

**COOPERATIVE PROJECT ON
FERAL PIG CONTROL IN THE LAKE MUIR AND
DENBARKER AREAS OF THE SOUTH COAST OF
WESTERN AUSTRALIA**

ANNUAL REPORT

For the year ended 31st December 2003



Feral pig trappers Peter Cochrane and Kevin Machen. Photo courtesy of Mark Muir.

by

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TABLE OF CONTENTS

1. BACKGROUND	3
2. PROJECT AIM.....	3
3. PROJECT OBJECTIVES	3
4. PROJECT MANAGEMENT.....	4
5. PROJECT RESULTS FOR 2003.....	4
5.1 FERAL PIG CONTROL DURING 2003	4
5.2 COLLABORATIVE ARRANGEMENTS.....	5
5.3 ASSESSMENT OF THE SUCCESS IN MEETING THE PROJECT OBJECTIVES	5
6. HIGHLIGHTS FOR 2003.....	6
6.1 NATIONAL WORKSHOP	6
6.2 MT BARKER WORKSHOP.....	7
7. PROJECT PLANS FOR 2004	11
8. CONCLUSION	12
APPENDIX 1 – PARTIES INVOLVED IN THE PROJECT FOR 2003.....	13
APPENDIX 2 – MAP OF FERAL PIG TRAP SITES FOR 2003	14
APPENDIX 3 – NUMBER AND SEX OF FERAL PIGS DESTROYED AT TRAP SITES IN 2003 ..	15
APPENDIX 4 – LIST OF CONTRIBUTORS TO THE PROJECT	16

PROJECT DETAILS

1. Background

The decision to establish a community based feral pig control project for south coastal areas of Western Australia was reached just over 3 years ago in the latter part of the year 2000. Since that time considerable progress has been made in bringing together a wide range of people to deal with an emerging problem for landholders. Details of the early development of the project are provided in the previous annual report¹ and therefore are not repeated here. This report provides a summary of the activities that were conducted during 2003 and presents some of the highlights of the year's events.

2. Project Aim

The aim of the project has remained the same since inception and is as follows:

- To facilitate the involvement of all landholders in the Lake Muir and Denbarker areas to contribute to the initial reduction of the feral pig population and the subsequent maintenance of low pig densities.

3. Project Objectives

As with the stated aim of the project, the objectives have also continued unchanged. A summary of these objectives follows:

- To minimise the effects feral pigs have on:
 - The likelihood of spreading exotic diseases
 - The quality of the natural environment
 - The quality of water in catchment areas
 - Private property adjoining forest areas.
- To share the cost and effort for feral pig control.
- To enable an immediate response to complaints from landholders who have pigs emanating from neighbouring land.
- Reduce illegal pig hunting and release of pigs into forest areas.
- Encourage the presence of participants in the forest "after hours".

¹ Copies of the 2002 annual report are available from the Department of Agriculture's website (<http://www.agric.wa.gov.au/>) by doing a search for 'feral pig control' from the home page.

- Improve the community image of government agencies, plantation owners and farmers as responsible managers of feral animals on their lands.
- Augment current CALM trapping and poisoning programs.
- Collect relevant statistics on the distribution and number of feral pigs.
- Monitor the effectiveness of hunting with dogs as a means of feral pig control.

4. Project Management

Operational management of the project continues to be carried out by a committee which has adopted the title of the 'Lake Muir/Denbarker Community Feral Pig Eradication Group'. As could be expected, membership of the committee has changed over time. A key role in the functioning of the committee has been that of the Chairman. Darrel Drage has ably fulfilled this role since the project started but has now handed over to the new Chairman Mark Muir. Darrel has been a key driving force behind the success of the project and while he has stepped down from the chair, he will continue to serve on the committee. The names of other members of the committee are provided in Appendix 1. Membership of the group is open at all times to offers from people wishing to join the team and assist with the project.

As mentioned in the 2002 annual report, one significant issue for the project has been insurance cover for the trappers. A solution to this problem was to transfer employment of the trappers to a Shire, thereby ensuring cover by their corporate policy. The Plantagenet Shire willingly accepted a request to take on this responsibility and has also taken on the role of administering the funds for the project. The committee gratefully acknowledges the support provided by the Shire CEO, Rob Stewart, Shire President, Kevin Forbes, Shire Executive Director, Anthony Middleton and former member of the Shire's staff, Michael Scott.

5. Project Results for 2003

5.1 Feral pig control during 2003

Trapping commenced on the 17th of February 2003 and continued for 9 weeks until the 17th of April 2003. Three trappers were employed for the first 4 weeks and 2 for the remainder of the period. No spring trapping was conducted in 2003 due to a lack of feral pig activity. Two trappers were employed on one day only (31st December 2003) to dispose of an entire family group of 8 pigs caught by a committee member (at no cost to the project) in the Denbarker area.

Traps were set at 25 sites during the year (see Appendix 2) and a total of 77 pigs were caught (see Appendix 3). The weights of trapped pigs ranged from 4 kg to 160 kg for males and 4 kg to 110 kg for females. The total work effort was similar to last year with 20 weeks of contract trapping in both years compared with 16 weeks in 2001. Despite a similar work effort in the last 2 years the number of pigs that were trapped fell (see Table 1) which is consistent with the view that the population, particularly in the Denbarker area, is in decline. Further information on population changes is provided in the results of the DNA fingerprinting work that is described in Section 6.2.

Table 1 Number of feral pigs trapped by locality and year

	2001	2002	2003
Lake Muir	70	51	51
Denbarker	24	44	26
Total	94	95	77

At the time of writing (January 2004), surveillance information from the Denbarker area indicated that there were 3 locations where single animals or small groups of pigs were present with an estimated total of less than 20 pigs remaining. In the Lake Muir area there were very few sightings or diggings at sites often found to have pig activity but there was ample water in the area enabling a wide distribution of the pig population. Preliminary indications are that the surveillance effort that will be required in 2004 will be greater than in previous years because of lower pig densities.

5.2 Collaborative arrangements

Two collaborative projects were referred to in the 2002 report:

1. Distribution and abundance of pest animals in the agricultural region of Western Australia – Principal Investigator Dr Andrew Woolnough (Department of Agriculture).
2. Genetic structure and management of feral pig populations – Principal Investigator Dr Peter Spencer (Murdoch University).

Results from both projects were presented at a workshop held in Mt Barker in September 2003. Summary information and results from these projects is provided in Section 6.2 of this report.

5.3 Assessment of the success in meeting the project objectives

In the 2002 annual report comments were provided on activities related to each of the nine project objectives. It was suggested in the 2002 report that six of the nine objectives had been achieved and the other three were partly achieved. In this report comments are provided on the partly achieved objectives.

- Objective 1 - To minimise the effects feral pigs have on:
 - The likelihood of spreading exotic diseases
 - The quality of the natural environment
 - The quality of water in catchment areas
 - Private property adjoining forest areas.

As identified in the previous report, a sustained reduction in feral pig numbers is the key to achieving this objective. Trapping results for 2003 and feedback from landholders suggest that feral pigs are having less impact than at the end of 2002. Also, the prospect of achieving eradication from the Denbarker area is an improvement on the situation at the end of 2002, hence the upgraded assessment from partly achieved.

Assessment – Further progress made.

- Objective 3 - To enable an immediate response to complaints from landholders who have pigs emanating from neighbouring land.

A change in the employment process for the trappers, where they are now engaged by the Plantagenet Shire, has provided the trappers with insurance cover throughout the year as long as they are working under the direction of the committee. The latter change means that the trappers are now available to respond to reports of feral pig damage or sightings.

Assessment – Achieved.

- Objective 4 - Reduce illegal pig hunting and release of pigs into forest areas.

This objective will always be difficult to assess because people involved in illegal activity tend to avoid detection. However, results from the DNA fingerprinting study revealed that there is only limited evidence of illegal ‘dumping’ in the project area. Anecdotal information suggests that the project has forced many perpetrators out of the area because it is highly likely that the project trappers will catch any ‘dumped’ pigs.

Assessment – Partly Achieved?

6. Highlights for 2003

6.1 National Workshop

The profile of feral pigs as a national problem was enhanced by the outbreak of Foot and Mouth Disease (FMD) in the United Kingdom and Europe in 2001. An increased recognition of known and potential damage due to feral pigs led to the convening of a national workshop in Cairns in June 2003. Representatives from a wide cross-section of the community attended and included WA representatives Dr Laurie Twigg (Department of Agriculture) and Dr Peter Spencer (Murdoch University).

The general consensus of the meeting was that:

1. Eradication of the threat from feral pigs is the long-term goal. This will require the development of more effective control techniques and technologies.
2. The immediate objective is to minimise economic, agricultural, public health and environmental impacts and risks through the development and implementation of a National Strategy and Action Plan for the management of feral pigs through the use of currently available techniques.

Laurie Twigg identified some key conclusions from the workshop and presented them to the Mt Barker Workshop (see Section 6.2). His conclusions were:

- Make better use of current techniques to control pigs
- Improve coordination of any control efforts
- Defend current control techniques such as 1080 baits and aerial shooting
- Develop a universal bait
- Increase public awareness of the negative impact of feral pigs (real and potential)
- Address the issue of illegal translocation of feral pigs

While there were no specific actions for the project to pursue, the committee recognises the importance of being aware of any opportunities arising out of broader strategic plans or potential new control techniques. The WA representatives are well known to members of our committee and will keep the committee informed of relevant developments resulting from the national workshop.

The full proceedings from the workshop can be obtained from the website for the Pest Animal CRC: <http://www.pestanimal.crc.org.au/PigProceedings.pdf>

6.2 Mt Barker Workshop

A public forum on feral pigs was initiated by the committee and held on the 5th September 2003 in the Ambulance Hall at Mt Barker. Over 50 people from across the agricultural areas of the State attended the forum.

The forum included presentations from committee members, staff from the Departments of Agriculture and CALM, Murdoch University and Great Southern Plantations, followed by a discussion session to consider current issues and future strategies.

To start the proceedings, **Tony Higgs, Darrel Drage and Ted Knight** provided a brief overview of the history of the project and the results achieved. The operational details of the latter presentations are available in either the 2002 annual report or elsewhere in this report.

Andrew Woolnough from the Department of Agriculture presented the history and results from a feral animal survey funded by the Wildlife and Exotic Disease Preparedness Program. The survey was originally aimed at the distribution and abundance of feral goats, camels and donkeys in the rangelands. However, the survey was expanded to include wild dogs and feral pigs and extended to the agricultural areas as well. Of interest was the identification of areas of high abundance of feral animals.

Information was collected from field staff working with either the Department of Agriculture or CALM. Using some standard definitions of abundance, each person was asked to map the distribution and abundance of pest animals in their district. Maps were generated from this survey showing the location of each of the feral animal species. The Mount Frankland National Park and Lake Muir area were of particular note from an exotic disease perspective. Feral goats, deer and pigs, and wild dogs were all identified as being present in these areas.

Andrew pointed out that the data could be used to help with controlling exotic disease outbreaks by providing information about potential risk areas requiring control. An important next step is to work out how reliable the information is by checking what is actually present on the ground compared to the local opinion. If the information is reliable, it can be used as a guide as to where best to apply management and control efforts.

Of particular interest at the workshop was the DNA fingerprinting work conducted by **Peter Spencer** and **Jordan Hampton**. Samples from trapped pigs were collected by the contract trappers during 2002 and 2003 and analysed at Murdoch University for their DNA fingerprint. Samples were collected from other areas of the State also, and the following results were presented for areas directly relevant to the project:

Lake Muir

- Feral pigs originated from the Collie region
- The population has undergone a large drop in size in recent years
- The population is acting as a source for invasion of surrounding areas (Walpole, Shannon River, Tone River, Lake Jasper)
- Boars stay close to rivers when they move away from Lake Muir
- This is a key population to eradicate in order to remove pigs from the wider region
- Very few pigs from surrounding areas move into Lake Muir population
- No evidence of recent 'dumping' of pigs into the population
- 'Dumping' has recently occurred in areas to the south on the Frankland River

Denbarker

- The population has not been invaded from the west (Lake Muir)
- Origins of the population are not known (the fingerprints do not match any other tested populations)
- The population has undergone a large drop in size in recent years
- If this population can be eradicated, re-invasion from the west is unlikely
- No evidence of recent 'dumping' of pigs into the population

- 'Dumping' has recently occurred in areas to the west on the Kent River

South-West WA

- Several large populations on major watercourses
- Very little movement of pigs between watercourses
- Considerable movement of pigs along watercourses
- Most boars only move about 8km to mate
- Pigs that move long distances between populations are large solitary boars
- Deliberate 'dumping' of pigs is occurring in several areas
- Very few domestic pigs have recently been added to feral populations

Key points of immediate importance to the project were that the Lake Muir and Denbarker populations have suffered significant reductions in size and that introductions from other areas are not evident. Also, the lack of genetic connection to other areas suggests that the Denbarker population can be eradicated in the short term as no natural movement of feral pigs into the area is occurring.

Laurie Twigg from the Department of Agriculture outlined the feral pig hotspots for Western Australia as the Fitzroy and De Grey Rivers, the Northampton and Collie areas and the Lake Muir/Denbarker project area. However, the densities of feral pigs in WA are very much less than those in New South Wales and Queensland. Laurie proceeded to outline a new project for the development and refinement of current baits and baiting strategies for feral pigs. The goal is to develop improved control strategies over the next 2 to 4 years in a collaborative effort with researchers from New South Wales and Queensland. Key issues for consideration are the humaneness of any technique, the need for single versus multiple doses, potential non-target impacts and whether an 'off-the-shelf' 1080 bait can be developed.

Laurie also discussed the national 1080 review that is currently under-way. The final report is due to be published by June 2004. Laurie considered the following to be possible outcomes from the review:

- 1080 is not to be used on native species
- Tighter regulations will be implemented for the use of 1080 (other States will probably follow WA standards)
- 1080 may be permitted for baiting feral pigs but vomiting of baits is a problem for non-target species
- Should not lose the use of 1080 totally.

Fertility control and other biological control methods were discussed but the current conclusion is that neither option is a prospect at the moment.

In the next session **Paul Roberts** from CALM presented information on the proposed Walpole Wilderness Area. Concerns relating to feral animals were:

- Creation of a Wilderness Area around known populations of feral animals may provide an ideal opportunity for the populations to expand.

- Closing of access roads would hamper efforts to control feral animals.

Paul invited people to make submissions on the draft policy that can be found at: http://www.calm.wa.gov.au/national_parks/management/wilderness_management.html

Christine Freegard highlighted the key reasons for CALM's involvement in feral pig control. The points that Christine identified were that feral pigs are:

- Causing significant problems at high value tourism sites such as Kalbarri
- A disease risk, both to human interests and the environment
- A potential physical threat to workers, researchers and bushwalkers
- Listed as a 'key threatening process' for biodiversity

Christine pointed out that CALM endeavours to maintain good neighbour relations which requires responsiveness to issues of concern to other land holders. With the latter in mind, staff in each district organise and prioritise their own feral pig control efforts. Most often, control work is motivated by neighbour complaints and the protection of threatened flora or fauna populations. CALM staff carry out most control work with a significant contribution coming from the Hunting and Conservation Group of the Sporting Shooters Association.

The plan from now is to develop a feral pig management strategy for CALM managed lands to provide direction and to coordinate efforts. The emphasis will be on minimising impacts rather than just controlling numbers. There is also a need to provide a means to share knowledge between districts.

Tom Rouse from Great Southern Plantations Ltd presented a timber industry view of feral pigs. Tom pointed out that feral pigs have little direct impact on plantations but the plantation companies do want to be good neighbours. Feral pigs make use of plantations for food and shelter which can assist with control efforts as generally there is good vehicle access to plantations compared to native forests.

During the discussion session, which was moderated by **Kevin Forbes**, there was general support for the project's approach with some people wanting an expansion of the project to include all agricultural areas. Some concern was raised that the community is being asked to fund an activity that is the result of inadequate action by government in the past, when the feral pig problem first emerged. The counter view was that the problem is here and, like responding to a fire, if we want to do something about it, then a community response is more likely to be effective. Other points raised in the discussion session were:

- Wild deer and goats – aerial shooting was suggested to eradicate the small numbers that have been sighted, before they get established.
- Penalties for illegal pig hunting should be tougher.
- Landholders should keep their politicians informed about feral animal issues.
- Promotion of the reporting of suspicious behaviour of people in forest areas.

- DNA fingerprints could be used to link illegally released pigs to pigs held on private property. DNA testing of private piggeries was suggested, possibly by visiting slaughterhouses to get samples.
- Manjimup Shire (represented by **Keith Liddelow**) expressed support for the project and undertook to report back after trying to create local interest.
- Community surveillance was raised by **Bob Gretton** (representing Green Skills) and a proposed flyer circulated to the meeting. The purpose of such a flyer is to enable the community to report sightings of feral pigs so the project trappers can follow them up. There was general agreement that a flyer should be distributed to all appropriate areas in the Shires of Denmark, Plantagenet, Cranbrook and Manjimup. (Subsequent to the meeting, Green Skills sent a revised version of the flyer to Denmark RMBs with community reports to go to the Denmark Shire Office).
- Training of future trappers was considered an important part of any successful strategy.

The committee is grateful for the financial support provided by the Departments of Agriculture and CALM who shared all costs associated with the workshop.

7. Project Plans for 2004

Financial contributions and pledges of further support have been made and as a result trapping is planned to take place in early 2004. A total of \$44,499 (excluding GST) was raised during 2003. The balance of funds held in trust at the 31st December 2003 was \$29,721. In addition, a second major contribution of \$15,000 from the Agriculture Protection Board (APB) is likely to be received before the 30th June 2004. The contribution from the APB would be the last such payment and it is made on the basis that contributions from other sources will be matched on a dollar for dollar basis up to \$5,000 per Shire for a maximum of 3 Shires in the project area. It should be acknowledged that in addition to cash contributions, CALM has supplied all the materials required for the construction of traps for which the committee is grateful. Also, the contract trappers require access to properties to carry out their work. They only do so if permission is received from the owner or manager. The committee appreciates the cooperation of landholders in allowing access to their properties.

The operational area will be similar to previous years with a focus on eradicating any remaining pigs in the Denbarker area and expanding further westwards into the Manjimup Shire. The principle strategy is to push the feral pig population away from the farming areas.

8. Conclusion

Significant progress has been made with feral pig control in the Lake Muir and Denbarker areas in what has been an exciting year for the project. Evidence for this progress comes from reports by the trappers, local landholders and the DNA fingerprinting study, all of which show that feral pig populations in the project have been significantly reduced. There is now the very real prospect of eradication of feral pigs from the Denbarker area.

Support for the project and the approach taken is strong. Financial contributions have been received from a wide range of sources (see Appendix 4), which has enabled the committee to carry out the operational needs of the project. Attendees at the workshop held in Mt Barker in September were enthusiastic about expanding the model used by this project into other areas. Committee members are keen to support any such moves by other communities or interested groups.

The project committee is committed to continuing with the efforts of the last 3 years with the principle that persistence is the key to success with such a campaign.

Appendix 1 – Parties involved in the project for 2003

Committee Members

Mark Muir (Farmer, Unicap and current Chairman)

Mark Barley (CALM)

Darrel Drage (Farmer, Denbarker and foundation Chairman)

Tony Fox (Farmer, Lake Muir)

Neil Heffernan (Farmer, Woogenilup)

Tony Higgs (Dept of Agriculture)

Simon Jenkins (Farmer, Denbarker)

Ted Knight (Dept of Agriculture)

Ashley Muir (Farmer, Lake Muir)

Barry Pledger (Integrated Tree Cropping)

Tom Rouse (Great Southern Plantations Ltd)

Erica Shedley (CALM)

David Townsend (WA Plantation Resources Ltd)

Brian Whittred (CALM)

Ian Wilson (CALM)

Committee members retiring in 2003

Wayne Burton (Great Southern Plantations Ltd)

Rod Simmonds (CALM)

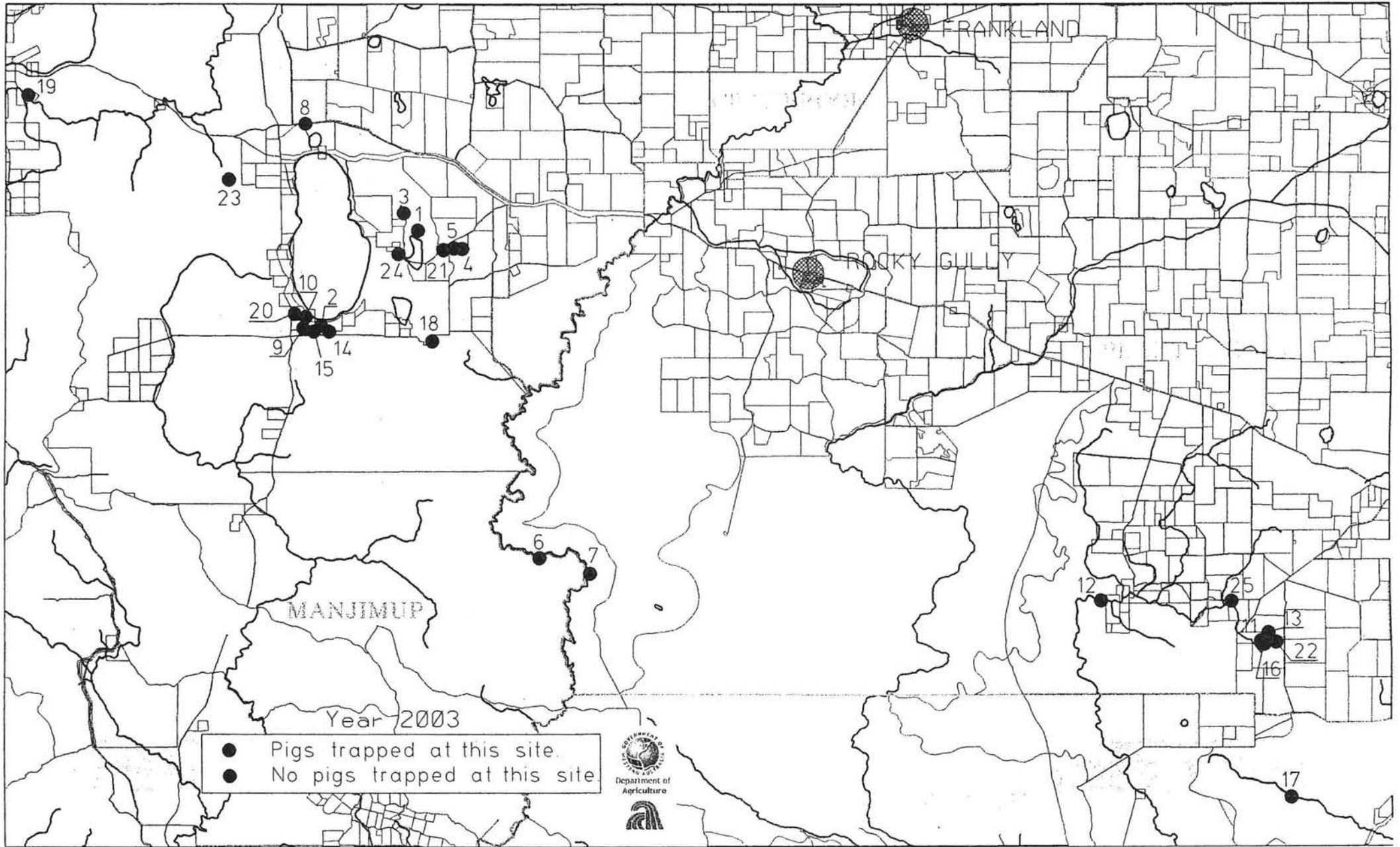
Contractors employed in 2003

Peter Cochrane (Accredited)

Kevin Machen (Accredited)

Appendix 2 – Map of feral pig trap sites for 2003

Please see next page



Appendix 3 – Number and sex of feral pigs destroyed at trap sites in 2003

Site	Male	Female	Total
1	2	1	3
2	0	2	2
3	2	1	3
4	6	3	9
5	5	7	12
6	3	3	6
7	2	0	2
8	1	0	1
9	2	2	4
10	6	2	8
11	0	3	3
12	4	1	5
13	3	1	4
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	0	0	0
20	0	1	1
21	0	0	0
22	2	4	6
23	0	0	0
24	0	0	0
25	4	4	8
	42	35	77

Appendix 4 – List of Contributors to the Project

State Government

Department of Conservation and Land Management
Water and Rivers Commission
Department of Agriculture

Local Government

Plantagenet Shire
Cranbrook Shire
Denmark Shire
Albany City
Manjimup Shire

Timber Industry

Great Southern Plantations Ltd
WA Plantation Resources
Timbercorp
Integrated Tree Cropping

Community Groups

West Mt Barker LCDC
Walpole Nornalup National Parks Association
Wilson Inlet Catchment Committee
Green Skills

Private Land-holders (listed alphabetically)

K Anderson	E, E & S Irwin
DJ & IEM Baxter	MT Jenkins & Sons
NT & DM Beech	HD, AL & NJ Lindberg
J Belfield	Lindsay Pastoral Co
JF & EA Carpenter	K Lymon
RR & L Crook	M & D Noack
Cuddyarup Pastoral Co	G & J Parker
M & G Cuss	JR & ME Rodgers
JH & DK Fisher	B Slade
SG & SG Grylls	Summers Brothers
AH Hall & Co	MJ & SC White
L & H Handasyde	Wood Nominees Pty Ltd
FJ & DM Haynes	