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AGWEST Revegetation Monitoring Activity

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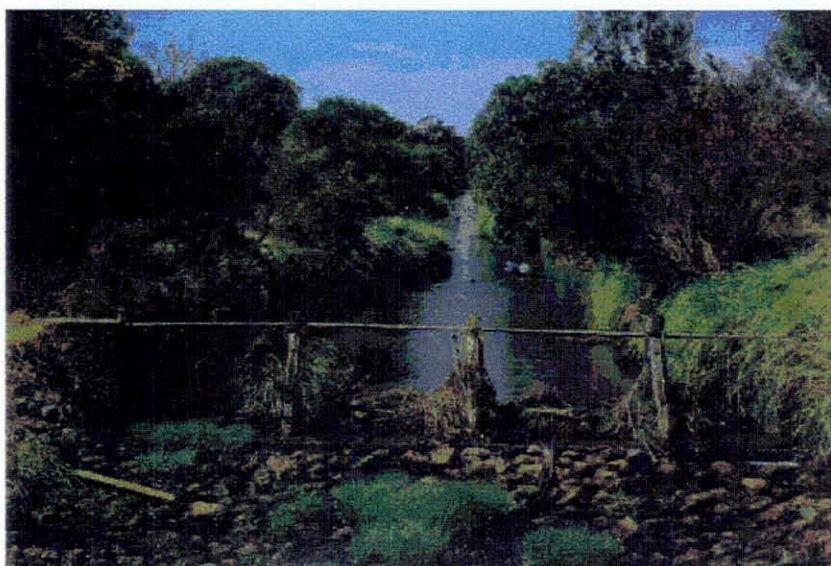
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AGWEST Revegetation Monitoring Activity



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Natural Heritage Trust
Helping Communities Helping Australia

AGWEST Revegetation Monitoring Activity

Report June 2001

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1.0 INTRODUCTION

Agriculture Western Australia (AGWEST) has provided strong support for the development of progressive landcare groups within the South West region since 1990.

The AGWEST Revegetation Monitoring Activity was initially established in 1994 to assist on-ground community groups record and monitor landcare vegetation and revegetation projects. The activity involves recording data from approximately 40 landcare groups and 12 Land Conservation District Committees (LCDCs) in the Peel Harvey, Leschenault and Geographe catchments. AGWEST coordinates, collects and records all information from these groups. Using a computer Geographical Mapping System (GIS), the data can be readily transformed into useful maps and reports.

One of the refinements of the project has been to include information on the funding mix to try and track what funding initiative was the catalyst for a project to proceed.

The AGWEST Revegetation Monitoring Activity aims to help on-ground community groups to monitor, evaluate and record landcare activities and to assist with future strategic planning of landcare projects.

The production of this annual report, and the gathering of landcare vegetation and revegetation data, has been funded by Natural Heritage Trust (NHT) in partnership with AGWEST. Funding for this project began in 1998/99 to assist in gathering data in Peel Harvey catchment, to extend the project to the Leschenault and Geographe catchments, and the production of annual reports.

This annual report summarises the landcare vegetation and revegetation projects that were completed at the end of 2000. Whilst every effort has been made to collect all activity data, it is recognised that these results are conservative.

2.0 PROJECT OBJECTIVES

- To produce a standardised method for recording landcare activity in the Peel Harvey, Leschenault and Geographe catchments that was accepted by the community;
- To provide LCDCs and landcare groups with an effective means of evaluating, monitoring and recording landcare activity;
- To allow groups to assess the impact of landcare revegetation activities and build this into refining local, catchment and regional planning; and
- To provide funding bodies and groups with reports highlighting landcare achievements as a result of their contributions.

3.0 THE PROCESS

After a 1994 /1995 pilot of the AGWEST Revegetation Monitoring Activity with the Coolup LCDC, it was decided to expand the activity to the entire Peel Harvey catchment, and in 1999 to the Leschenault and Geographe catchments also.

During 1996 and 1997, a refined method for mapping and monitoring landcare activities within the Peel Harvey catchment was developed between AGWEST and the LCDCs. Presently the process involves a partnership whereby LCDCs and their subsidiary landcare groups provide maps and reports of past and present landcare vegetation and revegetation activity to a contact in AGWEST. The information is then recorded into a database to produce reports, and GIS software to produce maps. AGWEST prepares these reports and maps, and routinely communicates with community groups to ensure information is correct and up to date. AGWEST may also use landcare project application forms (for example NHT and Alcoa application forms) as a means of gathering data. Community groups can then utilise the maps and reports to aid in planning and decision making of landcare activities.

In the AGWEST Revegetation Monitoring Activity, the landcare vegetation and revegetation projects that have taken place have been put into "project types" (Table 1). As with the project types, the funding mix has also been divided into categories (Table 2).

Table 1: Project types within the AGWEST Revegetation Monitoring Activity

Project Type	Project Description
Streamlining	Drains, creeks or rivers that are fenced to exclude stock, and vegetated.
Alley farming	Agricultural activities pursued between tree belts, fenced to exclude stock.
Vegetation belts	Windbreaks, shelter belts, wildlife corridors, fenced to exclude stock.
Tree lots	Block plantations of trees, fenced.
Protective fencing	Fencing to exclude stock from remnant vegetation, wetlands or other sensitive areas.
Revegetation	Protection of reserves and revegetation, fencing not required.
Other	For example, stock crossings, wetland rehabilitation, effluent ponds.

Table 2: Funding types within the AGWEST Revegetation Monitoring Activity

Funding Body	Description
ALCOA	Funded by ALCOA Landcare Program (plus farmer contributions)
Farmer	100% funded by the property owner
Industry/Government	Mining companies, local government etc.
Natural Heritage Trust	Funded by NHT (plus farmer contributions).
Other	Funded by others, NLP, Greening Aust etc.(plus farmer contributions)

4.0 GENERAL OVERVIEW

Landcare vegetation and revegetation data has been collected in the Peel Harvey since 1994. AGWEST is confident that a majority of the information has been collected for this region.

The Leschenault and Geographe catchments have only been involved in this activity for the past year and therefore there may be gaps in the data collected. As AGWEST continues to work with community groups in the Leschenault and Geographe catchments, the amount of data collected will increase.

The AGWEST Revegetation Monitoring Activity has included a section on special projects (those other than revegetation and landcare vegetation) in the Geographe catchment only (Appendix 4). This section is an example of what other information AGWEST is able to collate and represent on a map.

Following is an overview of the landcare vegetation* and revegetation activity** within the Peel Harvey, Leschenault, and Geographe catchments and their respective LCDC groups. You will notice a difference in the amount of landcare vegetation and revegetation activity between catchments. The effect of having a Community Landcare Coordinator is shown by the activity levels within the Peel-Harvey or Geographe catchments, compared with the Leschenault catchment. Leschenault catchment was serviced by a Community Landcare Coordinator from 1997 to 2000.

When comparing graphs, be sure to take notice of the scale. The scale differs between catchment graphs and LCDC graphs.

5.0 PEEL HARVEY CATCHMENT - OVERVIEW

Landcare in the Peel Harvey catchment has developed and evolved significantly in the past two decades. The landcare cycle in the Peel Harvey catchment began in the early 80s as a result of extensive algal blooms in the Peel Harvey Estuary, followed by the development and push for streamlining.

Today the Peel Harvey catchment is home to a pro-active sub regional Catchment Council, four LCDCs and numerous landcare and environmental groups who are supported by NHT, State government agencies, local government and the Alcoa Landcare Program.

Revegetation activities (not including protected remnant vegetation) in the Peel-Harvey catchment have increased significantly in the past decade (Appendix 1). In 1992, revegetation projects covered approximately 400 ha of land, which increased to roughly 1400 ha by 2000

* Landcare vegetation includes streamlining, vegetation belts, alley farming, tree lots, revegetation, wetland rehabilitation and protected remnant vegetation.

** Revegetation includes streamlining, vegetation belts, alley farming, tree lots, revegetation and wetland rehabilitation.

2000 (Fig 1). The majority of this increase is attributable to revegetation activities involving vegetation belts, streamlining and tree lots (Fig 2).

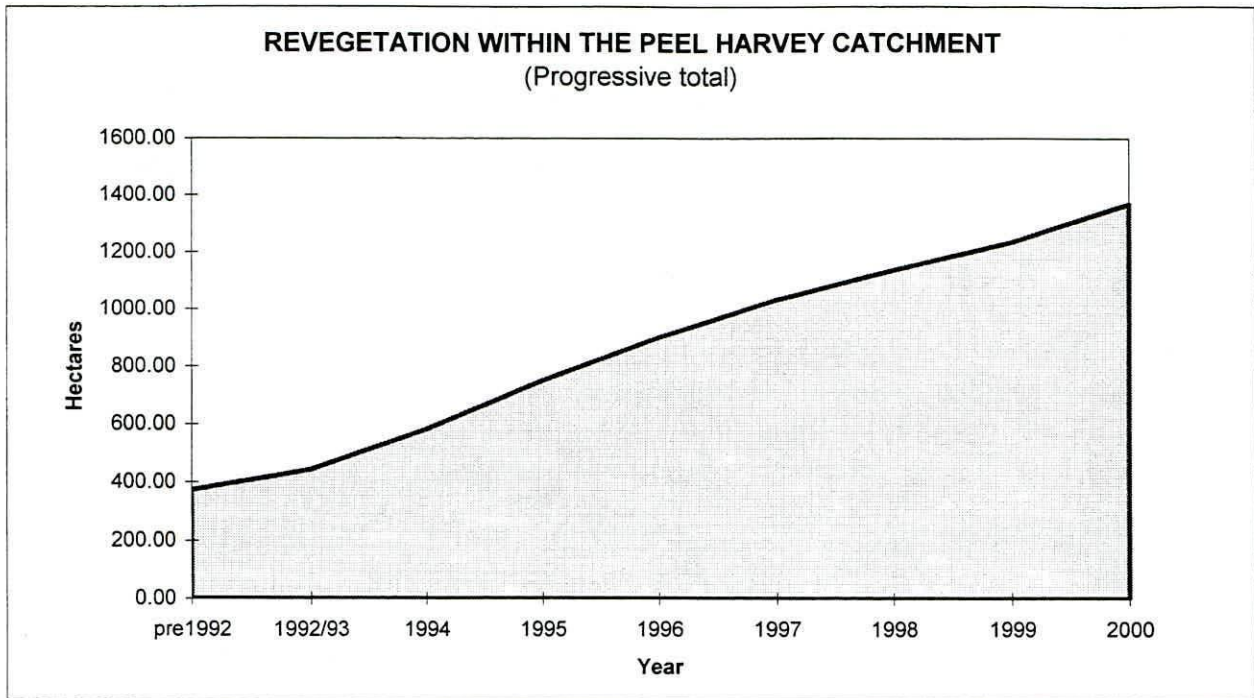


Figure 1 - Revegetation in the Peel Harvey Catchment, pre 1992 - 2000.

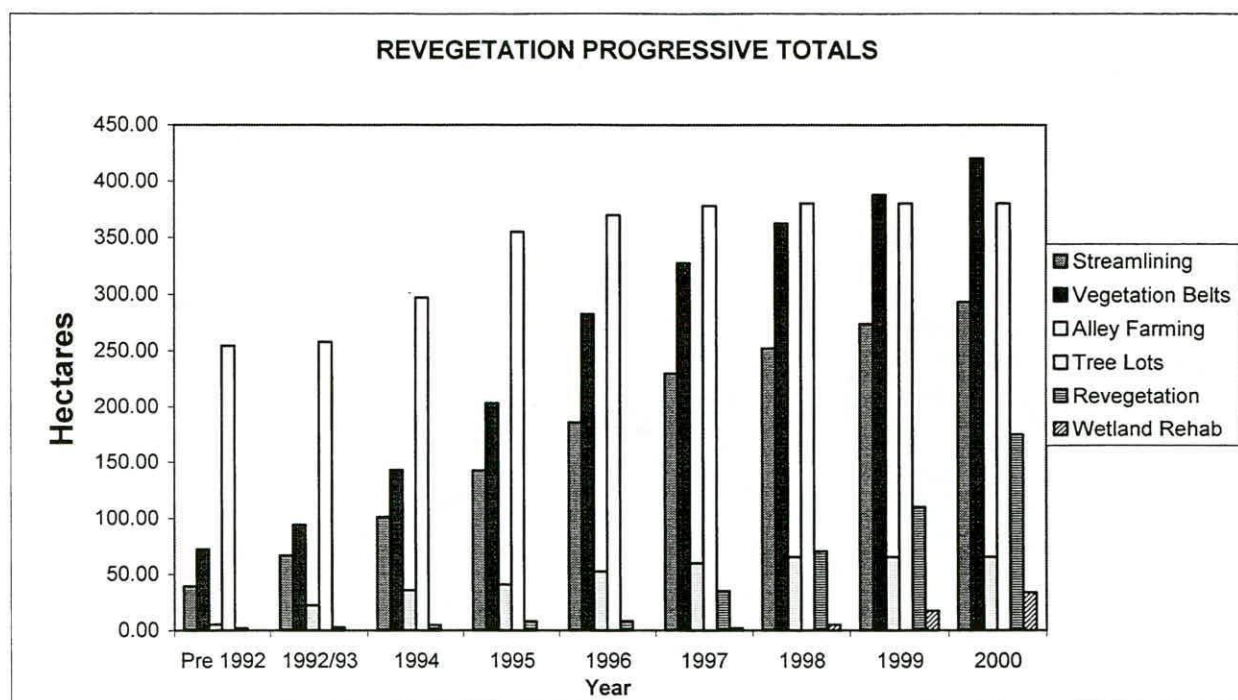


Figure 2 - Revegetation types in the Peel Harvey catchment, pre 1992 – 2000 (Progressive Totals).

The rapid increase in revegetation between 1992 to 2000 was catalysed by farmer contributions and the Alcoa Landcare Program funding (Fig 3).

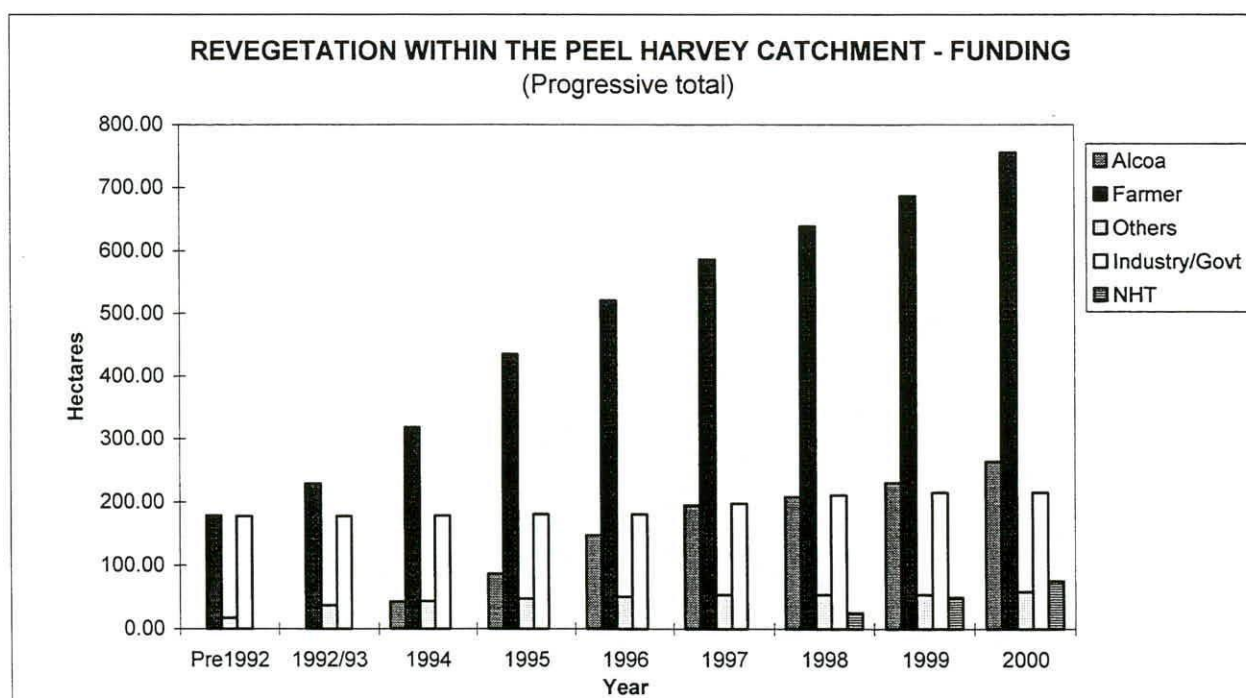


Figure 3 - Revegetation in the Peel Harvey catchment, pre1992 to 2000 (Funded by).

The vast majority of revegetation projects in the Peel Harvey catchment have been conducted on private land. This has been reinforced by the amount of funding contributed by farmers, as indicated by the dark grey bars in Figure 3. The level of funding provided by other landcare initiatives (see Table 2) has been fairly limited within the Peel-Harvey catchment in terms of real on-ground action as indicated in Figures 3.

Due to the landcare achievements within the Peel Harvey catchment in the years prior to 1997, the LCDCs have been able to attract significant NHT Federal funding enabling them to expand some of the landcare activity. Figure 3 clearly indicates that NHT funding has been a catalyst for on-ground landcare projects, especially in 1998-2000. NHT funds have also been directed into Community Landcare Coordinator positions to assist in increasing on-ground action.

5.1 LCDCs in the Peel Harvey Catchment

To achieve a coordinated approach to natural resource management, four LCDCs have been formed in Peel Harvey catchment: Serpentine Jarrahdale, Dandalup Murray, Coolup and Harvey River. Appendix 1 shows the location of each LCDC in the Peel-Harvey Catchment and the LCD (Land Conservation District) boundaries. Below is an overview on each LCDC highlighting the landcare vegetation activities (revegetation projects plus protected remnant vegetation) that have been achieved between pre 1992 and 2000.

5.1.1 Coolup LCDC

Landcare vegetation projects within the Coolup LCD peaked between 1994 and 1996, with annual totals in 1994 reaching 120 ha (Fig 4). Since 1996 landcare vegetation totals have leveled at approximately 40 ha.

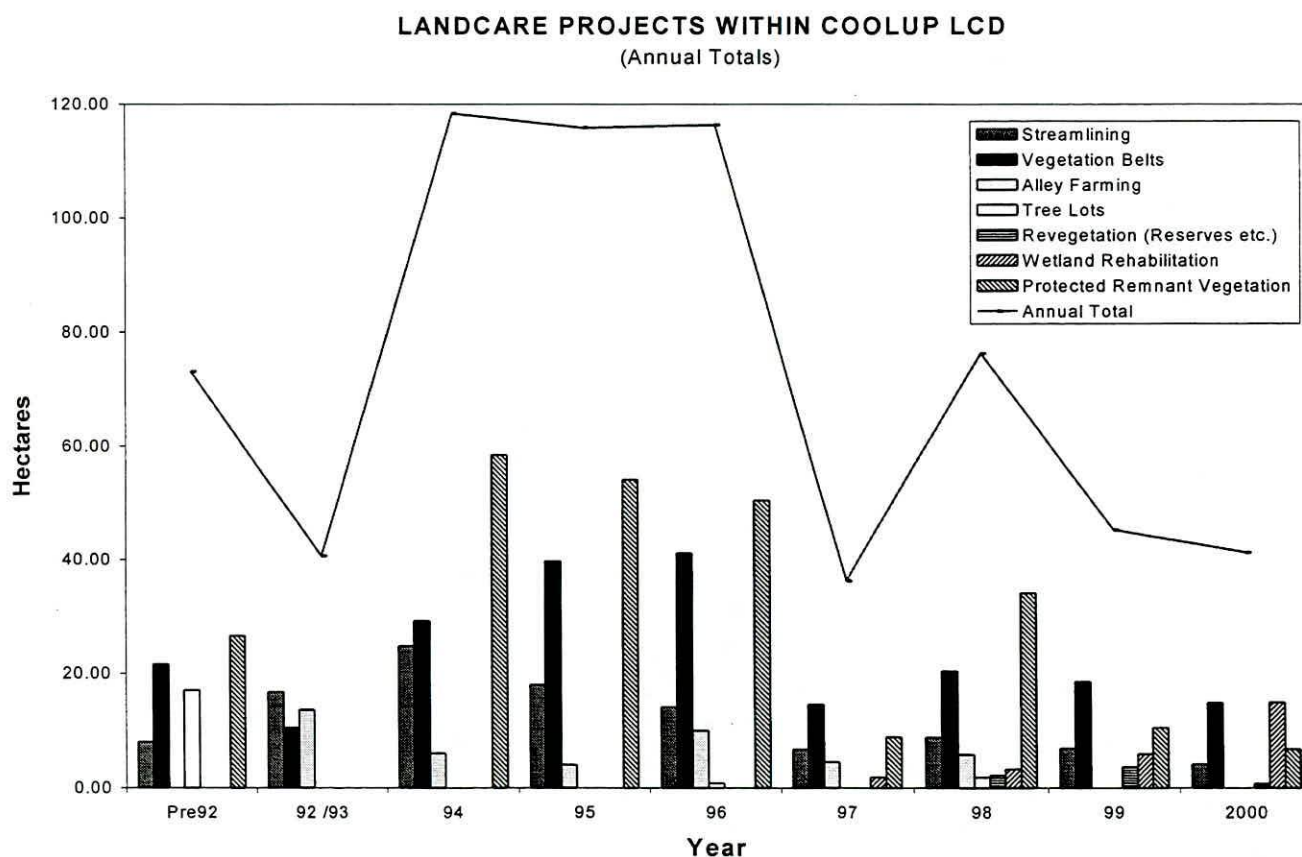


Figure 4: Landcare vegetation projects within the Coolup LCDC, pre 1992-2000 (annual totals).

Protection of remnant vegetation has been a common activity in the Coolup LCD. This project dominated in the period between 1994 to 1996, with approximately 60 ha, 55 ha and 50 ha being protected respectively during these years. Vegetation belts have also been a common project with planting occurring each year, especially in 1994 – 1996. The incorporation of streamlining in the Coolup LCD has been steady between pre 1992 and 1999, and wetland rehabilitation has been occurring in 1997 - 2000. The apparent reduction in activity in 1997

related to a need by many active LCDC members to consolidate existing plantings and ease off after 3 years of hectic landcare projects.

5.1.2 Harvey River LCDC

Landcare vegetation projects within the Harvey River LCD have been dominated by the 175 ha of tree lots planted pre 1992 as part of the Wagerup buffer zone (Fig 5). Annual totals in the Harvey River LCD rose in 1996 and 1999-2000, with 20ha, 30ha and 26ha planted respectively in these years.

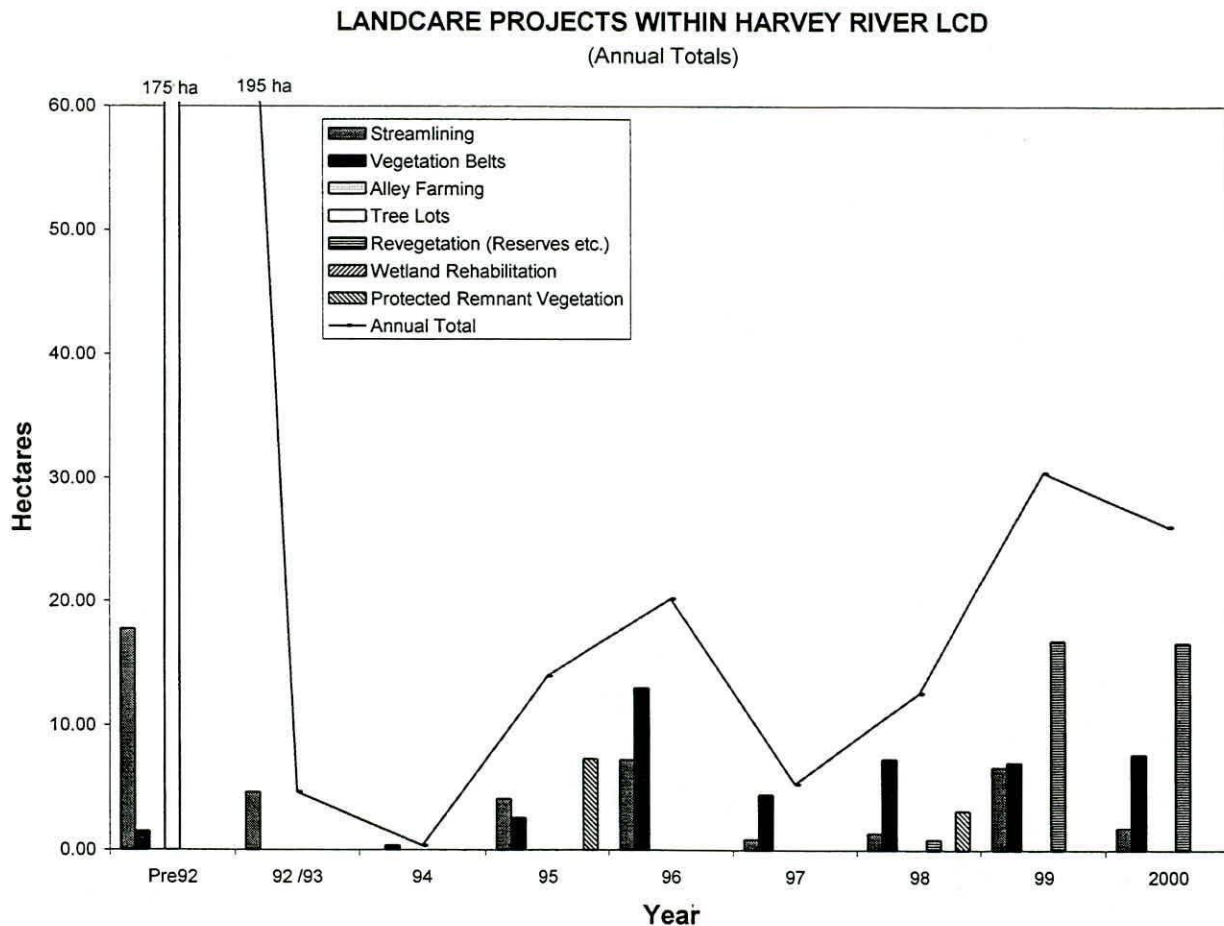


Figure 5: Landcare vegetation projects in the Harvey River LCDC, 1992-2000 (annual totals).

In pre 1992, 1996 and 1999, streamlining was a popular project, with 18ha, 8ha and 7ha planted respectively during these years. Vegetation belts were planted between 1995 and 2000, with 14 ha planted in 1996. In 1999 and 2000, the Bushcare project has also funded rehabilitation of reserves in the Harvey River LCD area. The Harvey River LCDC has also completed projects other than revegetation, such as the installation of dairy effluent systems.

5.1.3 Dandalup Murray LCDC

Landcare vegetation projects within the Dandalup Murray LCD have focused on protecting remnant vegetation and in 1996 this project totaled 114.65 ha (Fig 6). Annual totals have been irregular during the years of data collection, with significant planting pre 1992 (77ha) and 1994–1996 (62, 137 and 66 ha) also being years of high activity.

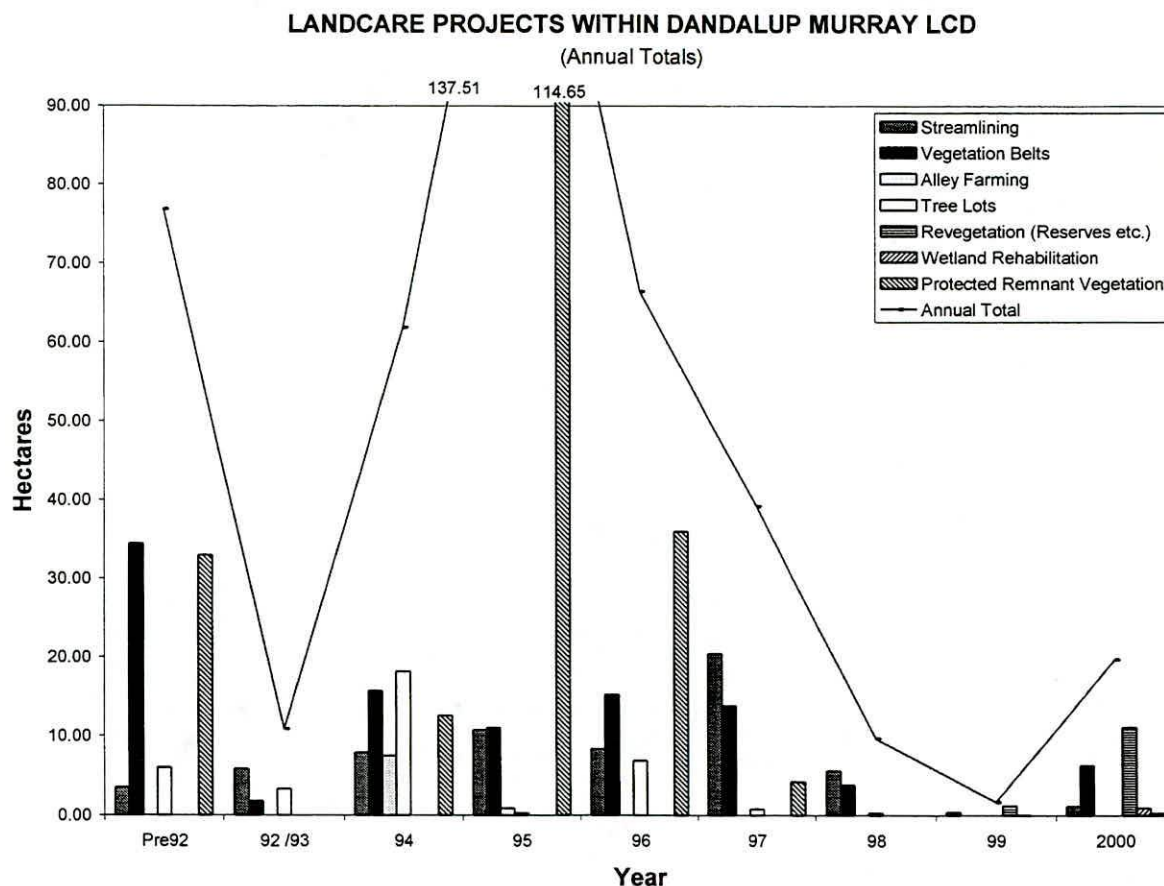


Figure 6: Landcare vegetation projects in the Dandalup Murray LCDC, pre 1992 – 2000 (annual totals).

Streamlining and vegetation belts have been steadily planted during the period of data collection. Streamlining has ranged from approximately 3 ha planted in pre 1992 to 18 ha planted in 1997. Revegetation of reserves is a new project in the LCD, with approximately 15 ha protected in 2000.

5.1.4 Serpentine Jarrahdale LCDC

The 1234 ha of remnant 'Lowlands' indicates the significance of this bush to the members of the Serpentine Jarrahdale LCDC (Fig 7). This area of remnant vegetation has existed in Serpentine Jarrahdale Shire for many years, even before the LCDC was established.

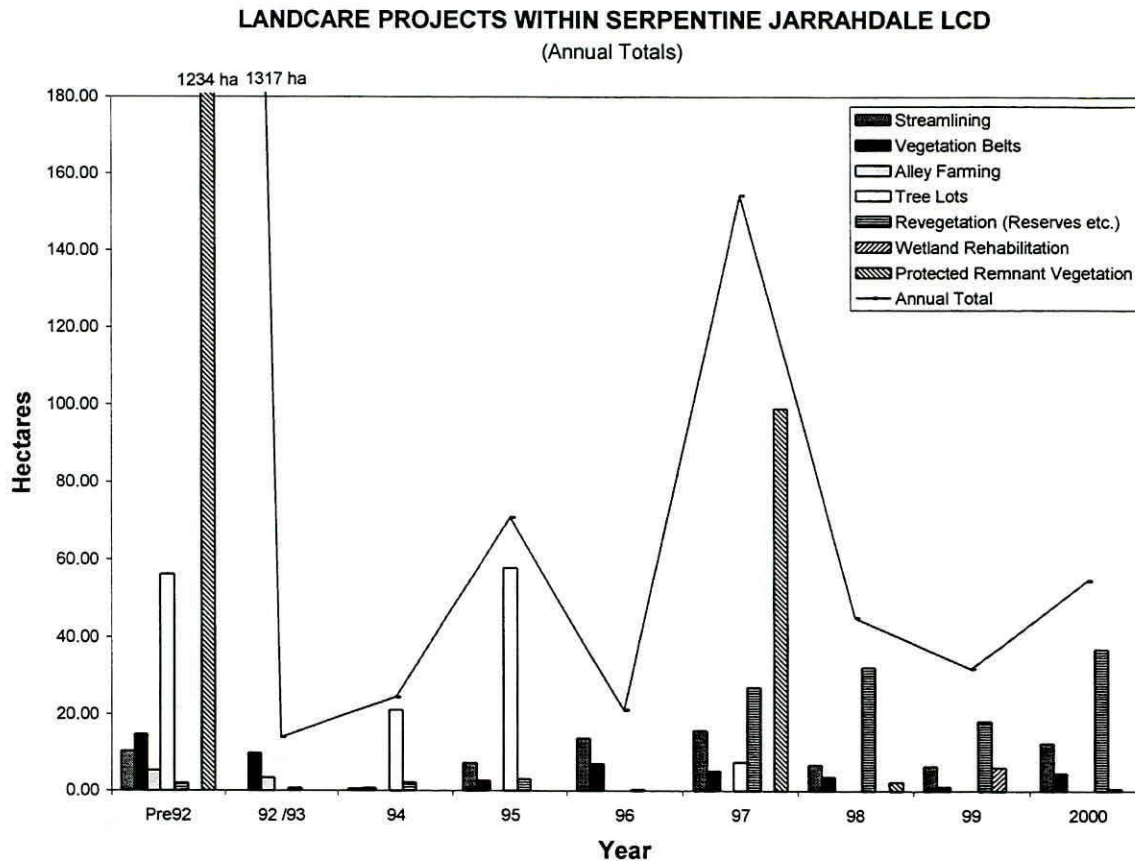


Figure 7: Landcare vegetation projects within the Serpentine Jarrahdale LCDC (annual totals).

Annual totals in the Serpentine Jarrahdale LCD have been irregular, reaching approximately 70 ha in 1995, 155 ha in 1997, and 60 ha in 2000.

Similar to the Dandalup Murray LCDC, Serpentine Jarrahdale has also focused on protecting remnant vegetation. The area of protected remnant vegetation was greatest in pre 1992 at 1234 ha and in 1997 at 100ha, however did not appear to be significant in other years. Tree lots have been a significant landcare project in the LCD with approximately 58 ha planted pre 1992 and 1995, and approximately 20 ha planted in 1994. Revegetation of reserves has only been undertaken in the period between 1997-2000, with approximately 30ha, 35ha and 38ha completed respectively in these years.

6.0 LESCHENAULT CATCHMENT - OVERVIEW

Landcare has been progressing in the Leschenault catchment since the early 1990s with the introduction of the National Landcare Program that assisted on ground community groups conduct landcare projects.

With assistance from AGWEST, the Leschenault catchment is now home to a proactive sub-regional Catchment Council, three LCDCs and numerous NRM community organisations.

Revegetation activity (not including protected remnant vegetation) in the Leschenault catchment has increased steadily between pre 1992 and 1997 (Appendix 2). In 1998 and 1999, progressive totals increased to approximately 80 ha, and rose to 140 ha in 2000 (Fig 8).

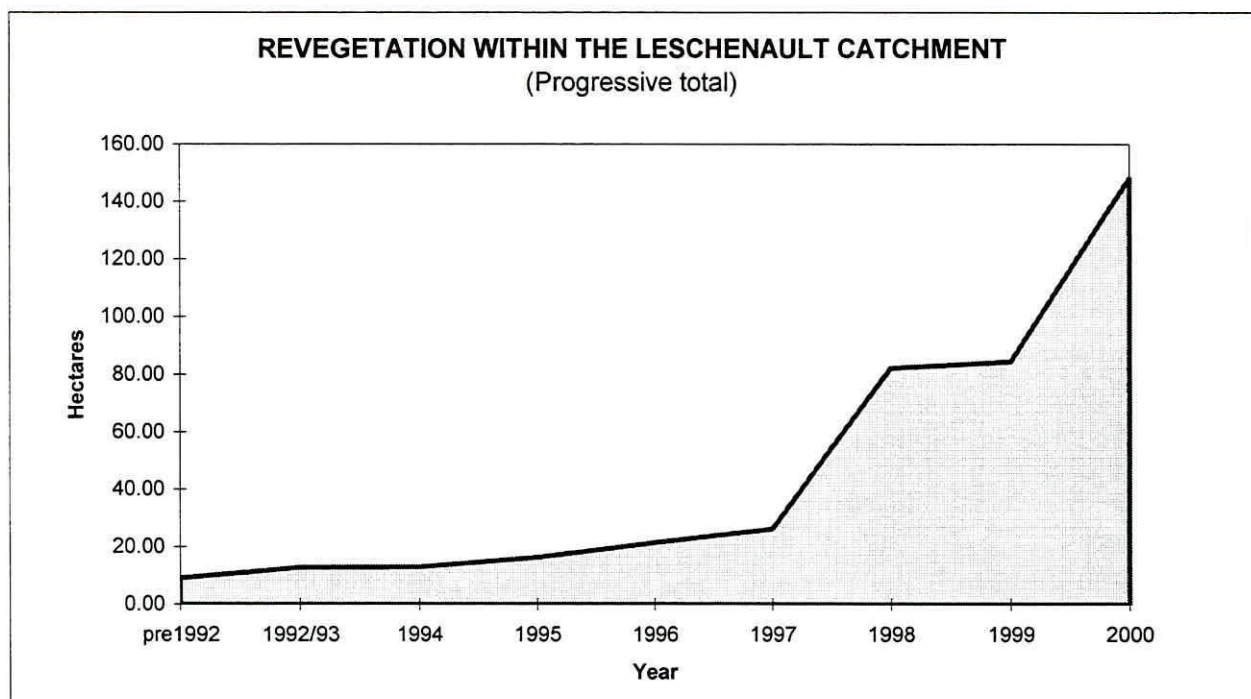


Figure 8: Revegetation within the Leschenault catchment (progressive totals), pre 1992 to 2000.

Figure 9 clearly demonstrates that the steady increase in revegetation from pre 1992 to 1997 was due to the planting of vegetation belts and tree lots. Revegetation of reserves, such as road reserves, by the Bushcare Program, has resulted in the dramatic increase in revegetation totals in 1998 to 2000. Streamlining was introduced in the Leschenault catchment in 1995, and has been a small contributor to the annual revegetation totals between 1995 and 1997.

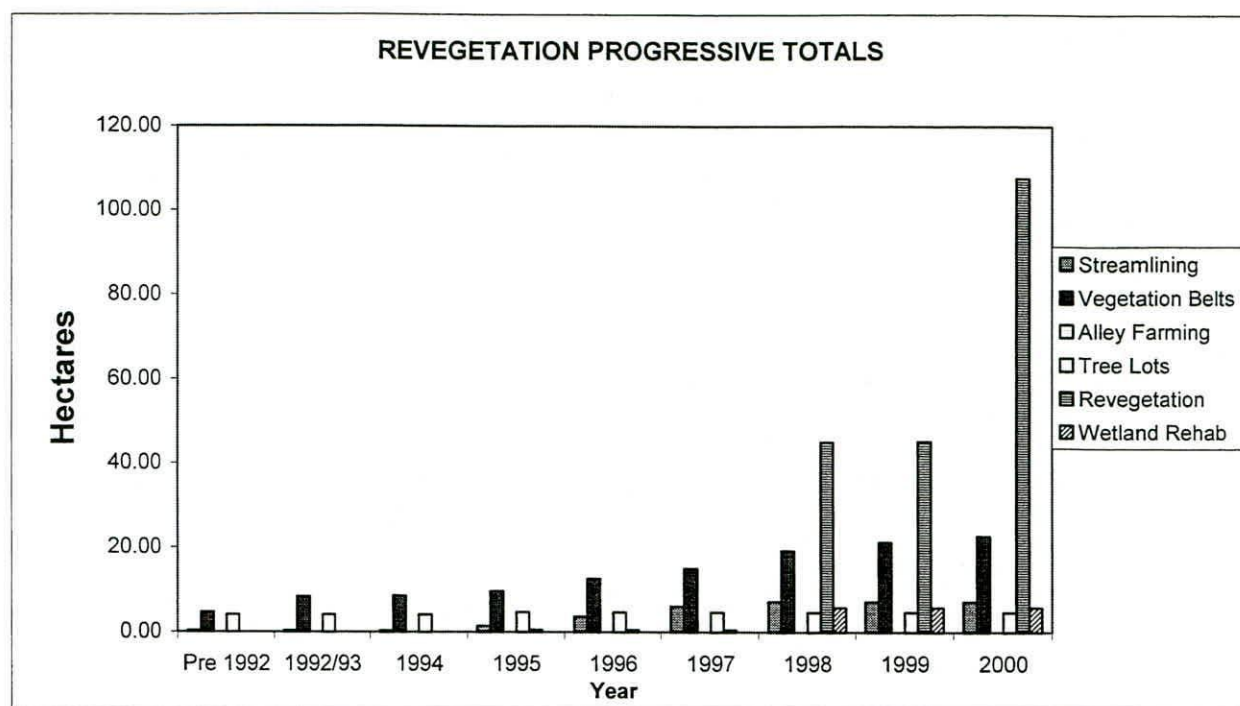


Figure 9: Revegetation types in the Leschenault catchment (Progressive Totals) between pre 1992 and 2000.

The projects described above have been the result of significant farmer contributions, plus funding from NHT, Alcoa and industry/government (Fig 10).

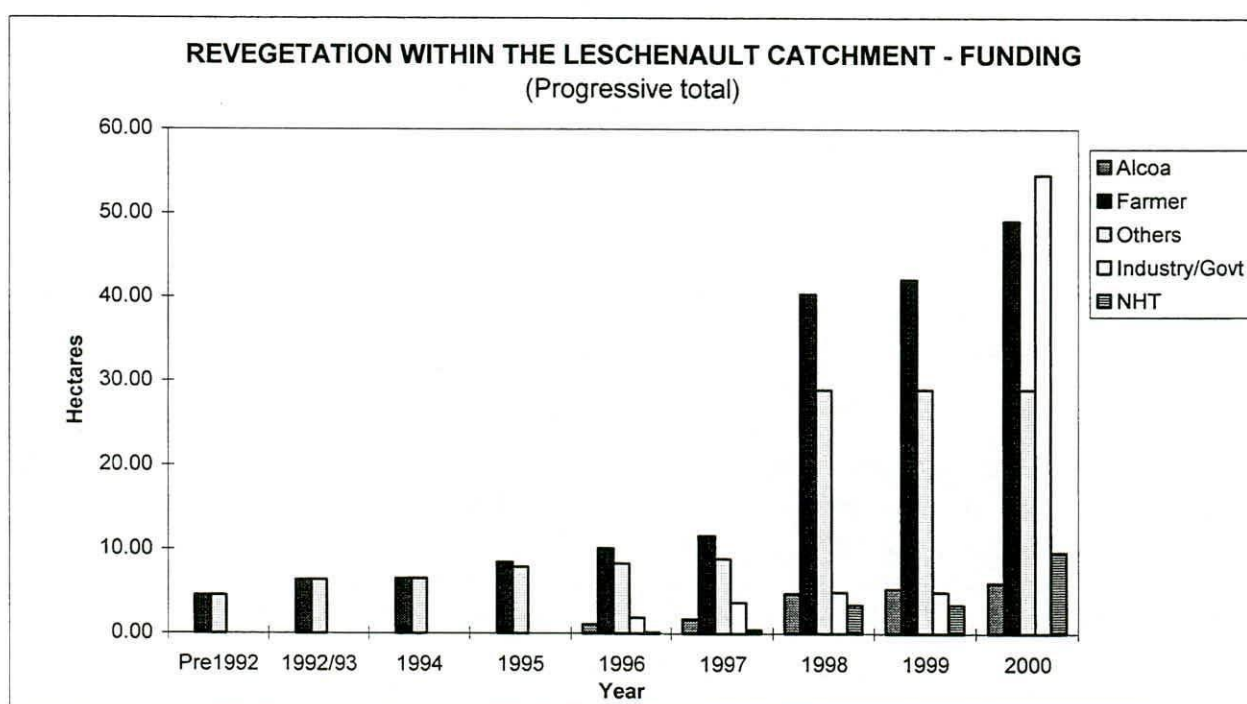


Figure10: Revegetation in the Leschenault Catchment, pre1992 to 2000 (Funded by).

The majority of revegetation projects in the Leschenault catchment have been conducted on private land. This has been reinforced by the amount of funding contributed by farmers. The level of funding provided by other landcare initiatives has also been significant within the Leschenault in terms of on-ground action as indicated by the bars in Figures 9. However, industry/government funding dominated farmer contributions and other landcare initiatives in 2000. Since 1998, significant works have been conducted on road reserves.

Due to the achievements within the Leschenault catchment during the years prior to 1997, the LCDCs have been able to attract significant NHT Federal funding to expand some of the landcare activity. NHT funds have also been directed into Community Landcare Coordinator positions to assist in increasing on-ground action.

6.1 LCDCs in the Leschenault Catchment

AGWEST has assisted in the establishment and development of three LCDCs in the Leschenault catchment: Wellesley, Dardanup and Donnybrook Balingup. Together these LCDCs form an integrated on ground network of landcare activity. Appendix 2 shows the location of each LCDC in the Leschenault catchment and the LCD boundaries.

Following is a breakdown of the landcare vegetation activity (revegetation plus protected remnant vegetation) on an LCDC basis in the Leschenault catchment. A common trend in the graphs is evident in the latter years of data collection, where annual totals have increased significantly. This trend may be explained by the appointment of a Community Landcare Coordinator in the Leschenault catchment to assist the LCDCs in increasing on ground activity.

6.1.1 Wellesley LCDC

The annual landcare vegetation totals in the Wellesley LCD rose in 1998 to approximately 25 ha due to projects such as protecting remnant vegetation, revegetation of reserves and vegetation belts. A decline is evident in 1999-2000 with only vegetation belts being planted (Fig 11).

LANDCARE PROJECTS WITHIN WELLESLEY LCD
(Annual Totals)

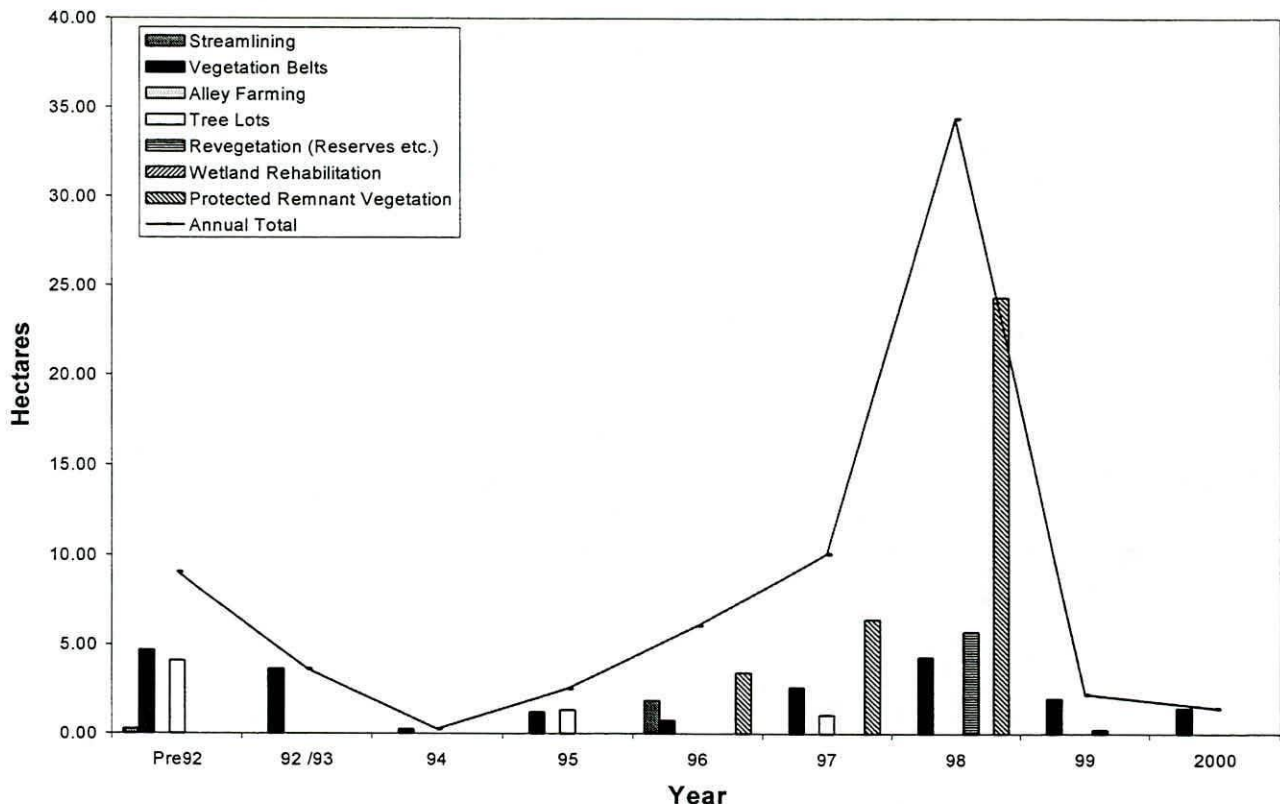


Figure 11: Landcare vegetation projects within the Wellesley LCDC (annual totals).

Landcare vegetation activities, such as vegetation belts, tree lots and alley farming have been common projects between pre 1992 and 1997. Protection of remnant vegetation, and revegetation (reserves) has resulted in the increase in revegetation totals in 1998. The years 1999 and 2000 have resulted in the LCDC scaling back activity after a busy few years of activity guided by the Community Landcare Coordinator.

6.1.2 Dardanup LCDC

Annual landcare vegetation totals in the Dardanup LCD follow a similar trend to the Wellesley LCDC (above). The annual totals rose in 1998 to approximately 60ha due to protected remnant vegetation, revegetation of reserves and establishment of streamlines (Fig 12).

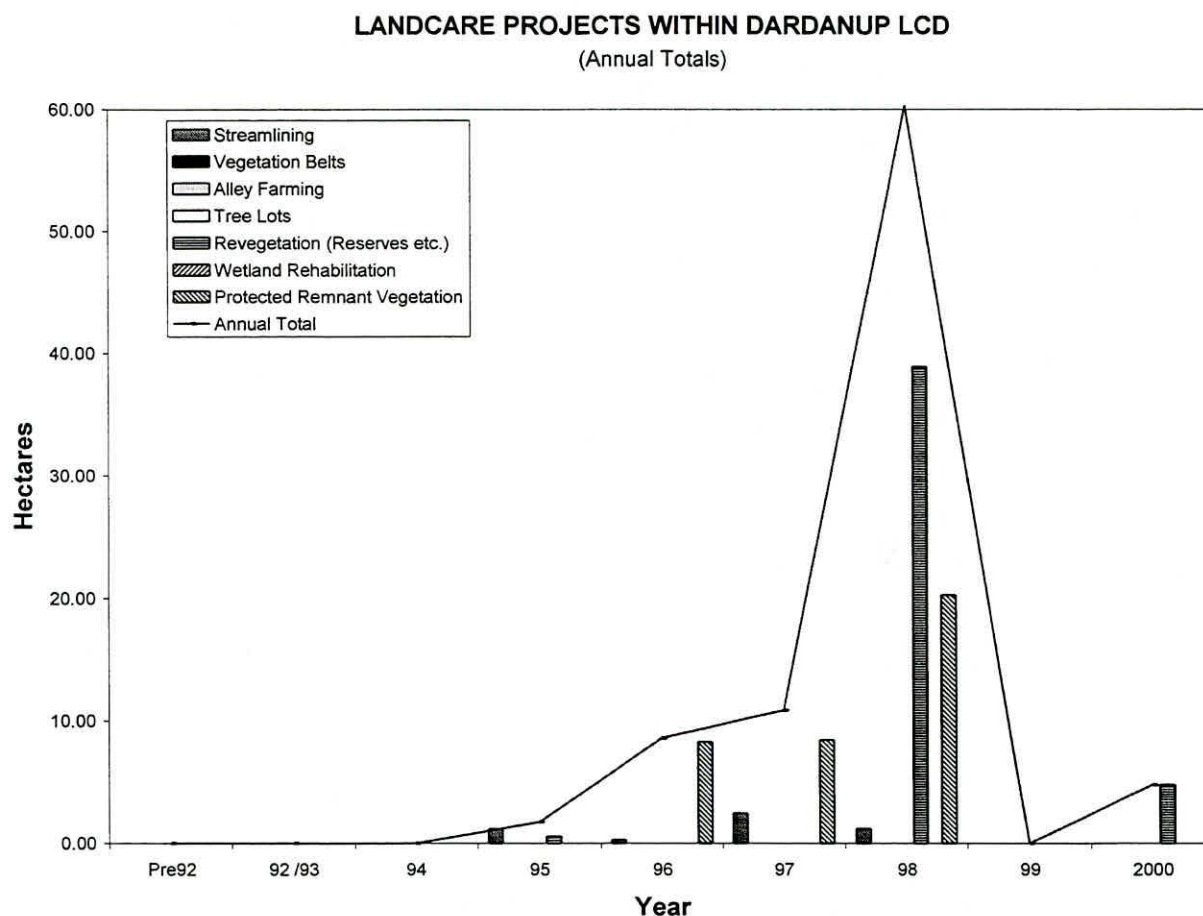


Figure 12: Landcare vegetation projects within the Dardanup LCDC (annual totals).

Revegetation of reserves and protecting remnant vegetation has been the focus of the LCDC during the years the data has been collected. In 1996 to 1998 protecting remnant vegetation was the major landcare project, with approximately 10ha, 8ha and 20 ha being fenced off respectively. In 1998, 40 ha of reserves were revegetated, accounting for the peak in annual totals in this year. In 1995, 1997 and 1998 some streamlining was established, but has been a minor project compared with revegetation of reserves and protecting remnant vegetation.

6.1.3 Donnybrook Balingup LCDC

Landcare vegetation activities in the Donnybrook Balingup LCDC have focused on revegetation of reserves, but activity has tended to be at generally low levels. In 1999 and 2000, revegetation of reserves covered approximately 3ha and 3.5ha of land respectively (Fig 13).

LANDCARE PROJECTS WITHIN DONNYBROOK BALINGUP LCD
(Annual Totals)

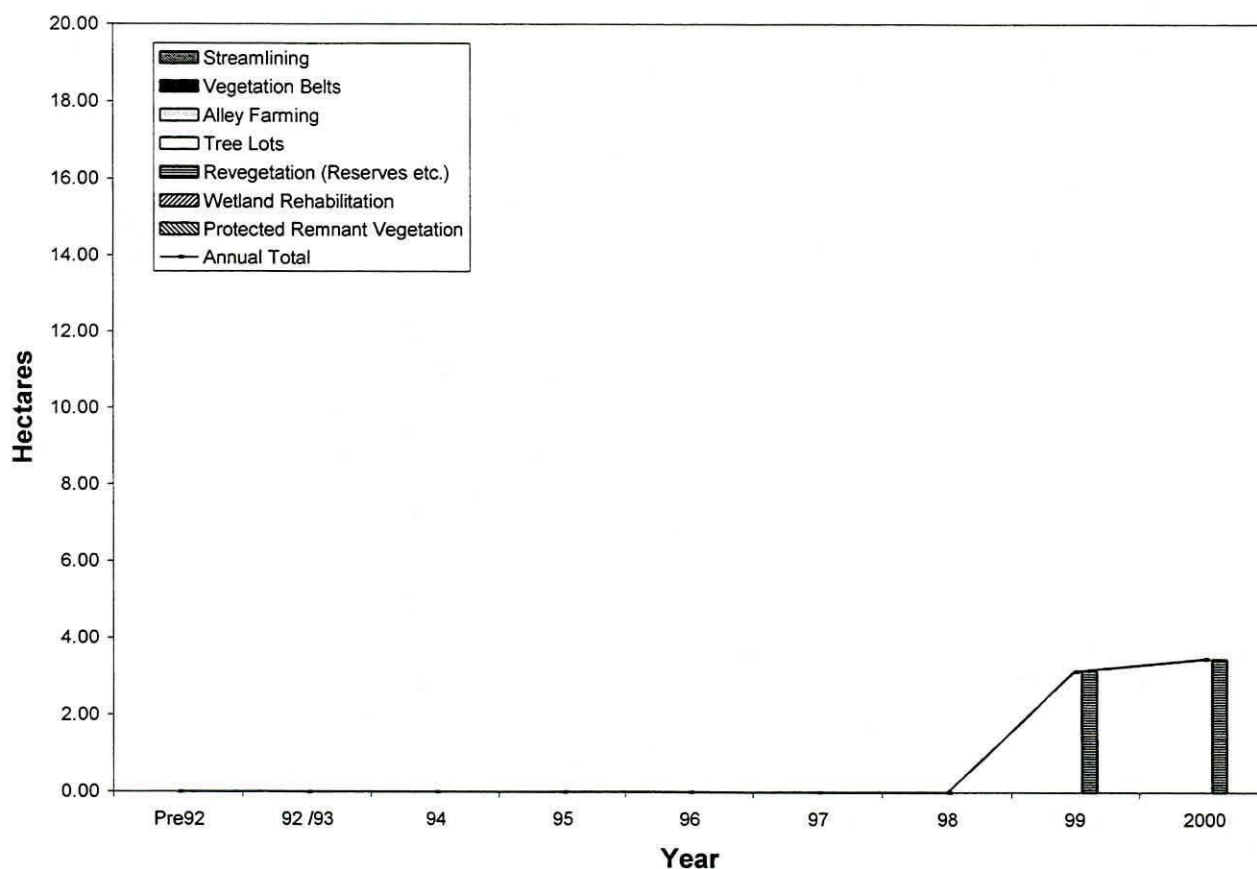


Figure 13: Landcare vegetation projects within the Donnybrook Balingup LCDC (annual totals).

The Balingup component of the LCD is within the Blackwood catchment. As this report only contains data from the Leschenault catchment, the Blackwood projects were not recorded. This plays a big role in the apparent lack of revegetation activity in the LCD.

7.0 GEOGRAPHE CATCHMENT - OVERVIEW

Landcare in the Geographe catchment began in the late 80's to early 90's with a strong focus on rivercare. LCDC groups were then formed as a coordinated means of attracting funding from the NLP.

In 1997, the Geographe Catchment Council (Geocatch) was established to help address natural resource management issues, such as loss of riparian vegetation, sedimentation and nutrient enrichment. The success of Geocatch is due to the high level of support provided by the Water and Rivers Commission and links to other organisations and NRM groups, such as the LCDCs.

Revegetation activity (not including protected remnant vegetation) in the Geographe catchment has increased dramatically between 1998 (since the formation of Geocatch), from below 100 ha, to approximately 650 ha in 2000 (Fig 14, and Appendix 3)

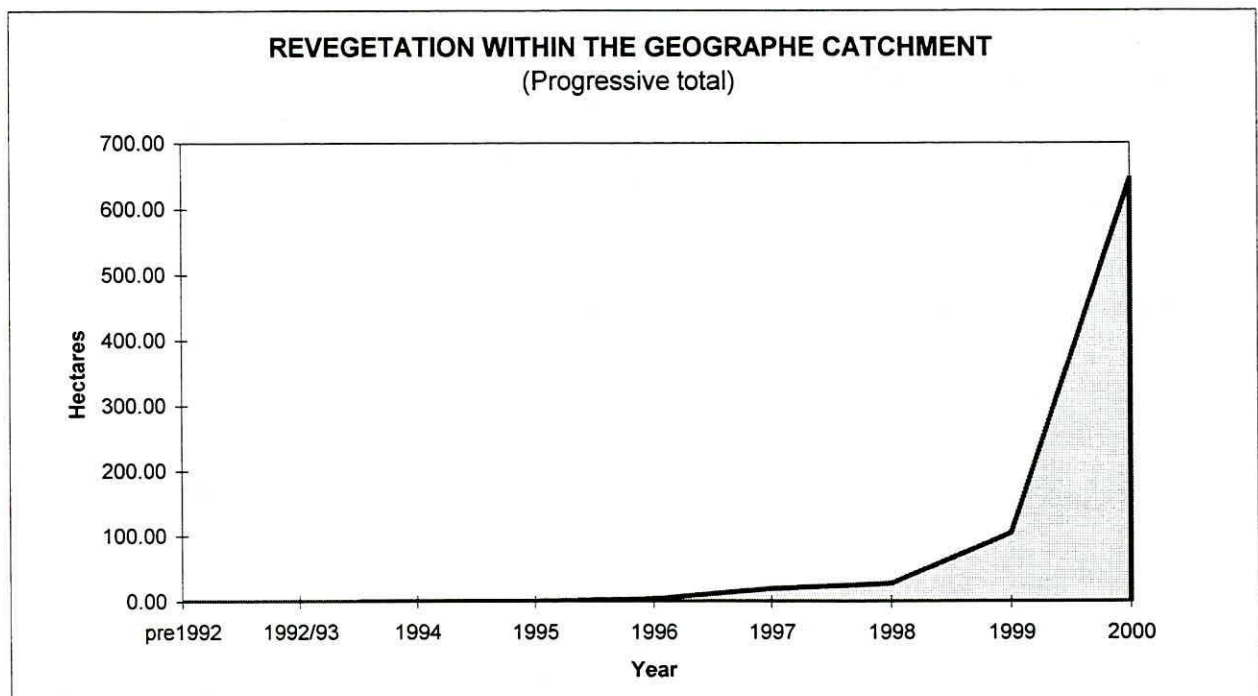


Figure 14: : Revegetation within the Geographe catchment (progressive totals), pre 1992 to 2000.

Figure 15 clearly illustrates that in 1997 to 1999, streamlining, vegetation belts and revegetation of reserves accounted for the increase. In 2000 the additional 133 ha of revegetation and 384 ha of wetland rehabilitation resulted in the rapid increase in the revegetation total.

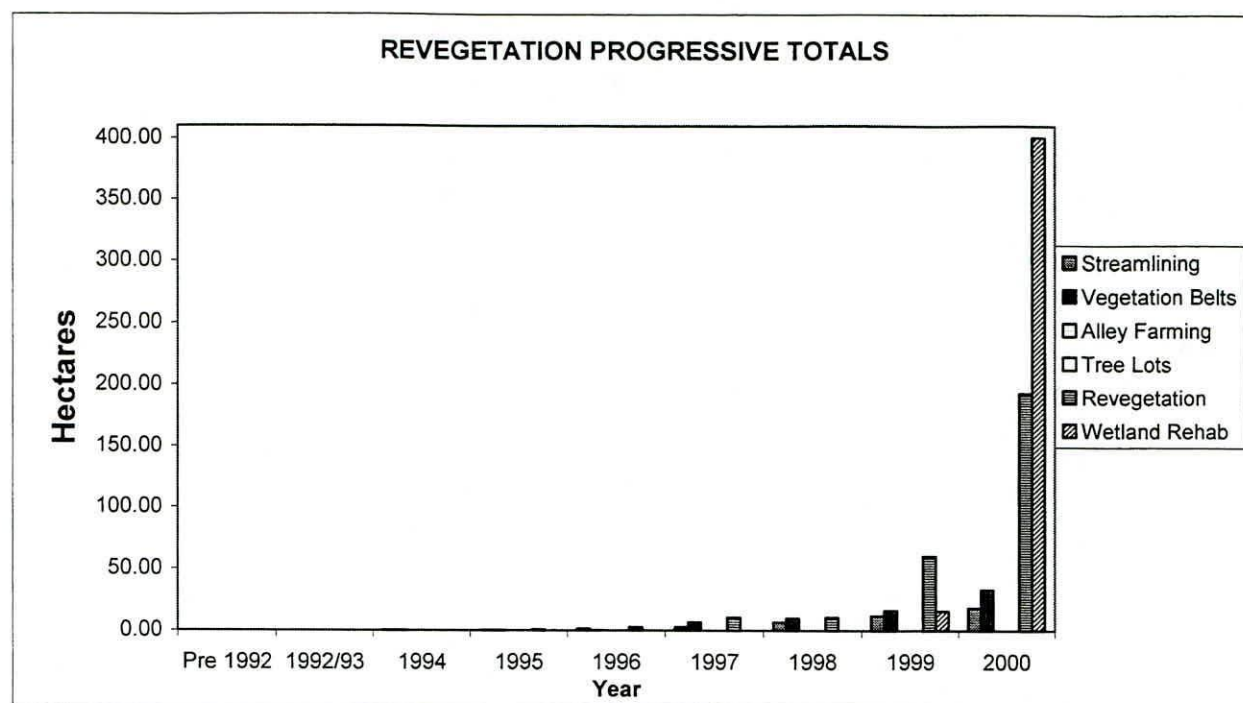


Figure 15: Revegetation types in the Geographe catchment (progressive totals) between pre 1992 and 2000.

The revegetation totals for the Geographe catchment are the result of farmer contributions, industry/government funding, other landcare funding initiatives and NHT (Fig 16).

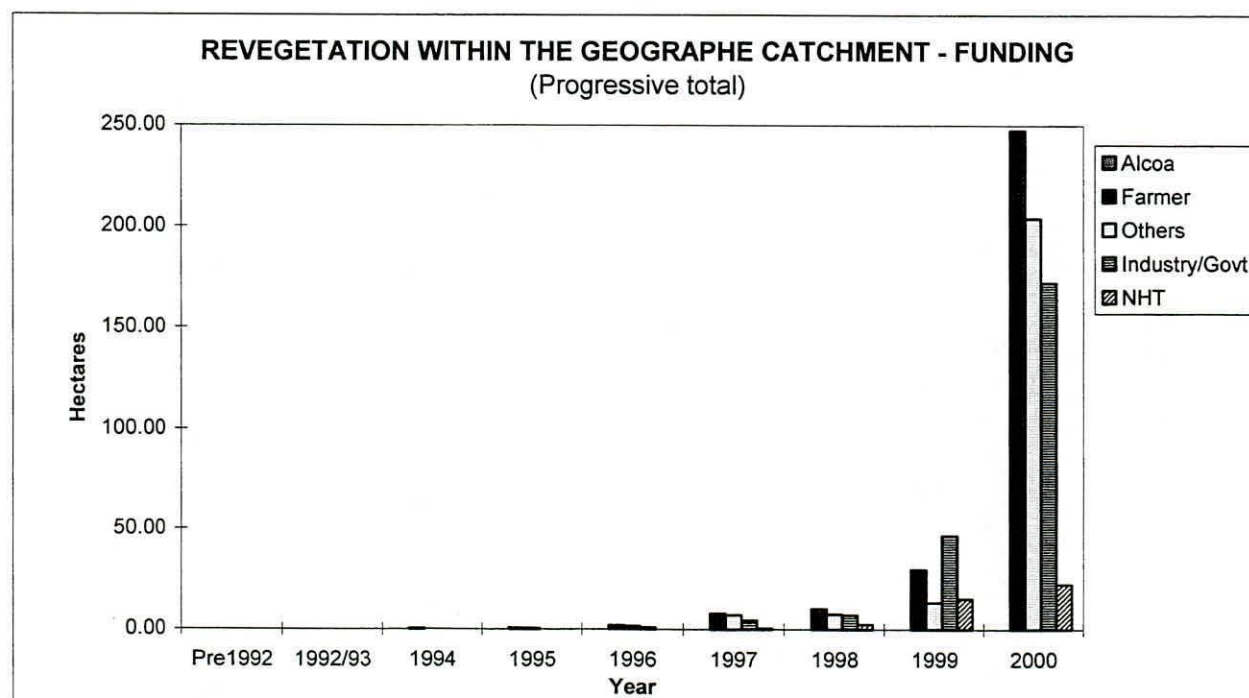


Figure 16: Revegetation in the Leschenault Catchment, pre1992 to 2000 (funded by).

The vast majority of revegetation projects in the Geographe catchment have been conducted on private land. This has been reinforced by the amount of funding contributed by farmers. The level of funding provided by other funding initiatives and industry/government (such as Water and Rivers Commission) has been significant within the Geographe in terms of on-ground action as indicated in Figures 16.

Due to the achievements within the Geographe catchment during the years prior to 1997, the LCDCs have been able to attract significant NHT Federal funding to expand some of the landcare activity. However Figure 16 clearly indicates that other sources of funding are more popular than NHT. NHT funding applications seem to have been labeled as “difficult”, and therefore LCDC groups have focused on other funding sources for on-ground landcare projects. NHT funds have been directed into Community Landcare Coordinators and facilitator positions to assist in increasing on-ground action.

7.1 LCDCs in the Geographe Catchment

AGWEST has assisted in the establishment and development of three LCDCs in the Geographe catchment to form an integrated on ground network of landcare activity. The LCDCs are Capel, Sussex and Vasse Wonnerup. Yallingup LCDC is in the Cape to Cape region, however their revegetation information has been included in this section.

Appendix 3 shows the location of each LCDC in the Geographe catchment and the LCD boundaries. Below is a breakdown of the Landcare vegetation activity (revegetation plus protected remnant vegetation protection) on an LCDC basis in the Geographe catchment.

7.1.1 CAPEL LCDC

Annual landcare vegetation activity in the Capel LCD has been increasing since 1994. In 1996 the annual total took a slight increase before rising in 2000 with a total of 552 ha revegetated (Fig 17).

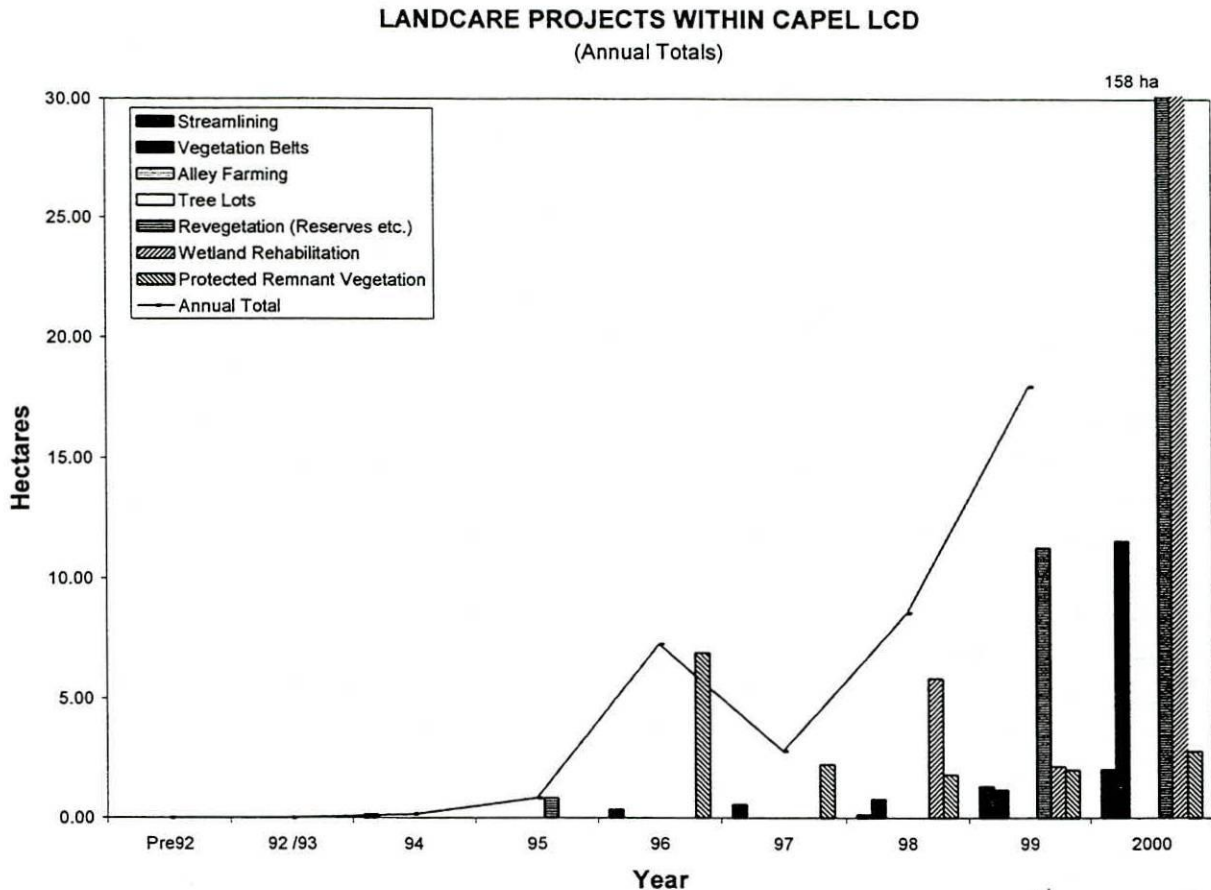


Figure 17: Landcare vegetation projects within the Capel LCDC (annual totals).

The increase in landcare vegetation activity in 2000 is due to rehabilitation of wetlands and the revegetation of reserves, such as road reserves. Wetland rehabilitation was introduced into the LCDC in 1998, with 7 ha being rehabilitated, and this figure rose to 378 ha by 2000. In 1999 and 2000 revegetation reserves was a undertaken with 10 ha and 158 ha revegetated respectively.

Protected remnant vegetation has also been a common project in the Capel LCD between 1996 and 2000. This project rose in 1996 to approximately 9 ha protected, and slightly decreased in 1997-2000 as other projects became the LCDC focus.

7.1.2 Sussex LCDC

Annual landcare vegetation totals in the Sussex LCD have increased from approximately 13 ha in 1997 to 77 ha in 2000 (Fig 18).

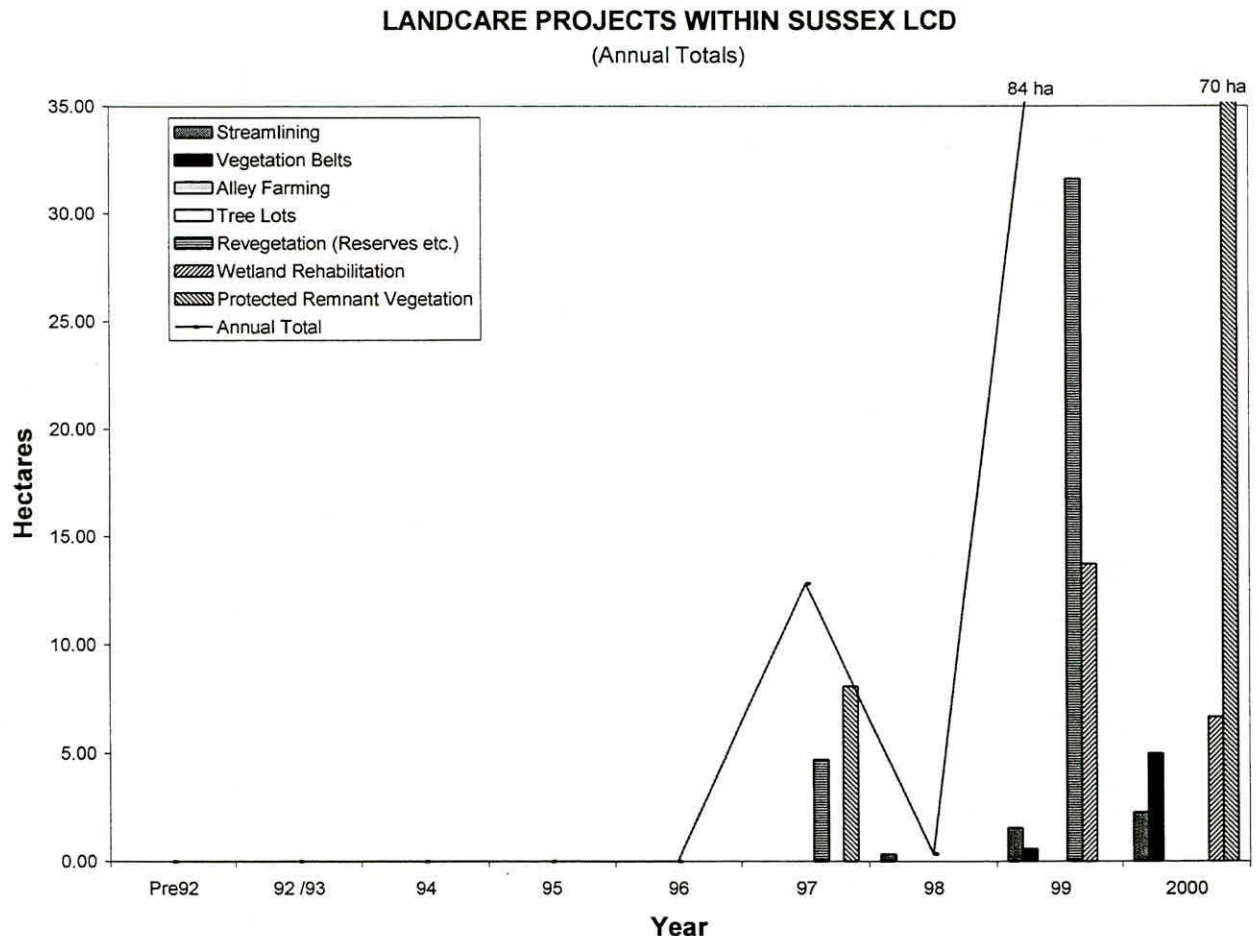


Figure 18: Landcare vegetation projects within the Sussex LCDC (annual totals).

Revegetation of reserves was a popular activity in the LCD in 1997 and 1999, with 5 ha and 33 ha planted respectively. Remnant vegetation was protected in the area in 1997 and 2000. The 70 ha protected in 2000 accounts for the dramatic increase in the annual total in that year.

In 1999 and 2000 wetland rehabilitation was undertaken in the LCD, with 13 ha and 7 ha rehabilitated respectively.

7.1.3 Vasse Wonnerup LCDC

Landcare vegetation activity in the Vasse Wonnerup LCD has been undertaken between 1996 and 1999 as illustrated by the annual totals line below (Fig 19).

LANDCARE PROJECTS WITHIN VASSE WONNERUP LCD
(Annual Totals)

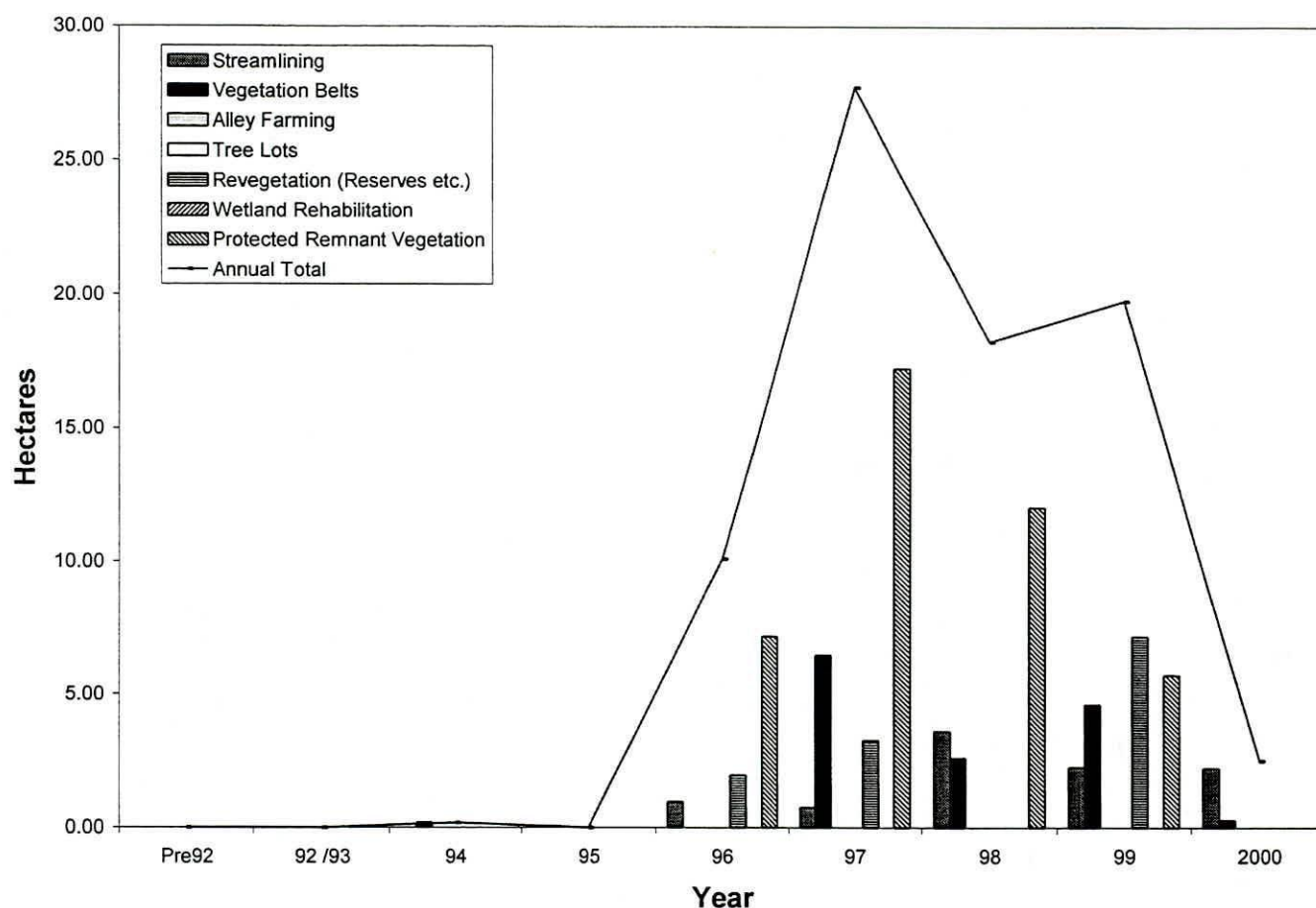


Figure 19: Landcare vegetation projects within the Vasse Wonnerup LCDC (annual totals).

The protecting of remnant vegetation appears to be the greatest contributor to the annual total, with approximately 8 ha, 18 ha, 14 ha and 7 ha respectively, fenced between 1996 and 2000.

Revegetation of reserves and vegetation belts has also been a common between 1996 and 2000 with a total of 12 ha and 14 ha planted respectively. As indicated by the grey bars, streamlining has also been a steady landcare activity.

7.1.4 Yallingup LCDC

Annual landcare vegetation totals in the Yallingup LCD have focused on revegetation of reserves in 1999 and 2000 with approximately 30 ha revegetated during these years (Fig 20).

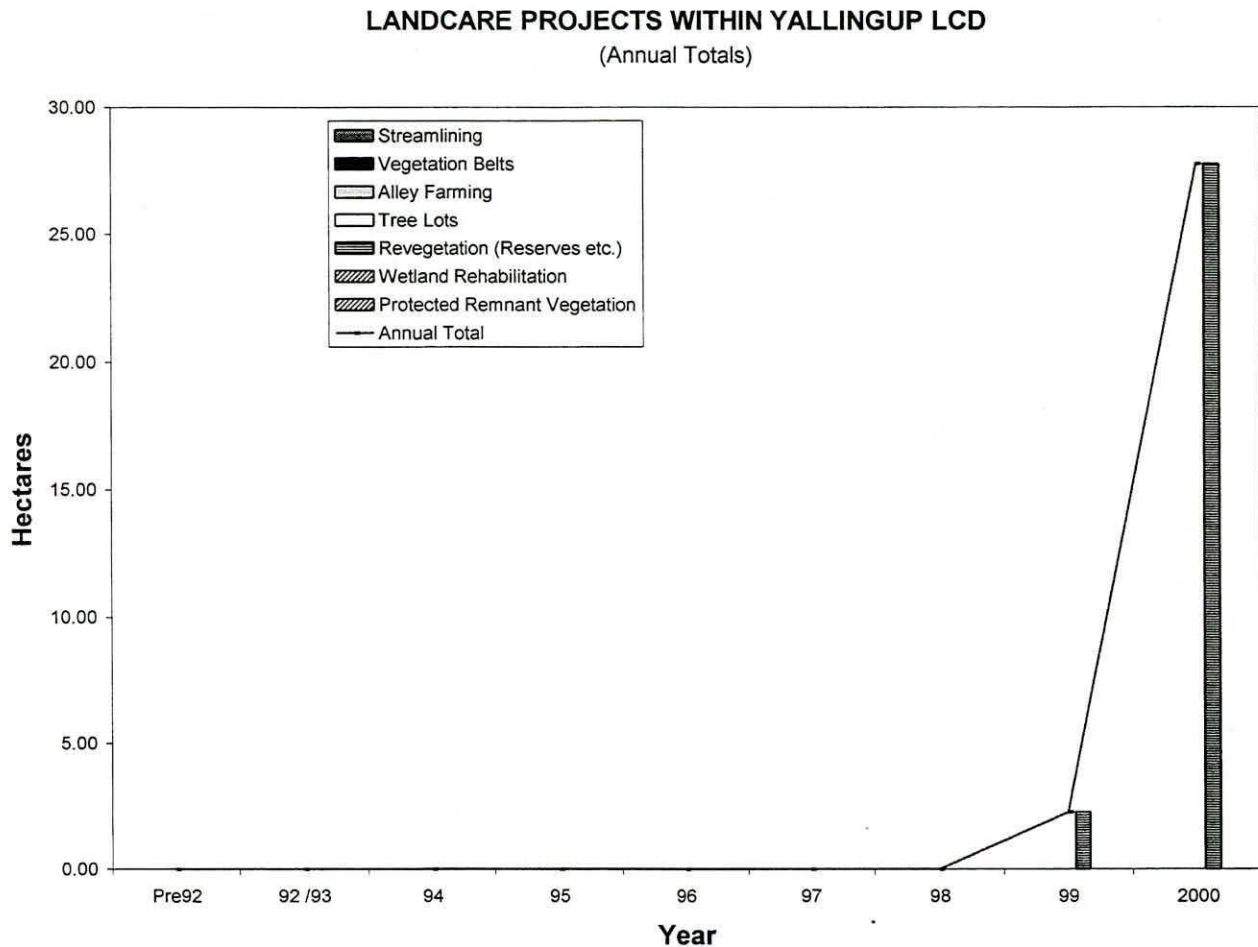


Figure 20: Landcare vegetation projects within the Yallingup LCDC (annual totals).

LCDCs in the South West Region have generally focused on projects relating to landcare and rivercare. However the Yallingup LCDC, adjoining the coast line, has also put resources into coastal rehabilitation work, for example dune restoration and beach paths.

8.0 VALUE OF LANDCARE IN THE SOUTH WEST

Sections 5 to 7 of this Annual Report documents the amount of on ground landcare projects that have been undertaken in the Peel Harvey, Leschenault and Geographe catchments. Whilst recording this information on a hectare basis is very useful, being able to estimate a dollar figure against these projects is valuable in determining how and where our funding dollars are being spent.

In the Peel Harvey, Leschenault and Geographe catchments, natural resource management agencies and the community have been successful in attracting an estimated \$1,209,396 for on-ground landcare activities in 2000. Match this figure with in kind contributions and we get a minimum estimate figure of \$2,418,792 (Table 3).

Most funding from NHT, Alcoa, industry and government and others requires the proponent to match the grants dollar for dollar. Therefore any inkind contributions are based on doubling the funding component of a landcare project. AGWEST understands that this figure is conservative, and landholders often contribute more, however calculations in this report are only estimates of the value of landcare. Calculations can be seen in Appendix 5.

Project	Peel Harvey funding	Leschenault funding	Geographe funding	TOTAL Funding
Streamlining	\$31,405		\$10,503	\$41,909
Vegetation Belts	\$52,437	\$2,336	\$25,546	\$80,319
Alley Farming				\$0
Tree Lots				\$0
Revegetation (reserves)	\$78,536	\$75,167	\$160,332	\$314,035
Wetland Rehabilitation	\$29,661		\$695,508	\$725,169
Protected Remnant Vegetation	\$4,200		\$43,764	\$47,964
TOTAL LANDCARE FUNDING	\$196,240	\$77,503	\$935,653	\$1,209,396
PLUS INKIND	\$392,480	\$155,006	\$1,871,306	\$2,418,792

Table 3: Total estimated dollars of funding secured in the Peel Harvey, Leschenault and Geographe Catchments in 2000 for landcare projects.

Figure 21 clearly illustrates that the Geographe catchment has been granted a large amount of money for on-ground landcare activities, namely wetland rehabilitation and revegetation of reserves. Funding for the landcare activities in the catchment estimated a total of \$935,653 in 2000. Adding together the community contributions (inkind) and the funding, this figure totals \$1,871,306.

The value of landcare calculations are based on the area in hectares that has been protected through landcare projects. For example, 10 ha of protected remnant vegetation may have been protected as a result of 20 m of fencing. Please note that wetland rehabilitation takes into account the entire area of a wetland, even though only a small section may have been protected by a landcare project.

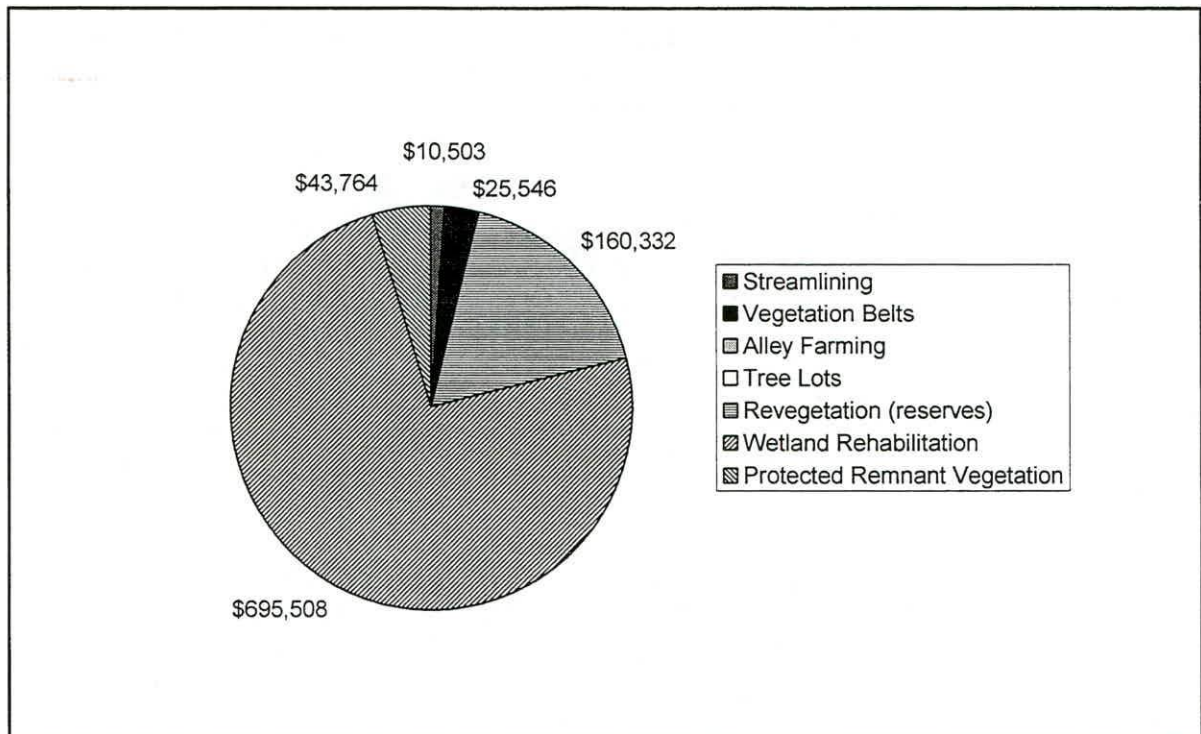


Figure 21: Estimated value of landcare in the Geographe catchment (funding dollars), 2000.

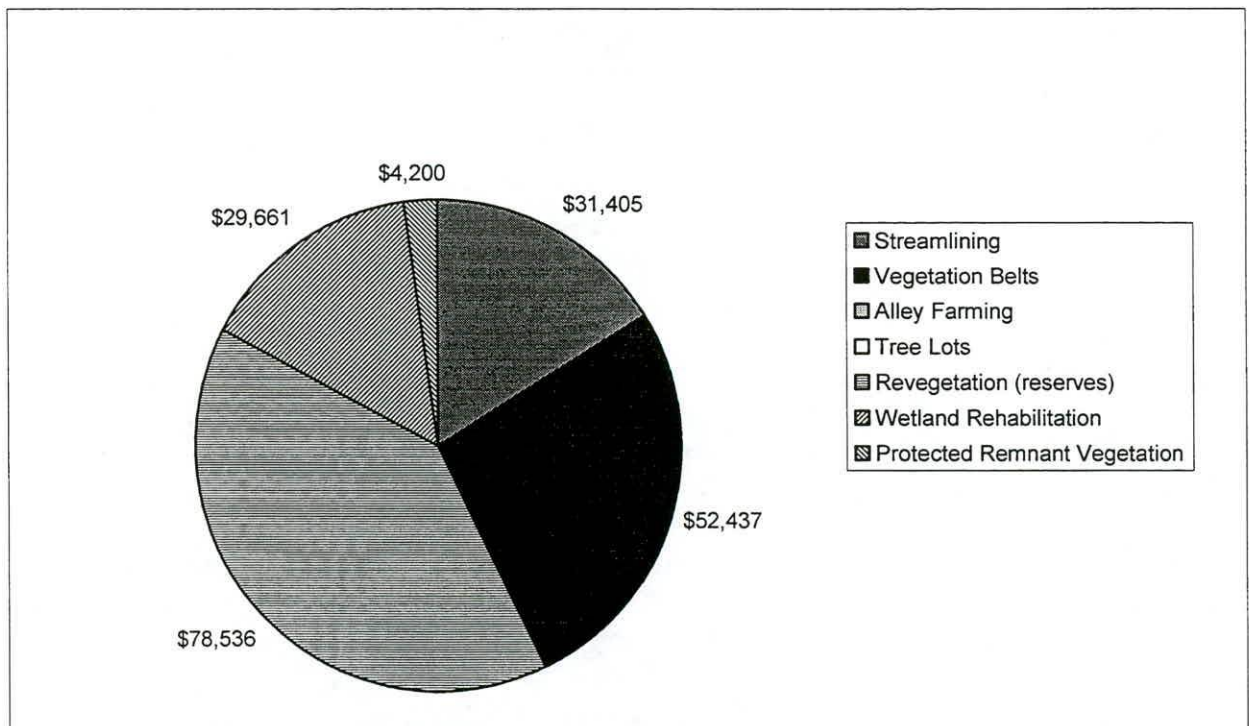


Figure 22: Estimated value of landcare in the Peel Harvey catchment (funding dollars), 2000.

In 2000, the Peel Harvey catchment was successful in attracting an estimated \$196,240 for on ground landcare works. Revegetation of reserves and vegetation belts used \$78,536 and \$52,537 of this on ground funding respectively, as indicated in Figure 22. Totalling up the community contribution and the funding grants, the full amount of on ground money dedicated to revegetation projects in 2000 is estimated at \$392,480.

In the Leschenault catchment, \$77,503 was obtained from funding bodies for on ground landcare activities in 2000. Revegetation of reserves was the catchments major focus, with \$75,167 being spent on this activity (Figure 23). Combining the dollars received from funding sources and the in kind contribution, the Leschenault catchment contributed \$155,006 to on ground landcare activity in 2000.

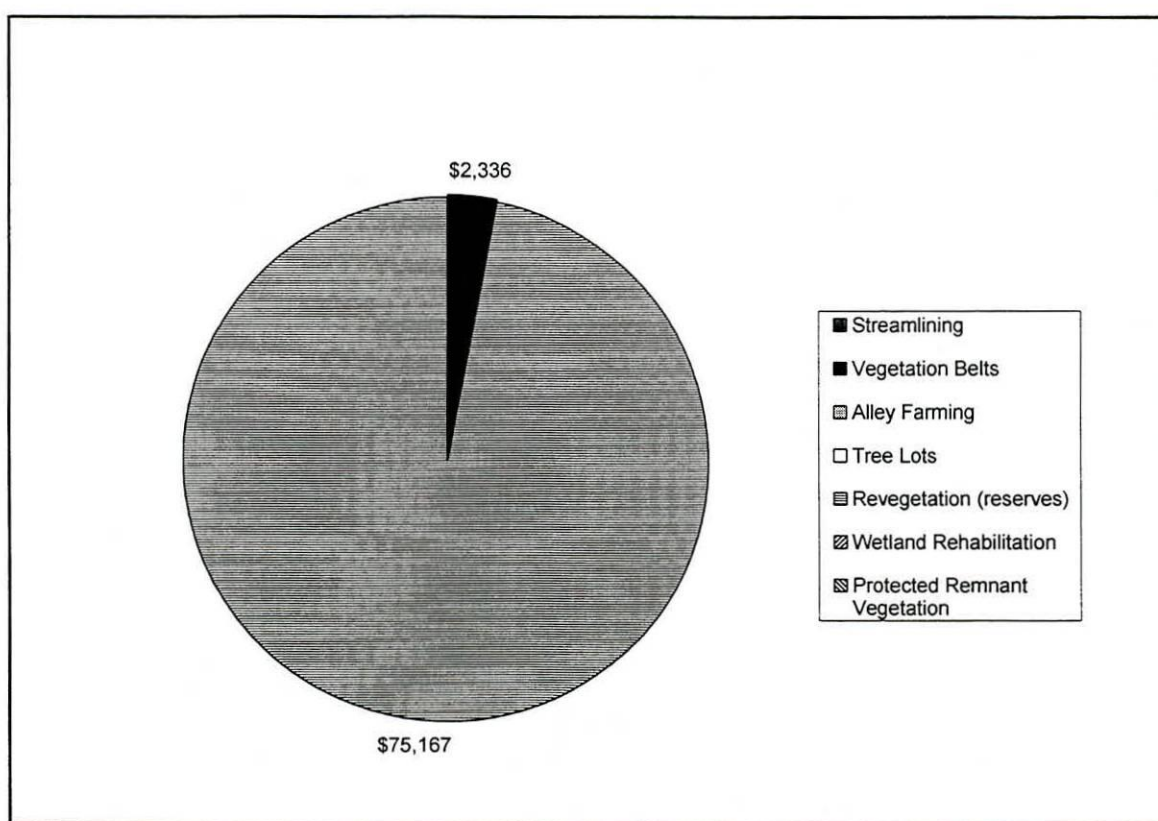


Figure 23: Estimated value of landcare in the Leschenault catchment (funding dollars), 2000.

In addition to the on ground activity, landcare funding has been directed into Community Landcare Coordinators positions, local government and State government agencies, to assist community members to complete on ground landcare activity.

Most importantly, members of LCDs and community natural resource management groups, play a large role in the implementation of landcare activity. The dollar value of volunteer contributions to landcare is estimated at \$8, 250, per person, per year (see Appendix 8). This figure is conservative, with many community members devoting a great deal of their time into

running community groups, organising planting days and promotional events, and applying for funding grants.

9.0 CONCLUSION

Trends in revegetation and landcare activity in the South West region in 2000 have been varied and unpredictable. Some LCDCs have increased their landcare activity, such as Donnybrook Balingup, Capel and Sussex, while others, such as Coolup, Wellesley and Vasse Wonnerup, have scaled back activity. Reasons for these differences may be due amounts of funding available for on ground activity, level of external support and individual and LCDCs groups' future goals.

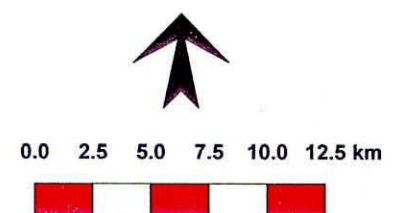
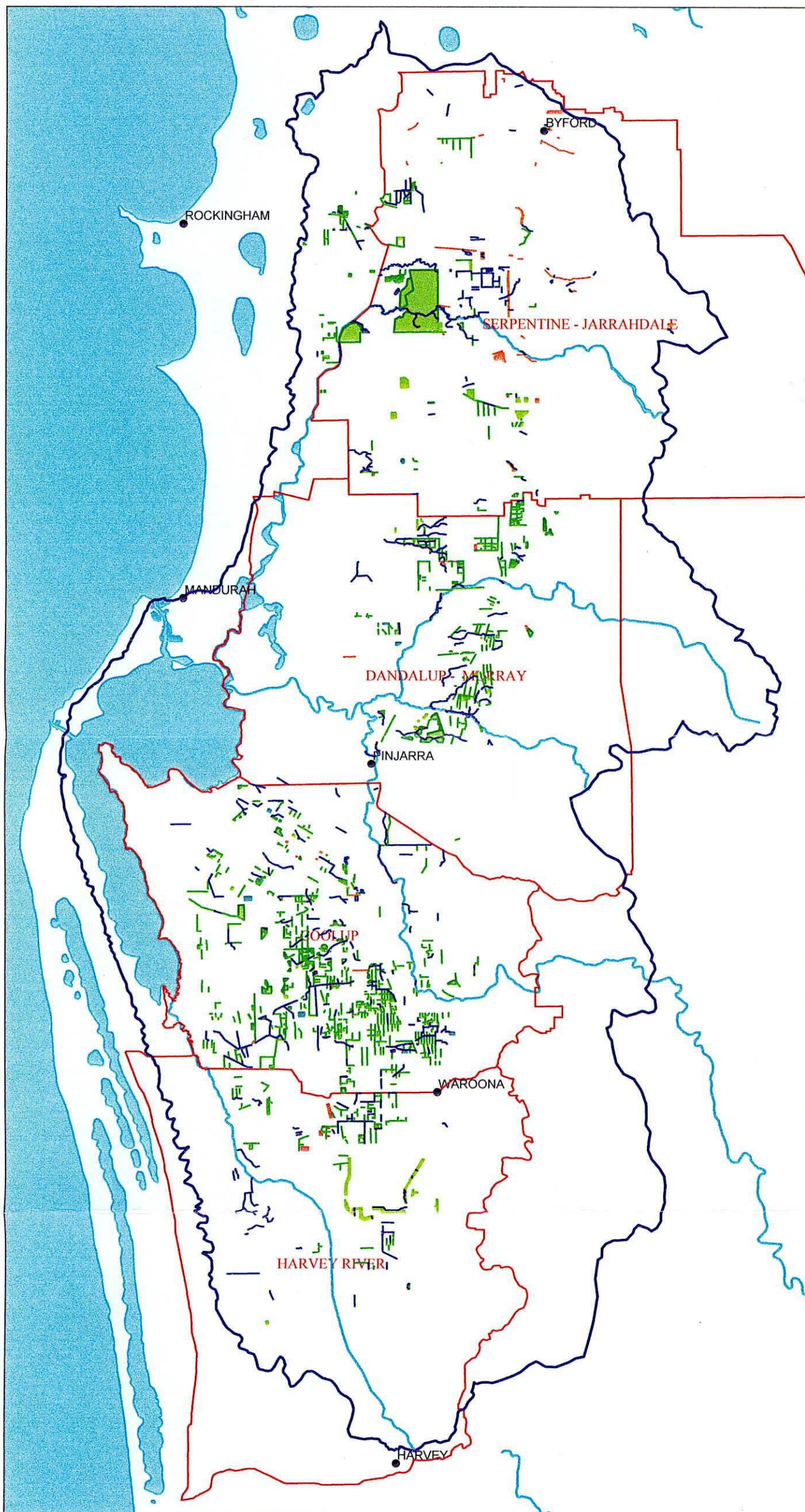
Whatever the reasons for the differing trends, this report has highlighted the amount of landcare activity and volunteer contributions that natural resource management groups have made in 2000.

The AGWEST Landcare Monitoring Activity will continue to be promoted as a standardised method for recording landcare activities. Revegetation has been increasing since pre 1992 and can be attributed to the communities keen interest in natural resource management and funding from Alcoa, and other State and Federal organisations being matched by farmer contributions.

Future funding by Federal government, Industry and other initiatives, plus external support, will ensure landcare activities continue in the future.

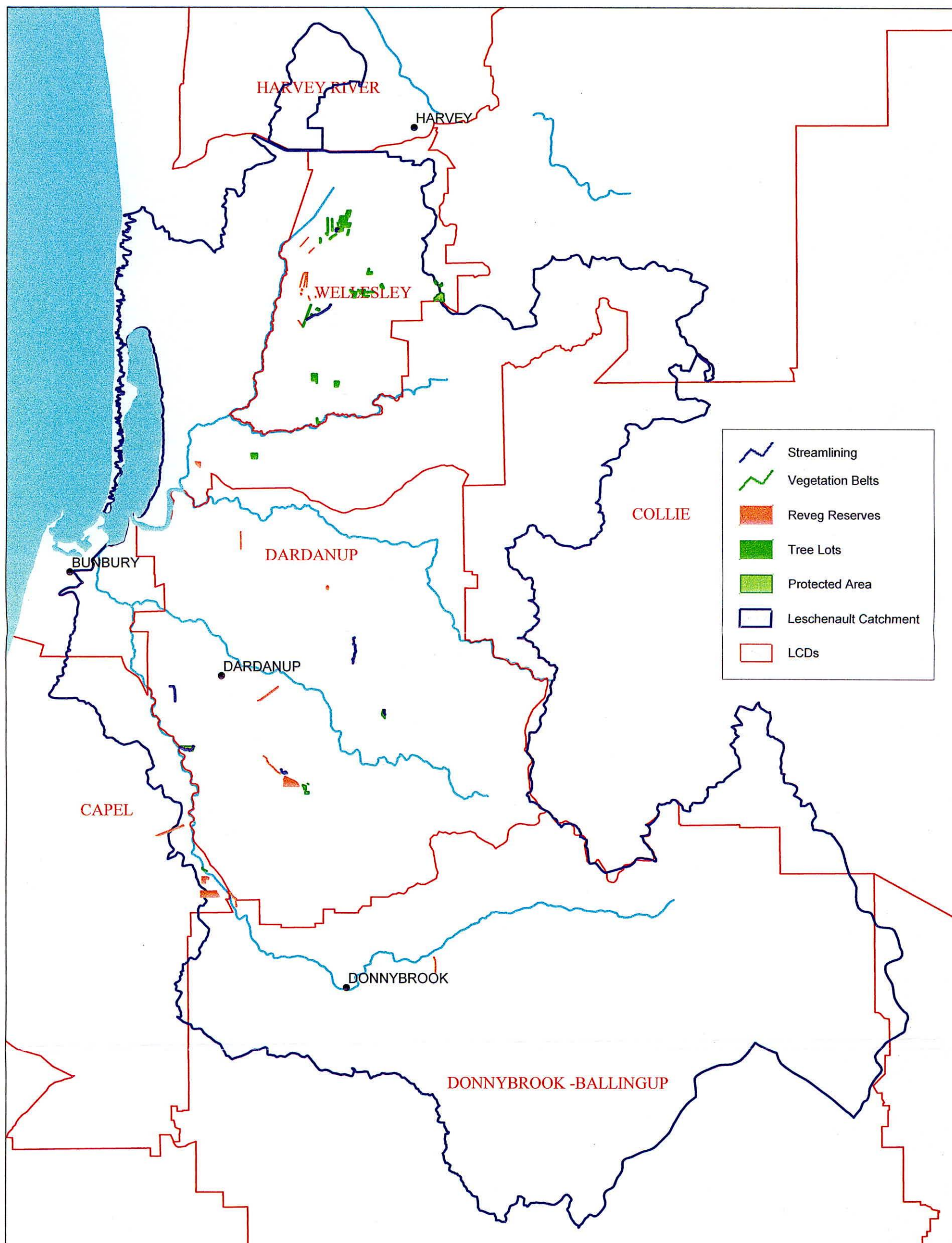
LANDCARE VEGETATION PROJECTS IN THE PEEL HARVEY CATCHMENT

Appendix 1



LANDCARE VEGETATION PROJECTS IN THE LESCHENAULT CATCHMENT

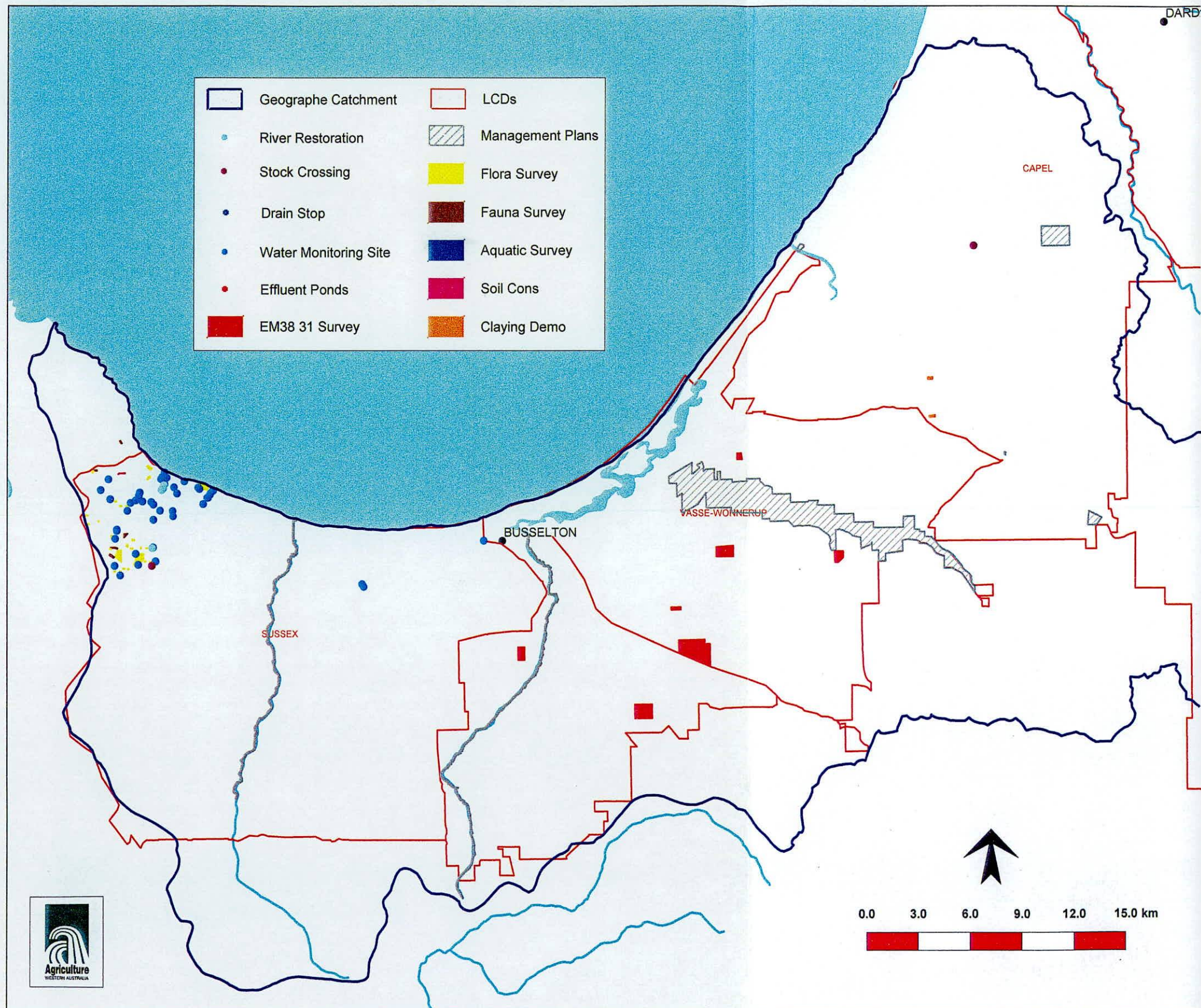
Appendix 2



0.0 2.5 5.0 7.5 10.0 12.5 km

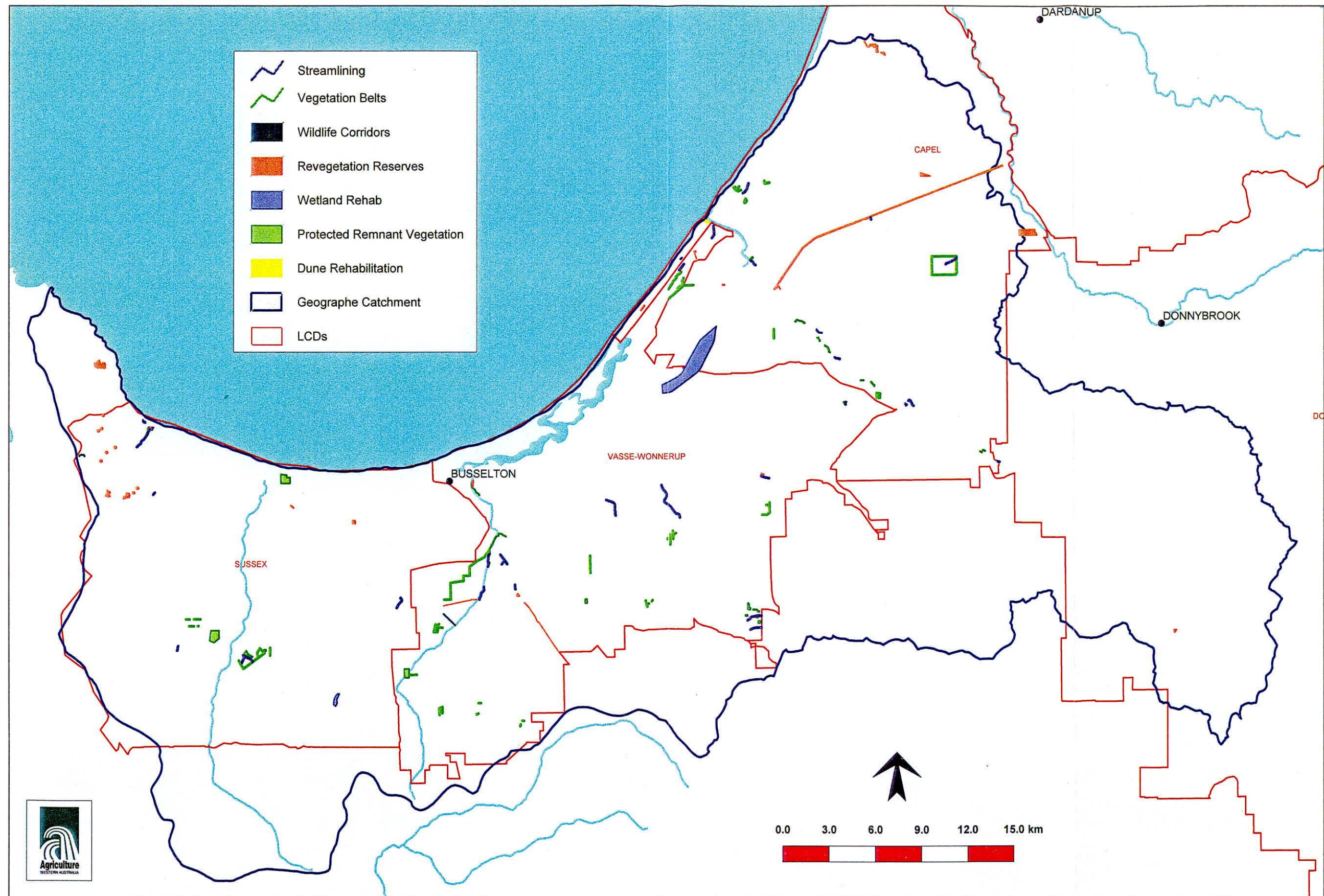


OTHER PROJECTS IN THE GEOGRAPHE CATCHMENT



LANDCARE VEGETATION PROJECTS IN THE GEOGRAPHE CATCHMENT

Appendix 3



Appendix 5 - Calculations for the value of landcare

ITEM	FUNDING RATE	Amount per ha
Fencing (protecting rem veg)	\$600/km	\$ 600
Streamlining, shelter belts, alley farming (all fenced)	\$1615/km	\$1615
Reveg of reserves <ul style="list-style-type: none"> Seedlings – 0.50c each. Ripping and mounding - \$90/hr and \$50/hr. Chemical weed control - \$115/ha. Tree Guards – 0.50c 	<ul style="list-style-type: none"> Seedlings = 1000 plants p/ha (0.50 x1000). Ripping (min 3 hrs) and mounding (min 2 hrs) – based on 4 ha per 5 hours = \$370. Tree Guards – 0.50c (0.50x1000) 	<ul style="list-style-type: none"> Seedlings = \$500 per ha. Ripping and Mounding = \$92.5. Chemical weed control - \$115 Tree Guards - \$500 per ha. <p>TOTAL = \$1207.5</p>
Tree Lots and Wetland Rehabilitation - as for reveg of reserves, but fenced.		\$1807.5

Assumptions:

1. All figures based on NHT costings for 2000 funding round.
2. This table does not include the inkind component of the project. Project totals will be doubled to include this component. This estimate will only be the minimum figure, as inkind contributions are often greater than 1:1 as stipulated by funding bodies.

Volunteer contributions

- Based on \$15 per hour
 - 10 meeting per year
 - 3 hours per meeting
 - 10 hours extra volunteer time per week
- = 10 x 3 x 15 = 450
10 x 15 x 52 = 7,800
TOTAL = \$8,250 per year