# **Wetland Implementation Plans**

# for

# **South Coast Wetland Suites**



January to March 2009

April 2009

A report produced by Green Skills Inc. for South Coast Natural Resource Management for Wetlands Implementation Project <u>mailto:tim.frodsham@gmail.com</u> 04SC1-08p

By Kerry Logan, Basil Schur and Maren Heckel

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Cover Photo: Green Skills Wetland Project Manager, Kerry Logan with Bremer Bay farmer Phil Whishart inspecting recently fence wetland area on his farm near Bremer Bay in the Bremer Bay Wetland Suite area.





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#### **Comments and Corrections**

This report is intended to provide documentation to support the future funding of wetland implementation projects on farms on priority south coast wetland suites. Any comments or corrections on the funded or proposed on-ground works outlined in this report would be welcomed. Please forward comments to: Basil Schur Projects Manager Green Skills PO Box 577, DENMARK WA 6333 Ph: 08 9848 1019 Mobile 0429481019 Fax: 08 9848 2061 Email: bschur@greenskills.org.au

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## 1 METHODOLOGY

## 1.1 Overview:

The aim of the Wetlands Implementation Assessment is to determine which wetland protection projects landholders are planning and to document the proposed projects. Individual proposed projects were assessed according to the threatening processes and conservation values identified in the corresponding management plans for the wetland suites. This process will facilitate prioritizing projects for future funding.

The Green Skills Regional Wetland Program has been operating for over a decade across the South Coast Region. During this time, Green Skills has built up a network of contacts for wetland conservation amongst landholders, NRM officers, Community Engagement Officers, Stage Agency staff and community organisations.

Contact details of landholders who were contemplating wetland protection works were forwarded to Green Skills from officers in the regions.

Information about Esperance based projects included:

- the Mortijinup Wetland Suite through Robyn Cail, Biodiversity Implementation Officer in Esperance and
- the Benje Benjenup wetland suite through Cindee Haig, the Lake Warden Project!Officer.

Projects in the Bremer Bay suite were referred from Charlotte Powis, the Community Engagement Officer at the Fitzgerald Biosphere Group.

A number of landholders in the Upper Kent and Balicup wetland suites were referred from Megan Jones, the Regional Capacity Engagement Officer based at the Gillamii Centre in Cranbrook.

A total of thirteen wetland implementation assessments were carried out between January and March 2009 and are reported in this report.

## 1.2 Contacting Landholders:

- call landholder, introduce implementation project, & arrange on-site assessment of planned projects, or
- desktop assessment with information obtained from CEO's & landholders
- Location No/ID or other identifying information was needed to produce maps of the properties.

## 1.3 Mapping

- Maps were produced by Maren Heckel using ArcView GIS.
- Map of property showing:
- Major and minor hydrography
- o Remnant vegetation
- Existing fencing
- Water bodies
- o Important wetlands
- o The wetland suite
- Contours
- o DEC managed lands
- o DIA heritage sites

## 1.4 The Assessment Process

- Meet with the landholder/s
- Identify areas for projects biodiversity protection remnant vegetation fencing
  - biodiversity protection revegetation/remnant fencing
  - o seedlings for biodiversity/riparian revegetation
  - $\circ$  seed only for biodiversity/riparian revegetation
  - seedlings and seed for biodiversity/riparian revegetation
  - o deep rooted perennial pastures
  - \*environmental weed management
  - o \*drainage
  - \*saline water diversion
  - \*other projects

\*no funding in this round – but may be in the future.

- Most often drove to project areas to look at and discuss what's needed.
- Or from landholder provided information
- Or from desk top assessment +info from CEO's and landholders

## 1.5 Information Required For Assessing Wetland Implementation Works

- Wetland suite
- Landholders demographics including registration for GST and ABN numbers
- Proposed projects
- Any previous funding
- GPS of project locations mostly sourced from Google Earth
- Project background including other sustainable land use activities
- History of project site including
- Site condition for each project
- Project summary including which catchment issues are being addressed and how the projects will progress the management aims for the suite.
- Site details:
- Area of remnant vegetation
- Perimeter of remnant vegetation
- Length of fence needed to protect remnant
- Fence type
- Landform
- Vegetation type and structure
- Vegetation condition
- If remnant links to other vegetation and/or waterways
- Known priority fauna and flora species
- Technique for revegetation
- Does it buffer/infill/link to other vegetation
- Soil type
- Is salinity present is it increasing, decreasing or stable
- Species list for revegetation
- Sewing rate
- Water logging
- Hydrology, EM38 data, water monitoring, and on-farm water.
- Monitoring and evaluation framework.

- Project timeline/s.
- Budget and funding requirements
  - Fencing 50% of the cost, up to a maximum of \$2000/km
  - Seedlings 50% of the cost, up to a maximum of \$450/Ha
  - Seed 50% of the cost, up to a maximum of \$200/Ha
  - Seedlings and seed 50% of the cost, up to a maximum of \$350/Ha
  - Soil health/deep rooted perennials 50% of the cost, up to a maximum of \$60/Ha.
- Overview map
- Property map
- Photographs
- Additional information priority fauna/fauna/Aboriginal Heritage etc......

## 2 LIMITATIONS OF METHODOLOGY

## 2.1 Contacting Landholders

It was not possible to make contact by telephone with all referred landholders. The process was to talk directly to the landholder rather than leave a phone message in the first instance. After three unsuccessful attempts a voice message would be left and in some cases the landholders returned the call.

## 2.2 Project Timing

During January and into February landholders were on holiday or busy settling children into schools. This meant some on-site assessments could not be conducted until after the second week of February.

## 2.3 The Wetlands Implementation Assessment Form

Soil pH data was not available to the assessor (either not known or finding the data was too time-consuming for the landholder).

The sewing rate for deep rooted perennials was not always known, but this information can be added when known prior to the agreement being signed.

Question 11, *HYDROLOGY*, *EM38 DATA*, *WATER MONITORING DATA*, *ON-FARM WATER MANAGEMENT* – complex series of questions, not well framed. Some of the issues were covered in the history section if they applied.

The DIA Search. It is incumbent on Green Skills under the Aboriginal Heritage Act, 1972 to undertake a search for Indigenous Heritage Sites prior to any planned works. In one case a landholder expressed concern about having a registered site on his farm without him having been previously made aware of it.

## 2.4 The Wetland Suite Management Plans

The location numbers used to identify properties in some wetland suites were not accessible to the assessor. Landholder names used in some of the management reports have changed or do not relate to the current projects. However catchment issues and threats were identified and recommendations for management were readily applicable across all of the wetland suites in this report.

## 3 THE PROJECTS

## 3.1 The Mortijinup Wetland Suite

The Mortijinup Wetlands are located 20km to the west of Esperance on the eastern south coast of W.A. (Appendix 1). The wetland suite is listed in the *Directory of Important Wetlands in Australia*. 'The directory lists Australia's nationally important wetlands, featuring a range of wetland types and locations. The Mortijinup lakes system is listed in the directory, cited as "A good example of a system of relatively undisturbed coastal lakes of south-western Australia, exhibiting a diversity of hydrological and vegetation characteristics".'<sup>1</sup>

A major rehabilitation project is being undertaken by landholder Adrian Welke whose land is situated due north of the Mortijinup Lake. He is fencing off and revegetating all of the creeks and wetlands on his property and revegetating salt affected areas. This project will implement 26 hectares of revegetation (riparian buffer and infill) and erect 13.5 km of new fences. The fencing will protect 175.8 hectares of remnant vegetation and revegetated riparian land. (Table 5).

This project will address the threats to the Mortijinup Wetland Suite of the effects of degraded fringing vegetation and changing water quality through increasing salinity, sedimentation and eutrophication of waterways. More groundwater will be used by the deep rooted perennials and native vegetation being planted, and less surface run-off will reduce the threat of waterlogging in the wetlands. Grazing will be excluded through fencing and this will reduce the incursion of weeds into remnant vegetation and revegetation.

The *Recommendations for the Management of the Wetlands of the Mortijinup Lakes* recommend the protection and enhancement of waterways as a top priority. Revegetating areas and infill plantings are also highly recommended. This project addresses those priorities.

#### Table 1: Threats and Priorities for the Mortijinup Wetland Suite

THREATS A	ADDRESSED/PRIORITY				
SALINITY	EUTROPHICATION	SEDIMENTATION	WATERLOGGING	GRAZING	WEEDS
Н	Н	Н	Н	Н	М

## 3.2 The Benje Benjenup Wetland

Lake Benje Benjenup is located approximately 18km north of Esperance on the eastern south coast of W.A. (Appendix 1). 'Lake Benje Benjenup is a naturally occurring salt water lake with significance for its habitat values for Hooded Plover and other waterbirds.'<sup>2</sup>

Noel Wilson is a sheep, cattle and cropping farmer whose property lies north west of Lake Benje Benjenup. He has been implementing a staged introduction of deep rooted perennial pastures on his property over the past four years. In this project, Noel Wilson has planted 38ha of Kikuyu into one land management unit.(Table 5). The completion of this project effectively achieves deep rooted perennial pastures on over half of his land.

The biggest threat to the safe breeding of Hooded Plovers identified in the report *An Inventory, Assessment and Recommendations for Management for the Benje Benjenup Wetland* is that of increasing quantities of water

<sup>&</sup>lt;sup>1</sup> Hopkinson. K 2001 *Recommendations for the Management of the Wetlands of the Mortijinup Lakes.* A report produced by Green Skills for the Natural Heritage Trust and the Water and Rivers Commission p10 <sup>2</sup> Cillogrip P 2006 An Investment of the Management of the Mortijinup Lakes.

<sup>&</sup>lt;sup>2</sup> Gillespie P. 2006. *An Inventory, Assessment and Recommendations for Management for the Benje Benjenup Wetland*. A report produced by Green Skills for the South Coast Regional Initiative Planning Team. P 13

entering the lake. Integration of deep rooted perennial species within the farming system of the catchment was recommended.

The planting for this project will reduce recharge into Lake Benje Benjenup and surrounding properties by implementing one of the recommended strategies.

#### Table 2: Threats and Priorities for the Benje Benjenup Wetland

#### THREATS ADDRESSED/PRIORITY – Benji Benjenup

		0 0 I			
SALINITY	EUTROPHICATION	SEDIMENTATION	WATERLOGGING	GRAZING	WEEDS
Н	Н	Н	Н	Н	Н

### 3.3 The Bremer Wetland Suite

The Bremer Wetland Suite is approximately 120km east of Albany on the south coast of W.A. (Appendix 2). 'The wetlands in the Bremer Bay region have been widely recognised as being significant'<sup>3</sup> due to the large number of waterbirds which roost there. They have national, regional and local significance because of the diversity of wetlands in the suite.

Two landholders have been offered funding for fencing off remnant vegetation on their properties, Phil and Kathy Wishart and Steve and Megan Robb. Their projects will protect more than 454 hectares of remnant vegetation by erecting 7.4 km of new fences on their properties. (Table 5).

More projects have been assessed for funding to June 2009. Phil and Jane Dorrell have revegetated a creekline and are seeking funding for 2.5 km fencing to protect these 44 hectares of native revegetation. (Table 8).

In the 2009/10 season the Robbs are planning to revegetate over 73 hectares of salt affected land around creeks and wetlands which will require a further 3.3kms of fencing. The Wisharts are planning to protect a further 104 hectares of remnant bush by erecting over 10kms of new fences. (Table 9)

Fencing native vegetation and revegetated areas from stock will address some of the threats outlined in the *Recommendations for the Management of the Bremer Wetlands, 2001.* The projects will reduce the introduction of weeds into native vegetation; stop grazing and trampling in native vegetation; stabilize the soil and reduce erosion, sedimentation and transport of nutrients into waterways and wetlands. It will protect biodiversity and habitat, enhance water quality and enhance the long-term sustainability of downstream wetlands.

#### Table 3: Threats and Priorities for the Bremer Wetland Suite

THREATS	ADDRESSED/PRIORITY	- Bremer			
SALINITY	EUTROPHICATION	SEDIMENTATION	WATERLOGGING	GRAZING	WEEDS
Н	Н	L	Н	Н	L

<sup>&</sup>lt;sup>3</sup> Hopkinson K. 1999, 2001. Recommendations for the Management of the Bremer Wetlands: Swamp Rd Catchment Gairdner Study Group Catchment Devils Swamp Catchment. Water and Rivers Commission and Green Skills .p 8

## 3.4 The Balicup Wetland Suite

The Balicup Wetland Suite is located approximately 42 km north east of Mt Barker in the south of W.A. Some of the wetlands contained in the suite are listed as being nationally significant, 'being the Balicup Lake System in the National Directory of Important Wetlands in Australia (ANCA 1996). In addition, these wetlands were identified as being regionally significant in the regional evaluation of wetlands of the South Coast region'<sup>4</sup> because of their diversity, landscape, processes and the refuge they provide to waterbirds.

Mark Jefferies owns a property that lies on the western border of Lake Balicup. In the last three years he has planted deep rooted perennial pastures to reduce recharge and stabilize the soils. His property has deep sand lenses and lunette dunes surrounding wetlands that are prone to erosion. Mark plans to fence off all of the remnant vegetation on his property, including some of the unstable dunes inside the new fencing.

In this funding round Mark Jefferies will erect 3.7 km of fencing to protect 78 hectares of buffering remnant vegetation surrounding lakes on the property. Over the next two to three years he plans another 4.8 km of fencing to protect a further116 hectares of remnant native vegetation. (Tables 5 & 10)

The projects planned for this year will address the threats outlined in the *Management Recommendations for the Balicup Group of Wetlands 2005*, namely '...poorly vegetated along western boundary...'(Balicup)and 'patchy vegetation connecting wetlands....potential for and excellent corridor between the 2 large lakes.' (South Lake: UKCL 4345,5040. pp 11, 24). Furthermore maintaining the remnant vegetation and use of deep rooted perennial pastures will limit recharge to groundwater. Fencing and protecting these important wetlands will buffer the lakes and provide actual or potential effective corridors that link to other large remnants that surround the property. It will also help with nutrient uptake, reduce degradation through trampling and grazing and reduce weed incursion into remnant vegetation.

#### Table 4: Threats and Priorities for the Balicup Wetland Suite

THREATS	ADDRESSED/PRIORITY				
SALINITY	EUTROPHICATION	SEDIMENTATION	WATERLOGGING	GRAZING	WEEDS
М	Н	L	Н	Н	М

## 3.5 The Upper Kent Wetland Suite

The Upper Kent Wetland Suite is situated approximately 20km north of Mt Barker in the south of W.A. 'The Upper Kent Catchment area contains a large group of wetlands that share a range of similar characteristics and attributes. These wetlands were identified as being regionally significant in the regional evaluation of wetlands of the South Coast region.'<sup>5</sup>

David Preston is a landholder whose property is dissected by the northern border of the Upper Kent catchment boundary. He has been undertaking farm-scale rehabilitation works over the last several years to ameliorate salinity problems. He has fenced remnant vegetation, used integrated tree management strategies (with the Forest Products Commission), revegetated riparian areas, planted deep rooted perennials and salt-tolerant species. He is seeking funding for 1.4km new fences to protect a revegetated area (36 hectares) and 27 hectares of remnant vegetation. (Table 8).

<sup>&</sup>lt;sup>4</sup> Hopkinson K. 2005. Management Recommendations for the Balicup Group of Wetlands. Wetland Conservation in the North Stirling Basin, South Coast region of WA. Green Skills p 7

<sup>&</sup>lt;sup>5</sup> Hopkinson K. 2003. Wetlands of the Upper Kent Catchment: An Inventory, Assessment and History of Priority Wetlands including Recommendations for Management. Green Skills p9

Jock Clapin has a number of properties which lie in and around the Upper Kent's north eastern boundary. He has fenced off all of the major creek lines and water courses on his properties. In the last six years he has noticed some tree deaths in low-lying areas. This has prompted him to engage the services of the Forest Products Commission to plant trees on some of his properties to buffer some native vegetation and reduce recharge. In this funding round Jock would like to plant perennial pastures in three low-lying, waterlogged, saline areas, a total of 66 hectares. (Table 8).

Jock Clapin is planning to fence off the remnant vegetation on his land over the next few years. Proposed fencing projects over the next 4 years would see 228 hectares of remnant vegetation protected by 7.3km of fencing.

Jenny and Chris Parsons live near Lake Nunijup in the middle of the Upper Kent Catchment. They have undertaken a number of sustainable land care projects including fencing off all of their creek lines and also fencing off large areas of remnant vegetation. They plan to continue fencing the remnant vegetation and to do some revegetation around creek lines and into some saline areas. They will be preparing the soil this year for planting next year and will be seeking funding for 7.5 hectares of native revegetation and 1.6km of fencing to protect the revegetation and 79 hectares of remnant native vegetation. (Table 9).

Brett and Tracy Smith's properties lie just outside of the Upper Kent catchment boundary in the Gordon River Catchment. They have been progressively draining and revegetating areas of their property and are interested in sourcing funding for future projects which include drainage, planting deep rooted perennial pastures, fencing remnant vegetation and revegetation using tree alleys with salt tolerant perennial plants. This year they plan to install 2 km of drains to address waterlogged soils and associated salinity. Over the next two years they are seeking funding to erect 1.9 km of fencing to protect 51 hectares of remnant vegetation; plant 26 hectares of deep rooted perennial pastures needing 2.5 km of new fence to fence it off; and plant 25 hectares to tree alleys and salt tolerant perennials.(Tables 9 & 10).

The proposed projects in the catchment will progress the recommendations made in the *Wetlands of the Upper Kent Catchment... Recommendations for Management, 2003.* Fencing remnant vegetation will exclude stock thus reducing the effects of degradation of soils, flora and waterways. Intermittently waterlogged ground will be revegetated and protected as it's an important wetland fringe. Fencing and revegetation improves the buffers for water courses and are conservation areas for flora and fauna. Deep rooted perennial pastures help to restore the hydrology of the wetlands through reduced recharge by surface runoff and by addressing rising groundwater and the associated waterlogging and salinity issues.

#### Table 5: The Threats and Priorities for the Upper Kent Wetland Suite

THREATS .	ADDRESSED/PRIORITY				
SALINITY	EUTROPHICATION	SEDIMENTATION	WATERLOGGING	GRAZING	WEEDS
Н	Н	М	Н	Н	Н

## 3.6 The Owingup Wetland Suite

The Owingup Wetland Suite is located approximately 20km west of Denmark on the south coast of W.A. 'The health of the Owingup swamp is largely dependent upon two things the quality of the water entering the wetland and the health of the riparian vegetation and surrounding bushland, the two being closely linked. The quality of water entering the system is mainly dependent upon that flowing from the Kent River.'<sup>6</sup>

Phillip Oxbrow's property in Kentdale is dissected by a tributary of the Kent River. He is a beef cattle farmer and up until now the stock have had full access to the creek and the riparian zone. Phillip is planning to fence off all of the riparian areas and some remnant vegetation on his property over the next 4 years. In this funding round

<sup>&</sup>lt;sup>6</sup> Gillespie P. 2006. An Inventory, Assessment and Recommendations for Management for the Owingup Wetland Suite. Green Skills p18

he wants to erect 0.5km of fencing to protect 1.5 hectares of riparian vegetation. (Table 9). In the future 2 km of fencing will protect 2.6 hectares of riparian and remnant vegetation.

Keith Morton and Jill Melsom own in partnership with others, a property which has 2.5 km of the Kent River as its southern border. Most of their property has been left to naturally revegetate over the last twenty years except for a few hectares were the occupants live. Keith and Jill wish to fence off an area for goats and to protect a revegetation area. In 2009/10 they plan to erect 0.45 km of fencing to protect 61 hectares of remnant vegetation in excellent condition and a revegetated area. The following year a further 0.165 km of fencing will protect all of the remnant vegetation from stock access. (Tables 9 & 10).

Preserving and protecting the riparian buffers around the creeks and river will address some of the threatening processes outlined in the ... *Recommendations for Management for the Owingup Wetland Suite, 2006.* Fencing remnant vegetation will enhance the connectivity of bushland and protect refugia for flora and fauna. It will stop the degradation of habitat through stock access to the creeks and protect the remnant vegetation from trampling and grazing. Excluding stock will reduce weed incursion to remnant vegetation. Protecting the remnant vegetation and excluding stock will help to address the issues of changing water quality through increasing salinity, eutrophication and sedimentation, which has lead to algal blooms in the Owingup Swamp.

#### Table 6: The Threata and Priorities for the Owingup Wetland Suite

#### **THREATS ADDRESSED/PRIORITY - Owingup**

SALINITY	EUTROPHICATION	SEDIMENTATION	WATERLOGGING	GRAZING	WEEDS
М	Н	L	М	Н	Н

## 4 PRIORISATION AND FUNDING

The Wetlands Implementation Project has some on ground funds for allocation. This includes:

\$60,000 for fencing (or 30km of fencing at a standard rate of \$2000+GST/km0
\$9000 for seedlings for Biodiversity and Riparian Revegetation at \$450/ha (20ha)
\$3500 for Seedlings and Seed mix Biodiversity and Riparian Reveg @\$350/ha (10ha)
\$2000 for Seed only Biodiversity and Riparian Reveg @\$200/ha (10ha)
\$12000 for Perennials @\$60/ha (200ha)
Based on the outcomes of the assessments and priorisations, the following projects had funding approved under this project budget.

### Criteria for Prioritisation

The projects chosen for approved funding were based on the following criteria:

- The scale of the environmental benefits of the funded activity in terms of addressing the threats identified for that wetland suite management plan
- Capacity of the landholder to deliver within the appropriate time scale
- Feedback from members of the technical advisory group on the value of the proposed works in terms of achieving wetland outcomes.

The five farmers who were approved project funding (see Table 7) were informed and confirmation of their agreement to implement the projects was obtained.

Further funding allocations will be made in April to June 2009, and these decisions will be based on the same criteria listed above.

For projects for which there is not funding through this South Coast NRM supported project, then Green Skills will actively work to seek other sources of NRM funding for these projects from State, Federal and Philanthropic sources.

LANDHOLDER	WETLAND SUITE	PROJECT TYPE	AMOUNT	\$ exc GST
1Wel (Welke)	Mortijinup	Fencing – Revegetation& Remnants	9.2km	18400
!	!	Fencing - Remnant	3.9km	7800
!	!	Seedlings	20ha	9000
!	!	Seedlings/Seed	бha	2100
!	!	!	!	
2Wil (Wilson)	Benje-Benjenup	Deep Rooted Perennials	38ha	2280
<b>!6 Jef (Jeffries</b>	Balicup	Fencing – Remnant	3.7km	\$7400
3Rob (Robb)	Bremer Bay	Fencing - Remnant	2.3km	4600
!	!	!	!	
4Wis (Whishart)	Bremer Bay	Fencing - Remnant	5.1km	10200
!	!	!	!	
		Fencing total – Wetland		18400
!	!Subtotals	fencing)	9.2km	
!	!	Fencing total – Wetland vegetation and bushland (km of fencing)	15km	30000
!	!	TOTAL	24.2km	48400
!	!	Seedlings - TOTAL	20ha	9000
!	!	Seedlings/Seed - TOTAL	6ha	2100
!	!	Deep Rooted Perennials - TOTAL	38ha	7600

Table 7: Planned Outcomes , on a farm by farm scale, for funding approvals provided through theWetlands Implementation Project up to the 31st March 2009

 Table 8: Planned Outcomes for funding approvals provided through the Wetlands Implementation

 Project to 31<sup>st</sup> March 2009

Planned				
outcomes				
March 2009				
Wetland Suites	Wetland Native Vegetation to be Protected by Fencing by 30 June (ha)	Area (ha)of River Riparian Vegetation to be Replanted with Native Species by 30 June	Perennial Pasture Planted (ha) to Improve or Maintain Water Quality	Fencing (km) To be Completed
Mortijinup	175.8	26	0	13.1
Benje Benjenup	0	0	38	0
Bremer Bay	454.8	0	0	7.4
Balicup	78	0	0	3.7
TOTALS	708.6	26	38	24.2

 Table 9: Funded Outputs January to March 2009

Funded Outputs: Jan-Mar 2009						
Wetland Suites	Wetland Native Vegetation Protected by Fencing (ha)	Area (ha)of River Riparian Vegetation Replanted with Native Species	Perennial Pasture Planted (ha) to Improve or Maintain Water Quality	Fencing (km)		
Mortijinup	175.8	26	0	13.1		
Benje Benjenup	0	0	38	0		
Bremer Bay	454.8	0	0	7.4		
Balicup	78	0	0	3.7		
TOTALS	708.6	26	38	24.2		

 Table 10: Wetland Implementation Projects Landholders are prepared to undertake by end of June 2009, if NRM funding support available.

LANDHOLDER	WETLAND SUITE	PROJECT No./ TYPE	AMOUNT (km) or (ha)
5Pre	Upper Kent	No.1: Fencing - Remnant (km) - 27ha	1.3
		No.2: Fencing - Revegetation (km) - 36ha	1.1
6Dor	Bremer Bay	No. 1: Fencing - Revegetation (km) - 44ha	2.5
8Oxb	Owingup	No1: Fencing - Remnant (km) - 1 ha	0.3
		No.2: Fencing - Remnant (km) - 0.4ha	0.2
11.01	<b>11 1</b> 2		21
TICIa	Upper Kent	No.1: Perennial Pasture (ha)	21
		No.2: Perennial Pasture (ha)	27
		No.3: Perennial Pasture (ha)	18
13For*	Upper Kent	No.1 - Perennial Pasture (ha)	14
		No.2 - Perennial Pasture (ha)	37
*Client has withdra	awn from project	No.3 - Perennial Pasture (ha)	1.8
		Fencing - Remnant Total (km)	1.8
		Fencing - Revegetation Total (km)	3.6
		TOTAL - FENCING (km)	5.4
		TOTAL -Perennial Patures (ha)	66
		^does not include 13For	

## Table 11: Planned Outputs April to June 2009

Planned Apr - Jun 2009				
Wetland Suites	Wetland Native Vegetation Protected by Fencing (ha)	Area (ha)of River Riparian Vegetation Replanted with Native Species	Perennial Pasture Planted (ha) to Improve or Maintain Water Quality	Fencing (km)
Upper Kent	27	36	66	2.4
Bremer Bay	0	44	0	2.5
Owingup	1.4	0	0	0.5
TOTALS	28.4	80	66	5.4

Planned Apr - Jun 2009				
Wetland Suites	Wetland Native Vegetation Protected by Fencing (ha)	Area (ha)of River Riparian Vegetation Replanted with Native Species	Perennial Pasture Planted (ha) to Improve or Maintain Water Quality	Fencing (km)
Upper Kent	27	36	66	2.4
Bremer Bay	0	44	0	2.5
Owingup	1.4	0	0	0.5
TOTALS	28.4	80	66	5.4

 Table 12: Proposed Outputs April 2009 – June 2009 (Conditional on Funding Availability)

 Table 13: Provisional Outputs July 2009 – June 2010 (Conditional on Funding Availability)

Proposed Outputs: Jul 2009- Jun 2010					
Wetland Suites	Wetland Native Vegetation Protected by Fencing (ha)	Area (ha)of River Riparian Vegetation Replanted with Native Species	Perennial Pasture Planted (ha) to Improve or Maintain Water Quality	Fencing (km)	
Bremer Bay	154	73.6	0	13.6	
Owingup	61	0.7	0	0.4	
Upper Kent	79	7.5	0	4.9	
TOTALS	294	81.8	0	18.9	
OTHER - not funded Plus 2.01km drains to protect 107** ha native wetland vegetation					

OTHER - not funded Plus 2.01km drains to protect 107\*\* ha native wetland vegetation

## Table 14: Provisional Outputs 2010 – 2011 (Conditional on Funding Availability)

Proposed Outputs: 2010-2011					
Wetland Suites	Wetland Native Vegetation Protected by Fencing (ha)	Area (ha)of River Riparian Vegetation Replanted with Native Species	Perennial Pasture Planted (ha) to Improve or Maintain Water Quality	Fencing (km)	
Bremer Bay	15.4	0	0	2.8	
Balicup	116	0	0	4.8	
Owingup	2	0	0	0.6	
Upper Kent	198	76	26	7.3	
TOTALS	331.4	76	26	15.6	

Proposed Outputs: 2011 - 2012					
Wetland Suites	Wetland Native Vegetation Protected by Fencing (ha)	Area (ha)of River Riparian Vegetation Replanted with Native Species	Perennial Pasture Planted (ha) to Improve or Maintain Water Quality	Fencing (km)	
Owingup	5.4	0	0	0.9	
Upper Kent	30	0	0	1.1	
TOTALS	35.4	0	0	2	

## Table 15: Provisional Outputs 2011 – 2012 (Conditional on Funding Availability)

## Table 16: Proposed Outputs 2012 on

Proposed Outputs: 2012 on					
Wetland Suites	Wetland Native Vegetation Protected by Fencing (ha)	Area (ha)of River Riparian Vegetation Replanted with Native Species	Perennial Pasture Planted (ha) to Improve or Maintain Water Quality	Fencing (km)	
Owingup	2	0	0	1.3	
Upper Kent	24	0	0	1.1	
TOTALS	26	0	0	2.4	