


Blueprint for **Action**

To protect and enhance biodiversity in the Network's area



LODDON PLAINS **LANDCARE** NETWORK



The Loddon Plains Landcare Network (LPLN) respectfully acknowledges that Indigenous Australians are intrinsically connected to the continent – including the area now known as Victoria. The Loddon Plains is Dja Dja Wurrung - Jaara People country and the Committee of Management pays their respects to Elders both past and present.

The LPLN has received \$60,000 funding toward this project from The Norman Wettenhall Foundation (NWF). The LPLN looks forward to the continued long-term partnership with The Norman Wettenhall Foundation and extend their thanks to the NWF Team and Board of Trustees.

This Blueprint for Action was prepared by Leah Cripps and updated by Anthony Gallacher on behalf of the LPLN.

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Project Partners



Table of Contents



The Loddon Plains Landcare Network and the GOANNA Project

Loddon Plains Landcare Network (LPLN)	2
The LPLN Committee of Management	2
The groups that make up the LPLN (Table 1)	3
The LPLN Logo	3
What is GOANNA?	4
LPLN Statement of purpose and Project Vision	5
The Loddon Shire	6
Land Use and Ecological Background	7
Biophysical Description	8
Definition of Ecosystem Services, Biodiversity and Biolinks	9

Biodiversity Blueprint Overview

Why was the Blueprint for Action developed?	10
The benefits of the Blueprint for Action	10
Flagship Species	11

Biodiversity Blueprint Elements

The Loddon Plains Landcare Network Area	12
Pre-1750 Ecological Vegetation Classes	14
2005 Ecological Vegetation Classes	16
Tree Cover Public v Private	18
Vegetation Conservation Significance	20
Roadside Conservation Significance	22
Loddon Plains Hydrological Features	24
January 2011 Flood Extent	26
Threatened Fauna and Flora	28
Indigenous Cultural Heritage	30
On-ground Works Achievements	32

Future Project Ideas	34
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References	40
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Appendices

Guidelines for consideration of Projects	42
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Loddon Plains Landcare Network



The Loddon Plains Landcare Network (LPLN) is an incorporated body that formed in October 2009. In July 2009 a meeting was held to explore the idea of forming a new Landcare network in the Loddon Shire area. A working group formed soon after to progress the concept of a network to support local groups that were working in isolation and to develop a set of guiding principles that a new Landcare network would adhere to.

The fundamental principle was that Landcare groups would retain their individual identities. The other agreed principles recognised that the Landcare network provided a critical mass of like-minded people across Loddon Shire, interested in the natural environment and in activities to enhance these values. The network adopted the name 'Loddon Plains Landcare Network' and although some representatives live in the foothills, the majority of members live on the Loddon Plain. The Network's governance comprises of an elected Committee of Management with representation drawn from member groups (Table 1). The Committee of Management convenes monthly at the Loddon Shire Offices at Serpentine.

The LPLN area follows the same boundary as the Loddon Shire except in the south, where the network extends only to Kooyoora State Park to include the Friends of Kooyoora Inc. The neighbouring Mid-Loddon Landcare Network covers the southern part of the Loddon Shire. The LPLN's eastern boundary is flexible to include works projects completed by nearby Landcare groups such as Bendigo Creek Floodplain Group and encompasses a section of the City of Greater Bendigo (Brown, 2010).

Member groups collectively bring to the Network more than 270 land managers responsible for the management of approximately 300,000 hectares of private land on the Loddon Plains. A number of member groups work closely with Parks Victoria and the Department of Sustainability and Environment and play a role in the management of public land across the Network area. Network members comprise farmers, 'tree-changers' and townspeople, each bringing varied life experiences, making the LPLN an interesting and multi-talented group (Brown, 2010).

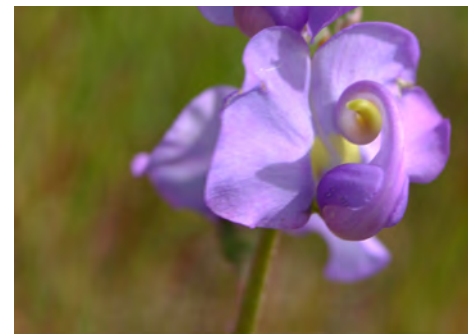
The 2012-13 LPLN Committee of Management





Table 1: The groups that make up the Loddon Plains Landcare Network (November 2012)

Bendigo Creek Floodplain Group	East Loddon Landcare
Fairley Bael Bael Sandhill Lake Landcare	Friends of Kooyoorra Inc.
Friends of Terrick Terrick National Park	Inglewood Urban Landcare
Kamarooka Landcare	Loddon Vale Landcare
North Central Landcare	Northern Plains Conservation Management Network
Northern United Forestry Group	Salisbury West Landcare
Terrick Ridge Landcare	Wedderburn Conservation Management Network
Wychitella District Landcare	



The LPLN Logo

The LPLN Committee of Management has developed a two-colour logo. The logo is in the shape of a goanna (representing fauna) and its components include: people, agriculture (e.g. wheat), water droplets (irrigation), leaves (conservation), circles (different communities and groups), solid lines (representing corridors and biolinks of revegetation across the plains). The overall shape illustrates the potential for socially acceptable landscape change (not just straight lines) throughout the Loddon Plains network area.

The LPLN maintains a website that is updated regularly with news of upcoming events and articles of interest pertaining to natural resource management. See www.lpln.org



The LPLN Logo



What is GOANNA?

GOANNA is an acronym for 'Group Organised Action Nurturing Natural Assets'. It is a landscape-scale restoration project across the Loddon Plains of north central Victoria. The Loddon Plains is home to diverse natural and cultural assets. The importance of this region as a primary food production area both locally and internationally is also recognised. The LPLN regards that a healthy environment is the foundation of healthy agriculture and a sustainable community.

In 2010, the Norman Wettenhall Foundation and the LPLN expressed interest in working together on developing a landscape connectivity project. The Foundation provided \$30,000 to the LPLN Committee of Management to develop the project, its vision and a blueprint for long-term action to protect and enhance the native flora and fauna of the area, with a long term goal to achieve large-scale coordinated action and landscape change.

In 2010 the LPLN appointed a Project Officer to collect mapping data on all of the environmental assets and potential threats they may face across the network area, liaise with member groups and individuals and map on-ground works that had not been previously captured by CAMS (Catchment Activity and Management System), the website used by the Victorian Government for recording environmental projects and tracking public investment.

From this the Blueprint for Action was produced and will be used for planning future activities subject to funding. Along with on-ground works, community education will be another important aspect of the GOANNA Project. Workshops and field days will be extended to the wider community who want to learn more about the importance of biodiversity in sustainable farming enterprises.

The Blueprint for Action will be shown as a 'Business Model' to potential public and private sector investors and demonstrates that the LPLN thinks strategically about landscape restoration and improving environmental outcomes.

An exciting feature of the GOANNA Project arising from the Blueprint for Action and Norman Wettenhall Foundation is the development of an interactive mapping tool that will link through to the LPLN website. This tool is powered by Spatial Vision and allows groups and individuals to record information about their local landscape and project work. For example, a landholder may want to record a Brolga sighting on wetlands or a Landcare group might want to mark off a section of roadside that has been planted with tubestock. So the Blueprint for Action can be a living document that will be continually updated as new information becomes available. This makes the GOANNA Project and its Blueprint for Action a living and evolving process that can be built upon, now and into the future.



Loddon Plains Landcare Network Statement of Purpose

All groups comprising the Loddon Plains Landcare Network (LPLN) will fully retain their individual identities. The LPLN structure provides support to a critical mass of like-minded people across the northern half of the Loddon Shire, interested in their natural environment and in activities to enhance these values.

Project Vision

The LPLN through the GOANNA Project will achieve long-term sustainable landscape change through biolink projects and raising community awareness about the importance of biodiversity in an agricultural landscape.

A Community Approach

The GOANNA Project is community driven and is grounded in the existing groups that make up the LPLN. Local people will determine how they want their landscape to look and how to achieve this.

Projects of any scale are welcomed. They may range from paddock to roadsides traversing districts.

The GOANNA Project is an evolutionary initiative and there is room to develop and incorporate new learning over time.

A Healthy and Productive Landscape

The GOANNA Project aims to:

- Promote a landscape in which agriculture, communities and the environment are in harmony by emphasising the importance of biodiversity on farms to improve land health.
- Promote on-ground works such as fencing, revegetation, natural regeneration, weed and pest control to improve the extent and quality of habitat.
- Encourages community participation in a variety of activities (field days, training courses, monitoring, information sharing and on-ground works activities).
- Tackle the decline of biodiversity, water quality and soil health across the Loddon Plains.
- Collaborate with other projects wherever possible to avoid reinventing the wheel.

Project Planning with good scientific rigour and monitoring

The LPLN Committee of Management will manage the project. Appointed representatives on the committee will be drawn from the membership of existing groups within the network.

The GOANNA Project will seek out local community knowledge and expert scientific advice and feedback as required. This will ensure that good ecological information is being used.

Baseline data on landscape attributes will be attained and then a long-term ecological monitoring process established to measure the impact of the GOANNA Project on the Loddon Plains landscape over time.





The Loddon Shire



The Loddon Shire is located 175km north west of Melbourne and covers an area of approximately 6,700 square kilometres making it the eighth largest municipality (in area) in Victoria. The Loddon Shire formed in 1995 from the amalgamation of seven former shires or a portion thereof. The Shire's population is approximately 8,600 and is characterised by a number of small towns and localities dispersed throughout the area. Towns that have a population of 100 or more people include Boort, Bridgewater, Dingee, Inglewood, Korong Vale, Mitiamo, Newbridge, Pyramid Hill, Serpentine, Tarnagulla and Wedderburn.

The Loddon Shire forms part of Victoria's Goldfields Tourist Region and incorporates the majority of the world-famous "Golden Triangle", encompassing Wedderburn, Inglewood and Dunolly. The Golden Triangle Region is reputed to have yielded up to 80% of the world's gold nuggets. The towns within the southern portion of the Shire are steeped in the history of the gold rush era of 130 years ago and have a strong culture and heritage linking them to goldfield influences of wealth and prosperity together with hardship and pioneering traditions. The Loddon Shire has a large number of natural and man-made tourism attractions. Some of these include award winning wineries, National and State Parks, heritage buildings, numerous wetlands and waterways suitable for water-skiing, swimming, fishing and camping, gold detecting and many local community festivals.

The rural character of the Shire continues to diversify from the traditional grains and sheep to more intensive forms of agriculture and horticulture - including dairy farming, wine grapes, tomatoes, oil seeds, pulses, olives and fodder crops. These developments are largely influenced by the economic need for higher value products, particularly in the irrigated areas in the north of the Shire and along the Loddon River. Agriculture is the economic foundation of the Loddon Plains area, being the main employer and income generator. Thirty nine percent of the LPLN's area population is involved in agriculture (Loddon Shire Council, 2003).



Land use and Ecological Background

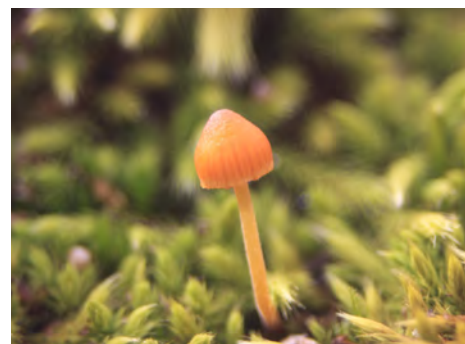
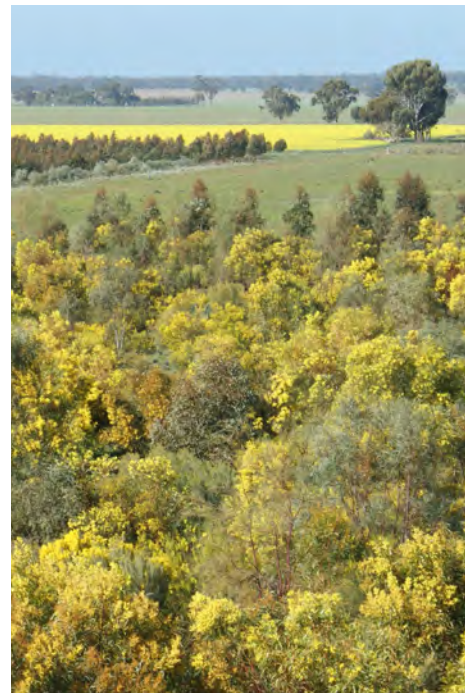
Across the Loddon Shire, and indeed much of Victoria, ecological processes have been impaired through prolonged unsustainable use of the land. The legacy of land clearing, mining, changing weather patterns and ongoing threats posed by poorly planned development threaten natural values in the Shire. The region once contained large areas of Plains Grassland and Plains Grassy Woodland vegetation communities, all of which are now endangered as they were largely cleared due to their suitability for agriculture. Grassland communities occurring in the north eastern part of the Shire and represented in the Terrick Terrick National Park and surrounds is recognised as one of the most endangered vegetation communities in Victoria with less than 1% of their original extent remaining (DSE, 2009).

Most of the forest remnants that remain are of lower quality consisting of multi-stemmed (coppiced) regrowth. These forests are structurally poor, being thick with even aged coppiced eucalypts that shade out understorey plants. The lack of big old trees results in fewer hollows and less nectar flows for birds and animals to inhabit and eat.

An abundant and varied understorey of shrubs, grasses and herbs offered habitat for many insects and smaller birds, and a ground cover of mosses, ferns and lichens stabilised and protected soil and soil dwelling organisms and retained moisture. A coppiced forest of smaller trees does not generally provide adequate habitat for the larger birds, bats, invertebrates and many marsupials.

Some threatened fauna species that live on the Loddon Plains include the Plains Wanderer, Fat Tailed Dunnart, Bush Stone Curlew, numerous waterbirds, Lace Monitor and Growling Grass Frog. Some threatened flora species include a number of Swainson-Pea and orchid species, Buloke, Streaked Wattle and numerous grass species.

The GOANNA Project aims to conduct onground and educational activities to restore the landscape. This means more than just planting trees. Landscape restoration involves recognising the different plant communities or Ecological Vegetation Classes (EVCs), knowing where they occur and understanding how they function across the landscape. This knowledge can be used to restore the kind of plant cover that is most appropriate to an area, as well as protecting and enhancing existing habitat. Such an approach can be used to strengthen biodiversity in order to enable a landscape to provide the kind of 'ecosystem services' that we need to survive.





Biophysical Background



The LPLN area is dominated by the Victorian Riverina bioregion, but also features Goldfields, Northern Inland Slopes and some Murray Mallee bioregion areas (NCCMA, 2005). As such there is a great mix of geology, topography, soils and terrain within the area (DSE, 2012).

The majority of the LPLN area is the Victorian Riverina Bioregion. This is a flat and gently undulating landscape on recent unconsolidated sediments and wide floodplain areas associated with previous major river systems and streams. Alluvium deposits from the Cainozoic period dominate the bioregion (DSE, 2012), which form red brown earths and red duplex soils in the LPLN area (NCCMA, 2012). Other prominent soil types include grey clays and grey sands around the Loddon River, and yellow duplex soils and grey clays to the south on the Bullock, Bendigo and Myers Creeks (NCCMA, 2012).

There are areas classified as Goldfields Bioregion located in the south west of the LPLN. Alluvial valleys with some basaltic plains dissect the northerly aspect uplands of Lower Palaeozoic deposits in this Bioregion. The terrain is both granitic and sedimentary with peaks formed from volcanic rocks (DSE, 2012). The soils vary greatly in this bioregion. Mottled duplex soils, stony red earths and yellow duplex sands, as well as red earths and red duplex soils dominate this bioregion in the LPLN area (NCCMA, 2012).

The Northern Inland Slope Bioregion features around the Terrick Terrick and Pyramid Hill area, in the north east of the LPLN. This bioregion features foothill slopes and is of granitic origin protruding from the surrounding Victorian Riverina Bioregion (DSE, 2012). The soils are yellow duplex sands and red friable earths (NCCMA, 2012).

Small areas of the Murray Mallee Bioregion occur in the LPLN area to the west of Boort. This bioregion generally forms broad undulating sandy plains of calcareous material. Cainozoic alluvial, Aeolian and swampy deposits are dispersed between low sand dunes (DSE, 2012). Calcareous soils and calcareous clays dominate this bioregion in the LPLN area (NCCMA, 2012).

The major hydrological features of the LPLN landscape are the Loddon River, Serpentine Creek, Bullock Creek, Bendigo Creek and Myers Creek. These hydrological features span large areas of the LPLN area. There are subsequent smaller tributaries throughout the area including Spring Creek, Bulabul Creek and Fentons Creek. There are also significant swamps and wetlands that feature within the LPLN area. These include Lake Boort, Lake Lyndger, Woolshed Swamp (and many more smaller swamps) in the northwest and the Kamarooka wetlands complex and Tang Tang Swamp in the southeast of the LPLN area.



Definition of Ecosystem Services, Biodiversity and Biolinks

What are Ecosystem Services?

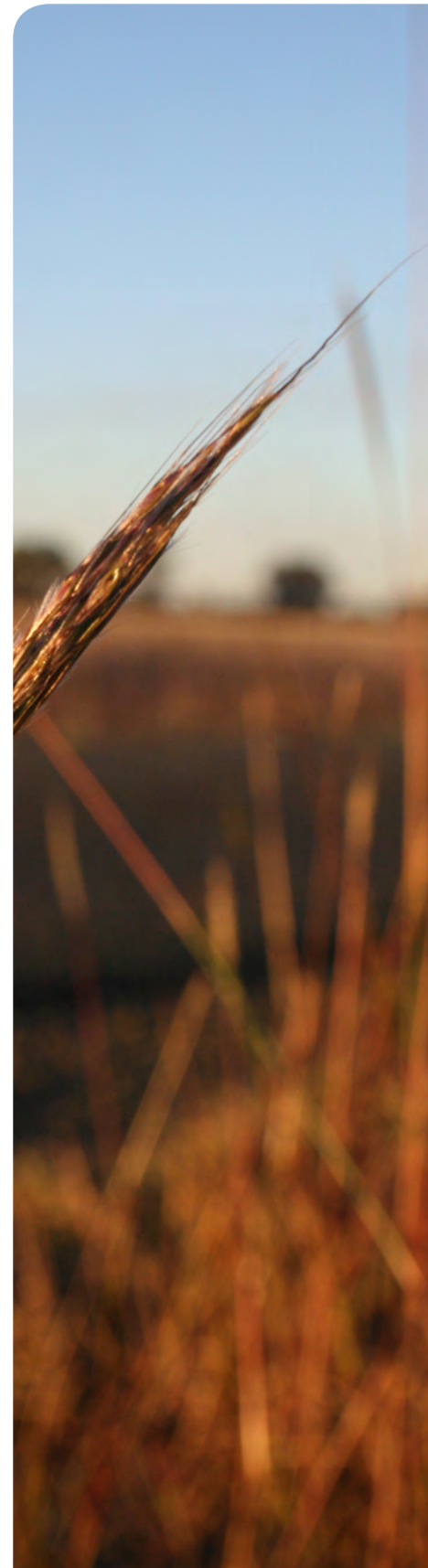
Ecosystem Services are the processes by which the environment produces resources that we often take for granted such as clean water, timber, and habitat for fisheries, and pollination of native and agricultural plants. Whether we find ourselves in the city or a rural area, the ecosystems in which humans live provide goods and services that are very familiar to us (Ecological Society of America).

What is Biodiversity?

Biodiversity is the variety of life and its processes. It includes the variety of living organisms, the genetic differences between them, the communities and ecosystems in which they occur, and the ecological and evolutionary processes that keep them functioning, yet ever changing and adapting. Biodiversity underpins ecosystems and the services they provide, upon which all people fundamentally depend. It supports recreational, cultural, spiritual and aesthetic values (Noss & Cooperrider, 1994).

What are Biolinks?

A section of the landscape managed primarily as habitat for native biodiversity, which is linked wherever possible to areas of native vegetation such as forests, woodlands, grasslands or other types of natural areas such as wetlands, waterways or rocky outcrops (Neerim and District Landcare Group, 2011).



Biodiversity Blueprint for Action Overview



Why was this Blueprint for Action developed?

The LPLN already has quite a few project ideas and a large geographical area to work with. There was a need for a greater understanding about the rich natural resource assets that the region contains and the Blueprint for Action provides a central point of reference. The LPLN can use this Blueprint for Action as a tool to demonstrate to potential investors that the LPLN is strategic about natural resource management (NRM) outcomes and has a clear long-term vision.

Preparation of the Blueprint for Action involved mapping on-ground works that Landcare and associated groups have completed. Many projects were completed before the development of mapping technology and the Internet; and had not been recorded in an accessible format. Some projects were also marked off on aerial photographs that only individual Landcare groups had access too. The Blueprint for Action illustrates these works and provides a comprehensive picture of community achievement.

The Benefits of the Blueprint for Action

The numerous advantages in having a Blueprint for Action that illustrates landscape change and related works are:

- Acknowledgement that the Loddon Plains is home to the Dja Dja Wurrung – Jaara People. The project has a shared aim with the traditional owners and that is with the conservation of cultural heritage sites and minimisation of harm. This blueprint aims to encourage the concept of stewardship for the land by all of its inhabitants.
- It provides a baseline for our understanding of what is happening now.
- It offers a chance for feedback about ongoing work and shows how different projects work together.
- Being able to display all of the great work that Landcare group projects and individuals have achieved is very motivating and makes the job of strategically planning for the future easier. LPLN members see where linkages for maximum benefit in the landscape can be established. These linkages must be ecologically appropriate.
- Conversely, by showing the relationship between ecological problem areas such as endangered species or degraded streams and completed work, it facilitates strategic planning for future work.
- It offers a perspective for planners concerned with housing, roads or other development/infrastructure works.
- As a result of all of the above, it can provide the basis for funding applications: works shown to fit into a carefully conceived and strategic context will be more credible and effective.

Flagship species

After some deliberation, the LPLN Committee of Management agreed upon the Lace Monitor or Goanna (*Varanus varius*) as its flagship species. The Goanna is a highly recognisable and well-loved resident found across most of the Loddon Plains in grassy woodland areas.

One of the major aims of the GOANNA Project is to protect and enhance plains grassy and grassy woodland EVCs. The Goanna relies upon this vegetation type and is noted on the DSE Advisory List as vulnerable in Victoria. Therefore there is potential that this species could face extinction if steps are not undertaken to protect and increase its habitat. Ecologically, there are advantages to the Goanna as a flagship species because it is:

- a top-order predator and as such a keystone species in the area;
- still relatively widespread and common in the LPLN, is a year-round resident, and occupies a range of habitats;
- sensitive to habitat degradation and requires specific habitat elements such as hollows and fallen timber. In this sense it is an umbrella species such that many other species have similar habitat requirements;
- relatively easy to monitor (e.g. sand pads, remote cameras);
- easy to establish indicators and measures of success (Radford, 2012).

Deciding the flagship species was difficult for there are many important plants and animals living in the Loddon Plain. Other notable mentions are the Malleefowl, Bush-stoned Curlew, Brolga, Grey-crowned Babbler and Plains Wanderer. Various groups in the LPLN have been performing on ground activities to help assist with the survival of these threatened bird species.

