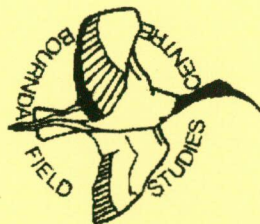




GUIDE TO DOCUMENTING LAND REHABILITATION PROJECTS

Prepared by:
Richard Blakers
Jackie Miles
Jan Lynch

This project has been funded
by a grant to the
Bournda Field Studies Centre by the
New South Wales Government
through its Environmental Trusts Program



ACKNOWLEDGEMENTS

The project team extends thanks to those who made the project possible and gave support during its execution. Particular thanks go to

Environmental Trusts of NSW

For funding the project.

Bega Valley Shire Landowners and Landcare Groups

For giving up time so that others could learn from their experience.

Bournda Field Studies Centre

Jack Miller for advice and encouragement.

Department of Land and Water Conservation

For help and advice in setting up and carrying out the project

Don McPhee

Justin Gouvernet

Sandra Riddell

Ken McLeod

Andy Dunn

John Knight. For advice and reviews of reports.

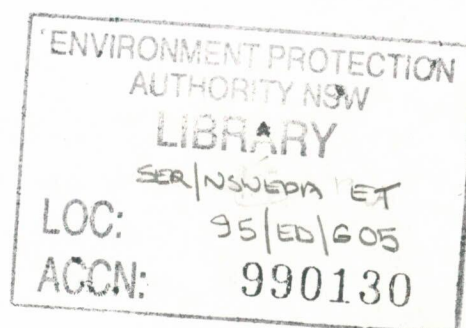


TABLE OF CONTENTS

DOCUMENTING LAND REHABILITATION WORKS.....	3
1 LAND DEGRADATION IN NSW.....	3
2 WHY DOCUMENT REHABILITATION WORKS?.....	3
3 HOW TO DOCUMENT REHABILITATION WORKS.....	4
4 PHOTOGRAPHING REHABILITATION WORKS.....	4
GUIDE TO COMPLETING THE REHABILITATION SITE WORKS REPORT	6
1 PROPERTY INFORMATION.....	6
2 THE SITE ENVIRONMENT.....	6
2.1 <i>Vegetation surrounding the site</i>	7
2.2 <i>Presence of noxious weeds</i>	7
2.3 <i>Fauna recorded around the site</i>	7
3 THE REHABILITATION SITE.....	7
3.1 <i>What type of degradation exists at this site</i>	7
3.2 <i>Description of the site prior to rehabilitation work (including the causes)</i>	7
3.3 <i>Likely impacts of the degradation if not corrected</i>	8
3.4 <i>Can it be corrected within the property? If not, who would be involved</i>	8
4 REHABILITATION WORKS.....	8
4.1 <i>What was the planning process and who was involved?</i>	8
4.2 <i>Description of the rehabilitation work done</i>	8
4.3 <i>Plant species used on the site if any</i>	8
4.4 <i>Equipment and labour used and costs incurred</i>	9
4.5 <i>Problems associated with the planning and execution of the work</i>	9
4.6 <i>Lessons learned from the works, advice and tips for others</i>	9
A GUIDE TO THE REHABILITATION SITE MONITORING REPORT	9
SAMPLE REHABILITATION SITE WORKS REPORT	10
PROPERTY INFORMATION.....	10
<i>The landowners</i>	10
<i>Current land use</i>	10
THE SITE ENVIRONMENT.....	10
<i>Topography and slope of the land at the site</i>	10
<i>Position of the site in the terrain</i>	10
<i>Climate and hydrology</i>	11
<i>Soils / geology</i>	11
FLORA AND FAUNA.....	11
<i>Vegetation type and species surrounding the site</i>	11
<i>Presence of noxious weeds</i>	11
<i>Fauna recorded around the site</i>	11
THE REHABILITATION SITE.....	11
<i>What type of degradation does this site represent</i>	11
<i>Description of the site prior to rehabilitation work (including the causes)</i>	12
<i>Likely impacts of the degradation if not corrected</i>	12
<i>Can it be corrected within the property? If not, who would be involved?</i>	12
REHABILITATION WORKS.....	13
<i>What was the planning process and who was involved?</i>	13
<i>Description of the rehabilitation work done</i>	13
<i>Plant species used on the site if any</i>	13
<i>Equipment and labour used and costs incurred</i>	14
<i>Problems associated with the planning and execution of the work</i>	14
<i>Lessons learned from the works, advice and tips for others</i>	14
SAMPLE REHABILITATION SITE MONITORING REPORT	15

PROPERTY INFORMATION	15
<i>Description of the site</i>	15
<i>Problems arising from the work</i>	15
<i>Benefits of the work</i>	15
BIBLIOGRAPHY	16
REHABILITATION SITE WORKS REPORT	17
PROPERTY INFORMATION	17
<i>The landowners</i>	17
<i>Current land use</i>	17
THE SITE ENVIRONMENT	17
<i>Topography and slope of the land at the site</i>	17
<i>Position of the site in the terrain</i>	17
<i>Climate and hydrology</i>	18
<i>Soils and geology</i>	18
FLORA AND FAUNA	18
<i>Vegetation type and species surrounding the site</i>	18
<i>Presence of noxious weeds</i>	18
<i>Fauna recorded around the site</i>	18
THE REHABILITATION SITE	19
<i>What type of degradation does this site represent</i>	19
<i>Description of the site prior to rehabilitation work (including the causes)</i>	19
<i>Likely impacts of the degradation if not corrected</i>	19
<i>Can it be corrected within the property? If not, who would be involved?</i>	20
REHABILITATION WORKS	20
<i>What was the planning process and who was involved?</i>	20
<i>Description of the rehabilitation work done</i>	20
<i>Plant species used on the site if any</i>	21
<i>Equipment and labour used and costs incurred</i>	21
<i>Problems associated with the planning and execution of the work</i>	21
<i>Lessons learned from the works, advice and tips for others</i>	21
REHABILITATION SITE MONITORING REPORT	22
PROPERTY INFORMATION	22
<i>Description of the site</i>	22
<i>Problems arising from the work</i>	22
<i>Benefits of the work</i>	22

DOCUMENTING LAND REHABILITATION WORKS

The purpose of this booklet is to help anyone involved in land rehabilitation works document the works as they are done. It also aims to simplify the ongoing monitoring of completed works.

1 LAND DEGRADATION IN NSW

The first comprehensive survey of land degradation in NSW (Soil Conservation Service 1989) revealed a disturbing picture of widespread and serious degradation across the whole state. The report identified land degradation as the "No. 1 environmental problem in New South Wales". It pointed out that

"Its (land degradation's) magnitude should be of concern to every citizen and community group, to private industry and all tiers of government since no group can escape the consequences of land degradation"

Today in the mid 1990's the truth of that statement is being borne out, particularly in rural communities where the impacts are currently being most directly felt. Across rural Australia individuals and community groups such as Landcare, RiverCare and Total Catchment Management committees are considering and dealing with the impacts and implications of land degradation.

2 WHY DOCUMENT REHABILITATION WORKS?

In many instances individuals, groups, and governments are embarking on projects that involve on the ground work to restore damaged land and prevent further damage occurring. However, apart from isolated instances such as the Potter Farm Plan (Campbell 1991) documentation of the work done is haphazard or non existent. This is unfortunate since documentation provides a way for the lessons learnt and experience gained from undertaking works to be shared across the community to the benefit of all.

Land rehabilitation works can be expensive. Most cost less than \$5000 but costs can range up to \$30,000 - \$50,000 (Land Rehabilitation Survey, 1996). In many cases it is not just a question of money to solve the problem, but also of ingenuity and perseverance.

The value of a resource that documents the local experience in land rehabilitation works cannot be overestimated. It will highlight local problems and be of help in developing cost effective techniques for use in new projects. Documentation provides a permanent record that does not rely on memories that fade over time.

3 HOW TO DOCUMENT REHABILITATION WORKS

Documentation is not difficult or time consuming. Two survey forms: **Rehabilitation Site Works Report** and **Rehabilitation Site Monitoring Report** are included in the booklet to act as a guide to the documentation and monitoring processes. The forms can be photocopied and filled in for each project undertaken.

The survey forms provide a guide that can be used to document most rehabilitation projects. They are generalised forms developed for a wide range of rehabilitation projects, so not every question will be relevant for every case. The intention is that a landowner would make a photocopy of each of the forms for each rehabilitation project undertaken, then fill in the questions relevant to the particular project.

Rehabilitation works are often undertaken in association with a community group, such as Landcare, RiverCare or Total Catchment Management committee. In such cases copies of the completed survey forms could be lodged with the groups. Individuals not directly associated with such groups can still be encouraged to document their work and lodge copies with the community groups. Over time an information resource will be built up that can be made available to any community members considering undertaking rehabilitation works.

4 PHOTOGRAPHING REHABILITATION WORKS

Photographs can be very useful in documentation of rehabilitation works. However, taking photos that will be useful requires special care. The following points should be kept in mind when taking photos.

1. Include something to give a scale to the photo such as a person, vehicle or fence post. Photos that have nothing to indicate the scale of the scene in the photo can be very difficult to interpret.
2. Include a permanent reference point in the photo to enable the precise location and direction of the shot to be determined in future years and for future photos. Without a fixed reference point it is difficult to compare "before and after" photos. Reference points can include fence or gate posts, large tree, or distinctive back-ground. If no suitable reference points exist then create one in the following way. Drive in two posts near the site, one to serve as a photo taking point and one to serve as a reference point in the actual photograph. The posts can then be used to take future photos.
3. Judge the distance from which to photograph carefully. If too far away the details will be lost. If too close, objects which will help locate the photograph will be excluded.
4. Label your photos as soon as they are processed with the date and site details. For example:

"Creek bed after willow removal, taken from 100m downstream from the ford, looking downstream. Feb 1996".



Plate 1. A poor photo. Note the lack of a scale and no reference point.



Plate 2. A good photo. The man gives scale, and the gate is a fixed reference point.

GUIDE TO COMPLETING THE REHABILITATION SITE WORKS REPORT

Site Number:

Date:/...../96.

The site number and date of completion of the survey form are useful for filing and indexing completed survey forms, particularly for Landcare or other groups.

1 PROPERTY INFORMATION

This section is designed to identify and locate the property. It makes it possible for interested people to establish follow up contact.

Information recorded in this section need not be made public if landowners have concerns about their rights to privacy. Even without this section, the remainder of the report provides useful information that may help others.

Particularly useful is the grid reference. This enables the location of the site to be mapped into any database that is being compiled for the region. With the advent of new computer technology an increasing amount of land management work is being planned with the help of Geographic Information Systems (GIS).

A GIS is a compilation of information about a region into a large database. Information stored on the database can be displayed in a number of different formats, such as that included on a topographic map. Topographic maps are very similar to printouts of GIS displays with three layers: a contour layer; a drainage line layer; and a cultural layer. A GIS would enable other layers, such as rehabilitation works for example, to be displayed in a similar way. In order to link any particular project into a GIS it is necessary to have a standard method of locating the site on the GIS database. This is provided by the grid reference.

2 THE SITE ENVIRONMENT

To complete this section circle the most appropriate choice in each of the categories. The information recorded provides an overview of the land and conditions around the site. The site environment information enables a comparison to be made between land degradation and land rehabilitation works in different areas.

It is also useful for land managers and property owners. The terrain, climate, hydrology and geology play crucial roles in determining the environmental conditions and limitations at any particular location.

2.1 VEGETATION SURROUNDING THE SITE

The purpose of this section of the survey form is to record the extent and type of vegetation present on the site at the time of the rehabilitation work. Many land rehabilitation projects involve planting of trees and shrubs, so this information provides a base line for further monitoring of progress.

In some cases potential areas of fire hazard may be worth noting.

2.2 PRESENCE OF NOXIOUS WEEDS

It is worth while recording the presence of any noxious weeds around the site as a record for future weed control works on the property.

2.3 FAUNA RECORDED AROUND THE SITE

The value of native fauna to insect control on farms has been well documented in a range of books and publications. The Davidsons (Davidson 1992) have produced an excellent, inexpensive and easy to read book on the subject entitled "Bushland on Farms: Do we have a choice?". This book explains in some detail the value of native animals and birds to insect control on productive farms, and the importance of native vegetation to the survival of native animals. Other publications by Greening Australia (1991) and Campbell (1992) give further information on the value of native flora and fauna to commercial farming activities.

Recording observations of fauna prior to work will provide baseline information for those rehabilitation projects that have restoration of biodiversity as one of the aims.

3 THE REHABILITATION SITE

3.1 WHAT TYPE OF DEGRADATION EXISTS AT THIS SITE

It is useful to be able to sort rehabilitation projects according to the nature of the land degradation which is being addressed. For example gully erosion, tree decline, streambank erosion. This will help others faced with similar problems to locate relevant reports.

3.2 DESCRIPTION OF THE SITE PRIOR TO REHABILITATION WORK (INCLUDING THE CAUSES)

A brief description of the works site prior to starting the project should be included. This will enable comparisons to be made at a later date after the works have been completed. It can be useful to take photographs of the site prior to work. However, there are some tricks to taking photos (See Page 3).

If the causes of the problem can be identified it is important to describe them. Experience has shown that it is much cheaper to treat degradation in its early stages rather than allowing it to develop (Land Rehabilitation Survey, 1996).

Consideration of causes may help landowners identify other areas on the property at risk of developing similar degradation problems. This may prompt action in time to prevent expensive problems from developing.

3.3 LIKELY IMPACTS OF THE DEGRADATION IF NOT CORRECTED

It is worthwhile to attempt to predict the likely outcome of the land degradation is not corrected. An estimation of damage to infrastructure and loss of farm productivity should help place in perspective the costs of the rehabilitation project.

3.4 CAN IT BE CORRECTED WITHIN THE PROPERTY? IF NOT, WHO WOULD BE INVOLVED

In many cases the causes and impacts of land degradation problems extend over private property boundaries. In such cases solutions may require cooperation between adjoining landholders.

4 REHABILITATION WORKS

4.1 WHAT WAS THE PLANNING PROCESS AND WHO WAS INVOLVED?

The first step in any successful rehabilitation project is planning. Planning the project may involve consultation with government agencies, other landowners or landowner groups such as Landcare. Make a note of the different people contacted and the advice they gave. This information will be useful for future reference and other projects.

4.2 DESCRIPTION OF THE REHABILITATION WORK DONE.

Date work carried out: From/...../..... to/...../.....

Make notes of the works which are being undertaken. Small diagrams are particularly useful in describing what is going on. Photos can also help, but once again refer to Page 3 on photography for advice on taking worthwhile photos.

4.3 PLANT SPECIES USED ON THE SITE IF ANY

Plant species selection is a very important component of rehabilitation works that require plantings. Note if particular plants have been selected for specific situations, such as frost tolerance, salt tolerance, or swampy ground.

Where several species are planted in a site a map showing the location of one of each species planted will make it easier to identify the plants as they grow. It will help to determine how the different species perform. Nursery tags attached to seedlings must be removed or they will ringbark the growing seedling, but they should be kept for future reference.

The information recorded here will be invaluable when considered with survival and growth rates of plants recorded during follow up monitoring of the site.

4.4 EQUIPMENT AND LABOUR USED AND COSTS INCURRED

An accurate record of costs and equipment required is an essential part of the bookkeeping that should accompany all rehabilitation projects. It is information that can be used to guide future farm management decisions.

4.5 PROBLEMS ASSOCIATED WITH THE PLANNING AND EXECUTION OF THE WORK.

Documenting problems encountered during the work is crucial. This provides a record of the hard won experience that comes through undertaking such works.

4.6 LESSONS LEARNED FROM THE WORKS, ADVICE AND TIPS FOR OTHERS

Similar land degradation problems are faced by many landowners in a region. This section provides an opportunity for those who have tackled a particular problem to share what has been learnt with others who may face similar problems.

Written documentation of experiences and advice is more readily available than that which is held in the memory of particular individuals.

A GUIDE TO THE REHABILITATION SITE MONITORING REPORT

Monitoring should be undertaken on an annual basis for the first few years to keep track of the success or otherwise of the works. Over time an extensive information resource will be built up that will be useful in developing farm management strategies, and may help determine the viability of future projects.

SAMPLE REHABILITATION SITE WORKS REPORT

Site Number: 1

Date: 3/11/1992.

PROPERTY INFORMATION

Property Name	<i>Anyname</i>	Size	<i>120 ha</i>
Address:	<i>Mountain Road</i> <i>via AnyTown</i>		
Owners:	<i>Paula and Tom Smith</i>	Phone:	<i>064 734567</i>
Map Name	<i>BigMountain 1: 25000</i>	Map Number	<i>7324-11-N</i>
Grid Reference.	<i>66 7651 69784</i>		

THE LANDOWNERS

Farm Planning utilised:	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Intended
Member of a Landcare group	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Intended
Group Name: <i>Big Mountain Landcare Group</i>			

CURRENT LAND USE

Dairy farm milking 120 cows.

THE SITE ENVIRONMENT

TOPOGRAPHY AND SLOPE OF THE LAND AT THE SITE

flat (0 - 5)	Undulating(5-10)	<input checked="" type="radio"/> Rolling (10 - 15)
hilly(15-20)	steep (20-25)	Mountainous(>25)

POSITION OF THE SITE IN THE TERRAIN

ridge	gully head	upper slope	mid slope	lower slope				
<input checked="" type="radio"/> valley floor	within gully	river bank	upper bank	toe of bank				
Site Aspect	N	NE	<input checked="" type="radio"/> E	SE	S	SW	W	NW

CLIMATE AND HYDROLOGY

Frost Hazard	High	moderate	Low	nil
Wind Exposure	High	Moderate	Low	
Flood susceptibility	Floodway	Flood fringe	nil	
Drainage	Well drained	Periodic Inundation	Frequent Ponding	

SOILS / GEOLOGY

Parent Rock	Sedimentary	Alluvial	Basalt	Granite
Erodibility:	low	medium	high	
Structure of soils	(Rocky, No Topsoil, etc)			

Deep alluvial deposits derived from granite parent rocks

FLORA AND FAUNA

VEGETATION TYPE AND SPECIES SURROUNDING THE SITE

Native grass improved pasture scrub remnant forest regrowth forest

Native and naturalised pasture grasses surround the site. Some relict forest red gum nearby.....

Fire Hazard Low Moderate High

PRESENCE OF NOXIOUS WEEDS

Small amounts of blackberry along the creek.....

FAUNA RECORDED AROUND THE SITE

None of significance.....

THE REHABILITATION SITE

WHAT TYPE OF DEGRADATION DOES THIS SITE REPRESENT

This site was gully erosion of previously stable valley fill sediments.

DESCRIPTION OF THE SITE PRIOR TO REHABILITATION WORK (INCLUDING THE CAUSES)

Photos taken: 1 of the gully erosion from the gate post looking east.

The gully erosion resulted from interruption of flood flow patterns due to construction in the 1930's of a public access road (Mountain Road) across the lower end of the valley.

The soil erosion was compounded by the loss of vegetation cover in the valley catchment which resulted in increased overland water flows.

Prior to the construction of the road, flood waters in the valley used to sheet across the entire width of the valley. The road interrupted the sheet flow and concentrated water flow into a single channel alongside the road.

Only one set of pipes were placed under the road to drain the banked up water. Once the road drain had eroded deeper than the pipe, this became non-functional. Without adequate drainage floodwaters would regularly undermine the road. It was not uncommon for half the road to collapse following floods, requiring extensive repair works.

Flood waters banked up by the road were also starting to erode the valley floor. Active head cuts 30 cm to 1 metre deep were forming upstream of the road and eating into productive grazing land.

.....

.....

LIKELY IMPACTS OF THE DEGRADATION IF NOT CORRECTED

Continued instability of the road and loss of grazing land. Also sedimentation of river systems.

.....

.....

CAN IT BE CORRECTED WITHIN THE PROPERTY? IF NOT, WHO WOULD BE INVOLVED?

The problem was able to be corrected within the property boundaries. However, because of the damage occurring to a council road, the Shire Council contributed to the rehabilitation work.

.....

.....

REHABILITATION WORKS.

WHAT WAS THE PLANNING PROCESS AND WHO WAS INVOLVED?

The Smiths consulted CaLM about the erosion problem. CaLM officers used past rainfall figures and a calculation of the size of the catchment to help them design a suitable structure to allow for free flow of flood waters.

The structure that was developed was designed to cope with flood events that occur on a once in 25 year frequency.

.....

.....

DESCRIPTION OF THE REHABILITATION WORK DONE.

Date work carried out: From 25/10/1992 to 3/11/1992

Photos taken: 1 of the completed works from the gate post looking east.

The work was carried out by the Shire Council over 8 days in October to November 1992.

To cope with large volumes of water flow and prevent further erosion a concrete flume was constructed in the gully. The gully above the flume was refilled and leveled to eliminate remaining active head cuts.

A stilling pond was installed at the base of the flume. The stilling pond acts to reduce the speed of water flow as it leaves the flume, and hence its capacity to erode.

The alignment of the gully dictated that the flume had to be positioned so that it directs water straight at Mountain Road. Rocks were installed along the side of the road to protect it from this water flow.

To direct water flow from the catchment of the gully into the flume, a large earth wall was constructed using fill from the side of Mountain Road. A road was constructed along the top of this bank to provide vehicle access to the flume site during and after construction. A smaller bank was also constructed beyond the flume site to divert water flow from the far side of the valley into the flume.

.....

.....

PLANT SPECIES USED ON THE SITE IF ANY

Following construction works the entire area was fenced off and revegetated to stabilise the soils on the site. Approximately 700 river she oak seedlings were planted. This work was done with the help of the Big Mountain Landcare Group.

.....

.....

EQUIPMENT AND LABOUR USED AND COSTS INCURRED

To construct the flume the Council provided 2 bulldozers and 1 excavator with operators. The machines were assisted by a six man crew..

CaLM provided one excavator and operator, plus a supervising foreman to oversee the work.

The owners contributed fencing (\$1,200) and tree planting (\$650).

The total costs of the work were approximately \$30,000.

.....

.....

PROBLEMS ASSOCIATED WITH THE PLANNING AND EXECUTION OF THE WORK.

The owners had considerable difficulty in persuading the Council of the need for a serious engineering remedy to the problems that were occurring at the site. As Mountain Road is only a minor access road, it had a low priority on the Council's works list.

During execution of the work the swampy nature of the site proved difficult. Trenches associated with flume work collapsed, and the flume took a lot more concrete than anticipated. A bulldozer also became bogged during construction.

.....

.....

LESSONS LEARNED FROM THE WORKS, ADVICE AND TIPS FOR OTHERS

This problem could possibly have been solved by cheaper measures if it had been tackled earlier. For example, by placing more pipes under the road and by fencing cattle out of the boggy areas.

The problem was very expensive to fix because it had been allowed to gradually worsen over several decades.

.....

SAMPLE REHABILITATION SITE MONITORING REPORT

Site Number: 1

Survey Date: 2/11/93.

PROPERTY INFORMATION

Property Name Anyname

Address: Mountain Road
via AnyTown

Owners: Paula and Tom Smith

Phone: 064 734567

DESCRIPTION OF THE SITE

Photos Taken: 1 from the gate post looking east

The site is fenced off with a dense growth of grass and annual weeds. The planted river sheoak are 1 to 2 metres high. There is also abundant natural regeneration of black wattle.

The area above the flume where the head cuts have been removed by bulldozer is level and well grassed.. There is a small depression that may develop into a head cut in time.

Generally, the site is stable and the work appears to have been a success.

.....

.....

PROBLEMS ARISING FROM THE WORK

It is more difficult to get tractor access to the area to control rabbits and blackberries. However, access and pest control is possible using a four wheel drive bike.

.....

.....

BENEFITS OF THE WORK

The work has stopped the active erosion and revegetated a previously unstable area.

BIBLIOGRAPHY

1. Blakers R, Miles J, Lynch J. 1996. "Land Rehabilitation Survey in the Bega Valley Shire". Environmental Trusts NSW and Bournda Field Studies Centre, Bega.
2. "Land Degradation Survey: New South Wales 1987 - 1988". Soil Conservation Service of New South Wales. 1989.
3. Campbell, A. 1991. "Planning for sustainable Farming: The Potter Farmland Plan Story". Greening Australia. Lothian Publishing Co. Ltd. ISBN 0 85091 433 7.
4. Davidson R, Davidson S. 1992. Bushland on Farms: Do you have a choice?". Australian Government Publishing Service. Canberra. ISBN 0 644 14444 0.
5. "The Understorey". Greening Australia Nov. 1991. Pamphlet published by Greening Australia.

REHABILITATION SITE WORKS REPORT

Site Number:

Date:/...../96.

PROPERTY INFORMATION

Property Name Size

Address:.....

Owners..... Phone:.....

Map Name Map Number

Grid Reference.....

THE LANDOWNERS

Farm Planning utilised: Yes No Intended

Member of a Landcare group Yes No Intended

Group Name:

CURRENT LAND USE

.....
.....

THE SITE ENVIRONMENT

TOPOGRAPHY AND SLOPE OF THE LAND AT THE SITE

flat (0 - 5)	Undulating(5-10)	Rolling (10 - 15)
hilly(15-20)	steep (20-25)	Mountainous(>25)

POSITION OF THE SITE IN THE TERRAIN

ridge	gully head	upper slope	mid slope	lower slope				
valley floor	within gully	river bank	upper bank	toe of bank				
Site Aspect	N	NE	E	SE	S	SW	W	NW

CLIMATE AND HYDROLOGY

Frost Hazard	High	moderate	Low	nil
Wind Exposure	High	Moderate	Low	
Flood susceptibility	Floodway	Flood fringe	nil	
Drainage	Well drained	Periodic Inundation	Frequent Ponding	

SOILS AND GEOLOGY

Parent Rock	Sedimentary	Alluvial	Basalt	Granite
Erodibility:	low	medium	high	
Structure of soils	(Rocky, No Topsoil, etc)			

.....

.....

FLORA AND FAUNA

VEGETATION TYPE AND SPECIES SURROUNDING THE SITE

Native grass improved pasture scrub remnant forest regrowth forest

.....

.....

.....

Fire Hazard Low Moderate High

PRESENCE OF NOXIOUS WEEDS

.....

.....

.....

FAUNA RECORDED AROUND THE SITE

.....

.....

.....

THE REHABILITATION SITE

WHAT TYPE OF DEGRADATION DOES THIS SITE REPRESENT

.....
.....
.....

DESCRIPTION OF THE SITE PRIOR TO REHABILITATION WORK (INCLUDING THE CAUSES)

Photos taken:.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

LIKELY IMPACTS OF THE DEGRADATION IF NOT CORRECTED

.....
.....
.....
.....
.....

PLANT SPECIES USED ON THE SITE IF ANY

.....
.....
.....
.....

EQUIPMENT AND LABOUR USED AND COSTS INCURRED

.....
.....
.....
.....
.....

PROBLEMS ASSOCIATED WITH THE PLANNING AND EXECUTION OF THE WORK

.....
.....
.....
.....
.....
.....

LESSONS LEARNED FROM THE WORKS, ADVICE AND TIPS FOR OTHERS

.....
.....
.....
.....
.....
.....
.....

REHABILITATION SITE MONITORING REPORT

Site Number:

Survey Date:/...../96.

PROPERTY INFORMATION

Property Name

Address:

Owners..... **Phone:**.....

DESCRIPTION OF THE SITE

Photos Taken:.....

.....
.....
.....
.....
.....
.....

PROBLEMS ARISING FROM THE WORK

.....
.....
.....
.....
.....

BENEFITS OF THE WORK

.....
.....
.....
.....
.....
