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On behalf of the board and staff of North West Local Land Services, I am delighted to present the North West Local Annual Report 2016.

Our third year in operation has built on a strong foundation based on trust, experience and result driven action. The year has seen us deliver our programs more efficiently and drive programs which have better community and industry appeal.

This year we continued to reach out to our local industries and communities to ensure we were meeting the needs of the north-west. This inclusive and collaborative approach ensures we can continue to build on our strong agricultural, environmental and cultural values.

It is very difficult to single out particular projects but some highlights of the year include:

- The invasive species and plant health team had a major focus on landholder training by holding vertebrate pesticide induction training days at 23 locations across the region.
- During the November/December floods our teams assisted landholders with animal welfare issues, damage assessments for disaster declarations and participated in recovery planning.
- Three of our district veterinarians travelled to Nepal for intensive training in villages with multiple active cases of foot and mouth incursions. This practical training provided our region and the state with an increased capacity to protect our community and industries.
- A large scale maintenance program on the travelling stock reserve network. A priority for this program was to regain water security on travelling stock reserves through de-silting of earth dams and tanks.
- An increased allocation of weed spraying resources to reinforce the harrisia cactus containment line south of Boggabilla.
- Improving the condition of habitat for koalas at Croppa Creek and south of Gunnedah.
- The successful completion of the Caring for Our Country Regional Investment Program 2013-18.

An additional highlight has been the support of the North West Community Advisory Group, which has provided advice to the local board to tailor services more effectively and have closer connections to industry and community.

The value of an effective community advisory group was clearly evident in the positive response we received during the year and it continues to prove an effective way to show the value local people can build in their community.

A direct response from community advisory group consultation was the implementation of a survey project, collecting data on the environmental and agricultural impacts of wild deer in the Liverpool Plains, which has subsequently been used for statewide policy development.

Many of our projects and programs would not be possible without the support of our funding partners—the National Landcare Programme via the Australian Government and Catchment Action NSW, supported by the NSW Government.

This report presents our work throughout the region during 2016. I would like to acknowledge the contribution of our Landcare partners, ratepayers, local government organisations, Aboriginal communities, pest animal groups, industry groups and other government agencies, all of whom have contributed, collaborated and invested themselves along with the team at North West Local Land Services with one outcome in mind—to make the north-west the best it can be now and even better for the next generation.

Finally, I would also like to extend the thanks of the board to the North West Local Land Services General Manager, Ken Flower and his team for their passion, enthusiasm and dedication.

Conrad Bolton
Chair, North West Local Land Services
The North West Local Land Services region is located in the North West of NSW stretching from Quirindi in the south and north to the Queensland border and Bendemeer in the east to Walgett in the west.

It is bounded by the Great Dividing Range in the east, the Liverpool Ranges and the Warrumbungle Ranges in the south and the Nandewar Ranges in the north.

Major tributaries are the Namoi, Peel, Cockburn, Manilla and McDonald rivers in the Namoi Catchment and the Macintyre, Gwydir, Severn and Barwon rivers in the Gwydir Catchment.

The North West Local Land Services region is made up of the council areas of Gunnedah, Gwydir, Liverpool Plains, Moree Plains, Narrabri, Tamworth and Walgett. The region has an area of approximately 82,000 km², a distance of over 440 kilometres.

It is home to around 113,000 people who live mainly along the rivers and their tributaries with major regional centres of Moree, Narrabri, Gunnedah and Tamworth. Around 7,500 people are employed directly in agricultural industries.

The Kamilaroi nation are the traditional custodians of the region, there are 14 local land councils representing some 13,000 people living in the area.

The North West region is a productive agricultural area with summer dominant rainfall and a climate allowing for crop and pasture growth across most of the year.

There are significant groundwater resources, together with surface water allocations, to enable the irrigation industries to contribute approximately 48 per cent of the gross value of agricultural production to the region’s economy.
2016 local achievements

- **310** Property visits by vets and biosecurity officers
- **250** General consultations by vets and biosecurity officers
- **163** Saleyard inspections
- **30** Livestock export certificates issued
- **728** Participants at training events
- **10,544** Hectares of land managed for natural resource outcomes
- **$2,231,083** Invested in community groups and on-farm activities in the region
- **384** Properties involved in wild dog baiting
- **1,971** Permits issued for moving stock
- **3,098,027** Hectares managed for pest animal control
Local Land Services goals

Local Land Services aligns all of its work with its mission of being a customer-focused business that enables improved primary production and better management of natural resources. The strategic direction of Local Land Services is summarised in four organisational goals.

- Resilient, self-reliant and prepared local communities
- Biosecure, profitable, productive and sustainable primary industries
- Healthy, diverse, connected natural environments
- Board members and staff who are collaborative, innovative and commercially-focused
Local Land Services statewide goals

The operations of North West Local Land Services are aligned and integrated with the four state-wide goals of Local Land Services. The North West Local Strategic Plan describes each area of operation and outlines key strategies and activities that will achieve each state-wide goal.

Resilient, self-reliant and prepared local communities

North West Local Land Services is committed to making a significant contribution to the North West region in order to see it thrive. Resilience, self-reliance and preparedness are vital ingredients in a thriving community, ensuring it is better able to withstand shocks or disturbances to the landscape, production of food and fibre and the economy, and still maintain its functions and structures.

The following activities have been implemented by North West Local Land Services in 2016 which was the second year of operation under the North West Local Strategic Plan.

Emergency management and disaster relief

Emergency management is a shared responsibility that involves prevention and preparedness to minimise the impact of emergencies, responding to emergency events and conducting recovery operations to return communities, the environment and economy to business as usual.

In partnership with NSW Department of Primary Industries (NSW DPI), we help manage livestock disease and emergencies such as drought, bushfires and floods and biosecurity events involving plants, animals and pest insects.

More than 25 per cent of North West Local Land Services staff have received base-level biosecurity and emergency response training while 17 per cent of staff have been trained beyond this level.

Trained staff have assisted in four emergency responses during the year.

Projects in the past year have included:
- Operation Mary, a statewide audit of NSW sheep saleyards
- Sheepcatcher II, a national sheep tracing exercise
- Operation Wishbone, an avian influenza scenario facilitated NSW DPI, NSW Health, police, local government and the poultry industry
- three district veterinarians were sent to Nepal for advanced diagnostic training in foot and mouth disease.

Aboriginal communities

We support Aboriginal people to care for Country, share traditional land management knowledge and help protect and strengthen Aboriginal cultural heritage. We’re working to promote Aboriginal cultural awareness and enhance engagement throughout our region.

Our goal is to support Aboriginal communities in caring for Country, particularly through employment and training opportunities to build skills and capacity in land management. More than 16.4 ha of land, holding Aboriginal cultural value, was managed along with seven Aboriginal sites.

Projects in the past year have included:
- burial ground protection at Angledool and Terri Hie Hie
- repatriation at Bingara
- traditional ecological burn project at Narrabri on a travelling stock reserve
- site protection fencing at Eurool Station
- traditional medicinal garden at the Barwon Learning Centre
- two garden nurseries to provide native seedlings for planning of traditional bush tucker
- rock art protection and remediation works at Boundary Rock
- North West staff have also run a number of local community events that have brought Aboriginal people on Country to share traditional knowledge and practices and to improve access to country.
Sustainable agriculture
North West Local Land Services provides high quality advisory services to landholders in the region to improve the sustainability and resilience of the landscape, agriculture industries and communities.
We have a strong team that provides credible, unbiased and trusted advice and extension services built upon sound scientific knowledge and evidence based practices.
We increased the capacity of land managers to improve primary production and natural resource management and trained more than 450 customers at training events. More than 3,200 ha of land was managed for sustainable grazing in the region.

Projects in the past year have included:
• soil water measurement on the Liverpool plains with electromagnetic surveying tools
• demonstrations on multi species cover cropping
• Aquatill field demonstrations
• best practice pasture management updates
• the formation of a professional livestock group
• tropical pasture silage assessment and a tropical pasture soil health project.

We increased the capacity of land managers to improve primary production and natural resource management and trained more than 450 customers at training events.
More than 3,200 ha of land was managed for sustainable grazing in the region.
Biosecure, profitable, productive and sustainable primary industries

Effective biosecurity and animal welfare is insurance to maintain market access for North West livestock and crop producers, now and in the future.

North West produce is free of many of the pests and diseases found in other parts of the world and that’s why Local Land Services works diligently with ratepayers to monitor herds, flocks, and crops across the region and shares up-to-date advice and information to boost productivity.

Animal biosecurity and welfare

Pest animals cause serious economic losses to agricultural production, pose a risk of exotic disease, threaten the survival of many native species and cause environmental degradation.

We work with landholders to minimise the impact of pests on agricultural production and the environment.

In the past year district veterinarians and biosecurity officers attended 250 general consultations along with conducting 310 disease investigations.

Projects in the past year have included:

- investigations into a number of cattle and sheep mortalities, due to plant toxicities, water deprivation and Barbers pole issues
- investigations of unusual weakness problems affecting sheep on a number of western properties
- there were also a number of sheep lameness reports with foot abscess, erysipelas and footrot being the main causes of lameness.

Invasive species and plant biosecurity

Invasive pests can impact significantly on the productivity and profitability of agriculture. We work with landholders to minimise the impact of pests on agricultural production and the environment.

We provided 24 education and training workshops to build the capacity of 268 land managers and support and help coordinate group control programs — bringing landholders together to control wild dogs, foxes, pigs, deer, plague locusts and other pests.

Working with land mangers three wild dog management plans were established and 384 properties were involved in 1080 dog baiting over an area of 1,572,333 ha across the region.

Projects in the past year have included:

- two information sessions providing more than 50 landholders with critical information on wild dog management and a further 23 landholders undertook intensive training to develop knowledge and skills in identifying wild dog activity, behaviour and best practice wild dog control and monitoring within the local area.
- supporting land managers and producers to manage existing weeds such as pasture weeds and environmental woody weeds and prevent the spread of new and emerging weeds which can impact negatively on agriculture
- establishment of the North West Regional Weed Committee, with representatives from more than 20 organisations including local control authorities, public and private landholders and community members involved in weed management across the North West.

Protecting our agricultural industry

To support primary producers we encourage and promote sustainable agricultural practices and increase the productivity of primary production.

Our biosecurity officers are empowered as stock inspectors in NSW.

Good surveillance detects any problems early and ensures the quality and safety of NSW livestock and livestock products, and access to domestic and international markets. In the past year we undertook 310 investigations to exclude an emergency animal disease.

Travelling stock reserves and stock management

North West Local Land Services manages travelling stock reserves for multiple users in the common interest of the whole community. We manage more than 162,000 ha of travelling stock reserves and promote a balance of use for production, social, cultural and environmental outcomes and continuously work to maintain and improve the resource.

Mobs of travelling stock are common throughout the North West with 1,971 walking and grazing permits issued in 2016.

To control the movement of stock, North West Local Land Services monitors the National Livestock Identification Scheme for compliance by undertaking sale yard audits and inspections and completed 163 inspections during the year. Some 30 livestock export certificates were issued from the North West during 2016 ensuring our stock are free from livestock health and disease problems.

To protect market access, North West Local Land Services manages the Property Identification Scheme (PIC), with 163 issued during the year.

Projects in the past year have included:

- travelling stock reserves received significant investment in weed control. A total investment of $589,000 has been made for Harissa cactus control around Boggabilla, across 2,600 ha
- we began a major workplace health and safety upgrade of our windmills. The first 12 of 108 windmills have been upgraded with new platforms, ladders and fall arrest systems. This upgrade will greatly improve our ability to service our travelling stock routes in the North West
- a project to control African box thorn on travelling stock reserves in the Moree area across 5,200 ha was also completed.
Healthy, diverse, connected natural environments

North West Local Land Services’ team works hard to bring landholders and our customers the best available research, knowledge and skills to assist producers to be more profitable and to ensure that natural resources are available for future generations. We support healthy environments and biodiverse ecosystems across the North West region by assisting landholders and communities to improve the quality of their land, soil, vegetation and water through grants and funding for on-ground projects, partnerships and training.

### Land management

Healthy ecosystems underpin successful, productive primary producers and communities. Through investment from the NSW and Australian governments, we support a healthy ecosystem across the landscapes of NSW.

We’re focussed on implementing landscape-scale approaches to address threats to the natural environment. In particular, we are supporting land managers to rehabilitate degraded habitat, manage weeds and pests, and contribute to the recovery of threatened ecological communities.

In the past year, 50 10-year management agreements were negotiated, protecting and conserving for biodiversity enhancement 2,500 ha of land, and 3,200 ha received support for measures to better manage sustainable grazing.

### Biodiversity

Native vegetation benefits both on farm production and environmental health. Healthy native vegetation can increase land values and productivity while reducing operating costs.

We’re aiming to improve the condition of native vegetation and riparian areas, extend habitat for threatened flora and fauna, and enhance existing wetland vegetation extent and quality. To achieve this we enhanced and rehabilitated 10 ha of wetland.

Sound management of native vegetation to rehabilitate, enhance and protect remnants and to increase the area of native vegetation in the landscape is a key objective for land managers in the North West region. In the past year we have enhanced and rehabilitated 1,093 ha of land and protected 400 ha of vegetation through fencing.

With better knowledge and improved land management techniques, soil is protected by native vegetation to reduce its susceptibility to erosion. Native vegetation is also critical for maintaining and improving habitat for many threatened flora and fauna species and for sustaining the health and function of local ecosystems, we planted 246 ha of native vegetation to assist in regeneration.

**Projects in the past year have included:**

- a koala conservation and care workshop, providing an opportunity for stakeholders collaboration
- targeted weed treatment of hudson pear to reduce the risk of spread into the Narran Lake Nature Reserve and Ramsar site
- a priority native vegetation conservation program focused on maintaining and improving the extent and condition of native vegetation and biodiversity assets identified as threatened or endangered ecological communities
- assisted landholders who have a travelling stock reserve on the boundary of their property to control weeds to improve the condition of these important native vegetation corridors
- conducted landholder engagement along the Namoi River for alligator weed eradication
- a priority riparian biodiversity program focused on enhancing and protecting key riparian reaches by managing key threatening processes
- the celebrity species program increased awareness of threatened species habitat

### Investment and partnerships

We support and engage new and existing Landcare networks and groups, community and industry partners, to undertake on-ground works and capacity building activities.

Working with Landcare NSW and NSW Government, we’re aiming to improve land and water ecosystem management, soil health, and native vegetation protection.

North West Local Land Services has allocated more than $489,228 dollars for the operation of local Landcare networks and the delivery of regional Landcare facilitator functions for the three-year period from 2015 to 2018.

Collaborative projects in the past year have included:

- ongoing small grant programs with Tamworth Regional Landcare and Northern Slopes Landcare Association to devolve small grant projects across the region as part of the National Landcare Programme
- funded three part-time regional Landcare officers and supported small groups to improve sustainable agricultural practices and natural resource management projects.
Our community

For nearly 30 years Gerard O’Connor has been managing travelling stock reserves in the north west region. Together with his team of travelling stock reserve rangers and senior field officers from North West Local Land Services, they provide access to 162,000 ha of land for walking and grazing stock.

Gerard is the Travelling Stock Reserve Team Leader for North West Local Land Services and based in Goondiwindi. Much of this work involves the issue of use permits, management of infrastructure maintenance, weed control and travelling stock reserve condition inspections.

Gerard is a community stalwart in the Goondiwindi region and is heavily involved with local sporting organisations, including touch football, junior cricket and the Goondiwindi Golf Club.

For his efforts he was awarded the Goondiwindi Regional Council’s Australia Day award for sports administration.
Water hyacinth mapping using remote sensing science

*Landsat remote sensing can be an effective and low-cost approach for regular surveillance/monitoring of larger landscape activities in the North West region. “*
- North West Local Land Services, Senior Strategic Land Services Officer, Rajendra Shilpakar.

**Location**
Gwydir Wetlands Conservation Area.

**The challenge**
Invasive weeds such as water hyacinth are a risk to the social and economic wellbeing for the North West region.

Remote sensing techniques can be an effective and low cost approach at for regular surveillance and mapping of distribution of weeds across the large landscapes.

**Work undertaken**
North West Local Land Services and the University of New South Wales (UNSW) are exploring the possibility of using remote sensing science for mapping water hyacinth distribution and changes over time across the Gwydir Wetlands Conservation Area.

This project uses a series of landsat satellite images captured from 2016 to identify potential water hyacinth incursion area in the Gwydir Wetlands Conservation Area and to understand their temporal behaviour.

In addition, an unmanned aerial vehicle (UAV) survey was conducted for a validation of water hyacinth map derived from Landsat images.

**Benefits**
- three North West Local Land Services staff attended a basic remote sensing training at UNSW Sydney
- landsat images covering a one year period are being processed for mapping water hyacinth distribution and their temporal behaviour in the Gwydir Wetlands Conservation Area
- a UAV survey conducted at two locations of the Gwydir Wetland Conservation Area for validation of suspected water hyacinth identified on landsat images.

**Key achievement**
Using best available science to reduce the surveillance costs of water borne weed across large areas of land in the North West region.
Wild deer in the Liverpool Plains survey

“The community has really pulled together to engage in this survey to demonstrate the importance of the deer issues in the area. It is good for the community to see Local Land Services listening to their communities and trying to drive the best services possible.”

- Liverpool Plains Community Advisory Group representative, Heather Ranclaud.

Location
Liverpool Plains.

The challenge
North West Local Land Services formed a community advisory group which assists the local board in its decision making capability by bringing key issues to its attention. In early 2016, a Liverpool Plains Community Advisory Group representative brought forward concerns of the numbers and destructive impact of wild deer within her area and the effect it was having on the customers of our region.

Work undertaken
Through this initiative of consultative networking by the community advisory group and listening to the needs and concerns of customers, members of North West Local Land Services’ strategic land services team met with key parties in the Liverpool Plains to further investigate the wild deer situation.

After the initial consultation, a course of action was agreed upon and a landholder survey was instigated to gauge the local opinions surrounding wild deer.

A survey was conducted via an online portal and a telephone survey to get the best representative sample.

Benefits
The survey delivered clear indications of customer concerns in that area including the real damage and impact of wild deer across a range of areas including crops, biosecurity, destruction of stock carrying capacity and road hazards.

Following on from the survey, it was imperative to ensure the community and the community advisory group were kept well informed of the information being gained and to make sure the community and key stakeholders were heavily engaged and kept informed.

As a result, the survey partner - University of New England, key staff from North West Local Land Services, Natural Resource Commission, Department of Primary Industries biosecurity staff, ABC local radio and approximately 30 local landholders attended a survey feedback day at the Warrah Creek Hall.

A detailed series of presentations were delivered with feedback received from our customers about the impact of wild deer in the area.

Key achievement
The next step will see the formation of a working group, driven by the community advisory group and key North West Local Land Services staff to investigate possible courses of action.

This process has demonstrated the capacity of the community advisory group model, the connectivity that it provides in the wider customer base and the platform that is able to be used to effect change and bring attention to the major issues within a customer area.

Total investment
- $40,000.
Wild dog management in the Walgett district

“It was an empowering environment for landholders to build a greater understanding of wild dog biology and behaviour together with integrated wild dog management practices in their local farming community. This intensive training has given landholders the opportunity to learn skills to protect their farming enterprises.”

- North West Local Land Services, Biosecurity officer, Heidi Mackay.

Location
Walgett and surrounding districts.

The challenge
Increased wild dog activity throughout the Walgett and surrounding districts.

To build community awareness and increase landholder capability in the detection, monitoring, control and management of wild dogs.

Work undertaken
Two community information sessions to inform landholders of the emerging wild dog activity and challenges in wild dog management, followed by an open forum to discuss key landholder concerns. These information sessions were delivered by Stuart Boyd-Law in partnership with North West Local Land Services biosecurity officers.

Delivery of two intensive training sessions over two days to provide landholders with an understanding and practical approach to integrated wild dog management.

Techniques developed by landholders included in field camera monitoring, detection of wild dog signs, best practice methods of control techniques in baiting, canid pesticide ejector and soft jaw trapping.

Benefits
Within the local landscape landholders were provided with an opportunity to learn and develop in hands on environment to develop skills in early detection, monitoring and control techniques.

Landholders were provided with four mentors during the intensive training to ensure the development of landholder skills.

Key achievement
More than 50 Landholders have an increased knowledge and awareness of the emerging wild dog presence in the local area and are supported by the development of 23 key landholder contacts who have committed to supporting the development of fellow landholders in wild dog management.

Total investment
- $25,000.
Aquatill farming training

“We can see how the technology can be used to improve fertiliser application and cut through stubble to improve planting.”
– Moree grower.

Location
Gurley.

The challenge
Zero till farming has provided significant benefits to agriculture in the region, including higher yields, more moisture storage and better soil health.
However, the increased surface residue can cause issues when planting the following crop as conventional machinery can struggle accurate place seed into the seedbed.

Work undertaken
North West Local Land Services, along with project partners, demonstrated how the adaptation of technology from the manufacturing industry could be used to improve planting opportunities in high residue situations.
The Aquatill system utilises ultra-high pressure (UHP) liquid to cut through residue in front of the planting units. This UHP liquid system is normally used for cutting steel and concrete.
The system was mounted to a local grower’s planter and demonstrated to interested growers and advisors at a field day in the Moree region.

Benefits
• improved planting opportunities
• growers would be able to maintain higher residue levels to improve groundcover
• ability to apply liquid fertilisers at planting time.

Key achievement
The agricultural sector was able to apply innovative thinking to solve a major issue through the use of technology from another industry.

Total investment
$16,000.

In collaboration with
• AMPS
• SA No-Till Farming Association
• Conservation Agriculture Australia
• Shape Technologies Group
• Conservation Agriculture and No-till Farming Association.
Office locations

**Narrabri**
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Narrabri NSW 2390
02 6790 7600

**Moree**
203 Balo St,
Moree NSW 2400
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**Warialda**
19 Stephen St
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02 6729 1528

**Tamworth**
33-35 Gunnedah Road,
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**Goondiwindi**
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