











Western New South Wales Wild Dog Case Study

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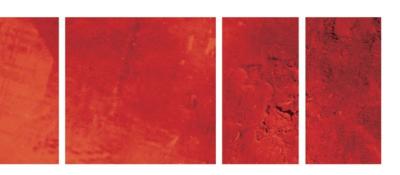
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Disclaimer: This document is a final version of the outputs delivered to the National Wild Dog Action Plan.

Input from eleven stakeholders is delivered in this case study.

A final review and approval by participating stakeholders has been undertaken.

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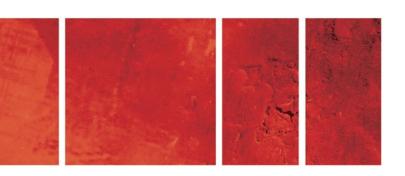
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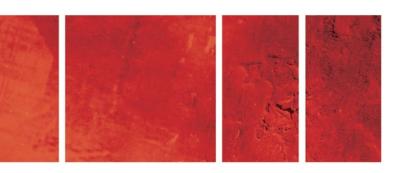
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Purpose of the Case Study

This project will investigate and document the barriers and responses to improving wild dog management encountered between 2010 and 2016 in the Western Division of NSW.



Introduction

The Western Division makes up 42% of New South Wales. The Western Division borders Queensland to the north and South Australia to the West. A large portion of the NSW border, within the Western Division, is protected by the wild dog fence. The successful management of wild dog populations, in previous decades in this region, is largely attributed to this fence. The fence is just as important today, however in the last 6 years, and particularly the last 3-4 years, through the adoption of various interventions, landholders in the Western Division have boosted their wild dog management efforts.

These interventions, including new equipment and tools, coordination, engagement with agency staff, funding availability and education, through sharing of knowledge and information, have overlaid pre-existing management approaches. The Western Division is also noted for being made up of a region of proactive and resilient landholders. This region has a culture of 'getting things done' based on their local knowledge, local leadership, shared commitment and persistence in working together to achieve goals. Landholders within this region embraced the support that flowed into the Western Division, most notably during the period of 2010 - 2016. It facilitated increased engagement of landholders, and gave them the confidence to change, achieving coordinated, and landscape scale management of wild dogs. This culture continues to exist today with the continued evolution of wild dog management groups, engagement of stakeholders and landholders, and the adoption of a range of interventions.

Drivers of success

This section documents the drivers of change and success in the Western Division during the period 2010 - 2016. It provides a timeline of key activities, events and influencers, which attributed to wild dog management during this period, and the progression of a collaborative, community wide, nil-tenure approach to wild dog management.

The case study will identify drivers of success, key themes, recommendations and quotes, recognised throughout the interviews, which have encapsulated the changes to wild dog management in the Western Division through the period 2010 - 2016. A sample of individual profiles, which offer specific insights to wild dog management at a local (property, group or organisation) level, are also provided.

Interviewees

Interviewees included a selection of stakeholders (landholders, agency staff, funders, wild dog coordination personnel) who are involved in wild dog management in the Western Division. Their period of involvement in wild dog management has varied among interviewees from more than 30 years to 3 - 4 years. Of the landholders engaged, no more than two landholders from a single wild dog management group were interviewed.

Interview analysis was based on detailed notes of comments made by interviewees and their answers to the questions posed in the interviews. These notes were transcribed and analysed. The results from the interviews are presented in the following sections.

While the group of interviewees was biased, in terms of selection process as identified by the National Wild Dog Action Plan team, the input from all has been collated to demonstrate the time line of activities that have driven success, along with the recognition of key themes.



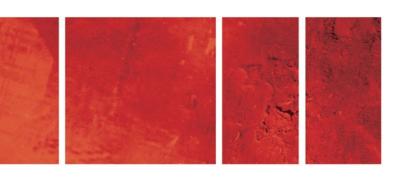
Early recognition in the far north west of NSW

- As a result of the alarming increase in wild dog numbers and attacks, Greg Mifsud, National Wild Dog Management Facilitator, began work with the Ledknapper Wild Dog Action group. The chair of this group presented a scope for coordinated management, which included aerial baiting that could link with the Paroo Shire wild dog baiting program (in Qld). However, at the time (2008), fixed wing aerial baiting was not allowed due to NSW regulations. By late 2010, such restrictions were lifted for aerial baiting in NSW (and the Wild Dog Destruction Board received approval from the NSW State Government to bait along the wild dog fence).
- Through Greg Mifsud's involvement with the Ledknapper Wild Dog Action Group in 2008, it was realised that the wild dog problem extended across the region, and a nil-tenure approach to management would yield a more effective management outcome. As a result, a public meeting was scheduled and delivered in Bourke in September 2008 between the Ledknapper Wild Dog Action Group, producers and public land managers across the region. "At the meeting, it was agreed that a nil-tenure approach was the only option, and that the Western Catchment Management Authority was the most appropriate stakeholder servicing the region to develop and support the program. This was also due to the link between Western CMA and the community Landcare groups that already existed, which could be utilised for planning workshops and, consequently, implementation of management programs. Despite the project being developed and presented to the Western CMA Board, it was not supported at the time," explained Greg Mifsud.
 - In 2010, the Western CMA was approached again, to engage with the wild dog management program, however resistance continued.

• "The lack of support from the Western CMA was largely due to them not recognising the importance of the wild dog problem for the region. As a result, support was gained for the roll out of an awareness program which Australian Wool Innovation funded. This awareness program generated interest from stakeholders to start developing cooperative wild dog management programs for the Western Division," said Greg Mifsud.

Awareness programs

• From early 2011 Australian Wool Innovation invested in a series of wild dog management workshops which were delivered across the Western Division by NSW Department of Primary Industries (NSW DPI). The purpose of the workshops was to increase landholders' understanding by recognising the risks of wild dogs to livestock production, as well as increasing community understanding of the role of trappers, and how to incorporate trapping into a management plan. Initially the project focused on workshops in the Ledknapper and Wanaaring area, given the history of group involvement/formation. It also provided intensive training for producers to gain skills in trapping. The program of workshops was expanded to other locations across the Western Division through to the end of 2012. The workshops engaged over 190 landholders.



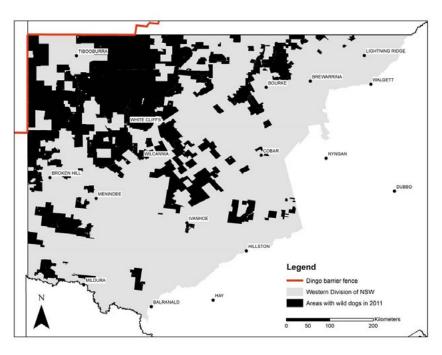


Figure 1 In 2011 landholders involved in the awareness workshops highlighted their properties/s to demonstrate known wild dog presence. This area is shown in the above diagram. Image supplied by Greg Mifsud, National Wild Dog Facilitator, Invasive Animals CRC.

• In September 2012, Greg Mifsud, National Wild Dog Facilitator with the Invasive Animals CRC, led meetings at Wanaaring and Tilpa. These meetings were attended by 12 - 15 producers, plus staff from the LHPA and CMA (both now replaced by Western Local Land Services). The objective of these meetings was to work with the landholders to improve the wild dog management programs within the region, and look at control options. The meetings aimed to enable interaction of landholders and to facilitate discussion and draw on their observations and local knowledge and experience regarding wild dog movements, control and livestock impacts. These details were captured on satellite maps of the region (a process implemented previously in others regions of Australia, including Hughenden, Qld).

The mapping exercise became an essential tool in developing a wild dog program. The meeting concluded with the development of a 12 month operating plan for wild dog management in areas of focus (Wanaaring and Tilpa).

These meetings initiated a range of ideas, and were a catalyst for enhanced wild dog management. Some of the outcomes of these meetings included:

- Sharing of knowledge and experiences. This
 resulted in increasing the capacity of producers
 to recognise issues through learning from
 others. Wild dog sightings and reports of impact
 were much more widespread than first thought,
 while there were some people at the meeting
 who were surprised there was a problem at all,
 or that the problem was actually so close to
 them (despite unexplainable low lambing and
 weaning percentages in some cases).
- Efforts placed on having further discussions (post meeting) with landholders not engaged in future involvement in the pest management group and coordinated control program.
- Encouragement of the use of wild dog strength baits over fox strength baits. Optimisation of bait spacing.
- Coordinating ground baiting with nearby groups (and in areas not initially represented at the Wanaaring and Tilpa meetings).



- Emphasis on planning, and being firm on setting dates for baiting campaigns. Allocating dates in advance to enable people to be aware, and organised. This removed a barrier to participation.
- Reporting sightings.
- Assisting with a process to facilitate baiting across properties providing 'absentee threat' to increase participation in baiting programs.
- Identifying ideas for use of the T&R funding available (explained in detail below) - this included applications for freezers, for local bait meat storage, and funding for sourcing meat for baits.
- Collaborating in the construction of drying racks to assist with baiting preparation. This lead to the development of a series of baiting stations.
- Initial discussions around the likelihood of initiating aerial bating. Aerial baiting had long been in the pipeline and a recognised need. Momentum for change was building around this time. At the time of these meetings (held September 2012), consensus was that it was too soon to implement aerial baiting for Spring 2012. This was due to timing, but also the seasonal conditions which had resulted in favourable grass growth, which made it difficult to track wild dog movements.
- There was significant value in these activities, and those involved were able to see the value in the coordinated efforts to allow for a strategic and landscape driven approach. The meetings motivated landholders and agency staff.

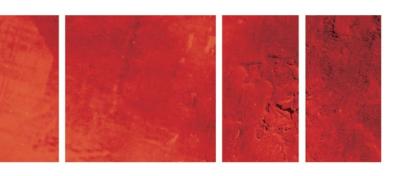
Group formation

 Group formation in the Western Division was accelerated with the introduction of increased stakeholder involvement, such as the wild dog coordinator and AWI investment or links with group orientated organisations, such as Landcare. See Figure 8 and Figure 9. Previous to this, in the Western Division, groups (while

- having some common features) varied in how formal their management arrangements and group structures were. Origination of groups also varied. This is explored later in the themes section.
- There were a small number of groups formed prior to 2012, however the above meetings in Wanaaring and Tilpa, in particular, enabled group formalisation. Some of the learnings from the Ledknapper group, which was established in 2008, were also incorporated to these groups. Groups would generally meet once or twice a year, and were linked with planning or implementing baiting. Much of the work of coordinating appears to have been undertaken by one or two people in each group, or a coordinator, and via email and phone calls.

Thomas Foods International (formally T&R Pastoral) donation to wild dog control

- Due to the concerns over the impacts on wild dogs in the rangelands of Western Australia, Thomas Foods approached, Greg Mifsud, National Wild Dog Facilitator to see how they could support wild dog management in the Western Division of NSW. As a result a program was developed, whereby a donation was offered to groups (consisting of at least two properties) for the coordinated management of wild dogs.
- Therefore, from 2012, for each goat sold to Thomas Foods (TFI) (formally T&R Pastoral Company (T&R)), a \$0.50 rebate per goat was returned for the control of wild dogs.
- The donation was offered to assist in the management of wild dogs and to help ensure long term viability of livestock industries, including the goat industry within the Western Division.
- The funds were available to all Western Division landholders via wild dog/pest management groups.
- The Pastoralists Association of West Darling



- collected and administered the funds on behalf of TFI and an application process was implemented for accessing funds.
- This was a unique engagement of a commercial business demonstrating interest in the long term viability of the region.

Western Division Wild Dog Coordinator appointed

- In 2013, a wild dog coordinator was appointed to the Western Division. The Western Division Wild Dog Coordinator, Bruce Duncan of NSW Farmers is funded by Australian Wool Innovation (AWI). The purpose of this role is to liaise with landholders and other stakeholders within the region to assist them in achieving long term onground management of wild dogs.
- Taking a helicopter view of the Western Division, and the wild dog management in the region, there were landholders and organisations operating in different directions. "The coordinator role was really needed. The role streamlined things and pulled together agencies, created more groups, filled gaps in groups and, as a result, anecdotally, wild dog numbers are down. It's having a positive effect on people, production and the environment," explained NSW Farmers, Vice President, Mark Horan.
- Implementation of this role has been an effective enabler for enhancing the impact of wild dog management. The involvement of the Wild Dog coordinator has introduced new skills and resources to new or existing groups.
- In addition to funding the role, AWI has provided ongoing funding support to groups for wild dog management initiatives in a flexible manner.
- "The same support avenue was provided to all groups, some chose to take on the support of AWI and the wild dog coordinator, while others didn't," explained one landholder.
- The role has also benefited landholders from an emotional wellbeing perspective as it

- provides a dedicated resource, in the area, who is enthusiastic, present and in contact with landholders regularly. Feedback is very positive about this role.
- "We would never be able to achieve what has been achieved in the last few years without the funding from AWI and the role of the wild dog coordinator," said Brendan Cullen.

· Aerial baiting implemented

- Aerial baiting was something producers were keen to do for a long time, particularly in the Ledknapper, Wanaaring and Tilpa areas. With the introduction of the wild dog coordinator role, aerial baiting became a project of focus. The wild dog coordinator was able to work with a range of people at different levels to make this a reality, which had been a challenge or barrier for producers to achieve on their own in the past.
- In 2014, the first aerial baiting campaign with a fixed wing aircraft was delivered, covering properties in the Wanaaring, Tibooburra, White Cliffs and Tilpa areas, designed to reach areas that were inaccessible for ground baiting.
- This program was a significant milestone for wild dog management in the Western Division.
 The aerial baiting program success was useful in demonstrating to all stakeholders what could be achieved with collective input, planning and coordination.
- "The fact that the whole of the region was more organised, with groups established, demonstrate demand, making it easier to demonstrate requirements for policy change," said Greg Mifsud.
- In 2014, the Commonwealth Government announced funding to support pest management programs in drought affected Local Land Services regions. The Western Local Land Services secured some of this funding. It was this funding which supported the aerial baiting program in the Western Division.



 The aerial baiting programs, undertaken in recent years, coincides with on ground baiting programs during Autumn and Spring. Coordination also considers the baiting programs over the border in Qld.

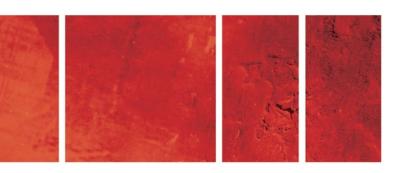
Increased stakeholder engagement

- Grants from State and Federal Governments and Industry have enabled the wild dog control program to expand its scope, footprint and operations across the Western Division.
 Contributions and collaborations with partner organisations have also been crucial.
- "There was growing acceptance from stakeholders which resulted in implementation of a lot of processes. We were seeing a nil-tenure approach, as a consequence, and were seeing greater involvement with the addition of more interested stakeholders," said Greg Mifsud, National Wild Dog Management Facilitator.
- Having greater stakeholder/agency engagement
 in the region provided a catalyst for change
 amongst the landholders. These parties
 were able to provide the information to
 assist landholders in making decisions. They
 provided landholders with a process to achieve
 outcomes and made it easier for activities to
 be coordinated. The landholders were already
 implementing localised approaches but, through
 the new involvement of stakeholders and also
 the Wild Dog Coordinator, the landholders were
 able to implement new support tools with
 greater confidence and breadth.
- Partner organisations included NSW DPI, Landcare, National Parks and Wildlife Service (NPWS), AWI, NSW Famers, Invasive Animals CRC/National Wild Dog Action Plan and Western Local Land Services (in addition to agencies that were superseded by Local Land Services inception).



Figure 2 Aerial baiting programs reach inaccessible areas of the NSW Western Division. Image supplied by Grant Davis, Western Local Land Services.

- Local Land Services launched in 2014. There was
 a time lag because of associated restructure
 for resourcing the region effectively. Today the
 Western LLS has resources and capacity to aid
 in pest management programs. The LLS also
 sourced funding to support baiting programs.
 Their capacity, to a degree, is also a result of
 the developing self-sufficient model of wild dog
 management. Additional tools and equipment
 being made available to groups of producers
 (eg freezers, drying racks etc. through AWI and
 other sponsors) has enabled the LLS staff to
 reach more groups due to shifts in roles and
 responsibilities within baiting programs.
- The Western LLS have a significant operational role in wild dog management and, in particular, during baiting program implementation. Their roles (which are shared with groups) include:
 - Supporting and enhancing the group approach to management
 - Preparation and coordination of baiting programs



Development of group dynamics and an integrated approach to pest management (which considers on ground and aerial baiting programs, plus use of other tools)

They also contribute to supporting monitoring and review processes and implementing these with groups, which aims to strengthen the collaborative approach.

- Western Landcare has a long history in the Western Division, and identified a role to support landholders in establishing groups, group administration, governance and sourcing funding support for wild dog management. The network of engaged landholders that Landcare has in the region is also advantageous.
- Donations of meat for baiting from Fletcher International Exports were valuable to groups (and available across a couple of seasons), however this has now moved to an 'at cost' purchase, given the increase in participation and demand for baits.



Figure 3 Wild dog baiting program at Tilpa. Baits being prepared on drying racks. Image supplied by Tim Wall, Western Local Land Services.





Figure 4 Members of the Tilpa Group participating in camera training with Paul Meek, July 2016. Images supplied by Bruce Duncan, Western Division Wild Dog Coordinator, NSW Farmers.



Support for events, training and equipment

- AWI and Western Local Land Services
 (WLLS) have provided a range of support for
 landholders across the Western Division to
 allow stakeholders to gain knowledge and skills
 in management of wild dogs. This includes
 conducting training in the use of:
 - 1080 products
 - Canid Pest Ejectors
 - Monitoring cameras
 - Trapping
 - Tracking
- Examples of events are included as follows:
 - In 2014, the Barrier Area Rangecare Group (BARG) hosted a Wild Dog Management Forum and Trapping School at White Cliffs, with support from Western Landcare, attracting landholders and other stakeholders from across the wider western region. The trapping school was held on property to upskill landholders (Figure 7).
 - Also during 2014, the Ledknapper Wild Dog Action Group, with support of the Western LLS and AWI funding, undertook a trapper training day with Paul Billsborough.

Ongoing group formation and group refinement

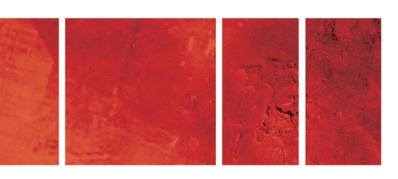
 Through combined efforts of numerous stakeholders (AWI, NSW Farmers, National Wild Dog Action Plan and Western LLS) across the region, the number of groups has grown significantly. See Figure 8 and Figure 9 for the change in group coverage from 2011 to 2016. While Figure 8 demonstrates Landcare groups only, it does reflect gaps within and between these groups.



Figure 5 Landholders who participated in a Trapping School on the Dog Fence, August 2016. Image supplied by Bruce Duncan, Western Division Wild Dog Coordinator, NSW Farmers.



Figure 6 Participants from the Tilpa district at a wild dog workshop and management day held in Tilpa with the Western Local Land Services. Image supplied by Tim Wall, Western Local Land Services.



- Groups today are more formal, and include an executive committee for decision making processes. Depending on the sources of funding, each group has varying degrees of reporting requirements. Groups are better connected today, with enhanced communication between groups, key agency staff and the wild dog coordinator.
- Capacity has been enhanced within groups and efficiency gains are being observed. The coordinated approach, and repetition of baiting programs season on season, is building the capacity of landholders to tighten their operations for implementing effective programs. As a result, "LLS are getting maximum results for their investment in time," indicated a landholder when discussing the shift in methods for preparing baits for injection and distribution. "It also came down to necessity and logistics. When the program started to expand, it was still necessary to get everything achieved in a similar time frame, with the same resources. We have seen the development of a culture of collaboration," he explained.
- Groups continue to form in new areas including south of the Barrier Highway. This area is experiencing the most growth as it's an area which, historically, has had significantly lower reported sightings and predation. In areas north of the Barrier Highway, groups are formed and continue to focus on participation.
- The wild dog coordinator assists by organising initial meetings with new groups. Landcare facilitators also contribute to the development of new groups.
- Within some groups, smaller clusters have been formed. Employing 'sub-groups/clusters' within each pest management group has allowed for a coordinator to manage a smaller group, covering a smaller geographical area, which helps to alleviate workload and enhances program implementation.



Figure 7 Trapping school with Paul Billsborough undertaken in March 2014 in the Packsaddle and Milparinka district following the Wild Dog Management Forum held at White Cliffs, hosted by BARG. Image supplied by Australian Wool Innovation. Coordinator, NSW Farmers.

During the period of 2010 to 2016, it is clear that the additional resources, tools and support provided to the landholders facilitated increased engagement within the region.

"It's shown everyone what can be achieved through planning and coordination," said Greg Mifsud.

A reduction in wild dog numbers is assumed, given the decreased number of sightings of wild dogs (and foxes) and increased lambing, calving and kidding rates observed by livestock producers. Increased numbers of native animals and key native species that have been less common in the past has been observed which is very encouraging.

A planned, coordinated approach to ongoing wild dog management is required to continue to control numbers, and is the goal to support the wellbeing of landholders and the productivity and profitability of businesses in the Western Division.

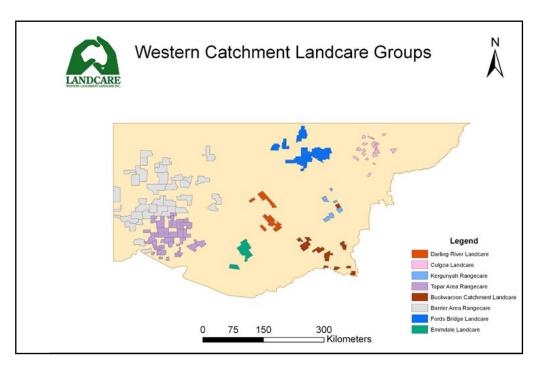


Figure 8 Western Catchment Landcare groups pre 2011, which includes pest management including wild dogs. Individual holdings and link to Landcare group shown. Image supplied by Greg Mifsud, National Wild Dog Management Facilitator, Invasive Animals CRC.

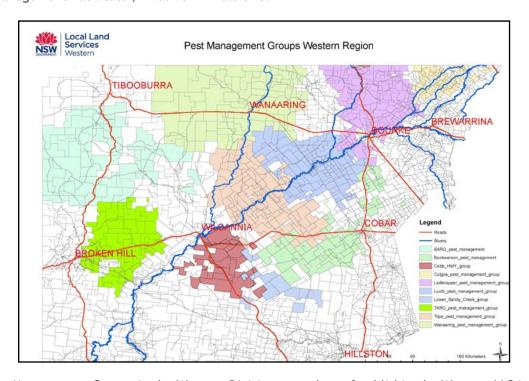
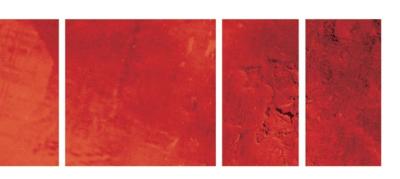


Figure 9 Pest Management Groups in the Western Division as at date of publishing by Western LLS in October 2016. Image supplied by Bruce Duncan, Western Region Wild Dog Coordinator, NSW Farmers.



Themes

In addition to highlighting the key activities which have shaped wild dog management in the Western Division from 2010 - 2016, interviewing stakeholders has highlighted a number of themes which demonstrate the background to the shift in management within this region. It also highlights some of the key features of wild dog management specific to the Western Division.

Scale of the Western Division

- The Western Division covers 42% of NSW and is considered within the low rainfall zone of NSW. The Western Division covers a large area with few people managing large landholdings, and many pests. The people in these areas are resilient. "Those who continue to manage businesses in this zone are of very strong character, they've been through a lot. This characteristic has allowed them to be successful, resilient land managers, managing large scale land holdings," explained a landholder.
- It has been noted that while property size may increase, with reduced number of Full Time Equivalent labour (family or non family), this is not always linked with reduced interest or availability to implement effective pest management programs.
- Pastoral/rangeland livestock production is the key enterprise. Sheep (meat and wool), beef cattle and goats are the key enterprises. Lambing, calving and kidding rates are a key profit driver for businesses in the Western Division. The impact of successful wild dog management has been positive on lambing, calving and kidding percentages. With favourable commodity prices for meat and wool, and the growth in the goat industry, effective pest management is seen as a small cost for the benefits gained. There is a lot of optimism among the producers interviewed.

- While there appears to be a growing number of younger families returning to the area, leaders of groups and initiatives of pest management are generally older. At least two of the interviewees who have been very proactive within the region for many years, holding various positions on committees associated with wild dog management, are retiring from the region with the next 12 months. Succession and transfer of IP between key influencers will be important for groups going forward.
- Efforts are made within groups to involve more than one person from the business in the programs. This assists with succession planning within businesses and also for group functions.
- Absentee landowners, organic certified properties (which is a profitable enterprise for the region) and land being locked up for carbon sequestration are all present in the Western Division. Given the scale of properties (large areas of land) operating in this way, there are concerns about the potential risks posed to overall wild dog management and the ability to maintain a nil-tenure approach if landholders do not remain proactive and engaged.

Bottom up approach and recognition of the need to share the responsibility

- Landholders and other stakeholders in the Western Division are, in general, very proactive and demonstrate resilience in the way they manage challenges.
- Examples of this proactive culture are particularly evident in those who have had a long association with pest management, and, more specifically, wild dog management. An example of this is the Wild Dog Destruction Board, an independently managed and driven organisation based predominantly on landholder rates, plus a State Government contribution. Combined with the board, landholders along the state border have been proactive in self managing wild dogs for many years. This culture of management has benefitted landholders further east and instigated some locally driven management.

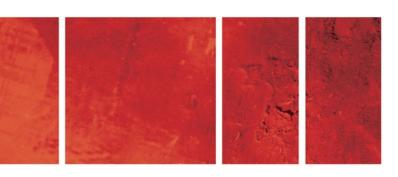


- Landholders recognise the need for budgeting for wild dog management, as a business expense, and to take responsibility for managing the problem. A minority, however, have an attitude of entitlement and, consequently, resist engagement in wild dog management unless funding is available.
- There is certainly a strong sector of the region that is self motivated and get on with implementation of proactive management and are not driven by funding availability.
 Funding certainly assists, but business goals and maintaining production is the driver.
 "Commodity prices and the growing goat industry helps to change attitudes," stated one interviewee.
- A characteristic of the engaged landholders is the many examples of other community and/ or industry roles they have undertaken or participated in, in the past or currently. The relatively low population of landholders across the regions means that landholders know each other and are comfortable working together. 'It's the way we do things,' was reinforced a number of times with stakeholders.
- From landholders to key stakeholders, organisations and agencies, there is clear recognition by the majority for the need to work collaboratively to share responsibilities of wild dog management. Early group formation signifies this, and more recent group formation has taken on characteristics of the longer running groups with support of recent introductions of the wild dog coordinator and targeted funding support.
- Responsibilities include an approach to covering costs of wild dog management. It appears that the majority of landholders appreciate the need to share costs and to adopt a public versus private benefit approach. They appreciate the support from industry, Government, sponsors and others to support the programs, but also take responsibility for their own investment to protect and preserve their livestock enterprises,

- landscape and native fauna. However, there are some concerns from landholders about the potential impact of increasing costs, with one landholder questioning, "Anecdotally, when costs start increasing, people begin to back out. Can the same group strength that's been established, and that exists, be maintained as the cost to be involved gets higher?"
- There is recognition that the wild dog population will never be eradicated, however controlling the population is a realistic goal and complacency is not an option.

Informal experiential group formation and implementation

- It became obvious that clusters of landholders would form groups, and these groups and associated functions would be based on informal knowledge and personal experience, rather than adopting a set process for formalising a pest management group.
- The leaders of these clusters are competent, proactive and community minded. For example, pest management groups have formed as an adjunct to a community group, such as the Little Topar Rural Fire Brigade, and a pest management group has formed along side the Tilpa Community Group. Groups have also formed, based on experience working together in the past, to undertake fox control programs for instance, or due to geographical locations and past 'borders' assigned by various organisations/agencies (eg PP Board). Learnings from these types of groups have been captured and adopted for the development of new groups more recently across the Western Division.
- Depending on the group, some groups take a less formal approach, while there are others who have formalised independently (and are incorporated) or within Landcare. Some groups have been in place for many years, but have more recently refined their group structure with the support of the wild dog coordinator.



- Some landholders undertake their own program, coupled with the coordinated community based baiting programs (on-ground and aerial).
- The groups are now implementing more
 effective management programs as a result
 of new tools, education and resources being
 directed to the effort. The group process is now
 a recognised approach across the region and
 new groups are in the forming stage, with other
 areas are being targeted to establish groups to
 cover gaps.
- "The groups help educate people about the possible downside risk of not managing wild dogs," said Ken Turner.

Landscape scale management

- Landscape scale management has been improved through the inception of the aerial baiting program. A further benefit of this is increased communication across groups and even across state borders as a result of the coordination required. This enhances the communication across the region and effectiveness of programs, regardless of the tools used.
- Nil-tenure works well within the state, but not so well between states, as a result of different laws and regulations regarding wild dog control. The state borders impact the influence of effective wide scale management.
- Nil-tenure has been adopted across regions of the Western Division more effectively in recent years, due to the growth in wild dog/ pest management groups and increased communication.
- Landscape scale management is, however, challenged with growing evidence of the number of absentee landowners/lifestyle block owners, within the Western Division, with a proportion not engaged in the management program (self organised, or collaboratively with coordinated effort).

- Organic certified properties also raise issues for the nil-tenure approach. 1080 products cannot be used on these properties, therefore making them reliant on other methods of management which are more time consuming to implement.
- Utilising dog bait strength 1080 assists in the management of foxes too. Due to the attitudes of some landholders, only fox strength baits are used, however this doesn't impact wild dog populations. This causes frustration within communities/clusters as wild dog effort is diluted.

Availability of new innovations and technologies

- Aerial baiting, via a fixed wing aircraft, was new to the region in 2014, and was designed to reach areas that were inaccessible to ground baiting.
- The introduction and value of new tools, such as aerial baiting, Canid Pest Ejectors and cameras for monitoring, have been highlighted numerous times during interviews.
- Education programs, to provide training in management techniques and information/ knowledge sharing, have also been important and valued by stakeholders. Such programs have included introductory workshops/focus groups to bring landholders together to raise awareness of the wild dog problem, along with trapping schools and workshops to train landholders in implementing Canid Pest Ejectors and cameras for monitoring.
- Positioning of freezers and drying racks in strategic locations has enabled landholders to individually and collectively as a group, source meat and prepare meat for baiting, speeding up the process. "On ground baiting programs are as efficient now as ever," said Tim Wall, Western Local Land Services.
- Clay capping of sand hills along the dog fence was introduced a number of years ago, demonstrating the ongoing adaptation to

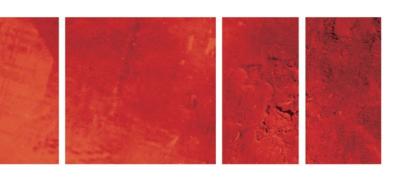


problem solving. There are a lot of sand hills long the SA border component of the fence. The worst of the sand hills have the potential to bury the fence in a short period of time. Taking clay from nearby low-lying areas, capping the sand hill and reestablishing the fence has reduced the incidence of burial. A repairs and maintenance program has been implemented to maintain the integrity of the capping.

Availability of communication technologies

- In some areas of the Western Division, phone and internet services are poor. However, in general, it was highlighted that the use of email technology has enhanced the communication and coordination efforts, within and between groups, and has become an efficient and effective manner of communication.
- Having a group in place also enables communication. This allows for extending information and sharing knowledge within and between groups. It also allows for enhanced monitoring as the group function helps to facilitate monitoring and reporting among landholders. It keeps the issue front of mind with involved landholders.
- Given the number of stakeholders now involved in wild dog management in the Western Division, there is a lot of information available. Information is available on a range of topics and about various control methods. This attributes to the success of educating landholders about engaging in management or remaining engaged even if wild dog populations are 'under control'.
- Social media, in particular Facebook, has been highlighted as another tool for communication, across the region, for creating awareness of management programs, and sharing opportunities (such as upcoming events). Pages that were highlighted during interviews include Western Landcare and Western Local Land Services in particular.

- Concerns regarding intentions of government or other organisations implying limits on the potential influence of the landholders
 - There are concerns with the lack of region specific guidelines for new pest management approaches given the unique nature of the Western Division compared to other areas of NSW. For example, feral pig management and the inability to deliver pig strength meat baits in aerial baiting programs has been raised as a concern by a number of interviewees. It was acknowledged, however, by interviewees that work is being undertaken in this space. "Work is being undertaken to get pig strength baits which will provide us with an integrated approach. While there is more work to happen here around regulations etc., the trials are looking positive," indicated one landholder.
 - Regional pest management was impacted by various agencies that have come and gone over the years in the Western Division. Some had a positive influence, while others detrimental. Today (and in the last few years) there has been growing recognition of the problem across all levels of Government, linked agencies and regional organisations, however 'history' and 'previous experience' with agencies (past and present) can be problematic for landholder engagement for some people despite the efforts surrounding or beliefs in the wild dog management program itself.
 - Concerns have been presented about the threat, and associated risk if the Wild Dog Destruction Board and the management of the NSW wild dog fence is centralised, or absorbed within a Government organisation. The threat that has been communicated is based on concerns regarding ongoing maintenance and upkeep of an invaluable asset. One interviewee commented, "This could be the biggest detriment to NSW livestock production if it (wild dog fence) is mismanaged. This is the biggest threat. It wouldn't take long with



the pressure that's on the fence (from dog populations) to destroy those producers along the fence if the fence went down."

· Personalities and relationships

- A consequence of the characteristics of the Western Division being a large area, with few people, is that the human effect of personality varies, with differences in opinions, goals and behaviours all having a greater impact on relationships than what might occur in more highly populated areas. Ineffective relationships between individuals, or groups of individuals (both landholders and staff of agencies), can affect effective implementation, progress and engagement. One interviewee commented, "the growing dog problem does cause some animosity between neighbours. In one group that I'm aware of, there are some terrible arguments. Fortunately it has not got to this stage in our group yet."
- 'Polarising' has been a word used to describe the effect a minority of key influencers can have on a landholder, members of a group, group or agency staff etc. Some concern was expressed by some interviewees regarding the risk of disengagement as a result of the way individuals interact.
- Competition within and between some groups/ individuals is apparent. It has been observed that in some cases undertaking 'whole of landscape' approaches can be difficult due to a minority appearing threatened by shared ideas/ resources across groups and areas within the broader region. This either results in delayed implementation or stalling.
- A culture of entitlement appears to exist with some landholders and representatives of some organisations within the Western Division.
 This is in regards to an entitlement mentality surrounding provision of funding and resources at no or subsidised costs. This impacts wild dog management effectiveness (within and between groups and agencies). One interviewee

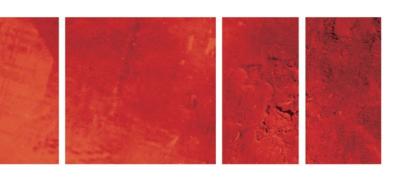
- commented, "If funding stops all together, there's a risk that the ones who are sitting on the edge will stop managing the pest. These are the ones we need to keep on board. Others will be engaged regardless."
- There are varying levels of personal accountability for wild dog management among stakeholders in the Western Division and this can put a strain on relationships and effectiveness of programs and funded initiatives.

General barriers and how barriers are being overcome

• Gaps in monitoring wild dog management to report on success have been highlighted, however, given the nature of the problem, it's difficult to implement monitoring at the individual wild dog level. Evaluation and monitoring, however, can be achieved when comparing the rate of engagement of landholders and stakeholders in the last six years. When exploring monitoring in more detail with landholders, one interviewee commented, "Everything nowadays has a contract, and need for a report of milestones. Need to be careful that we don't get to a point where the engaged become exhausted from the process with governance becoming too onerous (seeking funding, project involvement/implementation or monitoring)." He also added that, "The proactive members of the groups or the leaders, will be the ones charged with the task of doing this. Two thirds of the region don't fall into this group, if it becomes onerous, our leaders will also start to move aside". This highlights the issue of stakeholders engaged being time poor. Landcare has a clear presence in a number of areas of the Western Division. Implementation of local Landcare facilitators, more recently, has resulted in their charter being to form or give life to dormant groups under the Landcare model. This has added resources to the region around group formation, formalisation and support with sourcing funding.

- Some groups have separated themselves from Landcare to overcome frustrations or complications of the Landcare system, forming single function groups to simplify it. This has allowed groups to be focused on pest management specifically and ensure management of wild dogs doesn't get lost with the vast range of objectives Landcare is aiming to achieve in the same area. This can present challenges and barriers regarding relationships between groups. On the flip side, groups that are aligned through Landcare are positive about the association and their achievements. Australian Wool Innovation is commended by interviewees for the flexible approach in supporting a range of group types regardless of association, providing objectives are achieved as a result of their investment.
- The Western LLS in particular is working hard to assist producers in the administration/paperwork, accreditation and training areas to be as streamlined as possible, and retain engagement. It became clear during the interviews that flexibility has been sought in some cases to account for technological (poor internet, or lack of phone service) and environmental impacts (rain events causing road and runway closures, and impacting access for mail) which can delay processing of such paperwork. Having local and personal contact with landholders is critical to understand and overcome such barriers.
- Group formation and incorporation enables groups to apply for funding in their own right. There are examples of where the Wild Dog Coordinator, through NSW Farmers has been able to manage project funds on behalf of groups where groups that are not "incorporated".
- Participation in groups is not compulsory. If funding becomes available, generally the group leader/president/chair will make contact with neighbours/group members along with those not in the group currently to see if they want to be involved in the upcoming activity. "It

- (funding availability) facilitates the opportunity for people to join in" said one landholder who is currently establishing a new group.
- Closing gaps through provision of education
 has been significant for engaging landholders.
 This has included education around the use of
 1080 for example, and it's effectiveness, where
 results are seen in livestock production and
 associated lambing, calving and kidding rates.
 Native animals have also benefited. While it's
 been a gradual progression of education through
 forming groups, now groups know what goes
 on, and they know what they need to do and
 as a result are getting on with their goals and
 functioning very effectively.
- The people that operate outside of the industry (e.g. general community) are learning about these programs too. This gives people the knowledge of why and what is being undertaken to manage the wild dog population (not destroy the population) and how effective and well managed the baiting programs are.
- With baiting an essential element of proactive management of wild dogs, obtaining meat can be a significant challenge. Australian Wool Innovation's support in facilitating provision of capital items including freezers and materials for drying racks has assisted in overcoming barriers to achieve proactive baiting programs, thus allowing producers to become more self sufficient. This also allows landholders to proactively source product for baiting (meat) in an opportunistic way. Strategic location of these resources has allowed for improved efficiencies of delivery of baiting programs.
- Interviewees have seen a notable shift with how the problem is communicated. This shift is thought to be attributed to the formation of more groups, as more landholders will share information about sightings etc. One landholder stated "a lot of people are very private about what they do. Biosecurity issues are a sensitive thing. Once, a lot of people would go out and bust themselves to get the dog and communicate 'got him', but now more people



are more likely to communicate the problem (such as a sighting)." Another mentioned "people out here are reserved. The level of disclosure and communication varies regardless of involvement in a group." There is agreeance that in the last couple of years, the problem (wild dogs) is discussed more openly.

- Landholders have noted that since the groups have formed, participation of National Parks and Wildlife Service has improved as has communication. Policy challenges make it hard for the NPWS to participate in baiting programs on every occasion. Barriers had been observed within management outside of the local staff. "The local staff out here is fantastic," stated one landholder.
- There are Acts and laws in place which prescribe dog control, but the perception from some of the interviewees is that there is a gap in enforcement. "Lack of compliance impacts themselves and the compliant landholders by jeopardising their ability to run a livestock enterprise and earn income," said an interviewee.
- The role of the wild dog coordinator is valuable in filling the gap due to comparably low resources within the WLLS Biosecurity team compared to other areas of NSW. While there are less people in the region, the distances to reach them are great. The demand for involvement of LLS resources is much greater through the increased emphasis of coordinated management approaches, therefore to meet the demand, the Wild Dog Coordinator is able to reach these needs.

Highlighted quotes

 The following quotes have been extracted from interviews with landholders. Each landholder participates in a different wild dog management group. These quotes have been isolated to add value to the case study, and to be made available for the development of communication

Neill Leigo, White Cliffs

 When the Wanaaring pest management group was established in 2010, the group based the boundary on the old Wanaaring pasture protection board areas. "People were used to working together in other programs such as lice control programs, so using this as the boundary for the Wanaaring group seemed logical. Wanaaring was also central within this area, the community centre. This is where people would meet if anything was going on."

66 The dog problem is everyone's fault. We were all too complacent for too long. We had people in my area, to the north west and west of me, who were very diligent in their dog control for forty vears and without them we would have been overrun with dogs many years ago. But we can't change the present situation. We've got them. We've just got to deal with them. 77

- "We want the wild dog population controlled to a point that it is not impacting on the grazing industries."
- "Producer engagement has enhanced across the Western Division. In the last 12 months, groups have established in the southern part as the incidence of dog activity is increasing. What's been accomplished in the northern part of the region is now being replicated in the southern part. In the southern part it will be easier to establish groups and implement and encourage participation as we know what works and what doesn't."

- "Existing complacency with some landholders is a problem. Some people (for whatever reason) will refuse to participate, and with many excuses. Dogs will find these places as a haven. The only thing that will work is an integrated coordinated approach at all levels."
- "Success is easy to gauge with decreased mortality rates of livestock and increased lambing, calving and kidding percentages, plus less reported sightings of dogs."
- "Dogs are a landholder's problem, first and foremost, and a national problem with national impact on the economy second. Therefore, there has to be more ownership of the problem taken by landholders. This is difficult though to convey to people. When funding has been found for the purchase of meat for baiting, we get a fantastic participation rate, but next time, if there is no funding to purchase, or if people need to get the meat themselves, people pull out."

Richard Wilson, Broken Hill

- While they don't see a lot of wild dogs on their property, this is not a driver for Richard.
 "We need to be part of the overall program, where everyone is baiting at a similar time. It's a community responsibility to be part of the organised initiative."
- Some people in the area still only bait foxes; however, Richard's approach is to deliver only dog strength baits. As a result, foxes and wild dogs are targeted with the same effort. "It doesn't take much to justify the baiting of foxes and wild dogs when running livestock enterprises."
- "I don't think anyone would see the lack of information available as an excuse to not being involved in baiting."
- "Funding does certainly provide an incentive, but if it wasn't there, we wouldn't pull out from our management program."
- When discussing the success factors and

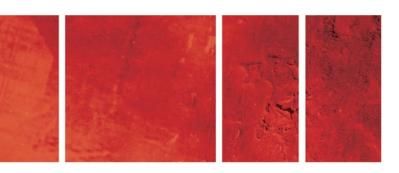
organisations, particularly the Western LLS staff and Wild Dog Coordinator involved in the collaborative, organised management approach, Richard commented, "we work with them to find a time that works for both of us. Hopefully they don't take the personnel out of the area. We need them as they are accredited to use the 1080. Baiting programs are getting bigger and bigger, so we need these people that are so important to us and the program's effectiveness."

We need to run a business.

The cost of baits and getting these out, for example, is no different to other overhead and variable costs. We need to keep up with this. One of the biggest threats outside of season and feed availability in the Western Division is predators.

Brendan Cullen, Broken Hill

Regarding the change in attitude to nil-tenure approach over time: "To think outside of this (own properties) was rarer in the past. The only ones (landholders) who did this knew there was an issue and were very motivated and happy to work more widely. The group formation has allowed for a far more focused nil tenure approach. It's become real that this approach works and we have more marsupials and birds in the landscape too. There is greater emphasis on preserving what we've got, but recognising the overall improvement of the landscape. The groups have allowed for cross border discussion. I think the groups are fantastic."



- 66 For us, lambing percentages is what provides the greatest production advantage. There is potential for producers to improve this through coordinated baiting. This can be done through education...?
- "Availability of groups helps overcome the narrow thinking, and seeing the lambing percentages speaks volumes. People who are getting involved are realising the benefits through the lambing and calving percentage results they are getting. Success is all based on percentages, the lambing and calving percentages. All these things directly impact income."
- "If there is a lot of damage from wild dogs, it can make you angry. And it can be frustrating. The ease of management baiting creates, and being able to sleep at night when there is a coordinated approach, would relieve people greatly, benefiting people's mental and emotional wellbeing."
- "People have the ability to run livestock in areas they otherwise would not have been able to. This ability has improved since having the wild dog management groups up and running."
- Regarding barriers to participation, Brendan recognised minimal barriers: "I don't believe there are barriers, not even time restraints. If there is a problem, you can still manage it if you are not relying on funding. People can create their own barrier by not understanding their own problem. Working with Bruce Duncan (Wild Dog Coordinator) that is funded by AWI has made it all very simple."
- In forming a new group, Brendan believes that "overall the area will become educated and they will become aware of tools that

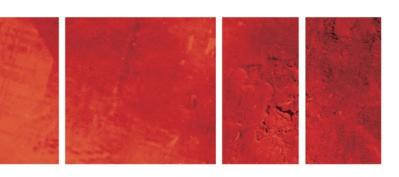
- they have access to that they may not have had previously, or even been aware of being available."
- "The NSW dog fence is a very good product. It's a very strong fence with good people working on it. There isn't a fence elsewhere in the country like it. It's a terrific fence and a great blueprint for how it's managed."
- "Cameras are very good. They tell people about how much they don't know of what's in front of them. It's a classic case of 'seeing is believing'. As a result people are hastier in approach. The more people that use them the more information is available. If you have the information generally people will act on it."
- "There's a major problem out there (with wild dogs) and it's recognised at the moment, and I don't think we need to lose sight of that. While I say 'yes, wild dog management is effective now', there is more to do. We are working with a greater number of tools than we ever have done. Information gathering and sharing is also now huge. The awareness is so much greater than ever too, not only with the property owners but also other stakeholders in industry and the general public. There is an ongoing need to hit it right and do it properly. We are on the right track."



Leon Zanker, Tilpa

- **66** Wild dog management is effective now, but we must be ready to take the next step. If we are not ready, or don't take the next step, everything achieved to date will unravel very quickly. We can't sit on our laurels and think 'we are all in groups, aerial and ground baiting is happening - we're there'.... We have got to a point, and we should be proud of what's been achieved. But we need to be ready. This is the challenge. How do we get on top of the residual dogs before the need to get rid of our sheep, or consider things like cluster fencing? >>
- "Goats are a very important enterprise right now for a lot of producers. With current favourable prices, goats seen as a part of the business, not just opportunistic. If wild dogs are not controlled, this part of our enterprises will be seriously impacted. This can impact the confidence in the region out here. Goats will be the first livestock group to be affected and to potentially disappear."

- "The Tilpa group has had a very good working relationship with the wild dog coordinator and we have achieved a significant amount, and in one way, shape or form, 80% of our achievements are attributed to contribution from this role. We understand how we all operate and, going forward, will continue to work with the wild dog coordinator."
- Timing was a key factor to the success of the group formation and relationship development with the wild dog coordinator. "The Tilpa group formed soon after the initiation of the wild dog coordinator, availability of AWI funding plus meat donations from Fletcher's. A lot of ducks lined up for us at that time, but we were open to the opportunities too."



Stakeholder Profile 1

Richard Wilson

Names of Business Owners Jed and Stacey Wilson and Richard and Shirley Wilson

Name of Interviewee Richard Wilson

Trading Name RT SL & JM Wilson

Property Name Yalda Downs

Address Yalda Downs, Broken Hill

Number of other employees (family/non-family) 1 casual employee

Number of years managing property 4 years

Property Size (ha) 120,000ha

Enterprises Sheep (meat and wool), beef cattle and goats

Images N/A

Richard began wild dog management when he moved to the area from South Australia in 2013 where he joined the Barrier Area Rangecare Group (BARG) local Landcare group. "They have a well established management program involving around 40 properties and I'm very happy with what I've experienced throughout my involvement to date," he said.

Richard was keen to gain as much information about the problem, and this was a good way to be involved. He received a lot of advice from neighbours and the Landcare group has helped them to become confident that they are on right track.

Richard doesn't know much of the history of wild dog presence from the previous owner, and any associated baiting program or how regular, but he maintains a resident roo shooter on the property, and indicated there were more foxes four years ago than there are now. The shooter has indicated that in last 12 months he is not seeing foxes. This is feedback on effectiveness of the wild dog management program.

Some people in the area still only bait foxes. Richard's approach is to only deliver dog strength baits. As a result, foxes and wild dogs are targeted with the same effort.

While they don't see a lot of dogs, this doesn't matter to Richard as "we need to be part of the overall program, where everyone baiting at similar time. It's a community responsibility to be part of a the organised initiative."

Apart from the normal baiting program, Richard has also done spot baiting if he has seen presence.

"Dogs could have killed sheep, but we don't know exactly what's caused it by the time we find them," Richard said. Richard is of the attitude that it's part of the community responsibility to continue with organised baiting.

Frustrations and barriers

66 Absentee land owners and landowners who don't do baiting is very frustrating and unfortunately baiting is not compulsory," Richard explains. Richard finds it disappointing when people take the attitude that someone else is doing it, therefore implying they don't need to and, as a result, don't appear to care. One of the biggest threats outside of season and feed availability in the Western Division is predators. ??



"Unfortunately as you get further away from the dog fence, I feel that people are of the opinion that there is not as big a problem. Often they are not recognising the problem until they start to see the impact on lambing percentage. But the number of people baiting has increased in last few years as dogs are now being found in new areas of NSW."

"It doesn't take much to justify the baiting of foxes and dogs when running livestock enterprises."

Richard has noticed that not everyone is involved in the group, but do baiting programs themselves. He has also recognised there are groups that are formal and some less formal.

Current management

The BARG group undertakes a spring and autumn baiting program. This includes an aerial baiting program for non-accessible areas. Richard's property has a lot of inaccessible ranges. Aerial baiting, conducted with the LLS is implemented in addition to ground baiting.

"Aerial baiting for inaccessible areas has also been one of the greatest things implemented. We have a lot of areas inaccessible by vehicle."

Richard will soon be implementing canid pest ejectors. "Everyone is doing the best they can with tools available and the knowledge they've got. The ejectors are the new tool being adopted and will be a big benefit once in place. As people get experienced in setting these up, sharing this information with others will be useful. It will be useful to collate people's experience."

He is currently grading some tracks into the less accessible areas for installation of ejectors.

"We are finding that dogs like a smooth graded pathway so we are trying to open up some country to create some smooth pads for dogs to move along, and we will then strategically target areas for baiting," Richard explained. Through this process, Richard is strategically creating an environment to target dogs.

Richard has valued his involvement with the Wild Dog Coordinator and the associated forums and workshops that have been provided. "There is a lot of information around. This is a good thing. I don't think anyone would see lack of information as an excuse to not being involved in baiting," he said.

Through AWI support, people have put in freezers, so meat is accessible, and put in the drying racks allowing the LLS to inject more easily. This makes the whole process simpler for all involved. Generally, each group has one or two freezers or they are working on getting them.

Richard has sourced his own freezers and racks, funding and implementing this himself. He has put the racks about five km from homestead and away from pet dogs. He finds that kangaroo meat dries out a lot better than goat and sheep hearts. "Working together with those who do injecting and having everything ready (meat thawed and dried on racks) does create efficiencies. Doing this locally and having it ready allows the logistics to be so much easier," he explained.

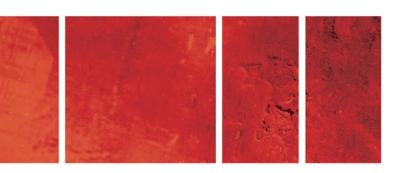
Richard has also made containers to hang off the side of the vehicle to help make the on ground distribution of baits more efficient.

Cost of management

People generally want somethings for nothing. If there is a need for landholders to cover full costs in the future, Richard doesn't mind. "We need to run a business. The cost of baits and getting these out, for example, is no different to other overhead and variable costs. We need to keep up with this. One of the biggest threats outside of season and feed availability in the Western Division is predators," he said.

"There will always be people who won't want to pay, and some will say they won't bait, but producers can provide their own meat. LLS provide the baiting of 1080 at no cost too. Landholders may need to pay 50% of cost of baits, but not the actual aerial costs to put it out. It's well supported at the moment," said Richard.

"Funding does certainly provide an incentive, but if it wasn't there, we wouldn't pull out," he said.



Group function

"The BARG group is very well organised with one meeting held per year which is an AGM. A lot of people, due to distances to travel, can't meet more than this. Communication is generally via email."

"It's a Landcare based group and, as a result, have been successful in getting assistance with manufactured baits and from other bodies to help out with some funding for baits."

There are eight different groups within the BARG group. Each group coordinates when their baits get injected. Given the size of the group and area, and for other reasons, it's not possible to get everyone together at same time. Sometimes baiting is delayed due to weather events. This method ensures the majority get the benefit of the campaigns.

Richard previously had the role in coordinating, but says now people are fairly organised. "There is no need to over complicate things when it is working well," he said.

Someone in each cluster group now organises the baiting for their respective group. "We are right on eastern boundary of BARG so we organise baiting ourselves. This suits us a bit better to go out on own in the coordinated way. Still part of the overall program though and keep in touch with BARG," he explains.

Group administration

The group is very organised. People have been proactive in seeking funding and, as a result, members don't pay a lot for membership. The group has two poly welders which can be shared around, for example, that were sourced through Landcare. "Landcare applies for lots of different things, not just wild dog control," Richard stated.

"Being involved with Landcare helps us by having a large parent body to support a range of different things. Wild dog control is an important part of it, and a big part of it, but it's involved a lot of other activities as well," he said.

Wild Dog Coordinator

"The far west appears to be a forgotten part of NSW," Richard said. Initially Richard was concerned about Bruce's role being in Dubbo, but "Bruce has

been very helpful and particularly with the aerial baiting program. It's a reflection of agricultural bodies, around AWI and NSW farmers understanding that it's a good thing to have someone way out here.

been very present in the region. His energy is very good. He has a very full role."

"It has been a very good move, and I hope they continue to fund it for some time. Because getting the information out about wild dog measures can now get out quickly," said Richard.

"I also talk to Tim Wall frequently (WLLS). He makes things happen. Grant Davis is the same. We rely on them to help on our programs." Richard stated, "They add great value. It's more than the baiting role on the day, they also provide information and knowledge sharing which is so critical."

Richard is, however, concerned about what would happen if the current people were no longer in their roles? "Would the programs be as effective?"

Richard feels that it is a "pity that there isn't more information shared among groups." He feels that there is more that could be learnt from groups, about the dog fence, about Landcare and what's



being delivered etc. He believes trying to get this information together and out to landholders is a big challenge though. He also notes, "some groups don't want to share the info either."

He would value more information regarding the management of the wild dog fence, its condition and effectiveness. Anecdotally he recalls the impact of washouts and the risks of dogs moving through from SA or Qld. More information about this may enhance engagement with landholders more generally, and reduce perception and associated questions around effectiveness. Richard commented, "hopefully the Government understands the importance of the fence."

Richard believes the access to equipment is suitable. "We all have the equipment; a ute, milk crate, old towel and away you go. Amazing how many baits you can get out in a day."

Richard indicated success factors for increasing efficiency was to ensure drying racks are at the right height, providing a comfortable work platform. Simple things such as using the cleaned out old chemical containers hooked to the ute, rather than using plastic bags, makes process easier.

"The LLS guys are great to get on with. We work with them to find a time that works for both of us. Hopefully they don't take the personnel out of the area. We need them, as they are accredited to use the 1080. Baiting programs are getting bigger and bigger, so we need these people that are so important to us and the program's effectiveness," he said.

Is wild dog management effective?

Richard is happy that he became involved with BARG. "It's a good group to be involved with. It's a big group across large area."

"The assistance with aerial baiting has been invaluable. We need to see some level continue because dogs will impact on the entire economy if we don't get this pest under control."

"It's not just a landowner's problem. Wild dogs are getting into hobby farms in more urban areas. They affect lifestyle and impact native animals. It's not just about the impact on landholders."

Richard feels the community don't realise it's not about dingoes, it's about wild dogs. Therefore, he sees that education is important for people in urban areas about how critical it is to inform/communicate sightings.

Overall Richard feels that the majority of people are on the same page and very proactive.

Richard wanted to note AWI's contribution. "AWI looked at ways of assisting with grant money for small projects (such as the freezers). Simple things can make things so much easier and quicker."

"There are also good systems in place with internet. As a result, messages get out quickly" While the internet and phone are a little unreliable, Richard doesn't feel that isolated and also doesn't see this as a reason or excuse for not doing it (wild dog management)," he said.

Stakeholder Profile 2

Bruce Duncan

Names of Business Owners NSW Farmers

Name of Business Manager/Interviewee Bruce Duncan, Wild Dog Coordinator

Trading Name NSW Farmers

Property Name N/A

Address Dubbo

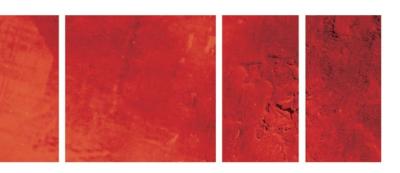
Number of other employees (family/non-family) N/A

Number of years managing property 3.5 years in role

Property Size (ha) N/A

Enterprises N/A

Images available No



Role of Wild Dog Coordinator

Beginning in the role at the end of 2013, the Wild Dog Coordinator, Bruce Duncan, is responsible for increasing communication and getting programs off the ground that wouldn't necessarily get off the ground.

Bruce is employed by NSW Farmers, and his role is funded by Australian Wool Innovation.

Bruce's role provides on ground delivery and niltenure. This means working with everyone. The role is funded by Australian Wool Innovation. In-kind support is provided by NSW farmers for administration support, IT support, and vehicle provision for example.

The Wild Dog Coordinator role aims to remove barriers. This requires flexibility and ongoing communication, including filling the gaps in areas where there are low resources/capacity. For example, with the distances between properties, it's difficult for the LLS to cover all properties. Bruce aims to fill this gap.

The Wild dog Coordinator notes the need for him to be conscious about where the effort is placed. "The challenge is to focus on the right areas, and give more voice to those areas where they are been impacted greatly," said Bruce.

There is now more emphasis on coordinated programs, which is due to the momentum developed by Greg Mifsud. The aerial baiting (which has been well supported with funding) has driven the coordinated approach and enhancements to the baiting undertaken.

"There is an issue in some areas where there are politics surrounding one area getting 'more' than another. As a result, people will follow up with an expectation of receiving the same or something of a similar value. This is not always practical."

As a result, the wild dog coordinator relies on strong leadership from landholders in the area to reinforce what is working well, and there is evidence of this happening.

Bruce has noted the emphasis and importance of funding to support participation of some landholders. He has seen a transition where dogs weren't really a problem, and now there is a significant problem and, as a result, the budget has expanded due to increased demand. For example, it is now no longer sustainable to provide free baits. For some people, this influences their participation. However, "user pay is required to ensure a sustainable model," said Bruce.

Bruce states,

66 there is never going to be eradication, there needs to be management where production can exist with native fauna and flora. 77

Other pests

In some areas, feral pigs are a bigger issue than wild dogs. Pig strength baits are seen as a need. However, there is a time lag for getting this implemented and available.

"Because of the feral pig problem, there are some producers not engaging in wild dog management because the feral pigs are seen to be having greater impact. Predation can be hidden by feral pigs. Feral pigs are also very visible, but dogs are not. In some areas, people don't have the right tools, given the range of pests they are dealing with," explained Bruce.



Agency impact and influence

History and previous experience of landholders with a 'brand', including association with organisations such as Landcare or NSW Farmers can create problems. "We need to be conscious of this," states Bruce. These concerns, associated with brand history can impact on engagement. But Bruce notes, "there are others that just want to get out and carry out management - just seeking knowledge, some information and are not so fussed by funding, brand association etc. and the other hoops or politics."

Group formation

The Wild Dog Coordinator doesn't think there is a one size fits all approach for group development. For example:

- The Topar Area Rangecare Group was formed based on the local fire brigade. It currently has about 28 members. This group works independently, and is essentially a 'closed group', accessing their own funding. "While they don't flex outside of their group, they are effective in their own area," said Bruce.
- "The Tilpa group is very successful. They have a couple of key landholders which are key to this group and are very well respected."
- "The Barrier Area Rangecare Group is the largest group in the Western Division. They have clusters and subgroups which assist them in management."

They are all different and are working well in their own right.

There remains an opportunity for sub groups to form, within groups, for ease of management and coordination. Some of the Western Division still has gaps, such as around Hungerford and southern areas of the western division. These areas will become Bruce's focus for development.

Enhancing groups

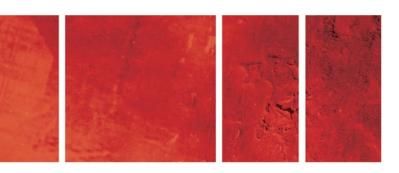
Bruce has forty motion sensing cameras, which he is going to move around the zone and put in locations to involve people to allow for wild dog observation.

He notes that while participation (activity and baiting) is good, reporting, monitoring and evaluating is an area for focus. He puts this down to people in the area who are time poor and cash poor, so don't prioritise reporting, and focus on getting the baits out. Bruce feels there is a need for better reporting to understand success.

Effectiveness

"Wild dog management is now having a significant effect, however it could be better managed and run. Could we implement something that everyone needs to follow? Yes."

"Are as many people putting in as needed to put in - no, and that's at all levels," states Bruce regarding overall effectiveness. Bruce believes there could be increased governance.



Stakeholder Profile 3

Neill Leigo

Names of Business Owners Neill and Debra Leigo Name of Business Manager/Interviewee Neill Leigo Trading Name NR & DA Leigo

Property Name Allundy Station

Address Allundy Station, White Cliffs

Number of other employees (family/non-family) 1 (family employee)

Number of years managing property 39 years Property Size (ha) 41,311ha

Enterprises Meat sheep, beef cattle and goats Images Available Yes - photographs of Neill

Background

Prior to purchasing his first property in 1978, Neill Leigo worked for a public grazing company for 8 years and spent time north west of where his current properties are. It was a property that was subject to flooding in 1974 and 1976 and then saw an influx dogs due to damage to the wild dog fence. Neill recalls his initial involvement in wild dog management, as a result of this influx.

Neill has always had an interest in the control and prevention of wild dogs. He has been a Board member of the NSW Wild Dog Destruction Board for 17 years, a Director of the former Wanaaring Pastures Protection Board (PPB) and its successor, the Wanaaring Rural Lands Protection Board for 19 years. He has been a Board Member of the Western LLS since 2014, since its inception.

Neill indicated that, in the past, his property had been shielded, to some extent, by several landholders to west and north who had been very proactive in wild dog control.

66 Complacency during that time was a common problem across western NSW - most people didn't recognise dogs. were there. The dogs were scarce. 77

said Neill.

However, as a result of the millennium drought, wild dogs were seen moving south and eastward due to lack of water in their traditional home area.

The problem became obvious to a number of people who decided to start to do something about it. In the Ledknapper area, north of Bourke, several prominent landholders saw a need to start doing something in a hurry, where they were seeing injured or lost stock. Neill attended the initial meeting given his role on the Wild Dog Destruction Board.

Soon after, the Wanaaring Pest Management Group formed and also the Tilpa community formed a wild dog control group at the same time. These were the second and third wild dog management group to form following the formation of the Ledknapper group.

Neill, along with other key, motivated landholders founded the group, and Neill was the inaugural President.

"If we didn't do something, it would be out of control in a very short period of time," explained Neill.

In 2012 a meeting was held, in Wanaaring, to gauge interest. It started out with 11 enterprises represented and now there is 22-25 in the group. The aggregation of properties represented varied in area from approximately 18000ha up to 400,000ha.



"One of the problems has been that a number of people wouldn't recognise or admit there was a problem. There was also a lack of labour available to carry out these control programs," explained Neill.

Neill believes this lack of labour is likely to have influenced effectiveness of the programs that have been conducted to date. "It could have also impacted initial engagement too, as people were 'too busy'."

When Neill became a Board Member of the Western Local Land Services, he stepped down the President of the Wanaaring Pest Management Group. Ben Bartlett is now the President of this group. Neill's wife, Debra recently retired from the treasurer's role.

"There have been a number of coordinated control programs across the region, and we have done everything we can to encourage 100% involvement, but we tend to always get a percentage that can't do it at that time, and a small percentage still don't take part. But there has been overall a very big take up in participation," said Neill.

When the Wanaaring Pest Management Group was established, the group based the boundary on the old Wanaaring Pastures Protection Board boundary. "People were used to working together in other programs, such as lice control programs, so using this as the boundary for the Wanaaring group seemed logical. Wanaaring was also central within this area - the community centre. This is where people would meet if anything was going on."

Businesses within the Wanaaring area are traditionally merino wool enterprises and further north and west are predominantly beef cattle enterprises. Since the collapse of the wool industry in the 1990's, some businesses moved into other enterprises, including Neill. Meat sheep in more recent years has become a more prominent enterprise and the goat industry has also grown and is seen as a highly valued commodity.

Properties have amalgamated, in recent years, and are being run will less labour. Neill believes this

can be part of the issue, but balances his view by indicating that there are some very large enterprises implementing very effective pest management programs.

Wild dogs have been in the north western corner of NSW, since the 1970s, in resident populations which didn't impact to any great extent. The few affected properties undertook regular, large scale ground baiting.

Management in recent years

Neill says, "the dog problem is everyone's fault. We were all too complacent for too long. We had people in my area, to the North West and west of me, who were very diligent in their dog control for forty years and, without them, we would have been overrun with dogs many years ago. But we can't change the present situation. We've got them. We've just got to deal with them."

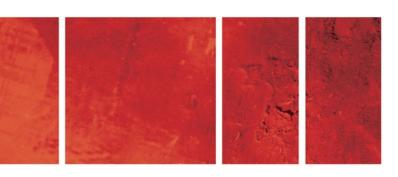
Neill explains the baiting programs as strategic. Strategic baiting is important to ensure there is not overuse. He also endorses the use of other tools as well including canid pest ejectors (which are a new tool), trapping and shooting.

Neill has encouraged education and supported training workshops on his own property, including trapping and the use of cameras for monitoring.

"We've been encouraging people to work in a coordinated fashion locally. In our local area we are trying to do this too," he said.

"The growing dog problem does cause some animosity between neighbours. In one group there are some terrible arguments. Fortunately it has not got to that stage in our group yet," Neill said.

In the early days of the Wanaaring group, the combined effort of landholders was aided by Greg Mifsud and the appointment of Bruce Duncan. Bruce and Greg attended a meeting to establish the group in a formalised manner. This involved suggesting that the group focused on being a pest animal management group to enable them to control to other species like foxes, pigs etc., in addition to wild dogs.



Formalising the group allowed for follow up discussions including planning for optimal baiting. Autumn and spring are the optimum baiting times due to mating and whelping so, as a result, the baiting dates were set around those periods. Since then, the group aims to conduct two ground baiting programs per annum.

As the group has grown, the Wanaaring Pest Management Group nominated five people within the region to engage and coordinate with others. There are now about 60 properties involved.

The President's role is to work with the WLLS staff to coordinate the overall program. The Wanaaring region doesn't bait on its own. With assistance from the WLLS, the Wanaaring, Tilpa Ledknapper, Milparinka, BARG group etc. - coordinate programs together.

Baiting generally takes place over a three or four week period (weather permitting), where each group baits one after the other.

The WLLS are a key success factor for ensuring the programs roll out, according to the plans, and Neill credits the LLS staff with giving the region the present low incidence of wild dog activity and reported sightings.

Effort is made to ensure the ground baiting takes place at same time as aerial baiting. This way the country that's inaccessible (flood country, too stony or hilly) is treated at the same time.

6 The introduction of aerial baiting has been extremely effective. 77

"On the northern side of Queensland/NSW dog fence, shires have been conducting aerial baiting programs twice a year for some time. These have been effective in keeping a lid on the problem. We now use the same aerial contractor, and work in with the timing of baiting with Qld," explained Neill.

The efforts in recent years are attributed to the collaborative approach between landholders, the Western LLS, National Wild Dog Action Plan and associated staff, including the Wild Dog Coordinator, Bruce Duncan and AWI. These people and agencies, with the availability of funding, has allowed for gaps to be closed through effective implementation.

Problems encountered during group formation

"One of the biggest issues, early, was the lack of recognition that there was a problem. People just don't see the sign of the dog attacks. In the Wanaaring area, most of region is heavily woody weed affected. A dog could come in and kill many sheep and, unless you have an aircraft, you don't see it. You might have to wait until next time the mob is in to count and, even then, you may have just missed them at mustering which results in a time lag."

"There is general complacency. Complacency follows lack of recognition. 'Someone else's problem, not mine,' for example. Once you get people past this point and people are willing to admit a problem and start carrying out control, then the effectiveness of group increases dramatically and quickly," explained Neill.

Success factors

66 What has worked for us is having sufficient people, on the executive of the group, who recognised early there was an increasing population and that they needed to start implementing control measures. 99



"We promoted the fact we were going to hold an inaugural meeting with a view to forming a local group. It was put out in the local Wanaaring newspaper that comes out once a month. The few of us that were the founding members called people in the area. We also used the radio station at Bourke. We got an extremely good roll up and, at that stage, not everyone had a dog problem, so attendance was actually good."

The meeting with Bruce and Greg followed. Neill had been working with Bruce for several months and, at Bruce's suggestion, he sourced good quality maps and spread them out across tables in the hall. Landholders used pens to define their property boundary and show dog problems or no dog problem. The maps were then used by Greg Mifsud to show a pattern, with dogs in watercourse country and travelling along ridge lines etc.

"It was a very proactive method for getting buy in. It put everyone on same level playing field and involved in the same task to start talking," Neill said.

What's been achieved in the last 2.5 years has been very effective. In this time, we've had the coordinated baiting programs with WLLS. Year on year, we have expanded the knowledge and implementation of programs, ??

said Neill.

The nil- tenure approach, in the past, was management within the state and within specific areas. Neill notes there may have been different approaches within each area. Now each region speaks to those neighbouring groups to coordinate an approach.

The nil-tenure approach now means landholders operate outside of property boundaries. Prior

permission, for aerial baiting, is signed by the landholders and is the responsibility of the WLLS staff to collect. The plane then delivers the baits on a grid pattern across property boundaries.

"Success of the programs and group effect is easy to gauge with decreased mortality rates of livestock, increased lambing, calving and kidding percentages and less reported sightings of dogs," he said.

Producer engagement has now increased across the Western Division. More groups have been established, in the southern part of the region, as the incidence of dog activity is increasing. What's been accomplished in the northern part of the region is now being replicated in the southern part.

"In the southern part it will be easier to establish groups to implement and encourage participation, as we know what works and what doesn't," Neill stated.

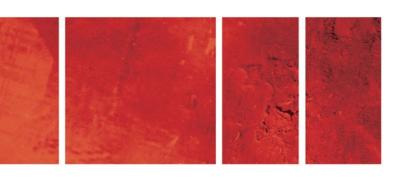
Labour requirement of landholders

For ground baiting programs, landholders procure and distribute the baits and the LLS staff visit to perform the injecting of 1080. In addition to this, additional labour input comes from a core group of people in each pest management group. "That labour could be sitting on the phone communicating plans, engaging others for funding or arranging days for meetings. Other than that, the landholders contribution is one or two days every six months to procure and distribute baits," Neill explained.

Support provided to groups

Like many areas of the Western Division, dirt roads are the only access to and from properties outside of main highways. Rainfall events mean that access becomes limited. This can be challenging for landholders to transport meat they have organised for baiting programs.

It became obvious that refrigerated storage could be a solution to manage risk of meat spoiling and/or baiting schedules being missed.



Thomas International Foods (TFI) (formally T&R Pastoral) supported the wild dog program by donating back to the region, a percentage of the sale of each goat sold. The money came back to the Western Division for management of wild dogs. Fletcher International Exports also donated meat, while now it is provided by them at cost.

Funds were sourced from TFI to purchase freezers.

In addition to this, "The support from Australian Wool Innovation has also been amazing," Neill said. AWI also provided funds for freezer purchases.

"Given the strategic placement of freezers, we have space for opportunistic meat storage as meat is not always easy to procure."

explained Neill.

66 The wild dog coordinator role has also been very important. We wouldn't be where we are today without this role. Bruce Duncan has facilitated a lot. Someone like the wild dog coordinator can also facilitate discussions where conflict may have emerged. As a result, the role has facilitated communication, 77

Acknowledgements

Rural Directions Pty Ltd acknowledges the contributions from:

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- Tim Wall, Senior Biosecurity Officer, Western Local Land Services
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- Leon Zanker, landholder
- Ken Turner, landholder
- Brendan Cullen, landholder/employee
- Richard Wilson, landholder
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