

***SALINITY DISCHARGE MAPPING FOR THE
EASTERN SECTION OF CORANGAMITE
SALINITY REGION***

BACKGROUND REPORT NUMBER 1

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**DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES**

GEELONG REGION

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SUMMARY

The main objective of the study was to determine the extent and severity of dryland salinity throughout the eastern section of the Corangamite Salinity Region. In particular, the study considered areas of land affected by salinity, although some water samples were taken from drainage lines and dams to develop an overall picture of the extent of salinity.

A total of 3720 hectares were identified to be saline in the study area. Most of these sites were either only slightly or moderately saline. There were a few larger sites of primary salinity and numerous smaller sites of secondary salinity.

The study indicated that most of the salinity occurs on the Basalt Plains, Sand Clay Rises and Western Highland Hills. In particular, the salinity problem is concentrated in the Upper Maribyrnong Catchment, and in the Meredith/Bamganie, Moriac, Leigh, Rockbank and Glenmore districts.

A common indicator of salinity in the study area is the deterioration of crop/pasture. This reflects the relatively high rainfall of the area, which has the effect of masking the salinity problem.

Most of the sites had no salinity treatment works carried out on them. This highlights the need for more awareness of the salinity problem in the study area.

The salinity information collected in this study will provide a background for the preparation of the Corangamite Region Salinity Strategy, which will highlight the main problem areas which should receive priority for treatment works. The information will be used as a basis to seek funding to treat saline areas through the planting of trees and perennial pastures, fencing and drainage works. Any future works will only be carried out with the interest and involvement of landholders.

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Marg Allan	CNR, Centre for Land Protection Research
Peter Codd	CNR, Colac Region
Eriks Muske	CNR, Colac Region
David Lean	CNR, Colac Region
Cam Nicholson	Department of Agriculture, Colac Region

The various LandCare Groups and individual landholders throughout the study area also provided invaluable assistance in the completion of the project.

1. INTRODUCTION

Salinity is one of the most serious forms of land degradation in Victoria. Already 140,000 hectares are affected by irrigation salinity and at least 120,000 hectares by dryland salinity. A further 365,000 hectares are considered to be at risk from salinity. The cost is estimated to be in excess of \$50 million per year (Salt Action: Joint Action, 1988).

This report outlines the background, methodology and results of salinity discharge mapping for the eastern section of the Corangamite Salinity Region. The report is to be used in conjunction with the Corangamite Region Salinity Strategy, and as such does not include proposed management strategies or the suggested causes of salinity in the study area.

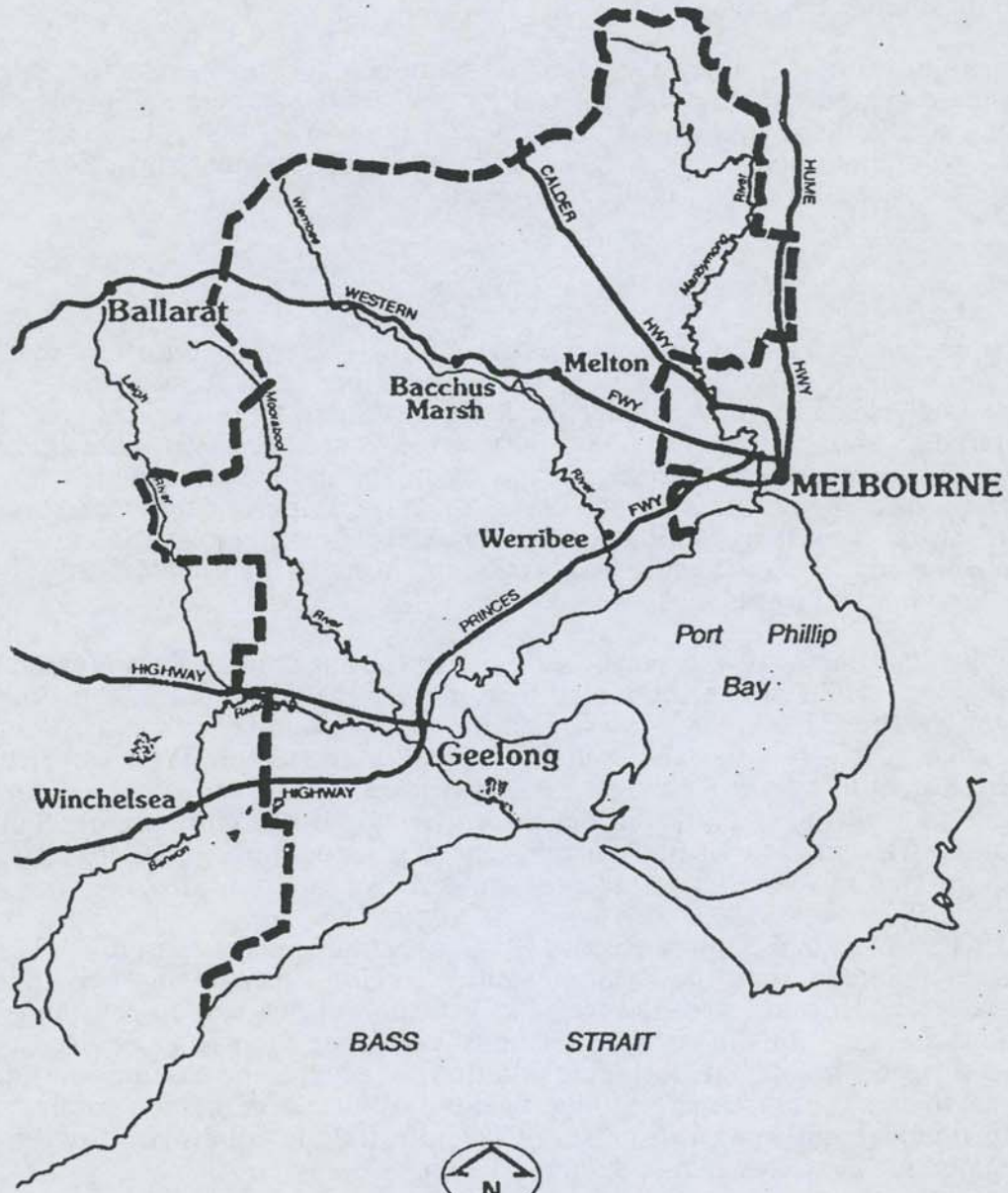
1.1 Government Policy and Previous Studies

This discharge mapping project is part of the statewide effort to manage Victoria's salinity problem. Under the Salt Action: Joint Action Strategy the State is divided into nine Salinity Regions. Considerable effort has gone into research on salinity in the northern part of the State. However, until recently, little had been done to investigate the extent of the salinity problem in the Corangamite Region. This Region covers the three Department of Conservation and Natural Resources Regions of Ballarat, Colac and Geelong. Salinity is not as obvious in the Corangamite Salinity Region because the symptoms of salinity are often masked by the high rainfall.

Salinity assessment for a major portion of the Corangamite Salinity Region was previously carried out in the Colac Region by Duff, 1983 and in the Ballarat Region by Sturmfels, 1988. Assessment has also previously been carried out on the state of rivers (including salinity levels) in the South West of Victoria (Department of Water Resources, 1988). However, little was known about the extent and severity of salinity in the eastern section of the Corangamite Salinity Region. The majority of this eastern section is made up of the Geelong CNR Region. Refer to Map 1, showing the boundaries of the study area.

In 1988, a Regional Salinity Report for Corangamite was prepared. A Forum was appointed for the Corangamite Region, comprising community representatives from across the Region. It is the Forum's role to determine the actions and priorities in regard to salinity assessment and control. Resources have since been built up (including additional staff and increased allocation of funds) to carry out research and investigations to further define the problem and in turn implement control strategies. Currently, a draft salinity strategy is being prepared for the Corangamite Salinity Region.

STUDY AREA BOUNDARY



Boundary of Study Area

1.2 Objectives of the Study

This study has three major objectives:-

- (i) To determine the extent and severity of dryland salinity throughout the eastern section of the Corangamite Salinity Region,
- (ii) To define and accurately map salinity discharge areas in the eastern section of the Corangamite Salinity Region, and
- (iii) To provide base data information for the formulation of salinity control strategies for the Corangamite Salinity Region.

1.3 Definitions

Dryland salinity: widespread clearing of native, deep-rooted vegetation and its replacement with species which use less water, has allowed more water to enter the sub-soil and underlying rock. The extra volume of water raises the groundwater level, and as the groundwater rises it brings with it dissolved salts. Eventually, saline groundwater reaches the surface in low-lying areas (Department of Conservation and Environment, 1989).

Discharge area: the area in which there is upward movement of groundwater and where groundwater is discharged from the soil surface (Salt Action: Joint Action, 1988).

Recharge area: the area in which surface water (from rainfall, irrigation or streams) infiltrates into the soil and is added to the groundwater (Salt Action: Joint Action, 1988).

Primary salinity: salt affected soils that existed under natural conditions before European settlement and were caused by natural phenomena (Duff, 1983).

Secondary salinity: salt affected land where salts have accumulated in soils as a result of a change in the environment by mans' activities (Duff, 1983).

2. THE STUDY AREA

2.1 Soils and Vegetation

There is great variation in the soils within the study area. Ranging from red friable porous soils on igneous rock at Mount Macedon, to black clays which are widespread on the gentle basaltic areas north of Melbourne, and dark saline soils around Lake Connewarre.

Hard setting, dispersive soils are found on most areas of granitic and sedimentary rocks, however, where annual rainfall is less than about 800mm, hard-setting and shallow, stony soils predominate.

Within the study area, salinity may either occur naturally (usually along the coastal areas) or be induced by the clearing of trees and other native vegetation.

The vegetation in the study area is extremely diverse, due to the nature of the topography. The vegetation complexes in the study area include sub alpine, open forest, woodland, grassland and coastal types.

More detailed information on soil and vegetation types can be found in the Geelong Regional Profile, 1985 and the Land Conservation Council Report, 1987.

2.2 Climate

The study area has a temperate climate, with warm, dry summers and maximum rainfall in the winter. The wide variation in topography across the study area also makes the climate within the area variable (Geelong Regional Profile, 1985).

2.3 River Catchments

There are seven river catchments in the study area. The majority of the study area consists of four river catchments, these are the Barwon, Moorabool, Werribee and Maribyrnong. The other catchments which make up the remaining portion of the study area are the Otway, head-waters of the Campaspe and a small portion of the Yarra.

2.4 Land Use

A range of land uses occur throughout the study area, however aviculture is the most common. Production of cereal crops, sheep and cattle grazing occur in the south and production of potatoes, spring lambs and wool in the north, with many variations due to differences in climate, elevation and soil type (Geelong Regional Profile, 1985).

3. METHODOLOGY

The methodology used in this study was based upon the statewide work by Marg Allan (unpublished) & Matters, 1987 (part of the Inventory of Soil Conservation Needs). Marg Allan, from the Centre for Land Protection Research, in Bendigo, provided some of the initial training for this project.

For the purposes of this project it was decided that salinity assessment should be based on river catchments. The Barwon catchment had already been partly assessed by Duff in 1983. Therefore, discharge mapping began in the remaining unmapped portion of the Barwon catchment in January 1991.

3.1 Criteria for Inclusion in the Study

It was intended that this project should assess all salinity discharge in the eastern section of the Corangamite Salinity Region. In particular, salinity on private land needed to be assessed because of its effect on farm productivity. The only types of salinity which were not included in this project were those that would not have an effect on productivity (i.e. primary salinity on public land and salt works). These areas were marked onto the maps but were not assessed.

Generally, it is difficult to distinguish between primary and secondary salinity (Duff, 1983), however, areas of land which are under an estuarine influence (e.g. Lake Connewarre), or are a natural swamp or marshland are classified as primary salting.

3.2 Promoting the Project

The support of Landholders was an important part of the project and there were a number of ways this support was encouraged. Prior to an area being assessed, an article was placed in the local newspapers giving details of the project and a contact phone number. A short presentation on the project was made at meetings and field days of LandCare Groups in the Geelong CNR Region. Contact was also made with individual landholders, this is discussed below.

3.3 Aerial Photos

Potential saline areas were identified and marked on the aerial photos. It is possible to identify saline areas from the photos due to their colour and appearance.

Complete aerial photo coverage of the region is available in colour, at a scale of 1:25,000. A set of aerial photos taken in 1989 - 1990 are held at the CNR Geelong Office, and are available as a reference resource. Aerial photos can be purchased from the Government Bookshop in Little Bourke Street, Melbourne.

3.4 Field Assessment

Extensive field work was an important part of this project. All of the potential saline areas which had been marked on the aerial photos were inspected in the field. This level of field assessment was important to ensure accuracy of the information being collected. There were several steps involved in field assessment, these are listed below.

3.4.1 Consultation with the relevant landholders.

Prior to entering a property to inspect possible saline areas, it was important to consult with the relevant landholder. Often it was necessary to leave a note at the property and return at a later date in order to speak to the landholder before entering the property. Although this was time consuming, it was an important phase in gaining the landholders' acceptance of the study and increasing public awareness of the salinity problem.

3.4.2 Assessment of the site for salinity indicators.

A site was considered to be saline if there were 3 to 4 plant indicator species and/or other saline features present. An assessment sheet was completed for each saline area; this included giving each a site number and a classification of the severity of salting. One site number was used if there were several small sites in one area with the similar plant indicators and severity of salting. The 'Spotting Soil Salting' booklet (Matters and Bozon, 1989), was used to identify indicator plants and the classes of soil salting (Refer to Table One). The EC levels for each of the classes have been changed from the Spotting Soil Salting booklet, after communication with James Matters. The actual area affected by salinity was determined in the field and marked onto the aerial photo.

In particular, the study considered areas of land affected by salinity, although some water samples were taken from drainage lines and dams to develop an overall picture of the extent of salinity.

The assessment sheet used in this project was a modified version of the sheet developed by Marg Allan. The format was modified to include a few additional factors and to make it easier to use in the field. A copy of the assessment sheet is attached in Appendix 1.

3.4.3 Soil Samples.

Soil samples were taken at the first 30 sites, to confirm the relationship between levels of soil salinity and different plant indicator species. The soils were sampled at a depth of around 10cm, which is thought to be within the root zone of most plant species (Allan, unpublished). The analysis of these soils indicated a direct correlation between the soil electrical conductivity (EC 1:5) and the classes of salinity.

Table 1. Classes of Salinity and their Characteristics

Class	Severity of Salting	EC Reading (EC 1:5)	Characteristics of site
1	Low	600 - 1400	<ul style="list-style-type: none">- Patchy growth of pastures- Salt sensitive plants are replaced with other plants of more salt tolerance
2	Moderate	1400 - 3500	<ul style="list-style-type: none">- Small bare patches of ground- Plant species of higher salt tolerance- Some species show marked changes in leaf colour and shape due to salt stress
3	Severe	> 3500	<ul style="list-style-type: none">- Highly salt tolerant plants- Large areas of bare ground- Trees may be dead or dying

Source: Spotting Soil Salting (Matters and Bozon, 1989) and Matters (pers. comm.).

NB: Each of the sites assessed in this study were assigned one or a combination of these salinity classes.

3.5 Maps and Database

The location and size of the saline sites were transferred from the aerial photos and marked onto 1:25000 base maps. The numbers on the maps refer to the site numbers, as used on the assessment sheets. The information from the assessment sheets was entered onto a computer database. A copy of the maps and the computer database are held at the Geelong CNR office.

The Geographic Information System digitizer at the Colac CNR office was used to calculate the area in hectares of each of the sites. Streams and drainage lines were estimated to be an average of 10 metres across and this was multiplied by their length to give an area in hectares affected by salinity.

3.6 Limitations of the Study

The project was not designed to produce a detailed botanical assessment of all the plants growing at a saline site; only the common indicator species were recorded.

Only areas that showed up on the aerial photos were assessed. It is possible some of the smaller and only slightly saline sites were not identified from the aerial photos. Therefore, the maps should not be considered to be exhaustive.

Ideally, salinity assessment should not be carried out over the winter months, when the effects of salinity are masked due to rainfall diluting and leaching salt from the soil, therefore, temporarily reducing the severity of the salinity (Matters, 1987). However, due to time restrictions it was necessary to carry out some assessment over this time.

Not all of the drainage lines in the study area were inspected, due to time restrictions and difficulties with access. It was assumed that if a particular drainage line was saline and ran into another drainage line, then the second drainage line would also be saline.

4. RESULTS

This section provides an analysis of some of the information collected during the study. A complete list of the information collected is attached as a print-out from the database, in Appendix 2.

4.1 Summary Information

Total area affected by salinity = 3720 hectares Total area of the study = 634,750 hectares
Total number of salinity sites in the study area = 264 Smallest salinity site = 0.1 hectare
Largest salinity site = 665 hectares (primary salinity) Average size of sites in the study = 14 hectares

The table below gives an indication of the amount of land in each of the salinity classes (or the severity of salinity). This information shows that most of the land in the study area is either only slightly or moderately saline.

Table 2. Amount of Land in each Salinity Class

Class	Number of Sites	Hectares
1 (Low)	96	415
2(Moderate)	159	3173
3 (Severe)	9	130

4.2 Types of Salinity Discharge

The results in Table three show that most of the sites in the study area are secondary or induced salinity. However, the total area of land affected by primary salinity is more than twice the amount affected by secondary salinity.

Table 3. Types of Salinity Discharge

Type	Number of Sites	Hectares
Primary: Marsh	29	2325
Primary: Flat	8	31
Secondary	248	1364

NB: Some of the sites had a combination of primary and secondary salinity.

4.3 Locations Where Salinity is Present

The following table shows the amount of salinity in each of the municipalities in the study area.

Table 4. Amount of Salinity in each of the Municipalities

Municipality	Number of Sites	Hectares
Bacchus Marsh	3	12
Ballan	16	43
Bannockburn	47	227
Barrabool	66	380
Bellarine	17	1045
Bulla	8	84
Corio	13	162
Gisborne	4	8
Kilmore	7	29
Leigh	2	2
Melton	12	172
Newham and Woodend	11	26
Newtown	1	4
Pyalong	9	16
Romsey	38	352
South Barwon	4	1062
Werribee	6	97

Although the amount of saline land in some of the municipalities is quite low, there are a few locations where the salinity problem is more concentrated. These locations are listed below, in random order.

- Upper Maribyrnong catchment: In particular, around the Darraweit Guim and Riddells Creek areas and includes nearly all the drainage lines which run into the Deep Creek. There are numerous saline springs and seeps throughout this catchment.
- Meredith/Bamganie district: Scattered salinity throughout.
- Moriac district: Scattered salinity throughout.
- Leigh district: Scattered salinity throughout.
- Rockbank district: Salinity is concentrated around Leakes Road and the Kororoit Creek.
- Glenmore (Rowsley Valley): Several saline sites in close proximity to one another.
- Balliang: One of the larger and better known salinity sites in the study area.
- Bellarine Peninsula: Large areas of primary salinity with smaller areas of secondary salinity scattered across the area.
- Along the Coast (Primary Salinity): Large areas of salinity extending from Geelong up to Point Cook.

4.4 Indicators of Salinity throughout the Study Area

Salinity appeared in many different forms throughout the study area. The most common indicators of salinity were deterioration of crop/pasture (172 sites), patches of bare round (97 sites) and plant indicator species (51 sites). These types of salinity indicators reflect the relatively high rainfall of the area, which has the effect of masking the salinity problem. At some of the sites there were other indicators which showed more severe salinity levels, these included salt stains, tree dieback and tree mortality. Many of the sites had a combination of salinity indicators.

Throughout the study area there were variations in the types of indicators which could be used to detect the presence of salinity. For example, in the Upper Maribyrnong catchment, the presence of Spiny Rush (*Juncus acutus*) was a reliable indicator of salinity. Whereas, around the Meredith district, Spiny Rush would sometimes indicate salinity and other times it would just be a water-logged area (e.g. Moorabool River, where it intersects the Egerton - Ballark Road, there is lots of Spiny Rush but it is not saline). Hence, there was a need for detailed ground work, to inspect all possible saline sites.

There were some plant species which were generally considered to be reliable indicators of salinity across the study area. These species included Sea Barley Grass (*Hordeum marinum*), Annual Beard Grass (*Polypogon monspeliensis*), Australian Salt Grass (*Distichlis distichophylla*), Spiny Rush (*Juncus acutus*), Buck's Horn Plantain (*Plantago coronopus*), Swamp Weed (*Selliera radicans*) and Water Buttons (*Cotula coronopifolia*).

4.5 Land Management Units

The following table shows the amount of salinity in each of the Land Management Units (LMU's) in the study area. These LMU's are based on geology, climate and land use. Trish Kevin from the Centre for Land Protection and Research has been involved in developing the specific LMU's for the Corangamite Salinity Region. The table shows that most of the salinity occurs on the Basalt Plains, Sand Clay Rises and Western Highland Hills. The largest amount of salinity (mainly primary salinity) occurs around the Lake and Dune System.

Table 5. Amount of Salinity in each of the Land Management Units

LMU	Number of Sites	Hectares
Alluvial Plains	17	176
Basalt Plains	83	647
Granite Rises	1	3
Greenstone Range	1	1
Lake and Dune System	10	1830
Sand Clay Rises	57	630
Southern Upland Hills	19	36
Western Highland Hills	75	394

4.6 Position of Salinity in the Landscape

Salinity occurs in many different areas throughout the landscape. In this study area, the most common occurrence of salinity was along drainage lines (128 sites), on flat ground (87 sites), in depressions (44 sites) and on slight slopes (18 sites). Some of the sites occurred in more than one of these categories (e.g. along a drainage line and spreading out onto flat ground). Around the Moriac district there are several salinity sites on hillsides, where saline seeps are coming out high up in the landscape. In the Upper Maribyrnong Catchment, saline springs/seeps tend to occur where the basalt meets the sedimentary soils.

These findings confirm, as anticipated, that many of the saline discharge sites occur in the low-lying areas and along drainage lines. Drainage lines were considered to be saline if there was evidence of plant indicator species and/or the water sample indicated an elevated concentration of salinity.

Some water samples were taken from drainage lines and creeks, however, as they were only taken once they would not account for seasonal variation which would have a significant effect on fluctuations in salinity levels. More information on the salinity levels of the drainage lines, creeks and rivers in the study area is available from the Department of Water Resources, who carry out regular monitoring of water quality along many of the watercourses.

It was interesting to note the salinity levels of some of the drainage lines varied considerably along their length. It is possible that saline springs which seep into the drainage lines at different points, may account for this change in salinity concentrations.

4.7 Treatment of Salinity

The sites assessed in this study had different levels of salinity treatment carried out on them. The table below shows a large proportion of the sites had no salinity control works carried out on them. This highlights the need to raise awareness of the salinity problem in the study area. Increased awareness can be achieved through better extension with groups of landholders, including increased use of field days and demonstration plots. Landholders could be encouraged to carry out salinity treatment works through the provision of assistance in the form of grants, resources, technical knowledge and skills.

Table 6. Treatment works carried out on Salinity Sites

Treatment	Number of Sites	Hectares
1 (Nil)	243	3568
2 (Moderate)	15	115
3 (High)	6	35

4.8 Response from Landholders

Generally, a good response was received from all landholders who were approached to have their properties inspected for salinity. Some of the landholders questioned what the information would be used for, however, once the purpose of the project was explained they were generally keen to assist. Only one landholder declined access to his property.

In the Upper Maribyrnong Catchment there are numerous hobby farmers, many of whom had little knowledge of salinity and its associated problems. Once this was explained to them they were interested to know what could be done and how they could be involved.

5. DISCUSSION

A copy of this report and the relevant maps will be distributed to the LandCare Groups, local municipalities and government departments (i.e. CNR, D of A and Department of Water Resources). It is anticipated this information could be used by these organisations and groups in the planning and implementation of future on-ground works.

If there are any additional areas of salinity which are not marked on the maps, details of these should be forwarded to the Department so they can be added to the existing information.

The salinity information collected in this study will provide a background for the preparation of the Corangamite Region Salinity Strategy, which will highlight the main problem areas which should receive priority for treatment works. The information will be used as a basis to seek funding to treat saline areas through the planting of trees and perennial pastures, fencing and drainage works. Any future works will only be carried out with the interest and involvement of landholders.

APPENDICES

Appendix 1: Copy of the Assessment Sheet



RECORDER: _____

DEPARTMENT OF
CONSERVATION &
ENVIRONMENT

DRYLAND SALINITY MAPPING

DCE REGION: GEELONG
 MAP NAME: _____
 MAP NO.: _____

LANDHOLDER: _____
 TELEPHONE: _____
 DATE: _____

AMG CO-ORD: E _____ 00 N _____ 00
 SITE: _____

LOCATION: _____

EVIDENCE OF SALINITY:

Groundwater	<input type="checkbox"/>	Salt	<input type="checkbox"/>
Deterioration: Crop/Pasture	<input type="checkbox"/>	Tree	<input type="checkbox"/>
Tree Mortality	<input type="checkbox"/>	Bare Ground	<input type="checkbox"/>

POSITION OF SALINITY IN LANDSCAPE

Slope	<input type="checkbox"/>	Break of Slope	<input type="checkbox"/>
Streambank	<input type="checkbox"/>	Depression	<input type="checkbox"/>
Flat	<input type="checkbox"/>	Drainage Line	<input type="checkbox"/>
Gully	<input type="checkbox"/>	Sandridge	<input type="checkbox"/>
Lake Margin	<input type="checkbox"/>	Lunette	<input type="checkbox"/>
Other _____	<input type="checkbox"/>		

EVIDENCE OF EROSION

TYPE OF DISCHARGE

Natural: Marsh	<input type="checkbox"/>	Pan	<input type="checkbox"/>
Flat	<input type="checkbox"/>	Induced: Seepage	<input type="checkbox"/>

GEOLOGY

Rock Type _____ Map No. _____

LANDUSE

Cropping	<input type="checkbox"/>	Grazing	<input type="checkbox"/>
Other _____	<input type="checkbox"/>		

TREATMENT

1 Nil	<input type="checkbox"/>	2 Moderate	<input type="checkbox"/>
3 High	<input type="checkbox"/>		

SALINITY CLASS	EXTENT	
	%	ha.
0 Nil		
1 Low		
2 Moderate		
3 High		
TOTAL	100	

Other Notes: _____

- PLANTS PRESENT -

SALT SENSITIVE SPECIES	Transition Zone	Adjacent only	SALT SENSITIVE SPECIES	Transition Zone	Adjacent only
GRASSES			RUSHES		
Barley Grass			Broad Leaf Rush		
Creeping Bent Grass			Finger Rush		
Kangaroo Grass			Jointed Rush		
Onion Grass			HERBS		
Perennial Rye Grass			Cape Weed		
Shivery Grass			Erodium sp.		
Short Wallaby Grass			Hairy Hawkbit		
Sweet Vernal Grass			Small Sandspurrey		
Yorkshire Fog Grass			Subterranean Clover		
			Suckling Clover		
			Woolly Clover		

SALT-TOLERANT SPECIES	Present	Salinity Indicator Class	SALT-TOLERANT SPECIES	Present	Salinity Indicator Class
GRASSES			HERBS		
Annual Beard Grass		2	Buck's Horn Plantain		1 2
Australian Salt Grass		2	Coast Sandspurrey		1 2
Curly Rye Grass		2	Creeping Brookweed		2
Hill Wallaby Grass		1	Red Crumbweed		2
Saltmarsh Grass		1 2	Salt Angianthus		1 2
Sea Barley Grass		1 2	Strawberry Clover		1 2
Slender Barb Grass		2	Swamp Weed		1 2
Swamp Couch Grass		2 3	Water Buttons		2
Tall Wheat Grass		1 2	SUCCULENTS		
Wimmera Rye Grass		1	Beaded Glasswort		2 3
Windmill Grass		1 2	Bonefruit		3
RUSHES			Iceplant		2
Club Rush		N/K	Rounded Noonflower		2 3
Spiny Rush		1 2	Ruby Saltbush		2
Streaked Arrow Grass		2	Samphire		3
Toad Rush		1 2	Sea Blite		2 3
			TREE		
			Swamp Paperbark		1 2

Appendix 2: Listing from the computer database

The data base program is called ' SALINITY.DBF '.

The symbols used in the date base are directly from the categories on the assessment sheet, they are as follows:

*** Evidence of Salinity**

G – Groundwater
S – Salt
D - Deterioration: Crop/Pasture
T - Tree Dieback
M - Tree Mortality
B - Bare Ground
I - Plant Indicator Species Only

*** Position of Salinity in Landscape**

S - Slope
B - Break of Slope
Y – Depression
F – Flat
D - Drainage Line
G – Gully
M - Lake Margin
O - Other

*** Type of Discharge**

M - Marsh (Natural Salinity)
F - Flat (Natural Salinity)
I - Induced Salinity

*** Treatment**

1 - Nil
2 – Moderate
3 - High

Abbreviations of Map and Shire Names

STHBARWON - South Barwon
MTMORIAC - Mount Moriac
BANNOCKBN - Bannockburn
STAUGHTVALE - Staughton Vale
ECLIPSECRK - Eclipse Creek
BMARSH - Bacchus Marsh
MTPOLLOCK - Mount Pollock
CLEEVERHIL - Cleever Hill
ALTONABAY - Altona Bay
KIRKPOINT - Kirk Point
GOLDIENTH - Goldie North
NEWHAMWOOD - Newham and Woodend
KONGADERRA - Konagaderra
SYDENWEST - Sydenham West
SPRINGFLD - Springfield
TOOLERNVAL - Toolern Vale
BOLINDAVAL - Bolinda Vale

Abbreviations of Land Management Units

ALLVPLNS - Alluvial Plains
LAKESYSMS - Lake and Dune Systems
BASALTPLNS - Basalt Plains
SANDCLAYRS - Sand Clay Rises
SOUTHUPHIL - Southern Upland Hills
WESTHIGHIL - Western Highland Hills
GRANRISES - Granite Rises
GREENRANGE - Greenstone Range

Record#	SITENUMBER'	AREA	EASTING	NORTHING	SEVERITY	MAPZONE	MAP		SHIRE	CATCHMENT	LANDMANGT	EVIDENCE	POSITION
							NUMBER	MAPNAME					
1	070001	9.2	264000	5768400	1	55	7721-1SW	GEELONG	STHBARWON	BARWON	SANDCLAYRS	D	D
2	070002	3.3	260800	5770400	2	55	7721-1SW	GEELONG	BARRABOOL	BARWON	SOUTHUPHIL	DB	D
3	070003	20.1	260300	5769300	1	55	7721-1SW	GEELONG	BARRABOOL	BARWON	SANDCLAYRS	D	0
4	070004	2.4	263600	5770100	1	55	7721-1SW	GEELONG	BARRABOOL	BARWON	SANDCLAYRS		
5	070005	8.4	258600	5772700	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	D	D
6	070006	4.0	259600	5772000	1	55	7721-1SW	GEELONG	BARRABOOL	BARWON	SOUTHUPHIL	DB	D
7	070007	0.6	260500	5773700	2	55	7721-1SW	GEELONG	BARRABOOL	BARWON	GREENRANGE	DS	D
8	070008	0.7	255800	5767900	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	D	D
9	070009	1.0	255400	5768500	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	D	D
10	070010	2.5	255400	5769300	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	D	D
11	070011	0.7	258000	5771500	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	D	M
12	070012	1.4	256500	5772000	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	D	YD
13	070013	1.4	257900	5771300	2	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	D	D
14	070014	365.6	271300	5766500	2	55	7721-ISE	LEOPOLD	STHBARWON	BARWON	LAKESYSMS	DI	F
15	070015	0.9	259000	5771100	2	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	DB	D
16	070016	10.1	260200	5775800	2	5.5	7721-1SW	GEELONG	BANNOCKBN	BARWON	BASALTPLNS	GD	Y
17	070017	10.8	260300	5775300	2	55	7721-1SW	GEELONG	BANNOCKBN	BARWON	BASALTPLNS	DB	F
18	070018	0.9	255500	5774800	2	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	DS	FGO
19	070019	1.2	253500	5768400	2	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	GD	D
20	070020	9.6	257200	5776500	2	55	7721-4-2	MTMORIAC	BANNOCKBN	BARWON	BASALTPLNS	GD	D
21	070021	2.4	256800	5775100	1	55	7721-4-2	MTMORIAC	BANNOCKBN	BARWON	BASALTPLNS	GDSB	D
22	070022	1.1	256300	5764400	2	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	SANDCLAYRS	DSB	D
23	070023	5.1	264000	5758800	3	55	7721-2-4	TORQUAY	BARRABOOL	OTWAY	SANDCLAYRS	DSB	D
24	070024	1.2	261300	5759400	2	55	7721-2-4	TORQUAY	BARRABOOL	OTWAY	SANDCLAYRS	DB	GD
25	070025	3.4	255800	5758400	1	55	7721-III	PARAPARAP	BARRABOOL	OTWAY	SANDCLAYRS	DMSB	FD
26	070026	1.7	252700	5764400	2	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	SANDCLAYRS	DSB	FYD
27	070027	4.1	252900	5764200	2	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	SANDCLAYRS	GDB	D
28	070028	4.2	250300	5762400	1,2	55	7721-III	PARAPARAP	BARRABOOL	OTWAY	BASALTPLNS	DSB	FD
29	070029	2.1	250500	5763500	2	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	BASALTPLNS	D	D
30	070030	11.2	250300	5763000	2	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	BASALTPLNS	DB	F
31	070031	3.6	249400	5762600	1	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	BASALTPLNS	D	F
32	070032	3.5	249900	5762500	2	55	7721-III	PARAPARAP	BARRABOOL	OTWAY	BASALTPLNS	G	F
33	070033	0.6	286200	5767300	2	55	7821-4-3	DRYSDALE	BELLARINE	BARWON	SANDCLAYRS	DMSTB	FD
34	070034'	2.0	286900	5767100	2	55	7821-4-3	DRYSDALE	BELLARINE	BARWON	SANDCLAYRS	MS	D
35	070035	4.2	286000	5766200	3	55	7821-4-3	DRYSDALE	BELLARINE	BARWON	SANDCLAYRS	DSB	FD
36	070036	3.2	269200	5801600	1	55	7722-2-3	ANAKIE	CORIO	MOORABOOL	GRANRISES		
37	070037	3.4	287700	5769100	1	55	7821-4-3	DRYSDALE	BELLARINE	BARWON	SANDCLAYRS	DMB	D
38	070038	2.2	288700	5769200	2	55	7821-4-3	DRYSDALE	BELLARINE	BARWON	SANDCLAYRS	DTB	D

Record#	SITENUMBER'	AREA	EASTING	NORTHING	SEVERITY	MAPZONE	MAP		SHIRE	CATCHMENT	LANDMANGT	EVIDENCE	POSITION
							NUMBER	MAPNAME					
39	070039	1.3	252800	5775200	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	BASALTPLNS	GDT	GD
40	070040	1.7	253800	5769900	2	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	DB	Y
41	070041	1.5	254800	5769200	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL	D	D
42	070042	1.3	248800	5766800	2	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SANDCLAYRS	DB	F
43	070043	8.1	250500	5769500	2	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	BASALTPLNS	DB	D
44	070044	16.1	249800	5778900	2	55	7721-4-1	BANNOCKBN	BANNOCKBN	BARWON	SANDCLAYRS	DMSTB	FM
45	070045	7.6	251300	5779200	2	55	7721-4-1	BANNOCKBN	BANNOCKBN	BARWON	SANDCLAYRS	GDMSTB	FD
46	070046	0.5	252400	5780200	1	55	7721-4-1	BANNOCKBN	BANNOCKBN	BARWON	SANDCLAYRS	D	F
47	070047	0.6	250600	5784700	2	55	7721-4-1	BANNOCKBN	BANNOCKBN	BARWON	SANDCLAYRS	S.	D
48	070048	1.8	247400	5781300	2	55	7721-4-4	TEESDALE	BANNOCKBN	BARWON	SANDCLAYRS	I	D
49	070049	7.1	242300	5783200	2	55	7721-4-4	TEESDALE	BANNOCKBN	BARWON	SANDCLAYRS	DMSB	M
50	070050	1.2	242500	5779200	2	55	7721-4-4	TEESDALE	BANNOCKBN	BARWON	BASALTPLNS	DSB	D
51	070051	2.4	245900	5779600	2	55	7721-4-4	TEESDALE	BANNOCKBN	BARWON	ALLVPLNS	DB	D
52	070052	0.4	240700	5784900	2	55	7721-4-4	TEESDALE	LEIGH	BARWON	SANDCLAYRS	DSTB	D
53	070053	1.3	762100	5787300	2	54	7621-1-1	SHELFORD	LEIGH	BARWON	SANDCLAYRS	GDMB	D
54	070054	13.4	241100	5804100	2	55	7722-3-4	ELAINE	BANNOCKBN	BARWON	BASALTPLNS	G	D
55	070055	29.5	238700	5804700	2	55	7722-3-4	ELAINE	BANNOCKBN	BARWON	WESTHIGHIL	GDMSTB	FGD
56	070056	8.7	237800	5807300	1	55	7722-3-4	ELAINE	BANNOCKBN	BARWON	BASALTPLNS	DMB	FD
57	070057	20.5	761600	5807600	2	54	7622-2-1	GRENVILLE	BANNOCKBN	BARWON	BASALTPLNS	DB	GB
58	070058	5.4	759000	5808800	2	54	7622-2-1	GRENVILLE	BANNOCKBN	BARWON	BASALTPLNS	I	D
59	070059	0.9	763400	5807300	1	54	7622-2-1	GRENVILLE	BANNOCKBN	BARWON	WESTHIGHIL	D	F
60	070060	2.4	761800	5.803700	1	54	7622-2-2	BAMGANIE	BANNOCKBN	BARWON	WESTHIGHIL	D	F
61	070061	63.6	253800	5759000	2	55	7721-III	PARAPARAP	BARRABOOL	OTWAY	SANDCLAYRS	TB	D
62	070062	24.2	252900	5757900	2	55	7721-III	PARAPARAP	BARRABOOL	OTWAY	SANDCLAYRS	DB	FYD

Record#	EROSION	TYPE	TREATMENT	PARISH
1	N	I	1	BARRABOOL
2	N	I	1	BARRABOOL
3	N	I	1	BARRABOOL
4		I	1	BARRABOOL
5	N	MI	1	BARRABOOL
6	N	I	1	BARRABOOL
7	Y	I	1	BARRABOOL
8	N	M	1	DUNEEED
9	N	M	1	DUNEEED
10	N	M	1	BARRABOOL
11	N	I	1	BARRABOOL
12	Y	MI	1	BARRABOOL
13	N	MI	1	BARRABOOL
14	N	M	1	CONEWARRE
15	N	M	1	BARRABOOL
16	N	MI	2	GHERINGHAP
17	N	M	1	GHERINGHAP
18	N	FI	1	BARRABOOL
19	N	I	1	DUNEEED
20	N	MI	1	GHERINGHAP
21	Y	MI	2	GHERINGHAP
22	N	I	1	DUNEEED
23	N	I	1	PUEBLA
24	N	I	1	PUEBLA
25	N	I	1	PARAPARAP
26	N	I	1	DUNEEED
27	N	I	2	DUNEEED
28	N	I	1	MODEWARRE
29	N	I	1	MODEWARRE
30	N	I	1	MODEWARRE
31	N	FI	2	MODEWARRE
32	N	FI	1	MODEWARRE
33	N	I	1	BELLARINE
34	N	I	1	BELLARINE
35	N	FI	1	BELLARINE
36		I	1	LARA
37	N	I	1	BELLARINE

Record#	EROSION	TYPE	TREATMENT	PARISH
38	N	MI	1	BELLARINE
39	N	I	1	GNARWARRE
40	N	I	1	BARRABOOL
41	N	I	2	BARRABOOL
42	N	I	1	MODEWARRE
43	N	I	1	GNARWARRE
44	N	I	1	MURGHEBOLUC
45	N	I	1	MURGHEBOLUC
46	N	I	1	MURGHEBOLUC
47	Y	I	1	WABDALLAH
48	N	I	1	MURGHEBOLUC
49	N	I	1	CARRAH
50	N	I	1	CARRAH
51	N	I	1	MURGHEBOLUC
52	N	I	2	CARRAH
53	N	I	1	CARRAH
54	Y	MI	1	COOLEBARGHURK
55	N	FI	1	BAMGANIE
56	N	FI	1	MEREDITH
57	N	I	1	CARGERIE
58	N	I	1	CARGERIE
59	N	I	1	MEREDITH
60	N	I	3	BAMGANIE
61	N	MI	2	PARAPARAP
62	N	I	1	PARAPARAP

Record#	SITENUMBER'	AREA	EASTING	NORTHING	SEVERITY	MAPZONE	MAP		SHIRE	CATCHMENT	LANDMANGT	EVIDENCE	POSITION
							NUMBER	MAPNAME					
63	070063	5.0	301700	5803200	1	55	7822-3-2	WERRIBEE	WERRIBEE	WERRIBEE	BASALTPLNS	DB	FY
64	070064	20.9	254500	5764100	1	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	SANDCLAYRS	D	F
65	070065	1.2	255000	5764000	1	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	SANDCLAYRS	DB	Y
66	070066	242.6	279100	5765500	2	55	7721-ISE	LEOPOLD	BELLARINE	BARWON	SANDCLAYRS	DI	F
67	070067	746.0	289500	5762400	2	55	7821-3-4	OCEANGROVE	BELLARINE	BARWON	LAKESYSMS	SBI	FY
68	070068	0.4	243500	5812200	2	55	7722-3-4	ELAINE	BANNOCKBN	MOORABOOL	WESTHIGHIL		
69	070069	665.0	271500	5758500	2	55	7721-2-1	CONNEWARRE	STHBARWON	OTWAY	LAKESYSMS	DBI	F
70	070070	1.3	254400	5763300	2	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	SANDCLAYRS	DMB	FD
71	070071	3.9	254100	5764200	2	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	SANDCLAYRS	D	FD
72	070072	1.2	255300	5762600	2	55	7721-111	PARAPARAP	BARRABOOL	OTWAY	BASALTPLNS	DMB	F
73	070073	4.0	258700	5763800	2	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	BASALTPLNS	DMT	FD
74	070074	3.8	254600	5764000	1	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	SANDCLAYRS	DMSTB	F
75	070075	15.7	293700	5838100	2	55	7822-4-1	SUNBURY	MELTON	WERRIBEE	BASALTPLNS	D	D
76	070076	13.1	279600	5786500	3	55	7721-1NE	LARA	CORIO	MOORABOOL	BASALTPLNS	DB	FD
77	070077	5.9	262200	5760200	1	55	7721-2-4	TORQUAY	BARRABOOL	OTWAY	SANDCLAYRS		
78	070078	0.5	256100	5764000	1	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	SANDCLAYRS	DBI	BY
79	070079	4.0	251700	5764600	3	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	SANDCLAYRS		
80	070080	1.1	253600	5766500	1	55	7721-4-2	MTMORIAC	BARRABOOL	OTWAY	SOUTHUPHIL		
81	070081	4.5	254700	5759500	2	55	7721-III	PARAPARAP	BARRABOOL	OTWAY	BASALTPLNS		
82	070082	2.8	255900	5761400	2	55	7721-III	PARAPARAP	BARRABOOL	OTWAY	BASALTPLNS		
83	070083	0.8	255700	5762400	1	55	7721-III	PARAPARAP	BARRABOOL	OTWAY	BASALTPLNS		
84	070084	6.9	254500	5758100	1	55	7721-III	PARAPARAP	BARRABOOL	OTWAY	SANDCLAYRS		
85	070085	1.8	262600	5770900	1	55	7721-1SW	GEELONG	BARRABOOL	BARWON	SOUTHUPHIL		
86	070086	0.3	254000	5770700	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL		
87	070087	1.7	253100	5774200	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	BASALTPLNS		
88	070088	0.8	251200	5772300	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SANDCLAYRS		
89	070089	0.1	263400	5766600	1	55	7721-1SW	GEELONG	BARRABOOL	BARWON	SANDCLAYRS		
90	070090	0.8	253400	5769300	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL		
91	070091	0.2	248500	5769800	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SANDCLAYRS		
92	070092	7.2	295300	5845500	2	55	7822-4-1	SUNBURY	BULLA	MARIBYRNON	BASALTPLNS	D	D
93	070093	1.8	253500	5761700	2	55	7721-III	PARAPARAP	BARRABOOL	OTWAY	BASALTPLNS		
94	070094	1.5	254300	5761700	2	55	7721-III	PARAPARAP	BARRABOOL	OTWAY	BASALTPLNS		
95	070095	3.6	269700	5792300	2	55	7722-2-2	YOUYANGS	CORIO	MOORABOOL	ALLVPLNS	MT	D
96	070096	1.4	240300	5778800	2	55	7721-4-4	TEESDALE	BANNOCKBN	BARWON	ALLVPLNS	DI	D
97	070097	5.8	308500	5826600	2	55	7822 ISW	KEILOR	BULLA	MARIBYRNON	BASALTPLNS	DI	D
98	070098	40.5	302400	5846600	2	55	7822-1-4	KONGADERRA	ROMSEY	MARIBYRNON	BASALTPLNS	GDI	YD
99	070099	0.2	283800	5770600	1	55	7821-4-3	DRYSDALE	BELLARINE	BARWON	LAKESYSMS		

Record#	SITENUMBER'	AREA	EASTING	NORTHING	SEVERITY	MAPZONE	MAP NUMBER	MAPNAME	SHIRE	CATCHMENT	LANDMANGT	EVIDENCE	POSITION
100	070100	0.6	295600	5773600	1	55	7821-4-2	STLEONARDS	BELLARINE	BARWON	LAKESYSMS		
101	070101	0.3	280200	5767300	1	55	7721-ISE	LEOPOLD	BELLARINE	BARWON	LAKESYSMS		
102	070102	0.5	281200	5766300	1	55	7821-4-3	DRYSDALE	BELLARINE	BARWON	SANDCLAYRS		
103	070103	0.5	283000	5764700	1	55	7821-4-3	DRYSDALE	BELLARINE	BARWON	LAKESYSMS		
104	070104	0.3	285000	5766000	1	55	7821-4-3	DRYSDALE	BELLARINE	BARWON	LAKESYSMS		
105	070105	0.4	289300	5763900	3	55	7821-4-3	DRYSDALE	BELLARINE	BARWON	SANDCLAYRS		
106	07010E;	1.9	236300	5809100	2	55	7722-3-4	ELAINE	BANNOCKBN	BARWON	BASALTPLNS		
107	070107	9.2	759200	5802300	2	54	7622-2-2	BAMGANIE	BANNOCKBN	BARWON	WESTHIGHIL		
108	070108	4.9	239800	5805300	1,2	55	7722-3-4	ELAINE	BANNOCKBN	BARWON	WESTHIGHIL		
109	070109	1.4	238600	5802100	2,3	55	7722-3-3	MEDINA	BANNOCKBN	BARWON	WESTHIGHIL		
110	070110	1.2	761100	5799100	1	54	7622-2-2	BAMGANIE	BANNOCKBN	BARWON	WESTHIGHIL		
111.	070111	0.3	258400	5767100	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SANDCLAYRS		
112	070112	0.5	248900	5776500	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	BASALTPLNS		
113	070113	0.3	251500	5775600	1	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SANDCLAYRS		
114	070114	100.0	246500	5760500	2	55	7721-III	WORMBETE	BARRABOOL	BARWON	SANDCLAYRS	DBI	M
115	070115	0.8	262500	5813700	1	55	7722-2-4	STAUGTVALE	BMARSH	MOORABOOL	ALLVPLNS		
116	070116	3.7	263300	5815500	1	55	7-722-2-4	STAUGTVALE	BMARSH,	MOORABOOL	WESTHIGHIL		
117	070117	0.6	249300	5805600	2	55	7722-3-1	ECLIPSECRK	BANNOCKBN	MOORABOOL	WESTHIGHIL		
118	070118	1.7	243200	5778400	2	55	7721-4-4	TEESDALE	BANNOCKBN	BARWON	ALLVPLNS		
119	070119	1.2	243800	5782000	1	55	7721-4-4	TEESDALE	BANNOCKBN	BARWON	BASALTPLNS		
120	070120	0.3	242000	5784800	2	55	7721-4-4	TEESDALE	BANNOCKBN	BARWON	SANDCLAYRS		
121	070121	2.4	243800	5783700	1	55	7721-4-4	TEESDALE	BANNOCKBN	BARWON	ALLVPLNS		
122	070122	2.0	254200	5814200	2	55	7722-3-1	ECLIPSECRK	BALLAN	MOORABOOL	WESTHIGHIL	TB	D
123	070123	1.4	255300	5813500	2	55	7722-3-1	ECLIPSECRK	BALLAN	MOORABOOL	WESTHIGHIL	D	D
124	070124	2.5	248200	5818500	2	55•	7722-4-2	YALOK	BALLAN	MOORABOOL	BASALTPLNS	I	Y

Record#	EROSION	TYPE	TREATMENT	PARISH
63	N	I	1	
64	N	I	1	DUNEEED
65	N	I	1	DUNEEED
66	N	M	1	MOOLAP
67	N	M	1	PAYWIT
68		I	1	MEREDITH
69	N	M	1	PUEBLA
70	N	I	1	DUNEEED
71	Y	I	1	DUNEEED
72	N	I	3	DUNEEED
73	Y	I	1	DUNEEED
74	N	I	2	DUNEEED
75	Y	I	1	
76	N	I	1	MURTCAIM
77		I	1	DUNEEED
78	N	I	1	DUNEEED
79		I	1	MODEWARRE
80		I	1	DUNEEED
81		I	1	PARAPARAP
82		I	1	PARAPARAP
83		I	1	DUNEEED
84		I	1	.PARAPARAP
85		I	1	BARRABOOL
86		I	1	BARRABOOL
87		I	1	BARRABOOL
88		I	1	GNARWARRE
89		I	1	DUNEEED
90		I	1	BARRABOOL
91		I	1	GNARWARRE
92	N	I	1	
93		I	1	DUNEEED
94		I	1	DUNEEED
95	N	I	1	LARA
96	N	I	1	CARRAH
97	N	I	1	
98	N	I	1	

Record#	EROSION	TYPE	TREATMENT	PARISH
99		I	1	BELLARINE
100		I	1	PAYWIT
101		I	1	MOOLAP
102		I	1	MOOLAP
103		I	1	BELLARINE
104		I	1	BELLARINE
105		I	1	PAYWIT
106		I	1	MEREDITH
107		I	1	BAMGANIE
108		I	1	MEREDITH
109		I	1'	BAMGANIE
110		I	1	BAMGANIE
111		I	1	DUNEEED
112		I	1	GNARWARRE
113		I	1	GNARWARRE
114	N	M	1	MODEWARRE
115		I	1	BALLIANG
116		I	1	BALLIANG
117		I	1	MOOR EEP
118		I	1	CARRAH
119		I	1	MURGHEBOLUC
120		I	1	CARRAH
121		I	1	MURGHEBOLUC
122	Y	I	I	BALLARK
123	N	I	1	BEREMBOKE
124	N	I	1	BUNGEELTAP

Record#	SITENUMBER'	AREA	EASTING	NORTHING	SEVERITY	MAPZONE	MAP NUMBER	MAPNAME	SHIRE	CATCHMENT	LANDMANGT	EVIDENCE	POSITION
125	070125	6.1	292700	5764400	2	55	7821-4-2	STLEONARDS	BELLARINE	BARWON	LAKESYSMS		
126	070126	2.2	259100	5772300	2	55	7721-1SW	GEELONG	BARRABOOL	BARWON	SOUTHUPHIL		
127	070127	1.0	258900	5769500	2	55	7721-4-2	MTMORIAC	BARRABOOL	BARWON	SOUTHUPHIL		
128	070128	0.3	247700	5783300	2	55	7721-4-1	BANNOCKBN	BANNOCKBN	BARWON	SANDCLAYRS		
129	070129	0.3	248200	5779200	2	55	7721-4-1	BANNOCKBN	BANNOCKBN	BARWON	SANDCLAYRS		
130	070130	2.0	272700	5804000	2	55	7722-2-2	YOUYANGS	CORIO	MOORABOOL	BASALTPLNS	DMT	D
131	070131	15.6	268900	5803600	3	55	7722-2-3	ANAKIE	CORIO	MOORABOOL	ALLVPLNS	DMSTB	D
132	070132	9.2	257500	5783300	2	55	7721-4-1	BANNOCKBN	BANNOCKBN	MOORABOOL	SANDCLAYRS	GDM	FGD
133	070133	2.2	248000	5803000	1	55	7722-3-2	LETHBRIDGE	BANNOCKBN	MOORABOOL	WESTHIGHIL	GDB	D
134	070134	9.6	262700	5803700	1	55	7722-2-3	ANAKIE	CORIO	MOORABOOL	ALLVPLNS	DMT	DO
135	070135	14.0	271700	5787500	3	55	7721-1NE	LARA	CORIO	MOORABOOL	ALLVPLNS	DB	Y
136	070136	3.1	243800	5809200	2	55	7722-3-4	ELAINE	BANNOCKBN	MOORABOOL	WESTHIGHIL	GDB	FD
137	070137	0.6	244000	5807800	2	55	7722-3-4	ELAINE	BANNOCKBN	MOORABOOL	WESTHIGHIL	D	D
138	070138	2.9	240600	5809600	2	55	7722-3-4	ELAINE	BANNOCKBN	MOORABOOL	WESTHIGHIL	GDB	FYD
139	070139	9.5	255000	5756800	2	55	7721-111	PARAPARAP	BARRABOOL	OTWAY	SANDCLAYRS	DTB	D
140	070140	23.9	272100	5789500	3	55	7721-1NE	LARA	CORIO	MOORABOOL	ALLVPLNS	DB	FD
141	070141	5.2	241500	5808500	1	55	7722-3-4	ELAINE	BANNOCKBN	MOORABOOL	BASALTPLNS	D	D
142	070142	0.5	253100	5787500	1	55	7721-4-1	BANNOCKBN	BANNOCKBN	MOORABOOL	SANDCLAYRS	D	F
143	070143	6.7	260400	5756900	2	55	7721-2-4	TORQUAY	BARRABOOL	OTWAY	SANDCLAYRS	DB	D
144	070144	11.0	260600	5758500	2	55	7721-2-4	TORQUAY	BARRABOOL	OTWAY	SANDCLAYRS	DTB	D
145	070145	10.5	250600	5810500	2	55	7722-3-1	ECLIPSECRK	BANNOCKBN	MOORABOOL	WESTHIGHIL	DMT	YD
146	070146	3.2	251500	5814800	2	55	7722-3-1	ECLIPSECRK	BALLAN	MOORABOOL	WESTHIGHIL	GDB	BD
147	070147	5.0	258900	5823700	2	55	7722-1-3	INGLISTON	BALLAN	WERRIBEE	SANDCLAYRS	GD	D
148	070148	14.4	309200	5846700	2	55	7822-1-4	KONGADERRA	ROMSEY	MARIBYRNON	BASALTPLNS	GI	SD
149	070149	12.1	263400	5782300.	2	55	7721-1NW	BATESFORD	CORIO	MOORABOOL	BASALTPLNS	DSB	FD
150	070150	2.0	253500	5798400	2	55	7722-3-2	LETHBRIDGE	BANNOCKBN	MOORABOOL	WESTHIGHIL	D	GD
151	070151	2.4	244400	5806800	2	55	7722-3-4	ELAINE	BANNOCKBN	MOORABOOL	WESTHIGHIL	GB	FBD
152	070152	132.2	313900	5852800	1	55	7823-SE	WALLAN	ROMSEY	MARIBYRNON	WESTHIGHIL	I	D
153	070153	4.1	311600	5843000	2	55	7822-1-4	KONGADERRA	BULLA	MARIBYRNON	WESTHIGHIL	DI	D
154	070154	5.3	261200	5822400	2	55	7722-1-3	INGLISTON	BALLAN	WERRIBEE	SANDCLAYRS	DMB	Y
155	070155	50.0	300400	5837700	2	55	7822-4-1	SUNBURY	BULLA	MARIBYRNON	BASALTPLNS	G	D
156	070156	6.3	293500	5824400	2	55	7822-4-2	SYDENWEST	MELTON	MARIBYRNON	BASALTPLNS	DSB	FY
157	070157	0.2	248900	5831000	2	55	7722-3-1	ECLIPSECRK	BALLAN	MOORABOOL	WESTHIGHIL		
158	070158	0.5	249500	5831500	1	55	7722-3-1	ECLIPSECRK	BALLAN	MOORABOOL	WESTHIGHIL		
159	070159	1.6	248800	5801300	2	55	7722-3-2	LETHBRIDGE	BANNOCKBN	MOORABOOL	WESTHIGHIL		
160	070160	2.0	241800	5815600	2	55	7722-3-4	ELAINE	BALLAN	MOORABOOL	WESTHIGHIL		

Record#	SITENUMBER'	AREA	EASTING	NORTHING	SEVERITY	MAPZONE	MAP NUMBER	MAPNAME	SHIRE	CATCHMENT	LANDMANGT	EVIDENCE	POSITION
161	070161	7.5	263900	5823100	2	55	7722-1-3	INGLISTON	BMARSH	WERRIBEE	SANDCLAYRS	DMT	F
162	070162	4.8	262800	5823800	2	55	7722-1-3	INGLISTON	BALLAN	WERRIBEE	SANDCLAYRS	DMB	Y
163	070163	0.9	262300	58700	1	55	7722-1-3	INGLISTON	BALLAN	WERRIBEE	SANDCLAYRS	DB	FD
164	070164	4.1	243500	5810900	2	55	7722-3-4	ELAINE	BANNOCKBN	MOORABOOL	WESTHIGHIL	GDTB	D
165	070165	11.7	289700	5839900	2	55	7822-4-4	TOOLERNVAL	MELTON	WERRIBEE	BASALTPLNS	I	D
166	070166	7.4	312600	5845600	2	55	7822-INE	DONNYBROOK	BULLA	MARIBYRNON	WESTHIGHIL	DI	SD
167	070167	6.5	314000	5848100	2	55	7823-SE	WALLAN	ROMSEY	MARIBYRNON	WESTHIGHIL	DI	SD
168	070168	10.8	293700	5824800	2	55	7822-4-2	SYDENWEST	MELTON	WERRIBEE	BASALTPLNS	DB	FY
169	070169	74.6	294800	5823800	2	55	7822-4-2	SYDENWEST	MELTON	WERRIBEE	BASALTPLNS	GDB	FYD
170	070170	1.1	251000	5835700	2	55	7722-4-1	CLEEVERHIL	BALLAN	MOORABOOL	WESTHIGHIL	DB	F
171	070171	8.3	250600	5836400	1	55	7722-4-1	CLEEVERHIL	BALLAN	MOORABOOL	BASALTPLNS	DMB	F
172	070172	3.7	253900	5834100	2	55	7722-4-1	CLEEVERHIL	BALLAN	WERRIBEE	BASALTPLNS	DMTB	FD
173	070173	0.5	255700	5836300	2	55	7722-4-1	CLEEVERHIL	BALLAN	WERRIBEE	BASALTPLNS		
174	070174	2.7	239300	5778700	2	55	7721-4-4	TEESDALE	BANNOCKBN	BARWON	ALLVPLNS	D	FY
175	070175	4.6	293200	5824300	1	55	7822-4-2	SYDENWEST	MELTON	WERRIBEE	BASALTPLNS	D	F
176	070176	3.2	298000	5846900	1	55	7822-4-1	SUNBURY	BULLA	MARIBYRNON	BASALTPLNS	D	FD
177	070177	3.5	292600	5849900	1	55	7823-3-2	RIDDELLS	GISBORNE	MARIBYRNON	BASALTPLNS	DI	FD
178	070178	1.6	246600	5835500	2	55	7722-4-1	CLEEVERHIL	BALLAN	MOORABOOL	WESTHIGHIL		
179	070179	3.8	293300	5825000	2	55	7822-4-2	SYDENWEST	MELTON	WERRIBEE	BASALTPLNS	DB	F
180	070180	9.4	292800	5823500	2	55	7822-4-2	SYDENWEST	MELTON	WERRIBEE	BASALTPLNS	DB	F•
181	070181	1.2	299100	5803100	1	55	7822-3-2	WERRIBEE	WERRIBEE	WERRIBEE	BASALTPLNS	D	F
182	070182	9.0	286700	5819800	1.	55	78221VSW	MELTON	MELTON	WERRIBEE	BASALTPLNS	DMST	YD
183	070183	1.2	251100	5798700	2	55	7722-3-2	LETHBRIDGE	BANNOCKBN	MOORABOOL	WESTHIGHIL		
184	070184	10.9	287800	5797400	1	55	7822-3-3	MANOR	WERRIBEE	MARIBYRNON	BASALTPLNS	DI	FD
185	070185	8.0	276100	5786200	2	55	7721-INE	LARA	CORIO	MOORABOOL	BASALTPLNS	DBI	FY

Record#	EROSION	TYPE	TREATMENT	PARISH
125		I	1	PAYW IT
126		I	1	BARRABOOL
127		I	1	BARRABOOL
128		I	1	MURGHEBOLUC
129		I	1	MURGHEBOLUC
130	Y	I	1	WURDIYOUANG
131	Y	I	3	LARA
132	N	MI	1	GHERINGHAP
133	N	I	1	DURDIDWARRAH
134	N	I	1	ANAKIE
135	N	MF	1	MORANGHURK
136	N	I	1	MEREDITH
137	N	I	1	MEREDITH
138	N	MI	2	MEREDITH
139	Y	I	1	PAR PARAPARAP
140	N	M	1	MORANGHURK
191	N	MI	1	MEREDITH
142	N	I	2	WABDALLAH
143	Y	I	2	PUEBLA
194	N	I	1	PUEBLA
145	N	I	3	MOOR EEP
196	Y	I	1	BALLARK
147	N	I	1	YALOAK
198	N	I	1	
149	Y	I	1	MOOR PANYAL
150	N	I	1	DURDIDWARRAH
151	Y	I	1	MEREDITH
152	N	I	1	
153	N	I	1	
154	N	I	1	YALOAK
155	N	I	1	
156	N	I	2	
157		I	1	BALLARK
158		I	1	BALLARK
159		I	1	DURDIDWARRAH

Record#	EROSION	TYPE	TREATMENT	PARISH
160		I	1	BORHONEYGHURK
161	N	I	1	GORROCKBURKGHAP
162	Y	I	3	GORROCKBURKGHAP
163	N	I	1	YALOAK
164	Y	I	1	MEREDITH
165	N	I	1	
166	N	I	1	
167	N	I	1	
168	N	I	1	
169	N	I	1	
170	N	I	1	MOORABOOLWEST
171	N	I	1	MOORABOOLWEST
172	N	I	2	GORONG
173		I	1	GORONG
179	N	I	2	CARRAH
175	N	I	1	
176	N	I	1	
177	N	I	1	
178		I	1	MOORABOOLWEST
179	N	I	1	
180	N	I	.1	
181	N	I	1	DEUTGAM
182	N	I	1	PYWHEITJORRK
183		I	1	DURDIDWARRAH
184	N	I	1	
185	N	I	1	

Record#	SITENUMBER'	AREA	EASTING	NORTHING	SEVERITY	MAPZONE	MAP NUMBER	MAPNAME	SHIRE	CATCHMENT	LANDMANGT	EVIDENCE	POSITION
186	070186	5.4	273700	5781700	2,3	55	7721-1NE	LARA	CORIO	MOORABOOL BASALTPLNS	DSB	FY	
187	070187	46.5	280700	5785300	3	55	7821-4-4	KIRKPOINT	CORIO	MOORABOOL LAKE	DSBI	FY	
188	070188	27.5	304300	5802200	2	55	782211SW	ALTONABAY	WERRIBEE	WERRIBEE BASALTPLNS	DSB	FY	
189	070189	32.7	295600	5794700	2	55	7822-3-2	WERRIBEE	WERRIBEE	MARIBYRNON ALLVPLNS	DB	FY	
190	070190	2.6	296000	5852900	2	55	7823-3-2	RIDDELLS	ROMSEY	MARIBYRNON WESTHIGHIL	DSB	MY	
191	070191	2.0	296200	5853100	1	55	7823-3-2	RIDDELLS	ROMSEY	MARIBYRNON BASALTPLNS	MTB	FY	
192	070192	0.3	296600	5853500	1	55	7823-3-2	RIDDELLS	ROMSEY	MARIBYRNON BASALTPLNS	DB	Y	
193	070193	5.6	286000	5837000	2	55	7822-4-4	TOOLERNVAL	MELTON	WERRIBEE WESTHIGHIL	DI	D	
194	070194.	1.1	284500	5852100	2	55	7823-3-3	MACEDON	GISBORNE	MARIBYRNON WESTHIGHIL	I	D	
195	070195	0.3	313100	5854900	1	55	7823-SE	WALLAN	ROMSEY	MARIBYRNON WESTHIGHIL	D	D	
196	070196	21.9	296700	5852900	1	55	7823-3-2	RIDDELLS	ROMSEY	MARIBYRNON BASALTPLNS	DMT	FD	
197	070197	9.9	298000	5853700	2	55	7823-3-2	RIDDELLS	ROMSEY	MARIBYRNON BASALTPLNS	DI	D	
198	070198	0.6	288600	5854700	2	55	7823-3-3	MACEDON	GISBORNE	MARIBYRNON WESTHIGHIL	DB	F	
199	070199	2.7	285400	5847800	2	55	7823-3-3	MACEDON	GISBORNE	MARIBYRNON WESTHIGHIL	GDT	YD	
200	070200	0.3	291100	5851300	2	55	7823-3-2	RIDDELLS	ROMSEY	MARIBYRNON WESTHIGHIL	I	D	
201	070201	12.5	308500	5852100	2	55	7823-SW	BOLINDAVAL	ROMSEY	MARIBYRNON WESTHIGHIL	GDI	D	
202	070202	0.8	307100	5845100	1	55	7822-1-4	KONGADERRA	BULLA	MARIBYRNON BASALTPLNS	D	D	
203	070203	17.8	297800	5820900	2	55	7822-4-2	SYDENWEST	MELTON	WERRIBEE BASALTPLNS	I	D	
204	070204	2.5	297200	5854200	2	55	7823-3-2	RIDDELLS	ROMSEY	MARIBYRNON BASALTPLNS	GMT	FD	
205	070205	3.8	311500	5858300	2	55	7823-SW	BOLINDAVAL	ROMSEY	MARIBYRNON BASALTPLNS	GD	SD	
206	070206	9.3	308200	5856100	1	55	7823-SW	BOLINDAVAL	ROMSEY	MARIBYRNON BASALTPLNS	D	F	
207	070207	8.0	313000	5860600	2	55	7823-SE	WALLAN	ROMSEY	MARIBYRNON WESTHIGHIL	GI	GD	
208	070208	3.0	314000	5860700	2	55	7823-SE	WALLAN	KILMORE	MARIBYRNON WESTHIGHIL	DI	FD	
209	070209	3.6	288300	5794300	1	55	7822-3-3	MANOR	WERRIBEE	MOORABOOL ALLVPLNS	D	FY	
210	070210	7.1	314400	5853200	2	55	7823-SE	WALLAN	KILMORE	MARIBYRNON WESTHIGHIL	GDSB	SD	
211	070211	5.2	307700	5841200	2	55	7822-1-4	KONGADERRA	BULLA	MARIBYRNON WESTHIGHIL	GD	D	
212	070212	1.9	298800	5860800	2	55	7823-3-2	RIDDELLS	ROMSEY	MARIBYRNON BASALTPLNS	I	D	
213	070213	3.1	295000	5871100	2	55	7823-3-1	ROMSEY	ROMSEY	MARIBYRNON BASALTPLNS	GDB	SD	

Record#	SITENUMBER'	AREA	EASTING	NORTHING	SEVERITY	MAPZONE	MAP NUMBER	MAPNAME	SHIRE	CATCHMENT	LANDMANGT	EVIDENCE	POSITION
214	070214	0.7	293800	5870100	1	55	7823-3-1	ROMSEY	ROMSEY	MARIBYRNON WESTHIGHIL	I	D	
215	070215	3.4	305900	5869500	2	55	7823-2-4	SPRINGFLD	ROMSEY	MARIBYRNON WESTHIGHIL	GDTB	SY	
216	070216	4.9	311100	5870700	2	55	7823-2-4	SPRINGFLD	PYALONG	MARIBYRNON BASALTPLNS	GTB	FD	
217	070217	0.1	289200	5870600	1	55	7823-3-4	WOODEND	NEWHAM WOOD	MARIBYRNON WESTHIGHIL	DB	Y	
218	070218	1.1	290000	5866900	1	55	7823-3-1	ROMSEY	NEWHAM WOOD	MARIBYRNON WESTHIGHIL	DB	Y	
219	070219	2.2	291100	5867400	1	55	7823-3-1	ROMSEY	NEWHAM WOOD	MARIBYRNON WESTHIGHIL	DB	F	
220	070220	0.9	291200	5867300	2	55	7823-3-1	ROMSEY	NEWHAM WOOD	MARIBYRNON WESTHIGHIL	D	FY	
221	070221	1.5	286000	5872500	1	55	7823-3-4	WOODEND	NEWHAM WOOD	MARIBYRNON WESTHIGHIL	DB	Y	
222	070222	4.2	283900	5871500	2	55	7823-3-4	WOODEND	NEWHAM WOOD	MARIBYRNON BASALTPLNS	DB	F	
223	070223	6.1	297000	5873500	2	55	7823-3-1	ROMSEY	ROMSEY	MARIBYRNON BASALTPLNS	DB	FD	
224	070224	0.2	299400	5874000	1	55	7823-3-1	ROMSEY	PYALONG	MARIBYRNON WESTHIGHIL	D	Y	
225	070225	1.1	300300	5873800	1	55	7823-3-1	ROMSEY	PYALONG	MARIBYRNON WESTHIGHIL	DM	SY	
226	070226	0.2	300000	5876500	1	55	7823-1-3	GOLDIENTH	PYALONG	MARIBYRNON WESTHIGHIL	DB	S	
227	070227	0.2	315800	5870400	1	55	7823-2-1	KILMORE	PYALONG	MARIBYRNON BASALTPLNS	D'	F	
228	070228	4.9	315100	5870600	1	55	7823-2-1	KILMORE	PYALONG	MARIBYRNON BASALTPLNS	D	F	
229	070229	1.9	312500	5870900	1	55	7823-2-1	KILMORE	PYALONG	MARIBYRNON BASALTPLNS	DB	F	
230	070230	5.8	314400	5868300	1	55	7823-2-1	KILMORE	KILMORE	MARIBYRNON WESTHIGHIL	I	D	
231	070231	3.1	313500	5867300	2	55	7823-2-1	KILMORE	KILMORE	MARIBYRNON BASALTPLNS	DI	S	
232	070232	0.9	305600	5869800	1	55	7823-2-4	SPRINGFLD	PYALONG	MARIBYRNON WESTHIGHIL	D	F	
233	070233	19.8	306900	5870400	2	55	7823-2-4	SPRINGFLD,	ROMSEY	MARIBYRNON WESTHIGHIL	DI	FD	
234	070234	1.2	306200	5872300	2	55	7823-2-4	SPRINGFLD	PYALONG	MARIBYRNON WESTHIGHIL	D	F	
235	070235	1.9	295600	5876100	2	55	7823-4-2	TAYLORHILL	ROMSEY	MARIBYRNON WESTHIGHIL	DB	F	
236	070236	13.6	289700	5872000	2	55	7823-3-1	ROMSEY	NEWHAM WOOD	MARIBYRNON WESTHIGHIL	DB	YD	
237	070237	0.7	289800	5871600	2	55	7823-3-1	ROMSEY	NEWHAM WOOD	MARIBYRNON WESTHIGHIL	DB	DY	
238	070238	0.2	289300	5871400	2	55	7823-3-4	WOODEND	NEWHAM WOOD	MARIBYRNON WESTHIGHIL	DB	F	
239	070239	1.1	295800	5872100	2	55	7823-3-1	ROMSEY	ROMSEY	MARIBYRNON BASALTPLNS	DMB	FY	
240	070240	0.4	294500	5874000	1	55	7823-3-1	ROMSEY	ROMSEY	MARIBYRNON BASALTPLNS	DB	S	
241	070241	0.6	292500	5873700	1	55	7823-3-1	ROMSEY	NEWHAM WOOD	MARIBYRNON WESTHIGHIL	I	SF	
242	070242	1.7	295200	5869300	1	55	7823-3-1	ROMSEY	ROMSEY	MARIBYRNON BASALTPLNS	DMB	F	

Record#	SITENUMBER'	AREA	EASTING	NORTHING	SEVERITY	MAPZONE	MAP NUMBER	MAPNAME	SHIRE	CATCHMENT	LANDMANGT	EVIDENCE	POSITION
243	070243	1.3	305100	5863200	1	55	7823-2-4	SPRINGFLD	ROMSEY	MARIBYRNON WESTHIGHIL	G	D	
244	070244	9.0	313400	5859700	2	55	7823-SE	WALLAN	ROMSEY	MARIBYRNON WESTHIGHIL	I	D	
245	070245	3.5	310500	5866300	2	55	7823-2-4	SPRINGFLD	ROMSEY	MARIBYRNON BASALTPLNS	I	D	
246	070246	16.1	312500	5853600	2	55	7823-SE	WALLAN	ROMSEY	MARIBYRNON WESTHIGHIL	GD	SD	
247	070247	1.8	312800	5851900	2	55	7823-SE	WALLAN	ROMSEY	MARIBYRNON WESTHIGHIL	D	D	
248	070248	3.9	315700	5859200	2	55	7823-SE	WALLAN	KILMORE	MARIBYRNON WESTHIGHIL	GI	D	

186	N	MI	1
187	N	M	1
188	N	I	1
189	N	M	1
190	N	I	2
191	N	I	1
192	N	I	1
193	N	I	1
194	Y	I	1
195	N	I	1
196	N	I	1
197	N	I	1
198	N	I	1
199	N	I	1
200	N	I	1
201	N	I	1
202	N	I	1
203	N	I	1
204	Y	I	1
205	N	I	1
206	N	I	1
207	Y	I	1
208	N	I	1
209	N	I	1
210	Y	I	1
211	Y	I	1
212	N	I	1
213	Y	I	1
214	Y	I	1
215	Y	I	1
216	N	I	1
217	N	I	1
218	N	I	1
219	N	I	1
220	N	I	1
221	N	I	1
222	N	I	1

223	N	I	1
224	N	I	1
225	N	I	1
226	N	I	1
227	N	I	1
228	N	I	1
229	N	I	1
230	N	I	1
231	N	I	1
232	N	I	1
233	N	I	1
234	Y	I	1
235	N	I	1
236	N	I	1
237	N	I	1
238	N	I	1
239	N	I	1
240	N	I	1
241	N	I	1
242	N	I	1
243	N	I	1
244	N	I	1
245	N	I	1
246	N	I	1
247	N	I	1
248	N	I	1

249	N	I	1
250	N	I	1
251	N	I	1
252	N	I	1
253	N	I	1
254	N	I	1
255	N	I	3
256	N	I	1
257	N	M	1
258	N	I	1
259	N	I	1
260	N	I	1
261	N	I	1
262	N	M	1
263	N	FI	1
264	N	I	1
265			

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