



wheatbelt
natural resource
management



2005 - 2008 Investment Footprint and Project Summaries



Left: Kellerberrin NRM trainee Jessica Forsyth with Kellerberrin Farmer Murray Clement. Courtesy of Michael Marriott.

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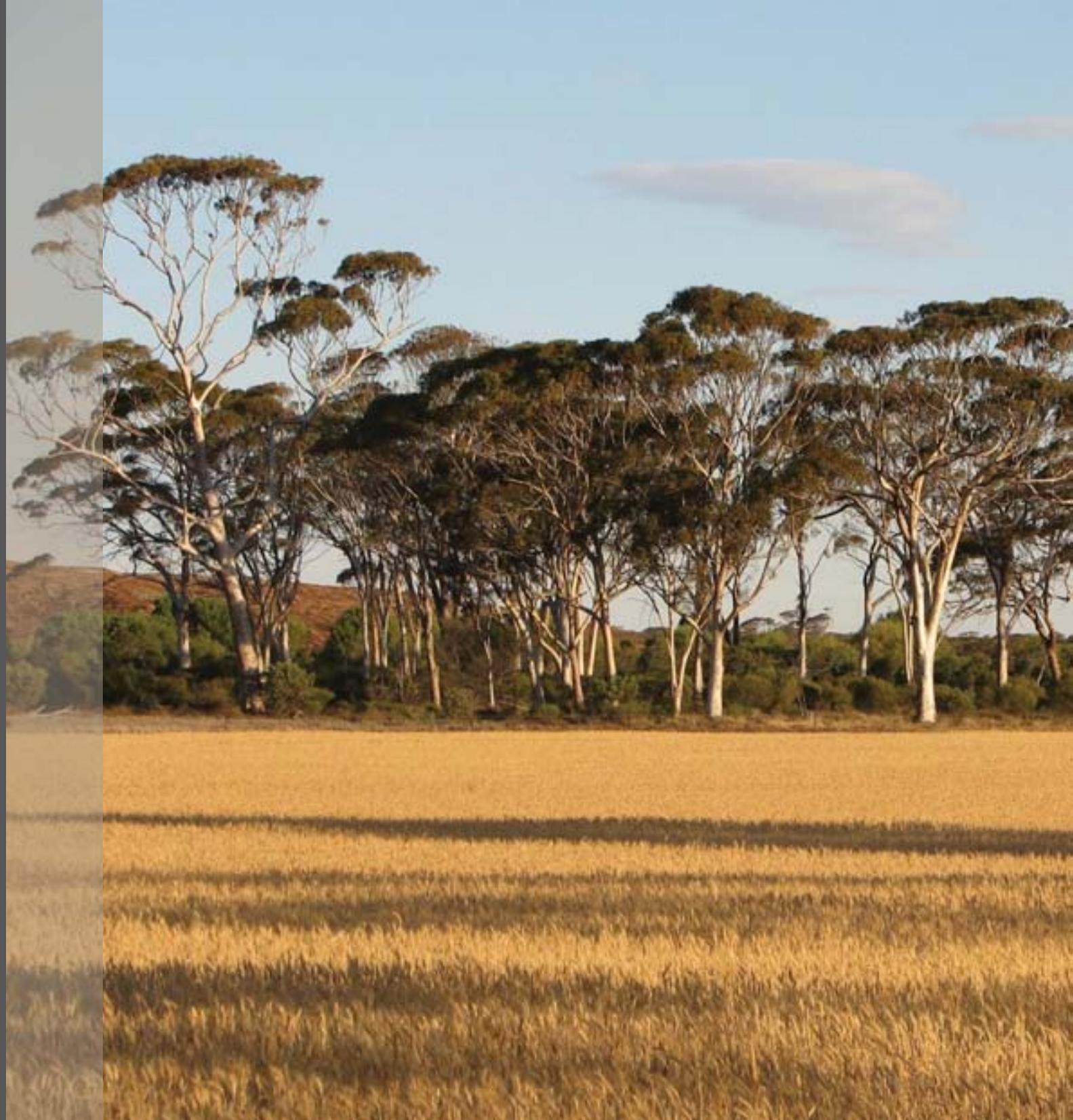
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PREFACE

Have you ever heard the phrase ‘take only pictures and leave only footprints’? Wheatbelt Natural Resource Management (NRM) has embraced this idea in recording its investment ‘footprint’ through a series of photographs and maps. This ‘footprint’ can be detected throughout 8.3 million hectares of the Avon River Basin and has left a legacy of environmental, cultural, economic and social improvements.

The location of Wheatbelt NRM on-ground investments are illustrated in figure one (right) for water (blue), biodiversity (green), sustainable industry (brown) and Aboriginal NRM (red) programs. Details about these investments are outlined in this report, which has been created for two main purposes. Firstly, it is an account to stakeholders of over \$36 million of Australian and State Government investment via the Natural Heritage Trust and National Action Plan for Salinity and Water Quality (2005-2008). Secondly, it shows progress against targets set by the community in the Avon Natural Resource Management Strategy (2005).



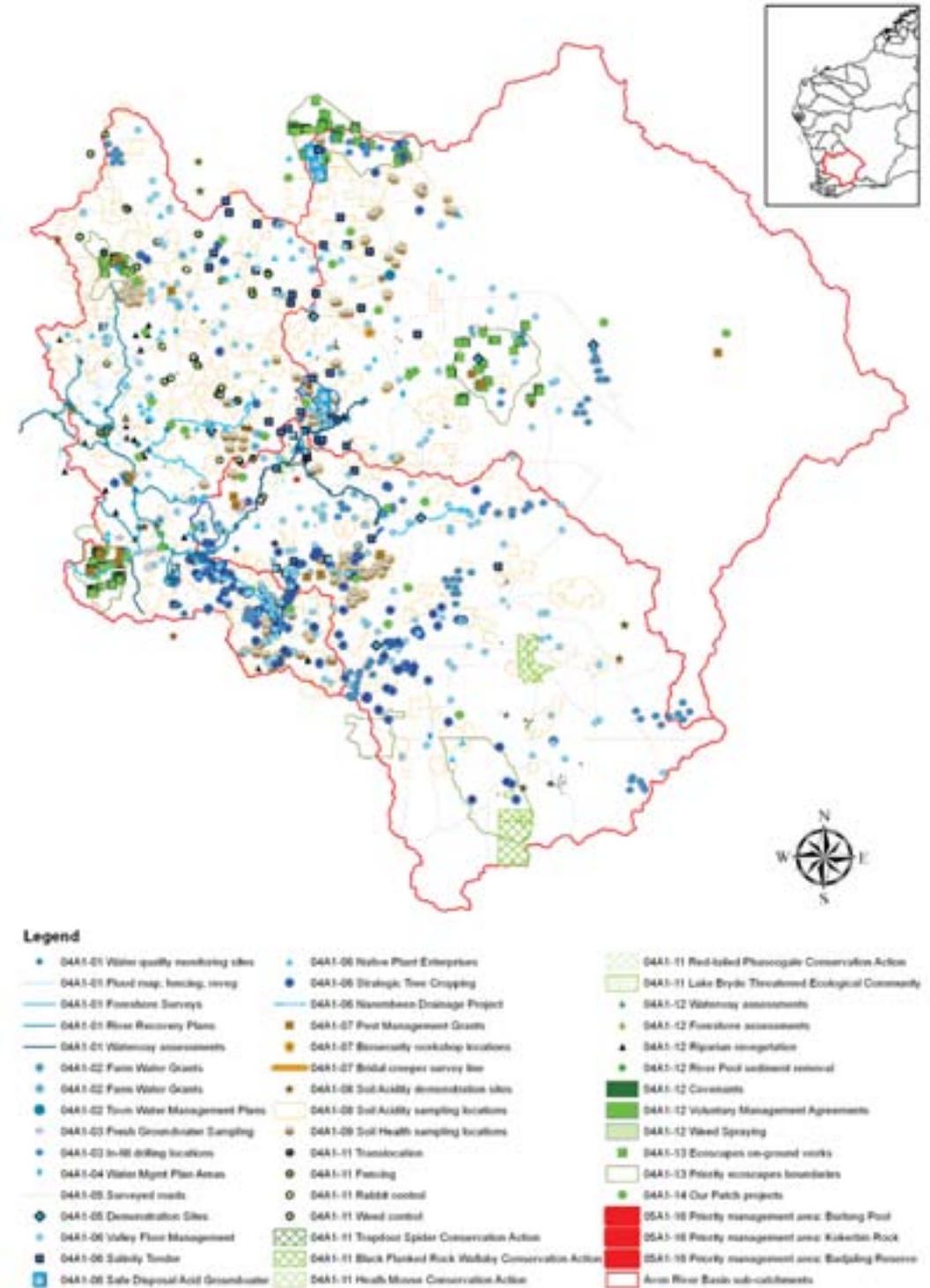


SO WHAT HAS BEEN LEARNT FROM MAPPING AND REFLECTING UPON ALL THIS WORK? We can see that activity hotspots have emerged where threats to significant natural assets occur such as in the Wongan Hills, Dale, Tampu and Westonia 'Ecoscapes'. Conversely, many hundreds of individuals have been supported to address widespread burdens on farm sustainability such as soil acidity and dryland salinity.

Above all it reinforces that behind every dot on the map there is a Landcare champion or dynamic community group guiding Wheatbelt NRM decisions to invest in their local patch. Those communities that are united in their willingness to adopt more sustainable land management practices have continued to attract the greater share of regional NRM investment.

What is not revealed in this report is that the Wheatbelt NRM contribution is only a portion of the sustainability measures implemented in the region during the past five years. Many of our projects are intended to act as a seed, which, will grow and multiply without further government investment. For others, however, public funding will continue to be allocated and the Wheatbelt NRM footprint will continue to grow.

Dan Ferguson
Sustainable Agriculture Program Manager
Wheatbelt NRM
2010



REBEKAH ESSZIG, FORMER DEPARTMENT
OF WATER EMPLOYEE AT EADINE SPRINGS
COURTESY MICHAEL MARRIOTT



INVESTMENT PLAN PROJECTS 2005-08

PROGRAM 1: INTEGRATED WATER MANAGEMENT

AVON RIVER WATERWAY MANAGEMENT

Investment: \$2 190 927
Delivery organisation: Department of Water

On-ground achievements

- 239 km fencing to 104 landholders in 17 Shires resulting in protection of greater than 1000 ha riparian vegetation.
- 8 salinity risk management demonstration sites (17.5 km of riparian fencing, 15.3 ha revegetation).
- Nutrient stripping wetlands at Brookton and Cunderdin Wastewater Treatment Plants.
- 8,000 m³ of sediment removed from Long Pool.
- Avon Water Quality Monitoring Program fortnightly sampling.

Community engagement and capacity building

- Ribbons of Blue / Waterwatch Program for schools and community groups.
- Workshops with stakeholders responsible for point source nutrient management.
- Engaged Shires in Avon Floodplain Study on implications of floodplain hydrogeology and salinity risk.

Publications

- Department of Water (2007) Avon Basin Potential Nutrient Discharge Sites, Department of Water, Perth.
- Department of Water (2009) Nutrient management for the Avon River Basin: A toolkit for managing nutrient loss to the environment from a range of land uses. Department of Water, Perth.
- Department of Water (2009) Avon River catchment Water Quality and Nutrient Monitoring Program for 2007, Department of Water, Perth.

Did you know?

The Avon Rivercare Program was awarded the 2007 State Premiers Award for Excellence in Public Sector Management (Regional Development).

*RIGHT: AVON RIVER AERIAL VIEW
COURTESY CHANTELE CUMMINS*





"His entire wetlands were degraded by his cattle, but since he put the fence back, the area has completely recovered"

Roger A Court
Farmer
Avon Valley Advocate
Wednesday 21 June, 2006



WATER MANAGEMENT & SELF SUFFICIENCY

Investment: \$1 403 545
Delivery organisation: GHD Pty Ltd

On-ground achievements

- 22 landholders received farm water grants to install storm water harvesting & reuse infrastructure.
- Brookton Shire wastewater and storm water harvesting and reuse project.
- Cunderdin Agricultural College storm water harvesting and reuse infrastructure project.

Community engagement and capacity building

- Water management planning within the Morbinning and Woolundra subcatchments.
- Planning for water self-sufficiency with Brookton, York and Mukinbudin Local Government Authorities.
- Six water management self-sufficiency workshops held at strategic locations around the region.
- Advice to local government on potential hydrologic impacts associated with new developments.
- Water audit and planning for the Cunderdin Agricultural College.

Publications

- GHD Pty Ltd (2007) Skills Audit Natural Resources Management Professionals (Community Landcare Coordinators), GHD Pty Ltd, Perth.
- GHD Pty Ltd (2007) Analysis of the Regional Water Demand, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Regional Water Demand and Target Setting, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Constructed Storage Analysis for the Avon Arc, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Preliminary Report on Stormwater Management Options, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Example Interim Rural Dams Policy for the Avon catchment, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2009) Environmental Water Flow Requirements, GHD Pty Ltd, Perth.

Did you know?

Of the estimated 30 GL (30 billion litres) / year delivered through the Mundaring to Kalgoorlie pipeline, approximately 10 GL / year is consumed within the Avon River Basin.

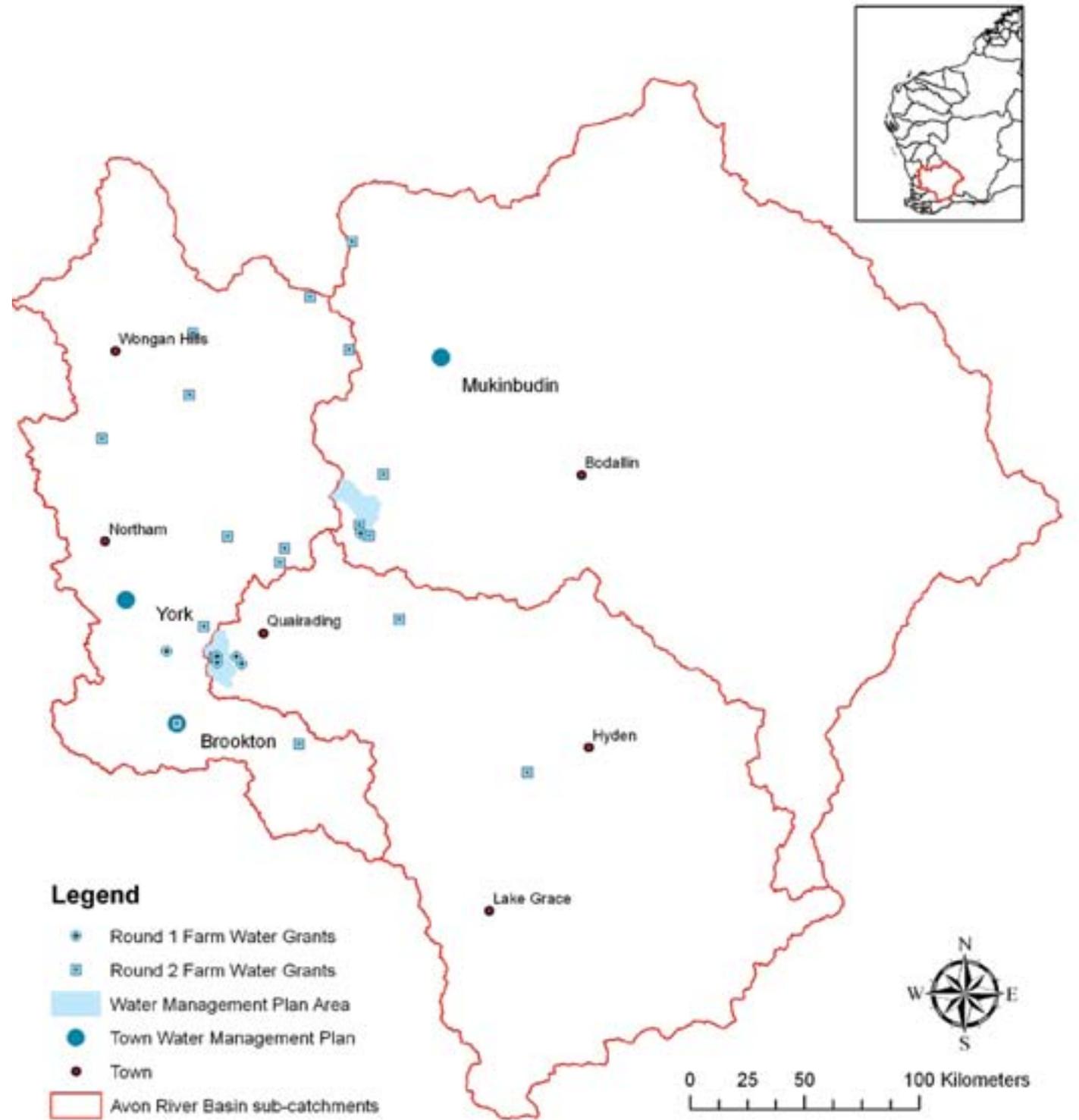
WHEATBELT NRM OPERATIONS MANAGER NATARSHA WOODS
IN FRONT OF BROOKTON DAM





"This is a great opportunity for the college to be more self sufficient and teach good water management practices to its students and of course there is the financial bonus".

Alec Fissioli
Cunderdin Agriculture College



Groundwater source identification, assessment & monitoring

Investment: \$1 081 091
Delivery organisations: Department of Agriculture & Food WA
GHD Pt Ltd

On-ground achievements

- 112 piezometers established for ongoing monitoring of regional groundwater trends
- Community engagement and capacity building.
- 'Combores' - a web-based interface for collecting land manager groundwater data established.
- Technical reports presented at public meetings and presentations to Local Government Authorities.

Publications

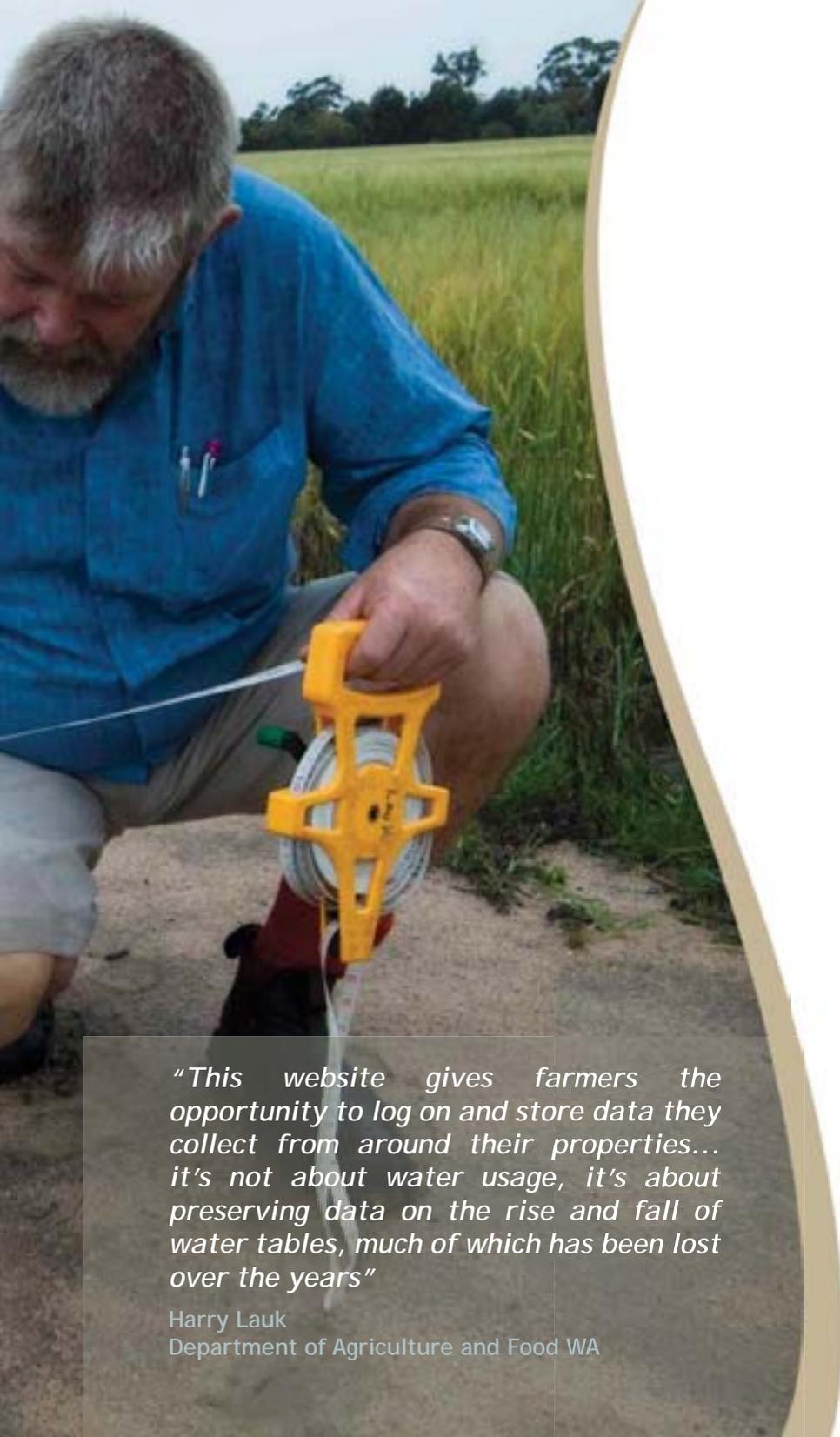
- GHD Pty Ltd (2008) Review of Low Salinity Groundwater Resources, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Groundwater Investigation Kokerby Paeleochannel, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Quairading Resources Study, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) York Resources Study, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2007) Salinity Trend Analysis - Avon River Basin, GHD Pty Ltd, Perth.

Did you know?

The Kokeby groundwater resource is considered to be the largest fresh groundwater resource within the Avon River Basin with an estimated sustainable yield of between 700 - 1300 ML / year.

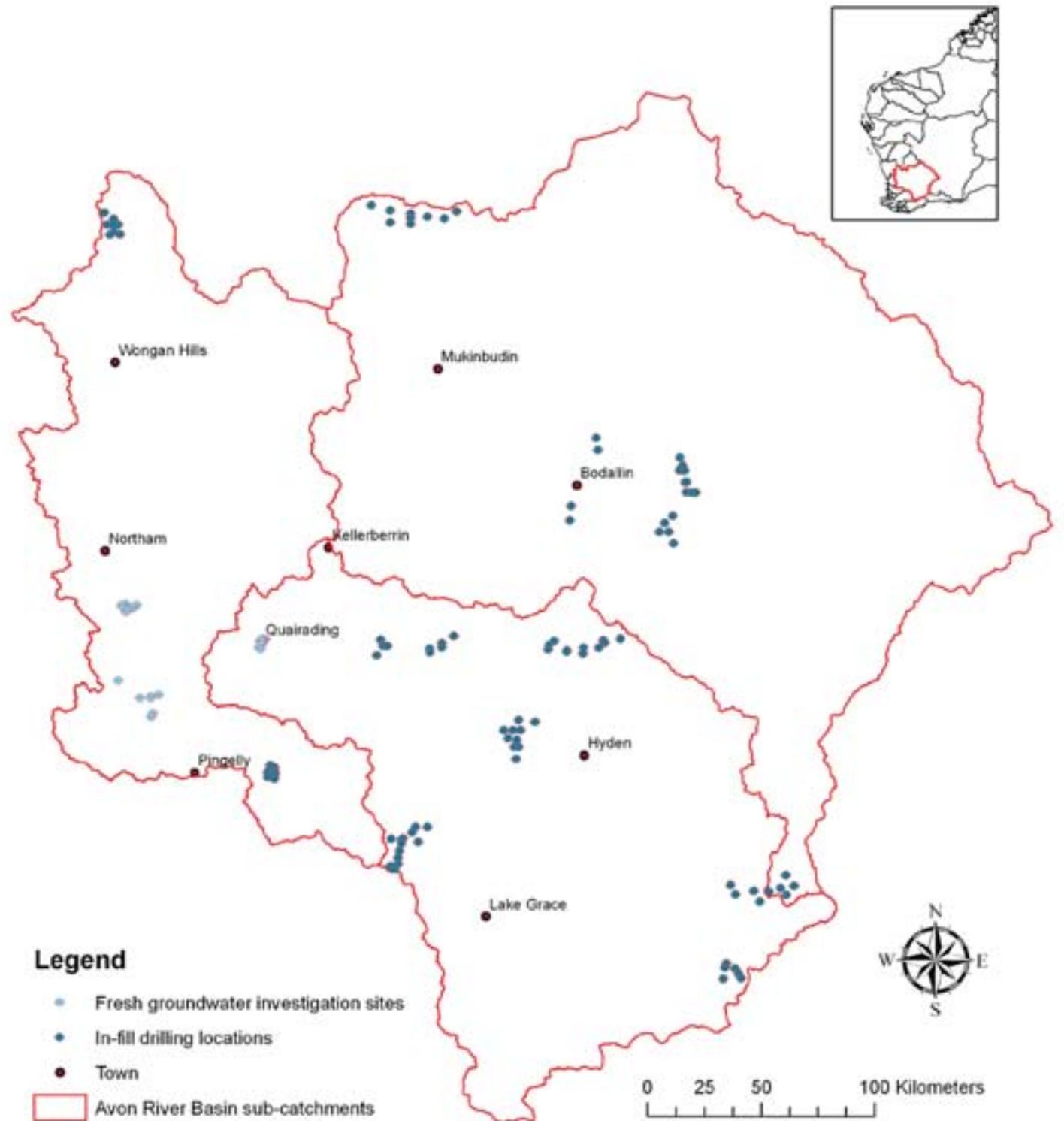
*RIGHT: HARRY LAUK, DEPARTMENT OF AGRICULTURE AND FOOD WA
MEASURING GROUNDWATER LEVEL AT A PIEZOMETER
COURTESY DEPARTMENT OF AGRICULTURE AND FOOD WA*





"This website gives farmers the opportunity to log on and store data they collect from around their properties... it's not about water usage, it's about preserving data on the rise and fall of water tables, much of which has been lost over the years"

Harry Lauk
Department of Agriculture and Food WA



Protection of Community Assets

Investment: \$1 172 140
Delivery organisations: Department of Agriculture & Food WA
GHD Pty Ltd

On-ground achievements

- Groundwater control bore field installed, tested and equipped to avert the risk of salinity in Merredin.
- Surface water harvesting and storage (dam) scheme in Dowerin.
- Groundwater drilling, pump testing and monitoring for Lake Grace, Dowerin, Pingelly, Wongan-Hills.
- Piezometer monitoring in Merredin, Lake Grace, Pingelly, Wongan-Hills, Brookton, York and Dowerin.
- Telemetry Equipped Logging Systems (TELS) units installed in Wongan-Hills.
- Viable groundwater production bore installed in Brookton.

Community engagement and capacity building

- 16 editions of the Rural Towns Liquid Asset newsletter.
- Annual displays at the Dowerin Field Days and Wagin Woolorama.
- Shire consultation and detailed engineering design for stormwater harvesting.

Publications

- Department of Agriculture & Food Western Australia (DAFWA) (2009) Water Management Plan (WMP) for the Town of Dowerin, Rural Towns Liquid Assets, DAFWA, Perth.
- Department of Agriculture & Food Western Australia (DAFWA) (2009) Water Management Plan (WMP) for the Town of Wongan Hills, Rural Towns Liquid Assets, DAFWA, Perth.
- Department of Agriculture & Food Western Australia (DAFWA) (2009) Water Management Plan (WMP) for the Shire of Lake Grace, Rural Towns Liquid Assets, DAFWA, Perth.
- Department of Agriculture & Food Western Australia (DAFWA) (2009) Water Management Plan (WMP) for the Town of Pingelly, Rural Towns Liquid Assets, DAFWA, Perth.

Did you know?

The wheatbelt region of Western Australia (WA) is where 70 per cent of Australia's salinity occurs.

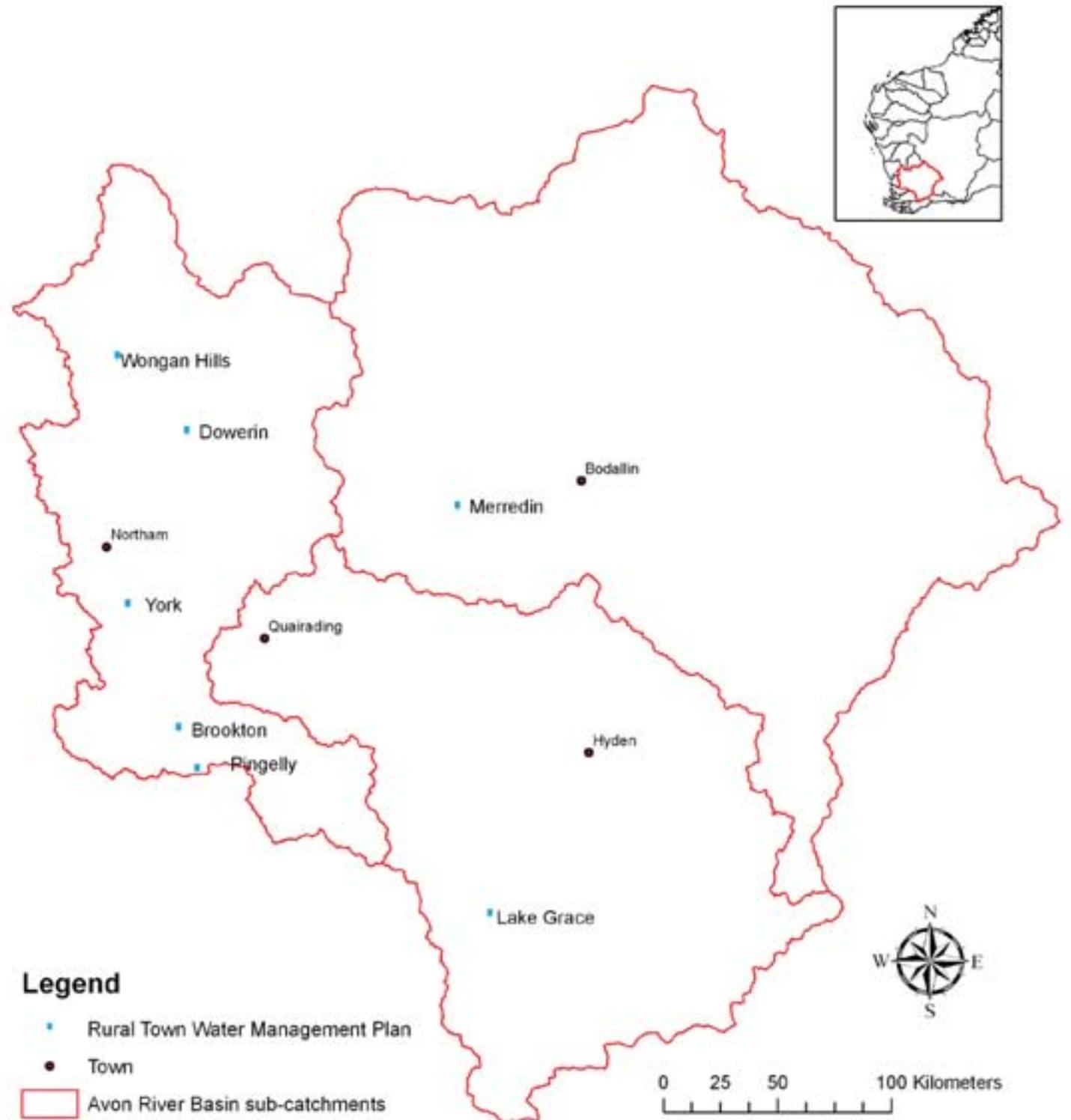


RIGHT: GROUNDWATER BORE



“By using innovative and integrated harvesting strategies, we are able to reduce the salinity and waterlogging problems in towns, while also providing residents with a new water supply and to combat the problems of extensive water run-off within the town”

Former Director General Ian Longson
Department of Agriculture and Food



Protection of Transport Assets

Investment: \$733 171
Delivery organisations: GHD Pty Ltd

On-ground achievements

- Electromagnetic survey of 6 000 km of regionally significant roads.
- 8 demonstration sites of waterlogging, salinity & flooding impact management on transport infrastructure.

Community engagement and capacity building

- Paper presented at the 4th International Salinity Conference titled 'Options to better manage the impacts of salinity on transport infrastructure within the Avon River Basin'.

Publications

- GHD Pty Ltd (2006) Inventory of Transport Assets in the Avon River Basin, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2007) Culvert Material and Design, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2007) Inventory of Water Corporation Pipelines in the ARB, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2007) Kulin Demonstration Site Design Report, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2007) Westonia Demonstration Site Design Report, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2007) Yilgarn Demonstration Site Design Report, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Detailed Risk Assessment: Priority Regional Roads, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Monitoring Methodology, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Rural Road design Guidelines, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Brookton Demonstration Site Design Report, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Cunderdin Demonstration Site Design Report, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Narembeen Demonstration Site Design Report, GHD Pty Ltd, Perth.
- GHD Pty Ltd (2008) Trayning Demonstration Site Design Report, GHD Pty Ltd, Perth.
- Beavis, D and Ellis, D. (2008), Geochemical investigation of Kulin-Holt Rock Road at Jilakin Lake, Western Australia: a report to GHD.

Did you know?

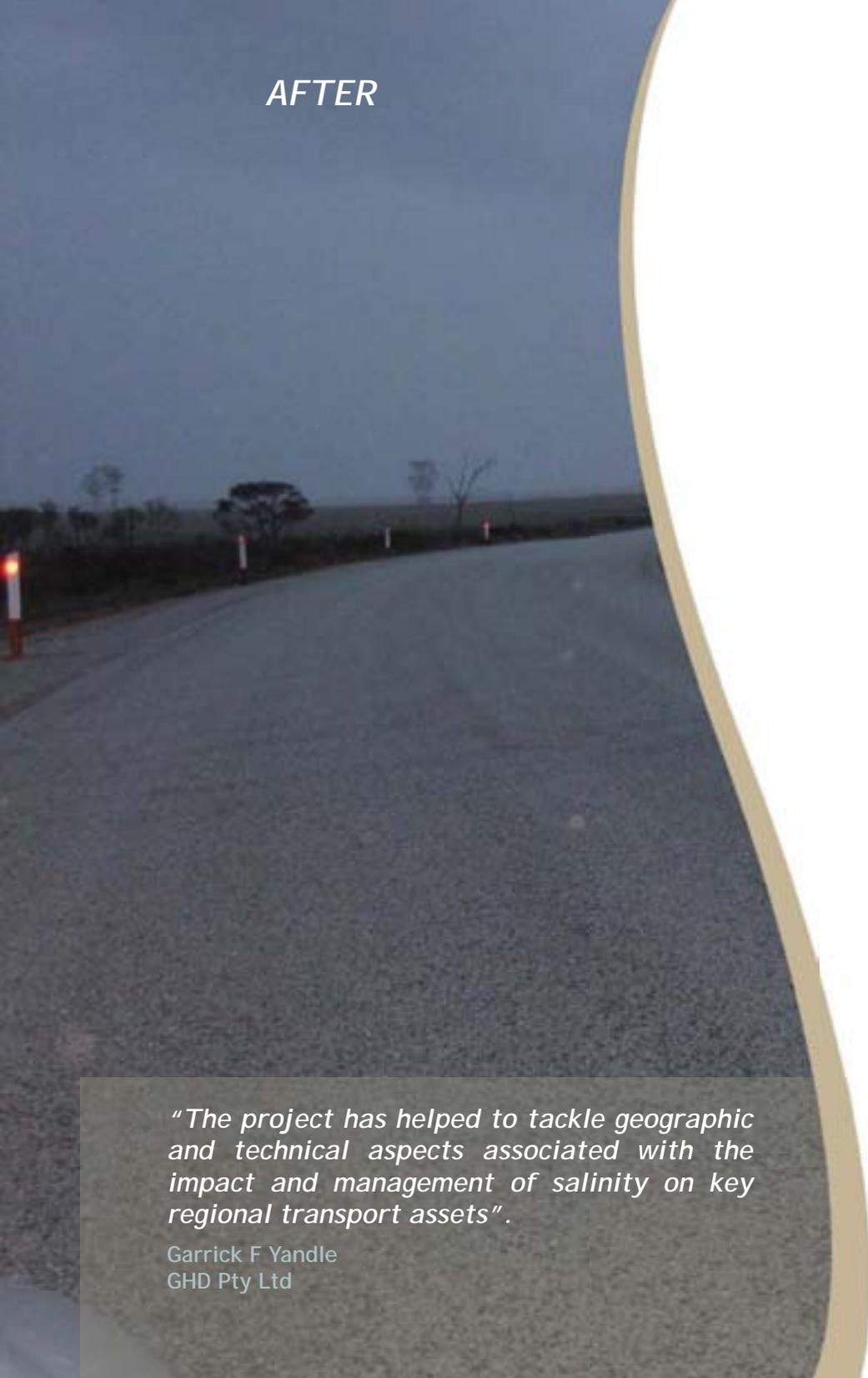
There are approximately 47 000 km of roads within the Avon River basin, of which, 1 730 km (3.5%) are situated in areas described as saline by the Land Monitor dataset.

BEFORE



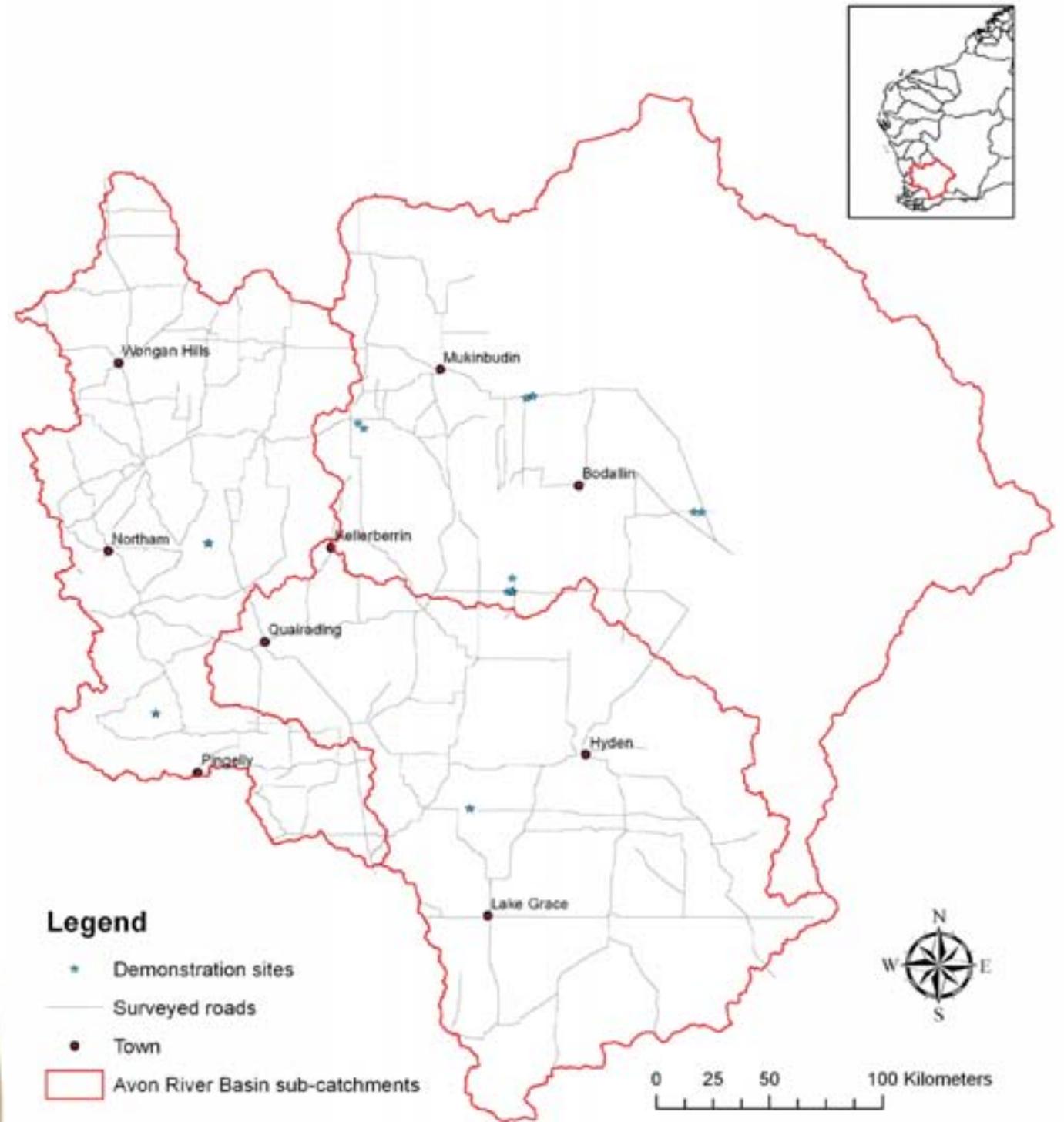
RIGHT: KULIN ROAD SEALING BEFORE AND AFTER

AFTER



"The project has helped to tackle geographic and technical aspects associated with the impact and management of salinity on key regional transport assets".

Garrick F Yandle
GHD Pty Ltd



Salinity Management: Avon Region Salinity Tender

Investment: \$837 138
Delivery organisation: Wheatbelt NRM

On-ground achievements:

- Round one (2005-2007) - \$399 000 to 42 farmers for establishing oil mallees, sandalwood, other native trees, tagasaste, lucerne and mixed perennial pastures.
- Round two (2007-2008) - \$390 000 to 9 farmers / farmer groups for establishing native trees, lucerne, oil mallees, brushwood, swamp sheoak, mixed perennial pastures and fencing.
- 2430 ha of land had tree and pasture species established to contain salinity in Rounds 1 & 2.
- 522 ha of land had tree and pasture species established to adapt to salinity in Round 2.

Community engagement and capacity building

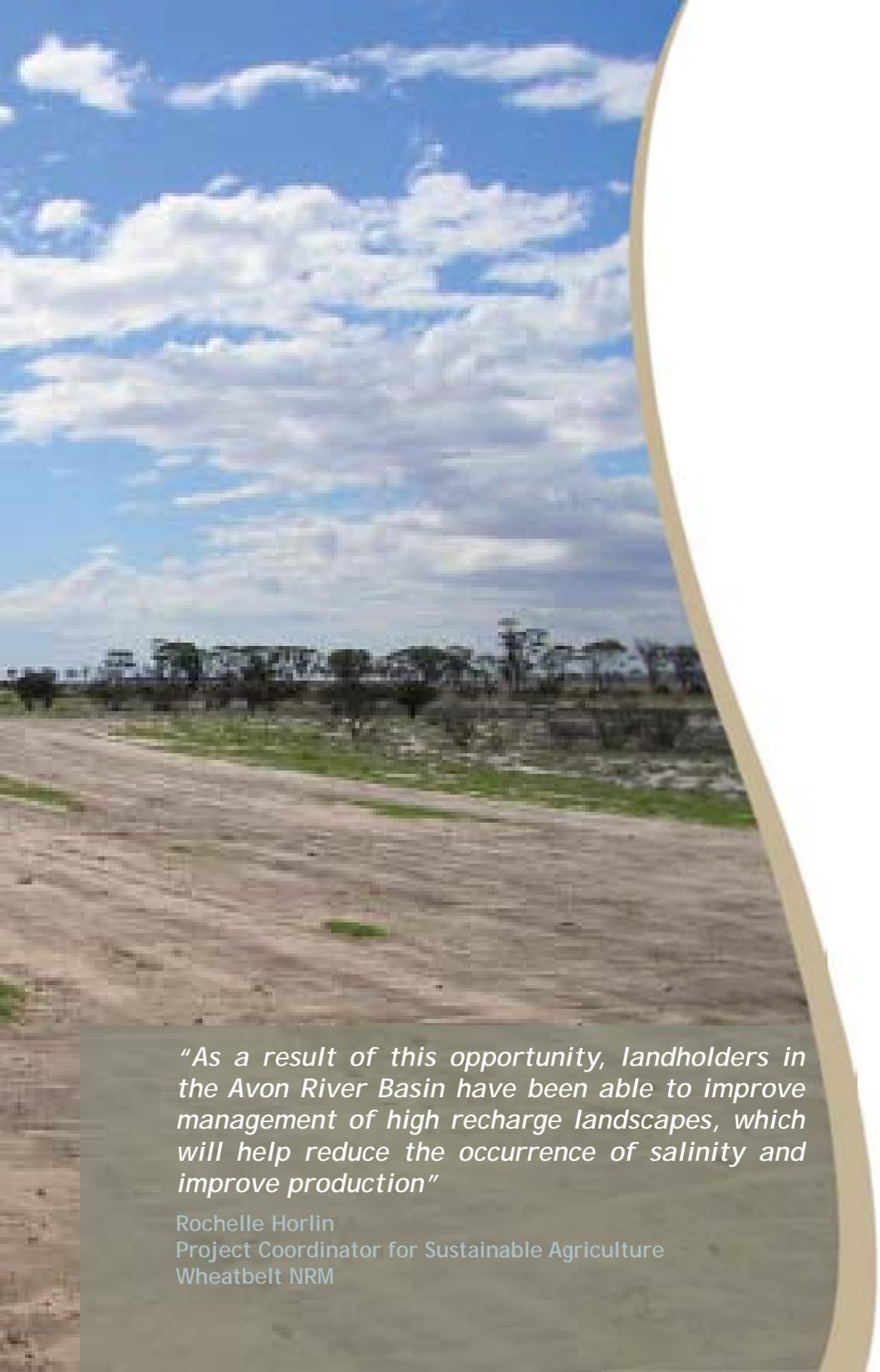
- Salinity tender participants received one-on-one technical advice on site.
- Case studies and media articles produced to promote the tender and the success of activities.
- Conference paper presented to the 4th international Salinity Conference by Dr Elizabeth Kington.

Did you know?

The accepted round one tenders resulted in outcomes of over 617 hectares at a cost of \$400,000. If the accepted land managers were instead paid the marginal (i.e. highest) flat rate per hectare that was tendered, the cost would have been \$524,000.

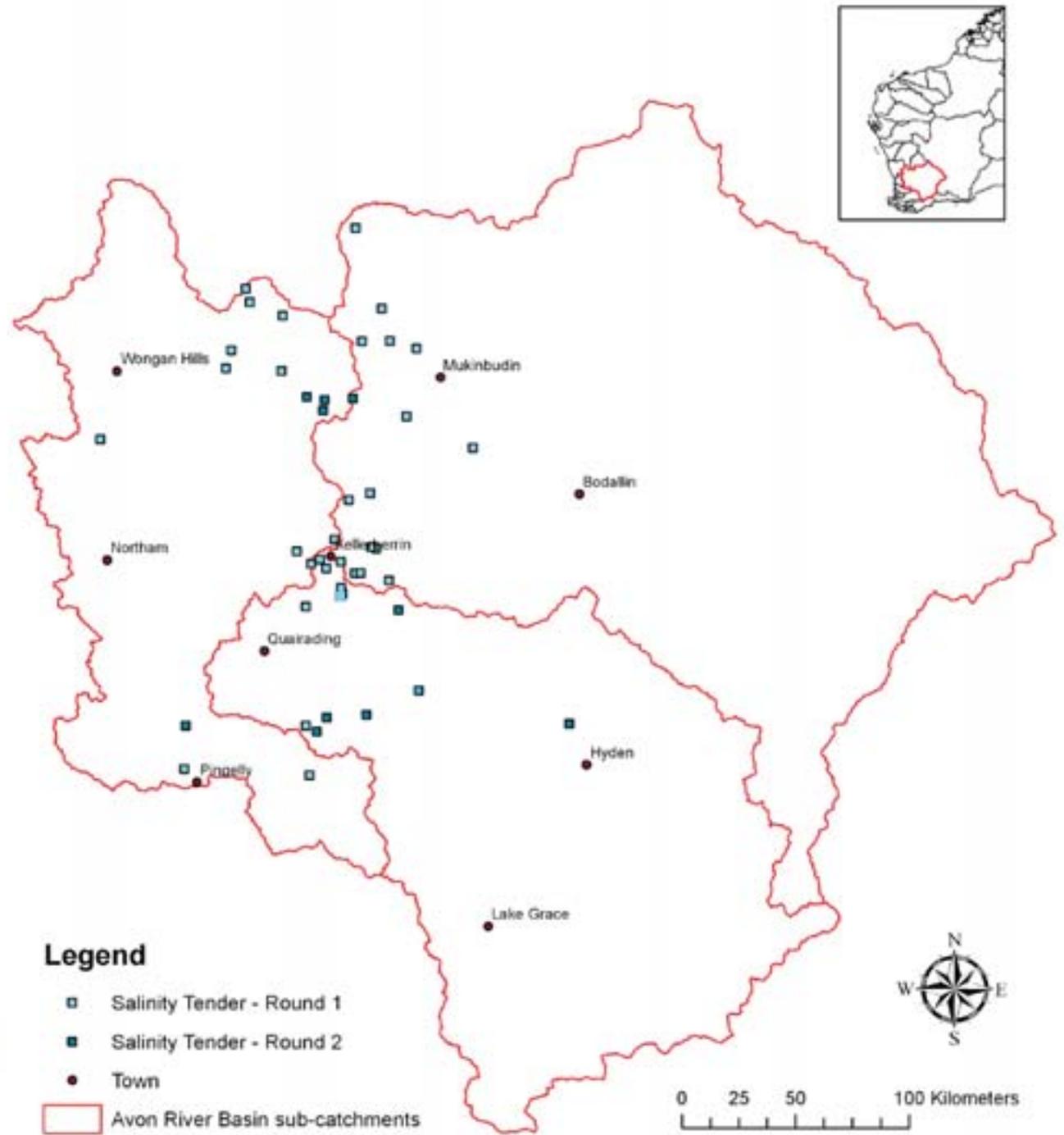


RIGHT: SALTBUSH SITE ON GRANT ROBINSON'S PROPERTY 'BEDAR FARM'



“As a result of this opportunity, landholders in the Avon River Basin have been able to improve management of high recharge landscapes, which will help reduce the occurrence of salinity and improve production”

Rochelle Horlin
Project Coordinator for Sustainable Agriculture
Wheatbelt NRM



Salinity Management: Strategic Tree Cropping

Investment: \$1 100 000

Delivery organisations: Oil Mallee Association

On-ground achievements:

- 2.14 million mallee seedlings distributed to 82 landholders, planting approximately 1 200 ha of mallee tree crops on cleared agricultural land.
- Estimated 10,000 hectares of new farm systems developed incorporating tree cropping to address NRM and production issues such as waterlogging, wind and water erosion.

Community engagement and capacity building

- One to one extension to build landholder capacity to plan and undertake large scale planting activity.
- Case study reports on 15 properties available online at: www.avongro.com.au
- Development of 6 oil mallee fact sheets.

Did you know?

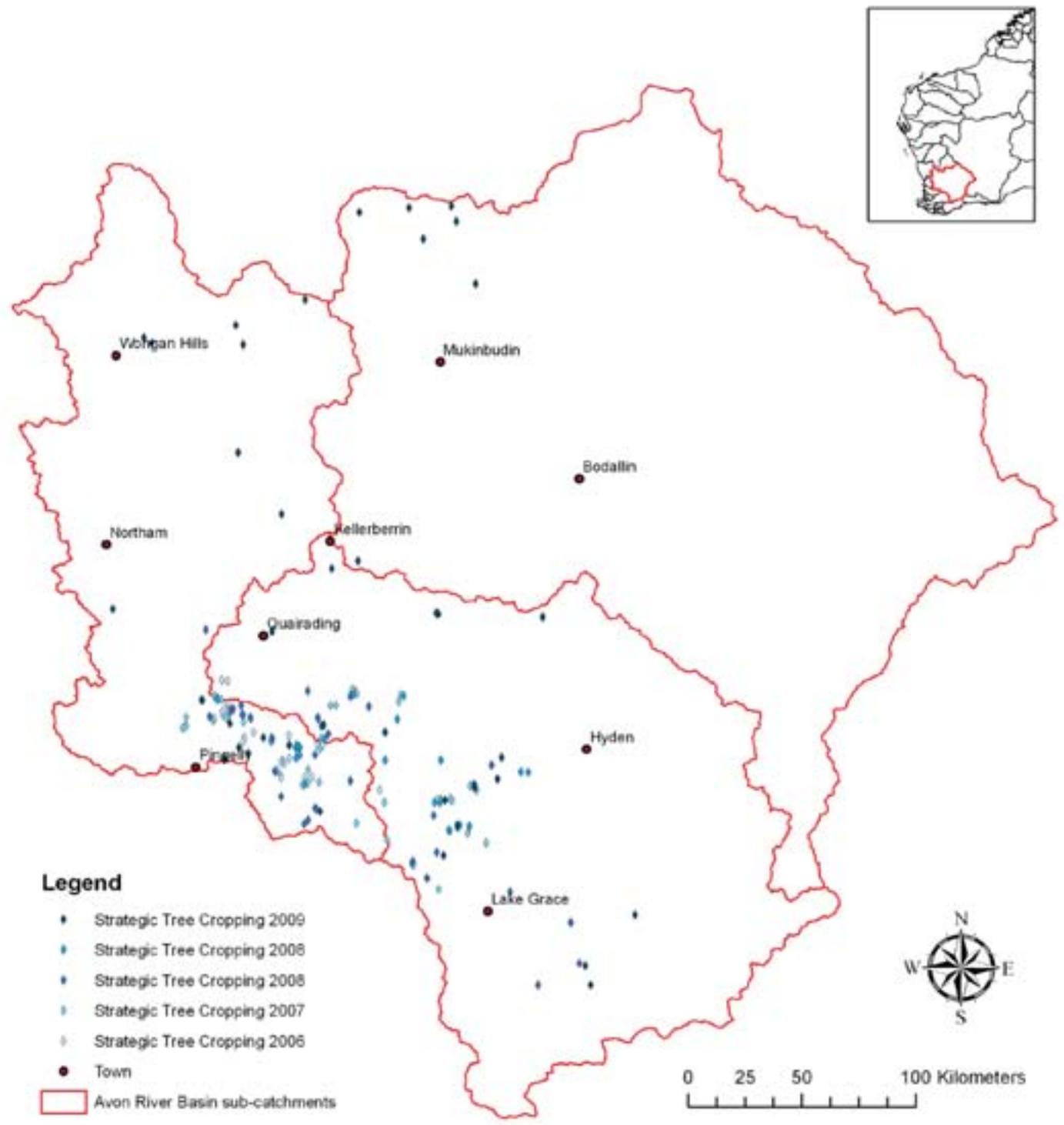
Our target set in 2005 was to establish 850 ha of oil mallees in the Avon River Basin - this target was exceeded by more than 70%.





"It's not just about us. If we can make it work and our mates and neighbours can make it work it will be a benefit to all of us and the sustainability of our local communities".

Keith Wilson
Farmer case study



Salinity Management: Valley Floor Management

Investment: \$604 000
Delivery organisations: Saltland Pastures Association

On-ground achievements

- 253 land managers established 2.2 million saltbush seedlings and 520 ha of salt tolerant inter-row understorey over 3,100 ha of valley floors of the low rainfall zone (<450mm).
- Twelve trial sites designed and established.
- 4 monitoring sites established measuring depth to groundwater, biomass production and stocking rates.

Community engagement and capacity building

- 11 officers trained as Saltland Pasture Grower Support Network Advisors to support land managers
- Pamphlet developed outlining outcomes of trial sites
- 3 field days to increase land manager understanding of groundwater management options and productive saltland pastures

Did you know?

From a survey of farmers who participated in the saltland pasture incentive scheme in 2006-07, 80% would not have grown saltland pastures, or grown them to a lesser extent without the incentive scheme and 97% said the scheme increased their confidence to grow saltland pastures in the future.

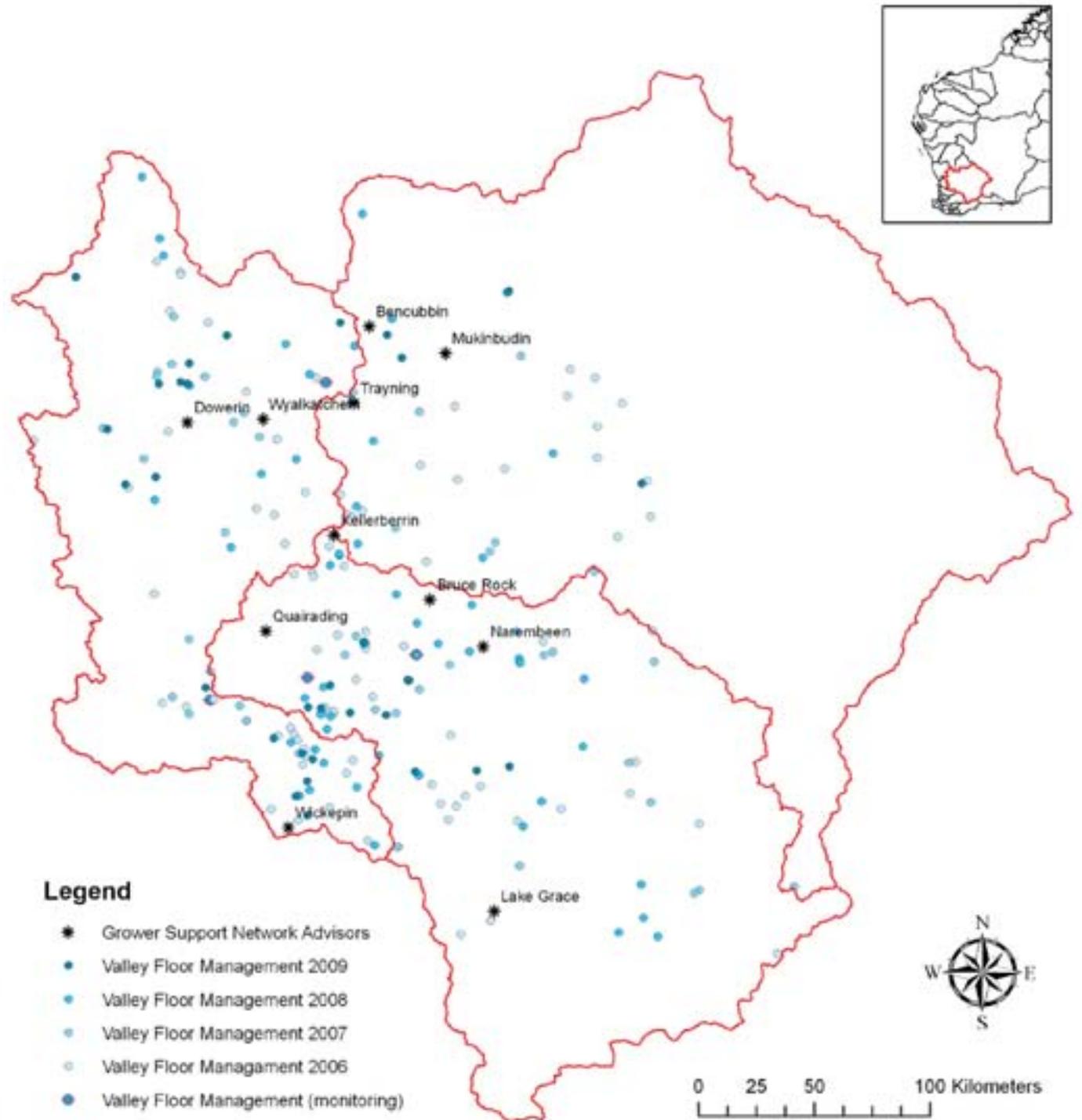
RIGHT: SHEEP IN THE SALTBUSH





"...but with this program, I've been able to continue fighting salinity, making unproductive land productive."

Murray McDonald
Kellerberrin Farmer



Salinity Management: Native Plant Industry Enterprises

Investment: \$492 543
Delivery organisations: Greening Australia (2006-07)
AVONGRO Wheatbelt Tree cropping
Forest Products Commission (2008)

On-ground achievements

- 27 demonstration sites of sandalwood, swamp sheok, brushwood and long rotation timber planted over 200 ha in 2007.
- 100 ha of tree crops established in 2008.
- 20.5 ha of swamp sheok, 35 ha sandalwood and 37 ha native timber planted as independent or mixed plantings in 2009.

Community engagement and capacity building

- 11 workshops with over 600 participants and over 50 active participants from stakeholder groups.
- Coordination of grower group newsletters.
- Executive / technical support for Avon Wheatbelt Tree Cropping & Oil Mallee Association .
- Peer Mentoring Program for farm forestry.
- One Introductory Training course on farm forestry.
- Technical information, guidance and liaison services on farm forestry.
- Assisted grower groups develop sustainable 'producer collaborative business models'.
- Australian Sandalwood Field Day, Brushwood Field Day, Regional Tree Crop Research Update.

Did you know?

Australian Sandalwood is grown for its high value aromatic heartwood over a 20 year rotation, with potential to generate income from the oil rich nuts from age five.

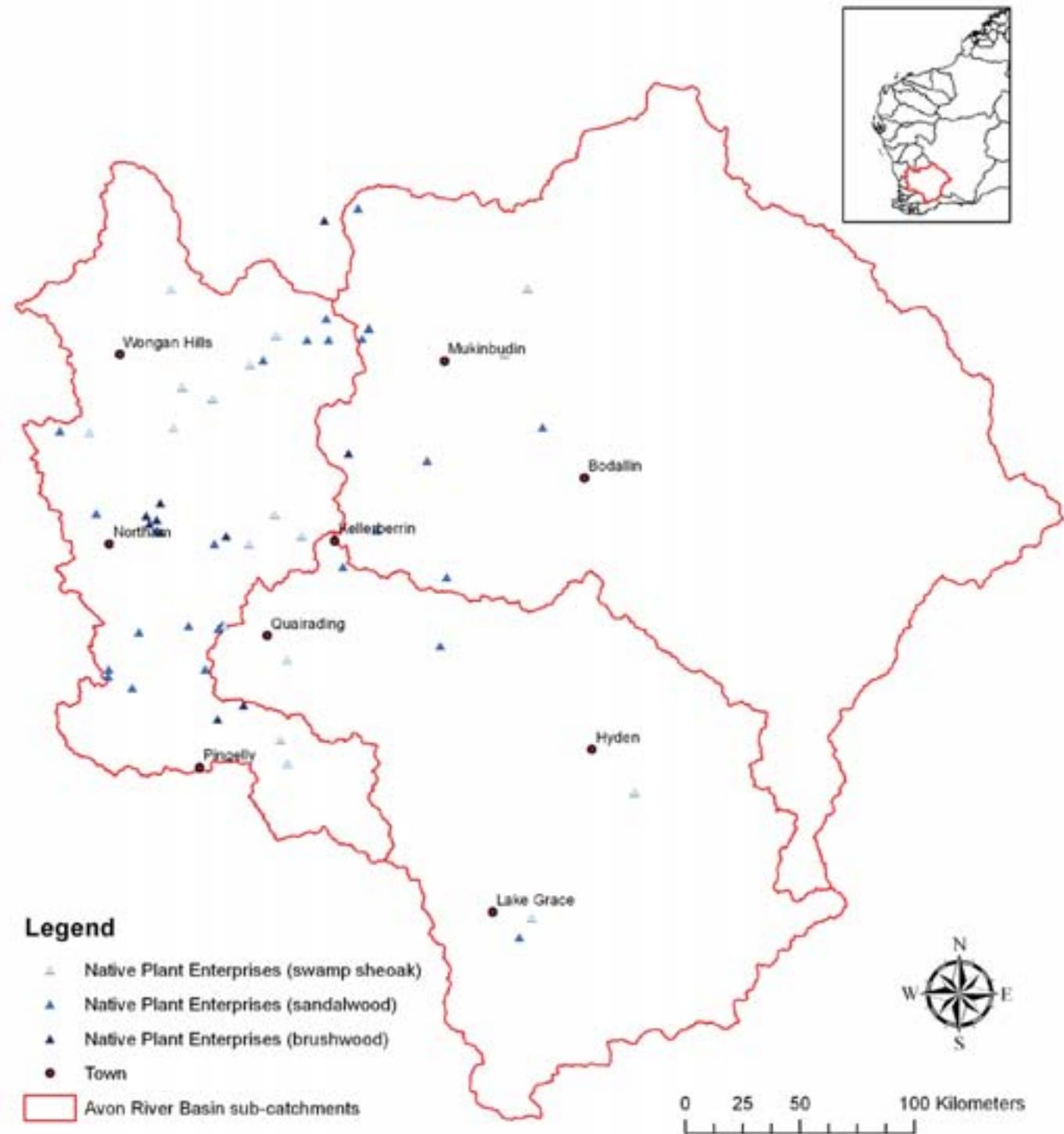
RIGHT: KOORDA FARMER BOB HUXLEY PREPARING TO PLANT SEEDLINGS ON HIS PROPERTY





“The benefits are already beginning to show. In the boggy areas the water going into the soak is nearly drinkable”

Adrian Donaldson
Baker's Hill property owner



Salinity Management: Narembeen Drainage Project

Investment: \$201 064
Delivery organisations: Department of Water
URS Consultants
SKM Consultants
ENV Australia

On-ground achievements

- Installation of stream gauging station downstream of proposed diversion sites.
- Installation of groundwater monitoring bore network and loggers at diversion demonstration sites.

Community engagement and capacity building

- Provided ongoing resources for the Stakeholder Reference Group representing Narembeen community to develop a technical and governance solution for pre existing deep drainage in the catchment.
- Drainage governance options developed in partnership with the community but a final solution was not agreed upon.

Publications

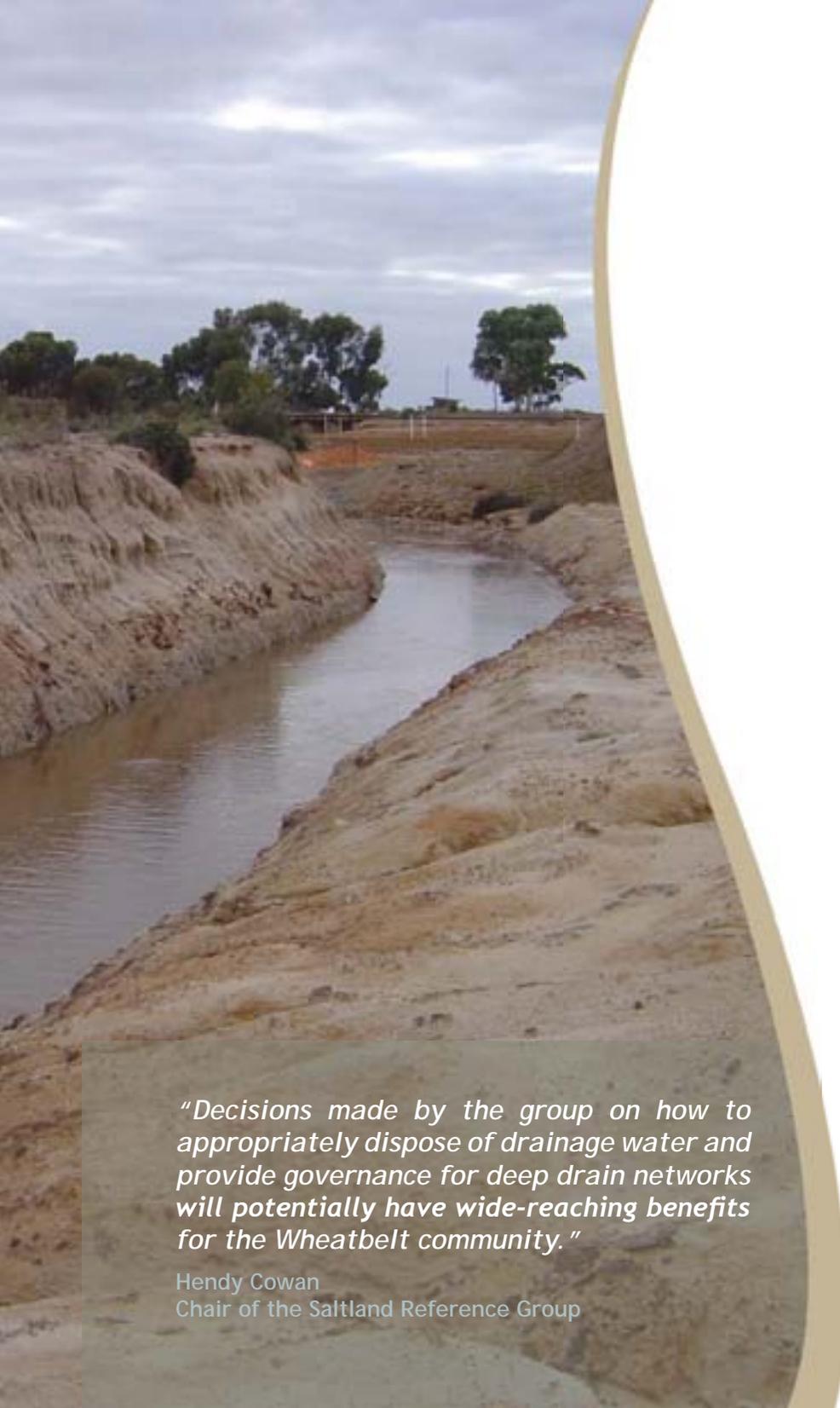
- Sinclair Knight Mertz Pty Ltd (2007), Narembeen Drainage Disposal Options - Assessment of Conceptual Engineering Options, SKM Perth, W.A.
- ENV Australia Pty Ltd (2008), Narembeen Lakes 1, 4, 5 and 6 Environmental Assessment, Perth, W.A.
- URS (2009), Governance considerations for the Narembeen drainage system, Perth W.A.

Did you know?

More than 5000 km of deep drains are estimated to have been constructed in the WA wheatbelt to protect low-lying land from salinisation and to help rehabilitate marginally saline lands.

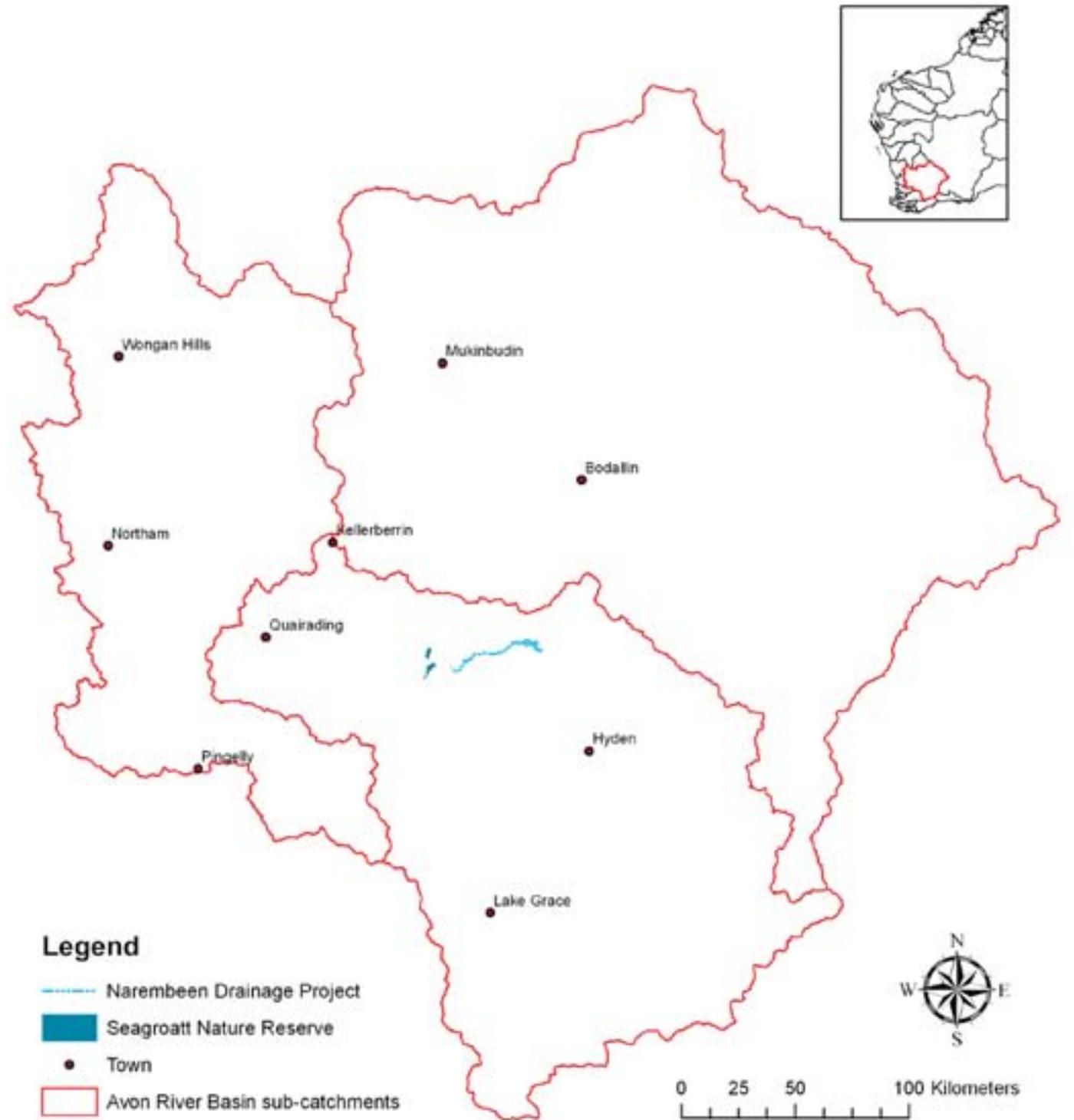


RIGHT: NAREMBEEN DRAIN



“Decisions made by the group on how to appropriately dispose of drainage water and provide governance for deep drain networks will potentially have wide-reaching benefits for the Wheatbelt community.”

Hendy Cowan
Chair of the Saltland Reference Group



Salinity Management: Salinity Risk Assessment

Investment: \$63 937
Delivery organisations: GHD Consultants

Key achievements:

- Detailed investigation into the spatial representation of salinity within the Avon River Basin. The detailed investigation involved the interrogation of Land Monitor salinity datasets (Landgate) including the Salinity Hazard Mapping dataset.
- Using a newly developed approach (Slope Hazard Mapping), a relationship between slope and the presence of land affected salinity was established. This relationship was refined to develop a method, with the knowledge of geomorphologic and geological relationships, of predicting the spatial extent of land affected salinity within the catchment.
- A salinity risk map was developed to identify areas at risk of becoming saline using the same method. The geomorphological assessment undertaken within this approach also resulted in the derivation of significant geomorphic zones that can be used for future works within the region.
- The Slope Hazard Mapping method of describing salinity within the region was discussed with reference to other methods previously used including the interrogation of groundwater levels and quality through the interpretation of a groundwater bore network.
- Streamflow salinity was assessed to offer an additional insight into the spatial extent of salinity.
- In order to ascertain the effectiveness of the Slope Hazard Mapping method, the reliability of the Landmonitor data used within this method was also assessed.
- Recommendations were made to improve the methods of salinity mapping within the Avon River Basin and to improve the coverage of salinity monitoring throughout the region.

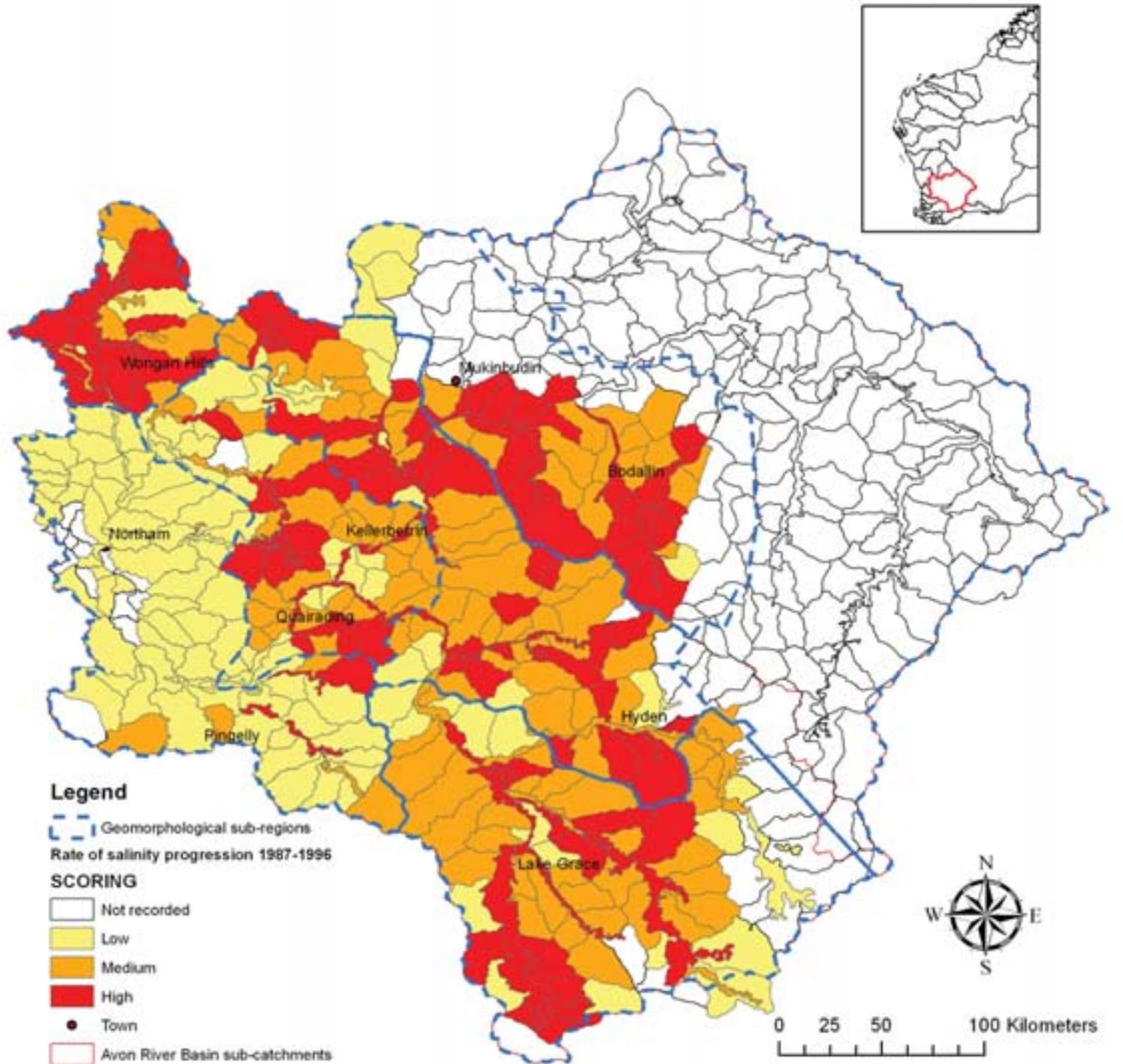
RIGHT: PARTICIPANTS IN THE SALINITY RISK ASSESSMENT WORKSHOP IN TAMMIN





“Salinity development within the Dowerin-Tammin regions appears to be similar, yet less pronounced to that of the Wongan - Pithara subregion, and slope analysis undertaken for these subregions indicate the potential for salinity to reach a similar extent as that expressed within the Wongan - Pithara subregion”.

Matt Giraud
Senior Environment Hydrologist
GHD Pty Ltd



Salinity Management: Safe Disposal Acid Groundwater

Investment: \$810 000
Delivery organisations: Department of Water

On-ground achievements

- Conducted the first pilot scale evaluations of low-cost treatment systems for on-farm treatment of acidic saline drains waters in Australia in three locations.

Community engagement and capacity building

- Communicated learning's from investigations and trails through presentations to landholders and community groups involved in salt land drainage, the broader NRM community (through the NRM conference), general public (ABC TV Landline coverage) and State agency management committees.

Publications

- Degens, B (2009), Proposed guidelines for treating acidic drain water in the Avon catchment: adapting acid mine drainage treatment systems for saline acidic drains, Western Australia, Salinity and land use impacts series, SLUI 54, Department of Water, 141p.
- Degens, B & Shand, P (2009), Introduction to acidic saline groundwater in the WA Wheatbelt - characteristics, distribution, risks and management, Department of Water.
- Degens, B (2009), Treating acidity in saline water and sediments in the Wallatin Creek catchment using a hydrated lime dosing unit, Department of Water.
- Degens, B (2009), Using composting beds to treat acidity in saline drain water, Department of Water.

Did you know?

Composting beds can effectively neutralise acidity in acidic saline drainage waters and remove a wide range of trace elements.

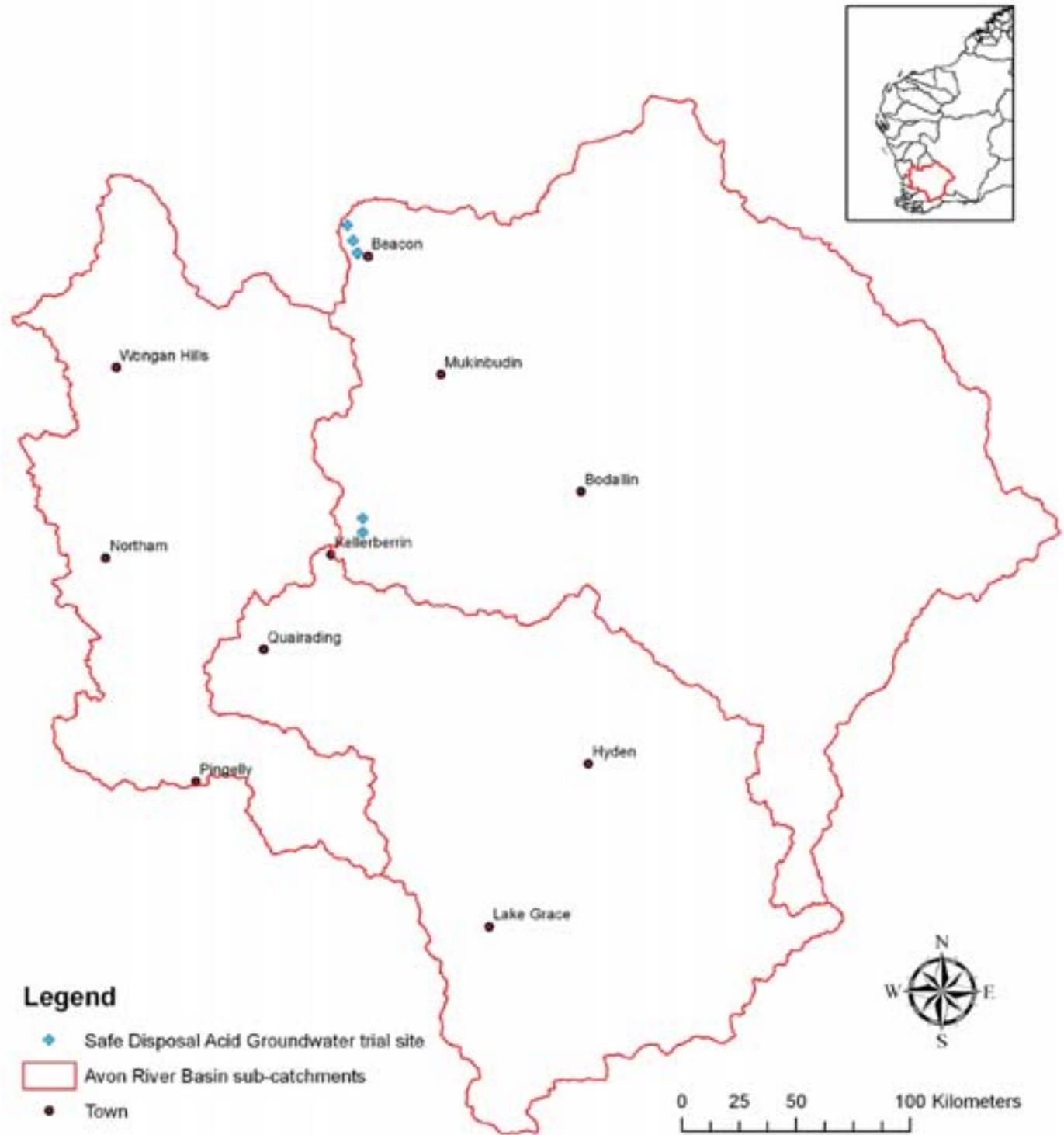
RIGHT: ACID DRAINAGE IN BEACON





"The treatment options trialed used a range of materials such as an organic mix of straw and sheep manure, as well as industrial hydrated lime and lime sand, which have neutralising qualities"

Dr Brad Degens
Department of Water



Salinity Management: Regional Community Engagement

Investment: \$20 000
Delivery organisations: AVONGRO

Community engagement and capacity building

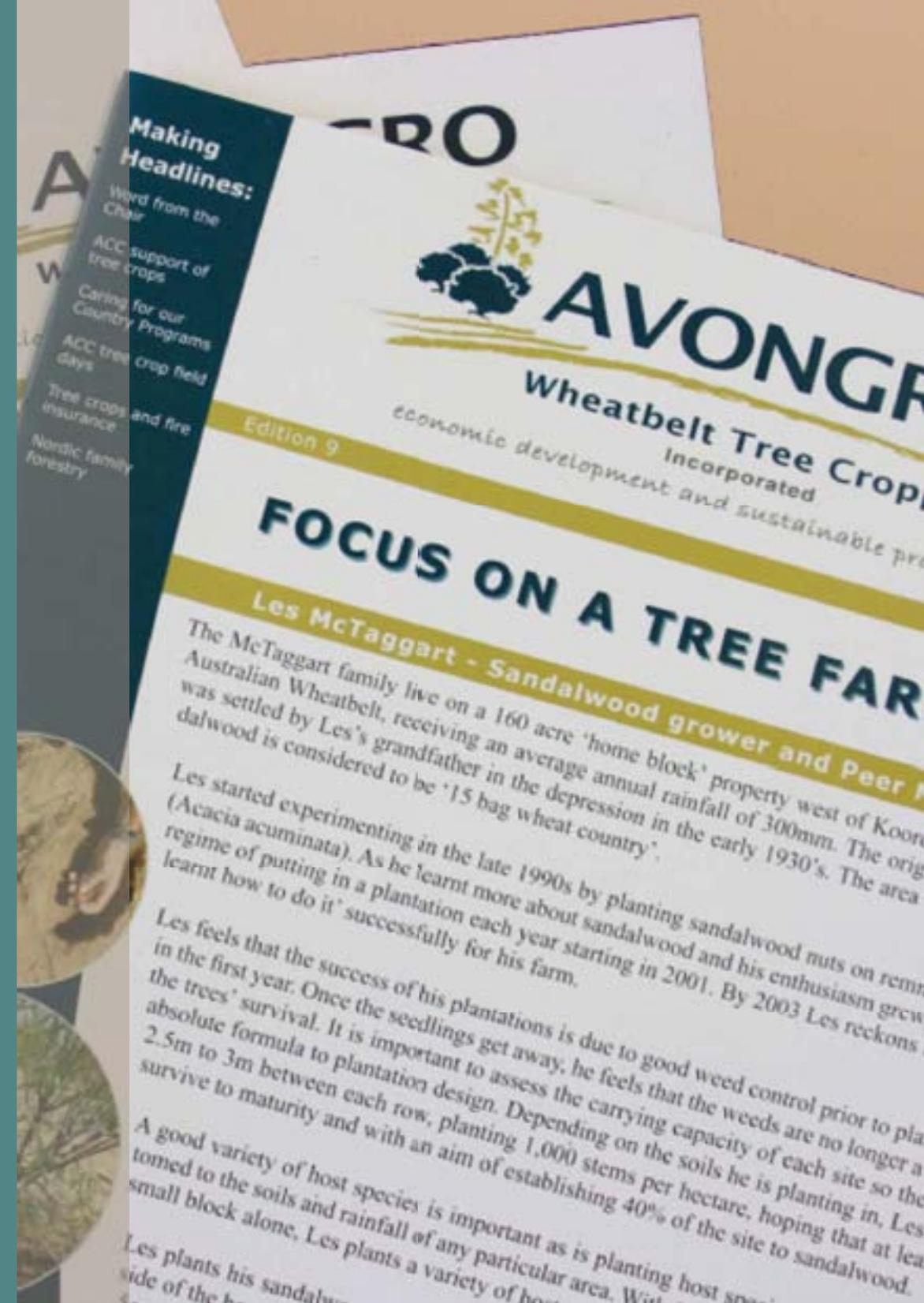
- Six AVONGRO newsletters produced with three mail outs to 1800 recipients.
- Sandalwood Economics, Brushwood Economics and Summary of the Bioenergy in the Avon Case Studies extension packages produced.

Salinity Management: WA Channel Management Group - Strategic Plan

Investment: \$30 000
Delivery organisations: WA Channel Management Group

Community engagement and capacity building

- Strategic Operational Plan document accepted at the 2008 WA Channel Management Group AGM.



RIGHT: A SELECTION OF AVONGRO NEWSLETTERS IN FRONT OF WIND SWEPT Paddock
COURTESY MONICA DURCAN

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Winter 2009

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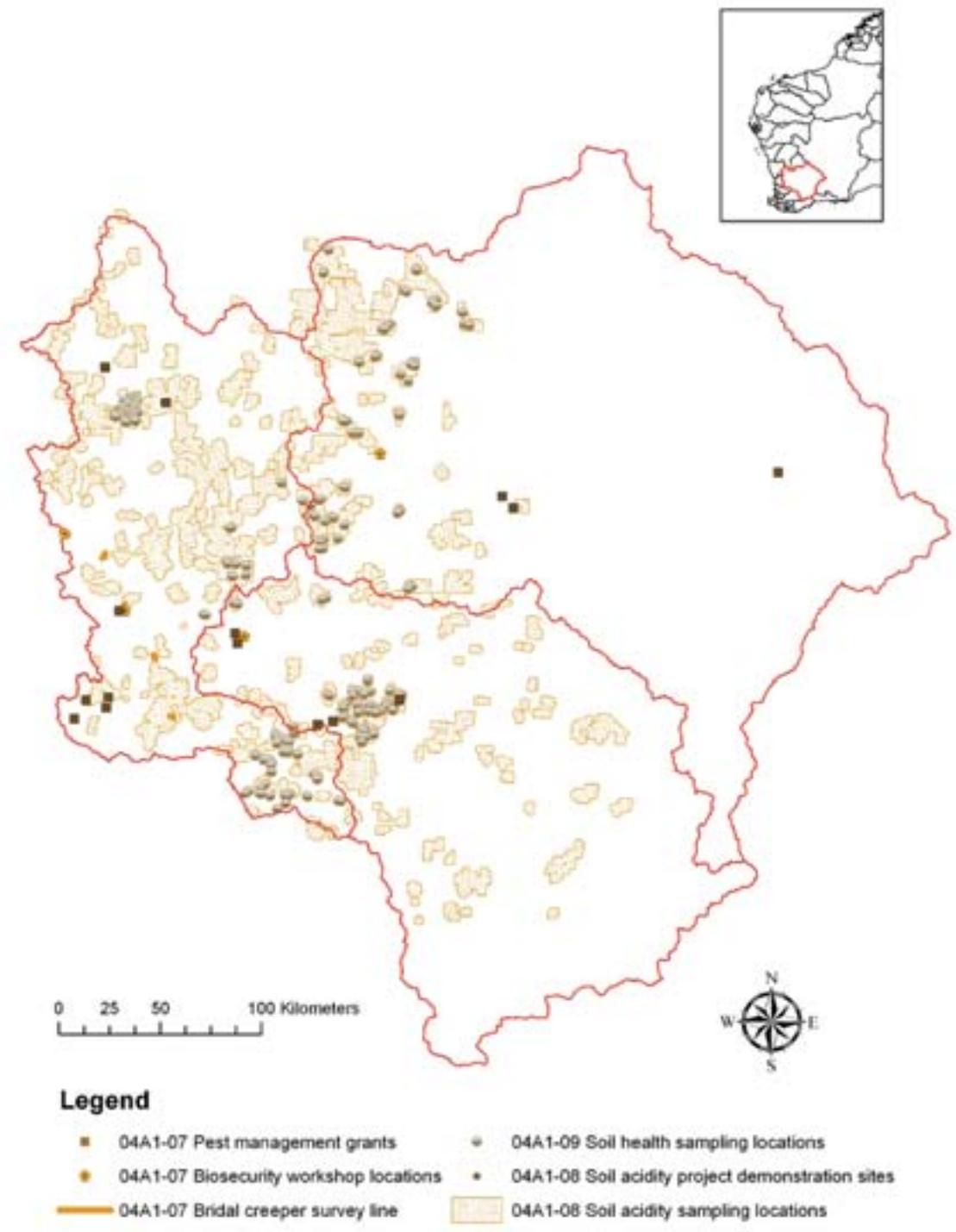
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BELOW: WA NO TILL FARMERS ASSOCIATION POST SEEDLING WALK.



INVESTMENT PLAN PROJECTS 2005-08
PROGRAM 2: SUSTAINABLE INDUSTRIES



Biosecurity: Spatial Distribution of Priority Environmental Pests

Investment: \$280 816
Delivery organisations: GHD PTY LTD
Wagin Woodanilling Landcare

On-ground achievements

- 15 on-ground projects to manage foxes, rabbits, cape tulip, thistles and freesias.

Community engagement and capacity building

- Co-funded part time regional coordinator for state-wide Red Card for the Red Fox program.
- Community workshops in the Shires of Nungarin, Quairading, Toodyay and with the Aboriginal community on the spatial distribution of pests and input into local pest management documents.
- Engaged local governments and communities to initiate community coordinated fox control programs.

Publications

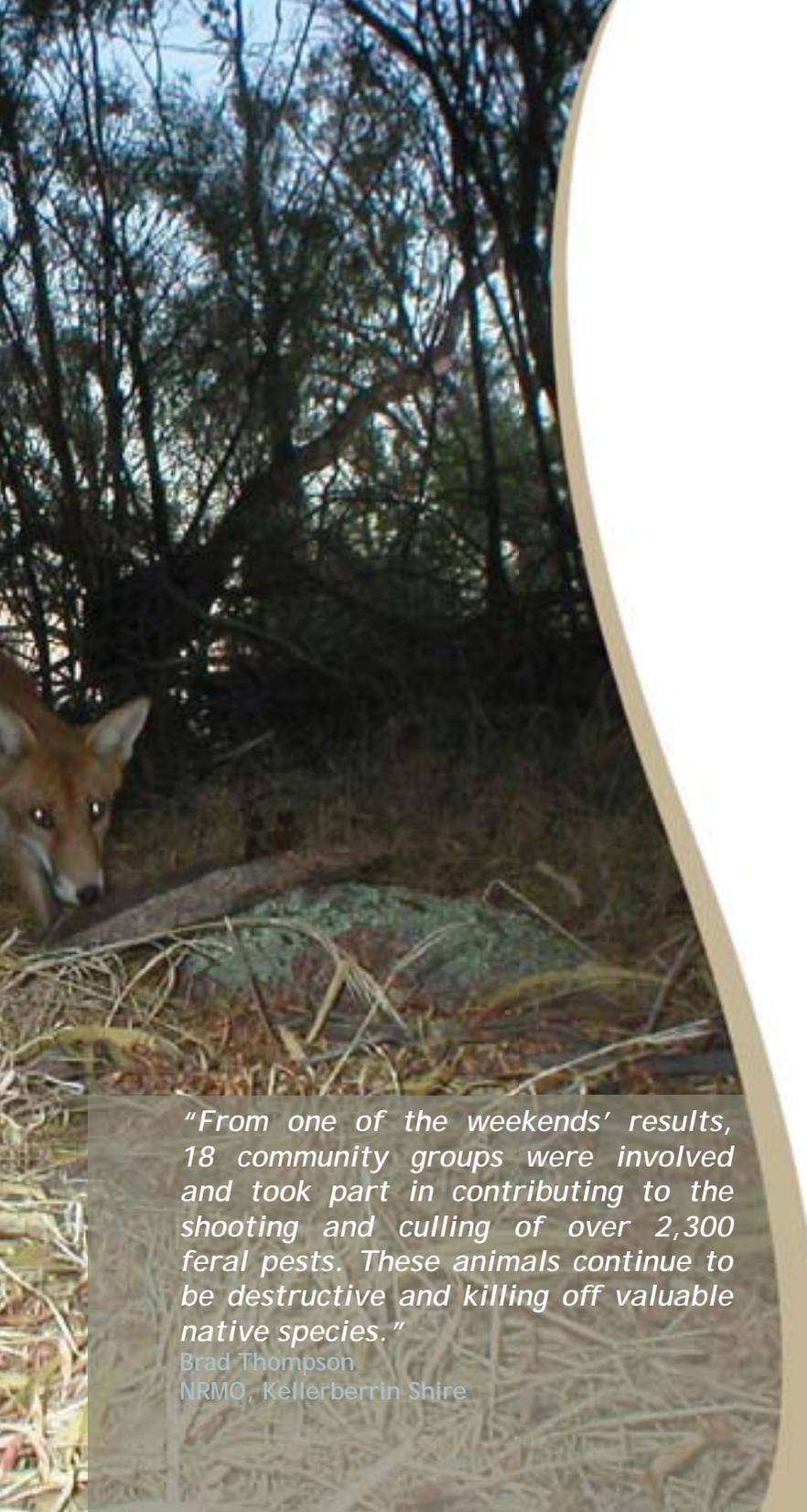
- GHD Pty Ltd (2006) Pest Management in the Avon River Basin - Volume II (Project SI-01), GHD Perth.
- GHD Pty Ltd (2007) Pest Management in the Avon River Basin - Volume I (Project SI-01), GHD Perth.

Did you know?

- The Red Card for Red Fox project attracted outside sponsorship from an agricultural company manufacturing stock tags that saw over \$40,000 donated to the Royal Flying Doctor Service as a result of a bounty set for foxes culled through community fox shoots.

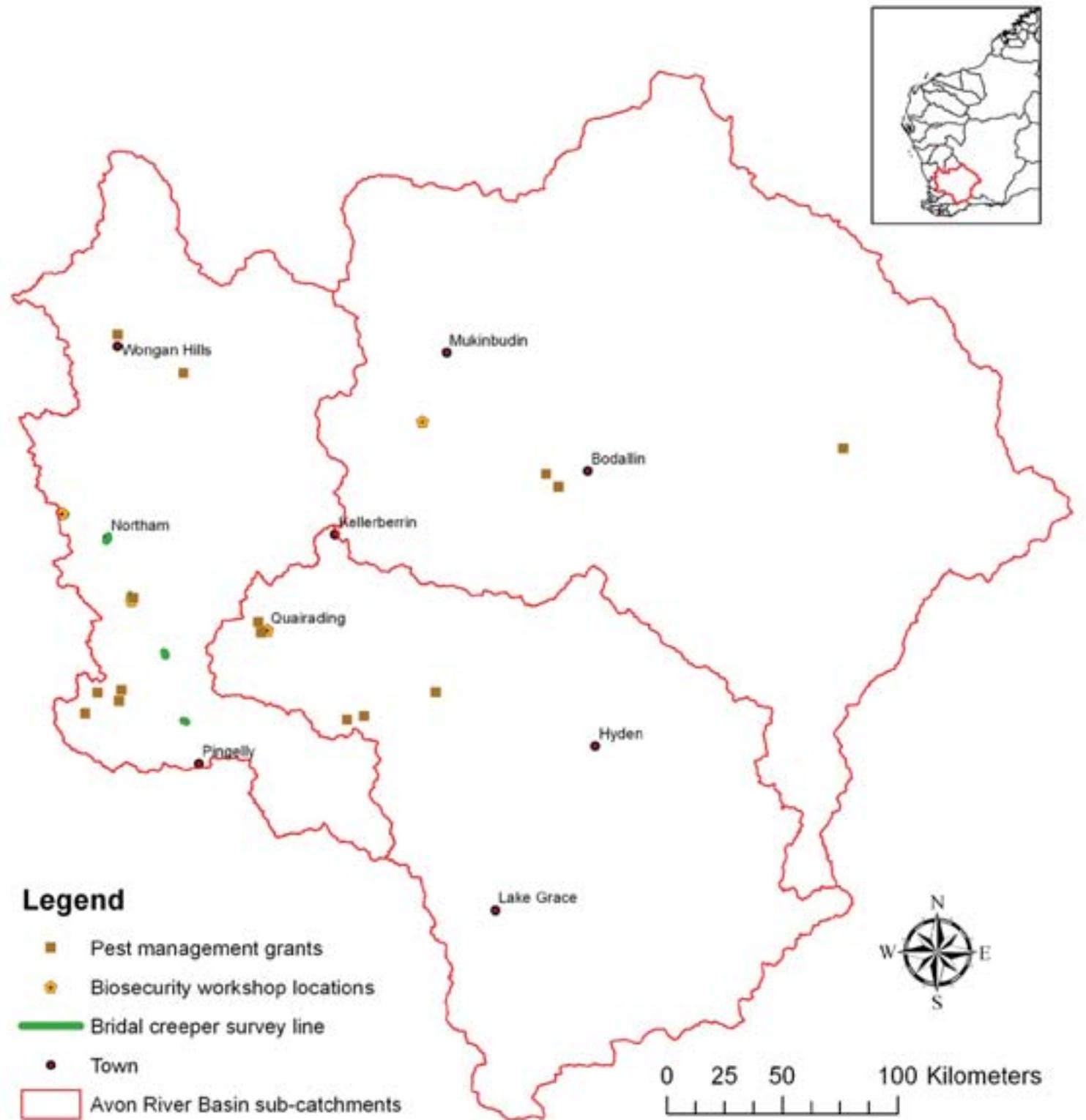
*RIGHT: FOX CAUGHT ON CAMERA TRAP
COURTESY MIKE GRIFFITHS, WWF*





"From one of the weekends' results, 18 community groups were involved and took part in contributing to the shooting and culling of over 2,300 feral pests. These animals continue to be destructive and killing off valuable native species."

Brad Thompson
NRM, Kellerberrin Shire



Soil acidity - Identification of Contributing Land Management Practices and Options

Investment: \$2 196 045
Delivery organisation: Department of Agriculture and Food, WA
Precision SoilTech

On-ground achievements

- A survey of soil pH to a depth of 30 cm with 18 000 topsoil samples (0-10 cm) and more than 20 000 samples from the 10-20 and the 20- 30 cm layers. Farmers who participated in the survey, manage properties which cover more than 840, 000 ha.

Community engagement and capacity building

- Each farmer received a comprehensive liming recommendation which allowed them to treat soil acidity more economically and efficiently by applying the correct amount of lime where and when required.
- A series of 21 'Time to Re-Lime' articles was published in the 'Farm Weekly'.
- Presentations at more than 50 events including field days, grower group meetings, and industry forums.

Publications

- Andrew J., Carr S., York D. & Gazey C. (2008) Geo-referenced, catchment based soil pH monitoring in three agro-ecological regions of Western Australia. Aglime of Australia /Precision SoilTech, Belmont, WA, Department of Agriculture and Food Western Australia, Northam, WA.
- Andrew J., Carr S., York D. & Gazey C. (2008) Subsidised Subsurface Soil pH Sampling in the Avon River Basin - Final Report, Aglime of Australia /Precision SoilTech, Belmont, WA, Department of Agriculture and Food Western Australia, Northam, WA.
- Andrew J., & Gazey C. (2008) Avon River Basin Soil Acidity Trial and Demonstration Site Summary, Aglime of Australia /Precision SoilTech, Belmont, WA, Department of Agriculture and Food Western Australia, Northam, WA.
- Fisher J., Gazey C., Abrecht, D. and Bowran D. (2009) Are reduced acidification rates a feasible, achievable option for future agricultural systems? Muresk Institute, Curtin University of Technology, Northam WA, Department of Agriculture and Food Western Australia, Northam, WA.

Did you know?

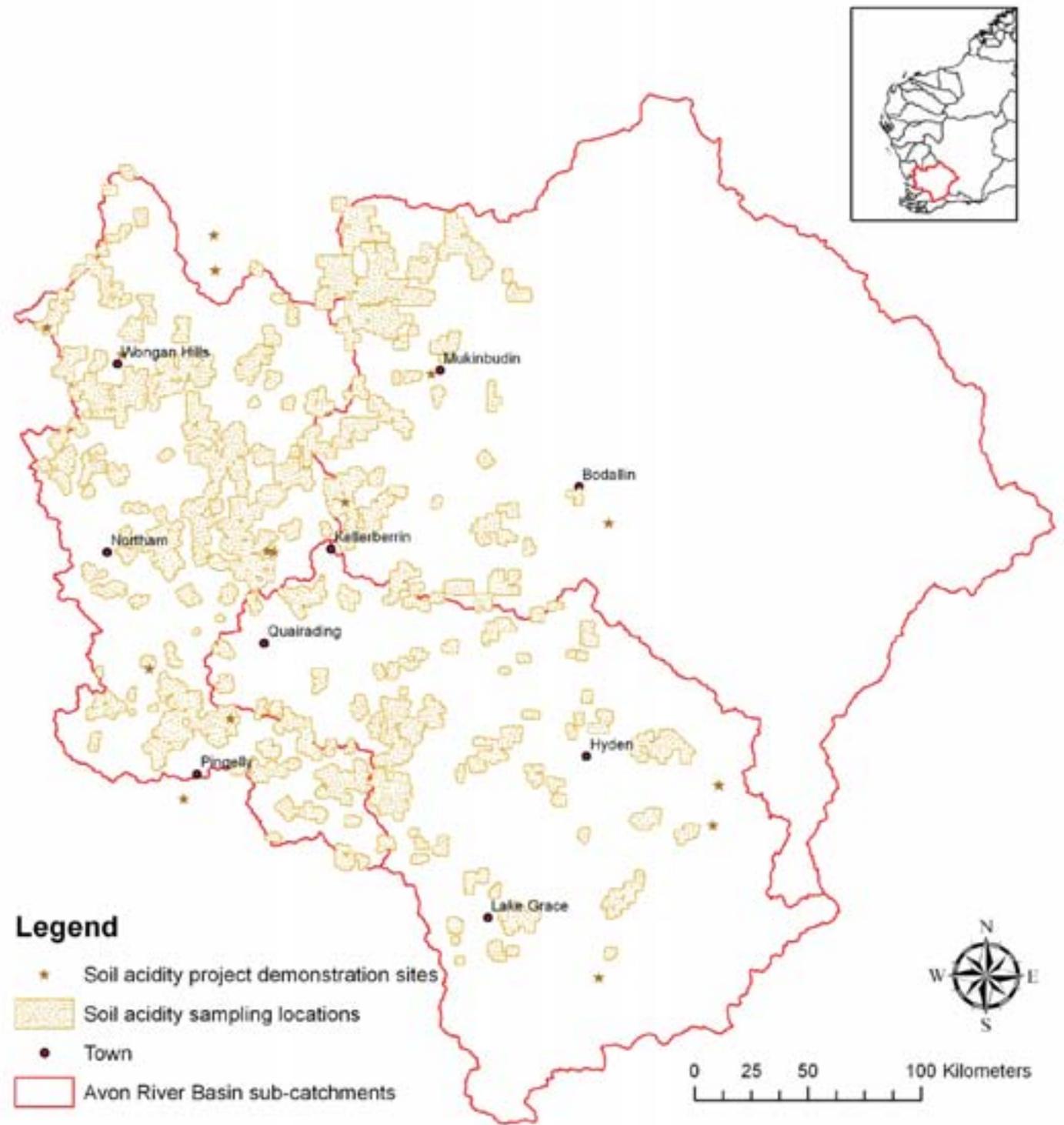
The 'Soil Acidity' project was nominated for a Department of Agriculture and Food's Excellence Award, which recognise outstanding work and commitment in all parts of the organisation.





"Applying lime in 1996 to maintain pH paid off in the long term in higher yields and improved grain protein through improved crop and pasture water and nitrogen uptake"

Justin King, Bindi Bindi farmer
Farm Weekly 23 October 2008
"Liming more effective as a preventative measure"



Awareness of soil health limiting factors and contributors

Investment: \$1 778 270
Delivery organisations: University of Western Australia

On-ground achievements:

- Benchmarked 286 sites for soil biological, chemical and physical constraints to production.
- Soil quality assessments on field trials in collaboration with grower groups, WANTFA and DAFWA.

Community engagement and capacity building

- Soil health workshops for growers and agribusiness.
- 22 information fact sheets and an 8-page brochure about the web site distributed and on the web site.
- Created www.soilquality.org.au web site that enables open access to data sets at a catchment and regional level and for individual growers actual paddock information.

Publications

- Kalideen H. (2007) Diagnosing Soil Quality Indicators for Sustainable Agricultural Production in Western Australia, Department of Agriculture and Food Western Australia, Perth W.A.
- Murphy, D., Hoyle, F., Wherrett, A. and Sawada, Y. (2007) Managing soil resources for enhanced and sustainable grain production (Gabby Quoi Quoi), University of Western Australia, Department of Agriculture & Food, WA (DAFWA).
- Murphy, D., Hoyle, F., Wherrett, A. and Sawada, Y. (2007) Managing soil resources for enhanced and sustainable grain production (Wickepin, West Corrigin), University of Western Australia, DAFWA.
- Murphy, D., Hoyle, F., Wherrett, A. and Sawada, Y. (2007) Managing soil resources for enhanced and sustainable grain production (York, Beverley), University of Western Australia, DAFWA.
- Murphy, D., Hoyle, F., Wherrett, A. Sawada, Y. and Byrne, A. (2007) Managing soil resources for enhanced and sustainable grain production (Corrigin), University of Western Australia, DAFWA.
- Murphy, D., Hoyle, F., Wherrett, A. Sawada, Y. and Byrne, A. (2007) Managing soil resources for enhanced and sustainable grain production (Kellerberrin), University of Western Australia, DAFWA.
- Murphy, D., Hoyle, F., Wherrett, A. Sawada, Y. and Byrne, A. (2007) Managing soil resources for enhanced and sustainable grain production (Ninghan), University of Western Australia, DAFWA.

Did you know?

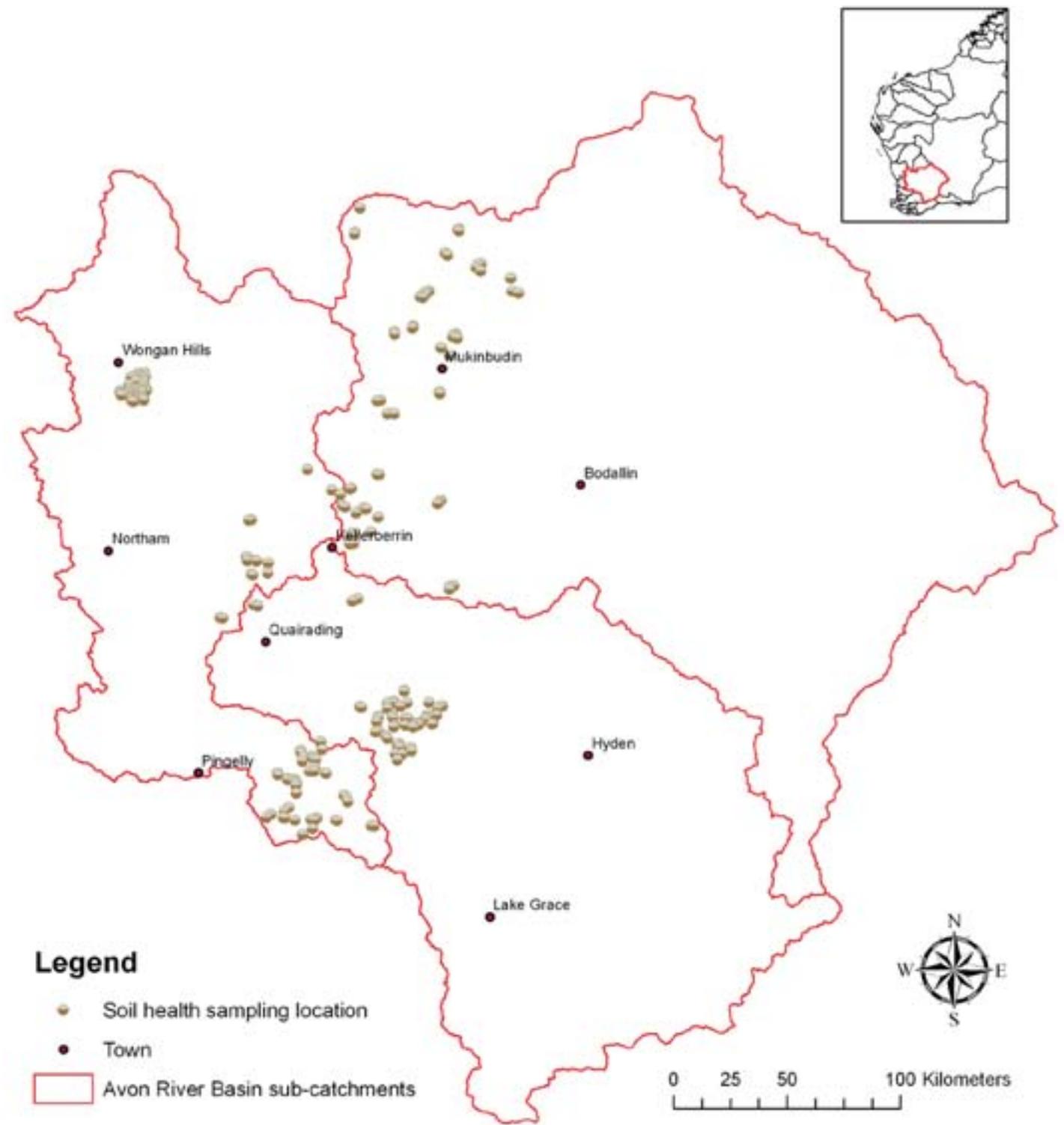
The website www.soilquality.org.au won a 2007 WA Web Award for best not for profit web site.





"You can use the tools provided on this website to gain a greater understanding of the health of your soil. You can look at regional soil quality information, compare your data and examine soil relationships."

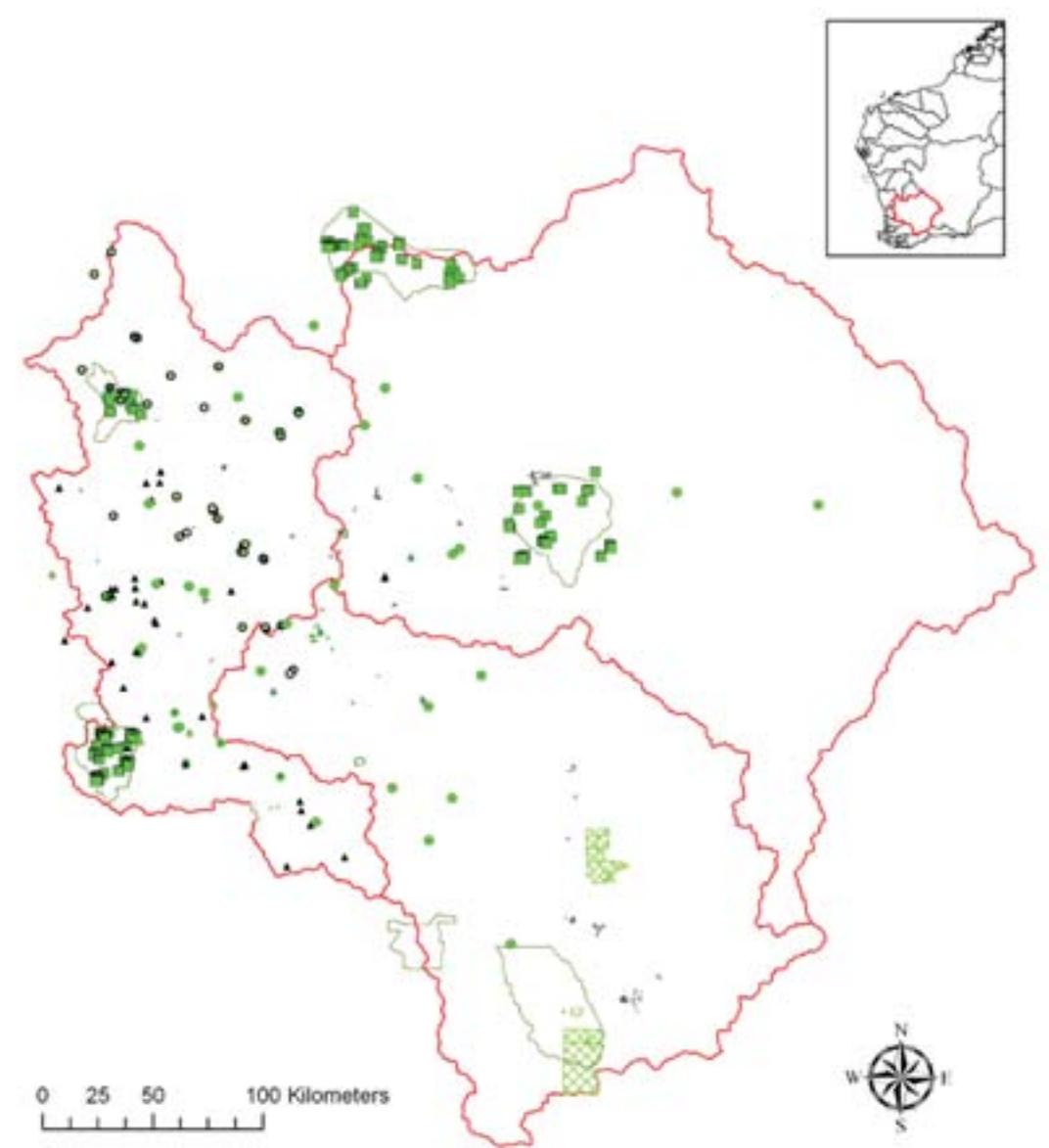
Associate Professor Daniel Murphy - UWA
(Kondinin Calendar, April 2007)





THORNY DEVIL (MOLOCH HORRIDUS)

INVESTMENT PLAN PROJECTS 2005-08
PROGRAM 3: NATURAL DIVERSITY



- Legend**
- 04A1-11 Translocation
 - 04A1-11 Fencing
 - 04A1-11 Rabbit control
 - 04A1-11 Weed control
 - ▨ 04A1-11 Trapdoor spider action
 - ▨ 04A1-11 Black flank wallaby action
 - ▨ 04A1-11 Heath mouse action
 - ▨ 04A1-11 Red-tail phascogale action
 - ▨ 04A1-11 Lake Bryde TEC
 - 04A1-12 Waterway assessments
 - ▲ 04A1-12 Riparian revegetation
 - 04A1-12 River Pool recovery
 - 04A1-12 Covenant
 - 04A1-12 Voluntary Agreement
 - 04A1-12 Weed Spraying
 - 04A1-13 Ecoscapes on-ground
 - ▭ 04A1-13 Priority Ecoscapes
 - 04A1-14 Our Patch projects
 - ▭ 04A1-14 Our Patch projects
 - ▭ Avon River Basin sub-catchment

Baselining Inventory & information management

Investment: \$2 300 863

Delivery organisation: Department of Environment and Conservation

Community engagement and capacity building

- Liaison with 61 landholders regarding the benefits of fencing their remnant.
- Biodiversity inventory distributed among key stakeholders including other biodiversity projects.
- Stakeholder workshop held to inform on vegetation mapping project.
- Reports provided to landholders of properties assessed as part of the trialing wetlands methodology.
- 185 000 ha (8.3%) of remnant vegetation in the region has been collated and digitised through GIS.
- Over 16 000 wetlands identified across the region via mapping of every slope, flat, channel, basin, reservoir and granite outcrop visible from aerial photography.

Publications

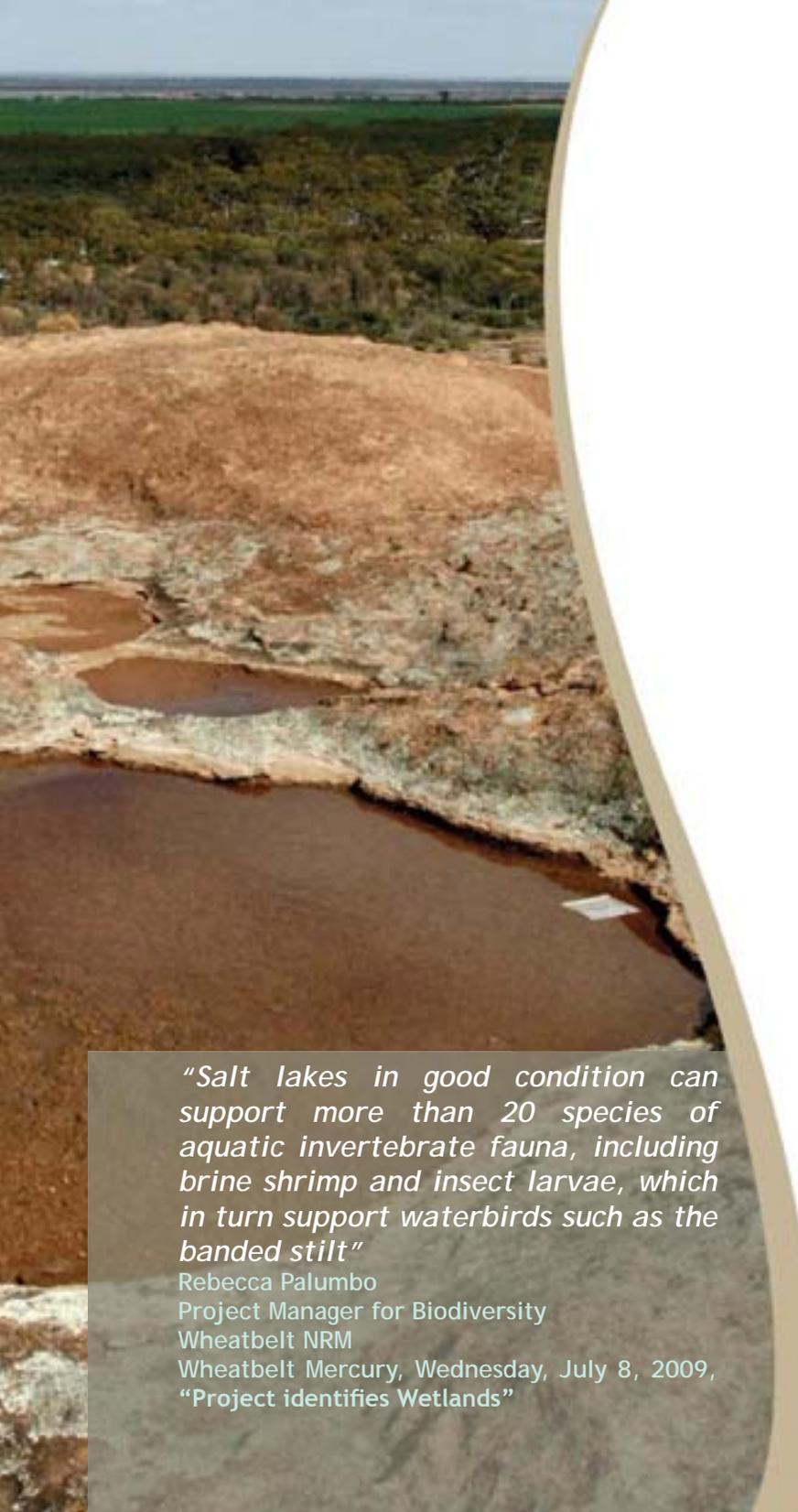
- Richardson, J., Gamblin, T., Glossop, B. and Hogben, J. (2007) A Biodiversity Assessment of the Avon NRM Region. DEC Perth. 178 pages.
- Richardson, J. (2007). Ecosystem Prioritisation Workshop Report: Identifying High Priority Ecosystems in the Avon NRM Region. Department of Environment and Conservation, Kensington, WA. 15 pages.
- Richardson, J. (2007) Defining Ecological Communities and Ecosystems for the Avon Natural Resource Management Region: A Discussion Paper. Avon Catchment Council, Northam, Western Australia.
- Richardson, J. (2007) Baselining's 07/08 Program: Discussion of gaps & proposed work. Report to Wheatbelt NRM.

- Richardson, J., Bayliss, B., Glossop, B. and Gamblin, T. (2008). The Vegetation Mapping of the ANRMR Project: Progress, Status and Future Directions. DEC, Perth Western Australia.
- Jones S.M., Pinder A.M., Sim L.L., Halse S.A. (2008) Evaluating the conservation significance of basin and granite outcrop wetlands within the Avon Natural Resource Management region: Stage One Assessment Method. Department of Environment and Conservation (DEC), Perth.
- Jones S.M., Pinder A.M., Sim L.L., Halse S.A. (2009) Evaluating the conservation significance of basin wetlands within the Avon NRM Region: Stage 3 Assessment Method. DEC, Perth.
- Jones S.M., Collins M.T., Francis C.J., Halliday D.L. (2009) Stage 3 evaluation of 28 wetlands in the Avon Natural Resource Management region, spring 2008. DEC, Perth.
- Jones S.M., Francis C.J., Halliday D.L., Leung A.E. (2009) The potential effects of groundwater disposal on the biota of wetlands in the Wheatbelt, Western Australia. DEC, Perth.
- Jones S.M., Francis C.J., Leung A.E. (2009) Aquatic invertebrates and waterbirds of wetlands in the Avon region. DEC, Perth.
- Jones S.M. and Pinder A.M. (2009) Old salt versus new salt: biodiversity patterning of halophilic species in a region threatened by salinisation in Western Australia. Poster presented at the Australian Society of Limnologists congress, September 2009.

Did you know?

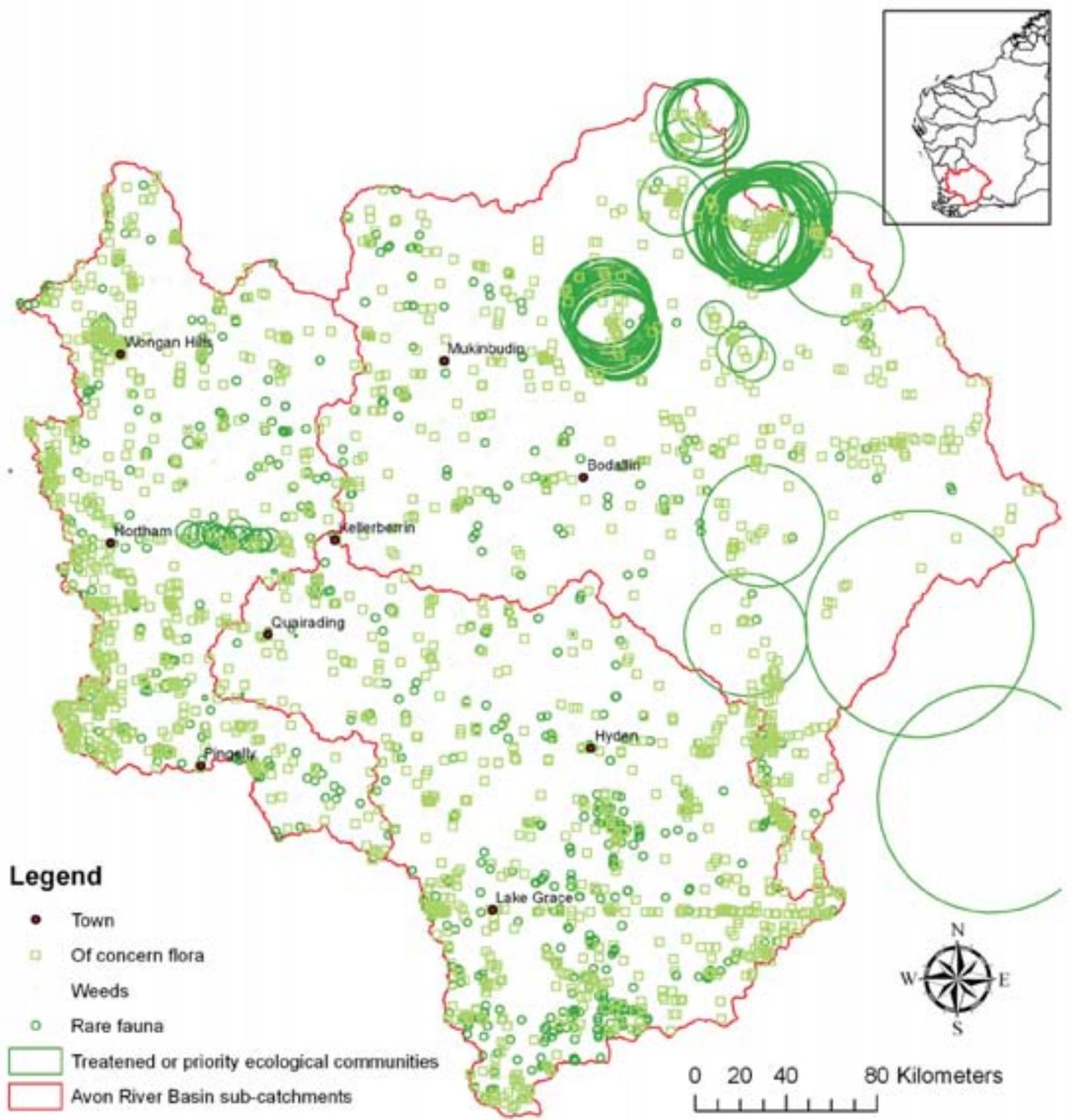
Of the 110 000 patches of vegetation in the agricultural area of the Avon NRM region nearly 70 000 are less than one hectare in size and only about 1000 are more than 100 hectares. Such fragmentation is a severe threat to biodiversity in the region.





"Salt lakes in good condition can support more than 20 species of aquatic invertebrate fauna, including brine shrimp and insect larvae, which in turn support waterbirds such as the banded stilt"

Rebecca Palumbo
Project Manager for Biodiversity
Wheatbelt NRM
Wheatbelt Mercury, Wednesday, July 8, 2009,
"Project identifies Wetlands"



Back from the Edge

Investment: \$4 135 862
Delivery organisations: World Wildlife Fund (WWF)
Department of Environment and Conservation

On-ground achievements

- Recruitment trials for 5 species; translocations planted for 4 species; monitoring & maintenance of translocation sites of critically endangered and endangered species; seed collected for 5 species.
- Fencing for 12 sites (9 rare flora species); weed control at 22 sites, rabbit control baiting at 8 sites.
- 4km of fencing protecting 80 ha of critical Carnaby's Black-Cockatoo nesting habitat from grazing.
- Lake Bryde Threatened Ecological Community monitoring, hydrological surveys & recruitment trials.
- Twelve Carnaby's Black-Cockatoo nesting sites monitored for breeding effort over summer 2008/09.
- 4 damaged Carnaby's Black-Cockatoo nesting hollows repaired.

Community engagement and capacity building

- Employed two local community members in Wongan Hills to manage threatened flora species.
- Threatened flora maps and management guidelines for 24 LGAs.
- Conservation plans for trapdoor spider species, black-flanked rock wallaby, heath mouse, declining Wheatbelt birds, red-tailed phascogale and western spiny-tailed skink.
- 26 monitoring transects at 7 sites for key trapdoor spider populations.
- 'Avon's Most Wanted' brochures mailed to landowners in the ARB
- 'Avon's Most Wanted' posters for all schools in the ARB; presentations to school and community groups.
- 17 threatened species profiles published by regional press.
- Back From The Edge community wall calendars; 'Have You Seen This Plant?'
- Flora ID workshops - Mukinbudin, Wongan Hills.

- 2007 East Yorkkrakine SpiderBlitz, 2007 Westonia BioBlitz, 2008 Corrigin BioBlitz.
- Field days attended including the Newdegate Field Day and the Wagin Woolorama.
- Nest box building workshops with the four groups and 50 participants.
- 9 training and awareness raising events involving 180 participants
- Introductory "Red-tailed phascogale Nest box" presentation at the Narrogin Agricultural College.

Publications

- Lullfitz, B., Konnur, A., Alderton, J, Joliffe, D. and Squire, M. (2008) Threatened and poorly known flora of the Yilgam Region, Department of Environment and Conservation, Bentley, WA.
- Johnston, W., Thomas, S, Dougall, S., Hamersley, C, Phillips, L. and Smith, I. (2008) Threatened, poorly known and other flora of Wongan Hills, Department of Environment and Conservation, Bentley, WA.
- Bamford, M., Inglis, R. and Watson, K. (2009) Mammals of the Avon Region, Department of Environment and Conservation, Bentley, WA.
- Collins, J. (2009) Threatened flora of the Western Central Wheatbelt, Department of Environment and Conservation, Bentley, WA.

Did you know?

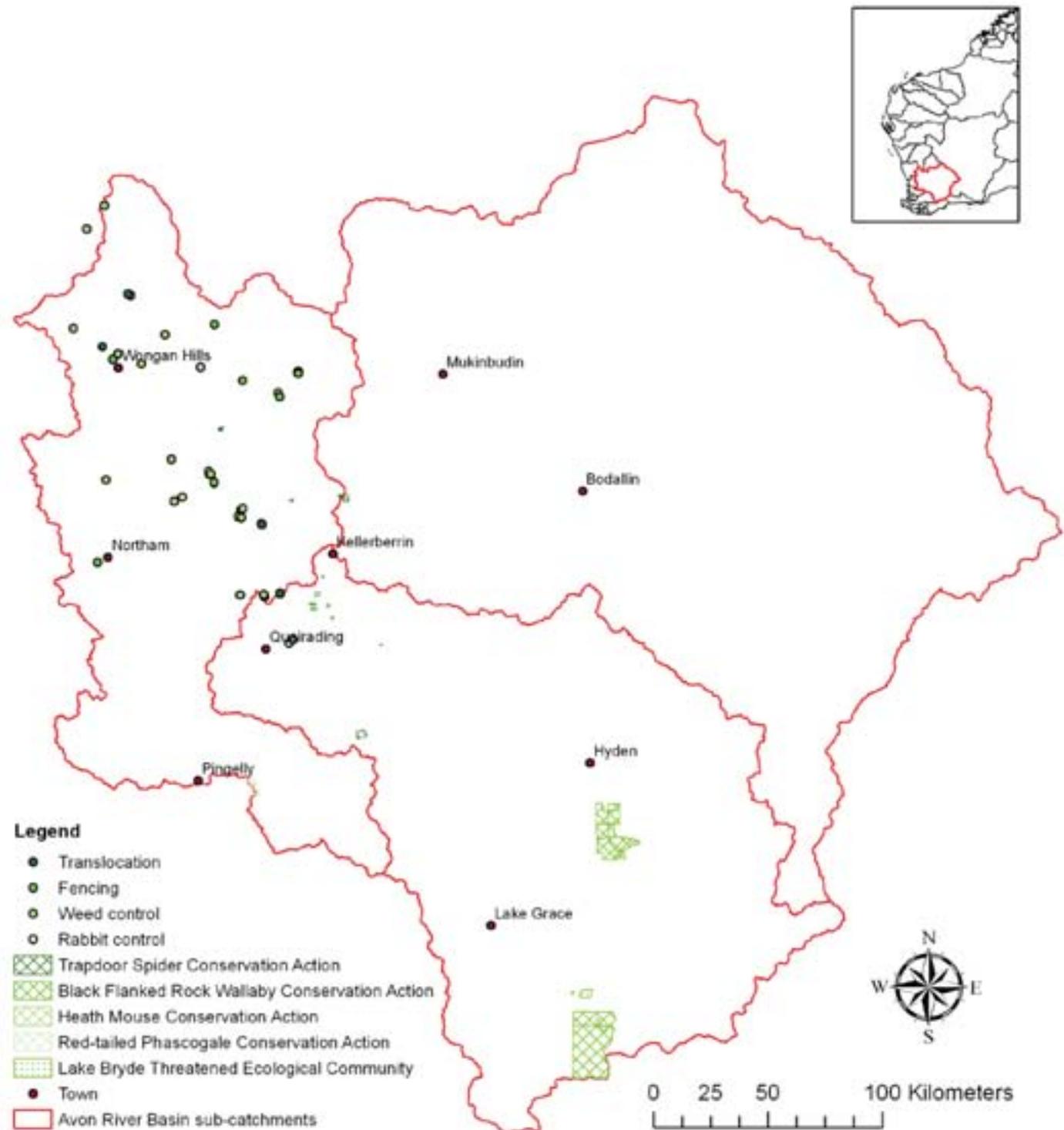
- As a result of the 'Avon's Most Wanted' initiative many new populations of rare and threatened species were discovered on private land including ten new populations of Western Spiny-Tailed Skinks.





"Many landholders enjoy the fact that they have a rare animal on their property and take a real sense of pride that they have an active role in the preservation of this species for future generations"

Brett Beecham
Department of Environment and Conservation, Northam
Avon Valley Advocate, 22nd April 2009, "Endangered species"



Healthy ecosystems

RIGHT: AVON RIVER
(COURTESY DEPARTMENT OF WATER)

Investment: \$3 991 312
Delivery organisations: Department of Water
World Wildlife Fund (WWF)

On-ground achievements

- 95 000 seedlings (75 Ha) in riparian zones for enhancement of biodiversity and water quality.
- 400 000 seedlings (243 Ha) for commercial tree cropping in and adjacent to riparian zones.
- 46 000 m³ of sediment removed from 8 priority pools along the Avon River.
- 827 ha of priority bushland legally protected through seven conservation covenants.
- Contracts signed for a further 2,745 ha of priority bushland to be protected through 12 covenants.
- Ten private land managers sign voluntary management agreements for 1 695 ha of priority bushland.
- 978 ha of priority native vegetation protected from stock grazing.
- Signed contracts and funds allocated for fencing to protect a further 1 896 ha.
- New gauging station constructed on the Avon River at Boyagarra.
- 40 flora surveys conducted resulting in finding 2 new populations of Declared Rare Flora, 22 new populations of priority flora and 14 significant range extensions.
- 15 applicants were assisted to gain Envirofund grants for protecting bushland on private land.

Community engagement and capacity building

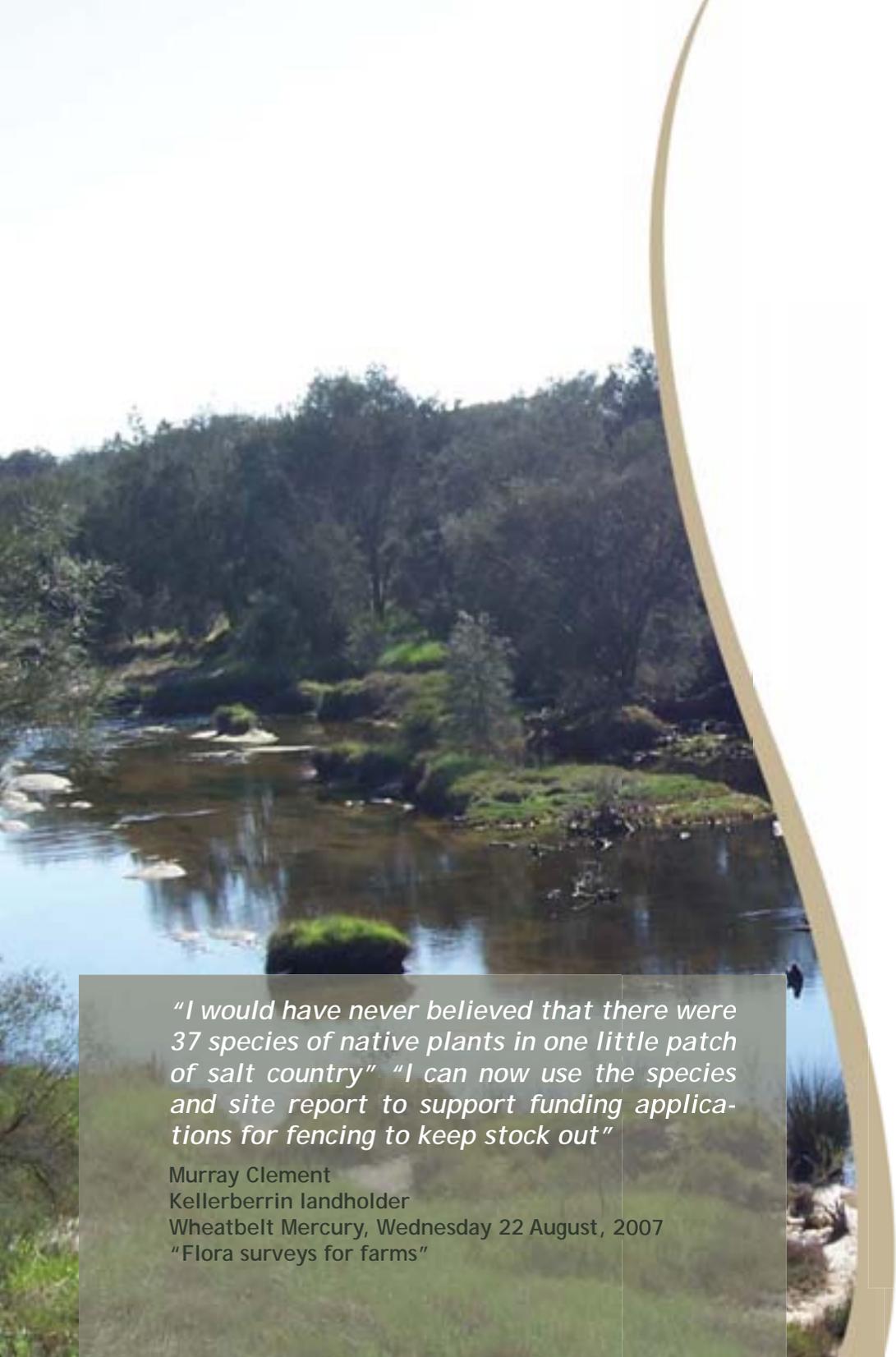
- 6 Rivercare workshops.
- 17 Case studies developed.
- Two workshops on the Management and Conservation of Wheatbelt woodlands.
- Best practice management guidelines provided to land owners / managers of 19 priority bushland areas.
- Sediment management plans prepared for 5 priority pools on the Lower Avon River
- River pool sediment surveys were completed pre & post sediment removal for the 8 priority pools.
- Presentations on biodiversity in the Avon region to 8 regional community environment groups, 1 national and 2 state conferences and 3 regional field days.

Publications

- Department of Water (2005) Foreshore and channel assessment of Mortlock River and Mortlock River South (WRM42), Department of Water, Perth.
- Department of Water (2006) River Recovery Plan for the Dale River incorporating foreshore and channel assessment (RRP10), Department of Water, Perth.
- Department of Water (2007) Assessment of the status of river pools in the Avon catchment, Department of Water, Perth.
- Department of Water (2008) Lower Avon River Recovery Plan incorporating foreshore and channel assessment (RRP13), Department of Water, Perth.
- Department of Water (2008) Riparian condition of the Salt River: waterway assessment in the zone of ancient drainage (WRM 46), Department of Water, Perth.
- Department of Water (2008) Foreshore and channel assessment of Jimperding Brook (WRM48), Department of Water, Perth.
- Department of Water (2008) Riparian condition of the Yilgarn River: Caroline gap to Hinze Hill - Waterway assessment in the zone of ancient drainage (WRM049), Department of Water, Perth.
- Department of Water (2008) Foreshore and channel assessment of Dale River South Branch (WRM50), Department of Water, Perth.
- Department of Water (2008) Priority tributaries of the Avon River basin: a process to prioritise tributaries for condition assessment: Volume 1 Avon & Mortlock catchments (WRM51), Department of Water, Perth.
- Department of Water (2008) Foreshore and channel assessment of Christopher Brook (WRM52) Department of Water, Perth.
- Department of Water (2009) Foreshore and channel assessment of Monjerducking Gully (WRM53), Department of Water, Perth.
- Department of Water (2008) Waterways assessment for the Lower Lockhart River: Caroline Gap to Old Beverley Road (WRM 54), Department of Water, Perth.
- Department of Water (2008) Waterway assessment for the Lockhart River: Lake Kurrencutten to the Camm River Confluence (WRM55) , Department of Water, Perth.
- Department of Water (2008) Field Guide: Managing waterways in the Avon Wheatbelt, Department of Water, Perth.
- Department of Water (2009) Waterways assessment for the Yilgarn River: Hines Hill to lake Campion (WRM56), Department of Water, Perth.
- Department of Water (2009) Waterway assessment of the Camm River: Lockhart River confluence to Hyden (WRM57), Department of Water, Perth.

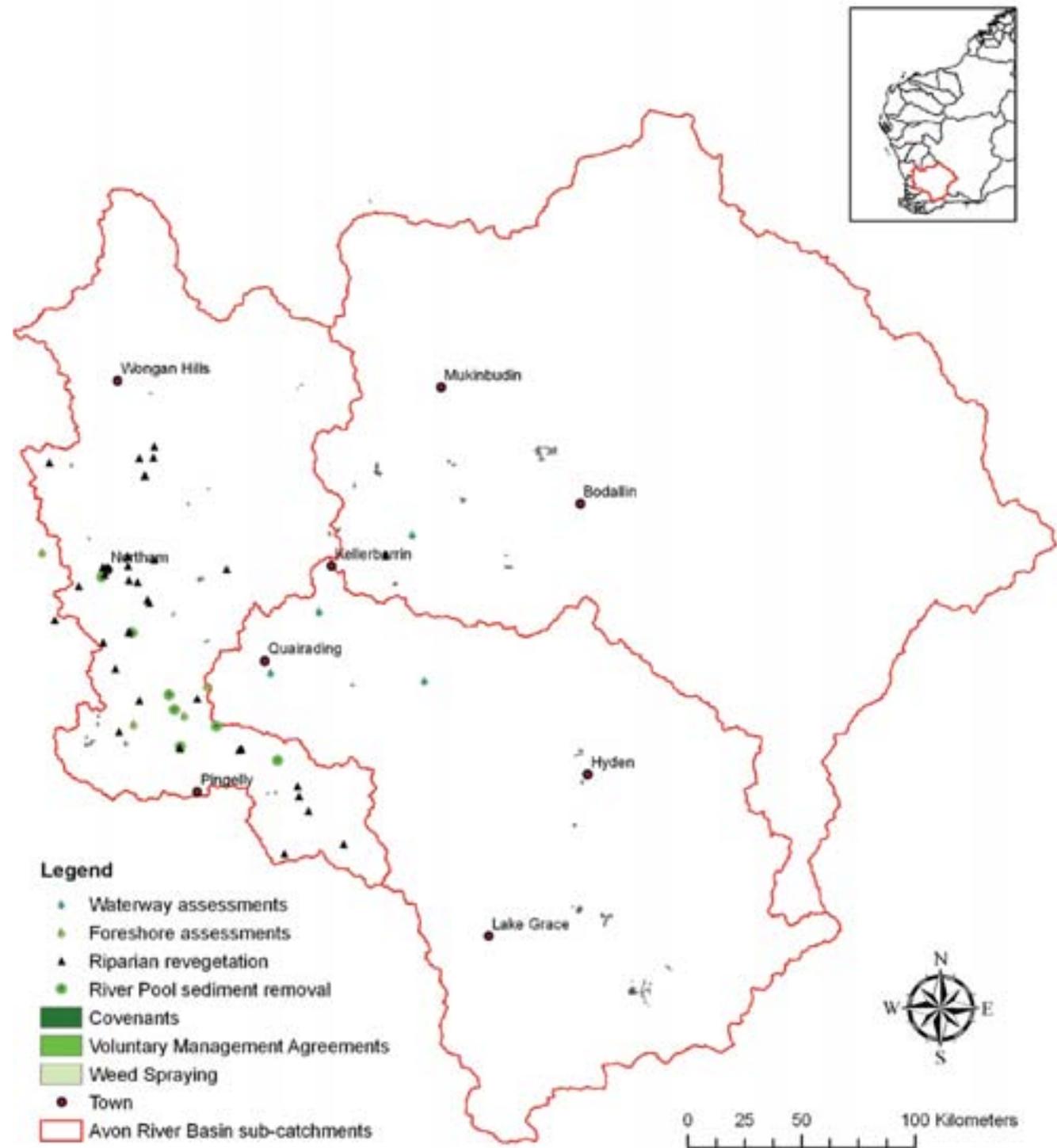
Did you know?

- It has been estimated that there is 2 million m³ of sediment in 26 major river pools on the main channel of the Avon River as a result primarily of land clearing in the early 1900's and the river training scheme.



"I would have never believed that there were 37 species of native plants in one little patch of salt country" "I can now use the species and site report to support funding applications for fencing to keep stock out"

Murray Clement
 Kellerberrin landholder
 Wheatbelt Mercury, Wednesday 22 August, 2007
 "Flora surveys for farms"



Ecscapes

Investment: \$5 554 254
Delivery organisations: Greening Australia WA
Department of Environment and Conservation
WWF

On-ground achievements

- Dale -83ha revegetation and 150 ha remnant vegetation fenced (2005-08); 20 ha riparian revegetation and 37 km of fencing for 15 sites (2008-09).
- Wongan Hills - 70 ha revegetation and 67 ha remnant vegetation fenced (2005-08); 28 ha biodiversity revegetation and 39km fencing (2008-09) .
- Westonia - 18 ha revegetation and 725 ha remnant vegetation fenced (2005-08); 39 km fencing of 1697 ha remnant vegetation across 13 sites and 10 ha direct seeding demonstration (2008-09).
- 84ha tree cropping (2008-09) aimed at reducing threats impacting on biodiversity assets.
- Tampu - 97ha revegetation and 990ha remnant vegetation fenced (2005-08).
- Lake Bryde - construction of a surface water conveyance structure to alleviate inundation and water logging. 20.3km of fencing to protect remnant vegetation on private land (2005-08).
- Tarin Rock - 12 ha revegetation and 124 ha remnant vegetation fenced (2005-08).

Community engagement and capacity building

- Tree cropping workshop, sandalwood workshop, flora id workshops, Rivercare workshop for Dale catchment, school engagement activities.
- Media articles, project newsletters and fact sheets.
- Water quality monitoring across the Dale River catchment.
- Community surveys.

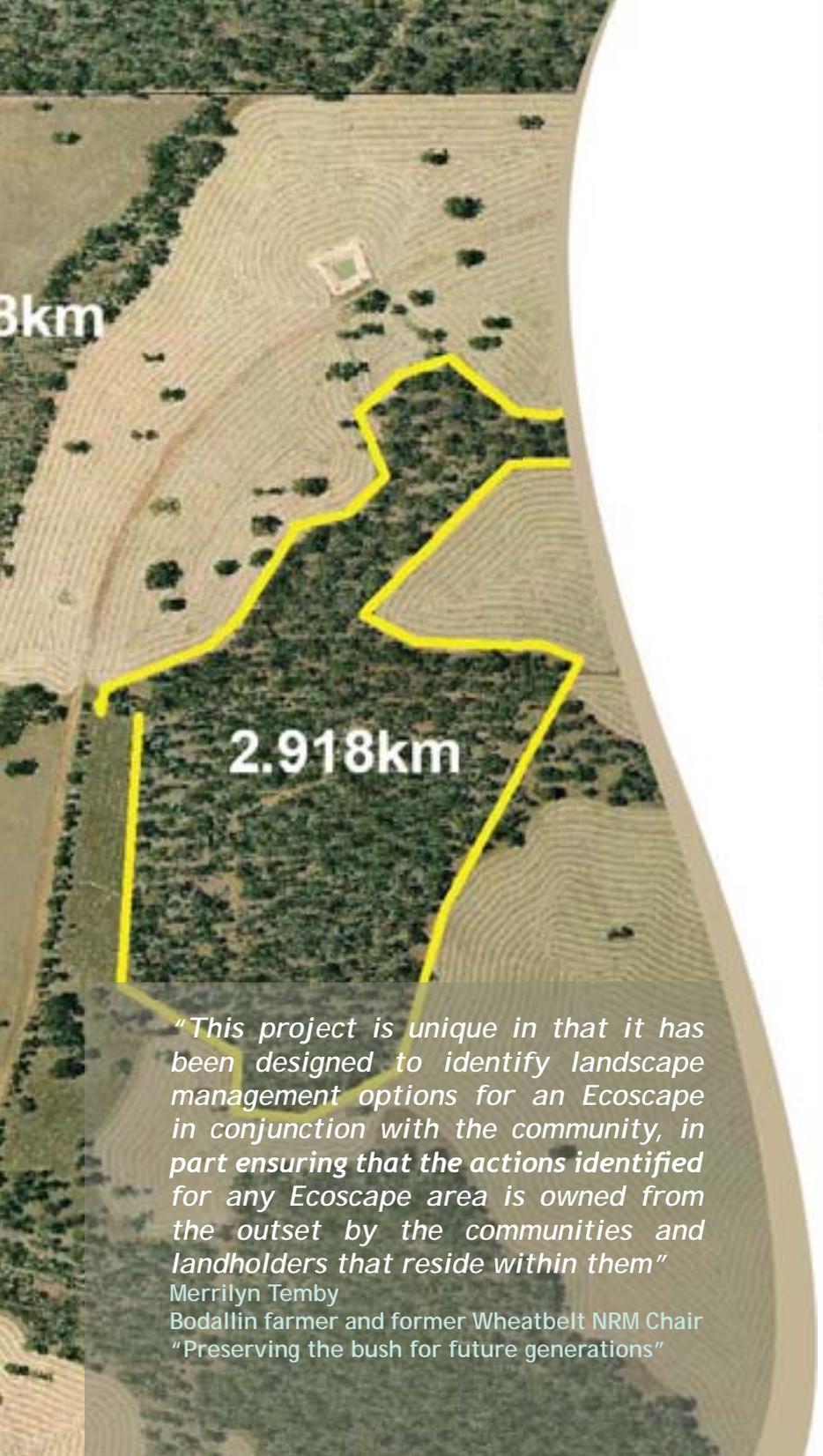
Publications

- Department of Environment and Conservation (2009) Conservation Management Plan for the Wongan Hills Ecoscape, Department of Environment and Conservation, Bentley, WA.
- Department of Environment and Conservation (2009) Conservation Management Plan for the Tampu Ecoscape, Department of Environment and Conservation, Bentley, WA.
- Department of Environment and Conservation (2009) Conservation Management Plan for the Westonia Ecoscape, Department of Environment and Conservation, Bentley, WA.
- Department of Environment and Conservation (2009) Conservation Management Plan for the Dale Ecoscape, Department of Environment and Conservation, Bentley, WA.

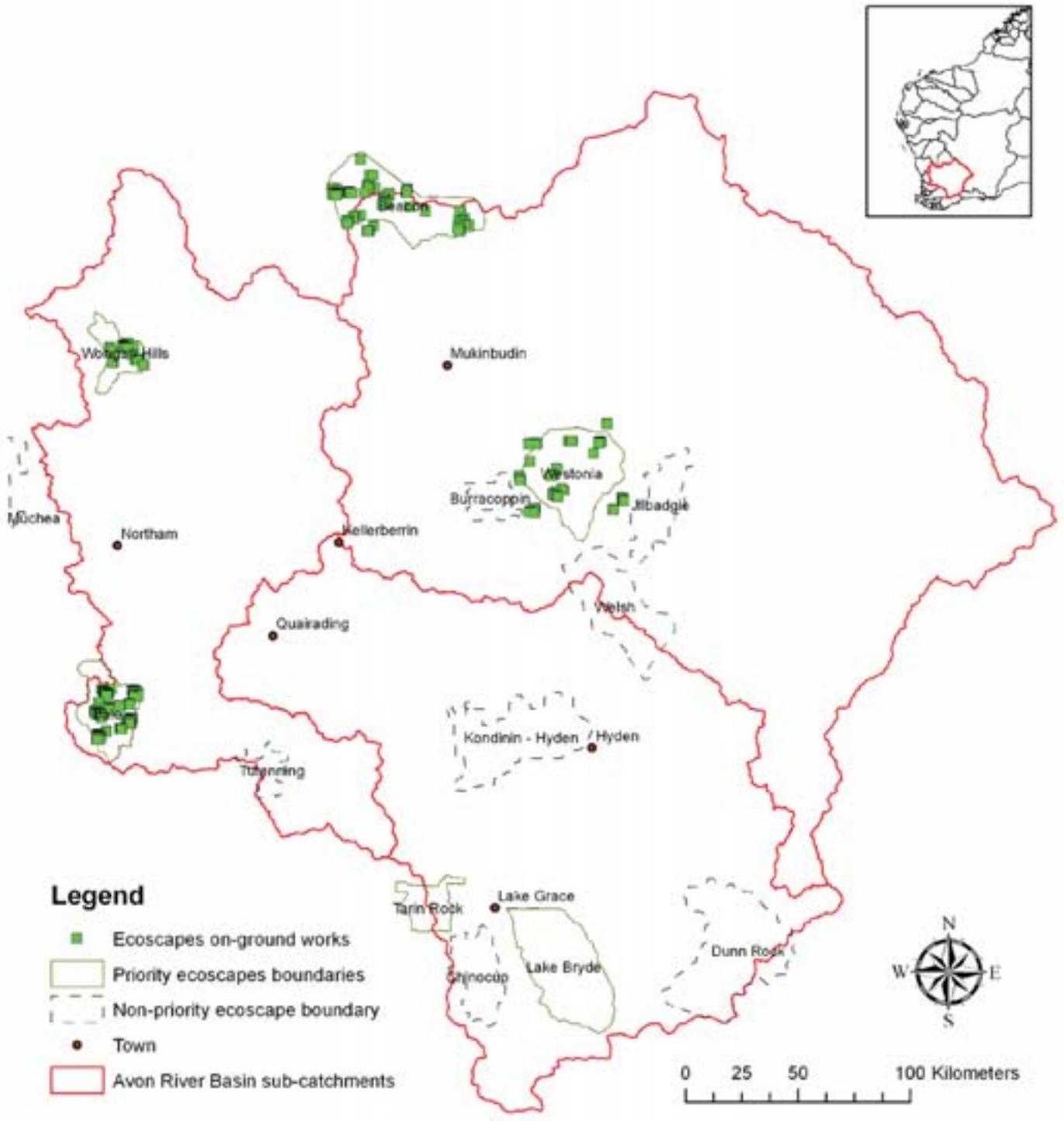
Did you know?

The Avon NRM region is part of the South West Botanical Province of Western Australia, which is recognised as one of the world's biodiversity hotspots due to its more than 5 000 different types of plants, of which more than 400 are confined to the Wheatbelt.





"This project is unique in that it has been designed to identify landscape management options for an Ecoscape in conjunction with the community, in part ensuring that the actions identified for any Ecoscape area is owned from the outset by the communities and landholders that reside within them"
 Merrilyn Temby
 Bodallin farmer and former Wheatbelt NRM Chair
 "Preserving the bush for future generations"



Our Patch: Local Bushland Management

Investment: \$1 836 662
Delivery organisation: Greening Australia WA and NEWROC

On-ground achievements

- 32 on-ground projects conducted in 30 of the 34 Shires including revegetation, fencing and other resources to protect local bushland.

Community engagement and capacity building

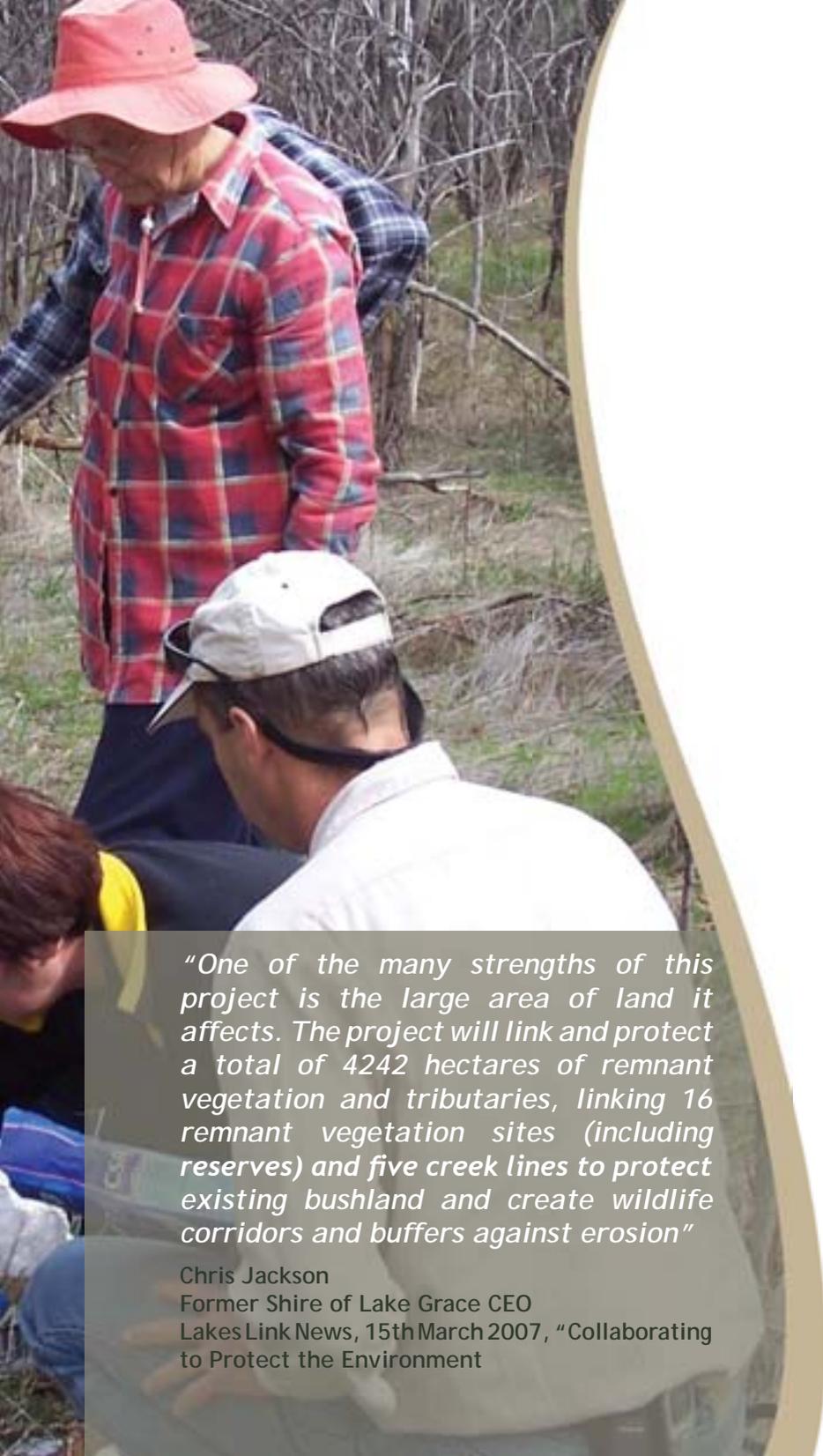
- 31 (of 34) Shires conducted remnant prioritisation and developed management plans for key remnants.
- Engaged local interest groups and encouraged broad community participation in NRM.
- Funding devolved through local governments to local community 'friends of' groups.
- Trained local officers to use remnant vegetation assessment scorecards to measure and evaluate remnant vegetation areas and score them for their natural and social values.

Did you know?

- It is estimated that for every dollar of government funding contributed to Landcare activities that \$3 is contributed 'in-kind' by people in the community who provide their labour and materials. Many thousands of volunteer hours were contributed by passionate people in the region to complete Our Patch projects.

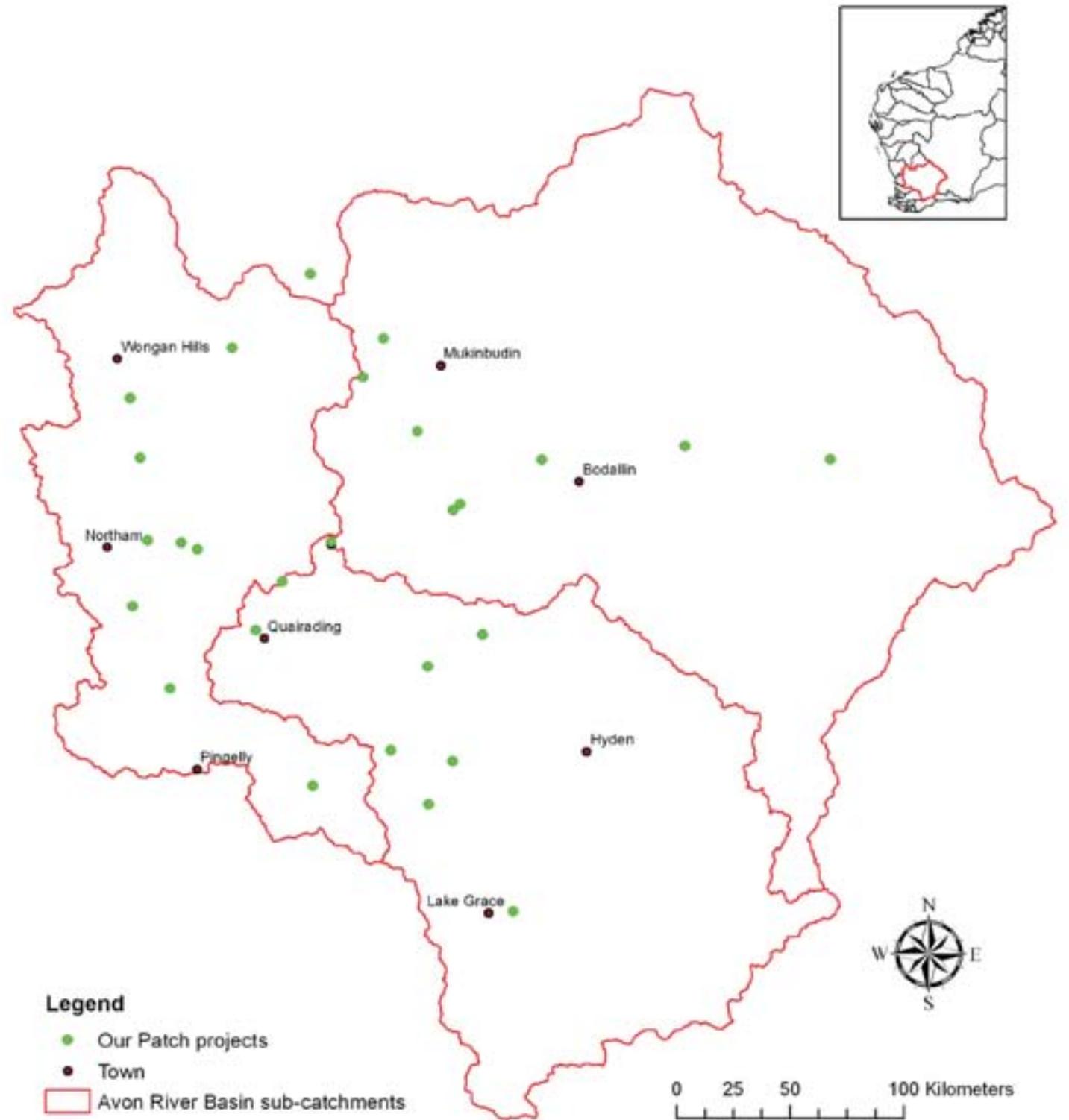
RIGHT: MEMBERS OF THE MT BROWN REHABILITATION GROUP PARTICIPATING IN SPREADING SUGAR IN NOVEL METHOD OF WEED CONTROL IN BUSHLAND





"One of the many strengths of this project is the large area of land it affects. The project will link and protect a total of 4242 hectares of remnant vegetation and tributaries, linking 16 remnant vegetation sites (including reserves) and five creek lines to protect existing bushland and create wildlife corridors and buffers against erosion"

Chris Jackson
Former Shire of Lake Grace CEO
LakesLink News, 15th March 2007, "Collaborating to Protect the Environment"



Fire Management for Biodiversity Outcomes

Investment: \$187 112

Delivery organisation: Department of Environment and Conservation

Community engagement and capacity building

- 500 copies of the Fire and Biodiversity Guidelines distributed to DEC staff, FESA, brigades, students, land for wildlife groups and other stakeholders.
- Long term monitoring sites established where different fire events were treated and the response of various species and communities was monitored.

Publications

- Department of Environment and Conservation (2008) 'Fire and Biodiversity Guidelines', Department of Environment and Conservation, Bentley.

RIGHT: FIRE FORM THE KORRELOCKING BURN-OFF





FIRE & BIODIVERSITY GUIDELINES FOR THE AVON BASIN



PREPARED FOR THE

**AVON CATCHMENT COUNCIL AND
DEPARTMENT OF ENVIRONMENT AND CONSERVATION**

BY
ERICA SHEDLEY



RIGHT: LAUNCH OF THE NYUNGAR
BUDJAR DOCUMENT 2007

INVESTMENT PLAN PROJECTS 2005-08

PROGRAM 4: SUSTAINABLE COMMUNITIES





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COUNCIL

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Lands

Commu

Recording of Traditional Knowledge for NRM

Delivery organisations: Murdoch University, Gundi Corporation
Wheatbelt Development Commission

Investment: \$598 123

On-ground achievements

- Cultural survey, flora survey, fauna survey, signage and heritage training at Kokerbin Reserve.
- Water tanks for community, cultural survey, flora survey, fauna survey, seed collection training, heritage training, signage, planning for drainage management at Badjaling Reserve.
- Flora and fauna survey and signage at Burlong Pool.

Community engagement and capacity building

- Developed a recording of traditional knowledge database for Aboriginal people of the Avon region.
- Consultation with Aboriginal Elders on and creation of a DVD titled 'Recording of Traditional Knowledge of NRM in the Avon River Basin'.
- Consultation with Aboriginal Elders on and creation of NRM Nyungar wordlist.
- Maintained a Aboriginal Advisory Group representing sub-regions of the ARB.
- Discussion paper and literature review on Aboriginal Site Management Plans.
- Discussion paper and literature review on Aboriginal Employment Opportunities in the Avon River Basin.
- Management Plans developed for Burlong Pool, Badjaling Reserve and Kokerbin Reserve.

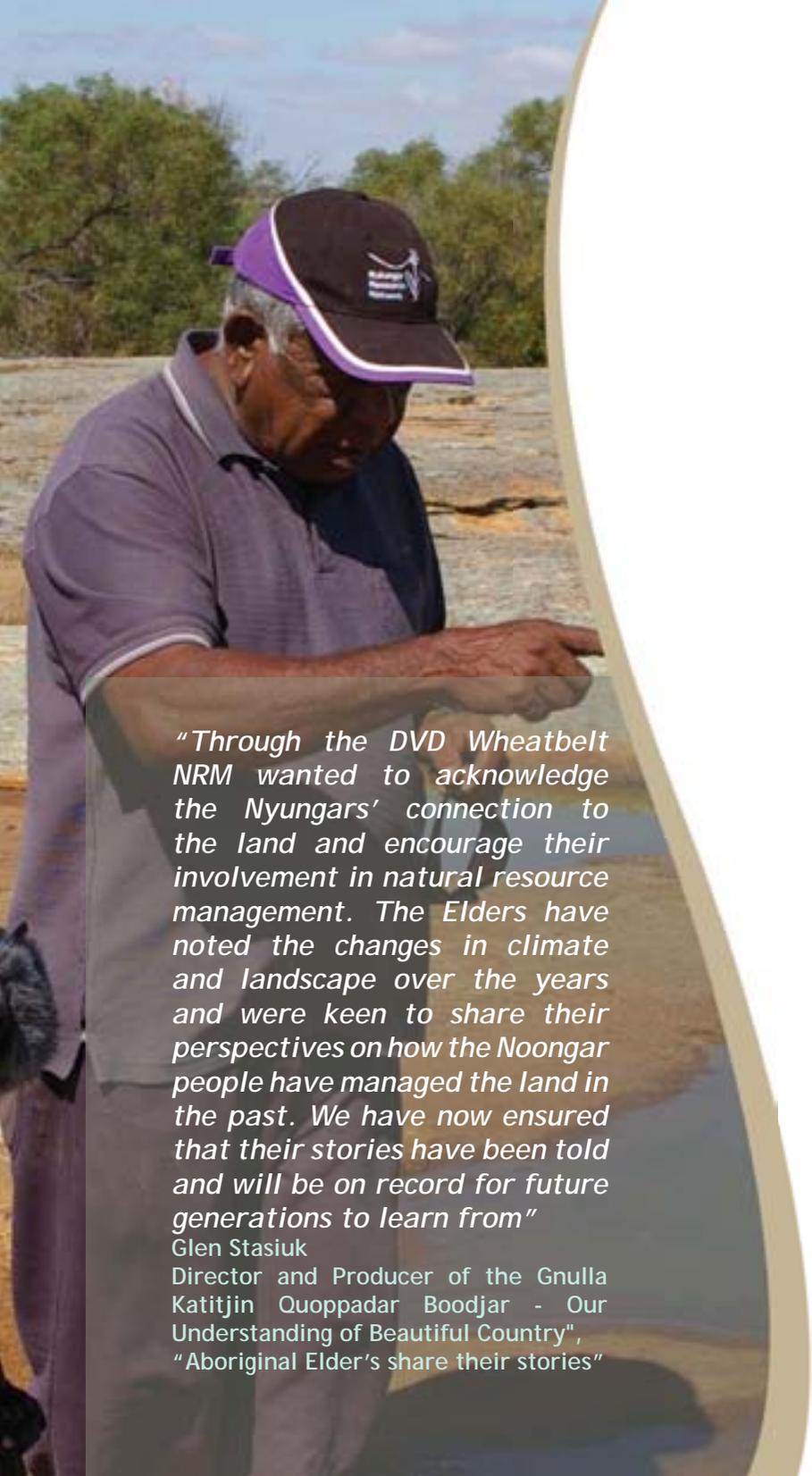
Publications

- Harben, S. and Collard, L. (2008) Avon Basin Noongar Heritage and Cultural Significance of Natural Resources: Literature Review, Murdoch University, W.A.

Did you know?

- The Nyungar recognised six seasons in their year: Bunuru - hot easterly and north winds (February to March); Djeran - becoming cooler with winds from the south-west (April to May); Makuru - cold and wet with westerly gales (June to July); Djilba - becoming warmer (August to September); Kambarang - rain decreasing (October to November) and Birak hot and dry with easterly winds during the day and south-west sea breezes in the late afternoon (December to January).

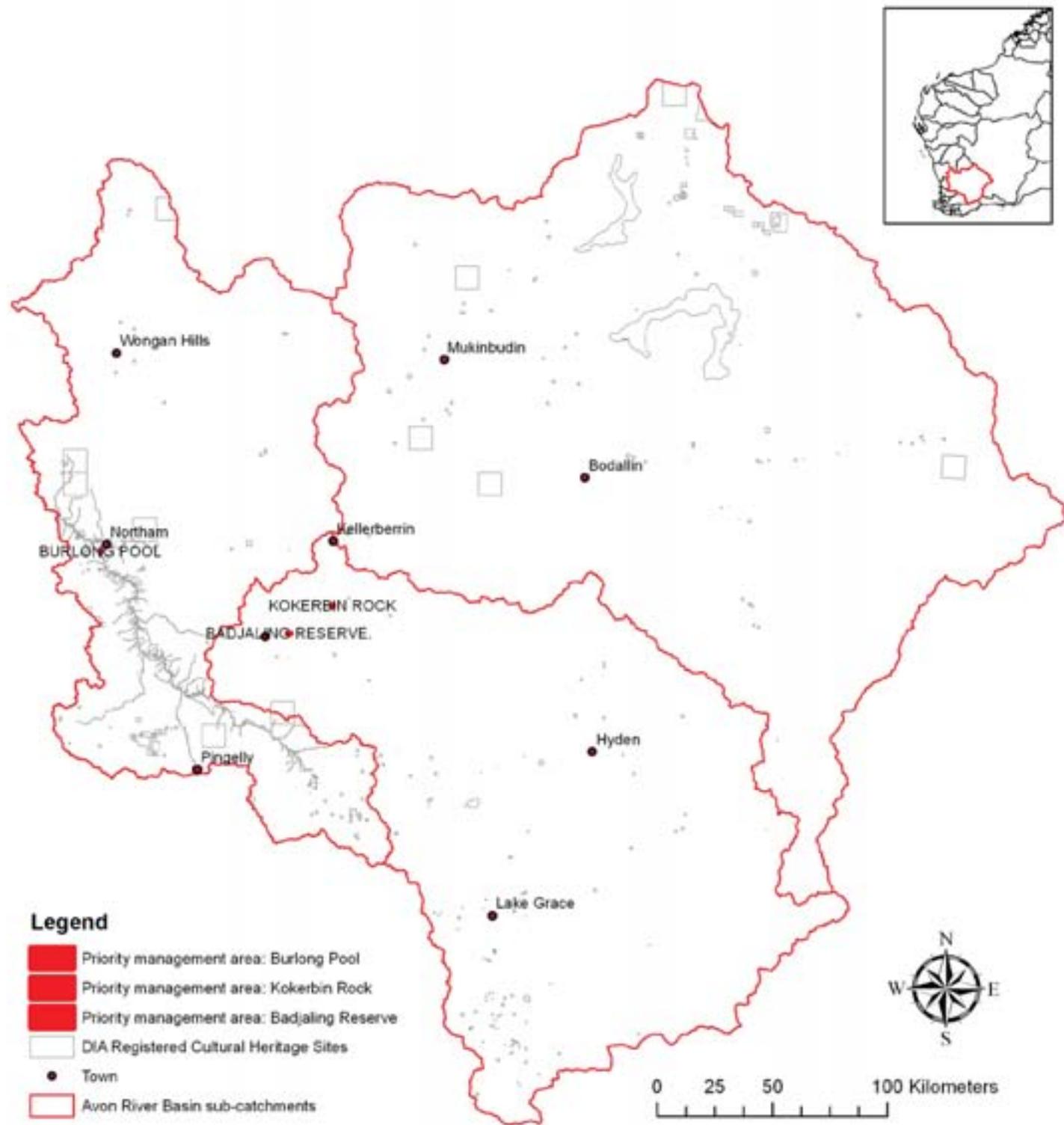




"Through the DVD Wheatbelt NRM wanted to acknowledge the Nyungars' connection to the land and encourage their involvement in natural resource management. The Elders have noted the changes in climate and landscape over the years and were keen to share their perspectives on how the Noongar people have managed the land in the past. We have now ensured that their stories have been told and will be on record for future generations to learn from"

Glen Stasiuk

Director and Producer of the Gnulla Katitjin Quoppadar Boodjar - Our Understanding of Beautiful Country",
"Aboriginal Elder's share their stories"



Regional Community Engagement in NRM & Program Support

Delivery organisations: Wheatbelt NRM

Investment: \$2 588 960

Community engagement and capacity building

- Management and support to deliver NHT/NAP investment plan projects including project management staff, M & E skills, communications and engagement, offices, facilities and vehicles.
- Establishment of project management and contract management systems that link to the Monitoring, Evaluation, Reporting and Improvement framework implemented by the Australian Government.
- Communication and awareness of NRM activities through quarterley newsletters, fortnightly e-news, case studies, information sheets, field day, community survey, project events and launches.
- Website developed to promote NRM activities and funding opportunities.
- Media articles to local and state newspapers and radio.
- Meetings and workshops with NRM stakeholders groups and local governments in the region.
- Reporting to Australian Government.
- Liason with the State and Australian government on NRM issues.
- Promotion of recommended NRM activities.
- Presentations to community.

RIGHT: MUKINBUDIN OVER 50'S MENS SHED TREE PLANTING DAY IN MUKINBUDIN

FAR RIGHT: EMMA WILSON, QUAIRADING NRM WITH MURDOCH FILM CREW





OUR PROJECT PARTNERS:



Other project partners included:

URS Consultants, SKM Consultants, ENV Australia and the GUNDI corporation.

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RIGHT: (L-R) FORMER MINISTER FOR AGRICULTURE THE HON KIM CHANCE, ANNE SMITH (GAWA), GLENICE BATCHELOR (WHEATBELT NRM CHAIR), LIZ MCLELLON (WWF), PATRICIA DAMES, REBECCA PALUMBO AND MICHAEL MCSHANE (FRONT) AT THE ECOSCAPES LAUNCH AT SANDFORD ROCKS, WESTONIA.





BELOW: MIKE HOGAN WITH MIKE GRIFFITHS AND DR ELIZABETH KINGTON



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