental assets, sustainable soils and regenerative agriculture programs, landscape-scale pest management and supporting Landcare groups in delivering projects as part of the Victorian Landcare Facilitator's Program.

Governance and Operations Framework

LPLN values a community-led governance and operational framework. The Network is made up of approximately 430 members across 18 Landcare groups. The LPLN Committee of Management (CoM) is made up of members from its groups and provides the decision-making guidance for the Network's operations. The Wettenhall Environment Trust supports the CoM in its governance..

An employee funded by the Victorian Landcare Facilitator Program, augmented by additional project funding, supports the Network. In August 2021, the Wettenhall Environment Trust committed to further support to LPLN by way of funding for an extra employee from December 2021.





LPLN Sustainable Agriculture Strategy

In 2019 through the support of the Wottenhall Environment Trust, Loddon Plains Landcare Network (LPLN) developed its community-led regional agriculture strategy to underpin community support and deliver activities focussed on transition the Loddon Plains farming community toward sustainable and regenerative agriculture practices. In undertaking this work LPLN has positioned itself in the central Victorian landscape as a leading organisation in sustainable and regenerative agriculture with a focus on:

- community and social capital,
- the development of family farming businesses to move towards sustainable and regenerative practices
- adoption of sustainable and regenerative practices to enhance biodiversity values on private land.

We believe this strategy to be the first of its kind initiated by a Landcare Network in Victoria and it has already provided success in securing:

- Two years of funding (2021 - 2023) from North Central CMA to facilitate a new peer lead agriculture group, the Loddon Plains Future Farmers regenerative agriculture group
- Delivery of a 4 part web series promoting adoption of sustainable agriculture practices during March and April of 2021
- Education and training partnership with Bendigo TAFE, delivering a Certificate III Agriculture from LPLN's education and Resource centre in Inglewood, Victoria

Sustainable agriculture across the Loddon Plains is important to LPLN in order to assist in the promotion of sustainable food systems and building community resilience. It keeps our farming families on the land which in turn supports local businesses and maintains amenities, social structures and the vibrancy of the local community.

The Loddon Plains Landcare Network Inc. (LPLN Inc.) aspires to be an Australian leader in sustainable agriculture and land stewardship to complement its vision for enhancing the area's biodiversity, working hand-in-hand with LPLN's biodiversity Blueprint for Action.

This vision is underpinned by the adoption of its Five Guiding Principles from the United Nations Food and Agriculture Organisation to guide its work for regional adoption and support of sustainable and regenerative agriculture practices to:

1. *Increase productivity, employment and value addition in food systems*
2. *Protect and enhance natural resources*
3. *Improve livelihoods and foster inclusive economic growth*
4. *Enhance the resilience of people, communities and ecosystems*
5. *Adapt governance to new challenges.*

As part of this strategy, the LPLN aims to support the benefits of sustainable and regenerative agriculture in the region through:

1. Education and community building

The increased adoption of sustainable agricultural practices will help the Loddon Plains farming community to better understand the benefits of diversity in agricultural systems and build stronger connections around the health of both agricultural soils and the natural environment.

2. Increasing environmental sustainability

Sustainable agricultural practices will contribute to the biological diversity of our agricultural lands and help to buffer the threatening processes of climate change and species loss.

3. Building the local economy

More sustainable food and fibre production across the Loddon Plains will have benefits to the local economy, keep our farming families on the land and strengthen the link between producers, providers and consumers and build employment opportunities.



Developing perennial systems on the Loddon Plains

Summary

Developing Perennial Systems on the Loddon Plains will provide opportunities to the Loddon Plains farming community to undertake workshops and training in native pasture management, cover cropping, soil management and alternative farming practices in order to adapt to a changing climate and landscape. These workshops will underpin an engagement program to support farming transition toward permanent, long term adoption of contemporary farming practices in the region.

The project aims to make practices readily accessible to farmers, provide consistent support to a farming community in transition, deliver essential knowledge and training that responds to local farming conditions and requirements, empower adoption for farming operations in the area to make them sustainable into the future and maintain and renew the farming community across the Loddon Plains region

There has been a clear trend towards farmers and agriculturalists walking off farms across central Victoria due to drying conditions, water and feed prices and other industry problems. In introducing new skills and practices, and enabling farm gates to stay open, the greater economy of the Loddon Plains region will benefit in retention of families in the district and encouraging existing local economies to continue through making information accessible, providing knowledge in new and best practice and empowering farm operations to change practices on farm in a managed transition to allow for continued production.

In 2019, Loddon Plains Landcare Network committed to the improvement of biodiversity & large-scale landscape restoration through supporting local farms in adapting to sustainable & regenerative practices. This has culminated in an investment of \$10,000 in a network-wide LPLN Sustainable Agriculture Strategy to support network groups in this transition. It is believed this is the first of its kind by a Landcare network in Victoria.

Landcare groups across the LPLN area clearly have an appetite to implement sustainable farming methods with 72% of participants in a 2019 LPLN project survey having an interest in a Network wide sustainable agriculture program implemented by the LPLN. The survey showed significant interest in;

- Provision of an LPLN Sustainable Agriculture Social & Community Support officer
- Native pasture renovation,
- Development of silvopasture methods & agroforestry,
- Use of cover crops,
- Improved soil structure & minimum till practices.

This desire of members to change & adapt is challenged by a lack in capacity, support & knowledge across the community, acting as a significant roadblock in the uptake of these practices. This program allows access, knowledge & empowerment within the local farming community to adopt new management practices.

Farming and agriculture account for 40% of Loddon Shire employment (2016 Census). In recent years, the Loddon Plains has seen an exodus of farming families & a higher rate of large consortium & impact funds buying primary production land. This trend has seen a major decline in population & local economies and a downward push in socio-economics. If farming exits and continued climate challenges persist, small farming families will continue to be forced out of the primary production due to reduced profit margins and increased operating costs. This can be countered by providing support & education in the form of professional development, allowing farmers to upskill & adapt to these challenges. Developing the farming community and extending it into day-to-day operations will provide greater economic value and retain farming operations in the area.

Activities and Focus:

The primary objective of this project focuses on the development and support of farmers in transitioning to sustainable and adaptive agriculture. The project will aim to enhance decision-making abilities, provide new skills and best practice knowledge in land and farm stewardship to increasing the number of farmers implementing contemporary and regenerative land management for increased vegetation cover, enhanced biodiversity, healthier soils and increased water and moisture retention on private farming land on the Loddon Plains.



The project will focus specifically on vegetation cover, restoring native pastures and grasslands and closing feed gaps in the summer period in farming operations.

The project will seek to address agricultural challenges in a drying climate through a curated workshop program, trial sites, paddock research & documentation and provide consistent support to the transitioning farming community through a dedicated sustainable agriculture engagement officer (0.5 FTE).

Project objectives include:

- Preserve farming enterprises across the Loddon Plains through empowering farmers through knowledge and support to successfully transition toward sustainable economic and environmental practices in a drying climate
- Support farming operations in adapting to a changing climate through management of native pastures and crop covers to preserve soils, retain moisture & provide annual feed
- Develop and implement trials with pastoralists in silvopasture systems designed specifically for a dry central Victorian climate
- Create a program based on accessibility, knowledge and empowerment to promote adoption of best practice methods, better pastures, soils and improved biodiversity across the Loddon Plains
- Provide training and support to families in order to retain family farmers and attract new farmers in the LPLN area to retain social structures and support strong local economies, services and communities in the area.
- Provide a Sustainable Agriculture Community and Social support officer to coordinate workshop and education programs & provide extended support in planning and adoption of sustainable farming practices.

Outcomes:

Working with local communities, farmers and other stakeholders, the project will deliver the following outcomes:

- Support greater vegetation cover to improve soil health on farm land
- Develop methods and training programs to limit soil loss through wind, surface water and erosion
- Provide trials and implement best practice methods to provide stock feed year round through pasture management & new practices such as:
 - silvopasture techniques,
 - identifying a pasture mix that includes exotic & native grasses, shrubs & trees
 - native grassland and pasture restoration and improve grazing management
 - developing cover crop systems for dry central Victorian climate for, providing benefits in soil health, ground cover, animal health and primary production gains
- Develop landscape scale farm plans with Loddon farmers, providing opportunities to aggregate and enter into EG&S agreement with improved, well supported land stewardship techniques
- Provide detailed documentation, resources and information events in order to support farmers in navigating transition to sustainable methods through best-practice methods, benchmarking and scalability to assist in management succession.

Investment:

LPLN is seeking an investment of \$249 000 over three years to successfully deliver this project and provide sustained support for transition in the medium term. Investment will provide capacity, community support and farm planning, succession in farming methods for effective transition, workshops and professional development for the farming community to provide knowledge required for successful transition, on farm trials and documentations including regional benchmarking and scalability for successful adoption and a resource guide for future reference and public adoption.

Breakdown of funds:

Project and community support role	\$25 000 per year, three years (\$75 000)
Farm planning and system succession program	\$16 000 per year, three years (\$48 000)
Workshops	\$12 000 two workshops per year, three years (\$36 000)
Trials	\$26 000 develop or extend 3 trials per year, three years (\$78 000)
Transition and adoption resources	\$12 000 guide to transition and adoption (\$12 000)

Total investment: **\$249 000 for 3 years**



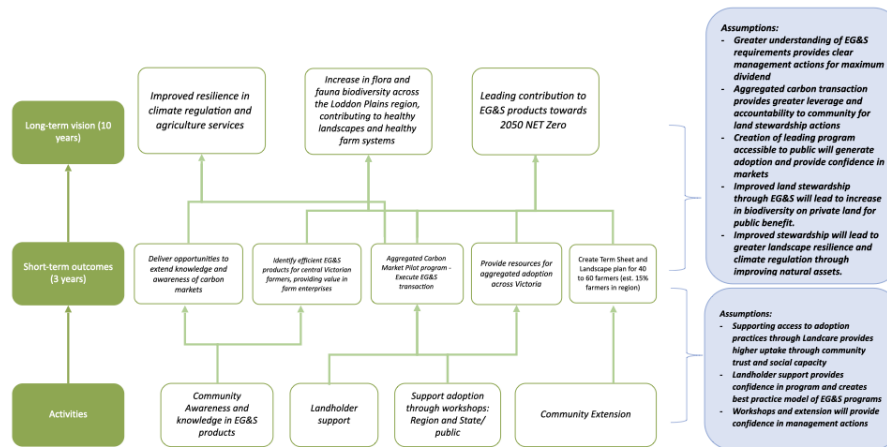
Loddon Plains Sustainable Agriculture - Carbon Market Pilot

Issue:

Sustainable and Regenerative agriculture has been identified as an avenue to farmers in providing Environmental Goods and Services (EG&S) in return for land stewardship payments. The CSIRO estimates that Australia's environmental market will be worth \$48bn by 2050, this estimate places a significant demand on the development and growth of EG&S opportunities providing farming communities with an opportunity to provide influence in the growing carbon market.

Creating robust community programs that open opportunities for family farm enterprises to enter into EG&S transactions will promote private land biodiversity, create more resilient farming landscapes and provide an economic benefit to farmers managing land for carbon sequestration.

What we want to achieve:



Long-term (10 years) outcome:

- Diversity in employment opportunities in the region through EG&S products (provide succession opportunity)
- Improved resilience in climate regulation and agriculture services through increased carbon market engagement
- Leading contribution to EG&S products towards 2050 NET Zero
- Established savings and benefits to farm enterprises through non- traditional farm practices (closed feed gaps, increased biodiversity, resilient landscapes)
- Established supply and demand chains for alternative agriculture products (native flowers, wattle seed, native grains, sandalwood, high value timber)
- Established multispecies and silvopastoral systems widely adopted in the Loddon Plains region
- Increase in flora and fauna biodiversity across the Loddon Plains region, contributing to healthy landscapes and healthy farm systems.

Short-term outcomes (3 years):

- LPLN employs a Sustainable and Regenerative Agriculture Project Officer.
- Deliver opportunities to extend knowledge and awareness of carbon markets for community adoption
- Efficient EG&S products identified for central Victorian farmers, providing value in farm enterprises
- Creation of Farmers Mutual to provide Environmental Goods and Services to market
- Benchmark minimum entry requirements for standing and soil carbon in central Victoria
- Trial a silvo-pastoral system (shrub and grasses mix) for livestock.
- A pilot program established in entering into EG&S transaction as part of farming system including public documentation for adoption across Victoria
- Support for native pasture and Silvopasture management to provide habitat opportunities and biodiversity refugia for rare, threatened and absent species in the landscape i.e Golden Sun Moth, Plains Wanderer.
- Create Term Sheet and Landscape plan for 40 to 60 farmers (est. 15% farmers in Loddon Plains region)
- Execute carbon transactions for 40 to 60 farmers (est. 15% farmers in Loddon Plains region)



Actions:

The Loddon Plains Landcare Network will partner with Regen Farmers Mutual and the Carbon Farming Foundation to create a model of adoption for entry into carbon markets through a farmer-led Mutual, the Loddon Plains Regen Farmers Mutual.

By undertaking the project, it will aim to identify and deliver maximum benefit to landholders interested in providing environmental goods and services as part of a farming enterprise, ultimately improving carbon capture and biodiversity enhancement on farm and landscape scales.

This program differs from standard entry to carbon markets by creating farmer-led programs within a region directing a majority of the carbon dividend to farmers opposed to conventional programs directing a majority to consultants and delivery requirements.

The program will call upon RFM's knowledge in carbon and EG&S market transactions and will work closely with the Carbon Farming Foundation to model farming landscapes with the Australian Governments FullCAM system in order to provide the most appropriate financial benefit to farmers. The LPLN will provide specialist advice and landscape design support using its READING LANDSCAPES framework, based on identifying enterprise and biodiversity requirements and selecting the most appropriate on-ground management actions for the benefit of enterprise, biodiversity and landscape function.

This program directly aligns to the Victorian Government's Carbon Farming Program to *provide avenues of support for private landholders to reduce emissions and build resilience to a changing climate* by developing a robust framework for landscape design and connecting these management outcomes to an EG&S transaction providing a dividend to farmers.

It also aligns strongly to the Victorian Government's Climate Change Framework, particularly addressing priorities of "Transitioning key sectors of our economy" (positively transitioning to a climate resilient economy) and "Growing Victoria's agriculture sector and regional communities" by "Supporting capacity building and adaptation planning (helping farm businesses to plan for climate change adaptation and developing new flexible farming systems..) and Partnering with industry to progress emissions reduction and offset opportunities (soil carbon, standing carbon, biodiversity)

Support required:

Our network is seeking financial support to develop a carbon and environmental goods and services pilot program in central Victoria, providing a model for adoption by other groups across the state. This involves:

- \$255 000 over three years to employ an LPLN Sustainable and Regenerative Agriculture Officer (0.2FTE) in order to:
 - o support Loddon Plains farmers in Landscape assessments and modelling
 - o work with key collaborators, Regen Farmers Mutual and Carbon Farming Foundation in delivering an executable Term Sheet to deliver annual carbon credits for farmers engaged in EG&S activities
 - o Deliver public resources in documentation of adoption practices, modelling and design for farmer-led carbon market projects - including 2 webinars or other events per year accessible to the public.

Total investment \$255 000 over three years.

Project partners:

Regen Farmers Mutual The Carbon Farming Foundation

Our work to date:

In 2020, LPLN invested in a community-led Sustainable Agriculture Strategy, believed to be the first commissioned by a Landcare Network in Victoria. This strategy was supported by the Wettenhall Environment Trust and involved significant community consultation with a focus on community empowerment, development of alternative farming practices and markets, and retaining family run farms in the region thus supporting strong, resilient communities and local economies.

As part of the organisations strategy, LPLN has been successful in securing funding from the North Central CMA to deliver the Loddon Plains Future Farming Regenerative Agriculture group focussed on the following key objectives:

- To improve knowledge of soil health and structure including how to maximise rainfall infiltration, build soil carbon and build topsoil
- To improve knowledge of growing and utilising grasses for livestock while maintaining ground cover
- To increase native vegetation on-farm.

As part of its Sustainable Agriculture Strategy goals, the LPLN has identified an opportunity to pursue a pilot program to develop community knowledge and skills in delivering EG&S outcomes in order to enter into a carbon transaction by way of a Farmers Mutual. This program provides farmers the option to aggregate their EG&S products into a single Term Sheet to put out to market and be paid for their stewardship by way of carbon transactions.

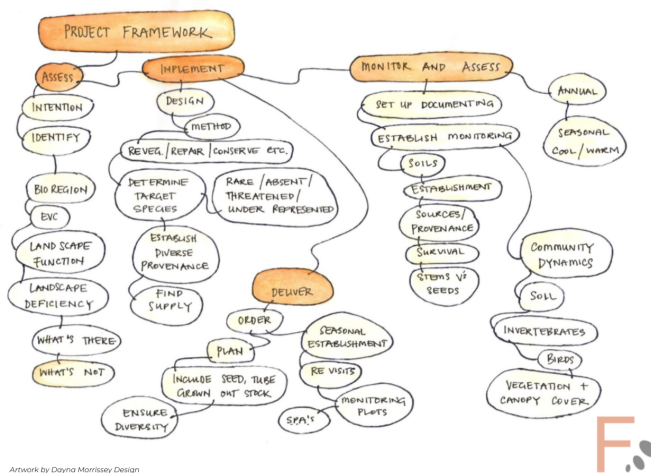


Summary

LPLN has worked extensively with the Regen Farmers Mutual and the Carbon Farming Foundation to develop a concept for a pilot program, creating a framework that prioritises biodiversity and maximising landholder returns through modelling the most appropriate land to restore or manage for EG&S products.

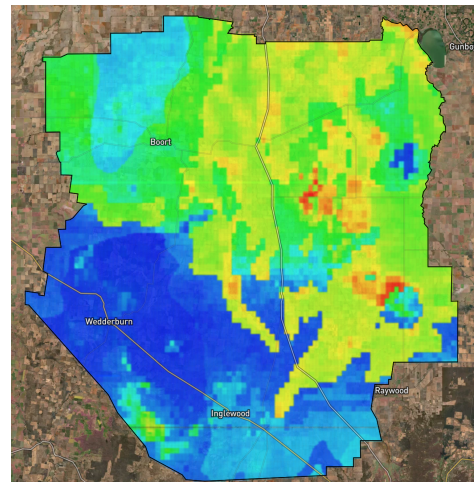
This concept is ready for testing, bringing together the work of LPLN's READING LANDSCAPES framework for landscape restoration, Regen Farmers Mutual's extensive knowledge in carbon markets and creating co-operatives and mutuals, and the

Carbon Farming Foundations development of landscape modelling to better forecast returns in carbon market transactions. To move forward, LPLN requires financial support to deliver proof of concept. LPLN believes that this adoption can provide significant returns to farmers and biodiversity and provide a leading example for others across Victoria to enter into carbon transactions by providing aggregated EG&S products.



Artwork by Dayna Morrissey Design

Development of READING LANDSCAPES Design framework, Concept: Danny Pettingill



Standing carbon modelling of Loddon Plains undertaken by Carbon Farming Foundation, red indicates high value - blue indicates low carbon value



Advancing Soil Management Through Testing and Localised Mapping Data

Summary:

This project will create a pilot and research program to develop activities and methodologies using localised drone mapping technology and soil testing (0cm to 30cm, soil health, abundance counts above and below soil level etc.) to understand correlations between vegetation cover and soil health on a seasonal basis. The project requires initial funds for 2 years to create baseline and benchmarking limits, with the intention to extend the program over five years.

The program will contribute to data sets on a federal and state level and provide opportunities to develop innovative local solutions readily adoptable for individuals or farming groups.

Activities and Focus:

The primary objective of this program is to create a methodology that utilises drone mapping technology and VARI assessments combined with soil testing and monitoring data in order to advance local management techniques in ground cover, soil biology and biodiversity values in farming systems.

The two year program will identify farming operations in the following tiers related to adoption and transition to contemporary farming practices:

- Established regenerative farmers (advanced)
- Farmers at early implementation or trialling regenerative practice (beginning)
- Farmers continuing with traditional methods (doing nothing)

Project objectives include:

- Working with farm interest groups to undertake innovative data collection and farm assessment techniques to better understand the relationship between vegetation cover and soil health
- Identify sites of varying regenerative agriculture adoption (advanced, beginning, doing nothing) to provide clear data in relation to the benefits of active regenerative farm management practices
- Develop a shelf-ready method for farmers and farm groups to adopt within a farm and landscape management context
- Establish between 10 and 20 trial sites within the North Central catchment for data collection and monitoring across the project life

Outcomes:

Working with local farmers and farm interest groups in the North Central catchment region and its surrounds, LPLN will deliver a pilot program to develop localised mapping and soil data methodology that harnesses existing soil testing history, future soil testing and a drone program to assess seasonal vegetation cover on farm. By undertaking these actions the program will:

- Provide data and benchmarking toward improved seasonal management of vegetation cover in pasture, cropping and mixed farming systems
- Establish correlations between soil health and soil cover through integrated research and analysis methods using drone flight, VARI (Visible Atmospherically Resistant Index) analysis, soil testing and soil health & biodiversity abundance to provide clearer understanding of the relation to soil health, vegetation cover and general abundance of biodiversity
- Provide proof-of-concept to a point that data can be used demonstrably in carbon or environmental goods and services transaction
- Provide shelf-ready monitoring solutions for farmers that are readily accessible and inexpensive
- Roll out a initial training program with farmers to execute, analyse and interpret data collected
- Provide workshops and find presentation opportunities in order to make the methodology and practice widely adoptable for others in the wider landcare and agriculture communities



Investment:

LPLN is seeking a total investment of between \$90 860 (minimum investment) and \$165 329 (maximum impact) over an initial two years of the project (see *appendix budget breakdown for details*). If successful, the project will require \$58 000 per year ongoing for the project duration (after year two).

A maximum investment will provide a project officer 2 days per week to conduct flights, planning and analysis on up to 25 trial sites and provide support to farmers and farming interest groups to be trained and execute that methods being developed. This investment will also allow the project to utilise the most advanced mapping technology and systems available on the market to conduct imagery activities and analysis within the associated drone program.

A minimum investment will employ a project officer one day per week to deliver the project, allowing for between 10 and 15 monitoring sites, data analysis and 2 workshops per year. Minimum investment also provides that minimum technical requirements in order to undertake the associated drone program.

Breakdown of funds (maximum investment):

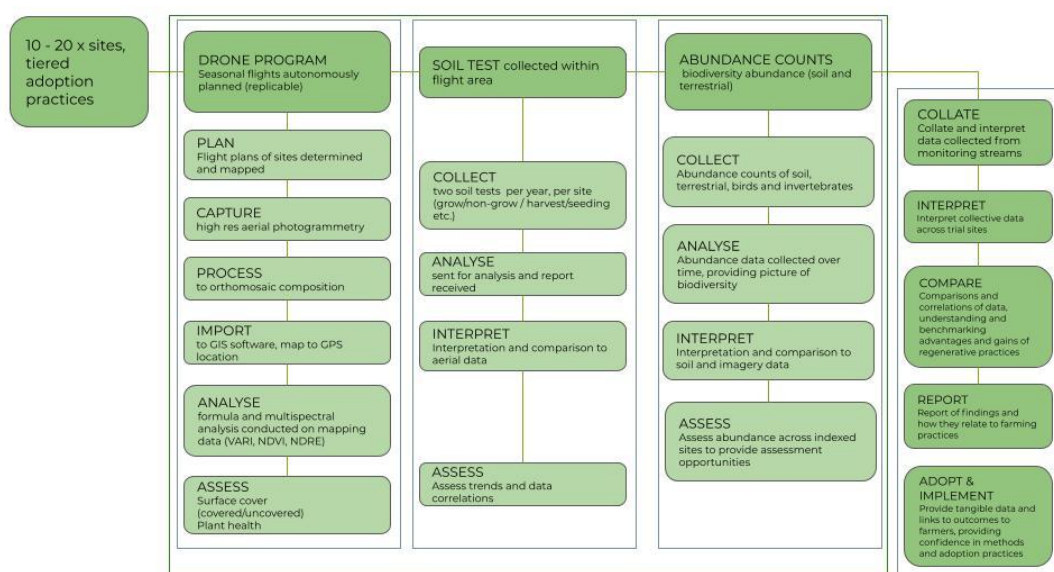
Project and community support role	\$105 220
Equipment	\$ 19 798 (year one)
Documentation and adoption guides	\$ 3 000
Workshops and events	\$ 3 000
Soil Testing	\$ 32 000
Project administration	\$ 3 309

Total investment:	\$165 329
Year one	\$ 89 194
Year two	\$ 76 135

Breakdown of funds (minimum investment):

Project and community support role	\$59 760
Equipment	\$ 7 200 (year one)
Documentation and adoption guides	\$ 3 000
Workshops and events	\$ 1 500
Soil Testing	\$16 000
Project administration	\$ 2 400

Total investment:	\$90 860
Year one	\$47 833
Year two	\$43 027



Designed drone Program logic and deliverable outcomes