



NATURAL RESOURCE

Management Plan

2021-2026



Local Land
Services



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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing December 2021. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of Local Land Services or the user's independent adviser.

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Chair's foreword

On behalf of my fellow board members and staff, I am proud to present the Central West Local Land Services (LLS) Natural Resource Management (NRM) Plan 2021-2026. The vision for LLS is 'resilient communities, in productive, healthy landscapes' and our highly experienced staff and regional community have embarked upon an ambitious consultation process to ensure this plan represented their aspirations for NRM planning in the region.

We are confident this NRM Plan reflects our strategies and service delivery priorities to help us achieve the overarching LLS NRM Framework vision of 'productive and sustainable land use'. A healthy environment has never been more vital to the productivity of our agricultural sector, wellbeing of our regional communities, and the connection of Aboriginal people to culture and Country.

NRM is the integrated management of the natural resources that make up our regions landscape, such as land, water, soil, plants and animals. It recognises that people and their livelihoods rely on the health and productivity of our landscapes, and their actions as stewards of the land play a critical role in maintaining this health and productivity. We strive to empower Aboriginal communities to manage land traditionally and develop the implementation of these traditional land management practices in the wider community.

The Local Strategic Plan community consultation process identified that one of LLS' greatest assets is our local staff with local knowledge. Our team looks forward to the opportunity of working collaboratively with you to deliver productive and sustainable land use in our beautiful and diverse Central West landscape into the future.

Susan Madden

Chair of the Board, Central West Local Land Services



1.0 Introduction

Natural resource management is a key component in the ongoing sustainability and prosperity of the region. The purpose of the NRM plan is to provide a strategic framework to guide investment and actions to improve the management of natural resources. The Plan's goals, targets and actions will be delivered through continued partnerships with community, government and other stakeholders. The Plan defines the most critical assets relevant for community and government intervention in consideration of investor preferences and proximity to critical thresholds.

The plan has been designed to align with other local, state-wide and Commonwealth level plans including:

- LLS state-wide NRM Framework
- Central West LLS Local Strategic Plan and Overarching Strategies
- The Commonwealth Government's National Landcare Program's requirements for a regional NRM plan

Local Land Services is clear about its niche within NRM in NSW. We believe that we make the greatest impact and have the most unique roles to play in:

- *Direct Action and Investment:*

Delivering NRM practice change through demonstration and extension services, advice and information to land managers and implementing on-ground interventions.

- *Partnership and Connection:*

Delivering outcomes at scale through collaborations and partnerships across private and public land, coordination of effort locally and state-wide and connections to approximately 12,600 regional customers and 250,000 state-wide customers.

1.1 Principles underpinning the NRM Plan

This plan aligns strongly with the Local Land Services Goals:

- Biosecure, profitable, productive, and sustainable primary industries
- Resilient, self-reliant and prepared local communities, and
- Healthy, diverse, and connected natural environments

The plan has been developed using a robust and measured approach that has incorporated underlying delivery commitments of Local Land Services including:

- **Customer Outcome-focused** – delivery for our customers and the people of the Central West LLS region, not process focused.
- **High Impact** – investment in the services and issues that realise the greatest impact on achieving healthy landscapes integration – linking NRM services with all other core services.
- **Partnering** – across tenures, groups, and organisations.

- **Accountability** – inspiring confidence through robust governance and transparency.
- **Evidence-based** – having confidence that our interventions will work based on scientific evidence or experience. If we are experimenting, we will do it with our eyes open and capture learnings along the way.
- **Adaptive** – our NRM services will change in response to what we learn, and as social, economic and environmental conditions change.

1.2 Community input into plan development

Central West Local Land Services fosters a transparent approach to engaging with stakeholders to ensure community values are incorporated into strategy, planning and service delivery.

During the development of the Draft NRM Plan, several consultation mechanisms have been undertaken to ensure a varied level of community input throughout the process. Including, but not limited to the following:

- Face to face workshops with Landcare coordinators
- Targeted consultations with the NRM working group
- Applying aligned findings from the Central West LLS Local Strategic Plan community workshops and consultation
- Online engagement via the Central West LLS Engagement Hub platform
- Guided online engagement sessions with key NRM stakeholders
- One-on-one consultation with stakeholders including Aboriginal community representatives
- Direct invitations for participation via various media channels and networks

Stakeholder engagement is an essential part of delivering NRM outcomes for the Central West region. Maintaining and developing relationships is embedded and prioritised across all sections of the Draft NRM Plan. This focus will continue to remain at the forefront of NRM project design into the future.

Central West LLS has commenced a new program, the Aboriginal Communities Engagement Opportunities Initiative. The purpose of the initiative is to guide development, implementation and delivery of Central West Local Land Services priority programs for engagement with Aboriginal communities in the Central West region for the next five-year period (2021-2026). The initiative's vision is 'to build strong relationships with communities and through good communication and respect, ensure that Aboriginal people have a voice and input into land management issues across the region, in particular the management of cultural values.'



1.3 NRM Plan Outcomes

The NRM Plan sets out how Central West LLS will deliver five long-term NRM outcomes, aligned to the five state-wide objectives set out in the LLS NRM Framework 2021-2026.

- **Outcome 1: Driving practice change**
- **Outcome 2: Promoting new environmental markets**
- **Outcome 3: Supporting healthy, resilient landscapes, including:**
 - » Significant species
 - » Soil and land
 - » Terrestrial ecosystems
 - » Aquatic ecosystems
- **Outcome 4: Empowering Aboriginal Communities to Care for Country**
- **Outcome 5: Fostering partnerships**

The program logic below shows the alignment between long-term outcomes for NRM in the Central West LLS region and the state-wide objectives set out in the LLS NRM Framework 2021-2026

Central West LLS Program Logic – NRM Plan

DRNSW LLS Outcome

Productive and sustainable land use

- Increased engagement of land managers in LLS programs relating to natural resource management
- Increased land manager recommendation of LLS to their friends for services relating to natural resource management
- Increased area of improved land manager practices relating to natural resource management over four years

LLS NRM Strategy Objective 1: Driving practice change through customer-centred NRM services

Long-term outcomes for NRM in Central West LLS region

Land managers are engaged and increase their capacity to manage strategic NRM priorities and adapt to climate change.

Intermediate Outcomes (5 years)

Driving Practice Change

- NRM services are tailored to our customers' specific needs and desired outcomes to achieve increased engagement and satisfaction from land managers
- Through improved awareness, knowledge and skills, our customers are empowered to seize opportunities arising from change, and to manage natural resources to adapt to change
- Our customers increasingly adopt sustainable NRM practices

LLS NRM Strategy Objective 2: Helping land managers get a return from NRM

Long-term outcomes for NRM in Central West LLS region

Land managers are realising returns from adoption of improved NRM and agricultural practices.

Intermediate Outcomes (5 years)

New Environmental Markets

- Our capacity to support customers to engage with primary production and NRM goods and services markets is improved
- Our customers awareness and understanding of potential economic benefits of improved primary production and NRM practices is increased
- Our customers are actively engaged and participating in primary production and NRM markets and/or stewardship schemes

LLS NRM Strategy Objective 3: Tackling the priority threats to achieving healthy resilient landscapes

Long-term outcomes for NRM in Central West LLS region

- Native plant and animal populations of Commonwealth, State, Regional and Local significance are maintained in balance with their landscape
- Soils are protected or rehabilitated to support ecosystem services
- Native vegetation and terrestrial habitat is protected or rehabilitated to support ecosystem services
- Streams and wetlands (including Ramsar sites) are protected or rehabilitated to support ecosystem services

Intermediate Outcomes (5 years)

Supporting Healthy, Resilient Landscapes

- Significant Species: Increased population viability of target species
- Soil and Land: Improved soil condition across priority sites
- Terrestrial Ecosystems: Improved extent, condition and connectivity of native vegetation in priority areas
- Aquatic Ecosystems: Streams and wetlands (including Ramsar sites) are protected or rehabilitated to support ecosystem services

LLS NRM Strategy Objective 4: Supporting Aboriginal land managers to care for Country

Long-term outcomes for NRM in Central West LLS region

Aboriginal people and communities participate in NRM decision-making and work on Country.

Intermediate Outcomes (5 years)

Empowering Aboriginal Communities to Care for Country

- Central West LLS' relationship and partnerships with Aboriginal people and communities are improving
- Relationships and partnerships are developed through two-way knowledge sharing and capacity building
- Participation of Aboriginal people and communities in NRM decision-making is improved
- Aboriginal people and communities have increased opportunities to work on Country



LLS NRM Strategy Objective 5: Becoming service provider of choice and trusted broker of partnerships

Long-term outcomes for NRM in Central West LLS region

Investors and regional stakeholders seek out Central West LLS to foster partnerships for NRM in the region.

Intermediate Outcomes (5 years)

Fostering Partnerships

- Our investors and partners are increasingly confident in Central West LLS to successfully deliver NRM projects and services
- Our partnership brokering and collaboration is highly valued and support the delivery of regional and state-level outcomes

1.4 Regional landscapes

The Central West LLS region is home to around 110,000 people and covers the area of Grenfell, Forbes, and Wellington to the western plains of Nyngan and Coonamble.

Mixed farming enterprises are dominant across the region. Wheat is the main cereal crop produced, with canola the most significant non-cereal crop. Sheep and cattle production are the dominant livestock enterprises. The region is also home to significant natural assets, including the internationally recognised Macquarie Marshes.

Western Plains

The Western Plains local landscape lies on the eastern edge of the Cobar Pediplain and contains fragile red soils, periodically suitable for opportunistic cropping when climatic conditions are suitable. Rainfall tends to be summer dominant in the north and winter dominant in the south. Livestock grazing is the main type of agricultural enterprise in this landscape.

Although only one major nature reserve exists (Quanda Nature Reserve), significant native woodland remnants are present in State Forest reserves, TSRs and on private or leasehold land. Good opportunities exist therefore to establish a series of vegetation corridors throughout the landscape to assist migration and maintain refugia for native species.

Floodplains

The Floodplains local landscape is dominated by the alluvial plains of the Bogan, Macquarie and Castlereagh rivers. Irrigation flows from Burrendong Dam makes this area suitable for citrus orchards in the Narromine area and a strong focus for cotton, particularly around Trangie and Warren. Wheat is a popular crop, accompanied by oats and both cattle and sheep grazing.

The Macquarie Marshes, an iconic and internationally recognised Ramsar wetland, is a significant feature of the local landscape, relying heavily on floodwaters of the regulated Macquarie River. Many bird and aquatic species are reliant on the Macquarie Marshes at some stage in their life cycle, and hence it is a critical feature in the landscape, especially for its habitat potential under hotter climates.

Lachlan Plains

The Lachlan Plains local landscape has gently sloping plains with intermittent creeks, gullies and grassy woodlands to the east and vast open flat country to the west. The productive capability of the fertile clays, workable rainfall and land values has made this area attractive to large-scale agriculture with the grains industry developing as the major agricultural industry across the landscape. The Lachlan River supports aquatic and terrestrial species, whilst supporting agricultural production. Ephemeral lake systems of Lake Cowal, Nerang Cowal and Bogadillon Swamp support a wide diversity of terrestrial and aquatic species and over 270 species of birds.

Northern Slopes

The Northern Slopes local landscape is characterised by rolling hills, ridges, and the major waterways – the Castlereagh and Talbragar rivers. The Warrumbungle Range is a notable feature of the region. More productive soils in this region are associated parent materials with the volcanic and alluvium soil derived from them. These soils support the majority of cropping activities in the local landscape and can be highly productive.

The Northern Slopes contain the largest proportion of remnant native vegetation in the Central West LLS region, including large areas of National Park, State Conservation Areas, Nature Reserves and State Forests. Vegetative cover on private land is also high relative to other local landscapes. This, combined with relatively higher rainfall and lower evaporation, gives these native vegetation remnants a very high corridor connectivity potential and conservation values under future climates (Drielsma et al, 2014).

Central Plains

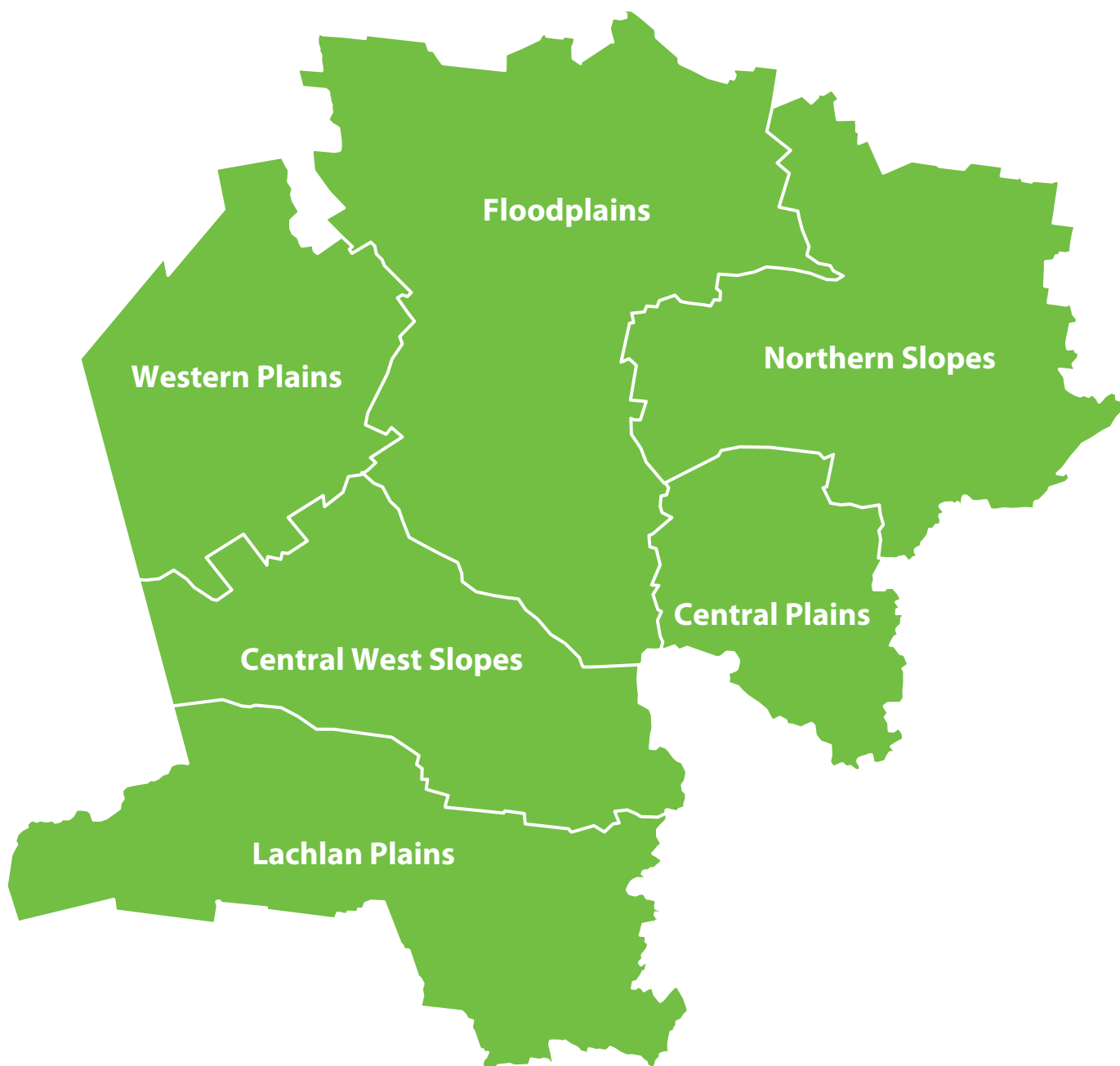
The Central Plains local landscape follows the Macquarie River from the lower inland slopes of the Great Dividing Range to the open plains around Dubbo. Elevated areas experience relatively higher rainfall and lower evaporation compared to other areas of the Central West. The geology, soils and vegetation in the local landscape is highly variable.

Remnant native vegetation on the more productive soils are rare and are mainly found along watercourses, road corridors and TSRs. Lake Burrendong supports more than 10,000 waterbirds.

Central West Slopes

The Southern Slopes is an area of foothills and isolated ranges in the lower inland slopes of the Great Dividing Range, and includes the towns of Peak Hill, Parkes, Trundle and Tullamore. The region is home to open forests and woodlands and is dominated by a sub-humid climate with hot summers.

The Bogan River is the main water resource. The landscape is heavily cleared for agricultural activities, and remnant vegetation is largely confined to less productive soils on ridges. The Goobang National Park contains a significant stand of remnant woodland. The geology and soils support a diverse range of broadacre cropping and grazing enterprises.



1.5 Regional snapshot

Top agricultural enterprises

- Wheat: \$634m
- Cattle: \$167m
- Wool: \$188m
- Cotton: \$68m
- Sheep: \$50m
- Barley: \$68m
- Oilseed: \$30m

Area

- Total area of region: 9,441,287 ha
- Total area occupied by agriculture: 7,248,810 ha
- Typical holding size: 990 Ha
- Value of agriculture per hectare of agricultural land: \$219
- Gross value of agriculture production (GVAP): \$1,685,509,633
- Number of agricultural businesses: 5,442
- Average rainfall: 539.67

Top land use

- Grazing / Cropping
- Nature Conservation
- Forestry
- Lakes, rivers, dams

Population

- Total population: 113,527
- Aboriginal population: 16,296
- Number of ratepayers: 14,156
- Average age of landholders: 42
- Unemployment rate: 6%

Systems of concern

- Sodic surface and subsoil
- High fragility river reaches
- Grassy woodlands and grasslands
- Dry sclerophyll forest
- Semi-arid shrubby woodlands

Natural assets

- Macquarie Marshes
- Warrumbungle National Park
- Macquarie River
- Lachlan River
- Goonoo Forest
- Weddin Mountains
- Lake Cowal

Central West LLS office locations

- Condobolin
- Coonabarabran
- Coonamble
- Dubbo
- Forbes
- Gilgandra
- Grenfell
- Nyngan

Data: Central West Local Land Services Regional Profile Snapshot 2018

1.6 Addressing climate change

Central West LLS recognises the importance of considering climate change and potential impacts in managing natural resources across the region. In 2016, Central West LLS produced a report *Climate Change in the Central West of NSW* which outlines the current and projected impacts of climate change within the region.

The report concludes that climate change is affecting the Central West region, particularly through increasing temperatures and erratic summer rainfall. Projections show temperatures are expected to keep rising, rainfall patterns will change, a higher likelihood of consistent and frequent hot days and heatwaves, and favourable fire conditions and risks will increase.

It is expected that these changes will lead to further native species and vegetation communities being listed as threatened. It is also likely that previously unrecognised weeds, disease, and pests (Key Threatening Processes) will expand into the region, and current threats will become increasingly difficult to manage.

The Central West is a critical region for species migration. As temperatures rise, the Warrumbungles Ranges, Pilliga Forest and the Goobang National Park will become important corridors for vulnerable species seeking refuge. Soils across the region are particularly vulnerable to increased gully erosion, therefore managing and maintaining groundcover will be essential.

The key investment priority identified in the Report for the Central West LLS region will be in the management of climate change adaptation. The report recommends a local and regional approach to mitigation programs and large scale collaborations.



Priority actions that Central West LLS can incorporate into program delivery to raise awareness and capacity to mitigate the impacts associated with climate change include:

- Extension of climate change research and projections and providing advice on adaptation response options
- Direct investment in on-ground activities which help support climate change adaptation including riparian zone revegetation, corridor planting, habitat enhancement and pest and weed control
- Promoting government initiatives that focus on climate change adaptation
- Educating new landholders about impending climate change and their role in a strategic adaptation framework
- Incorporating climate change adaptation and planning into Whole Property Planning workshops



2.0 What are the top threats to the landscapes and catchments of the region?

Key threats to achieving healthy and resilient landscapes and catchments in the Central West region have been identified across all outcome areas. Threats can be biophysical, social, economic and Cultural and identifying them as they relate to each outcome will assist in determining the most effective actions to achieve the Plan's objectives.

Central West have identified the main threats to the delivery of the outcomes. These are explained in further detail in Appendix 4.

The most common threats across the outcome areas that have been determined through consultation with staff and community and ranked according to the number of outcomes they relate to are:

- Lack of Departmental knowledge and procedures for implementing traditional land management practices
- Invasive animal species impacts on biodiversity/production/water quality or biosecurity
- Political influences on funding programs
- Changes in program/project staff
- Loss of knowledge of local Aboriginal Culture (significant sites and stories from across the whole region)
- Short-term funding programs
- Inadequate funding or resources to implement traditional land management programs



3.0 How we are going to tackle the threats and assess our performance

This section will outline the five outcomes of the plan which will set the strategic direction of NRM investment, operations and service provision for Central West LLS over the next five years. These goals aim to address key threats to natural resources and production within the region and provide a sound basis for a prioritised approach to investment.

The following sections describe the five long-term outcomes of this plan. Each outcome is described in terms of:

- **Long term Outcomes** – Outcomes that will take a longer period to determine the impact of project actions. In most cases, long-term outcomes refer to larger, landscape scale changes.
- **Intermediate Outcomes** – Outcomes that determine impacts of program activities across a 3 to 5-year period.
- **Priority NRM Actions** – A list of specific actions that will be implemented to address the short, medium and long term outcomes of the plan.
- **Potential key performance indicators** – Key performance indicators determine how activities and actions will be measured to ascertain their effectiveness towards achieving the proposed intermediate outcomes.
- **Key Customers** – Priority customers to work with to achieve the outcomes of the plan
- **Key Stakeholders** – Priority stakeholders to collaborate with on program delivery relevant to the outcomes of the plan
- **Priority Regions** – Broad areas to target resources and investment for the specific outcome.
- **Possible Activities** – Activities which may be implemented at a project or program level to address the priority NRM actions.



3.1 Driving practice change through customer centered NRM services

Long Term Outcome

- Land managers are engaged and increase their capacity to manage strategic NRM priorities and adapt to climate change

Intermediate Outcomes

- NRM services are tailored to our customers' specific needs and desired outcomes to achieve increased engagement and satisfaction from land managers
- Through improved awareness, knowledge and skills, our customers are empowered to seize opportunities arising from change, and to manage natural resources to adapt to change
- Our customers increasingly adopt sustainable NRM practices

Priority NRM actions

- Develop NRM practice change programs tailored to customer needs
- Demonstrate best practice for NRM in a range of local settings, highlighting economic, social and environmental outcomes
- Provide whole-property planning and advisory services that integrate NRM
- Deliver services that build land managers' capacity to sustainably manage land and adapt to change
- Support local leaders, land manager networks and community groups to share knowledge and demonstrate best practice

Potential key performance indicators

- % increase in customer satisfaction and net promoter scores
- % of land managers engaged in programs and services
- % land managers with an increase in knowledge and skills
- % of customers adopting improved NRM practices
- Area (ha) of improved land management practices

Possible Activities

- Whole Property Planning
- Identify opportunities for tailoring programs to segmented customer base where necessary
- Provision of tailored NRM advice, extension and incentives
- Promotion and support of innovation and technology adoption
- Field days, awareness raising workshops and targeted training events
- Citizen science programs
- Soil health testing and management programs
- Provision of 1:1 NRM advice
- Facilitate engagement between local networks
- Work with Regional Agriculture Landcare Facilitator (RALF), Aboriginal Community and Community Engagement officers to support local networks
- Networking and collaboration with other stakeholders in project delivery and community engagement
- Establishing and implementing a collaborative, regional-based, research and development program with tertiary institutions, industry and community groups program with tertiary institutions, industry and community groups



Key customers	Key stakeholders or partnerships for implementation
<ul style="list-style-type: none"> » Primary producers or farmers » Hobby or lifestyle and managers » Aboriginal land managers » >2ha land managers » Corporate land managers » Public land managers 	<ul style="list-style-type: none"> » Local Land Services » Crown Lands » DPI » DPI – Fisheries » EES » BCT » DPIE » NPWS » FC NSW » Local Government » Australian Government – DAWE » MDBA » Central West LLS Board » CWLLS Community Advisory Group » CWLLS Aboriginal Engagement Steering Committee » Local Aboriginal Lands Councils » Traditional Owner Groups » Aboriginal organisations, corporations and communities » Tertiary institutions – Universities » Tertiary institutions – TAFE NSW » Research and Development Organisations » NSW Farmers » Landcare Groups » Other producer Groups » Community not for profit groups » Other NRM Stakeholders » Potential Investors

3.2 Promoting New Environmental Markets

Long Term Outcome

- Land Managers are realising returns from adoption of improved NRM and agricultural practices

Intermediate Outcomes

- Our capacity to support customers to engage with primary production and NRM goods and services markets is improved
- Our customers awareness and understanding of potential economic benefits of improved primary production and NRM practices is increased
- Our customers are actively engaged and participating in primary production and NRM markets and/or stewardship schemes

Priority NRM actions

- Build organisational capacity to support customers to engage in primary production and NRM markets
- Scope opportunities for Central West LLS to play a role in primary production and NRM markets and stewardship schemes
- Build strategic partnerships with primary production and NRM market stakeholders
- Trial new programs and services where Central West LLS acts as intermediary between customers and emerging markets
- Deliver advice and extension that incorporates potential economic benefits of primary production and NRM activities

Potential key performance indicators

- 1.0 Number of relevant staff members trained in supporting adoption of primary production and NRM goods and services markets
- 2.0 Number of land managers participating and percentage with an increase in knowledge and skills
- 3.0 Number of land managers participating in environmental markets and/or stewardship schemes

Possible Activities

- Whole Property Planning
- Key staff members are provided training and development opportunities
- Research how other NRM regions have successfully established a role in market and stewardship schemes
- Develop a plan outlining the extent of Central West LLS involvement in market and stewardship schemes and opportunities for alignment with Central West LLS core business
- Develop formal and informal partnerships with key regional stakeholders
- Identify opportunities for Central West LLS to value-add to stakeholder-driven programs
- Determine opportunities for Central West LLS to provide links between customers and emerging markets, including researching existing programs
- Develop a trial program for Central West LLS to support landholder participation in primary production and NRM markets
- Extension activities aimed at building community awareness and capacity to participate in market opportunities
- Develop promotional materials
- Promotion and support of best practice primary production and NRM adoption that assist land managers to participate in market schemes
- Promote and coordinate biodiverse carbon sequestration opportunities



Key customers	Key stakeholders or partnerships for implementation
<ul style="list-style-type: none"> » Primary producers or farmers » Hobby or lifestyle and managers » Aboriginal land managers » >2ha land managers » Corporate land managers 	<ul style="list-style-type: none"> » Local Land Services » Crown Lands » DPI » DPI – Fisheries » EES » BCT » DPIE » NPWS » FC NSW » Local Government » Australian Government – DAWE » MDBA » Central West LLS Board » CWLLS Community Advisory Group » CWLLS Aboriginal Engagement Steering Committee » Local Aboriginal Lands Councils » Traditional Owner Groups » Aboriginal organisations, corporations and communities » Tertiary institutions – Universities » Tertiary institutions – TAFE NSW » Research and Development Organisations » NSW Farmers » Landcare Groups » Other producer Groups » Community not for profit groups » Other NRM Stakeholders » Potential Investors

3.3 Supporting Healthy, Resilient Landscapes

A – Significant Species

Long Term Outcome

- Native plant and animal populations of Commonwealth, State, Regional and Local significance are maintained in balance with their landscape

Intermediate Outcomes

- Increased population viability of target species

Priority NRM actions

- Conservation actions for threatened species
- Conservation actions for threatened ecological communities
- Pest and weed control programs

Potential key performance indicators

- Extent and condition of habitat for targeted species maintained or improved
- Populations of targeted species are stabilised or improved

Possible activities

- Whole Property Planning
- Implementation of recovery plan/conservation advice initiatives to reduce key threats
- Implementation of management actions to improve habitat and extent for native threatened species
- Local and landscape scale pest plant management
- Local and landscape scale pest animal management

Prioritisation Process Factors

Threatened Species

Threatened species within the Central West LLS region have been ranked using the Threatened Species Prioritisation Tool, according to several factors including:

- » Conservation status at both commonwealth and state level
- » Number of records within the region
- » Significance of regional population to entire known population

The abundance and distribution of threatened species within the region covers a wide geographical area. Project priority areas will be developed based on individual species or project focus species groupings and will incorporate recovery plan recommendations or conservation advice where appropriate.

At a project level, other factors may be incorporated to further refine the priority area including:

- » Density of known occurrences or sightings of species
- » Species-specific habitat features such as vegetation community, distance to waterways, soil characteristics, and geological formations
- » Spatial priority habitat models for individual species
- » Incorporation of subject matter expert advice or access to new data
- » Incorporation of investor/partner prioritisation recommendations
- » Align methodologies or data with local management plans and strategies



Threatened Ecological Communities

Threatened Ecological Communities (TECs) have been ranked using a Threatened Species Prioritisation Tool. Six TECs within the Central West region have been selected as a high priority through this process and the available spatial data for these TECs defines the priority area as shown in Map 1.

At a project level, other factors may be incorporated to further refine the priority area including:

- » Significance of TEC as demonstrated by overall ranking within Threatened Species Prioritisation Tool
- » Ecological condition score of High and Medium
- » Spatial priority habitat models for individual TECs

Key customers	Key stakeholders or partnerships for implementation
<ul style="list-style-type: none">» Primary producers or farmers» Hobby or lifestyle and managers» Aboriginal land managers» >2ha land managers» Corporate land managers» Public land managers	<ul style="list-style-type: none">» Local Land Services» Crown Lands» DPI» DPI – Fisheries» EES» BCT» DPIE» NPWS» FC NSW» Local Government» Australian Government – DAWE» MDBA» Central West LLS Board» CWLLS Community Advisory Group» CWLLS Aboriginal Engagement Steering Committee» Local Aboriginal Lands Councils» Traditional Owner Groups» Aboriginal organisations, corporations and communities» Tertiary institutions – Universities» Tertiary institutions – TAFE NSW» Research and Development Organisations» NSW Farmers» Landcare Groups» Other producer Groups» Community not for profit groups» Other NRM Stakeholders» Potential Investors

3.3 Supporting Healthy, Resilient Landscapes

B – Soil and Land

Long Term Outcome

- Soils are protected or rehabilitated to support ecosystem services

Intermediate Outcomes

- Improved soil condition across priority sites

Priority NRM actions

- Works to protect assets
- Works to remediate degradation
- Works to improve groundcover management
- Address soil constraints
- Pest and weed control programs

Potential key performance indicators

- Area (ha) of degradation is reduced
- Area (ha) of groundcover maintained

Possible activities

- Whole Property Planning
- Provision of 1:1 NRM advice
- Management of land in accordance with land capability and best management practices
- Strategic grazing management
- Maintaining groundcover in cropping systems (including stubble retention, cover cropping, mulching)
- Biomass production for carbon benefits
- Strategic revegetation – alley farming/shelterbelts
- Managing total grazing pressure (including water point exclusion and pest control)
- Remediation works (gully control structures, pasture and cropping systems, waterponding, water-spreading)
- Erosion control at critical points in the landscape
- Local and landscape scale pest plant management
- Local and landscape scale pest animal management

Prioritisation Process Factors

Soil is a critical biophysical asset within the Central West LLS region. It supports both natural and production systems and has many features to consider when prioritising investment and programs. The Soil and Land outcome has been broken down into the four priority NRM actions:

1. Works to protect assets
2. Works to remediate degradation
3. Works to improve groundcover management
4. Address soil constraints

The prioritisation process for each action has been customised based on available data, expert advice and local knowledge.

Prioritisation process factor refinement

At a project level, other factors may be incorporated to further refine the priority area including:

1. Potential for Carbon sequestration
2. Landuses that exacerbate the constraint
3. Refinement of groundcover data to a specific target threshold such as <40% or >80%
4. Incorporation of subject matter expert advice or access to new data
5. Incorporation of investor/partner prioritisation recommendations
6. Align methodologies or data with local management plans and strategies



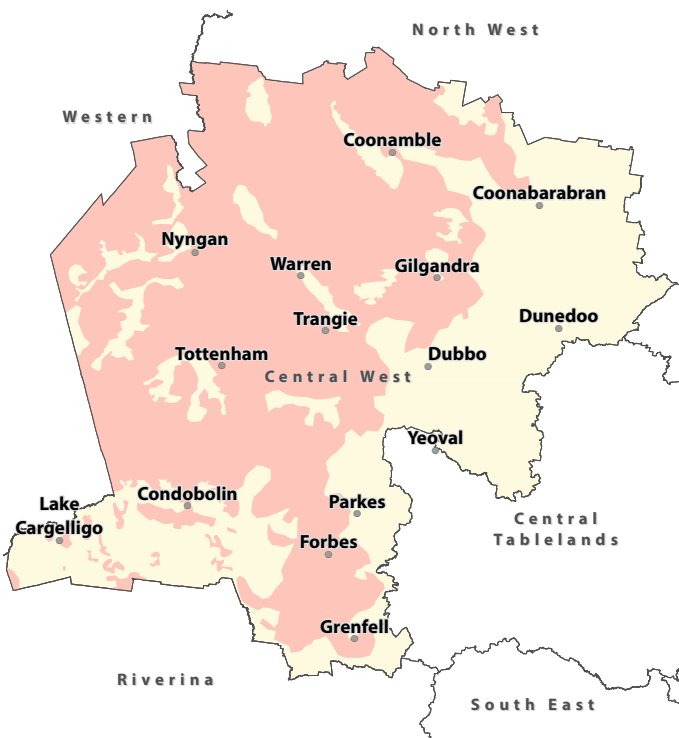
1. Works to protect assets

Prime agricultural production is highly dependent on healthy soils, therefore works to protect assets and remediate degradation are a high priority. To determine the priority area for this category, the following indicators were applied:

7. Areas of productive agricultural land were determined by highly productive Land and Soil Capability scores 2-3, and productive agricultural land uses.
8. Areas with consistently low groundcover (average <70% over a 10-year period)

Legend

Priority area for works to protect assets



2. Works to remediate degradation

Land and Soil Capability scores can determine land where degradation may be more prevalent. The priority area for this category was determined using a similar process for determining asset protection areas, although soils that were more prone to degradation were included as follows:

- » Land and Soil Capability scores of 4-6 which are more prone to degradation
- » Areas with consistently low groundcover (average <70% over a 10-year period)

Legend



Priority area for works to remediate degradation

Key customers	Key stakeholders or partnerships for implementation
<ul style="list-style-type: none"> » Primary producers or farmers » Hobby or lifestyle and managers » Aboriginal land managers » >2ha land managers » Corporate land managers » Public land managers 	<ul style="list-style-type: none"> » Local Land Services » Crown Lands » DPI » DPI – Fisheries » EES » BCT » DPIE » NPWS » FC NSW » Local Government » Australian Government – DAWE » MDBA » Central West LLS Board » CWLLS Community Advisory Group » CWLLS Aboriginal Engagement Steering Committee » Local Aboriginal Lands Councils » Traditional Owner Groups » Aboriginal organisations, corporations and communities » Tertiary institutions – Universities » Tertiary institutions – TAFE NSW » Research and Development Organisations » NSW Farmers » Landcare Groups » Other producer Groups » Community not for profit groups » Other NRM Stakeholders » Potential Investors

3.3 Supporting Healthy, Resilient Landscapes

B – Soil and Land (continued)

3. Groundcover

Groundcover has been assessed and characterised across the Central West LLS region. This characterisation allowed for targeted prioritisation of areas for remediation and conversely, areas for ongoing protection and preventative actions. The groundcover priority map has been developed using the following process:

- » Terrestrial Ecosystem Research Network (TERN) groundcover data has been used to develop a spatial map demonstrating groundcover levels over a 10-year period (2011-2020). An average groundcover dataset was then developed and divided into High (>85%), Medium (70-85%) and Low (<70%) groundcover categories.

Address Soil Constraints – Individual Soil Constraints Priority Areas

Five soil constraints were included as priorities for intervention within the Central West LLS region. Each constraint has a unique set of indicators that have been applied to determine the priority area as follows:



Legend

- High: Better than 85% groundcover
- Medium: Between 70% and 85% groundcover
- Low: Less than 70% groundcover



a) Land Salinity

Land salinity causes significant production losses across the region and can present unique management problems. Land salinity within the region has been mapped by DPIE through the Hydrogeological Soils program.

- » A Land Salinity score of High has been selected as the priority area to address land salinity constraints.

Legend

- Priority area for addressing Land Salinity

b) Wind Erosion

Low groundcover is a risk factor for wind erosion, especially in the western parts of the region. To develop a priority area to address wind erosion, the following indicators were used:

- » Land and Soil Capability scores may be broken down to specific soil hazards, each with its own score. The Wind Erosion hazard score of 4-7 was selected as a prioritisation factor as a score of 4 is the point where a constraint starts to have an impact on production and the environment and a score of 7 was the highest hazard score for Wind Erosion within the Central West region.
- » Areas with consistently low groundcover were also used (average <70% over a 10-year period).

Legend

Priority area for addressing Wind Erosion





3.3 Supporting Healthy, Resilient Landscapes B – Soil and Land (continued)

c) Water Erosion

Water Erosion is present in large parts of the landscape. It is usually a consequence of low groundcover, high risk landscapes, significant storm events or a combination. The water erosion priority map has been developed using the following process:

- » Land and Soil Capability Water Erosion hazard score of 4-7 was selected as a prioritisation factor as a score of 4 is the point where a constraint starts to have an impact on production and the environment and a score of 7 was the highest hazard score for Water Erosion within the Central West region.
- » Gully erosion risk of minor and moderate was also used in conjunction with streambank erosion risk to determine areas along watercourses and point sources prone to water erosion
- » Areas with consistently low groundcover were also used (average <70% over a 10-year period).

Legend

-  Priority area for addressing Gully Erosion
-  Priority area for addressing Water Erosion



d) Sodicty

Sodicty is a significant constraint, especially in crop production systems. Sodicty spatial data was sourced from DPIE using the following parameters:

- » Exchangeable soil percentage of 6-10, measured at a subsoil depth of 30-100cm as per recommendations from soil experts

Legend
Soil Sodicty

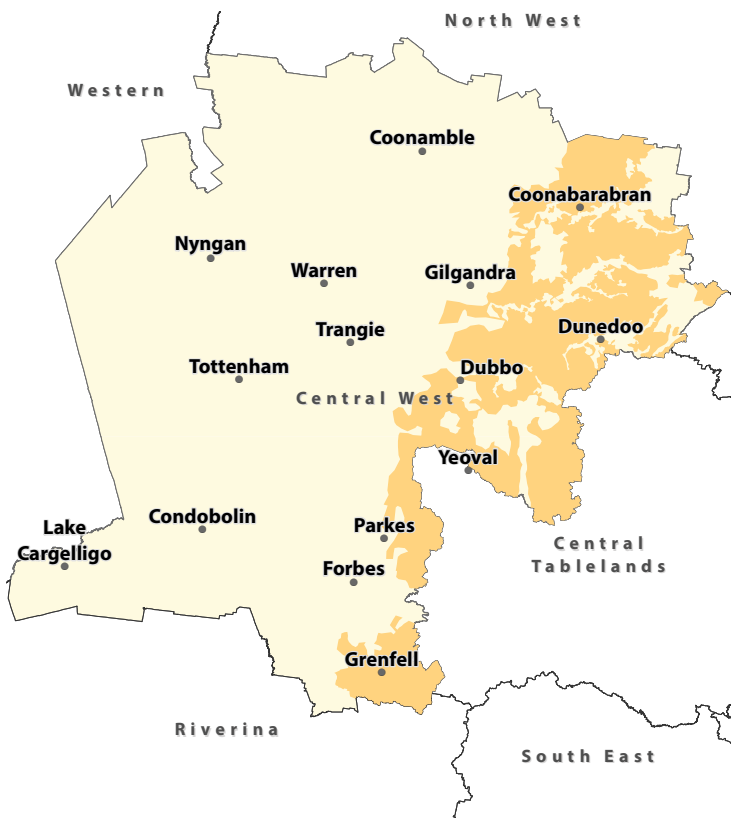


e) Acidity

To determine the priority area for the soil acidity constraint, the pH range has been selected based on research into standard measurements of the level where soil acidity begins to impact plant growth.

- » pH level of 5 (CaCl) and lower at a depth of 0-30cm as this is where subsoil acidity is a natural occurrence in the soil

Legend
Soil pH <=5



3.3 Supporting Healthy, Resilient Landscapes

C – Terrestrial Ecosystems

Long Term Outcome

- Native vegetation and terrestrial habitat is protected or rehabilitated to support ecosystem services

Intermediate Outcomes

- Improved extent, condition and connectivity of native vegetation in priority areas

Priority NRM actions

- Works to enhance native vegetation
- Works to restore native vegetation
- Works to protect native vegetation
- Pest animal and weed control programs

Potential key performance indicators

- Extent and condition of native vegetation maintained or improved
- Connectivity of native vegetation improved

Possible activities

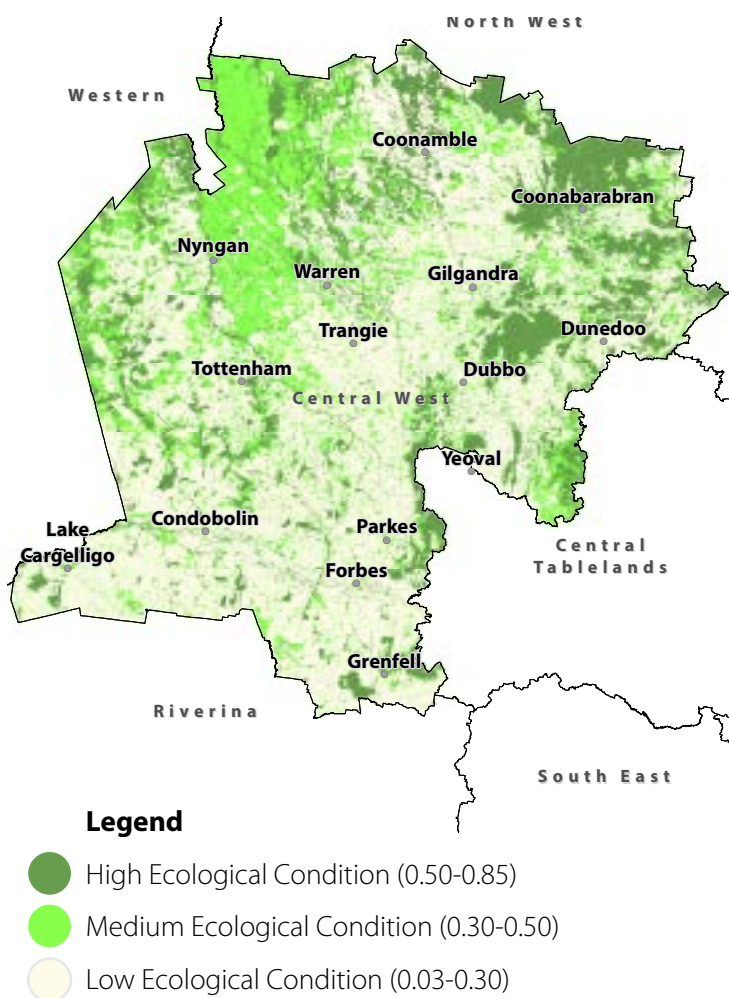
- Whole Property Planning
- Provision of 1:1 NRM advice
- Strategic revegetation – biodiversity, paddock trees, shelter belts and alley farming, fodder shrubs and trees
- Restore/enhance high conservation value areas
- Restoring woodland complexity and connectivity
- Whole of rocky outcrop ecosystem restoration and protection
- Tree hollow preservation/restoration/augmentation
- Management of land in accordance with land capability and best management practices
- Strategic grazing management
- Local and landscape scale pest plant management
- Local and landscape scale pest animal management

Prioritisation Process Factors

Terrestrial Ecosystems refer to woodland remnants across the region. Priorities for this outcome have been developed based on the ecological condition score. This score measures the intactness and naturalness of terrestrial vegetation as habitat to support biodiversity.

At a project level, other factors may be incorporated to further refine the priority area including:

- » Presence or proximity to a TEC
- » Patch size > 15ha
- » Patch connectivity score of High
- » Distance to waterways
- » Incorporation of subject matter expert advice or access to new data
- » Incorporation of investor/partner prioritisation recommendations
- » Align methodologies or data with local management plans and strategies





Key customers	Key stakeholders or partnerships for implementation
<ul style="list-style-type: none"> » Primary producers or farmers » Hobby or lifestyle and managers » Aboriginal land managers » >2ha land managers » Corporate land managers » Public land managers 	<ul style="list-style-type: none"> » Local Land Services » Crown Lands » DPI » DPI – Fisheries » EES » BCT » DPIE » NPWS » FC NSW » Local Government » Australian Government – DAWE » MDBA » Central West LLS Board » CWLLS Community Advisory Group » CWLLS Aboriginal Engagement Steering Committee » Local Aboriginal Lands Councils » Traditional Owner Groups » Aboriginal organisations, corporations and communities » Tertiary institutions – Universities » Tertiary institutions – TAFE NSW » Research and Development Organisations » NSW Farmers » Landcare Groups » Other producer Groups » Community not for profit groups » Other NRM Stakeholders » Potential Investors

3.3 Supporting Healthy, Resilient Landscapes

D – Aquatic Ecosystems

Long Term Outcome

- Streams and wetlands (including Ramsar sites) are protected or rehabilitated to support ecosystem services

Intermediate Outcomes

- Improved condition of priority aquatic ecosystems

Priority NRM actions

- Works to improve waterway health
- Works to improve wetland management
- Works to enable sustainable water use
- Pest and weed control programs

Potential key performance indicators

- Condition of high priority waterways is maintained or improved
- Extent and condition of high priority wetlands is maintained or improved

Prioritisation Process Factors

Aquatic Ecosystems refers to the sustainable management and conservation of waterways and water movement across the landscape. This section has been broken down into three categories as follows:

a) Waterway Health

Priority Regions



Waterways refer to the extensive network of rivers, creeks and streams across the region. Many factors contribute to waterway health and condition, many of which have been incorporated into the River Styles assessment process, which is widely used across NSW Government for assessing and prioritising waterway condition. Erosion potential along waterways has also been considered in the prioritisation process. The following indicators were applied to develop the waterway health priority area:

- » River Styles Recovery Potential prioritising areas with conservation and high recovery potential
- » Gully erosion of minor and moderate
- » Streambank erosion present

At a project level, other factors may be incorporated to further refine the priority area including:

- » Stream Order – 1st Order, 2nd Order, 3rd Order or 4th Order
- » Streambank Erosion – point source data
- » Stressed Rivers Subcatchment data
- » Fish status score
- » Presence of Threatened Ecological Community or threatened species
- » Macquarie and Lachlan Priority Reach data
- » Incorporation of subject matter expert advice or access to new data
- » Incorporation of investor/partner prioritisation recommendations

Legend

-  Waterway Health conservation priority area
-  Waterway Health high recovery potential priority area





Possible activities

- Whole Property Planning
- Provision of 1:1 NRM advice
- Fencing waterways to restrict and/or exclude stock access (other than for periodic strategic grazing management)
- Installation of off-stream watering points as an alternate water supply for areas where stock have been excluded
- Installation of fish friendly screens to support native aquatic species
- Construction of in-stream structures for stream bank/bed stabilisation and sediment management
- Strategic revegetation – stream banks and waterways
- Local and landscape scale pest plant management
- Local and landscape scale pest animal management

Key customers	Key stakeholders or partnerships for implementation
<ul style="list-style-type: none"> » Primary producers or farmers » Hobby or lifestyle and managers » Aboriginal land managers » >2ha land managers » Corporate land managers » Public land managers 	<ul style="list-style-type: none"> » Local Land Services » Crown Lands » DPI » DPI – Fisheries » EES » BCT » DPIE » NPWS » FC NSW » Local Government » Australian Government – DAWE » MDBA » Central West LLS Board » CWLLS Community Advisory Group » CWLLS Aboriginal Engagement Steering Committee » Local Aboriginal Lands Councils » Traditional Owner Groups » Aboriginal organisations, corporations and communities » Tertiary institutions – Universities » Tertiary institutions – TAFE NSW » Research and Development Organisations » NSW Farmers » Landcare Groups » Other producer Groups » Community not for profit groups » Other NRM Stakeholders » Potential Investors

3.3 Supporting Healthy, Resilient Landscapes

D – Aquatic Ecosystems (continued)

b) Wetland Management

Priority Regions

The Central West region features many wetlands of varying types and condition. The Macquarie Marshes in the north of the region is an internationally recognised Ramsar site, covering almost 20,000ha of important waterbird breeding and nesting habitat. To prioritise wetlands within the region, the following process has been applied:

- » Internationally significant wetlands (Ramsar Listed)
- » Nationally/State significant wetlands (Directory of Important Wetlands)

Legend

RAMSAR – Internationally Important Wetlands

DIWA – Regionally Important Wetlands



Possible activities

- Whole Property Planning
- Provision of 1:1 NRM advice
- Fencing waterways to restrict and/or exclude stock access (other than for periodic strategic grazing management)
- Installation of off-stream watering points as an alternate water supply for areas where stock have been excluded
- Installation of fish friendly screens on irrigation equipment to support native aquatic species
- Construction of in-stream structures for stream bank/bed stabilisation and sediment management
- Strategic revegetation – stream banks and waterways
- Local and landscape scale pest plant management
- Local and landscape scale pest animal management

At a project level, other factors may be incorporated to further refine the priority area including:

- » Specific wetland types
- » High condition wetlands
- » Pest animal or weed target species
- » Proximity to threatened species sightings
- » Incorporation of subject matter expert advice or access to new data
- » Incorporation of investor/partner prioritisation recommendations

c) Sustainable Water Use

Prioritisation Process Factors

Sustainable water use refers to the use of water for production outcomes. Surface runoff and water stored for agricultural purposes may be utilised across all farming operations, therefore conservation of on-farm water through improving infrastructure and production management is a priority across the whole Central West LLS region.

At a project level, other factors may be incorporated to further refine the priority area including:

- » Infrastructure and capacity requirements
- » Land and Soil Capability score
- » Landuse – irrigation and cropping landuses
- » Incorporation of subject matter expert advice or access to new data
- » Incorporation of investor/partner prioritisation recommendations
- » Align methodologies or data with local management plans and strategies

Possible activities

- Whole Property Planning
- Provision of 1:1 NRM advice
- Installation of off-stream watering points as an alternate water supply for areas where stock have been excluded
- Implementing water use efficiency measures
- Improving on-farm water quality
- Create healthy farm dams
- Adopting management strategies that align with industry Best Management Practices
- Construction of in-stream structures for stream bank/bed stabilisation and sediment management
- Management of land in accordance with land capability and best management practices



3.4 Empowering Aboriginal Communities to Care for Country

Long Term Outcome

- Aboriginal people and communities participate in NRM decision-making and work on Country

Intermediate Outcomes

- Central West LLS' relationship and partnerships with Aboriginal people and communities are improving
- Relationships and partnerships are developed through two-way knowledge sharing and capacity building
- Participation of Aboriginal people and communities in NRM decision-making is improved
- Aboriginal people and communities have increased opportunities to work on Country

Priority NRM actions

- Build the knowledge, skills, and Cultural awareness of Central West LLS staff on the importance of the protection and preservation of Aboriginal Cultural values and traditions
- Central West LLS NRM team, Central West LLS Aboriginal Communities Officer and key Aboriginal community stakeholders collaborate on program design and implementation
- Work with land managers to enhance awareness, knowledge, and ability to identify, protect and preserve Aboriginal Cultural heritage values
- Identify and develop partnerships to provide opportunities for Aboriginal community engagement in NRM projects
- Incorporate traditional Aboriginal land management knowledge and techniques into on-ground practice change
- Prioritise and support sustainable growth of Aboriginal-owned businesses via procurement of goods and services

Potential key performance indicators

- Number of collaborative agreements developed and formally documented
- Number of NRM events/projects that include a focus on sharing traditional knowledge, skills and practices
- Number of NRM events/projects that include a capacity building component focused on Aboriginal people and communities
- Number of Aboriginal people who have participated in the delivery of the project
- Number of programs/projects that involve aboriginal people and communities in decisionmaking processes
- Number of programs/projects that involve Aboriginal people and communities in delivering on-ground works
- • Area (ha) of land managed using traditional management techniques
- • Number of skills and knowledge surveys conducted



Possible Activities

- Whole Property Planning
- Develop a toolkit and standard process for Central West LLS staff to implement Aboriginal Cultural heritage best practice guidelines, due diligence and appropriate engagement strategies
- Ensure program design incorporates the LLS Aboriginal Engagement Strategy Action Plan
- Develop tools for monitoring baseline and improving Aboriginal community satisfaction
- Provide opportunities for face-to-face engagement with Aboriginal communities and the sharing of knowledge regarding the significance of Cultural heritage to NRM
- Identify meaningful and appropriate Aboriginal community involvement opportunities to guide project activities
- Attend Aboriginal Engagement Steering Committee meetings to consult on program and project plan development and relevant policies and procedures
- Actively seek new stakeholder involvement and collaboration opportunities
- Develop formal and informal partnerships with key stakeholders
- Undertake Cultural heritage surveys and record Aboriginal Cultural heritage values and landscapes of significance
- Field days, awareness raising workshops and targeted training events
- Providing 1:1 Aboriginal Cultural heritage advice
- Provision of tailored NRM advice, extension and incentives that incorporate the protection of Aboriginal Cultural heritage sites
- Incorporate traditional land management techniques into project activities
- Prioritise activities which provide skills and employment opportunities for Aboriginal community members
- Acknowledge Country and actively participate in Culturally significant Aboriginal events
- Pursue opportunities to develop resources and initiatives with other key stakeholders that will provide Aboriginal Cultural knowledge sharing and skills development
- Facilitate knowledge sharing and incorporate sustainable traditional Aboriginal land management practices into project design
- Preference Aboriginal-owned business procurement

Key customers

- » Primary producers or farmers
- » Hobby or lifestyle and managers
- » Aboriginal land managers
- » >2ha land managers
- » Corporate land managers
- » Public land managers

Key stakeholders or partnerships for implementation

- » Local Land Services
- » Crown Lands
- » DPI
- » DPI – Fisheries
- » EES
- » BCT
- » DPIE
- » NPWS
- » FC NSW
- » Local Government
- » Australian Government – DAWE
- » MDBA
- » Central West LLS Board
- » CWLLS Community Advisory Group
- » CWLLS Aboriginal Engagement Steering Committee
- » Local Aboriginal Lands Councils
- » Traditional Owner Groups
- » Aboriginal organisations, corporations and communities
- » Tertiary institutions – Universities
- » Tertiary institutions – TAFE NSW
- » Research and Development Organisations
- » NSW Farmers
- » Landcare Groups
- » Other producer Groups
- » Community not for profit groups
- » Other NRM Stakeholders
- » Potential Investors

3.5 Fostering Partnerships

Long Term Outcome

- Investors and regional stakeholders seek out Central West LLS to foster partnerships for NRM in the region

Intermediate Outcomes

- Our investors and partners are increasingly confident in Central West LLS to successfully deliver NRM projects and services
- Our partnership brokering and collaboration is highly valued and support the delivery of regional and state-level outcomes

Priority NRM actions

- Promote Central West LLS as a 'service provider of choice' for NRM project and service delivery
- Actively monitor partner and investor satisfaction, benchmarking current performance
- Identify and develop appropriate collaborative arrangements with priority partners
- Ensure resourcing required for partnership development and collaboration is incorporated into work plans and project budgets
- Ensure benefits of partnership and collaboration are reflected in MERI frameworks

Potential key performance indicators

- Proportional revenue from NRM services
- % increase in customer satisfaction and net promoter scores
- % increase in investor and partner satisfaction score and net promoter score
- Number of major collaborative/partnership projects
- Proportional funding for collaboration and engagement activities

Possible Activities

- Create shelf-ready documents promoting Central West LLS NRM service delivery
- Create a standard process for monitoring baseline and improved customer satisfaction
- Develop tools to implement and monitor customer satisfaction
- Create a standard process for monitoring baseline and improved partner and investor satisfaction
- Develop tools to implement and monitor improved investor and partner satisfaction
- Enter into new formal partnership agreements
- Actively seek new partnership/investment opportunities
- Develop formal and informal partnerships with key regional stakeholders
- Include allowance for time and resources into NRM budgeting and subsequent project plans
- Develop tools to implement and monitor collaboration and engagement
- Align data with MERI frameworks and include in Central West LLS reporting
- Develop tools to implement and monitor engagement/partnership value to leverage investment



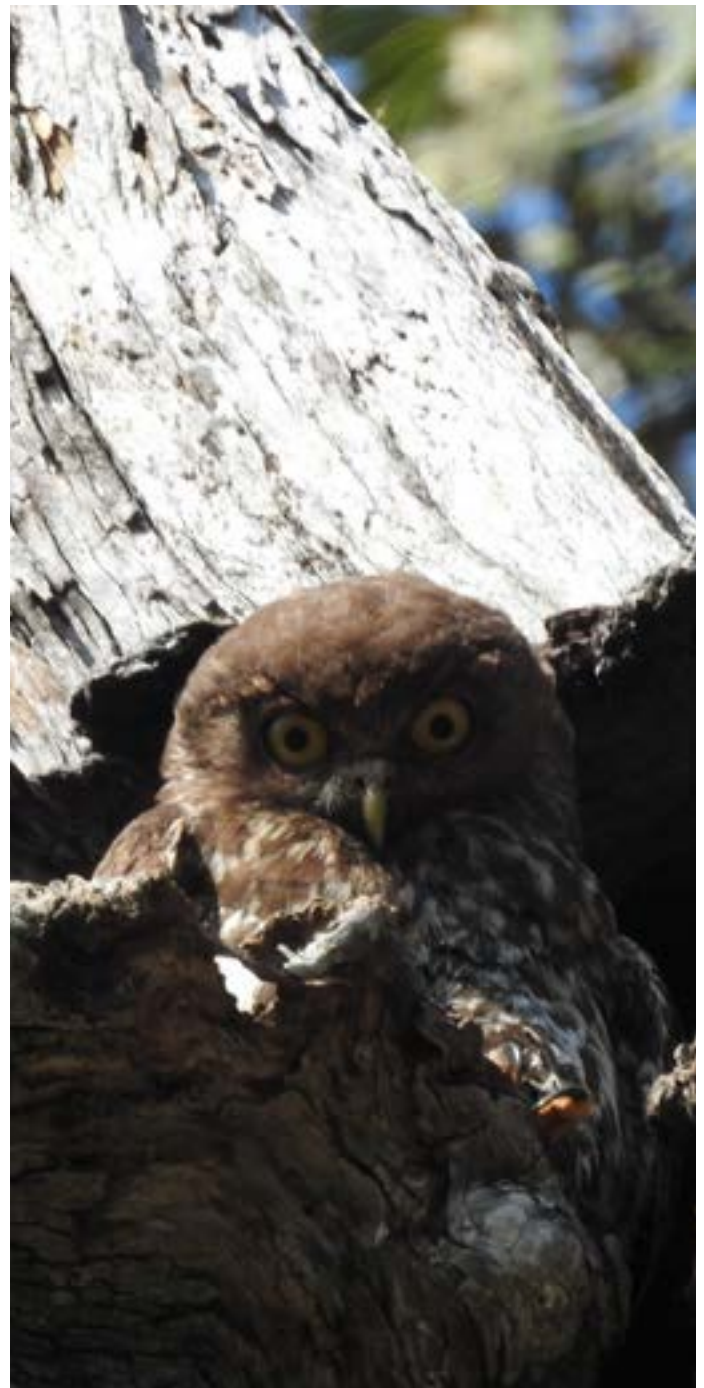
Key customers	Key stakeholders or partnerships for implementation
<ul style="list-style-type: none"> » Primary producers or farmers » Hobby or lifestyle and managers » Aboriginal land managers » >2ha land managers » Corporate land managers » Public land managers 	<ul style="list-style-type: none"> » Local Land Services » Crown Lands » DPI » DPI – Fisheries » EES » BCT » DPIE » NPWS » FC NSW » Local Government » Australian Government – DAWE » MDBA » Central West LLS Board » CWLLS Community Advisory Group » CWLLS Aboriginal Engagement Steering Committee » Local Aboriginal Lands Councils » Traditional Owner Groups » Aboriginal organisations, corporations and communities » Tertiary institutions – Universities » Tertiary institutions – TAFE NSW » Research and Development Organisations » NSW Farmers » Landcare Groups » Other producer Groups » Community not for profit groups » Other NRM Stakeholders » Potential Investors

4.0 Prioritisation Factors

A number of factors are considered in forming the priorities of the Plan. The overarching reference developing priorities is the LLS NRM Framework 2021-2026, which provides the strategic direction, key priorities and aspirational goals of NRM service delivery. The framework guides the development of both long term (5 years +) and intermediate (3 – 5 years) outcomes.

A range of actions and project level activities are required to deliver the outcomes. Several factors are considered to develop relevant project priority activities, including:

- Biophysical outcome priority areas (Soil and Land, Aquatic Ecosystems, Terrestrial Ecosystems and Significant Species)
- Investor driven to align with investor priorities and guidelines for funding
- Community driven as a response to community demand or incidental occurrences (eg: support following a natural disaster, community interest in practice change)
- Aboriginal community driven as a response to community demand, incidental occurrences or community recommendations
- Stakeholder driven in capitalising on partnership opportunities to value add to programs being delivered
- Alignment of methodologies or data with local management plans and strategies
- Recommended strategies to adapt to climate change from "Climate Change in the Central West of NSW"



5.0 Implementation of the Plan

The implementation of the NRM Plan will guide the efficient placement of land use activities to effectively and sustainably manage natural resources in the Central West LLS region. Long-term and intermediate outcomes, priority areas, possible activities and key stakeholders have been identified in this Plan to guide development of future projects.

Developing projects will be a collaborative process involving the key stakeholders identified above.

The process for project development

1. Project selection focusing on the outcomes and targeted areas identified in this Plan and investor requirements
2. Extensive review of existing literature and regionally specific data
3. MERI Plan and Project Plan development
4. Project-level stakeholder identification and engagement
5. Project-level stakeholder identification and engagement
6. Identification of Aboriginal community engagement and employment opportunities
7. Refining the priority area using strategies suggested in this Plan or by subject matter experts
8. Development of an evaluation framework
9. Determining training and awareness needs and developing information products as appropriate
10. Implementation of on-ground works including developing site plans and utilising an environmental services ratio to rank projects
11. Collection of baseline data
12. Ongoing monitoring and annual, short and mid-term reviews to ensure meeting the outcomes of the NRM plan and the funding program

6.0 Reviewing the NRM Plan

Central West LLS are committed to monitoring our progress and continuously improving our strategies, culture, products, and services over time. Systematically monitoring performance is part of that process. This Plan defines a set of performance measures for each of the long-term outcomes. This performance data is critical to ensuring regular reporting on progress towards these long-term outcomes.

Supporting effective monitoring and data collection is also important for:

- **Timely review of plan delivery** – regularly checking in on how things are progressing
- **Informing continuous improvement** – providing useful information on what is working (and what isn't) to enable adaptive management
- **Demonstrating competency to current and potential investors** – showing that Central West LLS is a trusted partner that can deliver good value-for-money
- **Demonstrating achievements and celebrating success** – including showing how the various Central West LLS services and projects contribute to the long-term outcomes of the Plan

Monitoring, evaluation, reporting and improvement are integral components of NRM programs. These activities provide approaches to assess the impact, appropriateness, effectiveness, efficiency and legacy of policies and programs and a process to promote accountability.

- START – IDENTIFY priority assets, desired outcomes and program logic
- DESIGN program including MERI strategy
- Implement program and MONITOR
- EVALUATE appropriateness, impact, effectiveness, efficiency, and legacy
- REFLECT on what's working, what's not, and why
- REPORT on outcomes and communicate learning
- Adapt strategy and apply to next program phase for IMPROVEMENT
- This is a continual cycle

Evaluation of NRM projects will:

- Adopt a consistent project monitoring, evaluation and reporting framework that will be usable across Central West LLS NRM projects
- Put the foundations in place for timely annual and mid-term reviews that result in refinements to project delivery and improve the ability of Central West LLS to demonstrate its achievements
- Meet reporting requirements of funding streams in such a way that the reporting process provides real value to Central West LLS, its delivery staff and partners, and to investors.

A schedule of monitoring and reporting will be adopted for each of the long-term outcomes identified in this Plan. This monitoring and reporting will take three forms:

1. Annual activity reporting
2. Mid-term progress reporting on the priority NRM actions
3. Final report on delivery of the five long-term outcomes

The following table sets out more details on how this will be delivered.

When	Data & sources	How
Annual activity review	<p>Data on activities delivered ('Possible activities') under each priority NRM action is collated into a summary. This data should include participant feedback gathered at events or activities.</p> <p>Project level annual reviews and reporting data</p>	<p>An annual meeting of the delivery team for each priority action is convened to review the activities delivered and identify any changes required (adaptive management).</p>
Mid-term progress report	<p>Annual activity data (relating to 'possible activities')</p> <p>Key Performance Indicator data (relating to intermediate outcomes and priority actions)</p> <p>Where the activities have involved changes in awareness, knowledge and skills among participants data on these changes need to be sourced. This could involve follow-up surveys or interviews with participants to verify changes.</p> <p>Project-level mid-term outcomes reporting data</p>	<p>A workshop of the team delivering on each outcome focusing on:</p> <p>Progress towards the five-year intermediate outcomes</p> <p>Reviewing the KPIs – do they accurately reflect progress? Are other (new) KPIs needed?</p>
Final report on long-term outcomes	<p>Review of progress towards the five long-term outcomes based on:</p> <p>Annual activity reports, project reporting data</p> <p>Key Performance Indicators</p> <p>Participant's information on changes in awareness, knowledge and skills</p> <p>Other data collected</p>	<p>A workshop involving the team delivering on each outcome, key stakeholders of the projects delivered under the plan and any funders of the plan. The workshop should focus on:</p> <ul style="list-style-type: none"> • Progress towards the LLS State Outcomes • Progress towards the Central West LLS five-year intermediate outcomes • Data for the KPIs related to each set of outcomes

Appendix 1

Regional Land Partnerships

Central West LLS is the service provider contracted to deliver the Australian Government's Regional Land Partnerships Program (RLP) in the NSW Central West Management Unit.

Under this arrangement, the Central West LLS is required to maintain the currency of NRM planning and to prioritise management actions. This involves ensuring that NRM plans are consistent with a set of specific Australian Government requirements as outlined in the Service Level Agreement. These requirements have been addressed throughout this plan.

Specifically, this plan sets out how NSW Central West can contribute to achieving the five-year outcomes and investment priorities of the Australian Government's Regional Land Partnerships Program (RLP), through current funded projects and priorities identified by Traditional Owners/First Nations, agencies, local government, community and community groups such as Landcare.

The RLP is the largest component of the Australian Government's National Landcare Program, being delivered from July 2018 until June 2023.

Regional Land Partnerships Priority Outcomes

The Regional Land Partnerships Program includes six long-term and associated five-year Outcomes:

1. By 2023, there is restoration of, and reduction in threats to, the ecological character of Ramsar sites, through the implementation of priority actions.
2. By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other Environment Protection and Biodiversity Conservation Act 1999 priority species, is stabilised or improved.
3. By 2023, invasive species management has reduced threats to the natural heritage Outstanding Universal Value of World Heritage properties through implementation of priority actions.
4. By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities.
5. By 2023, there is an increase in the awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation.
6. By 2023, there is an increase in the capacity of agriculture systems to adapt to significant changes in climate and market demands for information on provenance and sustainable production.

Developing Future RLP Priority Actions for the NSW Central West Region

Five of these outcomes are relevant to the Central West LLS region. Outcome 3 is not relevant as there are no World Heritage sites in the NSW Central West region.

RLP 5-year outcome investment priorities

RLP Outcome & Sub Logic	5 Year Outcome	Investment Priorities
RLP Outcome 1	By 2023, there is restoration of, and reduction in threats to, the ecological character of Ramsar sites, through the implementation of priority actions.	» Macquarie Marshes
RLP Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other Environment Protection and Biodiversity Conservation (EPBC) Act 1999 priority species, is stabilised or improved.	Fauna: <ul style="list-style-type: none"> » Regent Honeyeater (<i>Anthochaera phrygia</i>) » Swift Parrot (<i>Lathamus discolor</i>) » Malleefowl (<i>Leipoa ocellata</i>) Flora: <ul style="list-style-type: none"> » Small Purple-pea, Mountain Swainson-pea (<i>Swainsona recta</i>)
RLP Outcome 4	By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities.	<ul style="list-style-type: none"> » Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia » White Box (<i>Eucalyptus albens</i>) -Yellow Box (<i>Eucalyptus melliodora</i>) -Blakely's Red Gum (<i>Eucalyptus blakelyi</i>) Grassy Woodland and Derived Native Grassland » Coolibah (<i>Eucalyptus coolibah</i>) – Black Box (<i>Eucalyptus largiflorens</i>) Woodland » Fuzzy Box (<i>Eucalyptus conica</i>) Woodland » Weeping Myall (<i>Acacia pendula</i>) Woodland
RLP Outcome 5	By 2023, there is an increase in the awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation.	<ul style="list-style-type: none"> » Soil carbon » Native vegetation and biodiversity on-farm » Groundcover » Acidification » Sodicity » Soil erosion » Supporting behaviour change
RLP Outcome 6	By 2023, there is an increase in the capacity of agriculture systems to adapt to significant changes in climate and market demands for information on provenance and sustainable production.	<ul style="list-style-type: none"> » Climate change adaptation » Market traceability » Improved sustainability of farming practices » Knowledge, skills and awareness of farmers in climate adaptation and market demands » Understanding of risk management solutions in agriculture

Appendix 2

Priority Threatened Species

The following tables list the threatened flora and fauna species and ecological communities that are a priority for investment and conservation across the Central West region. Species have been ranked using the Threatened Species Prioritisation Tool which has been developed and reviewed by subject matter experts.

Threatened fauna species

Rank	Scientific Name	Common Name	Current Project
1	<i>Ninox connivens</i>	Barking Owl	*
2	<i>Grus rubicunda</i>	Brolga	
3	<i>Botaurus poiciloptilus</i>	Australasian Bittern	
4	<i>Aprasia parapulchella</i>	Pink-tailed Legless Lizard	
5	<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	
6	<i>Anthochaera phrygia</i>	Regent Honeyeater	*
7	<i>Rostratula australis</i>	Australian Painted Snipe	
8	<i>Pseudomys pilligaensis</i>	Pilliga Mouse	
9	<i>Leipoa ocellata</i>	Malleefowl	*
10	<i>Polytelis swainsonii</i>	Superb Parrot	
11	<i>Grantiella picta</i>	Painted Honeyeater	
12	<i>Calyptorhynchus lathamii</i>	Glossy Black-Cockatoo	*
13	<i>Anseranas semipalmata</i>	Magpie Goose	
14	<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler (eastern subspecies)	
15	<i>Neophema pulchella</i>	Turquoise Parrot	
16	<i>Nyctophilus corbeni</i>	Corben's Long-eared Bat	*
17	<i>Petaurus norfolcensis</i>	Squirrel Glider	*
18	<i>Phascolarctos cinereus</i>	Koala	
19	<i>Chthonicola sagittata</i>	Speckled Warbler	
20	<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (eastern subspecies)	
21	<i>Daphoenositta chrysoptera</i>	Varied Sittella	
22	<i>Melanodryas cucullata cucullata</i>	Hooded Robin (south-eastern form)	
23	<i>Melithreptus gularis gularis</i>	Black-chinned Honeyeater (eastern subspecies)	
24	<i>Stagonopleura guttata</i>	Diamond Firetail	
25	<i>Glossopsitta pusilla</i>	Little Lorikeet	
26	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	
27	<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	*
28	<i>Austrostipa wakoolica</i>	A spear-grass	
29	<i>Aepyprymnus rufescens</i>	Rufous Bettong	
30	<i>Antechinomys laniger</i>	Kultarr	
31	<i>Ardeotis australis</i>	Australian Bustard	
32	<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	
33	<i>Burhinus grallarius</i>	Bush Stone-curlew	

Rank	Scientific Name	Common Name	Current Project
34	<i>Calidris alba</i>	Sanderling	
35	<i>Calidris ferruginea</i>	Curlew Sandpiper	
36	<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	
37	<i>Calyptorhynchus banksii samueli</i>	Red-tailed Black-Cockatoo (inland subspecies)	
38	<i>Cercartetus nanus</i>	Eastern Pygmy-possum	
39	<i>Certhionyx variegatus</i>	Pied Honeyeater	
40	<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	
41	<i>Chalinolobus picatus</i>	Little Pied Bat	
42	<i>Cinclosoma castanotum</i>	Chestnut Quail-thrush	
43	<i>Circus assimilis</i>	Spotted Harrier	
44	<i>Crinia sloanei</i>	Sloane's Froglet	
45	<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	
46	<i>Drymodes brunneopygia</i>	Southern Scrub-robin	
47	<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	
48	<i>Epthianura albifrons</i>	White-fronted Chat	
49	<i>Falco hypoleucos</i>	Grey Falcon	
50	<i>Falco subniger</i>	Black Falcon	
51	<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	
52	<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	
53	<i>Hamirostra melanosternon</i>	Black-breasted Buzzard	
54	<i>Hieraaetus morphnoides</i>	Little Eagle	
55	<i>Hoplocephalus bitorquatus</i>	Pale-headed Snake	
56	<i>Hylacola cautus</i>	Shy Heathwren	
57	<i>Lathamus discolor</i>	Swift Parrot	*
58	<i>Limosa limosa</i>	Black-tailed Godwit	
59	<i>Lophochroa leadbeateri</i>	Major Mitchell's Cockatoo	
60	<i>Lophoictinia isura</i>	Square-tailed Kite	
61	<i>Macropus dorsalis</i>	Black-striped Wallaby	
62	<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat	
63	<i>Nettapus coromandelianus</i>	Cotton Pygmy-Goose	
64	<i>Ninox strenua</i>	Powerful Owl	*
65	<i>Oxyura australis</i>	Blue-billed Duck	
66	<i>Pachycephala inornata</i>	Gilbert's Whistler	
67	<i>Petroica boodang</i>	Scarlet Robin	
68	<i>Petroica phoenicea</i>	Flame Robin	
69	<i>Pseudomys oralis</i>	Hastings River Mouse	
70	<i>Sminthopsis macroura</i>	Stripe-faced Dunnart	
71	<i>Stictonetta naevosa</i>	Freckled Duck	
72	<i>Tyto novaehollandiae</i>	Masked Owl	*
73	<i>Vespadelus troughtoni</i>	Eastern Cave Bat	
74	<i>Leporillus apicalis</i>	Lesser Stick-nest Rat	

Threatened flora species

Rank	Scientific Name	Common Name	Current Project
1	<i>Zieria obcordata</i>	Granite Zieria	
2	<i>Zieria ingramii</i>	Keith's Zieria	
3	<i>Cheilanthes sieberi</i> subsp. <i>pseudovellea</i>		
4	<i>Homoranthus darwinioides</i>	Fairy Bells	
5	<i>Swainsona recta</i>	Small Purple-pea	*
6	<i>Acacia curranii</i>	Curly-bark Wattle	
7	<i>Pterostylis cobarensis</i>	Greenhood Orchid	
8	<i>Androcalva procumbens</i>		
9	<i>Diuris tricolor</i>	Pine Donkey Orchid	
10	<i>Acacia meiantha</i>	Barradam-bang wattle	
11	<i>Pomaderris queenslandica</i>	Scant Pomaderris	
12	<i>Tylophora linearis</i>		
13	<i>Austrostipa wakoolica</i>	A spear-grass	
14	<i>Myotis macropus</i>	Southern Myotis	
15	<i>Acacia ausfeldii</i>	Ausfeld's Wattle	
16	<i>Bertya opposens</i>	Coolabah Bertya	
17	<i>Dichanthium setosum</i>	Bluegrass	
18	<i>Digitaria porrecta</i>	Finger Panic Grass	
19	<i>Lepidium aschersonii</i>	Spiny Peppercross	
20	<i>Lepidium monolocoides</i>	Winged Peppercross	
21	<i>Polygala linariifolia</i>	Native Milkwort	
22	<i>Swainsona murrayana</i>	Slender Darling Pea	
23	<i>Swainsona sericea</i>	Silky Swainson-pea	
24	<i>Thesium australe</i>	Austral Toadflax	
25	<i>Wilsonia rotundifolia</i>	Round-leafed Wilsonia	
26	<i>Acacia loderi</i> shrublands	Acacia loderi shrublands	
27	<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheathtail-bat	*
28	<i>Austrostipa wakoolica</i>	A spear-grass	

Threatened ecological community

Rank	Scientific Name	Common Name	Current Project
1	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and	White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and	*
2	Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South Bioregions	Fuzzy Box Woodland on alluvial Soils of the South Western Slopes, Darling Riverine Plains and Brigalow Belt South Bioregions	*
3	Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions	Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions	
4	Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions	Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions	*
5	Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregions	Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregions	
6	Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions	Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions	

Appendix 3

Current RLP Investments in NSW Central West

There are five projects currently being undertaken with investment funding through the Australian Government's RLP program. These projects have been developed in line with the RLP priority outcomes identified above.

1. Progressing the Small Purple-pea in Central West NSW (RLP-MU05-P2)

The 'Progressing the Small Purple-pea in Central West NSW' project is focussed on assisting in the recovery of *Swainsona recta* in the Central West NSW management unit. This includes working in populations which are currently known, and within any new populations identified through the surveys.

Works associated with the project include regional community surveys, the propagation of plants and subsequent establishment of ex-situ populations, on-ground works to improve habitat quality and undertaking knowledge surveys. Works will be undertaken on public and private land, including populations at Mount Arthur Reserve, Stuart Town Common, Burrendong Arboretum and the Burrendong State Recreation Area. *Swainsona recta* is listed as endangered under State and Commonwealth legislation.

Project Highlights

- Partnering with the Australian National Botanic Gardens to carry out the seed collection and translocation program.
- A newly discovered population.
- Two prioritisation products developed to determine priority engagement/works areas as well as overall species priorities across the Central West LLS region.
- Annual survey data has shown some impacts from drought, further supporting the need for translocations at key sites.
- 725 attendees, including 79 Aboriginal participants at awareness raising events.
- 2124ha of Small Purple-pea habitat protected for 10 years via management agreements.
- 5 cultural heritage surveys to ensure on ground works do not cause any disturbance if sites are present.
- 33 survey plots surveyed annually to monitor existing populations of Small Purple-pea.
- Seeds have been collected and stored in the National Seed Bank to provide security to the northern populations in the event of large-scale losses.

Current RLP Small Purple-pea investment priorities

RLP Outcomes		Investment Priority
Primary Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved.	Small Purple-pea, Mountain Swainson-pea (<i>Swainsona recta</i>)
Secondary Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved.	Regent Honeyeater (<i>Anthochaera phrygia</i>)
Secondary Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved.	Swift Parrot (<i>Lathamus discolor</i>)
Secondary Outcome 4	By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities.	Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
Secondary Outcome 4	By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities.	White Box (<i>Eucalyptus albens</i>) -Yellow Box (<i>Eucalyptus melliodora</i>) -Blakely's Red Gum (<i>Eucalyptus blakelyi</i>) Grassy Woodland and Derived Native Grassland

2. Reaching out to the Regent Honeyeater (RLP-MU05-P8)

The 'Reaching out to the Regent Honeyeater' project is implementing recovery actions for the Regent Honeyeater in priority breeding and foraging habitats in the NSW Central West Management Unit. National Recovery Plan actions are being implemented to improve the extent and quality of habitat, increase knowledge of abundance and distribution of populations and increase community awareness and involvement in recovery activities.

Targeted Regent Honeyeater foraging habitat is being enhanced and restored through activities such as sustainable grazing management, pest animal control (primarily targeting total grazing pressure) and weed control to allow natural regeneration and supplementary plantings to alter the vegetation structure to encourage flower production on private and public land. The project continues to raise awareness of Regent Honeyeaters, and the threats to their habitat, and engage landowners to actively manage and monitor the Regent Honeyeater habitat on their land.

Project Highlights

- Map produced and utilised to identify the priority Regent Honeyeater foraging habitat areas in the Central West LLS region.
- 864ha of priority Regent Honeyeater habitat protected for 10 years via management agreements.
- Two cultural heritage surveys to ensure on ground works do not cause any disturbance if sites are present.
- Weed control treatment applied to 593ha of priority Travelling Stock Reserve.
- Checking-for-Change monitoring regimes established.
- Current RLP Regent Honeyeater investment priorities

Current RLP Regent Honeyeater investment priorities

RLP Outcomes		Investment Priority
Primary Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved.	Regent Honeyeater (<i>Anthochaera phrygia</i>)
Secondary Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved.	Swift Parrot (<i>Lathamus discolor</i>)
Secondary Outcome 4	By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities.	Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
Secondary Outcome 4	By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities.	White Box (<i>Eucalyptus albens</i>) -Yellow Box (<i>Eucalyptus melliodora</i>) -Blakely's Red Gum (<i>Eucalyptus blakelyi</i>) Grassy Woodland and Derived Native Grassland

3. Securing the Swift Parrot (RLP-MU05-P7)

The 'Securing the Swift Parrot' project is implementing recovery actions for the Swift Parrot in priority foraging habitats in the Central West Management Unit. National Recovery Plan for Swift Parrot actions are being implemented to improve the extent and quality of habitat, increase knowledge of abundance and distribution of populations and maintain and increase community awareness and involvement in recovery activities.

Targeted Swift Parrot foraging habitat is being enhanced and restored through activities such as sustainable grazing management, pest animal control (primarily targeting total grazing pressure) and weed control to allow natural regeneration and supplementary plantings to alter the vegetation structure to encourage flower production on private and public land. The project continues to raise awareness of Swift Parrots, and the threats to their habitat, and engage landowners to actively manage and monitor the Swift Parrots habitat on their land.

Project Highlights

- Map produced and utilised to identify the priority Swift Parrot foraging habitat areas in the Central West LLS region.
- 767ha of priority Swift Parrot habitat is being protected for 10 years via management agreements.
- Two cultural heritage surveys to ensure on ground works do not cause any disturbance if sites are present.
- Weed control treatment applied to 233ha of priority Travelling Stock Reserves.
- Checking-for-Change monitoring regimes established.

Current RLP Swift Parrot investment priorities

RLP Outcomes		Investment Priority
Primary Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved.	Swift Parrot (<i>Lathamus discolor</i>)
Secondary Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved.	Regent Honeyeater (<i>Anthochaera phrygia</i>)
Secondary Outcome 4	By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities.	Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia

4. Malleefowl Matter (RLP-MU05-P9)

The 'Malleefowl Matter' project is implementing recovery actions for the National Recovery Plan for Malleefowl. Baseline data of populations in the Mount Nobby State Forest, Tollingo and Woggoon Nature Reserves and surrounding private land has been established through LiDAR to determine distribution and abundance, and community knowledge surveys. Surveys are collecting data to monitor activity on mounds, pest activity and collection of genetic material.

Habitat management advice and landholder incentive grants to address key threats are being provided to protect and enhance Malleefowl. Data collected will contribute to the Adaptive Management Project being coordinated by the National Malleefowl Recovery Team which aims to gain a better understanding of the relationship between threats Australia wide and the national decline of Malleefowl numbers.

Project Highlights

- Collaboration with Riverina LLS, Western LLS, National Parks and Wildlife Service, Department of Planning and Environment, NSW Malleefowl Recovery Group and the National Malleefowl Recovery Group.
- Collaboration with Condobolin Public School, Lake Cowal Foundation and Kids Teaching Kids involving several learning sessions on Malleefowl.
- LiDAR data collection and data analysis. Groundtruthing of LiDAR data resulted in four new mounds being discovered, all inactive.
- Five community reports regarding potential Malleefowl sightings.
- One cultural heritage survey to ensure on ground works do not cause any disturbance. This has resulted in increased interest and understanding of cultural heritage within the community.
- 2861ha of priority Malleefowl habitat protected for 10 years via management agreements.

Current RLP Malleefowl investment priority

RLP Outcomes		Investment Priority
Primary Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved.	Malleefowl (<i>Leipoa ocellata</i>)

5. Preserving Grey Box Grassy Woodlands in Central West NSW (RLP-MU05-P3)

This project is supporting public and private land managers to protect and restore Grey Box Grassy Woodland high conservation value sites over 250ha through threat abatement works. Community engagement events are raising awareness of Threatened Ecological Communities (TECs) and how to identify and manage these high conservation value sites.

Works include fencing for domestic stock management, invasive species control (flora and fauna), reinstatement of hollow logs and dead timber, habitat augmentation, reintroduction of mistletoe and ecological burning activities. Sites located on public and private will be identified, a threat analysis undertaken and a 10-year management plan developed and implemented.

Project Highlights

- 1,739ha of threat abatement activities on public and private land.
- Nine land managers (four public and five private) across 13 sites have entered into 10-year management agreements to improve habitat condition covering 900ha of Grey Box Grassy Woodland.
- 16.9kms of stock proof fencing installed
- Five alternate water points installed
- 1267ha of weed and pest animal control
- 10ha of White Cypress Pine thinning
- White Cedar tree removal
- 212 Artificial Hollows created
- Five Cultural Heritage Surveys to ensure on ground works do not cause any disturbance if sites are present.

Current RLP Grey Box Grassy Woodland investment priority

RLP Outcomes		Investment Priority
Primary Outcome 4	By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities.	Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
Secondary Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved.	Swift Parrot (<i>Lathamus discolor</i>)

6. Sustainable Farming Systems for Climate Change and Market Merit — Adapt (RLP-MU05-P5)

This project is assisting a broad range of land managers and producers in mixed farming enterprise across the Central West LLS region to develop the skill and knowledge to adapt to changing climatic and market influences through education and training. This project focusses on encouraging land managers and producers to develop an objective approach to the allocation of inputs on a whole-farm basis to enhance business and natural asset management and ensure system malleability to cope with climate variability.

The development and delivery of training workshops, hands on field days, trials and demonstration sites, educational resources and podcasts supports an objective based decision-making process for management of the farming system which can be used to provide eco-credentials for food and fibre production.

Project Highlights

- Managing soils for climate change – event surveys show that 60% of participants intend to adopt a new technology or practice.
- Matching pasture and crop species to climate, landscape, soils and production – event surveys show that 79% of participants intend to adopt a new technology or practice.

- Developing a decision-making framework for improved production and sustainability - event survey shows that 100% of participants intend to adopt a new technology or practice.
- Matching livestock requirements with feed-base capability - event surveys show that 91% of participants intend to adopt a new technology or practice.

Current RLP Adapt investment priorities

RLP Outcomes		Investment Priority
Primary Outcome 6	By 2023, there is an increase in the capacity of agriculture systems to adapt to significant changes in climate and market demands for information on provenance and sustainable production.	» Climate change adaptation » Market traceability
Secondary Outcome 5	By 2023, there is an increase in the awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation.	» Soil carbon » Native vegetation and biodiversity on-farm



Appendix 4

Current Non-RLP Investments in NSW Central West

1. Agriculture Stewardship — Enhancing Remnant Vegetation and Carbon and Biodiversity pilot programs

Funding source — Department of Agriculture, Water and the Environment (DAWE)

These pilot programs will deliver services to improve the management of on-farm native vegetation and the planting of new areas, prioritising activities that enhance biodiversity in the NSW Central West region. Central West LLS is working in collaboration with the Australian National University to act as an on-the-ground liaison for potential participants. This includes the provision of advice on specific design elements including regional planting protocols and cost inputs for the Carbon + Biodiversity financial model and its linkages to the Enhancing Remnant Vegetation pilot and the proposed Australian Biodiversity Certification Scheme.

Project Highlights

- Increasing native vegetation on private land
- Improving management of on-farm native vegetation
- Increased awareness of the pilot programs
- Increasing native vegetation connectivity
- Increased uptake of carbon farming practices
- Income stream for farmers and increased generation of Australian carbon

RLP Outcomes		Investment Priority
Primary Outcome 5	By 2023, there will be increased awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation.	» Soil carbon » Native vegetation and biodiversity on-farm
Secondary Outcome 6	By 2023, there is an increase in the capacity of agriculture systems to adapt to significant changes in climate and market demands for information on provenance and sustainable production.	» Climate change adaptation » Market demand adaptation

2. Making Central Inland Glossies Great Again

Funding source — Environmental Trust

Central inland NSW is home to a significant, distinctive but declining Glossy Black-Cockatoo (GBC) population concentrated in forest and woodland areas stretching from Parkes to Narrabri. A collaborative partnership between LLS, Office of Environment and Heritage, National Parks and Wildlife Service, Australian Wildlife Conservatory, Landcare groups, Forestry Corporation NSW, Dubbo Field Naturalists & Conservation Society and the Central Inland Glossy Black Cockatoo Working Group, will implement Central Inland GBC Conservation Strategy actions across three broad sites that will enable community involvement and on-ground action in GBC conservation. Foraging habitat and nesting trees will be mapped and protected. New habitat areas on public and private land will be established and existing habitat will be enhanced.

Project Highlights

- Improving habitat quality to ensure GBC persistence.
- Expanding habitat areas to support the recovery of the GBC population.
- Identifying, prioritising the implementation of control and mitigation actions for all threats.
- Supporting community involvement in GBC conservation and citizen science.

RLP Outcomes		Investment Priority
Primary Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved.	» Glossy Black-Cockatoo (<i>Calyptorhynchus lathami</i>)

3. NRM Framework Regional Delivery

Funding source — Local Land Services

3a) LLS NRM Services- Riparian Restoration

The Riparian Restoration project is undertaking on-ground works to rehabilitate and enhance riparian habitat along the Lachlan River and the Goobang and Mandagery Creeks within the Central West LLS region.

Incentive grant funding is offered to eligible landholders to undertake on-ground enhancement and conservation works to support riparian ecosystems and related flora and fauna species.

Project Highlights

- Landholder management agreements to enhance and conserve riparian ecosystems along the Lachlan River, Goobang and Mandagery Creeks.
- Production of the Riparian digital magazine resource.
- Riparian management works outlining the importance of riparian areas and their impact on the overall landscape, wildlife friendly fencing designs, alternate water designs, grazing management, weed and pest animal control and revegetation and regeneration.

RLP Outcomes		Investment Priority
Primary Outcome 5	By 2023, there is an increase in the awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation.	» Riparian habitat along the Lachlan River, Goobang and Mandagery Creeks

Alignment with LLS State Strategic Aims

- Conserve and restore valuable natural and cultural assets
- Effectively manage native vegetation to deliver economic, social and environmental benefits
- Reduce the impact of invasive animal species on natural resources and agriculture

3b) LLS NRM Services- Improved Ecological Communities

The Improved Ecological Communities project is focused on preserving and improving the structure and condition of threatened ecological communities within the Central West region. Incentive grant funding is offered to eligible landholders to undertake targeted on-ground restoration and conservation works to aid threatened ecological community recovery and threat abatement whilst also improving farm productivity. Priority will be given to existing remnant vegetation.

Project Highlights

- Enhanced Threatened Ecological Communities connectivity through targeted on-ground restoration and conservation works to aid threatened ecological community recovery.
- Production of the Improved Ecological Communities digital magazine resource.
- Webinar highlighting the importance of paddock trees and their impact on the landscape, fencing design, alternate water, grazing, weed & pest animal management and revegetation/regeneration.

RLP Outcomes		Investment Priority
Primary Outcome 4	By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities.	» White Box (<i>Eucalyptus albens</i>) -Yellow Box (<i>Eucalyptus melliodora</i>) -Blakely's Red Gum (<i>Eucalyptus blakelyi</i>) Grassy Woodland and Derived Native Grassland » Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands
Secondary Outcome 5	By 2023, there will be increased awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation.	» Native remnant vegetation and biodiversity on-farm

Alignment with LLS State Strategic Aims

- Conserve and restore valuable natural and cultural assets
- Effectively manage native vegetation to deliver economic, social and environmental benefits
- Reduce the impact of invasive animal species on natural resources and agriculture

3c) LLS NRM Services- Woodland Hollows

The Woodland Hollows project is focused on hollow dwelling animals such as owls, gliders and bats, their habitat and implementation of on-ground works to protect these target species. The project also provides practical management options for landholders to manage remnant vegetation on their properties.

Incentive grant funding is offered to eligible landholders to undertake targeted on-ground enhancement and conservation works to aid in habitat protection and threat abatement. Priority has been given to sites with adequate habitat features for the target species, and projects that protect large hollow-bearing trees.

Project Highlights

- Targeted on-ground enhancement and conservation works to aid in habitat protection and threat abatement for threatened species.
- Production of the Woodland Hollows digital magazine resource which aims to highlight the importance of woodland hollows, the Barking Owl and its impact on the landscape, hollow augmentation, fencing design, alternate water, grazing, weed & pest animal management, revegetation/regeneration.

RLP Outcomes		Investment Priority
Primary Outcome 2	By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved.	» Barking Owl (<i>Ninox connivens</i>) » Powerful Owl (<i>Ninox strenua</i>) » Masked Owl (<i>Tyto novaehollandiae</i>) » Squirrel Glider (<i>Petaurus norfolcensis</i>) » Corben's Long-eared Bat (<i>Nyctophilus corbeni</i>) » Yellow-bellied Sheath-tailed Bat (<i>Saccolaimus flaviventris</i>)
Secondary Outcome	By 2023, there will be increased awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation.	» Hollow bearing native remnant vegetation and biodiversity on-farm

Alignment with LLS State Strategic Aims

- Conserve and restore valuable natural and cultural assets
- Effectively manage native vegetation to deliver economic, social and environmental benefits
- Reduce the impact of invasive animal species on natural resources and agriculture

3d) LLS NRM Services- Soil and Land

The Soil and Land project will assist land managers to improve ecological function, resilience of soils to support production and biodiversity and increase native plant diversity through education on sustainable grazing management, revegetation and improved water point management.

This will be achieved through the development and delivery of training and educational resources and on-on-one advice to support land managers in managing soil constraints and groundcover.

Project Highlights

- Initiating the development of written, audio and video salinity case studies within the Central West region.
- Providing advice to landholders on managing saline and erosion affected soils.
- Healthy Farm Dams workshops.
- Soil Pits and Kits workshops.

RLP Outcomes		Investment Priority
Primary Outcome 2	2023, there will be increased awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation.	» Soil carbon » Native vegetation and biodiversity on-farm » Groundcover » Acidification » Sodidity » Soil erosion » Supporting practice change
Secondary Outcome	By 2023, there is an increase in the capacity of agriculture systems to adapt to significant changes in climate and market demands for information on provenance and sustainable production.	» Climate change adaptation » Improved sustainability of farming practices » Knowledge, skills and awareness of farmers in climate adaptation and market demands » Understanding of risk management solutions in agriculture

Alignment with LLS State Strategic Aims

- Effectively manage native vegetation to deliver economic, social and environmental benefits
- Conserve and restore valuable natural and cultural assets
- Grow farm productivity and healthier environments through quality agricultural advisory services

3e) LLS NRM Services- NRM Extension and Engagement

This is an opportunity to provide advice, support and training opportunities to landholders and other community members through:

- The provision of one-on-one advice with land managers.
- Following up on monitoring sites from previously funded projects.
- Attending and presenting information to pest groups (especially in existing project priority areas) about other NRM outcomes.
- Electronic resources explaining how to use EUCLID to identify common Eucalyptus trees within the Central West.
- A generic revegetation workshop advising on planning, species selection, site preparation, planting & ongoing management.
- The production of articles for the Central West LLS newsletter, media releases for external publications, podcasts and social media posts.

RLP Outcomes		Investment Priority
Primary Outcome 2	2023, there will be increased awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation.	» Soil carbon: » Native vegetation and biodiversity on-farm » Groundcover » Acidification » Sodidity » Soil erosion » Supporting behaviour change
Secondary Outcome	By 2023, there is an increase in the capacity of agriculture systems to adapt to significant changes in climate and market demands for information on provenance and sustainable production.	» Climate change adaptation » Improved sustainability of farming practices » Knowledge, skills and awareness of farmers in climate adaptation and market demands » Understanding of risk management solutions in agriculture

Alignment with LLS State Strategic Aims

- Effectively manage native vegetation to deliver economic, social and environmental benefits
- Conserve and restore valuable natural and cultural assets
- Grow farm productivity and healthier environments through quality agricultural advisory services

Appendix 5

Threats to landscapes and catchments

Description

	Develop NRM practice change programs tailored to customer needs	Demonstrate best practice for NRM in a range of local settings, highlighting economic, social and environmental outcomes	Provide whole-property planning and advisory services that integrate NRM	Deliver services that build land manager's capacity to sustainably adapt to change	Support local community groups to share knowledge and demonstrate best practice
Invasive animal species impacts on biodiversity/production/water quality or biosecurity			✓	✓	
Invasive plant species impacts on biodiversity/production/water quality or biosecurity			✓	✓	
Grazing practices that promote reduction of groundcover beyond sustainable limits			✓	✓	
Grazing practices in vulnerable areas that will have a detrimental impact on soil condition			✓	✓	
Grazing practices in vulnerable areas that will impact water quality and aquatic health			✓	✓	
Grazing practices that will impact a threatened species or endangered ecological community			✓	✓	
Removal of multi-generational vegetation structure			✓	✓	
Removal of key habitat through clearing for agricultural purposes			✓	✓	
Isolation and fragmentation through removal of corridor linkages and paddock trees			✓	✓	
Removal of fallen timber and hollow bearing trees			✓	✓	
Pesticide and herbicide drift impacts on both flora and fauna			✓		
Loss or degradation of riparian and/or aquatic habitat			✓		
Lack of sustainable fire regimes			✓		
Utilising land beyond suitable landscape thresholds or capacity			✓		
Overabundance of native herbivores to unsustainable levels			✓		
Inconsistent and outdated spatial data			✓		
Lack of localised research and extension into agricultural and environmental market opportunities eg. carbon sequestration and methane/N2O reduction			✓		
Lack of localised research and extension into threatened species/threatened ecological community extent and condition			✓		
Lack of local examples across the region of regenerative agriculture in practice			✓		
Lack of local examples across the region of soil remediation actions			✓		
Lack of current and relevant information products			✓		
Economic impacts on sustainable agricultural production systems (ie rising costs/ lower returns making it harder for investment into sustainable production and NRM conservation practices)			✓	✓	

Description	Develop NRM practice change programs tailored to customer needs	Demonstrate best practice for NRM in a range of local settings, highlighting economic, social and environmental outcomes	Provide whole-property planning and advisory services that integrate NRM	Deliver services that build land manager's capacity to sustainably adapt to change	Support local community groups to share knowledge and demonstrate best practice
Social impacts on sustainable ag production systems (ie labour availability, resistance to change/new practices,			✓	✓	✓
Seasonal influences and natural disasters (flood/fire/drought)	✓	✓	✓	✓	✓
Climate change impacts to production and natural resources	✓	✓	✓	✓	✓
Competition for resources (mining, renewables, urban expansion)			✓		
Reduced capacity for uptake of new practices/technologies	✓	✓	✓	✓	
Poor intergenerational planning			✓	✓	
Lack of community knowledge of emerging markets or capacity to become involved (ie cant take advantage of market opportunities because of financial/lack of education/skills etc	✓		✓		
Loss of knowledge of local Aboriginal Culture (significant sites and stories from across the whole region)		✓	✓		
Lack of opportunities to access Country			✓		
Lack of Departmental knowledge and procedures for implementing traditional land management practices (ie Cultural burns)	✓	✓	✓		
Lack of formalised engagement opportunities to provide input into NRM programs	✓		✓		
Engagement methods are not appropriate to the stakeholder	✓		✓		
Poor communication across state/regional teams	✓	✓	✓		
Inadequate funding or resources to implement traditional land management programs			✓		
Lack of Aboriginal goods and services providers					
Turn over of external stakeholder membership/staffing					
Lack of organisational knowledge of emerging markets or capacity to become involved (ie cant take advantage of market opportunities because of financial/lack of education/skills etc			✓		
Inadequate systems in place to monitor performance and customer satisfaction	✓				
Inconsistent budget allocations and availability	✓		✓	✓	
Instability of agricultural markets					
Political influences on funding programs	✓	✓	✓	✓	
Changes in program/project staff	✓	✓	✓	✓	
Short-term funding programs	✓		✓	✓	
Access to training opportunities				✓	✓

Promoting new environmental markets

Description	Build organisational capacity to support customers to engage in primary production and NRM markets	Scope opportunities for CWLLS to play a role in primary production and NRM markets	Build strategic partnerships with primary production and NRM market stakeholders	Trial new programs and services where Central West LLS acts as intermediary between customers and emerging markets	Deliver advice and extension that incorporated potential economic benefits of primary production and NRM activities
Invasive animal species impacts on biodiversity/production/water quality or biosecurity				✓	✓
Invasive plant species impacts on biodiversity/production/water quality or biosecurity					
Grazing practices that promote reduction of groundcover beyond sustainable limits					
Grazing practices in vulnerable areas that will have a detrimental impact on soil condition					
Grazing practices in vulnerable areas that will impact water quality and aquatic health					
Grazing practices that will impact a threatened species or endangered ecological community					
Removal of multi-generational vegetation structure					
Removal of key habitat through clearing for agricultural purposes					
Isolation and fragmentation through removal of corridor linkages and paddock trees					
Removal of fallen timber and hollow bearing trees					
Pesticide and herbicide drift impacts on both flora and fauna					
Loss or degradation of riparian and/or aquatic habitat					
Lack of sustainable fire regimes					
Utilising land beyond suitable landscape thresholds or capacity					
Overabundance of native herbivores to unsustainable levels					
Inconsistent and outdated spatial data					
Lack of localised research and extension into agricultural and environmental market opportunities eg. carbon sequestration and methane/N2O reduction					
Lack of localised research and extension into threatened species/threatened ecological community extent and condition					
Lack of local examples across the region of regenerative agriculture in practice					
Lack of local examples across the region of soil remediation actions					
Lack of current and relevant information products					
Economic impacts on sustainable agricultural production systems (ie rising costs/ lower returns making it harder for investment into sustainable production and NRM conservation practices)					
Social impacts on sustainable ag production systems (ie labour availability, resistance to change/new practices)					

Description	Build organisational capacity to support customers to engage in primary production and NRM markets	Scope opportunities for CWLLS to play a role in primary production and NRM markets	Build strategic partnerships with primary production and NRM market stakeholders	Trial new programs and services where Central West LLS acts as intermediary between customers and emerging markets	Deliver advice and extension that incorporated potential economic benefits of primary production and NRM activities
Seasonal influences and natural disasters (flood/fire/drought)					
Climate change impacts to production and natural resources					
Competition for resources (mining, renewables, urban expansion)					
Reduced capacity for uptake of new practices/technologies					
Poor intergenerational planning					
Lack of community knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/skills etc)	✓		✓	✓	✓
Loss of knowledge of local Aboriginal Culture (significant sites and stories from across the whole region)					
Lack of opportunities to access Country					
Lack of Departmental knowledge and procedures for implementing traditional land management practices (i.e. Cultural burns)				✓	✓
Lack of formalised engagement opportunities to provide input into NRM programs					
Engagement methods are not appropriate to the stakeholder					
Poor communication across state/regional teams					
Inadequate funding or resources to implement traditional land management programs					
Lack of Aboriginal goods and services providers					
Turn over of external stakeholder membership/staffing					
Lack of organisational knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/skills etc)					
Inadequate systems in place to monitor performance and customer satisfaction					
Inconsistent budget allocations and availability	✓			✓	✓
Instability of agricultural markets	✓		✓	✓	✓
Political influences on funding programs	✓		✓	✓	✓
Changes in program/project staff	✓		✓	✓	✓
Short-term funding programs	✓		✓	✓	✓
Access to training opportunities	✓				

Supporting Healthy, Resilient Landscapes – Significant Species

Description	Conservation actions for threatened species	Conservation actions for threatened ecological communities	Pest and weed control programs
Invasive animal species impacts on biodiversity/production/water quality or biosecurity	✓	✓	✓
Invasive plant species impacts on biodiversity/production/water quality or biosecurity	✓	✓	
Grazing practices that promote reduction of groundcover beyond sustainable limits	✓		
Grazing practices in vulnerable areas that will have a detrimental impact on soil condition			
Grazing practices in vulnerable areas that will impact water quality and aquatic health	✓	✓	
Grazing practices that will impact a threatened species or endangered ecological community	✓	✓	
Removal of multi-generational vegetation structure	✓	✓	
Removal of key habitat through clearing for agricultural purposes	✓	✓	
Isolation and fragmentation through removal of corridor linkages and paddock trees	✓	✓	
Removal of fallen timber and hollow bearing trees	✓	✓	
Pesticide and herbicide drift impacts on both flora and fauna	✓	✓	
Loss or degradation of riparian and/or aquatic habitat			
Lack of sustainable fire regimes	✓	✓	
Utilising land beyond suitable landscape thresholds or capacity	✓	✓	
Overabundance of native herbivores to unsustainable levels	✓	✓	
Inconsistent and outdated spatial data	✓	✓	
Lack of localised research and extension into agricultural and environmental market opportunities eg. carbon sequestration and methane/N2O reduction	✓	✓	
Lack of localised research and extension into threatened species/threatened ecological community extent and condition	✓	✓	
Lack of local examples across the region of regenerative agriculture in practice	✓	✓	
Lack of local examples across the region of soil remediation actions	✓	✓	
Lack of current and relevant information products	✓	✓	
Economic impacts on sustainable agricultural production systems (ie rising costs/ lower returns making it harder for investment into sustainable production and NRM conservation practices)			
Social impacts on sustainable ag production systems (ie labour availability, resistance to change/new practices)			

Description	Conservation actions for threatened species	Conservation actions for threatened ecological communities	Pest and weed control programs
Seasonal influences and natural disasters (flood/fire/drought)			
Climate change impacts to production and natural resources			
Competition for resources (mining, renewables, urban expansion)			
Reduced capacity for uptake of new practices/technologies			
Poor intergenerational planning			
Lack of community knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/skills etc)			
Loss of knowledge of local Aboriginal Culture (significant sites and stories from across the whole region)	✓	✓	
Lack of opportunities to access Country			
Lack of Departmental knowledge and procedures for implementing traditional land management practices (i.e. Cultural burns)	✓	✓	
Lack of formalised engagement opportunities to provide input into NRM programs			
Engagement methods are not appropriate to the stakeholder			
Poor communication across state/regional teams			
Inadequate funding or resources to implement traditional land management programs			
Lack of Aboriginal goods and services providers			
Turn over of external stakeholder membership/staffing			
Lack of organisational knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/skills etc)			
Inadequate systems in place to monitor performance and customer satisfaction			
Inconsistent budget allocations and availability			
Instability of agricultural markets			
Political influences on funding programs			
Changes in program/project staff			
Short-term funding programs			
Access to training opportunities			

Supporting Healthy, Resilient Landscapes – Soil and Land

Description	Address soil constraints	Works to improve groundcover management	Works to protect assets	Works to remediate degradation	Pest and weed control programs
Invasive animal species impacts on biodiversity/production/water quality or biosecurity		✓			✓
Invasive plant species impacts on biodiversity/production/water quality or biosecurity		✓			
Grazing practices that promote reduction of groundcover beyond sustainable limits	✓	✓			
Grazing practices in vulnerable areas that will have a detrimental impact on soil condition	✓	✓			
Grazing practices in vulnerable areas that will impact water quality and aquatic health		✓			
Grazing practices that will impact a threatened species or endangered ecological community		✓			
Removal of multi-generational vegetation structure					
Removal of key habitat through clearing for agricultural purposes	✓	✓			
Isolation and fragmentation through removal of corridor linkages and paddock trees					
Removal of fallen timber and hollow bearing trees					
Pesticide and herbicide drift impacts on both flora and fauna		✓			
Loss or degradation of riparian and/or aquatic habitat					
Lack of sustainable fire regimes		✓			
Utilising land beyond suitable landscape thresholds or capacity	✓	✓			
Overabundance of native herbivores to unsustainable levels		✓			
Inconsistent and outdated spatial data	✓	✓			
Lack of localised research and extension into agricultural and environmental market opportunities eg. carbon sequestration and methane/N2O reduction		✓			
Lack of localised research and extension into threatened species/threatened ecological community extent and condition		✓			
Lack of local examples across the region of regenerative agriculture in practice	✓	✓			
Lack of local examples across the region of soil remediation actions	✓	✓			
Lack of current and relevant information products	✓	✓			
Economic impacts on sustainable agricultural production systems (ie rising costs/ lower returns making it harder for investment into sustainable production and NRM conservation practices)					
Social impacts on sustainable ag production systems (ie labour availability, resistance to change/new practices)					

Description	Address soil constraints	Works to improve groundcover management	Works to protect assets	Works to remediate degradation	Pest and weed control programs
Seasonal influences and natural disasters (flood/fire/drought)					
Climate change impacts to production and natural resources					
Competition for resources (mining, renewables, urban expansion)					
Reduced capacity for uptake of new practices/technologies					
Poor intergenerational planning					
Lack of community knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/skills etc)					
Loss of knowledge of local Aboriginal Culture (significant sites and stories from across the whole region)					
Lack of opportunities to access Country					
Lack of Departmental knowledge and procedures for implementing traditional land management practices (i.e. Cultural burns)		✓			
Lack of formalised engagement opportunities to provide input into NRM programs					
Engagement methods are not appropriate to the stakeholder					
Poor communication across state/regional teams					
Inadequate funding or resources to implement traditional land management programs					
Lack of Aboriginal goods and services providers					
Turn over of external stakeholder membership/staffing					
Lack of organisational knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/skills etc)					
Inadequate systems in place to monitor performance and customer satisfaction					
Inconsistent budget allocations and availability					
Instability of agricultural markets					
Political influences on funding programs					
Changes in program/project staff					
Short-term funding programs					
Access to training opportunities					

Supporting Healthy, Resilient Landscapes – Terrestrial Ecosystems

Description	Works to enhance native vegetation	Works to restore native vegetation	Works to protect native vegetation	Pest and weed control programs
Invasive animal species impacts on biodiversity/production/water quality or biosecurity	✓	✓	✓	✓
Invasive plant species impacts on biodiversity/production/water quality or biosecurity				
Grazing practices that promote reduction of groundcover beyond sustainable limits				
Grazing practices in vulnerable areas that will have a detrimental impact on soil condition				
Grazing practices in vulnerable areas that will impact water quality and aquatic health				
Grazing practices that will impact a threatened species or endangered ecological community				
Removal of multi-generational vegetation structure				
Removal of key habitat through clearing for agricultural purposes				
Isolation and fragmentation through removal of corridor linkages and paddock trees				
Removal of fallen timber and hollow bearing trees				
Pesticide and herbicide drift impacts on both flora and fauna				
Loss or degradation of riparian and/or aquatic habitat				
Lack of sustainable fire regimes				
Utilising land beyond suitable landscape thresholds or capacity				
Overabundance of native herbivores to unsustainable levels				
Inconsistent and outdated spatial data				
Lack of localised research and extension into agricultural and environmental market opportunities eg. carbon sequestration and methane/N2O reduction				
Lack of localised research and extension into threatened species/threatened ecological community extent and condition				
Lack of local examples across the region of regenerative agriculture in practice				
Lack of local examples across the region of soil remediation actions				
Lack of current and relevant information products				
Economic impacts on sustainable agricultural production systems (ie rising costs/ lower returns making it harder for investment into sustainable production and NRM conservation practices)				
Social impacts on sustainable ag production systems (ie labour availability, resistance to change/new practices)				
Seasonal influences and natural disasters (flood/fire/drought)				

Description	Works to enhance native vegetation	Works to restore native vegetation	Works to protect native vegetation	Pest and weed control programs
Climate change impacts to production and natural resources				
Competition for resources (mining, renewables, urban expansion)				
Reduced capacity for uptake of new practices/technologies				
Poor intergenerational planning				
Lack of community knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/ skills etc)				
Loss of knowledge of local Aboriginal Culture (significant sites and stories from across the whole region)	✓	✓	✓	
Lack of opportunities to access Country				
Lack of Departmental knowledge and procedures for implementing traditional land management practices (i.e. Cultural burns)	✓	✓	✓	
Lack of formalised engagement opportunities to provide input into NRM programs				
Engagement methods are not appropriate to the stakeholder				
Poor communication across state/regional teams				
Inadequate funding or resources to implement traditional land management programs	✓	✓	✓	
Lack of Aboriginal goods and services providers				
Turn over of external stakeholder membership/staffing				
Lack of organisational knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/ skills etc)				
Inadequate systems in place to monitor performance and customer satisfaction				
Inconsistent budget allocations and availability				
Instability of agricultural markets				
Political influences on funding programs				
Changes in program/project staff				
Short-term funding programs				
Access to training opportunities				

Supporting Healthy, Resilient Landscapes – Aquatic Ecosystems

Description	Works to improve waterway health	Works to improve wetland management	Works to enable sustainable water use	Pest and weed control programs
Invasive animal species impacts on biodiversity/production/water quality or biosecurity	✓	✓		✓
Invasive plant species impacts on biodiversity/production/water quality or biosecurity	✓	✓		
Grazing practices that promote reduction of groundcover beyond sustainable limits	✓	✓	✓	
Grazing practices in vulnerable areas that will have a detrimental impact on soil condition	✓	✓	✓	
Grazing practices in vulnerable areas that will impact water quality and aquatic health	✓	✓	✓	
Grazing practices that will impact a threatened species or endangered ecological community	✓	✓		
Removal of multi-generational vegetation structure	✓	✓		
Removal of key habitat through clearing for agricultural purposes	✓	✓		
Isolation and fragmentation through removal of corridor linkages and paddock trees	✓			
Removal of fallen timber and hollow bearing trees	✓			
Pesticide and herbicide drift impacts on both flora and fauna	✓	✓		
Loss or degradation of riparian and/or aquatic habitat				
Lack of sustainable fire regimes	✓	✓		
Utilising land beyond suitable landscape thresholds or capacity	✓	✓	✓	
Overabundance of native herbivores to unsustainable levels	✓	✓	✓	
Inconsistent and outdated spatial data	✓	✓		
Lack of localised research and extension into agricultural and environmental market opportunities eg. carbon sequestration and methane/N2O reduction				
Lack of localised research and extension into threatened species/threatened ecological community extent and condition	✓	✓		
Lack of local examples across the region of regenerative agriculture in practice	✓	✓		
Lack of local examples across the region of soil remediation actions				
Lack of current and relevant information products	✓	✓	✓	
Economic impacts on sustainable agricultural production systems (ie rising costs/ lower returns making it harder for investment into sustainable production and NRM conservation practices)				
Social impacts on sustainable ag production systems (ie labour availability, resistance to change/new practices)				
Seasonal influences and natural disasters (flood/fire/drought)				

Description	Works to improve waterway health	Works to improve wetland management	Works to enable sustainable water use	Pest and weed control programs
Climate change impacts to production and natural resources				
Competition for resources (mining, renewables, urban expansion)				
Reduced capacity for uptake of new practices/technologies				
Poor intergenerational planning				
Lack of community knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/skills etc)				
Loss of knowledge of local Aboriginal Culture (significant sites and stories from across the whole region)	✓	✓	✓	
Lack of opportunities to access Country				
Lack of Departmental knowledge and procedures for implementing traditional land management practices (i.e. Cultural burns)	✓	✓	✓	
Lack of formalised engagement opportunities to provide input into NRM programs				
Engagement methods are not appropriate to the stakeholder				
Poor communication across state/regional teams				
Inadequate funding or resources to implement traditional land management programs	✓	✓	✓	
Lack of Aboriginal goods and services providers				
Turn over of external stakeholder membership/staffing				
Lack of organisational knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/skills etc)				
Inadequate systems in place to monitor performance and customer satisfaction				
Inconsistent budget allocations and availability				
Instability of agricultural markets				
Political influences on funding programs				
Changes in program/project staff				
Short-term funding programs				
Access to training opportunities				

Empowering Aboriginal communities to care for Country

Description	Build the knowledge, skills and Cultural awareness of Central West LLS staff on the importance of the preservation of Aboriginal Cultural values and traditions	Central West LLS NRM team, Central West LLS Aboriginal Communities Officer and key Aboriginal community stakeholders collaborate on program design and implementation	Work with land managers to enhance awareness, knowledge, and ability to identify, protect and preserve Aboriginal Cultural heritage values	Identify and develop partnerships to provide opportunities for Aboriginal community engagement in NRM projects	Incorporate traditional Aboriginal land management knowledge and techniques into on-ground practice change	Prioritise and support sustainable growth of Aboriginal-owned businesses via procurement of goods and services
Invasive animal species impacts on biodiversity/production/ water quality or biosecurity					✓	
Invasive plant species impacts on biodiversity/production/ water quality or biosecurity					✓	
Grazing practices that promote reduction of groundcover beyond sustainable limits					✓	
Grazing practices in vulnerable areas that will have a detrimental impact on soil condition					✓	
Grazing practices in vulnerable areas that will impact water quality and aquatic health					✓	
Grazing practices that will impact a threatened species or endangered ecological community					✓	
Removal of multi-generational vegetation structure			✓		✓	
Removal of key habitat through clearing for agricultural purposes			✓		✓	
Isolation and fragmentation through removal of corridor linkages and paddock trees					✓	
Removal of fallen timber and hollow bearing trees			✓		✓	
Pesticide and herbicide drift impacts on both flora and fauna						
Loss or degradation of riparian and/or aquatic habitat			✓		✓	
Lack of sustainable fire regimes					✓	
Utilising land beyond suitable landscape thresholds or capacity						
Overabundance of native herbivores to unsustainable levels						
Inconsistent and outdated spatial data						
Lack of localised research and extension into agricultural and environmental market opportunities eg. carbon sequestration and methane/N2O reduction						
Lack of localised research and extension into threatened species/threatened ecological community extent and condition						
Lack of local examples across the region of regenerative agriculture in practice						

Description	Build the knowledge, skills and Cultural awareness of Central West LLS staff on the importance of the preservation of Aboriginal Cultural values and traditions	Central West LLS NRM team, Central West LLS Aboriginal Communities Officer and key Aboriginal community stakeholders collaborate on program design and implementation	Work with land managers to enhance awareness, knowledge, and ability to identify, protect and preserve Aboriginal Cultural heritage values	Identify and develop partnerships to provide opportunities for Aboriginal community engagement in NRM projects	Incorporate traditional Aboriginal land management knowledge and techniques into on-ground practice change	Prioritise and support sustainable growth of Aboriginal-owned businesses via procurement of goods and services
Lack of local examples across the region of soil remediation actions						
Lack of current and relevant information products						
Economic impacts on sustainable agricultural production systems (ie rising costs/lower returns making it harder for investment into sustainable production and NRM conservation practices)					✓	
Social impacts on sustainable ag production systems (ie labour availability, resistance to change/new practices)					✓	
Seasonal influences and natural disasters (flood/fire/drought)						
Climate change impacts to production and natural resources						
Competition for resources (mining, renewables, urban expansion)						
Reduced capacity for uptake of new practices/technologies					✓	
Poor intergenerational planning						
Lack of community knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/ skills etc)					✓	
Loss of knowledge of local Aboriginal Culture (significant sites and stories from across the whole region)		✓	✓	✓	✓	
Lack of opportunities to access Country			✓		✓	
Lack of Departmental knowledge and procedures for implementing traditional land management practices (i.e. Cultural burns)	✓	✓	✓		✓	
Lack of formalised engagement opportunities to provide input into NRM programs	✓	✓		✓		
Engagement methods are not appropriate to the stakeholder			✓	✓	✓	✓
Poor communication across state/regional teams	✓	✓				
Inadequate funding or resources to implement traditional land management programs	✓	✓	✓	✓	✓	✓
Lack of Aboriginal goods and services providers						✓
Turn over of external stakeholder membership/staffing		✓		✓		

Description

Description		Build the knowledge, skills and Cultural awareness of Central West LLS staff on the importance of the preservation of Aboriginal Cultural values and traditions	Central West LLS NRM team, Central West LLS Aboriginal Communities Officer and key Aboriginal community stakeholders collaborate on program design and implementation	Work with land managers to enhance awareness, knowledge, and ability to identify, protect and preserve Aboriginal Cultural heritage values	Identify and develop partnerships to provide opportunities for Aboriginal community engagement in NRM projects	Incorporate traditional Aboriginal land management knowledge and techniques into on-ground practice change	Prioritise and support sustainable growth of Aboriginal-owned businesses via procurement of goods and services
Lack of organisational knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/skills etc)							✓
Inadequate systems in place to monitor performance and customer satisfaction							
Inconsistent budget allocations and availability	✓		✓	✓	✓	✓	
Instability of agricultural markets	✓		✓	✓	✓	✓	
Political influences on funding programs	✓		✓	✓	✓	✓	
Changes in program/project staff	✓		✓	✓	✓	✓	
Short-term funding programs	✓		✓	✓	✓	✓	
Access to training opportunities	✓					✓	

Fostering Partnerships

Description	Promote Central West LLS as a 'service provider of choice' for NRM project and service delivery	Actively monitor partner and investor satisfaction, benchmarking and current performance	Identify and develop appropriate collaborative arrangements with priority partners	Ensure resourcing required for partnership development and collaboration is incorporated into work plans and project budgets	Ensure benefits of partnership and collaboration are reflected in MERI frameworks
Invasive animal species impacts on biodiversity/production/water quality or biosecurity					
Invasive plant species impacts on biodiversity/production/water quality or biosecurity					
Grazing practices that promote reduction of groundcover beyond sustainable limits					
Grazing practices in vulnerable areas that will have a detrimental impact on soil condition					
Grazing practices in vulnerable areas that will impact water quality and aquatic health					
Grazing practices that will impact a threatened species or endangered ecological community					
Removal of multi-generational vegetation structure					
Removal of key habitat through clearing for agricultural purposes					
Isolation and fragmentation through removal of corridor linkages and paddock trees					
Removal of fallen timber and hollow bearing trees					
Pesticide and herbicide drift impacts on both flora and fauna					
Loss or degradation of riparian and/or aquatic habitat					
Lack of sustainable fire regimes					
Utilising land beyond suitable landscape thresholds or capacity					
Overabundance of native herbivores to unsustainable levels					
Inconsistent and outdated spatial data					
Lack of localised research and extension into agricultural and environmental market opportunities eg. carbon sequestration and methane/N2O reduction					
Lack of localised research and extension into threatened species/threatened ecological community extent and condition					
Lack of local examples across the region of regenerative agriculture in practice					
Lack of local examples across the region of soil remediation actions					
Lack of current and relevant information products					
Economic impacts on sustainable agricultural production systems (ie rising costs/ lower returns making it harder for investment into sustainable production and NRM conservation practices)					

Description

Description	Ensure benefits of partnership and collaboration are reflected in MERI frameworks				
	Promote Central West LLS as a 'service provider of choice' for NRM project and service delivery	Actively monitor partner and investor satisfaction, benchmarking and current performance	Identify and develop appropriate collaborative arrangements with priority partners	Ensure resourcing required for partnership development and collaboration is incorporated into work plans and project budgets	Ensure benefits of partnership and collaboration are reflected in MERI frameworks
Social impacts on sustainable ag production systems (ie labour availability, resistance to change/new practices)					
Seasonal influences and natural disasters (flood/fire/drought)					
Climate change impacts to production and natural resources					
Competition for resources (mining, renewables, urban expansion)					
Reduced capacity for uptake of new practices/technologies					
Poor intergenerational planning					
Lack of community knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/skills etc)					
Loss of knowledge of local Aboriginal Culture (significant sites and stories from across the whole region)					
Lack of opportunities to access Country					
Lack of Departmental knowledge and procedures for implementing traditional land management practices (i.e. Cultural burns)					
Lack of formalised engagement opportunities to provide input into NRM programs					
Engagement methods are not appropriate to the stakeholder					
Poor communication across state/regional teams					
Inadequate funding or resources to implement traditional land management programs					
Lack of Aboriginal goods and services providers					
Turn over of external stakeholder membership/staffing					
Lack of organisational knowledge of emerging markets or capacity to become involved (i.e. cant take advantage of market opportunities because of financial/lack of education/skills etc)					
Inadequate systems in place to monitor performance and customer satisfaction		✓		✓	✓
Inconsistent budget allocations and availability	✓		✓	✓	
Instability of agricultural markets					
Political influences on funding programs		✓	✓	✓	
Changes in program/project staff		✓	✓	✓	
Short-term funding programs		✓	✓	✓	
Access to training opportunities					

