Mid Murray Council

Roadside Vegetation Management Plan 2014 - 2019

The Mid Murray Council Roadside Vegetation Management Plan 2014 –2019 has been developed to provide clear guidance on roadside vegetation protection and management. Council's Elected Members, Management and Staff have had input into the development of the Plan. The Mid Murray community, Native Vegetation Council and other stakeholders have also been consulted during the plans development

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1. INTRODUCTION AND BACKGROUND

1.1. Roadside Vegetation

The roadside is defined as the strip of land between the road formation and the boundary of the road reserve which is usually also the boundary of the adjacent property. Roadside vegetation includes any vegetation growing on roadsides and unmade road reserves; this includes native vegetation of conservation value and vegetation dominated by introduced species.

Indigenous or 'native' vegetation found on road reserves in South Australia, represents remnants of pre-European settlement vegetation. These important biological assets often have significant conservation value, as much of the native vegetation within the agricultural region of the state has been removed or highly disturbed.

(See **http://www.environment.sa.gov.au/dwlbc/assets/files/nv-faq-status-value-nv-sa-JUL10.pdf**). In some areas roadsides support virtually the only remaining example of the original vegetation.

There are three broad benefits of preserving native vegetation on roadsides. They are:

Conservation Benefits

- Contains remnants of the original vegetation
- Can support populations of rare or threatened native flora
- Provides important habitat for native fauna, including reptiles and invertebrates
- Can form an important habitat corridor linking blocks of native vegetation
- May provide unique genetic reference areas for sourcing seed for revegetation and regeneration projects.

Functional Benefits

- Helps to lower local water tables that may affect the road formation and pavement,
- Acts as an effective low cost form of weed control by preventing the establishment of weeds,
- Generally less fire-prone than introduced vegetation
- Can provide valuable shelter for livestock and crops in adjacent agricultural land
- Helps define curves, creating a safer driving environment
- Reduces the velocity of water runoff, in turn reducing scour and erosion of batters and embankments

Social Benefits

- Provides amenity value to the general landscape
- Contributes to driver alertness and road safety
- Often contains flora contributing to the natural character and tourist appeal of a district
- Remnants provide an historical reminder of the vegetation across the landscape prior to settlement

Native bushland is an efficient, self-sustaining system, and after any ground disturbance, it may take a number of years to return to a stable state. Major disturbance can unbalance the system (e.g. through serious weed infestation) and cause long-term damage. In many instances inappropriate management activities can set up the next round of maintenance problems.

Low-impact management of roadside vegetation, for example, is an integral part of efficient and effective maintenance of roads. The vegetation cannot be considered independently of the soil and water that support it, and these in turn cannot be considered in isolation of the pavement. Good roadside management practices can generate potential savings in Mid Murray Council's road maintenance budget.

1.2. Legal Protection of Native Vegetation on Roadsides

The clearance of native vegetation, including that along roadsides, is controlled under the ***Native Vegetation Act, 1991*** and the ***Native Vegetation Regulations 2003.*** The regulations among other things set out circumstances in which native vegetation may be cleared without the need for specific consent from the Native Vegetation Council (NVC). In dealing with the clearance of native vegetation the regulations provide a mechanism to assist in the day to day management of a property.

Regulation 5(1)(y) allows either (i) for clearance by the Mid Murray Council, or someone acting on behalf of the council, where the clearance complies with a Roadside Vegetation Management Plan (RVMP) that has been approved by the NVC, or (ii)- if no such plan has been prepared and approved, the regulation allows clearance where this complies with guidelines issued by the NVC – "*Guidelines for the Management of Roadside Vegetation*", which is available from the NVC Secretariat.

Other statutes relevant to the protection of native fauna and management of roadside vegetation include.

- Under the *Local Government Act 1999* (Section 221), Mid Murray Councils have the authority to regulate the planting, removal of or interference with, any roadside vegetation, including dead timber.
- The *National Parks and Wildlife Act 1972*, which prohibits the removal of native vegetation without a permit from reserves, wilderness protection zones, Crown land, and public land or forest reserves in SA.
- The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, provides the strongest protection for listed species of threatened indigenous plants and animals and important habitats. Any action having a significant effect on these requires assessment and Commonwealth approval.
- *The Natural Resources Management Act 2004,* which promotes sustainable and integrated management of the state's natural resources.

1.3. Purpose of this Roadside Vegetation Management Plan

This Roadside Vegetation Management Plan (RVMP) has been developed to provide a basis for managing roadside vegetation along all municipal controlled rural roads and main roads throughout the Mid Murray Council**.**

It fulfils a legal requirement under the *Native Vegetation Act 1991*, which allows for clearance by Mid Murray Council, or someone acting on behalf of the Mid Murray Council, where the clearance complies with a roadside management plan that has been approved by the Native Vegetation Council.

As well as providing Council with a comprehensive understanding of roadside management issues within the region, it also outlines the ecological value of roadside native vegetation. It identifies remnant native vegetation and any activity that may damage vegetation on roadsides, and establishes a system to properly manage roadside vegetation.

While the safe movement of travelling public is a key requirement of roads, Mid Murray Council has a responsibility to maintain adequate levels of safety and efficiency for drivers on Council owned roads. Mid Murray Council recognises that they also have a responsibility to retain and protect roadside vegetation wherever possible, as, road reserves have become increasingly important for conservation reasons due to the removal of vegetation from adjoining land.

This Roadside Vegetation Management Plan:

- sets clear policies and guidelines for activities affecting roadsides
- identifies threats, and provides a consistent, integrated approach to managing roadside vegetation including protecting it from these threats;
- improves the Council's community relations and their profile as an environmental manager;
- outlines how environmental impacts can be reduced and presents opportunities for environmental enhancement;
- reduces potential Council liabilities; and
- provides a means for Mid Murray Council to demonstrate due diligence in its responsibility to protect and maintain native vegetation on roadsides.

However, this Roadside Vegetation Management Plan is not:

- a means of avoiding liability if native vegetation clearance offences do occur;
- an appropriate mechanism to obtain environmental approval for large road construction works;
- an approval for all roadside vegetation clearing, or
- a stand-alone document in isolation to other management structures and controls over activities that occur in road reserves for which the Mid Murray Council has jurisdiction.

1.4. What This Roadside Vegetation Management Plan Contains

This Roadside Vegetation Management Plan (RVMP) contains:

- a summary of activities that may affect roadside vegetation and guidelines for undertaking these activities;
- procedures for environmental assessment and approval prior to implementation of roadworks;
- details of the Mid Murray Council's roadside vegetation survey and roadside marker scheme. The Plan is intended to be read in conjunction with the five attached A3 maps 1-5.

The RVMP applies not only to road works (maintenance or minor construction) but also to other uses of roadsides such as service provision, pest animal and plant control, property access, and bushfire prevention.

This RVMP provides a basis to promote forward planning and improved co-operation between all roadside users in the management of road reserves. These include Mid Murray Council's CEO, Director of Infrastructure, operational staff, local emergency services, adjacent private property owners, Local Action Planning Groups, the NVC, and importantly, the general public.

1.5. Description of the Local Council Region

The district has a total 3,524 kilometres of used roads and 1,827 km of un-made road reserves. The majority of these (2,989km) are local roads managed by the Mid Murray Council. The remaining 535 kilometres are the responsibility of the Department for Transport, Energy and Infrastructure. The Mid Murray Council has a responsibility to ensure that roads not only provide for the safe movement of traffic, but also reflect community expectations for their wider use.

The original range of vegetation types are still represented within the council boundaries, but have largely been reduced to scattered remnant stands. The dominant vegetation communities in the district are: *Eucalyptus camaldulensis*, river red gum and *Eucalyptus largiflorens*, Black Box along the River Murray floodplain, low mallee that occupies the majority of the highland including open *Myoporum platycarpum* woodlands, Sugarwood and low chenopod shrublands, saltbush, to the north with Black Oak woodlands, *Casuarina pauper.* Towards the eastern hills there is *Eucalyptus odorata*, peppermint box mixed with *Allocasuarina verticillata*, She-oak with *Lomandra effusa*, Irongrass grasslands.

There is currently 281,155ha (44.84%) of native vegetation remaining in the Mid Murray Council region. Native vegetation cover is greatest in the north where the average annual rainfall is less, preventing many land activities that lead to significant vegetation removal/disturbance. Undulating lands to the south have been extensively cleared due mainly to the slightly higher rainfall which is more suited to agricultural use.

The range of original vegetation types is well represented within the road reserve system of the council district however the quality varies from degraded vegetation with little conservation value through to vegetation associations of high biodiversity value based on the vegetation categories described in Table 1: Description of the categories of overall vegetation significance (on page 13).

1.6. Mid Murray Council Area Map

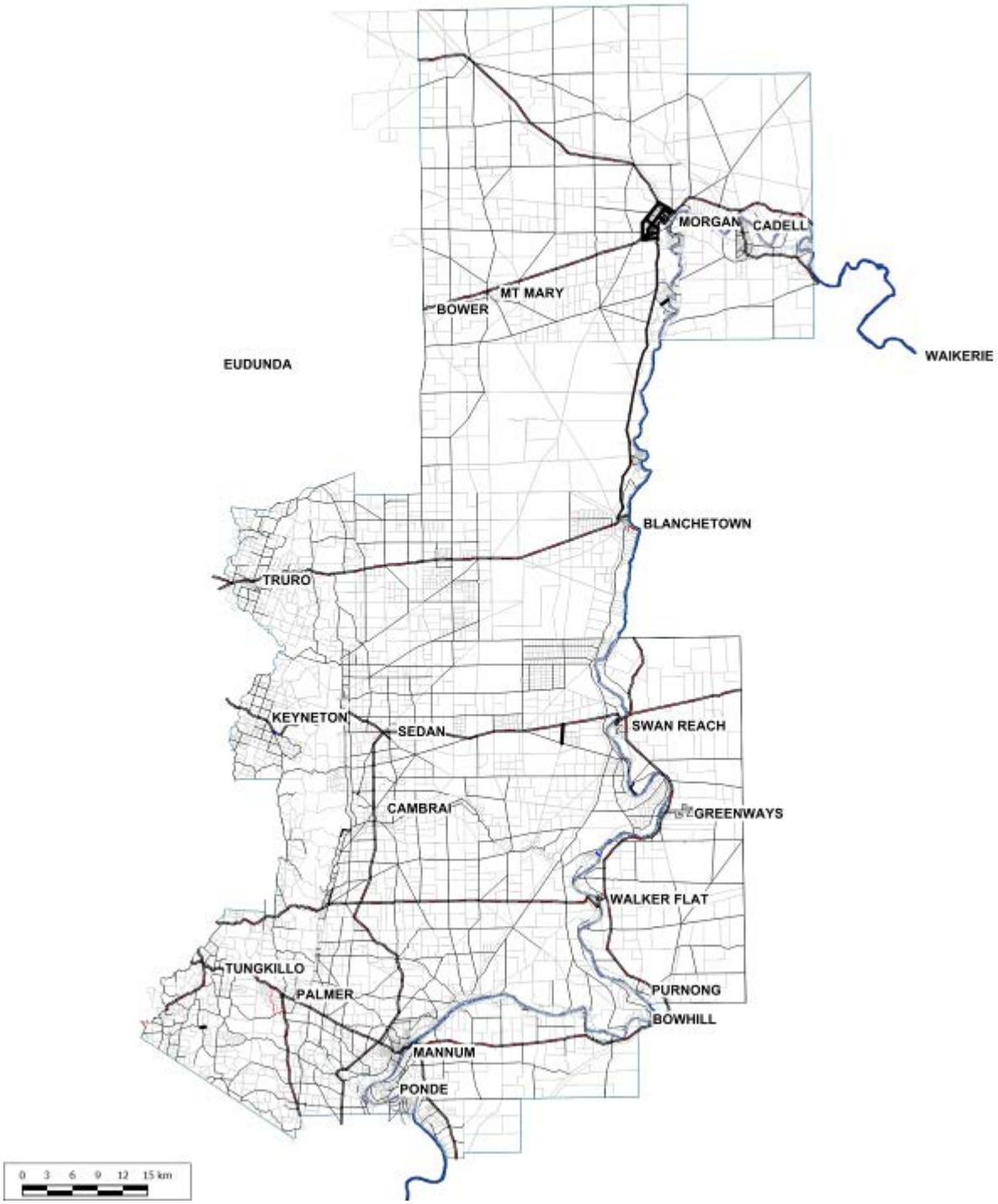


Figure 1 Mid Murray Council Area

1.7 Council Roadside Vegetation Policy Statement

Local Council Policy
The philosophy of the Mid Murray Council's RVMP is in accordance with best practices, to identify the risks and opportunities for the effective management of roadside native vegetation from possible damaging activities without compromising other essential functions of roadsides through integrating appropriate planning procedures.

1.8 Key Objectives of This Roadside Vegetation Management Plan

The Mid Murray Council's key objectives for roadside vegetation are to:

- meet legal requirements for both the provision and maintenance of a safe road network and the protection of roadside vegetation;
- maintain and enhance the habitat and corridor value for indigenous flora and fauna;
- minimise the adverse impacts of activities occurring within the roadside vegetation corridor;
- clearly identify unauthorised activity in road reserves;
- improve the awareness of roadside vegetation management issues for Mid Murray staff and contractors, the community and other authorities; and
- maintain and enhance the species diversity, genetic diversity, vegetation associations and habitat types currently occurring within existing roadside vegetation. An important aspect of this objective is the addressing of weed threats.

1.9 How the Roadside Vegetation Management Plan was prepared

This Plan was developed by the Mid Murray Local Action Planning Committee's Project Manager in consultation with the Chief Executive Officer, Director of Infrastructure Services, Department for Environment and Natural Resources, Mid Murray Local Action Planning Committee Inc., Elected Members, Eastern Hills and Murray Plains Catchment Group and community consultation to ensure it complies with the *Native Vegetation Act 1991,* other relevant legislative requirements and Council's plans and objectives.

As part of the consultative process, issues and activities affecting roadside vegetation within the district have been identified and management actions established to ensure compatibility with existing council policies and objectives. This includes development of standard operating procedures for managing roadside activities where those activities are likely to affect roadside native vegetation.

This RVMP was formally approved by the Native Vegetation Council on ***10/9/2014***.

1.10 How to Use This Roadside Vegetation Management Plan

This RVMP and associated maps will be used as a working reference document within the Mid Murray Council Roadside Vegetation Policy Unit. The implementation of the RVMP is linked to Council's Strategic and Development Plans and associated performance measures. The Director of Infrastructure Services will be responsible for administering its implementation. It will be kept on the Mid Murray Council's website, at the following address **www.mid-murray.sa.gov.au**

Mid Murray Council has chosen to provide the additional information involved in preparing a higher specification than a basic RVMP in order to increase the information available to road managers. This greatly assists in identifying and categorising the conservation value of roadside native vegetation. This is a more expensive and resource intensive Plan however we have been fortunate to haves received funding from the Department of Environment and Natural Resources to assist with this roadside survey as well as incorporating the survey work undertaken in 2000 by Woodward–Clyde.

It is noted that the Work Practices Guidelines will be amended from time to time and are therefore in loose-leaf form to enable distribution as required.

Council staff and contractors will be trained to ensure they can interpret the plan and implement the roadwork practices required to minimise damaging impacts on roadside vegetation and improve the protection of remnant vegetation.

1.11 Distribution of This Roadside Vegetation Management Plan

Copies of this RVMP will be distributed to all relevant Council staff and to all elected members. Copies will also be distributed to the NVC Secretariat and the Department of Environment, Water and Natural Resources. A copy of the RVMP will be available at the Council offices for public viewing as well as on Council's website. It is the responsibility of the Director of Infrastructure Services to ensure the plan is kept current and the contents are promoted to Council staff and the community.

1.12 Reporting and Review Requirements

To ensure that compliance with the objectives of this RVMP have been met, this RVMP will be internally reviewed by the council every five years to provide an opportunity for council to determine if the RVMP needs updating or not. Once the internal review is completed, the RVMP will be forwarded to Native Vegetation Assessment Panel to look at any significant changes, and re-endorse the plan for another set time period. This will help ensure the RVMP stays current with respect to legislation and terminology, and also to improve usability and relevance.

1.13 Roadside Vegetation Survey

To effectively manage roadside vegetation, a survey conducted by Consultant Woodward–Clyde in 2000 and more recently by the Mid Murray LAP using external funding (sought through the Department of Water, Environment and Natural Resources as well as financial contributions from the Mid Murray Council 2013-2014) was undertaken using the standard drive-by roadside methodology "Guide to the Roadside Vegetation Survey Methodology in South Australia" (*Stokes et al* 2006). The data has been incorporated into the state wide roadside vegetation mapping layer. The Woodward Clyde report is only available as hard copy so is not included in this report. However, the five maps produced are attached, and are intended to be used in conjunction with this plan. The maps include:

- Floristic plant communities

- Overview condition; and
- Overall significance (refer to the categories A-E in Table 1)

The survey has provided council with an inventory of the condition, ecological value and conservation significance of roadside vegetation along the major Council-managed roadsides, and has been used to assist Council in the development of strategies for the protection and management of this vegetation, including establishment of roadside markers under the Roadside Marker System (see 1.15). Such measures to minimise the impact of activities on roadside vegetation are likely to contribute to lower, long-term roadside and road verge maintenance costs. Other strategies used / to be used by Mid Murray Council include informing Council's planning programs for road construction and road maintenance activities of the location of high value vegetation so that alternative routes can be considered at the planning stage, identifying potential Significant Environmental Benefit (SEB[1]) areas should any proposed clearance of native vegetation for road work activities be required, and identifying suitable sites for intensive management to protect and enhance biodiversity values

1.14 Roadside Reserve Classifications

Roadside vegetation survey data has been used to conduct an assessment of the relative ecological value of the vegetation in each road segment surveyed. The *overall significance* rating provides a simple summary of the relative ecological value of the vegetation in each segment. This is based on a combination of two attributes: the conservation priority rating for the vegetation association, and the overview condition (extent of weed invasion) rating for the segment.

There are five categories of roadside vegetation based on its *overall significance* (Table 1 page 13). These range from Category A with high priority vegetation association in excellent or good condition to Category E with little or no native vegetation present). A map of the vegetation categories for the road network within the Mid Murray Council can be found in Appendix 4.

[1] The Native Vegetation Act 1991 includes provisions requiring the clearance of native vegetation to be offset by an environmental gain, referred to by the legislation as a 'Significant Environmental Benefit' (SEB). The SEB provides a mechanism to minimise that loss by managing, restoring or re-establishing areas of native vegetation that result in a better outcome for the environment.

Table 1 Description of the categories of overall vegetation significance

Category	Description
A	Should not be disturbed; contains a high priority vegetation association in excellent or good condition or listed plants (nationally, regionally, State).
B	Should not be disturbed; contains a high priority vegetation association in moderate condition or a lower priority association in excellent condition
C	Disturbance should be avoided wherever possible; contains a high priority vegetation association in poor condition or a lower priority association in moderate condition
D	May be disturbed, subject to further assessment and planning; contains limited native vegetation in poor condition
E	May be disturbed; very little or no native vegetation present.

1.15 Roadside Markers

In addition to this survey the Mid Murray LAP has marked the majority of category A and B with roadside markers and sought input from the wider community on other areas of significance that have previously not been captured. These additional sites include some rare plants in the region like *Dodonaea subglandulifera*, mallee hop-bush and *Olearia pannosa*, silver-leaf daisy. The community consultation has also found the inclusion of roadsides that have very good diversity and good condition vegetation that were missed in the earlier survey work. Photos of the silver leaf daisy and mallee hop-bush have been included for reference below.

Image 1 *O pannosa* flowers, photo S Coombe

Image 2 *O pannosa* plant, photo A Linke

Image 3 *D subglandulifera* shrub, photo A Linke

Image 4 D subglandulifera fruit, photo S Coombe

Image 5 photos of roadside markers used

2. MANAGEMENT ISSUES

Native vegetation along roadsides needs careful management if it is to be conserved for future generations. Purely because of its linear nature, it is susceptible to gradual degradation through weed invasion. This degradation can be compounded if soils are disturbed or compacted by machinery or if low native shrubs or native grasses are unwittingly driven over or cleared. Not only can native plants be unnecessarily destroyed, but conditions can also be made unsuitable for natural regeneration, and management problems can also be created for adjoining landholders.

This section outlines the management issues relevant to the Mid Murray Council that may impact on indigenous vegetation on roadsides and provides guidelines to reduce likely impacts, as well as any consultation or assessment procedures that are required.

NOTE: Throughout this plan, reference is made to **"minor clearance". This term is used to refer to very minor and localised clearance, such as pruning of branches or removal of one or two tree saplings or shrubs which are known to be common in the area.**

If in doubt as to what constitutes **minor clearance**, consultation with the Native Vegetation Management Unit prior to the work is recommended. It is just possible that the site may contain a small, visually insignificant plant species (e.g. orchid or native grass) which is of particular conservation significance. It is also possible that the clearance (if in excess of that described above) could be considered to fall under Section 29 (12) of the *Native Vegetation Act 1991*, and hence require a formal process and/or set-aside area. Either way, consultation is recommended to avoid any unintentional illegal clearance occurring.

Objectives

- To ensure road construction activities meet road safety standards whilst ensuring minimum disturbance to roadside indigenous vegetation.

2.1 NEW ROADWORKS CLEARANCE

Information

The Mid Murray Council sometimes needs to undertake road works which involve clearance of mature or relatively undisturbed native vegetation. *New road works*, include:

- construction of new roads along previously undeveloped road reserves,
- widening or realignment of existing roads,
- new borrow-pits, new drains, new stockpile sites, or
- upgrading as a result of changes in land use patterns across a region.

These activities could have significant environmental impact and it is important that the vegetation be assessed prior to the works. If significant vegetation is present (i.e. vegetation in good condition or of high significance) it may be possible to modify the road works to reduce or avoid critical impact.

- Under the *Native Vegetation Regulations 2003*, *Regulation 5(1)(d)* permits clearance of native vegetation for new road works provided that it is located such that it avoids or minimises the impact on significant areas of native vegetation. These types of activities require specific NVC approval and require an SEB to offset the clearance.

2.1.1 Consultation and Approval Procedures

Clearance approval under Regulation 5(1)(d) is required for new road works (ie. new road construction, widening, realignment,) which involve clearance of native vegetation.

NOTE: This requirement does not apply to very minor and localised clearance, such as pruning of branches or removal of one or two tree saplings or shrubs which are common in the area.

2.1.2 Guidelines

Road Design

Mid Murray Council will consider the following design principles when planning new road works (prior to obtaining NVC approval):

- avoid vegetation communities of high conservation significance
- one wide roadside is preferable to two narrow roadsides
- if widening is necessary where native vegetation is present on both sides, widening on the narrow roadside is preferred
- the value of roadside vegetation is greater where there is native vegetation adjacent (outside the road reserve)
- drainage systems and batters will be designed to minimise sedimentation of water courses, minimise discharge into disease-susceptible plant communities, and control erosion.

Road Construction

Once approval has been obtained from the NVC, the Mid Murray Council will minimise the impact of construction on vegetation by abiding by the following guidelines:

- clearly identify and mark with stakes or tape any significant or protected vegetation, habitat areas and sensitive areas prior to the commencement of works
- always stay within the construction zone
- keep machinery and stockpiles on previously cleared land
- limit soil disturbances on roadside
- limit vegetation removal to that approved by the NVC
- identify the exact location of proposed stockpiles, plant compounds, access roads and turning areas to avoid any incidental vegetation damage
- borrow pits must be located where native vegetation will not be disturbed
- materials for construction works to be taken from disease and weed free sites
- equipment should be cleaned on site before moving on to other sites: this particularly applies where machinery is operating in weed-infested areas
- only use the appropriate type and minimum size of machinery for the job
- chip light material from tree removal and use as mulch to spread local seed
- if there is no alternative to burning, do not burn close to desirable vegetation
- strip and stock-pile topsoil from areas of good vegetation. Re-use as soon as

possible

- avoid “cleaning-up” vegetation after construction. Retain stumps, dead wood and understorey where possible
- if unsure about any environmental controls, contact the site supervisor.

Road Standards[2]

The following standards for road construction have been adopted by the Mid Murray Council, and are to be carried out subject to approval from the NVC under Regulation 5(1)(d).

Sealed Roads

Road Carriageway Widths - New Class A or Class B (sealed) roads are to have a maximum road carriageway width Local Council, a shoulder width of up to 1m and a verge width of up to 1.5m on either side of the edge of the sealed carriageway (subject to Section 2.2 Roadside Maintenance and Section 2.3 Public Safety Clearance of this RVMP).

Vertical Height Clearance The vertical height clearance envelope of new sealed roads is to be up to a maximum of 5m from the edge of the sealed carriageway.

Unsealed Roads

Road Carriageway Widths

- New Class A or Class B (unsealed) roads are to have a maximum carriageway width Local Council and a verge width of up to 1.5m on either side of the carriageway (subject to Section 2. Public Safety Clearance of this RVMP).
- New Class C roads are to have a maximum carriageway width of up to 10m and a verge width of up to 1.5m on either side of the carriageway (subject to Section 2.3 Public Safety Clearance of this RVMP).
- New Class D and Class E roads are to have a maximum carriageway width Local Council and a verge width of up to 2.5m on either side of the carriageway (subject to Section 2.3 Public Safety Clearance of this RVMP).

Vertical Height Clearance

- The vertical height clearance envelope of all new unsealed roads is to be up to a maximum of 5m from the edge of the grader line.

2 Note that a higher vertical clearance may be sought in this RVMP if well justified and based on usage of road by over-sized agricultural vehicles. This may be limited to certain routes.

2.1.3 Consultation and Approval Procedures

Clearance approval under Regulation 5(1)(d) is required for new road works (ie. new road construction, widening, realignment,) which involve clearance of native vegetation.

NOTE: This requirement does not apply to very minor and localised clearance, such as pruning of branches or removal of one or two tree saplings or shrubs which are common in the area.

2.1.4 Guidelines

Road Design

Mid Murray Council will consider the following design principles when planning new road works (prior to obtaining NVC approval):

- avoid vegetation communities of high conservation significance
- one wide roadside is preferable to two narrow roadsides
- if widening is necessary where native vegetation is present on both sides, widening on the narrow roadside is preferred
- the value of roadside vegetation is greater where there is native vegetation adjacent (outside the road reserve)
- drainage systems and batters will be designed to minimise sedimentation of water courses, minimise discharge into disease-susceptible plant communities, and control erosion.

Road Construction

Once approval has been obtained from the NVC, the Mid Murray Council will minimise the impact of construction on vegetation by abiding by the following guidelines:

- clearly identify and mark with stakes or tape any significant or protected vegetation, habitat areas and sensitive areas prior to the commencement of works
- always stay within the construction zone
- keep machinery and stockpiles on previously cleared land
- limit soil disturbances on roadside
- limit vegetation removal to that approved by the NVC
- identify the exact location of proposed stockpiles, plant compounds, access roads and turning areas to avoid any incidental vegetation damage
- borrow pits must be located where native vegetation will not be disturbed
- materials for construction works to be taken from disease and weed free sites
- equipment should be cleaned on site before moving on to other sites: this particularly applies where machinery is operating in weed-infested areas
- only use the appropriate type and minimum size of machinery for the job
- chip light material from tree removal and use as mulch to spread local seed
- if there is no alternative to burning, do not burn close to desirable vegetation
- strip and stock-pile topsoil from areas of good vegetation. Re-use as soon as

possible

- avoid “cleaning-up” vegetation after construction. Retain stumps, dead wood and understorey where possible
- if unsure about any environmental controls, contact the site supervisor.

Road Standards[3]

The following standards for road construction have been adopted by the Mid Murray Council, and are to be carried out subject to approval from the NVC under Regulation 5(1)(d).

Sealed Roads

Road Carriageway Widths - New Class A or Class B (sealed) roads are to have a maximum road carriageway width Local Council, a shoulder width of up to 1m and a verge width of up to 1.5m on either side of the edge of the sealed carriageway (subject to Section 2.2 Roadside Maintenance and Section 2.3 Public Safety Clearance of this RVMP).

Vertical Height Clearance The vertical height clearance envelope of new sealed roads is to be up to a maximum of 5m from the edge of the sealed carriageway.

Unsealed Roads

Road Carriageway Widths

- New Class A or Class B (unsealed) roads are to have a maximum carriageway width Local Council and a verge width of up to 1.5m on either side of the carriageway (subject to Section 2. Public Safety Clearance of this RVMP).
- New Class C roads are to have a maximum carriageway width of up to 10m and a verge width of up to 1.5m on either side of the carriageway (subject to Section 2.3 Public Safety Clearance of this RVMP).
- New Class D and Class E roads are to have a maximum carriageway width Local Council and a verge width of up to 2.5m on either side of the carriageway (subject to Section 2.3 Public Safety Clearance of this RVMP).

Vertical Height Clearance

- The vertical height clearance envelope of all new unsealed roads is to be up to a maximum of 5m from the edge of the grader line.

3 Note that a higher vertical clearance may be sought in this RVMP if well justified and based on usage of road by over-sized agricultural vehicles. This may be limited to certain routes.

2.2 ROADSIDE MAINTENANCE

Objectives

- To ensure a safe and efficient road system whilst ensuring minimum disturbance to roadside indigenous vegetation.
- To ensure best management practices for vegetation maintenance works on roadsides are understood and adhered to.

Information

Adequate vertical and lateral clearance of roadside vegetation is needed for the safe movement of vehicles, and additional clearance is usually needed at intersections, crests and the inside of curves to provide adequate sight distance to ensure that a driver is able to perceive all possible road hazards in sufficient time and react accordingly. The degree of clearance needed will vary according to the standard of the road, the type and amount of traffic and the characteristics of the vegetation. Along most of Councils roads, clearance to the necessary safety standard has already taken place, but regrowth may be encroaching back into the clearance space.

These clearance areas are generally referred to as *Clearance Envelopes.* Clearance envelopes used in the Mid Murray Council**,** are found in the diagrams on page 19.

2.2.1 Consultation and Approval Procedures

a) **Maintenance** of **existing** roadside vegetation clearances (clearance envelopes) by low impact methods and vegetation clearance for **sight distance** at intersections, driveways and curves, and around roadside furniture, according to Austroad Standards, can proceed without clearance approval (refer to guidelines 2.2.2).

b) Clearance approval is needed for:

- **New** structures (e.g. construction of new open drains; new stockpiles);
- clearance **exceeding** that of the approved “clearance envelope”)OR
- regrowth that has reached the stage where high-impact methods (e.g. bulldozing) are required when they haven’t been previously.

2.2.2 Guidelines

Any clearance proposed here is not meant to imply or establish safety standards.

Clearance Envelopes

The main clearance envelope is the area that is required to be clear of vegetation for the safe passage of legal height vehicles (4.6m) across the full width of the traffic lanes. To allow for regrowth between pruning and sagging of branches caused by wet or windy conditions, a minimum[4] clearance height of 5.0 m will be maintained. (Note that if Council can justify a larger clearance envelope, then there is some flexibility, e.g. in areas of regular use of oversized agricultural vehicles, however at this stage MMC does not have this requirement).

Secondary clearance envelopes are further areas required to be kept clear of vegetation for adequate visibility of other traffic, signs and other roadside furniture. Secondary clearance envelopes can extend up to 500mm around furniture. Additional vegetation control may be undertaken on the approach side of signs and delineation devices to ensure that the sign is clearly visible from a distance equivalent to the stopping sight distance for the speed environment of the road.

As a general rule, regrowth vegetation less than 5 years old can be cleared in clearance envelopes without approval, clearance of vegetation between 5 and 10 years old requires consultation with the NVCS (and where a longer clearance cycle is deemed necessary, this is likely to be approved, and noted in the RVMP), and vegetation older than 10 years would usually require assessment and NVC approval. If in doubt, check with the Council's Director of Infrastructure, or contact the NVCS office for advice.

Sealed Roads Vertical Height Clearance:

- A clearance envelope will be maintained up to a vertical height of 5m from the edge of the seal (Figure 1). Clearance beyond this height will require NVC approval.

Unsealed Roads Vertical Height Clearance:

- A clearance envelope will be maintained to a vertical height up to 5m from the edge of the grader line (edge of carriageway, Figure 1). Clearance beyond this height will require NVC approval. On unsealed roads, every effort will be made to limit grading to the pre-existing width, and where possible this width should be documented for future maintenance works.

[4] Reference to maintaining a minimum, does not suggest that an increased level of clearance can automatically occur. In some cases roads may have historically been maintained with a higher vertical clearance, and can continue to do.

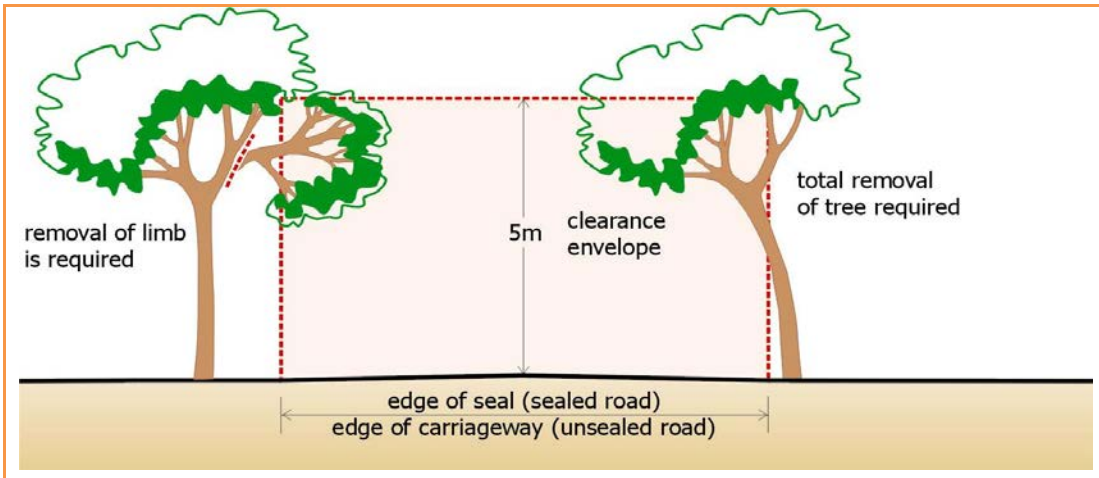


Figure 1: Maintenance of clearance envelope

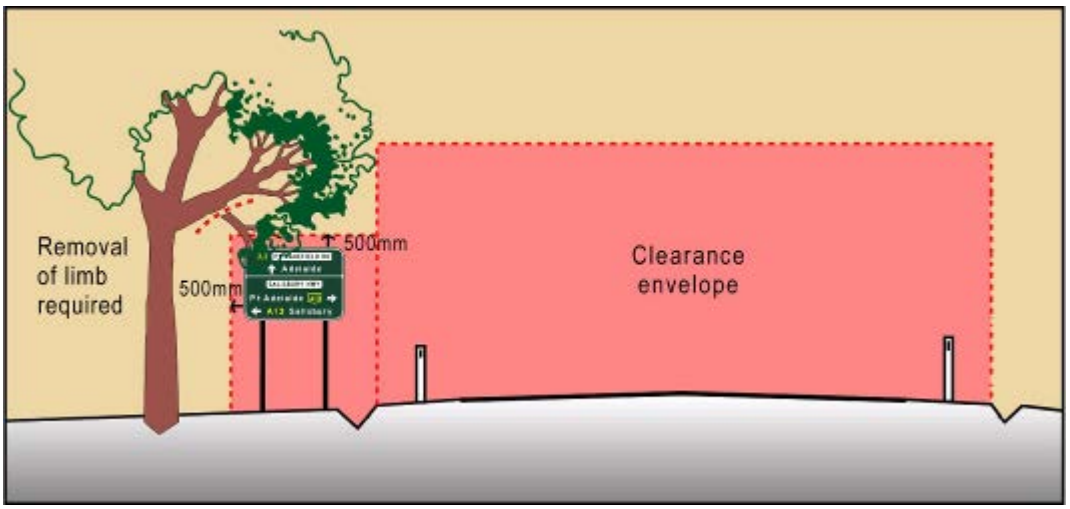
- 

Figure 2: Clearance around roadside furniture

Urban or built up areas:

- It is desirable to maintain a vertical clearance of 5.0m from kerb face to kerb face. Council will maintain a minimum clearance envelope that is 5.0 m high, extending over the width of the travel lanes that are available for the passage of all legal road vehicles as shown in Figure 4.

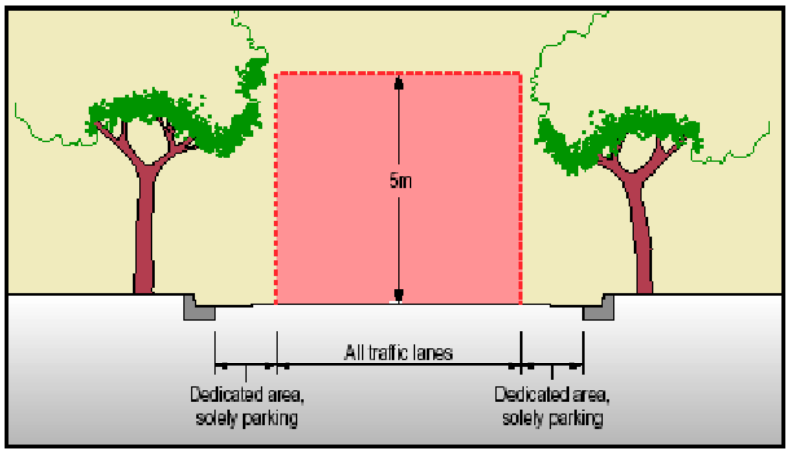


Figure 4: Urban Clearance envelope (Minimum)

The clearance envelope is further modified on highway medians. A clear height of 2.1 m will be maintained at the kerb and extend 1.0m from the carriageway or to the nearest edge of the trunk, whichever is lesser (Figure 5).

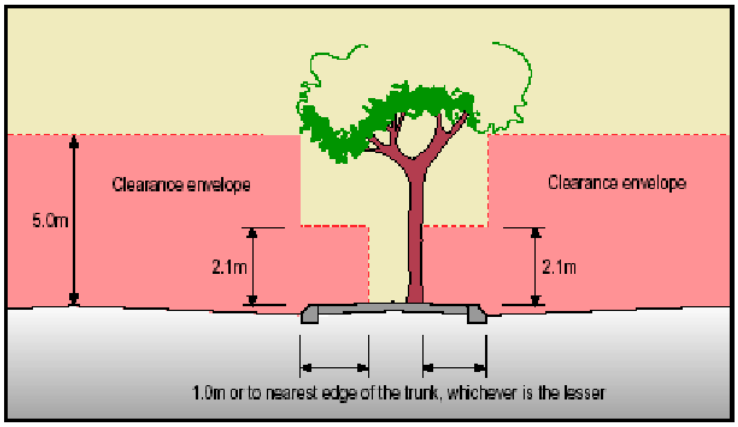


Figure 5: Change to clearance envelope at medians

Secondary Clearance Envelopes

A secondary clearance envelope extending up to 500 mm around existing roadside furniture can occur (Figure 6). Additional vegetation control may be undertaken on the approach side of signs and delineation devices to ensure that the sign is clearly visible from a distance equivalent to the stopping sight distance for the speed environment of the road (Figure 7). At road intersections where corners are created, verges are to be maintained for safe sight distance according to Figure 8.

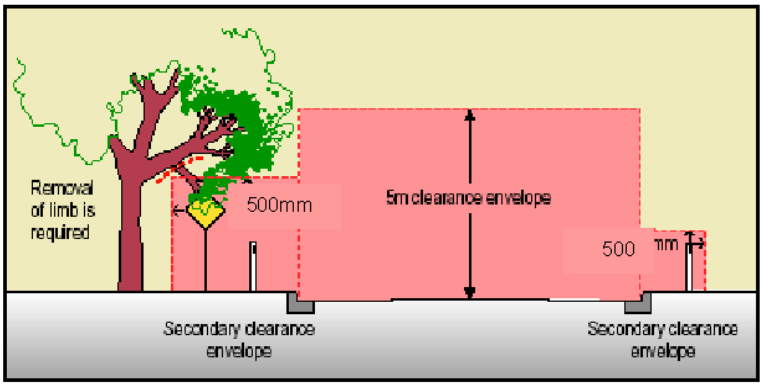
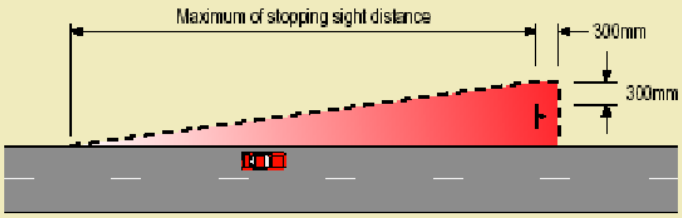


Figure 6: Secondary Clearance Envelope around existing roadside furniture

Low growing native plant species within the road verge that will not impair sight distance or pose a significant risk to vehicle safety is to be retained and promoted. The presence of these species can help prevent weed invasion and soil erosion, maintain a level of biodiversity in the area and can reduce roadside management costs.



85th percentile speed (km/h)	Stopping Sight Distance (m)
51-60	65
61-70	85
71-80	115
81-90	140
91-100	170
101-110	210
111-120	250

Source: extract from AS1742.2-1994, table 2.6

Figure 7: Secondary clearance envelope along road associated with visibility of signs, etc.

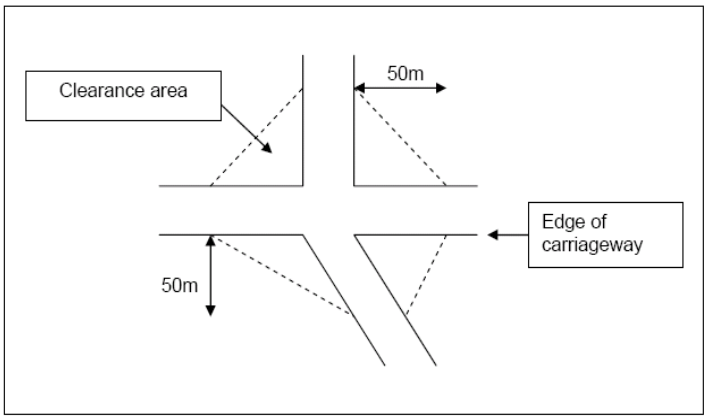


Figure 8: Existing verge clearance to be maintained at intersections (this includes road and rail intersections)

All Roads

The following codes of practice will be implemented by the Mid Murray Council with the delegated responsible officer being the (i.e.) Director of Infrastructure Services, located at 49 Adelaide Road, Mannum SA 5238 (08) 8569 0100

- **Minimise Weed and Disease Spread**
  - clean down machinery in appropriate areas before entering and when leaving work site
  - program works to begin with clean machinery in high conservation areas and work toward degraded sites
  - only use soil or fill from a weed or disease free site
- **Turn-around Points**
  - on narrow roads of high or medium conservation value, identify machinery turn-around points where native vegetation will not be damaged

- locate stockpiles, turn-out or lay-down areas on existing cleared land

- **Grading and Drain Cleaning Operations**
  - avoid damage to roots, bark and limbs
  - avoid working inside the drip line of trees
  - avoid working where root damage and soil compaction may occur
  - remove drain spoil and dispose of appropriately
  - care must be taken to ensure that the grader does not intrude beyond the existing carriageway width (grading a little further each time can have significant impact over a number of years)
- **Herbicides**
  - only use herbicides where vegetation control by mechanical methods is inappropriate
  - avoid over-spray by not spraying in windy conditions
- **Vegetation Removal**
  - avoid “cleaning up” vegetation and retain stumps, dead wood and understorey where possible
  - carefully prune trees using low impact methods in accordance with recognised arboriculture standards
  - avoid damaging undergrowth when removing trees
  - dispose of waste materials at an appropriate site or depot or leave as habitat for wildlife
  - low shrubs, native grasses and groundcovers generally do not affect road safety and, where possible, will be retained in the clearance zones to help prevent weed invasion and erosion
  - particular care to be taken at sites with Significant Roadside Marker signs.
- **Machinery Use**
  - only use the appropriate type and minimum size of machinery for the job
- **Erosion Control**
  - remove as little vegetation as possible and encourage the growth of native vegetation on batters
  - maintain drainage systems
  - minimise soil disturbance

2.3 PUBLIC SAFETY CLEARANCE

Objectives

- To balance roadside protection of native vegetation and public safety.
- To address any issues of public safety over and above those currently addressed (see Roadside Maintenance section) in accordance with the NVC '*Managing Native Vegetation - A Framework for the Application of Regulation 5(1)(lb), for Clearance Along Roads, Intersections and at Rail Crossings for Public Safety Purposes'.*

Information

This section of the RVMP summarises the requirements for Council when considering *new* clearance (as compared to *maintenance*) for the purpose of increasing levels of road safety under Regulation 5(1)(lb) in accordance with the NVC '*Managing Native Vegetation* - A *Framework for the Application of Regulation 5(1)(lb), for Clearance Along Roads, Intersections and at Rail Crossings for Public Safety Purposes'.*

2.3.1 Consultation and Approval Procedures

- Clearance of roadside vegetation within specified distances from the edge of carriageway can generally proceed with clearance approval under the Clearance to Protect Public Safety Regulation 5(1(lb), with no offset required. Once any additional areas are authorised under regulation 5(1)(lb) then these will be incorporated into the Maintenance section of this RVMP when the plan is next reviewed.
- Clearance beyond specified distances from the edge of carriageway may require clearance approval from the NVC under regulation 5(1)(d), with an offset required (see section 2.1).

2.3.2 Guidelines

All proposed clearance of roadside native vegetation under public safety *Native Vegetation Regulation 5(1)(lb)* must be undertaken in accordance with written approval from the NVC and must comply with the NVC's *"Managing Native Vegetation- Interim Framework for the Application of Regulation 5(1)(lb) for Clearance Along Roads, Intersections and at Rail Crossings for Public Safety Purposes".*

Road Curves

- For road curves, the amount of clearance will be determined on a case-by-case basis and, where practicable, only non-frangible plants impeding visibility will be removed using cut or cut and swab.

- Low growing species and ground covers should be retained.
- These clearance zones should be maintained by trimming, slashing and rolling that minimise soil disturbance.
- Avoid grading or bulldozing.

Sight Triangles at Road Intersections and Rail Crossings - Category 1

- Both frangible and non-frangible native vegetation (if need be) can be cleared for the establishment of safe sight lines at road intersections and rail crossings.
- Clearance must be consistent with clearance guidelines outlined in Austroad Guide to Road *Design: Part 4: Intersections and Crossings-General 2009*, and AS 1742.7:2007 *Manual of uniform traffic control devices, Part 7: Railway Crossings.* No SEB is required.

Sealed Roads – Category 2

- On sealed roads with a speed design of equal to or less than 80kms/hr, up to 2 metres of non-frangible native vegetation can be reduced, modified or removed from the edge of travelled way for the purpose of public safety.
- For sealed roads with a speed design greater than 80kms, up to 3 metres of non-frangible native vegetation can be reduced, modified or removed from the edge of travelled way is applicable for the purpose of public safety (Table 2).
- Clearance of frangible vegetation in Category 2 situations must have clearance approval from the NVC.

Table 2: Sealed roads - Category 2 zone clearance widths

Speed limit (*km/hr)*	**Category 2 zone widths adjacent to the edge of travelled way**
≤80 km	2 m
>80 km	3 m

Unsealed Roads – Category 2

- On unsealed roads, up to 2 metres either side of the defined travelled way can be cleared of non-frangible native vegetation for the purpose for public safety. No offset is required.
- Clearance of frangible vegetation requires clearance approval from the NVC, with an offset possibly required.
- The clearance level is capped at a total width including the travelled way itself of up to 12 metres.
- The road authority will need to demonstrate that it has considered the NAMO principles to avoid or minimise the impacts that any proposed actions may have on biodiversity or native vegetation.
- The road authority must show it has considered other safety improvement options as opposed to clearance.

Clearance Beyond Category 1 and 2 Zones - Category 3

- Category 3 is the native vegetation beyond the Category 1 and 2 zones. Clearance of non-frangible native vegetation in Category 3 area, or less than 6

non-frangible scattered trees, or less than 0.5 hectares of canopy area of non-frangible vegetation, will require the road authority to justify clearance for public safety purposes.

- Any proposed clearance in this area will require written approval from an NVC authorised delegate acting on recommendations by NVAP.

2.4 FENCELINE CLEARANCE

Objectives

- To enable landholders to **gain appropriate access** to fence lines for maintenance and construction purposes.
- To **minimise the impact** and disturbance of native vegetation by clearance for fence-line construction and maintenance.
- To encourage **alternative approaches** for erecting fences that minimises clearance of roadside native vegetation.

Information

A landholder who wishes to clear native vegetation on a road reserve, to enable construction or maintenance of a boundary fence, requires consent of the Mid Murray Council under the *Local Government Act 1999* (Section 221), and may, depending on the amount of vegetation involved, also require formal NVC approval.

2.4.1 Consultation and Approval Procedures

- Clearance approval from the NVC is required for any vegetation clearance along fence lines which **exceeds** the standards below:
  - **Where the roadside vegetation consists largely of <u>trees</u>, only branches protruding through or overhanging the fence, or trees growing <u>on the actual</u> fence alignment, can be removed.**
  - **Where <u>shrubs or bushes</u> are growing <u>through</u> the fenceline, those plants growing within <u>one metre</u> of the fence alignment can be removed.**
  - Greater fenceline clearance may be justified in some districts which have high bushfire risk, or where there is fence maintenance problems associated with vigorously growing shrubs. In this case, Mid Murray Council has sought a variation of the standards for situations along the river floodplain where Lignum grows thick and fast along fencelines. In these situations Mid Murray Council will clear plants growing within 2m of the fence alignment.
- Consultation with the Native Vegetation Management Unit should occur through the Mid Murray Council.
- If rare or threatened plant species (NPW Act Schedules or EPBC Act 1999) are present, Council staff to consult with the Native Vegetation and Biodiversity Management Unit.

- These standards take into account that the adjoining landholder can usually clear vegetation that impedes access to a fence, for up to five metres width on the private land abutting the road, where that clearance is necessary to provide vehicular or other access for fence construction or maintenance (see Regulation 5(1)(s) – NOTE that is does not provide an automatic right to clear a five-metre strip along a fence. If vegetation on an adjacent property is located within five metres but does not impede reasonable access to the fence, the regulation cannot be used to clear that vegetation).

2.4.2 Guidelines

Permission

- **Removal of native vegetation on a road reserve for the purpose of construction or maintenance of a boundary fence requires** consent of the Mid Murray Council**.**
- In granting any consent, Council will comply with the following standards:
  - Where the roadside vegetation consists mainly of trees, only branches protruding through or overhanging the fence, or trees growing on the actual fence alignment, should be removed.
  - Where shrubs or bushes are growing through the fence line, those plants growing within one (1) metre of the fence alignment can be removed. Along the river floodplain Mid Murray Council can clear plants growing within 2m of the fence alignment.
- **Clearance** approval from the NVC **is required for any native vegetation clearance along fence lines which exceeds the above standards**.
- Any unauthorised clearance will be referred by Council staff to the Native Vegetation Management Unit.

Clearance methods

- Low impact methods of clearance (e.g. minimal ground disturbance, cutting cleanly rather than breaking branches) should only be used when clearing vegetation according to these standards.
- Cleared vegetation is to be removed from the site and not left on the road reserve, so as to minimise disturbance to the remaining vegetation (unless considered habitat features, e.g. hollow logs, or if small amounts, material may be left on site if it is spread widely and not allowed to form a pile, and is not considered to increase the amount of combustible material significantly).

Re-locating Fences

- Landholders wanting to replace boundary fences may consider re-locating the new fencing a few metres into their properties to minimise potential impacts on roadside vegetation. This can also potentially reduce construction and maintenance costs. The narrow strip between the old and the new fence can be maintained clear of any regrowth to minimise impacts on the new fence, and also act as a firebreak between the roadside and the property.
- An alternative to the removal of trees in line with the property boundary may include constructing a simple strut arrangement that allows a fence to deviate a short distance around a tree. Wires are not attached directly to the tree, thus minimising potential damage to the tree (Image 6)

Image 6: A simple strut arrangement that allows a fence to deviate a short distance around a tree. Wires are not attached directly to the tree, thus minimising potential damage to the tree.

The same strut arrangement seen from the side. The strut holding the wires away from the tree is directly behind the trunk. The wires are in place, but cannot be seen due to the light at the time the photo was taken.

2.5 PROPERTY ACCESS CLEARANCE

Objectives

- To minimise the loss of native vegetation through the construction of property access points.
- To ensure clearance for safe sight distances are established and maintained in accordance with Austroad Standards[5].

Information

From time to time clearance of roadside vegetation may be required to provide access or improve access to private properties (e.g. new driveways). For rural areas, a primary producer may need new access to a paddock, possibly to cater for wide farm machinery. In other situations (e.g. semi-urban) it may be normal vehicular access to a residential allotment.

In these situations, the safety of the access user needs to be the primary consideration. At the same time the conservation of native vegetation also needs to be considered.

2.5.1 Consultation and Approval Procedures

- Clearance of roadside vegetation to provide access to adjoining land requires the consent of the Mid Murray Council**,** and along arterial roads, the Department of Planning, Transport and Infrastructure.
- In addition, approval is needed through the Native Vegetation and Biodiversity Management Unit for any proposed clearance of native vegetation for access which **exceeds the standards** in the guidelines section on page 30.
- Consultation with the Native Vegetation Management Unit should occur through the Mid Murray Council.
- If rare or threatened plant species (NPW Act Schedules or EPBC Act 1999) are present, Council staff to consult with the Native Vegetation Management Unit.

[4] Austroads Guide to Road Design: Part 4: Intersections and Crossings-General 2009

Austroads Guide to Road Design: Part 4: Intersections and Crossings-General 2009

2.5.2 Guidelines

Permission

- Removal of native vegetation on a road reserve to provide access to adjoining land requires consent of the Mid Murray Council.
- If there is more than one option which will provide safe access, the option which involves least disturbance of native vegetation, or vegetation of lower conservation significance should be selected.
- Where some clearance of native vegetation is unavoidable, this should not exceed the following standards:
  - For normal vehicle access: five metres wide plus minimum clearance along the road reserve needed to provide adequate sight distance;
  - For wider farm vehicles: ten metres wide plus minimum clearance along the road reserve needed to provide adequate sight distance.
- Clearance approval from the NVC is required for any native vegetation clearance along fencelines which exceeds the above standards.
- Any unauthorised clearance will be referred by Council staff to the Native Vegetation and Biodiversity Management Unit.

Clearance methods

- Low impact methods of clearance (e.g. minimal ground disturbance, cutting cleanly rather than breaking branches) should only be used when clearing vegetation according to these standards.
- Cleared vegetation is to be removed from the site and not left on the road reserve, so as to minimise disturbance to the remaining vegetation (unless considered habitat features, e.g. hollow logs, or if small amounts, material may be left on site if it is spread widely and not allowed to form a pile, and is not considered to increase the amount of combustible material significantly).

Avoiding unnecessary clearance

Care must be taken to avoid areas of native grassland and plant communities of conservation significance.

- Where possible, access points will not be permitted on Category A road reserves.
- If the roadside vegetation has not yet been assigned to Category A- E, a vegetation survey must be undertaken by suitably qualified persons to assign the vegetation present into these categories prior to undertaking any works.

2.6 BUSHFIRE HAZARD REDUCTION

Objectives

- To take reasonable steps to inhibit the outbreak of fire on roadsides and the spread of fire through roadsides.
- To minimise the adverse effects of fire management on roadside native vegetation.
- Regularly update this plan to be consistent with the Murray Mallee Bushfire Management Plan prepared under the Fire and Emergency Services Act 2005 by the local bushfire management committee.

Information

Mid Murray Council is required to adhere to the *Fire and Emergency Service Act 2005*. This Act places the responsibility on Council to take reasonable steps to prevent or inhibit the outbreak and spread of fire on council owned land, including road sides.

Mid Murray Council is also required to adhere to the *Native Vegetation Act 1991*. Achieving the goals of both of these Acts can be difficult and requires careful planning. In some vegetation associations in the area, the *Environmental Protection Biodiversity and Conservation Act 1999* may also be applicable and so must also be considered.

Guidelines in this roadside vegetation management plan should be updated regularly to reflect any changes in the Bushfire Management Plans covering this Mid Murray Council area.

2.6.1 Consultation and Approval Procedures

Under the *Native Vegetation Act* 1991, the clearance of native vegetation to reduce the levels of combustible materials can occur if the works are undertaken in accordance with an approved Bushfire Management Area Plan or equivalent ***or*** is authorised by the Chief Officer (or authorised delegate) of the SA CFS., i.e. under Regulation 5A part (b)(ii) where the clearance -

- **(A) is required or authorised by, and undertaken in accordance with, a bushfire prevention plan; or**
- **(B) is undertaken in accordance with the written approval of the Chief Officer of SACFS.**

Note: Reference to bushfire prevention plan is deemed to be that referred to under the *Fire and Emergency Service Act 2005* as a Bushfire Management Area Plan.

Consultation with the CFS should normally occur through the CFS Regional Prevention Officer.

Approval is not required for the maintenance of previously approved existing fuel breaks. All fuel modification works should be described in the District Bushfire Management Plan.

2.6.2 Guidelines

All fire prevention works on roadsides should link in with the District Bushfire Risk Management Plan and subsequent Council BMP or other local management plans and objectives. Consult SA CFS to plan and evaluate fire prevention works that provide the best practices for the conservation and fire prevention on roadsides.

Permission

- Removal of native vegetation on a road reserve to reduce bushfire hazard requires consent of the Mid Murray Council.
- In granting any consent, Council will comply with Regulation 5A part (b)(ii) where the clearance -
    - (A) is required or authorised by, and undertaken in accordance with, a bushfire prevention plan; or
    - (B) is undertaken in accordance with the written approval of the Chief Officer of SACFS.
- Clearance approval from the NVC is required for any native vegetation clearance which exceeds that allowable under Regulation 5A of the Native Vegetation Act 1991.
- Any unauthorised clearance will be referred by Council staff to the Native Vegetation Management Unit.

Clearance methods

- Low impact methods of clearance (e.g. minimal ground disturbance, cutting cleanly rather than breaking branches, slashing, trimming, mowing, or rolling) should only be used when clearing vegetation to reduce potential weed invasion and erosion problems.
- Grazing and herbicide use should only be contemplated where no or minimal impact upon native vegetation is likely.
- Limit the use of herbicides to spraying:
    - around furniture
    - for selective control of particular weeds where it is the most appropriate means of control
    - to control growth of potentially serious weeds on firebreaks (subject to the approval of the SA CFS Regional Prevention Officer), or
    - when weather conditions will minimise the likelihood of spray drift affecting non-target plants.
- Only remove vegetation that is referred to in the approved Bushfire Management Plan (e.g. strategic clearance, removal of fine fuel), and retain all other vegetation including dead timber.
- Take care to minimise damage to the remaining vegetation.

In the vast majority of cases, adequate fuel reduction along roadsides can be achieved by selective planning focusing on the removal of exotic vegetation (note – particular care should be taken to distinguish exotic grass from native grass).

Other considerations

Any applications to revegetate roadsides must be assessed and approved by the Council Fire Prevention Officer.

- Design weed slashing programs to begin with clean machinery in high conservation value areas and work towards the more degraded sites. This will assist in the prevention of further spread of weeds.

2.7 MAINTENANCE OF VEGETATION DIVERSITY

Objectives

- To promote community interest and involvement in maintaining roadside vegetation diversity.

Information

Along some roadsides there is evidence of a steady decline of native vegetation, not associated with direct clearance. Several factors may be contributing to this (some of which are addressed elsewhere in this plan) including:

- old age or senescence and lack of natural regeneration
- herbicides or other chemicals used on adjoining farmland, or used for weed control on roadsides
- animal pests and methods used to control them
- grazing and droving along roadsides
- increased exposure of vegetation on roadsides following clearance of vegetation on adjoining land
- Root-rot fungi such as *Phytophthora cinnamomi*
- Mistletoe infestations
- Lerp infestation
- competition from exotic species
- inappropriate fire regimes
- dumping of garden waste
- recreational activities such as motorcycling

Mid Murray Council has bi-laws, programs and/or guidelines in place to address some of these threats, as described below:

<u>Dumping of garden waste</u>

Council has addressed this problem at some regular dumping sites by cleaning up dumped waste, erecting signs, assembling remote cameras and following up on results of photos obtained.

<u>Motorcycling</u>

Council has put up signs and used remote cameras in areas subject to regular motorbike use.

<u>Rabbits</u>

Rabbits are a problem along some Mid Murray Council roadsides. Council does not undertake or coordinate rabbit control at present, but plans to scope the issue in the near future, including an outline of the extent of the issue and whose responsibility it is to

address it at particular sites.

Weeds

Weed infestation is a problem along Mid Murray Council roadsides. The extent of the issue is large and to date weed control has been confined to shoulder spraying. If resources allow within the next five years, Council intends to review the status of weeds along its roadsides, using existing data such as that from the roadside vegetation survey as a starting point. This will be the first step toward prioritising weed management. There are several Weeds of National Significance (WoNS) in the Mid Murray Council region including Wheel cactus, *Opuntia robusta*, Gorse, *Ulex europaeus*, Boxthorn, *Lycium ferocissimum*, and Bridal Creeper, *Asparagus asparagoides*. These weeds are a threat to biodiversity along roadsides in the district. Gorse spider mite has been released, but a more integrated program is required to control this weed and prevent its spread. The release of Bridal Creeper Rust Fungus is also an action that will likely be proposed as part of any future weed action plan. Apart from the WoNS mentioned there is also an Environmental Alert Weed, White weeping broom, *Retama raetam* that is of particular concern in the region and has become quite invasive in some areas, particular attention will be focussed on this weed in future weed action plans.

Grazing/droving of stock

Grazing of roadsides is not permitted by Mid Murray Council.

Firewood collection

The collection of firewood or any native vegetation on roadsides is not permitted under a bi-law of the Mid Murray Council

Partnerships

Partnerships that work to help maintenance and protection of biodiversity values along roadsides in the region include those with the Mid Murray LAP and community groups (refer also to Section 2.9).

In some cases a form of disturbance (e.g. burning, pollarding) may be proposed as a means of enhancing vegetation health or diversity in the longer term. For example burning an area may be required to promote natural regeneration in an area where species are declining. Or, removal of mistletoe or lopping of limbs may be proposed as a short-term means of protecting unhealthy host trees heavily infested with mistletoe. Such activities actually constitute clearance in terms of the *Native Vegetation Act 1991*, but can be permitted under Regulation 5(1)(zi) 'Clearance for enhancing ecological purposes' or other guidelines produced by the Native Vegetation Council. Conditions apply to this type of clearance, often in the form of a short management plan or management statement that describes how the clearance will result in a benefit to the environment.

The Mid Murray Council will seek advice from the Native Vegetation Management Unit when these issues arise.

2.7.1 Consultation and Approval Procedures

Maintaining roadside vegetation diversity can be a complex issue and close consultation with the Native Vegetation Biodiversity Management Unit is recommended.

Where modification of roadside vegetation **using measures such as lopping, burning or other disturbance of native vegetation** is proposed as a tool in maintaining diversity, clearance approval is required from the Native Vegetation Council.

2.7.2 Guidelines

Permission

- Modification of roadside vegetation (e.g. by burning, pollarding) within a road reserve for the purpose of maintenance of vegetation diversity requires consent of the Mid Murray Council, and the Native Vegetation Council.
- Any unauthorised clearance of road reserve native vegetation caused by activities will be referred by Council staff to the Native Vegetation and Biodiversity Management Unit.

Proposals

- Any proposals involving disturbance of native vegetation to maintain vegetation diversity will be developed in close consultation with the Native Vegetation and Biodiversity Management Unit.
- Revegetation of the affected area with a range of indigenous plant species should be considered in combination with or instead of disturbance, for example, in the case of mistletoe and lerp attack.

Clearance Methods

- These activities will be carefully planned and the results must be monitored.
- Trimming or pruning of vegetation using appropriate, low impact cutting tools is required - consult with the NVBM Unit for advice for all proposals to help determine best practice.

2.8 PROTECTION OF NATIVE VEGETATION OF HIGH CONSERVATION SIGNIFICANCE

Objectives

- To identify, record and protect roadside native vegetation of high conservation significance.
- To reverse the deterioration of roadside native vegetation by improving management practices.

Information

Roadsides may contain plants or vegetation types of high conservation significance (i.e. rated as threatened plants or communities at either a national, state, or local, level, and / or vegetation **classed as Category A and B**).

It is important that these locations are *identified, recorded* and *protected*.

While all native vegetation is protected and must not be cleared unless clearance is considered to be exempt or minor as stipulated in this plan, vegetation of high conservation significance requires *extra precautions* to prevent accidental damage (e.g. signage), and in other cases, active management to prevent decline in quality (e.g. Bushcare work) (also see next section – Restoration).

The Mid Murray Council aims to have assessed its roadside vegetation by compiling previous roadside vegetation survey data and other and has produced a road network identifying the conservation significance for most roads throughout its region (Appendix 7).

The Mid Murray Council contains approximately 750 km of roadways that are considered to support native plants or vegetation associations of high conservation significance.

Within the Mid Murray Council, 3 nationally recognised threatened plant species have been recorded along roadsides, and 5 species threatened at a state level and 8 at a regional level have also been recorded. There are also 2 vegetation associations that are listed as threatened at the national level; *Eucalyptus odorata* woodland and *Lomandra effusa* grasslands (see page 73 for plant list).

2.8.1 Consultation and Approval Procedures

Any activity involving native vegetation clearance in areas of high conservation significance requires consent from the Mid Murray Council and the Native Vegetation Council.

2.8.2 Guidelines

Permission

- Any activity occurring in areas of high conservation significance requires consent from the Mid Murray Council, and if native vegetation clearance is proposed, then consent is also required from the Native Vegetation Council.
- Any unauthorised clearance of road reserve native vegetation caused by activities will be referred by Council staff to the Native Vegetation and Biodiversity Management Unit.

Roadside surveys

- Assistance with funding for new surveys and compilation of existing data was sought from DEWNR.
- Roadside vegetation surveys were undertaken using the standard DEWNR roadside vegetation survey methodology to determine where significant species or vegetation occurs.
- The overall ecological significance of sections of roadside vegetation has been determined.

Database

- The roadside survey data has been incorporated into the Mid Murray Council's mapping system and into the DEWNR Roadside Vegetation Database.

Roadside markers and Bushcare work

- A site marking system to identify significant sites "Roadside Marker System (RMS)", particularly for Mid Murray Council staff or contractors, has been implemented to ensure protection of significant sites.
- In consultation with Bush for Life, Tungkillo Landcare Group and other community groups, Bushcare sites (see next section – Restoration) will also be encouraged wherever possible to help actively manage these important areas of native vegetation.

Roadside Activities

- Training programs for Mid Murray Council staff and others (eg. contractors), and development of work procedures to ensure protection of significant sites, will be implemented.
- A map of the vegetation categories for the road network within Mid Murray Council will be used to assist Council to minimise or avoid any loss or disturbance of native vegetation of conservation significance by locating proposed development or roadside works away from these areas.
- If it is not possible to avoid loss of native vegetation, Council will use the data collected and associated maps to identify areas of roadside vegetation that can be managed better as a way of providing an SEB offset which would be a requirement for clearance of vegetation associated with any new works under *Native Vegetation Regulation 5 (1)(d*) of the *Native Vegetation Act 1991.*

2.9 RESTORATION AND REVEGETATION ON ROADSIDE RESERVES

Objectives

- To encourage the re-establishment of native vegetation along roadsides in parts of the Mid Murray Council area where native vegetation has been identified as cleared or degraded.
- To prevent further degradation within road reserves giving high priority to rehabilitation works along High and Medium Conservation roadsides (Category A, B and C).

Information

The Mid Murray Council is committed to roadside restoration and revegetation programs within Council region.

Council recognises the ecological and aesthetic importance of restoring, maintaining and enhancing roadside native vegetation as areas of habitat for wildlife, to increase the biological diversity and seed stock of the area, and to create linkages for wildlife movement.

Other benefits include improving the amenity of an area, reducing the risk of soil erosion and soil salinity, and possibly reducing the risk of fire through appropriate fire management practices.

The Mid Murray Council is located within the SAMDBNRM region, and intends to follow the SAMDBNRM Regional Plan.

Within the Mid Murray Council *there are number of locations where roadside vegetation is being actively managed by community groups using minimal disturbance techniques (eg. Bush for Life, Yookamurra Sanctuary, Caloote Area Landcare Group, Friends of Lenger Reserve etc) to maintain biological diversity, or to promote regeneration of native species. This involves weeding, controlled burning, fencing, feral animal control and rubbish collection.*

2.9.1 Consultation and Approval Procedures

It is essential (and a legal requirement) that the permission of the Mid Murray Council be obtained for roadside revegetation programs.

Planned revegetation programs will be conducted under Council's authorisation and will incorporate other Council maintenance policies aimed at minimising soil disturbance and associated weed establishment, control introduced plants and animals, and restrict grazing or development along roadside areas in the district.

Proposals for restoration and revegetation must also take into account the existing vegetation present, and consultation with the Native Vegetation Council is required where revegetation is to occur within areas of existing vegetation, particularly areas of native grassland which may never have had an overstorey.

2.9.2 Guidelines

Permission

- Any activity occurring in rehabilitated and revegetated areas requires consent from the Mid Murray Council, and if native vegetation[6] clearance is proposed, then consent is also required from the Native Vegetation Council.
- Any unauthorised clearance of road reserve native vegetation caused by activities will be referred by Council staff to the Native Vegetation Management Unit.

Roadside rehabilitation and restoration

- *The* Mid Murray Council *encourages others / will undertake the rehabilitation and revegetation of suitable, degraded areas of road reserve through natural regeneration of native plant species and through utilising local native species.*
- Restoration and rehabilitation programs will be planned using the roadside vegetation survey data as a basis..
- Natural regeneration should be encouraged in High and Medium Conservation Value roadsides.
- Take care when planning planting of trees or shrubs in areas dominated by native grassland species. The area may be naturally occurring grassland and therefore disturbance may constitute clearance under the *Native Vegetation Act*. Consult with the Native Vegetation Council.

Database

- Rehabilitated sites will be recorded on the site register or database.
- Sites will be monitored with photo-point photos.

Roadside markers and Bushcare work

- Roadside Revegetation Sites will be added to the "Roadside Marker System" (RMS) to ensure protection of significant sites.
- In consultation with Trees for Life, the Local Action Planning group and/or Regional Ecologist, Bushcare sites will also be encouraged wherever possible to help actively manage these important areas of native vegetation.
- The Mid Murray Council will continue to encourage and promote the maintenance and improvement of roadside vegetation diversity through the support of existing groups, and, where appropriate, the establishment of more local community groups, to undertake restoration activities.
- Community groups should be encouraged to become involved in Bushcare work, e.g. Adopt a roadside school program.

[6] Native Vegetation includes any pre-European or vegetation that has naturally regenerated (i.e. by itself). It does not include vegetation that has been directly propagated and planted by hand. In other words, under the Native Vegetation Act approval for clearance of revegetated areas is not required, unless the area has naturally regenerated from original native vegetation, or if it is an area that was required to be planted as a requirement for a previous clearance approval under the Act (i.e., SEB or set-aside area).

3 REFERENCES

ARRB Transport Research (2000) *Unsealed Roads Manual: Guidelines to Good Practice*.

ARRB Transport Research (2001) *Environmental Practices for Rural Sealed and Unsealed Roads.*

Australian Standards (2007). *AS 4373 - Pruning of amenity trees*. Australian Standards, Sydney, Australia.

Austroads publications dealing with Road design: http://www.onlinepublications.austroads.com.au/script/ICSDocBrowse.asp?Code=99.AR.RD&StdType=Austroads

Berwick M (1998). *National Local Government Biodiversity Strategy*. Australian Local Government Association in conjunction with Biological Diversity Advisory Council.

DEH (2005). *Dieback in Native Vegetation in the South Australian Murray-Darling Basin: a Guide to Symptoms and Causes*. Department for Environment and Heritage, South Australia.

Gannaway, D. (n.d.). *New form of bridal creeper found in Australia [*Brochure]. Natural Heritage Trust, Australia.

Govt. of SA (2005). *South Australia: Guidelines for state government agencies, firebreak and fire access tracks.* Government of South Australia, Australia.

Guimmarra, G (2000) *Unsealed Roads Manual – Guidelines to Good Practice*, ARRB Transport Research Ltd.

Heard LMB & Channon B (Eds) (1997) *A Guide to a Native Vegetation Survey (Agricultural Region) using the Biological Survey of SA Methodology.* Section 1. Edition 1. Department of Housing & Urban Development - SA

Local Government Association (1994). *Managing Unsealed Roads in South Australia*.

NSW Roadside Environment Committee (1996) *Managing Roadsides*.

Phytophthora Technical Group (2003) *Phytophthora Management Guidelines*

Phytophthora Technical Group (2006), *Phytophthora Management Guidelines*. Government of South Australia, Australia. (Online, accessed 5th May 2008). URL: http://www.environment.sa.gov.au/biodiversity/pdfs/pc_management_guidelines.pdf

Roadside Conservation Committee of Victoria (1995) *Roadside Management and Planning: Background and Guidelines.*

Sheldon, S (1996) *Managing the Environment – A practical guide for Local Government to Environmental Management Systems and ISO 14001*, Commonwealth of Australia, Canberra.

Stokes AL, Heard LMB, Corruthers S & Reynolds T (1998) *Guide to the Roadside Vegetation Survey Methodolgy in South Australia* – Draft Working Document. SAR Unit, Planning SA and Environmental Unit, Transport SA.

Transport SA *Environmental Code of Practice for Road Maintenance*.

Transport SA (1997) *Environmental Code of Practice for Construction: Road, Bridge and Marine Facilities*.

Woodward-Clyde (2000) *Study to Aid the Development of a Remnant Roadside Vegetation Management Strategy for the Mid Murray Council.* Project No. A9600506/2 AGC Woodward-Clyde Pty Ltd.

4 ABBREVIATIONS & DEFINITIONS

4.1 Abbreviations

DEWNR	Department of Environment Water and Natural Resources
LGA	Local Government Association
NRM	Natural Resources Management
NVBMU	Native Vegetation and Biodiversity Management Unit
NVC	Native Vegetation Council as established by the *Native Vegetation Act, 1991.*
RVMP	Roadside Vegetation Management Plan

4.2 Definitions

Clearance (from the *Native Vegetation Act 1991*)	• the killing, destruction or removal of native vegetation • the severing of branches, limbs, stems or trunks of native vegetation • the burning of native vegetation • any other substantial damage to native vegetation, and includes the draining or flooding of land
Clearance Envelope	The area required to be clear of vegetation for the safe passage of legal height vehicles across the full width of the traffic lanes [*Secondary clearance envelopes* are further areas required to be kept clear of vegetation for adequate visibility of other traffic, signs and other roadside furniture].
Mid Murray Council	Local Government body constituted under the *Local Government Act 1999.*
Droving or Movement of Stock	Moving stock, usually cattle or sheep, from one place to another by driving them slowly on foot along roadways or stock routes.
Grazing of Stock	Using a particular area for grazing rather than for movement of livestock.

Indigenous (or Native) Vegetation	Local (naturally established) native vegetation species of the type occurring prior to European settlement in this district.
Minor Clearance	The pruning of native vegetation is acceptable provided that it is kept to a minimum and does not result in the death of the plant(s) involved
Natural Regeneration	New growth of indigenous native plants from seed or sucker growth.
Native Vegetation (adapted from the *Native Vegetation Act 1991*). This definition does not represent the full legal wording of this term – see the *Native Vegetation Act 1991* for the exact wording.	Any plant or plants of a species indigenous to South Australia, including a plant or plants growing in or under waters of the sea, but does not include: (a) a plant or part of a plant that is dead unless the plant, or part of the plant, is of a class declared by regulation to be included in this definition, or (b) plants intentionally sown or planted by a person, except where the planting was undertaken in compliance with a condition imposed by the Native Vegetation Council (or the Native vegetation Authority under the 1985 vegetation clearance legislation), or in accordance with an order of the court under the *Native Vegetation Act 1991*(or the 1985 clearance legislation) In this context native vegetation does include dead trees of a species indigenous to South Australia if: a) the trunk circumference (measured at a point 300mm above the base of the tree) (i) in the case of a tree located on Kangaroo Island – 1 metre or more, or (ii) in any other case – 2 metres or more), and b) the tree provides or has the potential to provide, or is a part of a group of trees or other plants (whether alive or dead) that provides, or has the potential to provide, a habitat for animals of a listed threatened species under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*
Remnant Vegetation	Surviving indigenous vegetation
Road	Road as defined under the *Road Transport Act 1961*; i.e. road = reserve.
Roadway (or Carriageway)	That portion of the road devoted particularly to the use of vehicles, inclusive of shoulders and auxiliary lanes.
Road Reserve	The total strip of land reserved for transportation purposes from fence line to fence line or boundary to boundary if unfenced. The road reserve includes the roadside.

Roadside Vegetation	Any vegetation growing on roadsides. This includes native vegetation of conservation value and vegetation dominated by introduced species.
Road Shoulder	The area on a sealed road between the roadway (carriageway) and the road verge
Road Verge	That portion of the formation not covered by the carriageway or the footpath.
Significant	Attributed to features of special value including vegetation, landscapes and cultural heritage.
Significant Environmental Benefit	The *Native Vegetation Act 1991* includes provisions requiring the clearance of native vegetation to be offset by an environmental gain, referred to by the legislation as a 'Significant Environmental Benefit' (SEB). The rationale for an SEB offset recognises that clearance of native vegetation will result in the loss (even temporary) of habitat, biodiversity and/or other environmental values, in a landscape that has already been significantly modified by human settlement. The SEB provides a mechanism to minimise that loss by managing, restoring or re-establishing areas of native vegetation that result in a better outcome for the environment.
Table Drain	The side drain of a road adjacent to the shoulder, having its invert lower than the pavement base and being part of the formation.
Threatened Species	Indigenous flora and fauna under threat of extinction (usually categorised to level of threat as: rare, threatened, vulnerable or endangered).
Traffic Lane	A portion of the carriageway allocated for the use of a single line of vehicles.
Travelled Way	That portion of a carriageway ordinarily assigned to moving traffic, and exclusive of shoulders and parking lanes.
Unused Road Reserve	A road that has been gazetted under the *Crown Lands Act 1929* where it is not used for public traffic.
Vegetation	Any living or dead plant material (trees, shrubs, groundcovers including herbs; grasses; reeds, rushes and other aquatic species).
Weeds	A plant species not indigenous to the area and which invades endemic vegetation.

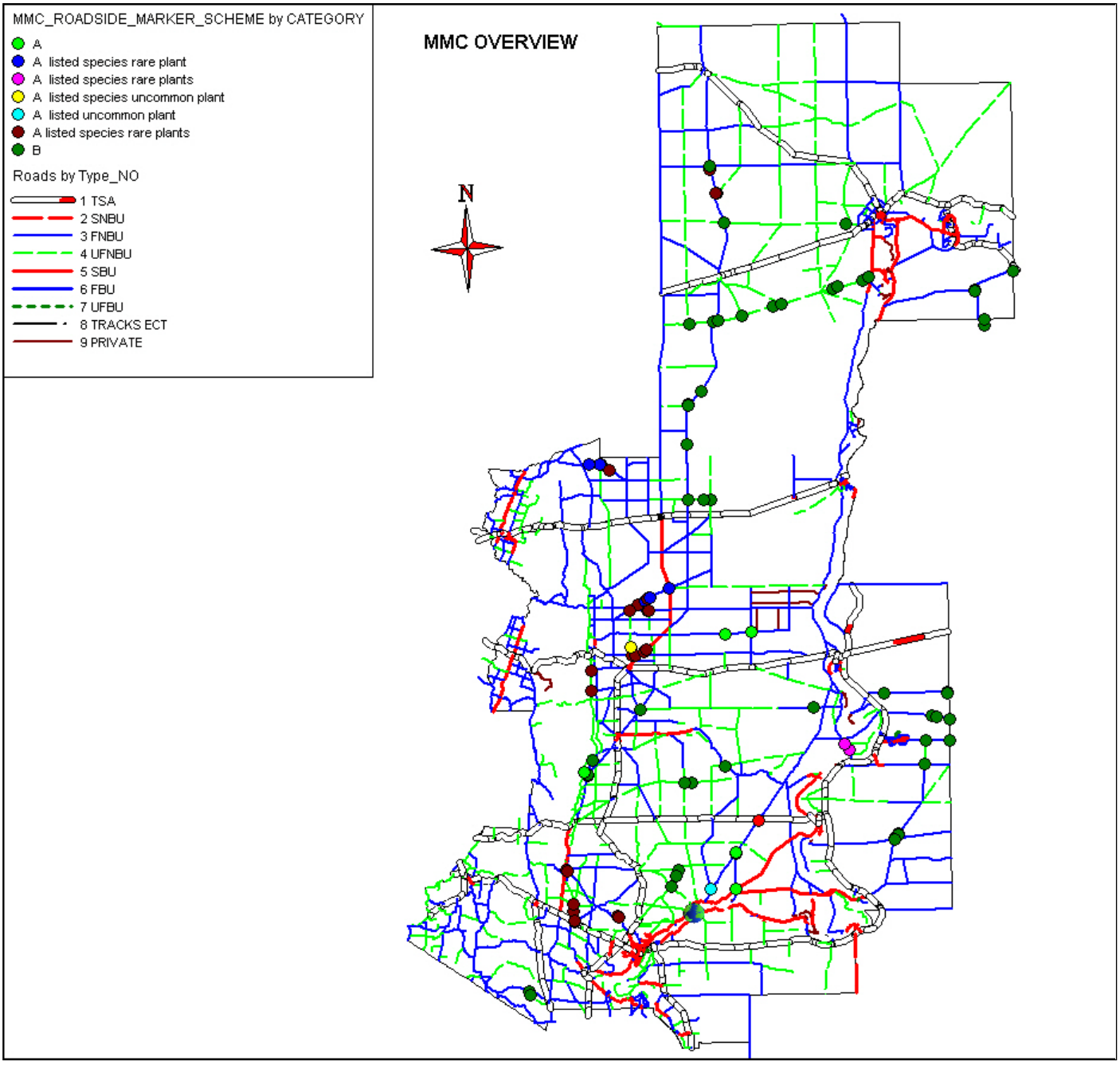
5 Appendices

5.1 Summary of State Legislation Relating to Roadside Management

The following (Commonwealth) Parliament Acts and Government policies are relevant to road maintenance activities for the protection and management of roadside vegetation. Electronic copies of State and Federal legislation can be found at http://www.austlii.edu.au/

Aboriginal Heritage Act, 1988
Agricultural and Veterinary Products (Control of Use) Act, 2002
Controlled Substances Act, 1984
Crown Lands Act, 1929
Dangerous Substances Act, 1979
Environment Protection Act, 1993
Environment Protection and Biodiversity Conservation Act, 1999
Fire and Emergency Services Act, 2005
Heritage Places Act, 1993
National Parks and Wildlife Act, 1972
Native Vegetation Act, 1991
Natural Resources Management Act, 2004
Native Vegetation Regulations 2003

5.2 Map of Roadside Marker Scheme by Vegetation Category



5.3

Permit Application

Application to Undertake Work on Council Land

(Pursuant to Section 221 of the Local Government Act 1999)

Welcome to your Works Permit Application for undertaking work on Council land. Any work that is required to be carried out on Council's land requires separate approval before work can commence. The Mid Murray Council's Infrastructure Department manages all work approvals to ensure that work is carried out in a safe manner and that hazards are minimized.

Careful consideration needs to be taken into account when planning the location of your proposed works. As the applicant it is your responsibility to ensure that there are no public utility infrastructure such as underground cables, pipes etc. in the vicinity of the work. This can be obtained by calling DBYD (Dial Before You Dig) on 1100 or by making on online enquiry at www.1100.com.au.

Approval needs to be obtained for any work that is outside your property boundary which may include Driveway Construction, Concrete/Paved Walkway, Private Stormwater Outlet, Underground Electrical Services, Landscaping on Verge, Removal of Vegetation and other miscellaneous work.

The applicant/contractor is required to complete all works within 6 weeks from date specified on the permit. Any outstanding works to be undertaken outside of this time frame will need to be submitted on a new and separate application under which normal conditions of approval will apply.

As the applicant/contractor you are required to provide a current Public Risk Insurance Policy (min $10,000,000) and understand that you are responsible for Public Safety and any damage caused to Council land and public utilities that may occur from your proposed work. Please ensure you read and understand all conditions attached to your permit prior to commencing work.

A $50.00 fee applies to all applications payable upon lodging your application.

Should have any questions in regards to your application please contact the Council's Infrastructure Department on (08) 8540 0060 or email **postbox@mid-murray.sa.gov.au**.

Declaration

As the applicant/contractor I acknowledge the above information and understand that I am required to obtain all relevant service locations and take responsibility for any damage caused to Council land or public utilities as a result of this proposed work.

Signature ……

Name ……

Date ……..

Ref: ……

MID MURRAY COUNCIL

PERMIT TO UNDERTAKE WORK ON COUNCIL LAND

THIS FORM IS USED FOR:

PERMIT TO ALTER A PUBLIC ROAD (OR FOOTPATH) EG. DRIVEWAY CROSSOVER, PAVERS, CABLES, PIPES, STORMWATER, TREE PLANTING OR REMOVAL ETC.

(PURSUANT TO SECTION 221 OF THE LOCAL GOVERNMENT ACT 1999)

Section 1: Applicant's Details

Name: ……

Address:……

Phone: (AH)……..**(W)**……..**(M)** ……

Email: …….. **Fax:** ……

Address of Proposed Work: ……..

Date of Proposed Work: ……

Note 1: The Act provides that a road extends from property boundary to property boundary. i.e., it includes the carriageway, footpaths and verges.

Note 2: Pursuant to the Act, it is an offence to make an alteration to a public road/reserve without an authorisation to do so from the Council. The following are considered road reserve altering activities pursuant to the Act.

Section 2: Proposed Work

☐ **Driveway Construction**
Repair/Reinstate or widen an existing driveway

Install new Concrete Crossover & Driveway

☐ **Landscaping on Verge**
Tree Planting/Shrubs/Grass

☐ **Private Stormwater Outlet**
Repair existing stormwater outlet

Install additional stormwater outlet

☐ **Various Concrete Construction**
Pave/Concrete Walkway/Footpath

Crossover (concrete between footpath & boundary)

Invert

☐ **Underground Services**
Installation of electrical services to property

☐ **Removal of Vegetation**

☐ **Temporary Occupation of Council Land**
Temporary fence on Council land

Temporary Scaffolding on Council land

Temporary Road Closure

☐ **Miscellaneous** (Specify below)

……..

……..

Section 3: Details of Work (General outline of proposed work, materials/equipment used, etc)

Section 4: Location of Proposed Works

House No: …….. **Street:** ……

Section: …….. **Town/Hundred:** ……

These works will be undertaken by: ☐ Permit Holder ☐ Contractor (if known)

Contractors Details: (if known)

Name:…… **Address:** ……

Phone:..... **Licence number:** ……..

Section 5: Drawing / Plans

As part of your application you are required to provide plans and other relevant documents which may be of relevance. Please use the space below to draw a detailed plan of your proposed work. Please provide GPS coordinates, measurements and accurate distances and clearly label your drawing.

LOCATION ……

North

* Remember to include boundaries of the site, position of buildings, trees and any existing paving and other major structures

Section 6: General Conditions for Works on Council Land

(Pursuant to the relevant Sections of the Local Government Act. Sections 212, 213, 218, 221 and 254)

Construction

1. The applicant shall give the Council at least seven (7) days' notice of intention to commence work. Construction should be commenced within 6 weeks of the permit being issued, and should be completed within seven (7) days of commencement.
2. Upon completion, any reinstatement of the surrounding kerb or footpath will be undertaken by the applicant in accordance with Council's specifications, or at the discretion, by the Council at the expense of the applicant.
3. The applicant shall ensure that all necessary barriers, lamps, etc., as may be necessary are supplied, erected and maintained. The applicant must adhere to all conditions to avoid the possibility of damage or mishap to property, persons or vehicles using the area where construction is proceeding. All care shall be taken by the applicant to reduce the risk of mishap, loss, damage or injury to all parties. Should the Council decide that the protection provided is inadequate, the applicant may be required to provide additional protection to be installed at the applicant's cost.
4. The worksite should be left in a safe condition and clean and tidy by the applicant so as not to create a hazard to persons or vehicles using the area.
5. All workmanship shall be executed in a thorough and satisfactory manner throughout the construction period.

Unsatisfactory Work

1. The applicant(s) shall be responsible for any damage that may be caused by themselves, their employees, servants, agents or contractors.
2. This permit does not relieve the applicant from liability for any loss or damage caused by the construction and the Council does not accept any responsibility for any such loss or damage.
3. In the event that the applicant has failed to comply with the conditions of the permit or for any other justifiable circumstance, the Council may revoke the permit, complete the work and recover the costs from the applicant.

Damages

1. No tree or shrub shall be removed without the authority of the Council. The utmost care shall be taken by the applicant to avoid any damage whatsoever to any tree or shrub.
2. Damages to services, (both Council and the Public Utilities), incurred during or as a result of works shall be the responsibility of the applicant.

Section 6A - PERMIT CONDITIONS FOR CONCRETE DRIVEWAYS

General

1. That the construction is carried out in accordance with the specifications attached hereto.
2. Authority for any variations from the specifications will be recognised only when given in writing by the Council's Engineer or appropriate authorised officer.
3. A concrete driveway is required to be placed with all new concrete inverts.

Construction

4. The excavation should not be done more than 48 hours prior to placing the driveway.

Section 6A - PERMIT CONDITIONS FOR CONCRETE DRIVEWAYS cont'd

Unsatisfactory Work

5. The Council may require the applicant at the applicant's cost to repair or remove a crossing place which does not comply with the specifications.

Damages

6. If required, separate applications for stormwater disposal shall be submitted by the applicant prior to construction.
7. Where a roadside drainage system exists, the applicant shall maintain at all times a suitable drainage system during and after construction.

Restoration

8. It is the applicant's responsibility to ensure that the footpath is made safe upon completion of the driveway. Existing concrete or bitumen footpaths must be reinstated to the edge of the crossover. A flat transition is to be maintained between the existing footpath and the new driveway level for pedestrian safety.

Section 6B - PERMIT CONDITIONS FOR DRAINS UNDER FOOTPATHS

General

1. A sketch must be provided either separately or in the area provided showing the location of the services so that it can be readily relocated at any time.
2. The applicant will be responsible to the relevant authority for depths and widths of trenches and the correct placement of all pipes, cables, conduits, etc.

Pipes

3. The top pipe must be at least 25mm below the level of the footpath.
4. The pipe must not protrude beyond the face of the kerb.

Box Culverts

5. The bottom and sides of the box must be solidly formed or set in concrete.
6. Cover plates must be recessed flush with the footpath and top of the concrete slab and they must be securely fixed down with suitable non-rusting bolts, screws, etc.
7. The junction of concrete drain with the concrete kerb must be neatly formed.
8. The end of the cover plates must not protrude beyond the face of the kerb.

Maintenance

9. The owner or occupier of the premises will remain responsible for the maintenance of the services, and shall maintain same in a safe condition at all times.

Damages

10. No tree or shrub shall be removed without the authority of the Council. The utmost care shall be taken by the applicant to avoid any damage whatsoever to any tree or shrub.
11. Damages to services, (both Council and the Public Utilities), incurred during or as a result of works shall be the responsibility of the applicant.

Section 6C - PERMIT CONDITIONS FOR TREE PLANTING

The tree is to be …… (type of tree)

1. The tree is to be planted …….. from the kerb.
2. The tree is to be planted approximately in the centre of the frontage, depending on items as listed under (5) below.
3. Only one tree is to be planted unless permission is obtained from the Director Infrastructure Services.
4. Trees must not be planted closer than:-
   a) 2 metres from any access driveway
   b) 2.5 metres from any stobie pole or other permanent structure
   c) 1 metre from allotment dividing boundaries
   d) 10 metres from an intersection when the width from boundary to kerb is less than 4.5 metres
   e) 11 metres from an intersection when the width from boundary to kerb is between 4.5 and 5.5 metres
   f) 12 metres from an intersection when the width from boundary to kerb is more than 5.5 metres
   g) 10 metres (on approach side) from any street sign, parking sign or warning sign
   h) 1 metre from any water connection
   i) 2 metres from any sewer connection

Section 6D - CONDITIONS FOR REMOVAL OF VEGETATION

The applicant/contractor shall take into account all relevant information under the Native Vegetation Act and Mid Murray Council Roadside Vegetation Management Plan (where applicable).

2. Removal and disturbance of native vegetation and trees is to be avoided wherever possible. However, where there are situations where it is not possible to avoid native vegetation and trees within the road verge the applicant must obtain approval.

3. In certain circumstances the Native Vegetation Branch and Council will be consulted.

4. Reference should be made to Mid Murray Council Roadside Vegetation Management Plan which is available from the Infrastructure Services department or Council's website **www.mid-murray.sa.gov.au**.

OFFICE USE ONLY

Permit – Approved / Denied Permit Number: ……

Payment Received – YES / NO

Council Specification for Alteration to Road attached – YES / NO

Special Conditions attached – YES / NO Insurance – YES / NO

Name of Authorised Officer in Council: ……...

Position: ……..

Signature: …….

Date: …….

5.4 Vegetation Assessment and Approval Matrix

ACTIVITY	RSVMP SECTION	ASSESSMENT / APPROVAL REQUIRED		
		NONE	**COUNCIL APPROVAL**	**EXTERNAL (NVC/DEWNR/NRM BOARD/CFS)**
ROAD CONSTRUCTION	2.1	If construction is taking place in area with no native vegetation	For minor clearances outside of road envelope. Minor clearance is limited to branch removals, removal of one or two saplings or shrubs.	If construction requires more than minor removal of native vegetation outside road envelope.
ROAD MAINTENANCE	2.1	If maintenance is taking place in area with no native vegetation	For minor clearances outside of road envelope. Minor clearance is limited to branch removals, removal of one or two saplings or shrubs.	If maintenance requires more than minor clearance of native vegetation outside road envelope.
ROAD VERGE MAINTENANCE	2.2	If maintenance is taking place within approved road 'envelope'.	For minor clearances outside of road envelope. Minor clearance is limited to branch removals, removal of one or two saplings or shrubs.	If work is taking place outside road envelope and involves more than minor clearance.

QUARRIES AND STOCKPILE AREAS	2.3	If existing stock piles / quarries used. If no native vegetation is present at selected site.	Council approval required if external applicants want to store materials on Council lands. Internal Council approval required for minor clearance. Minor clearance is limited to branch removals, removal of one or two saplings or shrubs.	If areas with native vegetation are required for use and more than minor clearance of native vegetation is required.
INSTALLATION AND MAINTENANCE OF UTILITIES	2.4	If no native vegetation is affected.	Council approval required if external applicants want to conduct work on Council land.	If more than minor clearance is required outside the road envelope.
PEST PLANT AND ANIMAL CONTROL	2.5	If native vegetation will not be affected.	Council approval required if external applicants want to conduct work on Council land. NRM Board advice must be sought. Internal Council approval required for minor clearance. Minor clearance is limited to branch removals, removal of one or two saplings or shrubs.	If more than minor clearance of native vegetation is required to conduct work.

CLEARANCE ALONG FENCE LINES	2.7	If no native vegetation is present.	Council approval required if external applicants want to conduct work on Council land. Internal Council approval required for minor clearance. Minor clearance is limited to branch removals, removal of one or two saplings or shrubs.	If required clearance exceeds guidelines set out in this plan Section 2.4
PROPERTY ACCESS	2.8	If no native vegetation is present.	Council approval must be sought for clearance on Council lands. Internal approval for clearance which is within NVC guidelines for property access clearance. See section 2.5 of this plan.	If required clearance exceeds guidelines provided in section 2.5 of this plan.
BUSHFIRE HAZARD REDUCTION	2.9		If previous CFS approval and NVC approval has been given. Consultation with Council Fire Prevention Officer is essential. Council approval must be sought by external applicants. CFS approval only if no native vegetation is present.	For any new fire breaks that require the removal of native vegetation.

GRAZING AND STOCK MOVEMENT ON ROADSIDES	2.10	No approval required for stock movement if stock do not stop to graze. Internal routes should be used in preference to active roadways.	Grazing of roadsides is not permitted by Mid Murray Council. Leased undeveloped road reserves with no native vegetation may be used for stock grazing.	Grazing of roadsides is not permitted by Mid Murray Council. Grazing by stock of native vegetation is considered as native vegetation clearance by the NVC.
RECREATION	2.11	Walking.	Horse riding and bicycle riding. The use of motor vehicles and motor bikes on leased undeveloped road reserves must be negotiated with the lease. The use of motor bikes and motor vehicles on unleased undeveloped road reserves is not permitted.	Any recreation activity which will impact on native vegetation. Motor cycles and other vehicles are not permitted to use roadsides.
CROPPING OF ROADSIDES	2.12	Cropping of roadsides and undeveloped road reserves is not permitted by Mid Murray Council.	Cropping of roadsides and undeveloped road reserves is not permitted by Mid Murray Council.	Cropping of roadsides and undeveloped road reserves is not permitted by Mid Murray Council.
REMOVAL OF PLANT MATERIAL	2.13		The removal of plant material, including seed collection, requires the approval of Council.	The removal of native plant material including seed collection requires Council approval and appropriate permit from DEWNR

MAINTENANCE OF VEGETATION DIVERSITY	2.14	Any maintenance works taking place in approved Bush for Life sites by Bush for Life volunteers and staff.	Any works conducted on roadsides and which do not involve the clearance of native vegetation. Advice from the local NRM Board should be sought.	Works which require the burning and/or clearance of native vegetation outside the road envelope requires the approval of the Native Vegetation Council. Any burning requires the approval of the CFS.
REHABILITATION AND REVEGETATION	2.16		Rehabilitation and revegetation of roadsides and of undeveloped road reserves requires the approval of Mid Murray Council.	

5.5 Declared Weeds in the Mid Murray Council Area

The general provisions shown on this list are to be used only as a general guide. For the exact provisions that apply to each plant species listed please refer to the Natural Resources Management Act 2004 & Schedule 2 of the Declaration of Animals & Plants (source: Department for Transport Energy & Infrastructure Transport Services Division)

(A) Weed of National Significance (WoNS) (B) National Environmental Alert List (C) Plant to be reported 1800 084 881	FAMILY	GENUS	SPECIES	COMMON NAME
(A)	LEGUMINOSAE	*Acacia*	*nilotica subsp indica*	Prickly acacia
	GRAMINEAE	*Achnatherum*	*caudatum*	Broad-kernel espartillo
	COMPOSITAE	*Acroptilon*	*repens ssp*	Creeping knapweed
	RUNUNCULACEAE	*Adonis*	*microcarpa*	Pheasants eye
	LILIACEAE	*Allium*	*vineale*	Crow garlic
	AMARANTHACEAE	*Alternanthera*	*philoxeroides*	Alligator weed
	AMARANTHACEAE	*Alternanthera*	*pungens*	Khaki weed
	COMPOSITAE	*Ambrosia*	*spp*	Perennial ragweed
	BORAGINACEAE	*Amsinckia*	*spp.*	Yellow burrweed
(A)	ANNONACEAE	*Annona*	*glabra*	Pond apple
(A)	ASPARAGACEAE	*Asparagus*	*asparagoides*	Bridal creeper
	ASPARAGACEAE	*Asparagus*	*declinatus*	Bridal creeper
	UMBELLIFERAE	*Bifora*	*testiculata*	Bifora
(A)	CABOMBACEAE	*Cabomba*	*caroliniana*	Cabomba
	CRUCIFERAE	*Cardaria*	*draba*	Hoary cress
	GRAMINEAE	*Cenchrus*	*incertus*	Innocent weed
	GRAMINEAE	*Cenchrus*	*longispinus*	Innocent weed
	COMPOSITAE	*Chondrilla*	*juncea*	Skeleton weed
(A)	COMPOSITAE	*Chrysanthemoides*	*monilifera*	Boneseed
	COMPOSITAE	*Cirsium*	*arvense*	Perennial thistle
	CONVOLVULACEAE	*Convolvulus*	*arvensis*	Field bindweed
	GRAMINEAE	*Cortaderia*	*jubata*	Pink pampas grass
	GRAMINEAE	*Cortaderia*	*richardii*	toetoe
	ROSACEAE	*Crataegus*	*monogyna*	May, Hawthorn
	ROSACEAE	*Crataegus*	*sinaica*	Azzarola, Hawthorn
(A)	ASCLEPIADACEAE	*Cryptostegia*	*grandiflora*	Rubber vine
	CONVOLVULACEAE	*Cuscuta*	*campestris*	Golden dodder
	CONVOLVULACEAE	*Cuscuta*	*indecora*	Large seeded dodder
	CONVOLVULACEAE	*Cuscuta*	*planiflora*	Red dodder
	CONVOLVULACEAE	*Cuscuta*	*spp all others not specifically named*	Dodder
	CONVOLVULACEAE	*Cuscuta*	*suaveolens*	Chilean dodder
	COMPOSITAE	*Cynara*	*cardunculus*	Artichoke thistle
	CYPERACEAE	*Cyperus*	*rotundus ssp rotundus*	Nut-grass
	LEGUMINOSAE	*Cytisus*	*scoparius*	English broom
	CRUCIFERAE	*Diplotaxis*	*tenuifolia*	Lincoln weed
	GRAMINEAE	*Distichlis*	*spicata*	Distichlis
	BORAGINACEAE	*Echium*	*plantagineum*	Salvation Jane
	HYDROCHARITACEAE	*Egeria*	*densa*	Leafy elodea
	PONTEDERIACEAE	*Eichhornia*	*crassipes*	Water hyacinth

	HYDROCHARITACEAE	*Elodea*	*canadensis*	Elodea
	POLYGONACEAE	*Emex*	*spp*	Three-cornered Jack
(B)	EQUISETACEAE	*Equisetum*	*spp.*	Horsetail
	GRAMINEAE	*Eragrostis*	*curvula*	African lovegrass
	EUPHORBIACEAE	*Euphorbia*	*terracina*	False caper
	LEGUMINOSAE	*Genista*	*monspessulana*	Montpellier broom
(B)	COMPOSITAE	*Gymnocoronis*	*spilanthoides*	Senegal tea plant
	UMBELLIFERAE	*Hydrocotyle*	*ranunculoides*	Hydrocotyle
(A)	GRAMINEAE	*Hymenachne*	*amplexicaulis*	Hymenachne
	GRAMINEAE	*Hyparrhenia*	*hirta*	Coolatai grass
	GRAMINEAE	*Jarava*	*plumosa*	Plumerillo
	CHENOPODIACEAE	*Kochia*	*scoparia*	Kochia
(B) & (C)	HYDROCHARITACEAE	*Lagarosiphon*	*major*	Lagarosiphon
(A)	VERBENACEAE	*Lantana*	*camara*	Common Lantana
	ONAGRACEAE	*Ludwigia*	*peruviana*	Primrose willow
	SOLANACEAE	*Lycium*	*ferocissimum*	African boxthorn
	MALVACEAE	*Malvella*	*leprosa*	Alkali sida
	LABIATAE	*Marrubium*	*vulgare*	Horehound
	CRUCIFERAE	*Matthiola*	*longipetala*	Nightstock
(A)	MIMOSACEAE	*Mimosa*	*pigra*	Mimosa
	IRIDACEAE	*Moraea*	*flaccida*	One leaf Cape tulip
	IRIDACEAE	*Moraea*	*miniata*	Two-leaf Cape Tulip
	CRUCIFERAE	*Myagrum*	*perfoliatum*	Muskweed
(C)	HALORAGACEAE	*Myriophyllum*	*spicatum*	Eurasian water-milfoil
	GRAMINEAE	*Nassella*	*hyalina*	Cane needlegrass
(A)	GRAMINEAE	*Nassella*	*neesiana*	Chilean needlegrass
(C)	GRAMINEAE	*Nassella*	*tenuissima*	Mexican feathergrass
(A)	GRAMINEAE	*Nassella*	*trichotoma*	Serrated tussock
	GRAMINEAE	*Nassella*	*leucotricha*	Texas needlegrass
	UMBELLIFERAE	*Oenanthe*	*pimpinelloides*	Water dropwort
	OLEACEAE	*Olea*	*europaea* (not planted & maintained for domestic or commercial use)	Olive
	COMPOSITAE	*Oncosiphon*	*suffruticosum*	Calomba Daisy
	CACTACEAE	*Opuntia*	*spp excluding Opuntia ficus-indica*	Prickly pear
(C)	OROBANCHACEAE	*Orobanche*	*spp excluding cernua var australiana*	Australian broomrape
	OXALIDACEAE	*Oxalis*	*pes-caprae*	Sour-sob
(A)	LEGUMINOSAE	*Parkinsonia*	*aculeata*	Parkinsonia
(A)	COMPOSITAE	*Parthenium*	*hysterophorus*	Parathenium weed
	ZYGOPHYLLACEAE	*Peganum*	*harmala*	African rue
	GRAMINEAE	*Pennisetum*	*macrourum*	African feather-grass
	COMPOSITAE	*Picnomon*	*acarna*	Soldier thistle
(A)	LEGUMINOSAE	*Prosopis*	*spp*	Mesquite
	RANUNCULACEAE	*Ranunculus*	*scleratus*	Poison Buttercup
	RESEDACEAE	*Reseda*	*lutea*	Cut-leaved mignonette
	RESEDACEAE	*Reseda*	*phyteuma*	Rampion mignonette
	ROSACEAE	*Rosa*	*canina*	Dog rose

	ROSACEAE	*Rosa*	*rubiginosa*	Sweet briar
(A)	ROSACEAE	*Rubus*	*fruticosus excluding certain cultivars*	Blackberry
	ALISMATACEAE	*Sagittaria*	*graminea*	Sagittaria
	ALISMATACEAE	*Sagittaria*	*montevidensis*	Arrowhead
	SALICACEAE	*Salix*	*spp (excluding babylonica, calodendra, reichardii)*	Willow
(A)	SALVINIACEAE	*Salvinia*	*molesta*	Salvinia
	CHENOPODIACEAE	*Sclerolaena*	*birchii*	Galvanised burr
	COMPOSITAE	*Senecio*	*jacobaea*	Ragwort
	CARYOPHYLLACEAE	*Silene*	*vulgaris*	Bladder campion
	COMPOSITAE	*Silybum*	*marianum*	Variegated thistle
	SOLANACEAE	*Solanum*	*elaeagnifolium*	Silver-leaved nightshade
	HYDROCHARITACEAE	*Stratiotes*	*aloides*	Water soldier
(A)	TAMARICACEAE	*Tamarix*	*aphylla*	Athel pine
	ANACARDIACEAE	*Toxicodendron*	*radicans*	Poison ivy
	ANACARDIACEAE	*Toxicodendron*	*succedaneum*	Rhus tree
	TRAPACEAE	*Trapa*	*natans*	Water caltrop
	ZYGOPHYLLACEAE	*Tribulus*	*terrestris*	Caltrop
(A)	LEGUMINOSAE	*Ulex*	*europaeus*	Furze, gorse
	IRIDACEAE	*Watsonia*	*meriana var bulbillifera*	Bulbil watsonia
	COMPOSITAE	*Xanthium*	*spinosum*	Bathurst burr
	COMPOSITAE	*Xanthium*	*strumarium sp. agg.*	Noogoora burr complex

5.6 Environmental Weed Species

FAMILY	GENUS	SPECIES	COMMON NAME
LEGUMINOSAE	*Acacia*	*baileyana*	Cootamundra Wattle
LEGUMINOSAE	*Acacia*	*farnesiana*	Mimosabush
LEGUMINOSAE	*Acacia*	*saligna*	Golden wreath wattle
SIMAROUBACEAE	*Ailanthus*	*altissima*	Tree of heaven
LILIACEAE	*Allium*	*triquetrum (is "declared" in some areas refer to "Declared Plants" Sheet)*	Three-cornered garlic
AMARANTHACEAE	*Amaranthus*	*retroflexus*	Red-root amaranth
COMPOSITAE	*Arctotheca*	*calendula*	Capeweed
GRAMINEAE	*Arundo*	*donax*	Giant reed
LILIACEAE	*Asphodelus*	*fistulosus (is "declared" in some areas refer to "Declared Plants" Sheet)*	Onion weed
GRAMINEAE	*Avena*	*barbata*	Bearded oat
GRAMINEAE	*Avena*	*fatua*	Wild oat
GRAMINEAE	*Avena*	*sp*	Wild oat
CRUCIFERAE	*Brassica*	*tournefortii*	Long-fruited wild turnip
GRAMINEAE	*Briza*	*minor*	Shivery grass
COMPOSITAE	*Carduus*	*tenuiflorus (is "declared" in some areas refer to "Declared Plants" Sheet)*	Slender thistle
CRUCIFERAE	*Carrichtera*	*annua*	Wards weed
COMPOSITAE	*Carthamus*	*lanatus*	Saffron thistle
CASUARINACEAE	*Casuarina*	*glauca*	Swamp oak
GRAMINEAE	*Cenchrus*	*ciliaris*	Buffel grass
COMPOSITAE	*Centaurea*	*calcitrapa*	Star thistle
LEGUMINOSAE	*Chamaecytisus*	*palmensis*	Tree Lucerne
GRAMINEAE	*Chloris*	*gayana*	Rhodes grass
GRAMINEAE	*Chloris*	*virgata*	Feathertop Rhodes
COMPOSITAE	*Cirsium*	*vulgare (is "declared" in some areas refer to "Declared Plants" Sheet)*	Spear thistle
COMPOSITAE	*Conyza*	*bonariensis*	Flaxleaf fleabane
RUBIACEAE	*Coprosma*	*repens*	New Zealand Mirror-bush
ROSACEAE	*Cotoneaster*	*sp.*	Cotoneaster
GRAMINEAE	*Cynodon*	*dactylon*	Couch-grass
GRAMINEAE	*Dactylis*	*glomerata*	Cocksfoot
UMBELLIFERAE	*Daucus*	*carota (not planted) (is "declared" in some areas refer to "Declared Plants" Sheet)*	Carrot
COMPOSITAE	*Delairea*	*odorata*	Cape ivy
ORCHIDACEAE	*Disa*	*bracteata*	Brown finger orchid
COMPOSITAE	*Dittrichia*	*graveolens*	Stinkwort
GRAMINEAE	*Ehrharta*	*calycina*	Perennial Veldt Grass
GRAMINEAE	*Ehrharta*	*longiflora*	Annual veldt grass

ERICACEAE	*Erica*	*arborea*	Tree heath
UMBELLIFERAE	*Foeniculum*	*vulgare*	Fennel
OLEACEAE	*Fraxinus*	*angustifolia*	Desert ash
IRIDACEAE	*Freesia*	*hybrid*	Freesia
AIZOACEAE	*Galenia*	*secunda/pubescens*	Carpet weed
RUBIACEAE	*Galium*	*aparine*	Cleavers
RUBIACEAE	*Galium*	*tricornutum (is "declared" in some areas refer to "Declared Plants" Sheet)*	Three-horned bedstraw
COMPOSITAE	*Gazania*	*rigens*	Gazania
BORAGINACEAE	*Heliotropium*	*europaeum*	Common heliotrope
CRUCIFERAE	*Hirschfeldia*	*incana (is "declared" in some areas refer to "Declared Plants" Sheet)*	Buchan weed
GRAMINEAE	*Hordeum*	*vulgare ssp distichon*	Two-rowed barley
GRAMINEAE	*Hordeum*	*vulgare ssp hexastichon*	Six-rowed barley
GUTTIFERAE	*Hypericum*	*perforatum*	St Johns wort
COMPOSITAE	*Hypochaeris*	*radicata*	Deep-rooted catsear
IRIDACEAE	*Iris*	*unguicularis*	Winter flowering iris
JUNCACEAE	*Juncus*	*acutus*	Spiny rush
JUNCACEAE	*Juncus*	*bufonius*	Toad rush
COMPOSITAE	*Lactuca*	*serriola*	Prickley lettuce
LEGUMINOSAE	*Lathyrus*	*tingitanus*	Tangier pea
LABIATAE	*Lavandula*	*stoechas*	Topped lavenser
MYRTACEAE	*Leptospermum*	*laevigatum*	Coast Tea-tree
LIMONIACEAE	*Limonium*	*lobatum*	Winged sea-lavender
GRAMINEAE	*Lolium*	*perenne*	Perennial ryegrass
GRAMINEAE	*Lolium*	*rigidum*	Annual ryegrass
POACEAE	*Lophopyrum*	*elongatum*	Tall wheat grass
ROSACEAE	*Malus*	*sp*	
MALVACEAE	*Malva*	*parviflora*	(Small-flowered)marshmallow
LEGUMINOSAE	*Medicago*	*sativa*	Lucerne, alfalfa
AIZOACEAE	*Mesembryanthemum*	*crystallinum*	Common iceplant
POLYGALACEAE	*Muraltia*	*heisteria*	Furze muraltia
APOCYNACEAE	*Nerium*	*oleander*	Oleander
ONAGRACEAE	*Oenothera*	*stricta ssp stricta*	Common evening-primrose
COMPOSITAE	*Pallensis*	*spinosa*	Golden Pallensis
GRAMINEAE	*Paspalum*	*distichum*	Water couch
GRAMINEAE	*Pennisetum*	*clandestinum*	Kikuyu grass
GRAMINEAE	*Pennisetum*	*setaceum*	Fountain grass
GRAMINEAE	*Pennisetum*	*villosum*	Feathertop grass
COMPOSITAE	*Pentzia*		
GRAMINEAE	*Phalaris*	*aquatica*	Phalaris
GRAMINEAE	*Phalaris*	*minor*	Lesser canary-grass
GRAMINEAE	*Phalaris*	*paradoxa*	Paradoxa grass

PINACEAE	*Pinus*	*halepensis (is "declared" in some areas refer to "Declared Plants" Sheet)*	Aleppo pine
PINACEAE	*Pinus*	*radiata*	Radiata pine
GRAMINEAE	*Piptatherum*	*miliaceum*	Rice millet
PITTOSPORACEAE	*Pittosporum*	*undulatum*	Sweet pittosporum
PLANTAGINACEAE	*Plantago*	*lanceolata var lanceolata*	Ribgrass
POLYGALACEAE	*Polygala*	*myrtifolia*	Myrtle-leaved milkwort
POLYGONACEAE	*Polygonum*	*aviculare*	Wire-weed
SALICACEAE	*Populus*	*sp*	Poplar
CRUCIFERAE	*Raphanus*	*raphanistrum*	Wild radish
CRUCIFERAE	*Rapistrum*	*rugosum ssp rugosum*	Short-fruited wild turnip
RHAMNACEAE	*Rhamnus*	*alaternus*	Blow-fly bush
EUPHORBIACEAE	*Ricinus*	*communis*	Castor Oil Plant
IRIDACEAE	*Romulea*	*rosea var australis*	Guildford grass
POLYGONACEAE	*Rumex*	*obtusifolius*	Broad-leaved dock
SALICACEAE	*Salix*	*sp*	Willow
LABIATAE	*Salvia*	*verbenaca*	Wild sage
DIPSACACEAE	*Scabiosa*	*atropurpurea*	Scabious
ANACARDIACEAE	*Schinus*	*molle*	Pepper-tree
COMPOSITAE	*Senecio*	*pterophorus var pterophorus*	African daisy
GRAMINEAE	*Setaria*	*verticillata*	Whorled pigeon-grass
SOLANACEAE	*Solanum*	*linnaeanum*	Apple of Sodom
SOLANACEAE	*Solanum*	*nigrum*	Blackberry nightshade
COMPOSITAE	*Sonchus*	*oleraceus*	Common sow-thistle
GRAMINEAE	*Sorghum*	*halepense*	Johnson grass
COMPOSITAE	*Taraxacum*	*officinale*	Dandelion
LEGUMINOSAE	*Vicia*	*sativa*	Common vetch
APOCYNACEAE	*Vinca*	*major*	Blue Periwinkle
PALMAE	*Washingtonia*	*filifera*	
ARACEAE	*Zantedeschia*	*aethiopica*	White Arum Lily

The general provisions shown on this list are to be used only as a general guide. For the exact provisions that apply to each plant species listed please refer to the Natural Resources Management Act 2004 & Schedule 2 of the Declaration of Animals & Plants (source: Department for Transport Energy & Infrastructure Transport Services Division)

5.7 Mid Murray Council Roadside Marker Scheme

Markers established at high category sites resulting from the roadside vegetation survey and from feedback from community consultation. Additional survey data was then collected at these sites.

Marker No.	Location	Starting coordinates	Ending coordinates	Species/Community-Comments	Category or listed sp
1	Tungali Rd	0349349 6183750 Mark 495	0346757 6182460 Mark 496	*Dodonaea subglandulifera* *Cratystylis conocephala*	A listed species rare plant
2	Sign not used				
3	Mannum Adelaide Rd Bush 4 Life Site	03369401 6139229 Mark 036	0336854 6139281 Mark 035	*Olearia pannosa, Grevillea hugelli*	A listed species rare plant
4	Frayville Rd	0336900 6139420 Mark 033	0336849 6139418 Mark 034	*Olearia pannosa*	A listed species rare plant
5	Bellchambers Reserve/Wachtel Rd	0336704 6141679 Mark 037	0336808 6141635 Mark 038	Protecting *Olearia pannosa,* has been fenced. Grass specimen sent to herbarium.	A listed species rare plant
6	Talbots Reserve, Mallee Hill Blackheath Rd Eastern Side	0330879 6129982 Mark 498	0331171 6129539 Mark 497	*Callitris gracilis* and *Acacia argyrophylla* Bridal Creeper – ongoing control program ; boxthorn, veldt grass ; rabbits	B
7	Cnr of Wegner and Long Gully Rd Milendella Cemetery **Council Reserve Name? Needs fencing**	0335887 6146095 Mark 042	0335928 6146049 Mark 041	*Olearia pannosa (7), Arthropoium sp, Pittosporum angustifolium, Clematis microphylla, Austrostipa sp., Austrodanthonia sp., Snottygobbles, Dianella, Bursaria*	A listed species rare plant

Marker No.	Location	Starting coordinates	Ending coordinates	Species/Community-Comments	Category or listed sp
8	Tungali Rd Western side	0349325 6183729 Mark 493	0346751 6182442 Mark 494	*Cratystylis conocephala Dodonaea subglandulifera* Near farming land heaps of weeds	A listed species rare plant
9	Tungali Rd Western side	0346584 6182339 Mark 490	0346120 6182044 Mark 492	Protecting significant stand of *Dodonaea subglandulifera*	A listed species rare plant
10	Sedan Blanchetown Rd	0346001 6175250 Mark 053	0346276 6175507 Mark 052	*Olearia magniflora* MDB Uncommon, *Grevillea huegelli, Duma florulenta, Exocarpus aphyllus, snottygobbles*	A listed species uncommon plant
11	Battens Rd Rabbit control needed	0344391 6174790 Mark 051	0344359 6175849 Mark 487	*Olearia magniflora, Westringia rigid, E. aphyllus, M. lanceolata, Austrostipa spp., S. acuminatum, E. longifolia, Hakea (good stand), P. angustifolium* Corner of roads, private land good veg native pines, *W.rigida*	A listed species uncommon plant
12	Broncos Rd Rabbit control needed Onion weed at start could be controlled	0344408 6174750 Mark 049	0344900 6174752 Mark 050	Diverse vegetation in good condition. *M. rohrlacchii* (rare), *Exocarpus aphylla, A. argyrophylla,E. longifolia*	A listed species rare plant
13	Koch Rd Rabbits	0338800 6200239 Mark 488	0340300 6200248 Mark 489	Diverse vegetation in good condition *M. rohrlacchii* (rare), M. sedifolia, *D. subglandulifera, O. pimmeloides*	A listed species rare plant

Marker No.	Location	Starting coordinates	Ending coordinates	Species/Community-Comments	Category or listed sp
14 **Burnt**	Three Chain Rd near Bank Rd to Rons Rd Approximately 2.9km long **Native grass resource group inform**	0339165 6169987 Mark 047	0339187 6172808 Mark 048	Protecting significant grassland reserve. At least 6 species of grass, Rare plants *Lomandra effusa, Acacia acinacea, M. rohrlacchii and Sida corrugata*	A listed species rare plant
15	Bakara Rd	0384514 6166626 Mark 082	0383927 6166719 Mark 081	Vegetation along roadside mostly in very good condition	B
16 **Burnt**	Three Chain Rd-Kanappa / Spriggs Rd	3381429 6159209 Mark 044	338636 6158790 Mark 043	Excellent undisturbed roadside Vegetation along unmade track	A
17	Sanderston – Cambrai Rd / Pinecrest Rd	338658 6158823 Mark 45	339196 6160743 Mark 46	Vegetation along roadside mostly in very good condition	B
18	Blackhill Rd, intersection of Rochow and Schroeder Rd	0356734 6160014 Mark 025	0358588 6158842 Mark 026	*M. lanceolata, Callitris sp, Pittosporum, Grevillea, R. crassifolia, Pimelea* Weeds: Pepper trees, bridal creeper, boxthorn, horehound, onion weed.	B
19	Falkenberg Rd, south side. Intersection of Starick Rd	0351329 6157802 Mark 027	032279 6157822 Mark 028	Good remnant Mallee	B

Marker No.	Location	Starting coordinates	Ending coordinates	Species/Community-Comments	Category or listed sp
20	Long Gully Rd	0342680 6139909 Mark 031	0342638 6139951 Mark 032	Protecting *Dodonaea subglandulifera* plant coordinates; 0342649, 6139939 0342667, 6139925	A listed species rare plant
21	Fischer Rd	0336754 6140614 Mark 039	0336757 6140633 Mark 040	Protecting *Olearia pannosa* (1)	A listed species rare plant
22	Sleeper Track	0368191 6167790 Mark 029	0345565 6167552 Mark 030	Both sides of road marked virtually whole way. *Lycium australe, G. huegelli, E. aphylla, W. rigida, E. scoparia, E. glabra, Helychrysum leucopsideum*	B
23	Sleeper Track	0368191 6167797 Mark 029	0345568 6167563 Mark 030	Both sides of road marked virtually whole way. *O. muelleri, C. conocephala, Halgania andromedifolia (U), Dodonaea stenozyga,* unidentified plant – *Daviesia?*	B
24	Murraylands Rd/Groth Rd	0354870 6143620 Mark 054	0361107 6152805 Mark 056	*Olearia magniflora* MDB uncommon	A listed species uncommon plant
25	Egel Rd to Walker Flat	0354853 6143628 Mark 055	0361100 6152808 Mark 057	Vegetation along roadside mostly in very good condition	B
26	Bolts Sand Rd	0382928 6160233 Mark 075	0383090 6163370 Mark 076	Only did western side of road, other as shown on plan was thin strip saltbush along fence line	B

Marker No.	Location	Starting coordinates	Ending coordinates	Species/Community-Comments	Category or listed sp
27	Haby Rd	0378988 6150304 Mark 071	03794668 6150958 Mark 073	*Sandy soil, angular pigface* *Note motorbike track	B
28	Haby Rd	0378994 6150292 Mark 072	0379478 6150947 Mark 074	*Eremophila sp* *Goodenia sp* See photos	B
29	Mt Mary Rd	0351846 6208146 Mark 066	0353611 6209966 Mark 070	*M. sedifolia, Nitraria billardieri* (No 69 accidentally entered)	B
30	Mt Mary Rd	0351854 6208135 Mark 067	0353620 6209957 Mark 068	*Scaveloa spinescens*	B
31	Linkes Woolshed Rd	0354852 6195474 Mark 058	0353873 6195480 Mark 060	*Eremophila scoparia, Olearia, Maireana spp, Exocarpus, A. nyssophylla*	B
32	Linkes Woolshed Rd	0354850 6195479 Mark 059	0353871 6195489 Mark 061	Vegetation along roadside mostly in very good condition	B

Marker No.	Location	Starting coordinates	Ending coordinates	Species/Community-Comments	Category or listed sp
33	Mt Mary Rd	0351832 6195476 Mark 063	0351759 6202837 Mark 064	Vegetation along roadside mostly in very good condition	B
34	Mt Mary Rd	0351841 6195473 Mark 062	0351771 6202837 Mark 065	Vegetation along roadside mostly in very good condition	B
35	From Greenways to Bakara Rd – *Road has no name*	0386323 6163490 Mark 077	0386295 6166328 Mark 079	Off Greenways	B
36	From Greenways to Bakara Rd – *Road has no name*	0386332 6163491 Mark 078	0386301 6166328 Mark 080	Vegetation along roadside mostly in very good condition	B
37	Old Loxton Rd	0385922 6169839 Mark 083	0377579 6169699 Mark 085	Vegetation along roadside mostly in very good condition	B
38	Old Loxton Rd	0385919 6169850 Mark 084	0377579 6169711 Mark 086	*Sida corrugata, Scaevola spinescens*	B
39	Stock Route Road	0355081 6219257 Mark 432	0352007 6218928 Mark 431	*Mallee understorey M. sedifolia, N. billardierei Stipa* ***note GPSMAP 60CSX used***	B
40	Cnr of Daffs Gully Rd and Stock Route Rd	0358893 6219950 Mark 433	0355755 6219305 Mark 434	*M. Sedifolia Shrubland* **Only marked southern side of road*	B

Marker No.	Location	Starting coordinates	Ending coordinates	Species/Community-Comments	Category or listed sp
41	Stock Route Rd Northern Side	0362966 6221265 Mark 435	0364039 6221608 Mark 437	*Mallee Overstorey* *M. sedifolia understorey,* *S. spinescens*	B
42	Stock Route Rd Southern Side	0362970 6221253 Mark 436	0364041 6221598 Mark 438	Vegetation along roadside mostly in very good condition	B
43	Stock Route Rd Northern Side	0370798 6223657 Mark 439	0371535 6223851 Mark 440	*S. spinescens, E. scoparia, Lycium austral, Casuarina Pauper, A. oleifolius, A. nysophylla, Stipa sp, E. Aphylla, M. Platycarpa* * Note Fire has passed through area	B
44	Stock Route Rd Northern Side	0374771 6224709 Mark 441	0375634 6225176 Mark 443	*M. platycarpum, Mallee, Casuarina pauper, M. sedifolia* *Note Serious motorbike track	B
45	Stock Route Rd Southern Side	0374776 6224701 Mark 442	0375641 6225167 Mark 444	Same as Mark 44 *Note Near council quarry?	B
46	Prominintz Rd Southern Side	0372528 6232271 Mark 445	0356573 6232380 Mark 448	*Mallee, Casuarina pauper, M. sedifolia, N billardierei, L. Austral, C. conocephala, E. scoparia*	B
47	Prominintz Rd Northern Side	0372529 6232283 Mark 446	0356571 622391 Mark 447	Same as Mark 46 *Note specimen like *Dodonaea*	B
48	Florieton Rd Eastern Side	0354635 6239906 Mark 449	0355561 6236335 Mark 452	Good diversity 3 species of *Eremophila, S. spinescens, C. Pauper*, native grasses, Daisy Rubbish – concrete several piles of	B

Marker No.	Location	Starting coordinates	Ending coordinates	Species/Community-Comments	Category or listed sp
49	Florieton Rd Western Side	0354713 6239547 Mark 450	0355546 6236345 Mark 451	*M. rohrlacchi* big patch, *M. sedifolia, E. longifolia, N. billardierei, C. pauper* Rabbit activity	A listed species rare plants
50	Ramco School Rd Western side	0390919 6218690 Mark 453	0389598 6223386 Mark 455	Mallee overstorey, good diversity, *Triodia sp.* Motorbikes Annual weeds	B
51	Ramco School Rd Eastern side	0390828 6219567 Mark 454	0389605 6223397 Mark 456	Mallee overstorey, good diversity, *Triodia sp. E. scoparia.* "Fire Track" cut at back	B
52	Oxford Landing Rd Eastern side	0394526 6226009 Mark 457	0389617 6223432 Mark 458	Good overstorey and diversity Eucalyptus plantation Rabbits and weeds	B
53	Koch Rd Stonefield Eastern Side	0340343 6200211 Mark 459	03451513 6199454 Mark 460	*E. glabra, Sennas, G. Illicifolia, M. Sedifolia, M. rohrlacchi, Olearia, S. spinescens, E. sparteus,* dodder 2 wombat holes few annual weeds	A listed species rare plants
54	Koch Rd Stonefield Western Side	0340347 620025 Mark 461	0341520 6199463 Mark 462	Same as 53 but back by heritage block and contains *D. subglandulifera*	A listed species rare plants
55	Robertson Rd	0360104 6177833 Mark 463	0356683 6177590 Mark 466	Diverse vegetation in excellent condition, backs onto Yookamurra	A
56	Robertson Rd	0360103 6177827 Mark 464	0356683 6177582 Mark 465	*Ptilotus, W. rigida, E. glabra*	A

Marker No.	Location	Starting coordinates	Ending coordinates	Species/Community-Comments	Category or listed sp
57	Pipeline Rd NE side	0346732 6180774 Mark 468	0344205 6180800 Mark 470	Rare plant *D. subglandulifera*	A listed species rare plants
58	Pipeline Rd SW side	0346726 6180759 Mark 467	0346465 6180763 Mark 469	Rare plant *D. Subglandulifera* before pipeline takes over Bridal Creeper WoNS	A listed species rare plants
59	Tungali Rd Western side	0345280 6181520 Mark 471	0346722 6182437 Mark 472	Rare plant *D. subglandulifera*	A listed species rare plants
60	Christian Rd Western Side	0372481 6162997 Mark 473	0373050 6162128 Mark 477	Rare plant *D. subglandulifera*	A listed species rare plants
61	Christian Rd Eastern Side	0372474 6162991 Mark 474	0373041 6162122 Mark 478	Rare plant *D. subglandulifera*	A listed species rare plants
62	Pilwarren Rd Note both sides marked as dead end road	0372511 6162987 Mark 475 western	0372511 6162976 Mark 476 eastern	Rare plant *D. subglandulifera*	A listed species rare plants
63	Springs Rd Western Side	0350621 6146156 Mark 483	0349729 6143875 Mark 485	Vegetation along roadside mostly in very good condition	B
64	McGormans Rd Western side	0358207 6143617 Mark 479	0358176 6148437 Mark 481	Black box section few weeds e.g. tobacco, bridal creeper, wild mustard. Excellent diversity	A

Marker No.	Location	Starting coordinates	Ending coordinates	Species/Community-Comments	Category or listed sp
65	McGormans Rd Eastern side	0358216 6143620 Mark 480	0358182 6148441 Mark 482	Black box section few weeds e.g. tobacco, bridal creeper, wild mustard. Excellent diversity	A
66	Springs Rd Eastern Side	0350617 614615 Mark 486	0350262 6145339 Mark 484	Vegetation along roadside mostly in very good condition	B

5.8 Listed Plant Species

Within the Mid Murray Council, 3 nationally recognised threatened plant species have been recorded along roadsides, and 5 species threatened at a state level and 7 at a regional level have also been recorded. There are also 2 vegetation associations that are listed as threatened at the national level which is *Eucalyptus odorata*, Peppermint Box Woodland and *Lomandra effusa*, Scented Mat-rush Grassland.

Nationally recognised

Acacia menzelii
O pannosa
D subglandulifera

State

Acacia menzelii
O pannosa
D subglandulifera
Maireana rohrlacchii
Myoporum parvifolium

MDB-regionally

Acacia menzelii
O pannosa
D subglandulifera
Maireana rohrlacchii
Eremophila divaricata
Muehlenbeckia horrida
O magniflora