



**Adelaide Plains Council
Roadside Vegetation Management Plan**

Adelaide Plains Council Roadside Vegetation Management Plan

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Version 2

Prepared by EBS Ecology for Adelaide Plains Council

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GLOSSARY AND ABBREVIATION OF TERMS

BAM	Bushland Assessment Method
BCM	Bushland Condition Monitoring
BMAP	Bushfire Management Action Plan
BMS	Bushfire Management Strategy
BPOP	Best Practice Operating Procedure
CFS	Country Fire Service
cm	Centimetre(s)
Council	Adelaide Plains Council
DCCEEW	Department of Climate Change, Energy, the Environment and Water (formerly DAWE)
Declared Weed	Weeds that are regulated under the <i>Landscape South Australia Act 2019</i> due to their threat to primary industries.
DEW	Department of Environment and Water (South Australia) (formerly DEWNR)
DIT	Department for Infrastructure and Transport
EBS	EBS Ecology
GPS	Global Positioning System
Ha	Hectare(s)
hr	Hour(s)
JEA	Job Environmental Analysis
LGA	Local Government Area
LGA Act	<i>Local Government Act 1999</i>
LSA Act	<i>Landscapes South Australia Act 2019</i>
m	Meter(s)
mm	Millimetre(s)
MNES	Matters of National Environmental Significance
NA	Northern Agricultural
NPW Act	<i>National Parks and Wildlife Act 1972</i>
NV Act	<i>Native Vegetation Act 1991</i>
NVB	Native Vegetation Branch
NVC	Native Vegetation Council

NYLB	Northern and Yorke Landscape Board
Rd	Road
RMS	Council Roadside Marker Site
RVMP	Roadside Vegetation Management Plan
SA	South Australia
Site	A roadside marker site
SISD	Safe Intersection Sight Distance
SOP	Standard Operating Procedure
sp.	Species
spp.	Species plural
ssp.	Subspecies
TRPZ	Tree Root Protection Zone
VA	Vegetation Association
var.	Variant
VSC	Vegetation Significance Category
WoNS	Weeds of National Significance
WP	Waypoint

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Attachments

- Attachment 1: Roadside Vegetation Survey (EBS 2023)
- Attachment 2: Adelaide Plains Council Road Construction and Grading Best Practice Operating Procedure – Roadside Shoulders and Verges.

1 INTRODUCTION

The Adelaide Plains Council (Council hereafter referred to as 'Council') have engaged EBS Ecology (EBS) to undertake a Roadside Vegetation Management Plan for 99 Roadside Marker Sites across the Council district. This report discusses the remnant vegetation that currently exists across the Roadside Marker Sites as well as the condition and the significance of that vegetation. This report aims to highlight the current threats that exist across the Roadside Marker Sites and delve into the management strategies and guidelines for Council in relation to the roadside vegetation.

1.1 The purpose and the objectives of this Roadside Vegetation Management Plan

The primary objectives of this Roadside Vegetation Management Plan (RVMP) are to assist the Council to meet the legal requirements for the provision and maintenance of a safe road network and the protection of native roadside vegetation. Other objectives include:

- Maintain and improve roadside vegetation diversity and quality;
- Avoid or minimise loss of or damage to native vegetation on Council roadsides;
- Improve awareness of roadside vegetation management issues internally and externally (Council staff, contractors, community); and
- Encourage appropriate roadside management practices.

1.2 Project area

The Project Area is located within the Local Government Area (LGA) of Adelaide Plains, the Northern and Yorke Landscape Region and spans across 18 suburbs (Figure 1).

1.2.1 Adelaide Plains Council

Adelaide Plains Council (formerly the District Council of Mallala) is made up of approximately 926 square kilometres (km²), which contains mostly rural land with a large tidal coastal region facing the Gulf of St Vincent. The City of Playford bounds the south, with Wakefield Regional Council in the North and the Light Regional Council to the east.

Council currently has a total of 103 Roadside Marker Sites (RMS (Figure 2). Refer to [Appendix 1](#) for a full list of the RMS.

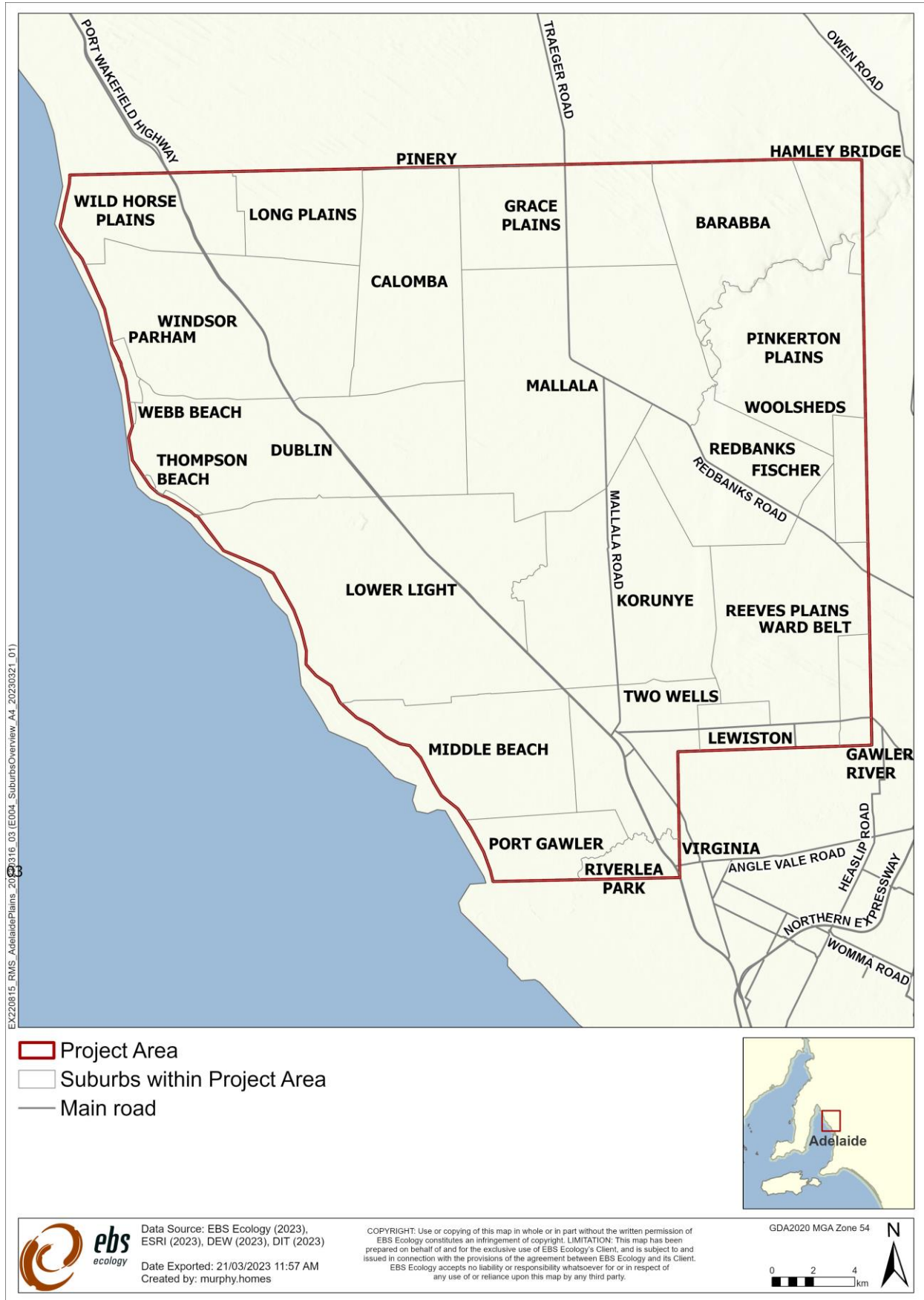


Figure 1. The Project Area.

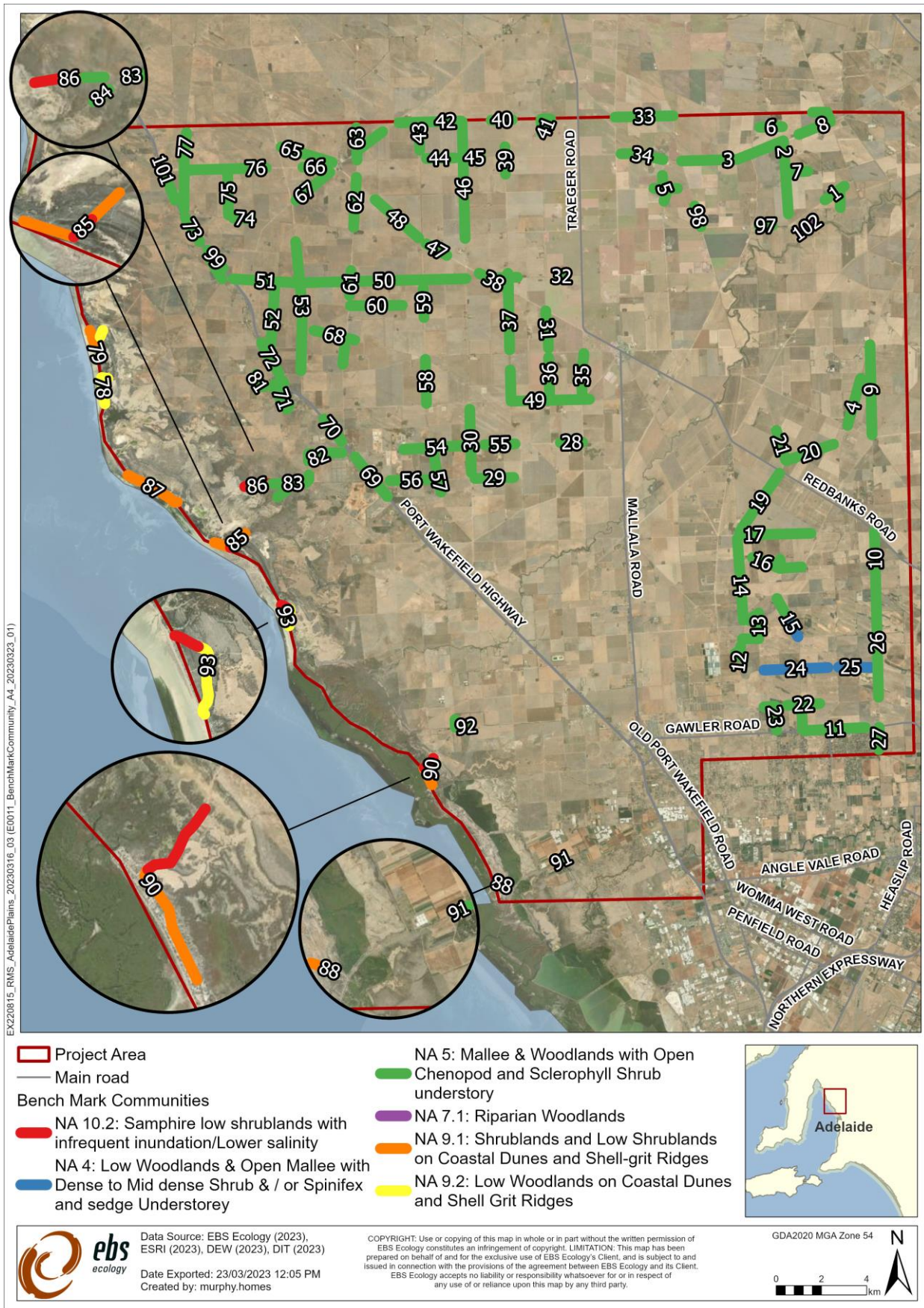


Figure 2. Location of Roadside Marker Sites located within the Project Area.

2 BACKGROUND INFORMATION

2.1 Roadside vegetation

The definition of a road from the *Roads (Opening and Closing) Act 1991* is:

- (a) a public road within the meaning of section 4 of the *Local Government Act 1999*; or
- (ab) an alley, laneway, walkway or other similar thoroughfare vested in a council; or
- (b) in relation to a part of the State not within a council area—
 - (i) a road or street delineated and shown on a public map or plan of the State as laid out for public purposes by the Crown; or
 - (ii) a road or street opened under this Act or any other Act relating to the opening of new roads and streets; or
 - (iii) a road or street transferred or surrendered to the Minister of Local Government or the Crown by the owner or lessee for use as a public road or street; or
 - (iv) a road or street declared or dedicated under any other Act to be a public road or street and includes part of a road.

Roadside vegetation, as outlined in the Guidelines for the Management of Roadside Native Vegetation and Regrowth Vegetation (NVC 2020b) is defined as “*any vegetation growing on a road reserve, including vegetation on a roadside (the area adjacent to a formed road), and vegetation growing on an unmade or undeveloped road reserve. It ranges from native vegetation of conservation value to vegetation dominated by introduced species.*”

An example of roadside vegetation located within the Council is presented in Figure 3.



Figure 3. Example of roadside vegetation located within the Council.

2.1.1 *The importance of roadside vegetation*

In south Australia, remnant vegetation has been highly fragmented from past vegetation clearance activities. As a result, a large percentage of remnant vegetation now only remains along roadside corridors. This roadside remnant vegetation has important ecological value and functional benefits, including:

- providing important habitat for local and threatened fauna species (Figure 4);
- supporting Threatened Ecological Communities (TEC) and populations of significant plant species;
- providing a corridor allowing movement for wildlife across the landscape;
- providing an important seed source for local revegetation projects; and
- remnant roadside vegetation in good condition will suppress weed invasion and help the control of declared or other introduced species.

Functional benefits of remnant roadside vegetation include:

- reduce the risk of erosion from run off;
- help to lower the local water tables, which can affect the road formation and sealed pavement;
- provides shade for people who utilise the road reserves along with livestock living adjacent to the vegetation; and
- in areas that have been extensively cleared, these pockets of vegetation provide amenity value to the area.



Figure 4. State Rare Elegant Parrot (*Neophema elegans*) utilising vegetation alongside a Council Roadside Marker Scheme (EBS 2023).

2.1.2 Threats to roadside vegetation

Due to the linear nature of roadside vegetation, it is susceptible to a number of different threats. The following are examples of threats that are likely to impact native vegetation along roadsides:

- inappropriate fire regimes;
- pesticide drift from surrounding properties;
- clearing for fence replacements;
- weed invasion from neighbouring property (i.e., garden escapes, see Figure 5) and weed invasion from inappropriate roadwork activity;
- disposal of rubbish and other waste materials;
- collection of firewood;
- inappropriate or poorly managed roadwork activity resulting in clearance of native vegetation (see Figure 6);
- invasion by pest species such as rabbits;
- grazing of stock such as sheep and cattle;
- dieback due to plant disease such as Mundulla Yellows and Phytophthora; and
- lack of active management of Roadside Marker Sites.

These above activities can occur for several reasons and can be grouped into four (4) broad categories:

1. **ignorance** of the law – e.g., clearance for fence lines by adjacent landholders, or seed collection;
2. **accidental** clearance – e.g., vehicles parking on roadside, grading a little wider each time, or inappropriate weed control methods;
3. **illegal** use – e.g., domestic waste and weed dumping, or sheep and cattle grazing; and
4. **in-action** – e.g., weeds and pests spread over time, if not actively controlled.

Each of the above categories require a different approach to minimise or eliminate the risk.



Figure 5. Weed invasions within a RMS.

Figure 6. Inappropriate roadside activity located within a RMS.

2.2 Roadside Marker Scheme

The Roadside Marker Scheme is an important and valuable means of identifying, managing, and protecting important areas of roadside vegetation. Roadside Marker Sites (RMS) are identified by small blue marker signs with a unique identification number, at the start and end of important areas (Figure 7). The marker system ensures that those involved in road related works (e.g., road upgrades, maintenance, pest control programs) are aware of the location of these sensitive roadside areas, thereby protecting them from disturbance (NVC 2019a).

RMS are those that are established and managed by Council along Council roads. Two surveys were previously conducted across the Adelaide Plains LGA:

- J.A. Pedler and W.E. Matheson (1993). *Remnant Vegetation in the Mallala District Council Area. Its Status and Conservation Strategies*. Report to Mallala District Council (now Adelaide Plains Council).
- V. Philpott (2004). *District Council of Mallala Roadside Vegetation Drive-by Survey #60. Survey Findings and Recommendations to Council*. Report to Mallala District Council (now Adelaide Plains Council).



Figure 7. Example of a Council Roadside Marker Scheme sign.

3 COMPLIANCE AND LEGISLATIVE REQUIREMENTS

Native roadside vegetation in South Australia is protected and regulated under State and Commonwealth legislation. Council is responsible for the provision and the maintenance of a safe transport network under the *Local Government Act 1999*, whilst also ensuring that native roadside vegetation is protected under the *Native Vegetation Act 1991*.

3.1 Local Government Act 1999

Requires Council to facilitate sustainable development and the protection of the environment, and to ensure a proper balance within its community between economic, social, environmental and cultural considerations. Gives Council the power to regulate activities on roadsides including the planting, removal of, or interference with roadside vegetation.

3.2 Native Vegetation Act 1991

The Project Area is in the district council of the Adelaide Plains, which is currently subject to the *Native Vegetation Act 1991* (NV Act). Native vegetation within the Project Area is protected under the NV Act and *Native Vegetation Regulations 2017*. Any proposed clearance of native vegetation in South Australia (unless exempt under the *Native Vegetation Regulations 2017*) is to be assessed against the NV Act Principles of Clearance and requires approval from the Native Vegetation Council (NVC).

Native vegetation refers to any naturally occurring local plant species that are indigenous to South Australia, from small ground covers and native grasses to large trees and water plants.

"Clearance", in relation to native vegetation, means:

- The killing or destruction of native vegetation.
- The 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, or any other act or activity, that causes the killing or destruction of native vegetation, the severing of branches, limbs, stems or trunks of native vegetation or any other substantial damage to native vegetation.

Approval must be obtained before performing any activity that could cause substantial damage to native plants. This also applies to dead trees that may provide habitat for animals. These activities include but are not limited to:

- The cutting down, destruction or removal of whole plants.
- The removal of branches, limbs, stems, or trunks (including brush cutting and woodcutting).
- Burning.
- Poisoning.
- Slashing of understorey.

- Drainage and reclamation of wetlands.
- Grazing by animals (in some circumstances).
- Change of land use.

3.2.1 Regulation 11(23) – Roadside or rail corridor vegetation management

The guidelines comply with Section 25 of the NV Act, which relates to Guidelines for the application of assistance and the management of native vegetation.

Specifically, these guidelines have been developed under Part 3, Division 4, Regulation 11(23) to allow the clearance of vegetation that is growing or situated on a road reserve or rail corridor for the purpose of:

- a) ensuring the safety of persons entering or passing the land, or
- b) controlling pests on the land.

Under this regulation, clearing vegetation can only occur if:

- i. the clearance complies with these guidelines; **or**
- ii. the clearance complies with a Roadside Management Plan prepared by the Local Council or Department for Infrastructure and Transport (DIT) and approved by the Native Vegetation Council **and**
- iii. the clearance meets all the other requirements of Regulation 11.

The information contained within this report mirrors the NVC Guidelines for the Management of Roadside Native Vegetation and Regrowth Vegetation (NVC 2020b). It provides a lead into the sub-sections for each activity.

Council can clear vegetation on road reserves or rail corridors for:

- maintaining the native vegetation regrowth,
- the personal safety of those entering or passing the land, or of property on the land,
- controlling pests on the land,
- managing safety concerns of large trees, and
- maintaining the health of veteran trees.

Clearance must be undertaken in compliance with the *Guidelines for the Management of Roadside Native Vegetation and Regrowth Vegetation* (NVC 2020b), this RVMP or the *Local Government Tree Management Guidelines* (NVC 2020c).

If there are circumstances where Council needs to undertake clearance beyond what is permitted by the above NVC Guidelines, these need to be included in the RVMP and approved by the NVC. Vegetation clearance is not permitted if it will permanently remove or degrade native vegetation.

If the proposed clearance does not meet the requirements of Native Vegetation Regulation 11(23), or another regulation, a clearance application must be submitted under Section 28 of the *Native Vegetation Act 1991* (and will be subject to different assessment criteria).

3.2.2 Mitigation Hierarchy

Prior to any clearance, any clearance activities need to consider the 'Mitigation Hierarchy,' a fundamental principle of the *Native Vegetation Regulations 2017*. The Mitigation Hierarchy has four requirements:

- **Avoidance** – Measures must be taken to avoid clearing native vegetation wherever possible.
- **Minimisation** – If clearing native vegetation cannot be avoided, measures must be taken to minimise the duration, intensity and extent of impacts of the clearance on biological diversity as much as possible (whether the impact is direct, indirect or cumulative).
- **Rehabilitation or restoration** – If clearing native vegetation cannot be avoided or minimised, measures must be taken to rehabilitate ecosystems that have been degraded, and to restore ecosystems that have been destroyed, as a result of the clearance.
- **Offset** – Any adverse impact on native vegetation or ecosystems that cannot be avoided or minimised must be offset by the achievement of a significant environmental benefit that outweighs that impact.

3.2.3 Operating requirements

All roadside vegetation management must be undertaken in accordance with the following requirements (NVC 2020b):

1. Where clearance is restricted to regrowth vegetation only, clearing any vegetation that is more than 20 years old will require an application to the NVC.
2. Use the most low-impact methods possible for the given activity. Ensure works cause minimal ground disturbance, cut cleanly rather than breaking branches, and use low-impact methods like slashing, trimming, mowing, or rolling.
3. Limit the use of herbicides to spraying around roadside furniture and for selective weed control.
4. Ensure graders and other high-impact machinery do not intrude beyond the existing carriageway width, as grading a little further each time can have significant impact over a number of years.
5. Position mitre drains in areas devoid of native vegetation (unless clearance approval is given).
6. Ensure that drains do not deposit sediment into native vegetation, waterways or neighbouring private land.
7. Minimise soil disturbance and general intrusion beyond the designated carriageway, as disturbance encourages weeds that compete with native species, leading to potential increases in maintenance costs. More specifically:
 - a. Parking or turning machinery must be at a limited number of designated sites that do not have native vegetation.
 - b. Materials must be stockpiled at a limited number of designated sites that do not have native vegetation.

- c. Equipment must be cleaned on-site before moving to other sites. This is particularly important where machinery is operating in weed-infested or infected areas (e.g., land affected by *Phytophthora* spp.).
 - d. Any required tree-trimming must be performed in accordance with recognised arboriculture standards.
 - e. Any debris from trimming operations must not be deposited on or among other native vegetation and must be disposed of in a manner that does not affect native vegetation, unless it is useful as habitat for wildlife, or is scattered sparsely among the remaining vegetation.
8. Threatened plant species on roadsides must be mapped, where possible, and roadworks at those sites must be carefully planned to avoid any impact to those plants. It is recommended that roadside markers are installed to identify sites with threatened plant species, and that best-practice training is undertaken by staff and contractors.
 9. Retain native vegetation, including dead timber, wherever possible, and integrate it into revegetation programs. Particular care must be taken to preserve areas of native grasses, which can be difficult to distinguish from exotic grasses.
 10. Wherever possible, clear exotic vegetation or undertake proposed works on already cleared land in preference to clearing native roadside vegetation.
 11. Start works with clean machinery in areas of less degraded vegetation and work towards the more degraded sites. This will help to prevent spreading weeds and, in turn, reduce ongoing maintenance.

3.3 Other legislative policies relevant to roadside vegetation

3.3.1 Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides protection for nationally important flora, fauna, ecological communities and heritage places – defined in the Act as Matters of National Environmental Significance (MNES). Threatened species and ecological communities listed under the EPBC Act are known to occur within Council's road reserves. Under the EPBC Act, any action with potential to have a significant impact on a MNES requires assessment and Commonwealth approval.

3.3.2 National Parks and Wildlife Act 1972

Native plants and animals in South Australia are protected under the *National Parks and Wildlife Act 1972* (NPW Act). It is an offence to take a native plant or protected animal without approval. Threatened plant and animal species are listed in Schedules 7 (Endangered species), 8 (Vulnerable species) and 9 (Rare species) of the Act. Persons must not:

- Take a native plant on a reserve, wilderness protection area, wilderness protection zone, land reserved for public purposes, a forest reserve, or any other Crown land.
- Take a native plant of a prescribed species on private land.

- Take a native plant on private land without the consent of the owner (such plants may also be covered by the NV Act).
- Take a protected animal or the eggs of a protected animal without approval.
- Keep protected animals unless authorised to do so.
- Use poison to kill a protected animal without approval.

The assessment of vegetation clearance applications under the NV Act give consideration to the impact on threatened species and threatened plant communities.

Section 75A of the NPW Act states that a permit under this Act is not required if the person has a permit under the NV Act or is acting in compliance with a requirement under the *Landscape of South Australia Act 2019* or another Act.

3.3.3 Landscape of South Australia Act 2019

Under the *Landscape South Australia Act 2019* (LSA Act) repealed the *Natural Resources Management Act 2004*, new regional landscape boards have been established. The aim is to deliver landscape related services to regional communities, including effective water management, pest plant and animal control, soil and land management and support for broader sustainable primary production programs. Council falls in the Northern and Yorke Landscape Board Region. This Landscape Board can provide advice in relation to the management of biodiversity, pest plants and animals.

Under the LSA Act, landholders have a responsibility to manage declared pest plants and animals and take reasonable steps to prevent land and water degradation. The Northern and Yorke Landscape Board (NYLB) is responsible for the control of declared plants and animals on road reserves. Any costs incurred in carrying out this control work may be charged to the adjoining landholder up to half the road reserve.

3.3.4 Planning development and Infrastructure Act 2016

The *Planning, Development and Infrastructure Act 2016* (PDI Act) repealed the *Development Act 1993*. The PDI Act, along with the *Planning, Development and Infrastructure (General) Regulations 2017* and *Planning and Design Code*, provide the legislative framework for carrying out planning and development works within the state. The *Planning and Design Code* is the cornerstone of the new system and has replaced all council development plans to become the single source of planning policy for assessing development applications. No development can be undertaken without an appropriate Development Approval being obtained from the relevant authority after an application and assessment process.

3.3.5 Aboriginal Heritage Act 1988

Aboriginal sites and objects are protected by the *Aboriginal Heritage Act 1988*. It is an offence to damage, disturb or interfere with Aboriginal sites. Advice should be sought regarding road infrastructure projects, on the risk of impact to sites and the need for a heritage assessment. Addressing this early in the planning process will enable alternative options to be considered if sites are found. If burial sites or artefacts are uncovered during road works, work must stop immediately, and contact made with the relevant authority.

3.3.6 Other

Other legislation which applies to the management of Roadside Vegetation includes but is not limited to:

- *Agricultural and Veterinary Products Act (Control of Use) 2002;*
- *Electricity Act 1996* (note that this legislation is affected by amending provisions that have not yet come into operation or taken effect).
- *Fire and Emergency Services Act 2005; and*
- *Road Traffic Act 1961.*

4 SURVEY AND MONITORING

4.1 Overview

Council engaged EBS Ecology to undertake a roadside vegetation survey to gain a better understanding on the condition of the current remnant roadside vegetation located across 99 RMS. The field survey was conducted by Ecologists E. West and G. Wilson and spread across a two-week period and covered a total of 196.5 kilometers (kms). The first field survey was conducted from 13-16 December 2022, with the second field survey conducted from 9-13 of January 2023.

The native vegetation condition of all RMS was assessed in accordance with the Bushland Assessment Method (BAM) (NVC 2020a). The BAM photo locations were geo-referenced for repeat monitoring. Photos were also taken at the start and end points of the RMS, where the blue marker pegs were located (if located and present). The raw data for each site is recorded in BAM scoresheets (MS Excel files).

The 2022-2023 RMS surveys were time limited, and the coverage and survey effort at each site varied. It is deemed likely that numerous additional flora species were present at sites, particularly where the understorey was diverse and intact. The flora species diversity and vegetation cover results are not comparable between the two other surveys undertaken by Pedler and Matheson (1993) and Philpott (2004), as these two surveys applied different methodologies, as described in Stokes *et al.* (1998). However, flora species lists of sites can be compared to identify changes in flora species composition over time. A summary of the survey results at RMS is provided in Section 4.3 of this RVMP, and refer to Attachment 1 (EBS 2023 Survey report) for an in-depth summary of the 99 RMS.

It is recommended that the RMS are resurveyed at least every 5 years. More regular monitoring (e.g., every 1-2 years) is justified where specific site threats have been identified. After each survey period, BAM scoresheets should be completed. Digital copies of the BAM Scoresheets should be provided to Department of Environment and Water (DEW) for upload of the survey results to the Biological Databases of South Australia.

4.2 Objectives and outcomes

The objectives of the RMS survey were as follows:

- Global Positioning System (GPS) marking of Site, aerial map high-lighting location, photograph(s) of Site, Site number, road/reserve name, date of survey;
- List of plant species (native and threatening weeds) and their conservation rating (NPW Act and EPBC Act);
- Condition of the vegetation; and
- Site recommendations.

Outcomes from the 2022-23 survey include:

- The Roadside Marker Scheme aims to identify areas of remnant native vegetation that exist along roadside corridors. RMS highlight these areas by a white sign with a blue house which states the district council and the roadside marker site (e.g., Figure 7). Since the implementation of these markers, have degraded overtime due to natural weathering. These signs have been damaged and have disappeared over time. Council have highlighted that these signs will be replaced with new signs (Figure 8).
- Restoration of roadside vegetation by the means of weed control and revegetation effort, with the aim to improve the condition of the sites (further discussed in Section 18).



Figure 8. Example of a new Council Roadside Marker sign (supplied to EBS Ecology by Council on 30/05/2023).

4.3 Roadside vegetation survey results

The following findings were observed from the 2022-2023 roadside vegetation survey (EBS 2023):

- 196.50 kilometres (km) of roadside vegetation was surveyed, which included 99 RMS across the Council;
- A total of six benchmark communities (Croft *et al.* 2005-2009, EBS 2023) were observed (Table 1);
- 103 different roadside Vegetation Associations (VAs);

- 256 flora species were identified, this included 151 native and 106 introduced species (see [Appendix 3](#) and [Appendix 4](#) for full species lists). Two flora species have a State conservation rating; and
- RMS consisted of varying condition, ranging from Poor to High.

4.3.1 Native vegetation

A total of 103 unique VAs were observed across 99 RMS (see [Appendix 5](#)). This consisted of six benchmark communities, which includes Low Woodlands and Open Mallee, Mallee, Woodlands, Shrublands, Low Woodlands on Coastal Dunes and Samphire low Shrublands (Table 1, Table 4). The condition of these communities varied from excellent quality to very poor quality, as further discussed in Section 4.3.4.

Table 1. Overall summary of benchmark communities across Council's Roadside Marker Scheme.

Benchmark community	Area (km)
NA 4 – Low Woodlands & Open Mallee with dense to mid-dense shrub &/or Spinifex and sedge understorey.	5.29
NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	179.90
NA 7.1 Riparian Woodlands.	0.40
NA 9.1 Shrublands and Low Shrublands on Coastal Dunes and Shell-grit Ridges	5.79
NA 9.2 – Low Woodlands on Coastal Dunes and Shell Grit Ridges.	2.64
NA 10.2 – Samphire Low Shrublands with infrequent inundation/Lower salinity.	2.48
TOTAL	196.50

Na: Northern Agricultural Region

4.3.2 Native flora species

A total of 151 flora species were recorded during the survey. Two of these species have a State rating under the NWP Act, this includes the State Rare *Acacia iteaphylla* (Flinders Ranges Wattle) and the State Rare *Myoporum parviflorum* (Creeping Boobialla). No species were identified to have a National rating under the EPBC Act. The full flora species list is presented in [Appendix 3](#).

4.3.3 Significant vegetation

As outlined in EBS 2023, a total of three TECs under the EPBC act were identified as possibly occurring within the Project Area, consisting of:

- Peppermint Box (*Eucalyptus odorata*) Grassy Woodland – Critically Endangered;
- Iron-grass Natural Temperate Grassland of South Australia – Critically Endangered; and
- Subtropical and Temperate Coastal Saltmarsh – Vulnerable.

Although TECs were not assessed as a part of the RMS assessments, *Eucalyptus odorata* (Peppermint Box) was observed across 11 sites. Four sites were associated with a saltmarsh and contained salt tolerant plants such as *Tecticornia* spp. and *Samolus* spp. Therefore, vegetation within these sites is likely to be a part of the Vulnerable Subtropical and Temperate Coastal Saltmarsh. Protecting and enhancing this type of vegetation will be a key outcome for Council.

Council have identified that vegetation that is classed as Type A (excellent), Type B (good) and Type C (moderate) is considered significant vegetation within this RVMP. This type of vegetation makes up 86.18% (169.35 kms) of the vegetation within this region and it will form one of the Councils management issues (further discussed in Section 18).

4.3.4 Vegetation condition score

The condition of the vegetation at RMS was scored in 2022-2023 as part of the BAM assessment. The BAM condition score is calculated based on positive vegetation attributes (e.g., species diversity, regeneration, native plant life forms, fallen timber/debris and hollow-bearing trees) and negative vegetation attributes (e.g., weeds), compared to a benchmark community – refer to the BAM manual (NVC 2020a). The higher the score, the higher the vegetation condition. The condition scores of RMS are shown in Figure 9 and Table 2.

Only a small percentage of vegetation (0.97%) received a High vegetation condition score with most of the vegetation receiving a Medium score (54.36%). A total of 37.87% of vegetation received either a Low or Low to Medium condition score.

Table 2. Vegetation Condition Score of Vegetation associations across the Council Roadside Marker Sites (adapted from Stokes *et al.* 2006).

Vegetation Condition Score	Description	Length (kms)	Percentage (%)
High	Very little or no sign of alien vegetation in the understorey*; resembles probable pre-European conditions.	2.87	0.97
Medium to High	High proportion of native species and native cover in the understorey*; reasonable representation of probable pre-European condition.	12.47	6.80
Medium	Substantial invasion of aliens, but native understorey* persists; for example, may be a low proportion of native species and high native cover, or high proportion of native species and low native cover.	122.46	54.36
Low to Medium	The understorey* consists predominantly of alien species, although a small number of natives persist.	41.86	25.25
Low	Upper and lower strata is heavily impacted (consist of scattered individuals. The understorey predominantly consists of alien species.	16.84	12.62
TOTAL		196.50	100

*Or all strata if upper and lower strata are difficult to distinguish e.g., grasslands, sedgeland, low shrubland

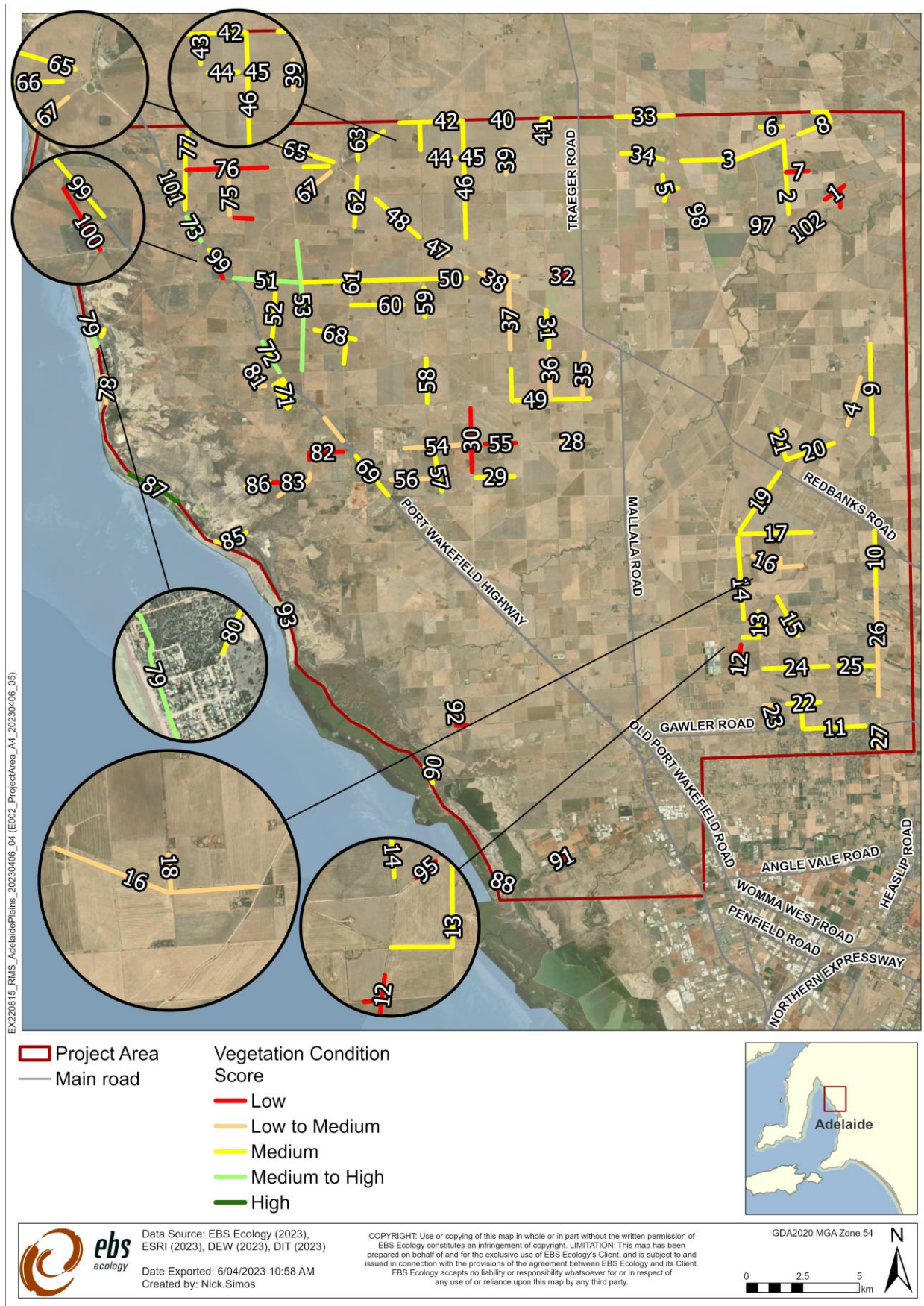


Figure 9. Vegetation Condition Score of the RMS, as determined from the 2022-2023 survey results using Bushland Assessment Methodology.

4.3.5 Vegetation Significance Category

A part of the RVMP is to identify roadside vegetation that is of conservation significance. This is done by assigning vegetation to a category known as the Vegetation Significance Category (VSC). The VSC (as outlined in [Appendix 7](#)) was utilised as a guide to determine what significance category the surveyed RMS. As the current roadside vegetation survey was assessed under the BAM methodology, the VSC descriptions were adapted from both NVC (2020b) and Stokes *et al.* (2006). Overall, 44.12% (86.69 km) of the RMS were in moderate condition (Type C) followed by Type A with 35.49% (69.74 km), Type D with 13.74 % (27.01 km), Type B with 6.58% (12.92 km) and 0.08% (0.15 km).

Table 3. Overall ecological significance of roadside vegetation within Council (adapted from Stokes *et al.* 2006 and NVC 2020b).

Vegetation Significance Categories	Description	Length (kms)	Percentage (%)
A	<ul style="list-style-type: none"> vegetation is in excellent condition – i.e., very little or no sign of alien vegetation in the understorey, close resemblance to probable pre-European condition, or vegetation containing a species or communities listed under the National Parks and Wildlife Act 1972, or Environment Protection and Biodiversity Conservation Act 1999, or contains species that are represented in a threatened ecological community (i.e., <i>Eucalyptus odorata</i>). 	69.74	35.49
B	vegetation is in good condition – i.e., a high proportion of native species and native cover in the understorey, reasonable representation of probable pre-European vegetation	12.92	6.58
C	Vegetation is in moderate condition – i.e., substantial invasion of aliens, but native understorey persists, for example, there may be a low proportion of native species and high native cover or a high proportion of native species and low native cover.	86.69	44.12
D	vegetation is in poor condition – i.e., the understorey consists predominantly of alien species, although a small number of natives persist.	27.01	13.74
E	vegetation is in very poor condition – i.e., no native species exist within the understorey.	0.15	0.08
TOTAL		196.50	100

4.3.6 Weeds

A total of 105 introduced plants were recorded during the field survey. One species *Pistacia vera* (Pistachio) was not observed during the field survey. However, Council have identified this species as an ongoing issue throughout this Council region. A total of 18 out of the 105 introduced species have been listed as declared under the LSA Act, eight of the 18 species also have a Weeds of National Significance (WoNS) listing. A total of 37 weeds have been listed as introduced.

Declared plants and WoNS require control under the LSA Act. Non-declared species are also detrimental to native vegetation; however, these species are not significant enough to warrant legislative. Control of non-declared species is still required in order to reduce to competition with local native species.

4.3.7 Fauna

A total of 23 birds, four mammals and three reptiles were observed during the field survey. Two State Rare species threatened under the NPW Act were observed within the Project Area: the Elegant Parrot (*Neophema elegans*) and the Common Sandpiper (*Actitis hypoleucos*).

Four of the fauna species are introduced:

- House Sparrow (*Passer domesticus*);
- Cat (*Felis catus*);
- Hare (*Lepus europaeus*); and
- European Rabbit (*Oryctolagus cuniculus*).

The impacts of these pest species are further discussed in Section 7.

5 MANAGEMENT ISSUES

5.1 Quick reference guide

The following management issues have been highlighted by Council and may impact native vegetation along roadsides. Guidelines are also provided to reduce the likely impacts and provide background to legal requirements of native vegetation clearance, as follows.

- Native vegetation clearance approval is required from the NVC under the NVC act or the removal of any native vegetation or impacts to native vegetation
- the Native Vegetation Branch (NVB) should be the first point of contact regarding native vegetation clearance, as the NVB may be able to approve the clearance of a small amount of vegetation known to be common to an area and that would not impact on the biodiversity of the area.
- the NVB will determine whether the proposed clearance requires formal clearance approval from the NVC in the form of a Clearance or Regulation Application.

The following table highlights the management issues and the legal requirements under the NV Act (Table 4). Refer to [Appendix 8](#) for more information on the important governing bodies.

Table 4. Quick reference guide to the legal requirements for roadside vegetation (NVC 2012).

Activity	Clearance Approval		Section within this RVMP
	Not Required (Does not require approval under the <i>Native Vegetation Act 1991</i>)	Required (Under the Native Vegetation Regulation or clearance application to the NVC)	
New Roadworks <i>Regulation 12(34)</i>	Very minor clearance (e.g., pruning of branches or removal of one or two saplings or shrubs known to be common in the area).	All but very minor clearances.	6
Pest Plant and Animal Control <i>Regulation 8(15)</i>	Very minor clearance (e.g., pruning for access)	Where proposed animal or plant control program is likely to cause significant ¹ damage to roadside vegetation.	7
Roadside Vegetation Maintenance <i>Regulation 11(23)</i>	Primary clearance envelope Secondary clearance envelope <1 m into the verge	Clearance of vegetation greater than 1 metres (m) into the verge from the edge of the carriageway. Consultation with Native Vegetation Branch (NVB) is required if the width of the verge is unclear. An Annual Works Form must be completed and submitted if approvals are required.	8
Public Safety <i>Regulation 11(23)</i>	Maintenance of existing clearance with low impact methods	New clearance, increased clearance or high impact methods to be used.	9
Clearance for Fenceline <i>Regulation 8(14)</i>	Trees on boundary; branches over/through fence; where shrubs or bushes are growing	Any clearance exceeding standards.	10

¹Significant includes ripping of warrens where native vegetation will be affected, non-selective spraying in mixed weed/native vegetation and burning of native vegetation to assist pest control.

Activity	Clearance Approval		Section within this RVMP
	Not Required (Does not require approval under the <i>Native Vegetation Act 1991</i>)	Required (Under the Native Vegetation Regulation or clearance application to the NVC)	
	through the fence those within 1 m from fence may be cleared. If rare or threatened plant species ² are present care should be taken to protect, contact NVB for advice.		
Clearance for Access to Adjoining Land <i>Regulation 11(23)</i>	Maximum 5m wide – normal access Maximum 10 m wide – machinery	If any proposed clearance of native vegetation for access that exceeds the standards.	11
Fire Management	All other bushfire protection works which are carried out under an approved Bushfire Management Plan or equivalent under the <i>Fire and Emergency Services Act 2005</i> and require approval from the Country Fire Service (CFS).	Any other clearance for fire prevention. Formal NVC approval required unless in accordance with a District Bushfire Management Plan under the <i>Fire and Emergency Services Act 2005</i> , or through an application to the CFS.	12
Installation and Maintenance of Services <i>Regulation 8(2) and Regulation 8(4) – maintenance</i> <i>Regulation 12(34) – new infrastructure</i>	Maintenance of existing clearance within the parameters of the Regulation 8(2) and 8(4).	Clearance association with new works.	13
Grazing (leased and general) <i>Regulation 8(5) – ongoing</i> <i>Regulation 11(26) – new regime</i>	Leased roads – long-standing grazing practices. General – No native vegetation or only native trees and exotic grasses present.	Leased roads - any direct clearance or increased pressure on native vegetation through changed grazing. General – where understorey or regeneration vegetation present.	14
Cultivation and Cropping	If no native vegetation is present, no approval is required.	Change of practice will require approval from NVC or if any measures involve burning, lopping or other disturbance of native vegetation.	15
Removal of Plant Material <i>Regulation 8(11)</i>	Dead vegetation other than that defined in the <i>Native Vegetation Regulations 2017</i> . Seed collection requires consent of local council, and a permit is required under the NPW Act.	Live timber, flower or brush cutting of <i>Melaleuca uncinata</i> . Clearance of dead plants of a class declared by a Regulation to be included in the definition of native vegetation.	16
Protection and maintenance of Native Vegetation of High Conservation Significance <i>Regulation 8(15)</i>	Very minor clearance (e.g., pruning for access).	Any measures involving burning, lopping or other disturbance of native vegetation.	17
Restoration of Roadside Vegetation	Clearance to provide access for ecological work, grazing to		18

²Rare or threatened plant species are defined in the schedule of National Parks and Wildlife Act 1972 or the *Environmental Protection and Biodiversity Conservation Act 1999*. Removal of plants listed under the *Environmental Protection and Biodiversity Conservation Act 1999* may require approval under that Act.

Activity	Clearance Approval		Section within this RVMP
	Not Required (Does not require approval under the <i>Native Vegetation Act 1991</i>)	Required (Under the Native Vegetation Regulation or clearance application to the NVC)	
<i>Regulation 11(25)</i>	reduce weeds and improve native understorey.		

NOTE: As well as the above requirements under *Native Vegetation Act 1991*, ANY removal of roadside native vegetation needs local council approval and may require approval under other legislation, e.g. *Environment Protection and Biodiversity Conservation Act 1999*.

If Council is in doubt about any of the clearance approval requirements, consultation with the relevant authority is recommended.

6 NEW ROADWORKS

6.1 Description

Council may need to undertake new roadworks that involve the clearance of native vegetation. Clearance associated with new roadworks requires approval from NVC under [Regulation 12\(34\)](#). However, where clearance is required for public safety [Regulation 11\(23\)](#) may apply.

6.2 Policy

Council has a Best Practice Operating Procedure (BPOP) in place for road construction and grading/maintenance.

6.3 Objectives

- To ensure road construction activities meet road safety standards whilst ensuring minimum disturbance to roadside native vegetation.
- To ensure that where significant native vegetation is present, Council will give genuine consideration to modifying the road design and construction process to reduce or avoid serious environmental impact.

6.4 Information

Council may need to undertake the following additional works:

- Widening or realignment of existing roads;
- Construction of new roads along previously undeveloped road reserves;
- Construction of new drains, borrow-pits and stockpile sites;
- Installation of signs, traffic control devices;
- Widening of existing unsealed roads to 11m in order to seal the pavement.
- ins will be incorporated.
- Additional widening for drains is sometimes required, although rare.
- Additional vegetation clearance beyond 11 m will be dealt with in accordance with the NVB.
- Re-forming of unsealed roads during re-sheet works to a maximum of 11 m including drains.

Under normal circumstances roads will be constructed and maintained as per [Section 8](#).

6.5 Guidelines

New roadworks can have a significant environmental impact. Therefore, it is important that the vegetation is assessed, and the mitigation hierarchy is followed prior to design, or any construction works. It is recommended that a suitably qualified person undergoes the survey work in order to ensure that:

Adelaide Plains Council Roadside Vegetation Management Plan

- Road, drainage and batters will be designed to minimise or avoid impacting native vegetation;
- Avoid vegetation communities of high conservation significance;
- When required Council will consult with the NVB;
- Clearly identify significant vegetation with green flags or stakes;
- Limit soil disturbance on roadsides;
- Only remove vegetation approved by NVC in consultation with Council's Open Space & Environment Team Leader;
- Take Tree Root Protection Zones (TRPZ) into consideration; and
- Identify stockpile locations to minimise impact to vegetation.

7 PEST PLANT AND ANIMAL CONTROL

7.1 Description

Commonly known and 'weeds' and 'feral animals'. They can cause economic, ecological, physical and aesthetic problems often with significant potential impacts on local and regional biodiversity. [Regulation 8\(15\)](#) allows the clearance of vegetation for the control of declared plants and animals under the LSA Act. Non-declared species are also detrimental to native vegetation; however, these species are not significant enough to warrant legislative. Control of these species is still required in order to reduce to competition with local native species.

[Appendix 4](#) outlines the declared plants species identified during the ecological survey (EBS 2023). A total of 105 introduced plants were recorded during the field survey, one species *Pistacia vera* (Pistachio) was not observed during the field survey. However, Council have identified it being an ongoing issue throughout this Council region. A total of 18 out of the 106 introduced species have been listed as declared, of which, eight are also listed as WoNS under the LAS Act. A further 37 species have been listed as an introduced.

Self-seeded *Pinus radiata* (Radiata pine) is an emerging issue on roadsides with the Council. Control works will become more costly if works are delayed.

Some non-local Australian native species can create management problems, such as *Acacia saligna* (Golden wreath wattle), a native of Western Australia, which germinates prolifically along some road verges and is invading native roadside vegetation.

Gazania linearis, now recognised as a declared weed, which has spread from inappropriate plantings by the neighbouring landholder. Infestation of *Opuntia sp.* (Figure 10) and *Aloe sp.* are also established and prolific across a number of RMS, likely also to have originated from garden plantings.

Council acknowledges that species considered as high priority includes those listed as declared, WoNS and of environmental concern. Pest species that are deemed invasive throughout the district, will be controlled by Council as required, to not become a significant and costly problem in the area. Council will aim to:

- Control of declared weeds on land owned or under the care and control of Council, as required under the LSA Act.
- Council will work with Landscape South Australia (SA) Northern and Yorke and its District Officers, to effectively control declared weeds within the constraints of Councils resources.
- Where required control of pest animals such as rabbits, hares and foxes will also be undertaken.
- Council will investigate and where possible take compliance action in respect to illegal dumping of garden waste and other waste of roadsides.

7.2 Policy

Briefly covered in Vegetation Management Policy 19. 20. And 21 (Adelaide Plains Council 2019).

7.3 Objectives

- To manage weeds within road reserves by reducing the spread and establishment of new plants.
- To effectively manage weeds whilst minimising any impact on native vegetation.
- To effectively manage pests including but not limited to weeds, rabbits, hares and foxes.

7.4 Guidelines

7.4.1 Basic principles

- Suitably qualified contractors or council staff trained in the identification of native vegetation and weeds will be used to implement control procedures that minimise disturbance and damage to native vegetation.
- Small infestations of weeds may be best dealt with using minimum disturbance techniques such as hand-pulling (while still minimising soil disturbance) and 'cut-and-swab' with herbicide.
- Work from the best areas of native vegetation or areas of low weed infestation towards denser infestations to minimise potential spread.
- Spot-spraying and the use of selective herbicides should be used carefully to avoid off-target damage to native plants.
- Where natural regeneration of native species is not occurring, revegetation with local native species can be an effective long-term means of weed control.
- Pest-control methods usually require an integrated approach using several methods to both control the pests and minimise impacts on native vegetation.
- Spot-spraying techniques and the use of selective herbicides will be utilised carefully to avoid off-target damage to native plants.
- Where serious pest problems are highlighted by council, consultation with the NVB.

Table 5. Summary of Pest Plant and Animal Control Responsibilities.

Situation	Responsible stake holder under the LSA Act	Comments regarding current Council Practices
Declared pest species on road reserves	The local landscape boards. For Council, this is the NYLB.	Council undertakes an annual roadside weed control plan. This plan focuses on declared plants, with priority given to the areas within or adjacent to RMS or other areas of high conservation status.
Declared pest species on private property	Landholder	Council refers landholders to the Northern Yorke Landscape District Officer for advice on best control methods. Council may also report landholders to the NYLB who are not complying with relevant legislation
Non-declared environmental pest species on road reserves	Council	Council undertakes an annual roadside weed control plan and monitors roadsides for new outbreaks. Species of higher environmental concern are given priority for control.
Declared weeds on council land other than roadsides	Council	Council undertakes an annual environmental weed control plan. This plan focuses on declared plants, with priority given to the areas within or adjacent to RMS or other areas of high conservation status.

7.4.2 Requirements under the Native Vegetation Act 1991

There is a legal requirement that damage to native vegetation is minimised during pest control works. A wide range of low impact methods have been developed for the control of weed species within native vegetation.

Any clearance of native vegetation for pest plant and animal control must be compliant with Native Vegetation Regulation 8(15) – Plant and Animal Control. The NVC Guideline Clearance associated with Plant and Animal Control describes the level of impact on native vegetation which is permitted. If impacts to native vegetation are unavoidable and likely to exceed the permissible level of clearance indicated in the NVC Guideline, then NVC authorisation is required.

The clearance must also comply with the NVC guidelines 'Clearance of Native Vegetation associated with the Control of Plant and Animal Pests' – see the NVC website for full details. Some key points include:

1. Pruning of Native Vegetation

The pruning of native vegetation, if essential to provide access for pest animal and plant control, is acceptable provided that pruning activities are kept to a minimum and do not affect the overall viability of the plant(s) involved.

2. Spraying of Herbicides in Native Vegetation

Spraying of declared plants in native vegetation is acceptable provided that a careful and selective approach is used (e.g., spot-spraying) and damage to nearby native vegetation is avoided or minimised. The use of herbicides must be in strict accordance with NRM advice and with instructions for use provided by the manufacturer. Any broader spraying program in native vegetation (e.g., boom-spraying) requires the endorsement of the NVB and may require the consent of the NVC through a clearance application under the *Native Vegetation Act 1991*.

3. Removal of Entire Native Plants

The removal of entire native plants (if considered essential to facilitate animal and plant control) must be discussed with and endorsed by the NVB. This consultation can occur on a case-by-case basis or in the form of broader planning arrangements developed between the LSA Board/Authorised officers and the NVB, such as a regional pest management plan. See the NVC Guidelines for further details.

4. The control of declared animals and plants in native vegetation should also take the following into account:

- The removal of tree saplings or more mature trees is not normally necessary for pest control;
- Very localised pest control issues might be manageable with hand-held equipment rather than heavier machinery which could have greater environmental impact;
- There is an increasing range of pest control equipment available, some of which has less environmental impact than the equipment used more traditionally;
- Any control method involving soil disturbance has the potential to promote further establishment of declared plants or other introduced plants which may disrupt the ecology

of the native vegetation. Soil disturbance should be minimised, and control works should be followed with site monitoring and selective eradication of any introduced plants which re-establish;

- Fire has some potential for inclusion in pest control programs in native vegetation to improve access, reduce the bulk of declared plants and possibly to promote regeneration of native species. However, the issues associated with fire can be complex and any such burning in native vegetation should be discussed with the Native Vegetation Branch to avoid the possibility of a breach of the NV act.



Figure 10. Example of a Declared plant and Weed of National Significance *Opuntia* sp. (Prickly Pear) located at a roadside marker scheme within the Council.

8 ROADSIDE VEGETATION MAINTENANCE

8.1 Description

Roadside maintenance refers to the clearance of regrowth (native and introduced) in order to maintain a safe road corridor and other already established areas on the road. Regrowth may be encroaching back into the already cleared space often referred to as the clearance envelope (the full width of the carriageway) or the secondary clearance envelope (adjacent to the carriageway). This section covers clearance activities that are permitted or roadside vegetation maintenance that can be undertaken on the:

- Primary envelope;
- Secondary envelope; and
- The verge.

An example of a typical road within the Council region is shown in Figure 11.



Figure 11. Typical breakdown of a dirt road found along Council region (EBS 2023).

8.2 Policy

Vegetation Management Policy 19, 20, and 21 (Adelaide Plains Council 2019).

8.3 Objectives

To clear regrowth vegetation (up to 20 years old) both laterally and vertically in order to maintain a safe road corridor.

8.4 Information

- Clearing regrowth vegetation is necessary to adhere to safety standards.
- Council has a recurring roadside vegetation maintenance program which is undertaken annually via both manual and mechanical means. This aligns with Council's road resheeting program, annual tree trimming program and community requests.
- Council also undertakes reactive pruning throughout the year should safety concerns be raised or unscheduled civil works be required.
- Council will provide a clearance envelope in accordance with the Guideline for the Management of Roadside Native Vegetation and Regrowth Vegetation of up to 6m vertically and laterally as below;
 - Category 1 - Up to 12 m (with 9 m of the Road sheeted).
 - Category 2 - Up to 12 m (with 8 m of the Road sheeted).
 - Category 3A - Up to 10 m (with 7 m of the Road sheeted).
 - Category 3B - Up to 10 m (with 6 m of the Road sheeted).
 - Category 4 - Up to 6 m (with 6 m of formed earth Road).
 - Category 5 - Up to 6 m (with up to 6 m or less of formed earth track).
 - Category 6 - Up to 6 m (with up to 6 m or less of unformed earth track).

Every effort must be made to limit grading to the pre-existing road width.

8.5 Clearance envelopes

8.5.1 Primary clearance envelopes

Refers to the area of road that will support regular vehicle movement within the carriageway (travelled way and shoulder). Clearance is permitted within this envelope and is considered important in order to maintain the safety of the road uses (NVC 2020b). Within the primary clearance envelope, the following is permitted:

1. Vegetation clearance is required to allow for legal-height vehicles (i.e., vehicles measuring 4.6 m in height or less) to pass along the full width of the carriageway. To allow for regrowth between pruning and sagging of branches caused by wet or windy conditions, a clearance height of up to 6 m may be maintained within the primary clearance envelope.

2. For sealed roads, the primary clearance envelope of up to 6m is to be measured from the edge of the shoulder, which represents the edge of the carriageway.
3. For unsealed roads, the primary clearance envelope of up to 6 m is to be measured from the edge of the grader line, which is taken to be the edge of the carriageway. Grading must be kept to the pre-existing width.
4. Any regrowth of native vegetation may be cleared within the carriageway where it extends into the primary clearance envelope. In addition, limbs extending into the primary clearance envelope can be trimmed back to the trunk or major limb in a manner to ensure the health of the tree is maintained (Figure 12). Removal to the base is not permitted.

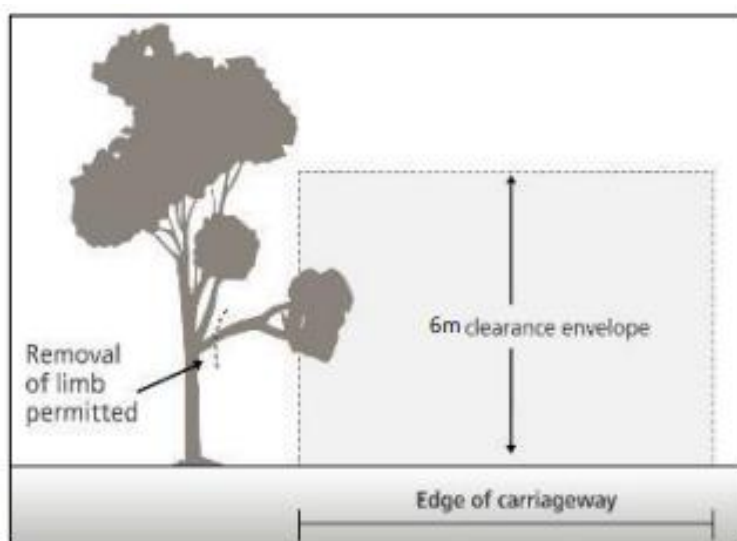


Figure 12. Clearance of vegetation within the primary clearance envelope up to 6 metres (m) high (NVC 2020b).

8.5.2 Secondary clearance envelopes

The secondary clearance envelope refers to the area surrounding roadside furniture to allow for sufficient sight lines for road users. The envelope encompasses the vegetation that has regrown and impacts the ability to see upcoming traffic, signs, and roadside furniture. This also includes managing regrowth to maintain guardrails. Vegetation in this envelope can only be cleared to how it was when the road was constructed, or the roadside furniture was installed (i.e., only vegetation that has grown or regrown in areas previously lawfully cleared for the construction, installation or maintenance of the road or associated infrastructure may be cleared) (NVC 2020b). Within the secondary clearance envelope, the following is permitted:

1. Regrowth vegetation growing up to 500mm around existing roadside furniture (Figure 13) can be cleared.
2. Regrowth vegetation growing on the approach side of signs and road delineation markers can be cleared to ensure these signs and markers are clearly visible from a distance equivalent to the stopping sight distance for the speed environment of the road according to Austroad standards
3. At road intersections, existing verge clearance can be maintained on corners for safe sight distance according to Austroad Guidelines (Austroads 2010).

4. To maintain mitre and longitudinal drains, existing clearance can be maintained. Ensure clearance is confined to the original extent of the drain and that cleared debris is not pushed into native vegetation within the natural ground surface.

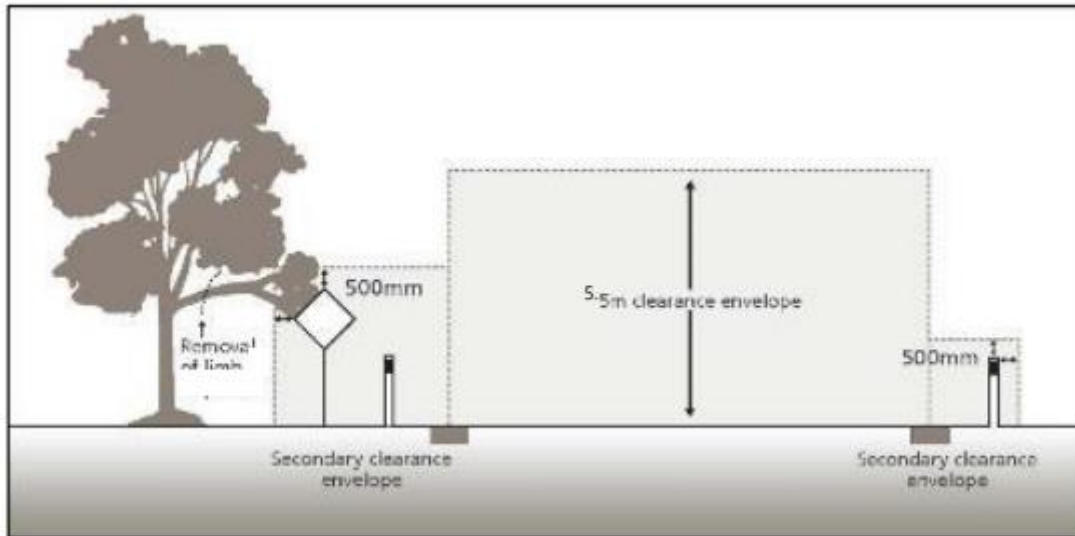


Figure 13. Clearance permitted within the secondary clearance envelope (NVC 2020b).

8.5.3 Verge clearance

Clearance along the verge may be necessary due to fast growing native species located within roadsides. The following operating requirements apply within the verge (NVC 2020b):

1. Only regrowth vegetation less than 20 years old that has previously been cleared as part of roadside maintenance (determined from local council works records, by the size of the trees in the regrowth, or by comparing aerial images of various dates) can be cleared.
2. Clearance must use the most low-impact methods possible for the given activity. Ensure works cause minimal ground disturbance, cut cleanly rather than breaking branches, and use low-impact methods like slashing, trimming and mowing. (Note: high-impact methods include any activity that disturbs the soil or results in plants being uprooted, such as the use of graders or bulldozers). Retain native vegetation at a minimum height of 10 centimetres (cm) above ground-level. Any regrowth trees with a trunk circumference greater than 10 cm should be removed by poisoning or cut and stump-grind only, rather than heavy machinery.
3. Clearance can only be conducted within a maximum width of 3 m (measured from the edge of the carriageway) for arterial and collector roads and 2 m for a local road, but:
 - a. must be confined to a maximum width of 1 m in Type A roadside vegetation (i.e., vegetation with high conservation significance – see [Appendix 2](#)) or
 - b. must be confined to a maximum width of 2 m in Type B roadside vegetation (i.e., vegetation with moderate conservation significance – see [Appendix 2](#)).



Figure 14. Example of clearance of regrowth required along the travelled way.

8.6 Best Practice

The following best practice will be implemented by Council when undertaking maintenance of standard clearance envelopes and any other areas of existing clearance located along the roadside. The site supervisor or Councils Team Leader of Open Space and Environment should be contacted prior to undergoing maintenance within the clearance envelope to ensure that best practice is followed, this includes undertaking the following:

1. Minimising weed and disease spread

- Ensure appropriate biosecurity controls are applied to machinery when entering and leaving the site.
- Council personnel (or similar) to work from Type A vegetation down to Type E.
- Only utilise soil that is free of weed and disease.

2. Turn-around points

- Identify turn around location prior to entering site, ensure that these sites are located within already cleared areas along the roadside.

3. Grading and drain cleaning

- Ensure all personnel undertaking the work are trained in order to avoid damage to native vegetation, including roots.

- Avoid working in the drip line of the trees³.
- Dispose of drain spoil responsibly and safely.
- Ensure personnel undertaking grading work is aware of the limits within the carriageway.

4. Herbicides

- Only use herbicides where vegetation control by mechanical method is inappropriate.
- Only undertake spraying on ideal weather condition for that herbicide Training provided on herbicide use.

5. Vegetation removal

- Avoid the “clean up” of vegetation as this can provide suitable habitat and microclimate for flora and fauna.
- Ensure pruning is undertaken in line with arborist standards.
- Avoid the removal or destruction of mid and understorey species when removing trees.
- Removed timber and trees should be reused as habitat where possible.
- Minimise or avoid the removal of low shrubs, grasses and sedge as this helps to prevent weed evasion and soil erosion.

6. Machinery use

- Ensure that appropriate machinery is used for the job.

7. Fauna

- Ensure that the tree is inspected prior to removal to ensure the safety of fauna.
- Avoid the removal of trees with large hollows as these take years to evolve and provide habitat for local fauna species.

³ The outermost circumference of the tree canopy from which water drips onto the ground.

9 PUBLIC SAFETY

9.1 Description

The NVC Framework for Public Safety covers the clearance of native vegetation that is permitted to be undertaken if required for public safety. This includes clearances that need to be undertaken for safety measure related to sight distances, intersection, clearance adjacent to the travelled-way or other safety concerns that may cause risk to people or property. It is important to note that public safety framework does not apply to clearance associated with new works or upgrade to infrastructure. Any works associated with new works or upgrades will require an application and approval under Regulation 12(34) infrastructure as this vegetation is not considered a hazard but a part of the new works.

Any areas approved for clearance under this framework can be subsequently managed under Regulation 11(23).

Note that the Framework for Public Safety replaces the previous Framework for clearance of Native Vegetation under Regulation 5(1)(1b) – Public Safety for Rail cross, Road intersections and Roadsides (October 2012).

9.1.1 Objectives

To ensure public safety whilst also maintaining protection of roadside vegetation.

9.2 Guidelines

There are three categories for assessing clearance of native vegetation on roadsides, intersection and rail crossings for public safety.

9.2.1 Category 1 – Sight distance line/triangles at road intersection and rail crossings

This refers to both frangible⁴ and non-frangible⁵ native vegetation to address and existing risk to the general public along roads intersections and rail crossings.

Calculating the visibility sight triangle for clearance of native vegetation should be limited to meet required standards of the Austroads Guide to Road Design: Part 4: Intersections and Crossings General (Austroads 2023) (Figure 15).

Clearance of non-frangible native vegetation along sight-lines should be limited to targeted removal.

Frangible native vegetation should be limited to a height that sustainably maintains the understorey and not cleared down to bare earth.

⁴ Understorey vegetation with slender stems that give-way, break or uproot on impact (NVC 2020b).

⁵ Plant species with a stem diameter (at maturity) of 100mm or greater with rigid, large, or sturdy stems that will not readily break, bend or crush on impact by a typical passenger vehicle, which can cause significant damage to the vehicle or injure the occupants (NVC 2020b).

9.2.2 Category 2 – Clearance adjacent to the edge of the travelled-way

This refers to non-frangible native vegetation that can be cleared adjacent to the edge of the travelled-way for sealed roads or adjacent to the edge of the grader line as defined in local council infrastructure plans for unsealed roads. It applies differently to the following situation:

- Category 2 (Sealed - ≤ 80 km/hour);
- Category 2 (Sealed - ≥ 80 km/hour); and
- Category 2 (Unsealed).

This section outlines what can be done to manage non frangible native vegetation to protect public safety along sealed and unsealed roads based on set widths from the edge of a travelled way. Non-frangible vegetation may be removed with NVC approval if it presents a road safety issue, and the road authority first demonstrates that it has considered the Mitigation Hierarchy (section 3.2.2) 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.

On sealed roads, the Category 2 zone is dependent upon road speed design (km/hour). On unsealed roads the Category 2 zone is not dependent upon road speed design (km/hour), rather it is based on set widths from the edge of a travelled-way. The Category 2 zone is based on Austroads Guidelines that demonstrate a 50 per cent probability that a vehicle travelling at speeds and hitting non-frangible native vegetation within that Category 2 zone, would likely result in a casualty or serious injury.

Sealed roads

- On sealed roads with a speed design of less than 80 km/hr, up to 2 m of non-frangible native vegetation can be reduced, modified or removed from the edge of a travelled way for the purpose of public safety.

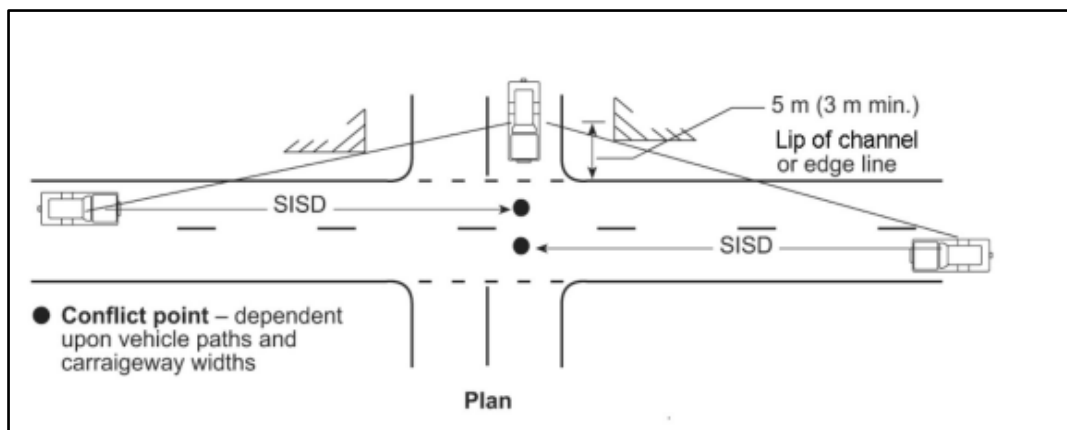


Figure 15. Safe Intersection Sight Distance (SISD). Austroads Guide to Road Design Part 4A. For details on how to calculate safe sight distance and sight triangle, refer to Section 3.3.3. of the Austroads Guide.

- On sealed roads with a speed design of greater than 80 km/hr, up to 3m of non-frangible native vegetation can be reduced, modified or removed from the edge of a travelled way for the purpose of public safety

Table 6. Sealed roads- Category 2 zone widths adjacent to the edge of a travelled way (NVC 2020b).

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

Unsealed roads

On unsealed roads, up to 2m on either side of the defined carriageway (the edge of the grader line as defined in local councils' infrastructure plans) can be cleared of **non-frangible** native vegetation for the purpose for public safety. The Category 2 zone is capped at a total width including the carriageway itself of up to 12m.

This option is tailored to consider varying road widths. It caters for narrow unsealed roads where only 2m of **non-frangible** native vegetation can be cleared either side (i.e., 4m carriageway width plus 2m **non-frangible** clearance either side totals 8m). Conversely a 10m carriageway can only clear 1m either side of the carriageway as the Category 2 zone is capped at 12m (Table 7).

It caters for wider roads where the road design incorporates an existing safety margin within the carriageway width.

Table 7. Unsealed roads- Category 2 zone widths adjacent to the edge of a travelled way (NVC 2020b).

Speed limit (km/hr)	Category 2 zone – carriageway width plus 2 m either side of carriageway (capped at 12 m)
6m	$6m + 2m + 2m = 10m$
8m	$8m + 2m + 2m = 12m$
10 m	$10m + 1m + 1m = 12m$

9.2.3 Category 3 – Clearance beyond Category 1 and 2 Zones

This Category refers to the area beyond the areas referred to within Category 1 and 2. If the road authority can demonstrate that the non-frangible native vegetation is a risk to public safety, clearance may be approved. Category 3 refers to the areas/activities that are out of scope of Category 1 and Category 2 but still may present as a public safety concern, including:

- Beyond Category 1 approved sight distance triangles/lines, or
- Beyond Category 2 specified distances from the edge of travelled way,
- Applies only to safety treatments that result in clearing:
 - Less than 6 scattered trees (**non-frangible**);
 - Less than 0.5-hectare canopy area of non-frangible vegetation, and

- Applies to trees that present a danger of falling, or if a limb or some other part of the plant is in danger of falling, causing a risk to people or property. Any application in relation to this provision will be considered against the requirements of Native Vegetation Regulation 8(6) – Safety of Persons and Property.

If the proposed safety treatments do not fall within this threshold, the framework will generally not apply. However, the NVC will consider matters on a case-by-case basis where sufficient justification can be provided.

For the justification of clearing non-frangible native vegetation within this Category, the road authority should demonstrate that they have considered the Mitigation Hierarchy (section 3.2.2) to avoid or minimise the impacts that any proposed actions may have on biodiversity or native vegetation. The road authority needs to show it has considered other safety improvement options as opposed to clearance.

For full content and application forms refer to the Framework for Public Safety (NVC 2020b - Part 2, page 19 -22) of the “*Native Vegetation Council Guidelines for the Management of Roadside Native Vegetation and Regrowth Vegetation* (NVC 2020)”.

10 CLEARANCE FOR FENCELINES

10.1 Definition

A landholder who wishes to clear native vegetation on a road reserve to enable construction or maintenance of a boundary fence requires local council consent.

10.2 Policy

N/A

10.3 Objectives

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

10.4 Information

- Council recognises that landholders with property adjacent to roads will be required to construct and maintain boundary fences. Often there will be cleared land on adjacent farmland which can be used to access the boundary fence.
- In circumstances where adjacent land is not cleared, landowners may have to clear native vegetation to construct or maintain their fence.
- Council strongly encourages landowners to consider the option of relocating the new fencing a few meters into their properties to minimise the impacts native vegetation.
- Currently no formal/enforced process in place to clear vegetation on the council verge for fenceline maintenance/renewal other than verbal communication (occurs very rarely). Technically vegetation clearance for fence lines would fall under the Section 221 Application to Alter a Verge of the LGA Act 1999.

10.5 Guidelines

- Seek Council approval before clearing vegetation on the verge (see Appendix 6 Council Approval Requirements).
- If rare or threatened plants species are present, reasonable care should be taken to protect them. If necessary, contact NVB for advice.

10.5.1 Relocation of fences

- If landholders would like to replace fences, they may like to consider re-locating the new fence a few meters into their properties to minimise the potential impact to surrounding native vegetation. This will also reduce construction and maintenance costs. The area between the old and new fence can be maintained to limit regrowth and act as a firebreak.
- An alternative to removing a tree in line with the property may include constructing a simple strut arrangement that allows the fence to deviate a short distance around a tree (e.g., Figure 16). This method may not be suitable for smaller trees and every effort should be made to avoid the structural roots and structural root zone when placing the post hole into the strut next to the tree.

10.5.2 Clearance methods

- Ensure that low impact methods are utilised when clearing native vegetation, including:
 - Minimal ground disturbance;
 - Clean cuts when removing branches; and
 - Slashing, trimming, mowing or rolling vegetation.
- Cleared vegetation should be disposed in a manner that does not impact the existing native vegetation, unless it is utilised for wildlife habitat (e.g., tree logs with hollows) or sparsely scattered.



Figure 16. Simple strut arrangement that allows a fence to deviate a short distance around a large tree (NVC 2020b).

11 CLEARANCE FOR ACCESS TO ADJOINING LAND

11.1 Description

Occasionally a new access point will be needed a road to adjoining land. For rural areas, a primary producer may need new access to a paddock, possibly to cater for wide farm machinery. Safety of the access-user needs to be the primary consideration, but the conservation of native vegetation is also a high priority. If there is more than one option to provide safe access, the option which involves the least amount of disturbance to native vegetation or impacts on vegetation of lower conservation significance, should be selected.

When clearing for access, the highest priority is safety of the person accessing the property. The conservation of native vegetation is secondary, but once safety has been addressed, the clearance option that requires the least disturbance of native vegetation of the lowest conservation significance should be selected.

Where clearance of native vegetation is unavoidable, the following standards should not be exceeded:

- For normal vehicle access: 5m wide plus minimum clearance of frangible vegetation for sight distance along the road reserve.
- For wider farm vehicles: 10m wide plus minimum clearance of frangible vegetation for sight distance along the road reserve.

If rare or threatened plant species are present, reasonable care should be taken to protect them. If necessary, contact the NVB for advice.

These guidelines do not apply to clearance required to establish access for a new development or use (e.g., associated with a new house site) or where an existing access point is available. In these circumstances, an application under Regulation 12(34) Infrastructure is required.

11.2 Policy

N/A

11.3 Objectives

- To minimise the loss of native vegetation through the construction of property access points.
- To provide safe and appropriate access to properties adjacent to road reserve.

11.4 Guidelines

11.4.1 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.

- Cleared vegetation should not be deposited on or amongst other native vegetation unless it is useful as habitat for wildlife or is scattered sparsely amongst the remaining vegetation.

11.4.2 *Avoiding unnecessary clearance*

- A suitably qualified person(s) will conduct an inspection to assess options for access points and negotiate an access point that is safe and minimises disturbance to native vegetation.
- If there is more than one option to provide safe access, the option which involves the least amount of disturbance to native vegetation or impacts on vegetation of lower conservation significance, should be selected.
- Care must be taken to avoid plant communities of conservation significance and naturally open areas such as native grassland, sedgeland and wetland.
- If rare or threatened plant species are present, reasonable care should be taken to protect them.
- If necessary, contact the NVB for advice.

12 FIRE MANAGEMENT

12.1 Description

Native vegetation may need to be managed for fire management to assist during times of bushfire, to reduce loads and to encourage ecological processes. Council falls within the Flinders Mid-North Yorke Bushfire Management Area Plan. Council have been victim to the Pinery fire, a major disaster which burnt approximately 85,000 hectares of land across five council regions. The Pinery fire caused a significant loss of native flora and fauna. 20 Roadside Marker Sites across the Council was impacted by the 2015 Pinery bushfire. In order to rehabilitate native vegetation, post-fire on-ground works to stabilise soil with large machinery across the fire scar. Approximately 30,000 native plants, stakes and guards to assist in re-greening the fire scar (Zimmerman 2017).

Under the *Fire and Emergency Service Act 2005*, Council, regarding land under its care, control or management, or in a designated urban bushfire risk area, must take reasonable steps to prevent or inhibit the outbreak and spread of fire on council owned land, protect property, and minimise the threat to human life from a fire. Council currently undertake bushfire protection works such as slashing on verges and reserves in accordance with the Bushfire Management Area Plan (BMAP).

Council is also required to adhere to the *Native Vegetation Act 1991*. Achieving the goals of both Acts can be difficult and requires careful planning. Council is committed to undertaking and facilitating fire prevention works that provide best practice outcomes for the conservation of biodiversity and the prevention of fire on roadsides.

12.2 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.
- To outline the process for undertaking bushfire protection works within roadside vegetation to protect life and assets.

12.3 Information

A council that has the care, control or management of land in the country, or in a designated urban bushfire risk area, must take reasonable steps to:

- prevent or inhibit the outbreak of fire on the land;
- prevent or inhibit the spread of fire through the land;
- protect property on the land from fire; and
- minimise the threat to human life from a fire on the land.

The *Native Vegetation Regulations 2017* prescribe the rules applying to the clearance of native vegetation for bushfire protection works. The Native Vegetation Regulations relevant to fire hazard reduction on roadsides are:

- Regulation 9(1)(17) – Fire prevention and control;
- Regulation 9(1)(18) – Clearance for the purposes of the *Fire and Emergency Services Act 2005*;
- Regulation 9(2)(20) – Fuel reduction; and
- Regulation 9(2)(21) – Fuel breaks.

Under the *Native Vegetation Regulations 2017*, the clearance of vegetation for fire hazard reduction to support bushfire management activities, particularly strategic actions based on Bushfire Management Plans, falls under one of two clearance pathways:

1. **Fire Hazard Reduction 1** – (Regulations 9(1)) activities that can be self-assessed by a proponent (no CFS application or approval required). The proponent needs to determine whether they meet the criteria of the regulation, in accordance with requirements of any relevant bushfire management plan, or another plan for the management of bushfires approved by the NVC. Note, the written permission of the landowner must be obtained if acting on behalf of the landowner for any clearance activity.
2. **Fire Hazard Reduction 2** (Regulations 9(2))– activities requiring more significant vegetation clearance where CFS approval is required.

12.4 Guidelines

- Any applications to revegetate roadsides must be assessed and approved by Council.
- Council will encourage and re-iterate the importance of landowners having property specific bushfire management plans.
- All bushfire protection works on roadsides must be authorised by, and undertaken in accordance with, the Flinders Mid-North Yorke Bushfire Management Action Plan (BMAP).

12.4.1 Clearance methods

- Low impact methods will be utilised as clearance methods, including:
 - limiting ground disturbance;
 - clean cuts rather than breaking branches;
 - slashing, trimming, mowing, or rolling should be used wherever possible when clearing vegetation for fuel reduction to reduce potential weed invasion and erosion problems.
- Grazing and herbicide use should only be contemplated in areas where no or minimal impact upon native vegetation is likely (such as where there are mature trees over exotic grasses (i.e. no native understorey and no evidence of natural regeneration of the tree species)).
- The use of herbicides to spraying should be limited to:
 - around furniture/signage,
 - 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 CFS), 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.
- Such work should preferably be combined with a native vegetation re-establishment program.
- In most cases, adequate fuel reduction on roadsides can be achieved by selective planning focusing on the removal of exotic vegetation. Particular care should be taken to avoid areas of native grasses, which can be difficult to distinguish from exotic grasses.

13 INSTALLATION AND MAINTENANCE OF SERVICES

13.1 Description

Services such as power, water, gas and telecommunications have been and continue to be established along road reserves. The construction and the maintenance of these services may involve the clearance of native vegetation.

13.2 Objectives

- Minimise impact of the installation of services and maintenance activities to native vegetation within road reserves.
- Maintain safe operating environment for services.

13.3 Guidelines

13.3.1 *New services*

The installation of any new services involving the clearance of native vegetation on roadsides requires the service provider to make an application to the NVC under Native Vegetation Regulation 12(34) - Infrastructure. Some service providers have an NVC approved Standard Operating Procedure (SOP), so the work is carried out under set criteria.

Clearance of vegetation incidental to new work being undertaken by or on behalf of the Commissioner of Highways requires approval under Regulation 12(32). Clearance must be undertaken in accordance with an NVC approved SOP.

The NVC will assess the level of risk to biodiversity presented by the clearance proposal provided by an applicant to inform whether approval should be granted. The NVC will also assess the proposed clearance against whether there are any other alternatives that involve no clearance, less clearance or clearance of vegetation that is less significant (or has been degraded to a greater extent than the vegetation proposed to be cleared). If an NVC-approved SOP exists, the assessment approach will occur in accordance with the SOP.

Note: For telecommunications, a carrier authorised by the Australian Communications Authority under the *Telecommunications Act 1997* to install a low impact facility (e.g., underground cable) is immune from some State and Territory laws, including the *Native Vegetation Act 1991*. However, the carrier must comply with the requirements of the *Telecommunications Act 1997* and the *Telecommunications Code of Practice*.

13.3.2 *Maintenance of services*

Maintenance works associated with electricity supply and other infrastructure such as water and gas which involve the clearance of native vegetation on roadsides are permitted under Native Vegetation and Regulation 8(2) – Maintenance of Infrastructure and Regulation 8(4) – Clearance under the Electricity Act 1996 or Emergency Management Act 2004.

- Under Regulation 8(4), electricity entities are to keep vegetation clear of powerlines (unless that duty is conferred on a council under a vegetation clearance scheme) in accordance with the *Electricity (Principles of vegetation clearance) Regulations 2010*. The State Coordinator, upon the declaration of an identified major incident, major emergency or disaster, can take any necessary action to remove or destroy vegetation for response and recovery operations.
- Under Regulation 8(2), clearance of vegetation can occur which is incidental to the repair or maintenance of infrastructure, or the repair or maintenance work of the Crown, without the need for notification or approval from the NVC. Clearance is undertaken in accordance with an NVC-approved SOP. The clearance must be limited to that in the vicinity of which was previously lawfully cleared in relation to the construction, repair or maintenance of the infrastructure; and clearance must only be of plants or parts of plants that have grown or regrown since the previous lawful clearance.

A service provider undertaking vegetation clearance on a roadside for infrastructure maintenance purposes must follow this RVMP and guidelines issued by the NVC.

14 GRAZING

14.1 Description

The grazing of stock refers to a particular area for grazing rather than the movement of livestock. Regulation 11(26) allows for the clearance of native vegetation to introduce a new grazing regime that is not consistent with that grazed over the last 10 years.

Grazing can be an acceptable form of roadside management, for example; where exotic species such as *Phalaris* sp. has replaced native understorey and have created a fire hazard. However, grazing most of the time can have detrimental impacts on native vegetation by damaging plants, assisting weed invasion and compacting soil.

Council generally does not permit grazing of stock on Council road reserves, however, if a situation arises where grazing will be beneficial it may be considered. If a landholder wishes to utilise a road reserve for grazing it is subject to Council approval.

14.2 Objectives

- Provide guidance on grazing practices.
- To minimize the impact of grazing by stock on roadside reserve and where native vegetation is present.
- Refer Appendix 6 for Council approvals.

14.3 Guidelines

- Areas of high conservation to be avoided, this includes Type A, B and C vegetation types, unless inspection of the road indicated that only exotic understorey exists.
- Stock should be clear of pest plants (seeds) and disease.
- Decision to graze at the discretion of Council - may be referred to NVB.
- The following NVC approval is required:
 - approval is required for any grazing of roadsides likely to cause damage to native roadside vegetation (other than incidental grazing associated with roadside stock movements). This includes grazing on roadsides where:
 - native shrub and understorey species are present, and/or
 - there is evidence of recent or periodic regeneration of native plant species.
 - Where grazing already occurs, then this may continue to occur under Regulation 8(5) – Ongoing Grazing Practices, provided it has not changed over the last 10 years, in relation to the area grazed, manner and rate. The proponent is responsible for ensuring that the clearance activity meets the specific criteria defined in the Regulations and can determine their compliance by self-assessment. Grazing practices should prevent degradation of

native vegetation by grazing of domestic stock in a way that maintains the value and protection of the vegetation on an ongoing basis.

- Where a new grazing regime is introduced that is not consistent with that grazed over the last 10 years (change in the species of domestic stock or the manner and rate of grazing), the clearance of vegetation may fall under Regulation 11(26) – Grazing of Domestic Stock. An NVC approved management plan is required in line with the *NVC Guideline: clearance associated with grazing stock – changing species*. The change in grazing regime must not cause permanent degradation of native vegetation.
- If the grazing regime is being introduced into long ungrazed native vegetation or if it is likely to result in permanent degradation, a clearance application must be submitted under the *Native Vegetation Act 1991*.
- Grazing on roadsides does not require approval where:
 - no native vegetation is present, or
 - there are native trees over exotic shrub and understorey species only and stock are not going to damage the trees via chewing, ringbarking or compaction.

15 CULTIVATION AND CROPPING

15.1 Description

Agricultural practices substantially modify the natural environment and are in direct conflict with the objective of enhancing and protecting native vegetation. Any farming practices or associated activity is not permitted on roadside that have significant roadside native vegetation. Approval from NVC is required if native vegetation is cleared.

Many roadside marker sites have seen impact from surrounding cropping land from spray drift and invasion of weeds.

In most cases Council does not permit cultivation or cropping of roadsides.

Cropping of roadsides has likely resulted in the increase of weed species within areas of remnant native vegetation. Dieback of native species was also observed, which is likely caused by spray drift as a result of farming practices on adjoining land.

15.2 Objectives

- To manage potential damage to roadside native vegetation from cultivation and growing of agricultural crops.

15.3 Guidelines

- Refer [Appendix 6](#) for Council approvals.
- Council will assess applications to crop or cultivate a verge. Will not be permitted within areas of conservation/ecological value Type A, B, C or D.
- The road that has been surveyed and falls into Category E has no remnant vegetation present.
- Decision at the discretion of council and may be referred to NVB.
- Unauthorised damage to native vegetation caused by cultivation/cropping will be referred to NVB.
- Unauthorised spraying of Council roadsides by adjacent agricultural landowners is a recurring issue in some areas. When investigating and responding to instances of unauthorised spraying of roadsides, Council staff may use a range of responses including (but not limited to):
 - writing to the adjacent landowner requesting that they cease and desist.
 - requesting that the adjacent landowner rehabilitate the sprayed roadside.
 - revegetating the sprayed roadside as part of Council's annual environmental works program.
 - report any unauthorised spraying of native vegetation in roadside to the Native Vegetation Branch (+61 8 8207 7727).
- Encourage the growth of perennial summer growing native grasses as alternative cover for weed control and bushfire prevention.

- NVC approval is required if cropping and cultivation on roadside where native understorey or regenerating native vegetation is present.

16 REMOVAL OF PLANT MATERIAL

16.1 Description

The collection of dead timber. Dead timber refers to wood debris from standing or fallen dead trees or branches. It does not usually encompass fine fuels such as grass, leaves, bark and twigs less than 6 millimetres (mm) in diameter. This section applies to:

- Removal includes; firewood/dead timber collection;
- Cutting of live timber;
- Brush-cutting;
- Seed collection; and
- Flower harvesting.

16.2 Objectives

- To limit the extent of damage caused by removal of roadside native vegetation.
- To ensure that only a sustainable amount of native vegetation is removed from roadsides.
- Abide by statutory requirements.
- To ensure that habitat for local fauna species is protected.

16.3 Guidelines

16.3.1 *Collection of dead timber*

- The collection of dead timber from roadside is not a sustainable practice and is not permitted by Council. Dead timber removal may be permitted if associated with a Bushfire/fuel reduction plan, hazard reduction.
- Dead timber on Council roadsides is not controlled under the *Native Vegetation Act 1991*, except in the case of dead trees that have a circumference of 2 m or more (measured at a point 300 mm above the base of the tree) and which provide or have the potential to provide habitat for nationally listed threatened animal species. Dead trees of this nature are defined as native vegetation under Section 3(1) of the *Native Vegetation Act 1991*.
- Council controls the collection of dead timber on Council land under the *Local Government Act 1999*.
- Dead timber, both standing and fallen, provides cover and foraging places for native fauna, it shelters young seedlings and small plants from herbivores, severe sunshine and drying winds, and is also important in the recycling of nutrients.
- The development of hollow timber takes many years and is a limited resource for wildlife, and therefore should not be collected for firewood. Retention of dead timber (and fallen leaves, bark

and twigs) is also encouraged so that soil disturbance and the creation of open areas suitable for weed invasion is minimised.

- If dead timber collection is permitted, care should be taken to prevent damaging surrounding native vegetation in the process of removal, and where possible should not be permitted in areas of vegetation of high conservation significance.

16.3.2 Cutting live timber

- Trimming of live timber on roadsides undertaken by Council for the purpose of maintaining a safe road system is dealt with in Section 8 and 9.
- Trimming of live timber on roadsides undertaken by SA Power Networks and other utility providers is dealt with in Section 13.
- Any cutting of live timber on roadsides by other persons requires the prior approval of Council.
- Cutting any live timber, other than that allowed for roadside management under these guidelines, requires the consent of Council and clearance approval of the NVC under the *Native Vegetation Act 1991*.

16.3.3 Brush-cutting

- Cutting brush (*Melaleuca uncinata*) on roadsides requires clearance approval unless it is undertaken in accordance with other sections of these guidelines.

16.3.4 Seed collecting, cuttings and specimens

- In addition to Council approval requirement, an annual permit to collect native plant materials is needed from DEW under the *National Parks and Wildlife Act 1972*. Conditions of collection are provided with the permit. The DEW Permit Unit can provide guidance on seed collection methods and can be contacted on (08) 8463 4841 or online at <https://www.environment.sa.gov.au/licences-and-permits/plant-permits>.
- On private land, seed collection requires the consent of the landholder and, if the plant is a prescribed species under the *National Parks and Wildlife Act 1972*, a permit from DEW is also needed. It should be noted that expertise is required to know how and when to collect viable seed from some native plants. Such expertise should be sought from the NYLB by contacting them on (08) 8841 3444.
- Collecting seeds, cuttings or other specimens from native plants does not require consent from the NVC if damage to the plant is not substantial. As a guide, cutting a substantial branch off a tree or bush to collect seed would not be regarded as exempt, nor would the removal of virtually all harvestable seed from a single plant or plant community.
- Council's Tree trimming programs (for maintenance of safe clearance envelopes) and roadside slashing programs (for bushfire hazard reduction) will be undertaken in consultation with local revegetation groups to facilitate their community-based seed collection activities.

16.3.5 Flower harvesting

- Harvesting flowers from roadsides requires the consent of Council and clearance approval from the NVC and Council should be the first point of contact.

- In general, harvesting of roadside flowers, particularly for commercial purposes, is not favoured because of its impact on the vegetation and on the landscape amenity of the area.

17 PROTECTION AND MAINTENANCE OF NATIVE VEGETATION OF HIGH CONSERVATION SIGNIFICANCE

17.1 Description

Roadside vegetation may contain vegetation types or plants that have high conservation significance. Roadside vegetation may also provide habitat to fauna that have a high conservation significance. This includes TECs (classified as a Type A and B) and individual species that are protected under the EPBC Act or the NPW Act . It is important that these communities/ species are identified and protected as they:

- provide habitat for native flora and fauna, including threatened species;
- assist the movement of animals from one habitat to another
- provide a source of seed for future revegetation projects.

A total of 196.5 km of roadside vegetation was assessed along developed and undeveloped roads within the Council (EBS 2023). Of the 196.50 km a total of 69.74 km has been assessed as Type A, and 12.92 km of Type B (Table 3).

Type A vegetation contained species that are threatened under the EPBC Act or the NPW Act and/or vegetation in excellent condition and reflect pre-European condition. Type A vegetation also contained species that may be considered a part of a TEC. For example, *Eucalyptus odorata* (Peppermint Box), which is a part of the Critically Endangered Peppermint Box Grassy Woodland of South Australia. Other communities considered are the saltmarshes located along the western side of the Council.

Type B vegetation reflected pre-European condition.

One of the objectives within Section 18 (Restoration of Roadside Vegetation) is to restore vegetation of high conservation significance, with the overall aim to improve the condition of potential TECs across this region.

17.2 Objectives

- Preservation of roadside vegetation.
- Identify, record and manage vegetation of significance.
- Avoid/minimise Council operations impact on high conservation value roads.

Guidelines

17.3 Establishing and managing RMS

- Restoring and upgrading the existing RMS signs to identify areas that are significant vegetation.
- Ensure that all council staff and contractors are involved with relevant training programs to ensure the protection of high conservation value of vegetation.

- Unless clearance is considered exempt as described in this RVMP, any activity involving clearance of native vegetation in areas of high conservation significance requires clearance approval from NVC.
- Council is looking into future consultation with local groups. Council is also looking and engaging the local community by raising awareness in the local newsletters and creating planting days.

18 RESTORATION OF ROADSIDE VEGETATION

18.1 Description

A total of 196.50 km of roadside vegetation will be managed by Council to maintain and enhance biodiversity. However, Council recognises the importance of maintaining and restoring the condition of roadside vegetation and is therefore committed to continue monitoring and restoring Type A, B and C roadside vegetation.

In 2023, Council engaged to EBS Ecology to undertake an ecological survey for 99 RMS. This involved calculating the condition for each of the sites following the BAM (NVC 2020a). It was identified that a total of 86.18% (169.35) of the Council roadside vegetation contains vegetation of significance (EBS Ecology 2023).

18.2 Objectives

- Prevent further degradation of native vegetation within road reserves.
- Monitor and restore Type A, B and C vegetation communities within the RMS;
- Encourage re-establishment of native vegetation along roadsides.

18.3 Guidelines

- Council to develop an annual program to undertake weed control and re-vegetation activities, the focus being RMS of Type A, B and C. It is acknowledged that Council is constrained by limited resources.
- Work in partnership with the Northern and Yorke Landscape Board, landholders and other third-party conservation organisations.
- Re-vegetation to be undertaken with indigenous native flora species (i.e., seed collections for tubestock to be collected as close to RMS site as possible)
- Encourage natural regeneration to occur, where not presenting a safety issue.
- Re-vegetation of the roadside by landholder(s) – see [Appendix 6](#) for Council approval requirements.

19 MANAGEMENT ACTION PLAN

Below outlines an action plan that will guide Council to successfully manage roadside vegetation within the Council region. Each action has been prioritised using the following timeframes:

- **High:** Priority to be completed within 2 years
- **Medium:** Priority to be completed within 5 years
- **Low:** priority to be completed within 10 years or re-assessed within this timeframe
- **Ongoing:** actions which will become effective immediately

The actions aimed at protecting and enhancing Council's roadside vegetation are outlined in Table 8 below.

General actions are listed first, followed by actions specific to a management category, as per the order they are addressed in [Section 5](#). The actions incorporate relevant recommendations from J. Pedler and W. Matheson (1993) and Philpott (2004), as well as the roadside vegetation survey undertaken by EBS (EBS 2023).

Table 8. Roadside Vegetation Management Action Plan for the Council.

Activity	Action statement	Priority
General		
Staff training	<p>Staff will be adequately trained in aspects relevant to their role. Some examples include.</p> <p><u>Open Space and Environment staff</u></p> <ul style="list-style-type: none"> • Appropriate certification in Conservation and Ecosystem Management or Horticulture. • Weed identification and control. • Council's requirements under the <i>Native Vegetation Act 1991</i> and <i>Landscape South Australia Act 2019</i>. <p><u>Civil Construction and Maintenance Staff</u></p> <ul style="list-style-type: none"> • Ongoing training regarding weed dispersal and hygiene. • Weed identification and reporting. • Identifying RMS sites and native vegetation. 	Ongoing
Maintenance of RMS	Maintenance duties will be undertaken to maintain or increase vegetation condition scores throughout all RMS locations. This may include revegetation, weed control, additional surveys and monitoring. Weeds of declared status or WoNS will be priorities.	Ongoing
Consult local groups	Council will consult with relevant local community groups as necessary to promote involvement and awareness.	Medium
Tree Management Policy	A Tree Management Policy will be developed within the next 18 months.	High
Job Environmental Analysis Checklist	Develop a Job Environmental Analysis Checklist (JEA) to be utilised for roadworks that pose a high risk to vegetation.	High

Activity	Action statement	Priority
Roadside Marker System – Ecological Survey	Undertake an ecological survey for all RMS sites.	Low
Additional Surveys	Survey roadside vegetation of significance not captured within the 2023 survey.	Medium
Specific to management category		
New Roadworks	Maintain a precise and co-ordinated register around the construction of any new roads/works that may impact remnant vegetation, to enable adequate time for any clearance approval requirements by the NVC. Staff are to maintain internal communication, particularly plant operators, to raise potential issues before and during works.	Ongoing
Pest Plant and Animal Control	Collaborate with NYLB to develop a weed control strategy, targeting declared and WoNS and other invasive species (Appendix 4) in the areas of highest conservation significance first.	Ongoing
Roadside Vegetation Maintenance	Council will provide the following services; <ul style="list-style-type: none"> • Roadside vegetation pruning program to provide a clear, safe carriageway and intersection safe sight distances. • Weed control program targeting all weed species of concern. • Revegetation where required. • Target areas of high conservation significance. 	Ongoing
Public Safety	Complete Clearance proposal form under <u>Public Safety Framework of Regulation 11(23)</u> (refer to Appendix 2 of NVC Guidelines). Provide photographs of any works to NVC.	Ongoing
Clearance for Fencelines	Develop education and management guidelines for the clearance of fencelines adjacent areas of remnant vegetation.	Low
Clearance for Access to Adjoining Land	Work with landholders to encourage consultation with Council prior to clearance so suitable areas with low ecological significance are identified for clearing where required.	Low
Fire Management	In conjunction with the Council Fire Prevention Officer implement an approved Bushfire Management Strategy (BMS), in line with the NYLB BMAP. Liaise with CFS, Council Fire Prevention Officer and landholders adjoining Council roadside reserves to develop and implement strategies to reduce areas of high fuel loads that have been identified within the BMS.	Ongoing

Activity	Action statement	Priority
	<p>Ensure Management category A-B sites are identified in the BMS and techniques are appropriate to protect these areas.</p> <p>Develop a priority list of strategic fuel breaks and roadways for broad scale fire prevention purposes, and maintenance schedule. Any bushfire protection works (e.g. slashing) along roadsides to follow internal risk assessment process.</p>	
Installation and Maintenance of Services	Ensure contracts issued to third parties to be working in/near roadsides, clearly state the relevant Council and NVC policies/Guidelines they need to work within.	Medium
Grazing	Applications for grazing to be assessed as required.	Ongoing
Cultivation and Cropping	Develop education and management guidelines/info for the spraying of roadsides for agricultural purposes adjacent areas of remnant vegetation.	Medium
Removal of Plant Material	Review Council issued permit for the collection of plant material.	Medium
Restoration of Roadside Vegetation	Council will continue to restore vegetation on an as needed basis. Council will endeavour to utilise locally sourced seed for revegetation projects	Ongoing

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21 APPENDICES

21.1 Appendix 1. Council Roadside Marker Scheme across the Adelaide Plains Council.

Roadside Marker Site	Road	Suburb
001	T junction Hamley Bridge Road (Rd) at Edward Rd	Barabba
002	Fridge Rd at Brady Rd	Barabba
003	Fridge Rd	Barabba
004	Pinkerton Rd	Pinkerton Plains
005	March and Davies Rd Intersection	Barabba
006	Wilson Rd	Barabba
007	In a paddock off Brady Rd	Barabba
008	Tank Rd at Murphy Rd and Fridge Rd at Murphy	Barabba
009	Woolsheds Rd	Pinkerton Plains
010	Boundary Rd	Reeves Plains
011	Gawler Rd at Aunger North Rd	Reeves Plains
012	Kenner Rd at Hall Rd (T-intersection)	Korunye
013	Conroy Rd and Humphrey Rd	Reeves Plains
014	Hall Rd	Korunye
015	Sandpit Rd	Reeves Plains
016	Richter Rd	Reeves Plains
017	Verner Rd	Redbanks
018	Fischer Rd	Reeves Plains
019	Lynch Rd	Redbanks
020	Helps Rd	Redbanks
021	Hancock Rd	Redbanks
022	Sharpe Rd at Pederick Rd	Lewiston
23	Sharpe Rd at McPharlin Rd	Lewiston
024	Oliver Rd	Reeves Plains
025	Oliver Rd	Reeves Plains
026	Boundary Rd	Reeves Plains
027	Boundary Rd	Lewiston
028	Cawrse Rd at Curnow Rd	Mallala
029	Limerock Rd	Mallala
030	Frost Rd	Mallala
031	Franks Rd	Mallala
032	Ross Rd	Mallala
033	Tank Rd	Barabba
034	Fidge Rd	Barabba
035	Hall Rd	Mallala
036	Earl Rd	Mallala
037	Hall Rd	Mallala

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Roadside Marker Site	Road	Suburb
038	Ross Rd, Hall Rd and Calomba Rd	Mallala
039	Hallion Rd at Hall Rd	Grace Plains
040	Tiller Rd	Grace Plains
041	Tiller Rd at Franks Rd	Grace Plains
042	Tiller Rd	Grace Plains
043	Young Rd	Calomba
044	Hallion Rd	Calomba
045	Hallion Rd	Grace Plains
046	Powerline Rd	Grace Plains
047	Calomba Rd	Calomba
048	Daniel Rd	Calomba
049	Turner Rd and Old Dublin Rd	Mallala
050	Johnsons Rd	Calomba
051	Pritchard Rd	Windsor
052	Carter Rd	Windsor
053	Avon Rd	Windsor
054	Carslake Rd	Dublin
055	Cawrse Rd	Mallala
056	Limerock Rd	Dublin
057	Shannon Rd	Dublin/lower light
058	Shannon Rd	Dublin
059	Shannon Rd	Calomba
060	Jenkin Rd	Calomba
061	Long Plains Rd	Calomba/Windsor
062	Long Plains Rd	Calomba/Long Plains
063	Parker Rd	Calomba/Long Plains
064	Lawrie Rd	Calomba
065	Lyons Rd	Long Plains
066	Wild Horse Plains Rd	Long Plains
067	Ridley Rd	Long Plains
068	Windsor Rd and Long plains Rd	Calomba/Windsor
069	Port Wakefield Hwy (RHS)	Dublin
070	Port Wakefield Hwy (RHS)	Dublin
071	Seventh St, Dublin	Dublin
072	Port Wakefield Hwy (RHS)	Windsor
073	Port Wakefield Hwy (LHS)	Windsor
074	Bakers Rd	Windsor/long plains
075	Sandy Brae Rd	Long Plains/Wild Horse Plains
076	Wild Horse Plains Rd	Long Plains
077	Slant Rd	Wild Horse Plains
078	Webb Beach	Webb Beach

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Roadside Marker Site	Road	Suburb
079	The Esplanade (Thompson Beach)	Parham
080	Tickera Rd	Parham
081	Bubner Rd at Harris Rd	Dublin
082	Thompson Rd at	Dublin
083	Shingleback Beach Rd	Dublin
084	Port Prime Rd	Lower Light
085	North Tet and Beach Tet	Lower Light
086	Thompsons Beach Rd	Lower Light
087	The Esplanade (Thompson Beach)	Thompson Beach
088	Off Recreation Dr	Port Gawler
089		
090	Middle Beach	Middle Beach
091	Port Gawler Rd at Applebee Rd	Port Gawler
092	Middle Beach Rd at Smith Rd	Middle Beach
093	Off Light Beach Rd (In the dunes)	Lower Light
094	Roberts Rd	
095	Day Rd	Reeves Plains
096	Redbanks	
097	Hamley Bridge Rd	Barraba
098	Collins Rd	Barraba/ Grace Plains
099	Port Wakefield Hwy (RHS)	Windsor
100	Lowey Rd	Windsor
101	Port Wakefield Hwy (RHS)	Wild Horse Plains
102	Light River	Barraba
103	Jenkins Water Reserve	

21.2 Appendix 2. Roadside Vegetation quality categories.

Vegetation significance categories	Vegetation description
Type A	<ul style="list-style-type: none"> • vegetation is in excellent condition – i.e. very little or no sign of alien vegetation in the understorey, close resemblance to probable pre-European condition, or • vegetation containing a species or communities listed under the National Parks and Wildlife Act 1972, or Environment Protection and Biodiversity Conservation Act 1999, or • vegetation in an Interim Biogeographical Regionalisation of Australia (IBRA) association with vegetation cover of 5 per cent or less • roadside vegetation is less than 5m in width in total (including both sides of the road).
Type B	<ul style="list-style-type: none"> • vegetation is in good condition – i.e. a high proportion of native species and native cover in the understorey, reasonable representation of probable pre-European vegetation, or • vegetation within an area delineated by roadside marker scheme, or • vegetation in an IBRA association with vegetation cover of 10 per cent or less but higher than 5 per cent • roadside vegetation is less than 10m in width in total (including both sides of the road).
Type C	<ul style="list-style-type: none"> • vegetation is in moderate condition – i.e. substantial invasion of aliens, but native understorey persists, for example, there may be a low proportion of native species and high native cover or a high proportion of native species and low native cover.
Type D	<ul style="list-style-type: none"> • vegetation is in poor condition – i.e. the understorey consists predominantly of alien species, although a small number of natives persist.
Type E	<ul style="list-style-type: none"> • vegetation is in very poor condition – i.e. the understorey consists only of alien species.

Source: Native Vegetation Council (NVC) (2020b). Guidelines for the Management of Roadside Native Vegetation and Regrowth Vegetation. *Under Native Vegetation Regulation 11(23)*.

21.3 Appendix 3. Conservation significant plants recorded during the roadside vegetation survey.

Conservation Status:

AUS = Australia (as listed under the EPBC Act); SA = South Australia (as listed under the NPW Act)

R = Rare.

In total 151 native flora species were recorded during the survey. Two of these species have a State Rare rating. None of the identified flora species have a national rating.

Species Name	Common Name	AUS	SA
<i>Acacia acinacea</i>	Wreath Wattle		
<i>Acacia argyrophylla</i>	Silver Mulga-bush		
<i>Acacia brachybotrya</i>	Grey Mulga-bush		
<i>Acacia calamifolia</i>	Wallowa		
<i>Acacia cyclops</i>	Western Coastal Wattle		
<i>Acacia hakeoides</i>	Hakea Wattle		
<i>Acacia iteaphylla</i>	Flinders Ranges Wattle		R
<i>Acacia ligulata</i>	Umbrella Bush		
<i>Acacia notabilis</i>	Notable Wattle		
<i>Acacia nyssophylla</i>	Spine Bush		
<i>Acacia oswaldii</i>	Umbrella Wattle		
<i>Acacia pycnantha</i>	Golden Wattle		
<i>Acacia salicina</i>	Willow Wattle		
<i>Acacia sclerophylla</i> var. <i>sclerophylla</i>	Hard-leaf Wattle		
<i>Acacia</i> sp.	Wattle		
<i>Acacia wilhelmiana</i>	Dwarf Nealie		
<i>Adriana quadripartita</i>	Coast Bitter-bush		
<i>Alectryon oleifolius</i> ssp. <i>canescens</i>	Bullock Bush		
<i>Allocasuarina verticillata</i>	Drooping Sheoak		
<i>Alyxia buxifolia</i>	Sea Box		
<i>Amyema melaleucae</i>	Tea-tree Mistletoe		
<i>Amyema</i> sp.	Mistletoe		
<i>Arthropodium fimbriatum</i>	Nodding Vanilla-lily		
<i>Atriplex cinerea</i>	Coast Saltbush		
<i>Atriplex nummularia</i> ssp.	Old-man Saltbush		
<i>Atriplex paludosa</i> ssp.	Marsh Saltbush		
<i>Atriplex paludosa</i> ssp. <i>cordata</i>	Marsh Saltbush		
<i>Atriplex semibaccata</i>	Berry Saltbush		
<i>Atriplex</i> sp.	Saltbush		
<i>Atriplex stipitata</i>	Bitter Saltbush		
<i>Austrostipa elegantissima</i>	Feather Spear-grass		
<i>Austrostipa nodosa</i>	Tall Spear-grass		
<i>Austrostipa platychaeta</i>	Flat-awn Spear-grass		
<i>Austrostipa scabra</i> ssp.	Rough Spear-grass		
<i>Austrostipa</i> sp.	Spear-grass		
<i>Beyeria lechenaultii</i>	Pale Turpentine Bush		
<i>Bursaria spinosa</i> ssp.	Bursaria		
<i>Bursaria spinosa</i> ssp. <i>spinosa</i>	Sweet Bursaria		
<i>Callistemon</i> sp.	Bottlebrush		
<i>Callitris gracilis</i>	Southern Cypress Pine		
<i>Callitris</i> sp.	Native Pine		
<i>Callitris verrucosa</i>	Scrub Cypress Pine		
<i>Carpobrotus rossii</i>	Native Pigface		
<i>Carpobrotus</i> sp.	Pigface		
<i>Cassytha</i> sp.	Dodder-laurel		

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Species Name	Common Name	AUS	SA
<i>Chloris truncata</i>	Windmill Grass		
<i>Clematis microphylla</i>	Old Man's Beard		
<i>Cyperus gymnocaulos</i>	Spiny Flat-sedge		
<i>Dampiera rosmarinifolia</i>	Rosemary Dampiera		
<i>Dianella brevicaulis</i>	Short-stem Flax-lily		
<i>Dianella revoluta</i> var.			
<i>Dianella revoluta</i> var. <i>revoluta</i>	Black-anther Flax-lily		
<i>Dianella</i> sp.	Flax-lily		
<i>Disphyma crassifolium</i> ssp. <i>clavellatum</i>	Round-leaf Pigface		
<i>Distichlis distichophylla</i>	Emu-grass		
<i>Dodonaea</i> sp.	Hop-bush		
<i>Dodonaea viscosa</i> ssp.	Sticky Hop-bush		
<i>Duma florulenta</i>	Lignum		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	Ruby Saltbush		
<i>Enneapogon avenaceus</i>	Common Bottle-washers		
<i>Enneapogon nigricans</i>	Black-head Grass		
<i>Enneapogon</i> sp.	Bottle-washers/Nineawn		
<i>Eremophila longifolia</i>	Weeping Emubush		
<i>Eucalyptus brachycalyx</i>	Gilja		
<i>Eucalyptus camaldulensis</i> ssp.	River Red Gum		
<i>Eucalyptus dumosa</i>	White Mallee		
<i>Eucalyptus gracilis</i>	Yorrell		
<i>Eucalyptus incrassata</i>	Ridge-fruited Mallee		
<i>Eucalyptus largiflorens</i>	River Box		
<i>Eucalyptus odorata</i>	Peppermint Box		
<i>Eucalyptus oleosa</i> ssp. <i>ampliata</i>			
<i>Eucalyptus phenax</i> ssp.			
<i>Eucalyptus phenax</i> ssp. <i>phenax</i>	White Mallee		
<i>Eucalyptus porosa</i>	Mallee Box		
<i>Eucalyptus socialis</i> ssp.	Beaked Red Mallee		
<i>Eucalyptus socialis</i> ssp. <i>socialis</i>	Beaked Red Mallee		
<i>Eucalyptus</i> sp.			
<i>Euphorbia dallachyana</i>	Caustic Weed		
<i>Euphorbia drummondii</i> s.str.			
<i>Exocarpos aphyllus</i>	Leafless Cherry		
<i>Frankenia pauciflora</i> var.	Southern Sea-heath		
<i>Geijera linearifolia</i>	Sheep Bush		
<i>Grevillea huegelii</i>	Comb Grevillea		
<i>Hibbertia</i> sp.	Guinea-flower		
<i>Juncus kraussii</i>	Sea Rush		
<i>Kunzea pomifera</i>	Muntries		
<i>Lawrencia squamata</i>	Thorny Lawrencia		
<i>Lomandra effusa</i>	Scented Mat-rush		
<i>Lomandra leucocephala</i> ssp. <i>robusta</i>	Wolly Mat-rush		
<i>Lomandra multiflora</i> ssp.	Many-flower Mat-rush		
<i>Maireana aphylla</i>	Cotton-bush		
<i>Maireana brevifolia</i>	Short-leaf Bluebush		
<i>Maireana enchylaenoides</i>	Wingless Fissure-plant		
<i>Maireana eriantha</i>	Woolly Bluebush		
<i>Maireana erioclada</i>	Rosy Bluebush		
<i>Maireana oppositifolia</i>	Salt Bluebush		
<i>Maireana</i> sp.	Bluebush/Fissure-plant		
<i>Melaleuca acuminata</i> ssp. <i>acuminata</i>	Mallee Honey-myrtle		
<i>Melaleuca lanceolata</i>	Dryland Tea-tree		
<i>Muehlenbeckia adpressa</i>	Climbing Lignum		
<i>Myoporum insulare</i>	Common Boobialla		
<i>Myoporum parviflorum</i>	Creeping Boobialla		R
<i>Myoporum platycarpum</i> ssp.	False Sandalwood		

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Species Name	Common Name	AUS	SA
<i>Nitraria billardierei</i>	Nitre-bush		
<i>Olearia axillaris</i>	Coast Daisy-bush		
<i>Olearia teretifolia</i>	Cypress Daisy-bush		
<i>Phragmites australis</i>	Common Reed		
<i>Pittosporum angustifolium</i>	Native Apricot		
<i>Rhagodia candolleana</i> ssp.	Sea-berry Saltbush		
<i>Rhagodia parabolica</i>	Mealy Saltbush		
<i>Rhagodia spinescens</i>	Spiny Saltbush		
<i>Roepera apiculata</i>	Pointed Twinleaf		
<i>Roepera aurantiaca</i> ssp. <i>aurantiaca</i>	Shrubby Twinleaf		
<i>Rytidosperma caespitosum</i>	Common Wallaby-grass		
<i>Rytidosperma</i> sp.	Wallaby-grass		
<i>Salicornia blackiana</i>	Thick-head Samphire		
<i>Salicornia quinqueflora</i> ssp. <i>quinqueflora</i>	Beaded Samphire		
<i>Salsola australis</i>	Buckbush		
<i>Samolus repens</i>	Creeping Brookweed		
<i>Santalum acuminatum</i>	Quandong		
<i>Sarcozona</i> sp.			
<i>Scaevola spinescens</i>	Spiny Fanflower		
<i>Sclerolaena diacantha</i>	Grey Bindyi		
<i>Sclerolaena diacantha/uniflora</i>	Grey Bindyi		
<i>Sclerolaena</i> sp.	Bindyi		
<i>Senecio</i> sp.			
<i>Senna artemisioides</i> ssp.	Desert Senna		
<i>Senna artemisioides</i> ssp. <i>petiolaris</i>			
<i>Senna artemisioides</i> ssp. <i>petiolaris</i> x ssp. <i>sturtii</i>	Desert Senna		
<i>Senna artemisioides</i> ssp. <i>X coriacea</i>	Broad-leaf Desert Senna		
<i>Senna</i> sp.	Senna		
<i>Solanum esuriale</i>	Quena		
<i>Spinifex hirsutus</i>	Rolling Spinifex		
<i>Suaeda australis</i>	Austral Seablite		
<i>Tecticornia arbuscula</i>	Shrubby Samphire		
<i>Tecticornia indica</i> ssp.	Brown-head Samphire		
<i>Tecticornia</i> sp.	Samphire		
<i>Templetonia retusa</i>	Cockies Tongue		
<i>Tetragonia implexicoma</i>	Bower Spinach		
<i>Tetragonia</i> sp.	False Spinach		
<i>Teucrium racemosum</i>	Grey Germander		
<i>Threlkeldia diffusa</i>	Coast Bonefruit		
<i>Threlkeldia</i> sp.	Bonefruit		
<i>Triodia scariosa</i>	Spinifex		
<i>Vittadinia blackii</i>	Narrow-leaf New Holland Daisy		
<i>Vittadinia condyloides</i>	Club-hair New Holland Daisy		
<i>Vittadinia cuneata</i> var.	Fuzzy New Holland Daisy		
<i>Vittadinia gracilis</i>	Woolly New Holland Daisy		
<i>Vittadinia</i> sp.	New Holland Daisy		
<i>Zygophyllum aurantiacum/eremaeum</i>	Shrubby Twinleaf		
<i>Zygophyllum</i> sp.			

21.4 Appendix 4. Introduced plants recorded during the roadside vegetation survey.

A total of 106 introduced plants were recorded during the field survey. Of these 18 weed species are listed as Declared under the LSA Act, with eight also listed as a WoNS. A further 37 weed species are introduced.

Species Name	Common Name	Declared++	WoNS++	Introduced species
<i>Acacia saligna</i>	Golden Wreath Wattle			Yes
<i>Agave</i> sp.				
<i>Aira</i> sp.	Hair-grass			
<i>Aizoon pubescens</i>	Coastal Galenia			Yes
<i>Aloe</i> sp.	Aloe			
<i>Aptenia cordifolia</i>	Heart-leaf Ice Plant			
<i>Arctotheca calendula</i>	Cape Weed			Yes
<i>Arundo donax</i>	Giant Reed	Yes		
<i>Asparagus asparagoides</i>	Bridal Creeper	Yes	Yes	
<i>Asphodelus fistulosus</i>	Onion Weed			Yes
<i>Asteriscus spinosus</i>	Golden Pallensis			Yes
<i>Avena barbata</i>	Bearded Oat			Yes
<i>Brassica rapa</i> ssp. <i>rapa</i>	Turnip Rape			
<i>Brassica</i> sp.				Yes
<i>Bromus diandrus</i>	Great Brome			
<i>Cactaceae</i> sp.				
<i>Cakile maritima</i> ssp. <i>maritima</i>	Two-horned Sea Rocket			
<i>Cakile</i> sp.	Sea Rocket			
<i>Carrichtera annua</i>	Ward's Weed			Yes
<i>Carthamus lanatus</i>	Saffron Thistle			Yes
<i>Carthamus</i> sp.				
<i>Casuarina glauca</i>	Grey Bul oak	Yes		
<i>Cenchrus clandestinus</i>	Kikuyu			Yes
* <i>Centaurea calcitrapa</i>	Star Thistle			Yes
<i>Centaurea solstitialis</i>	St Barnaby's Thistle			
<i>Conyza bonariensis</i>	Flax-leaf Fleabane			Yes
<i>Cucumis myriocarpus</i> ssp. <i>myriocarpus</i>	Paddy Melon			
<i>Cynara cardunculus</i> ssp. <i>flavescens</i>	Artichoke Thistle	Yes		
<i>Cynodon dactylon</i> var.	Couch			Yes
<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch			Yes
<i>Dactylis glomerata</i>	Cocksfoot			Yes
<i>Echium plantagineum</i>	Salvation Jane	Yes		
<i>Ehrharta calycina</i>	Perennial Veldt Grass			Yes
<i>Ehrharta longiflora</i>	Annual Veldt Grass			Yes
<i>Ehrharta</i> sp.	Veldt Grass			
<i>Eucalyptus</i> sp. (WA variety)				
<i>Euphorbia</i> sp.				
<i>Euphorbia terracina</i>	False Caper			
<i>Ficus carica</i>	Edible Fig			
<i>Foeniculum vulgare</i>	Fennel			Yes
<i>Fraxinus angustifolia</i> ssp.	Narrow-leaved Ash	Yes		
<i>Fraxinus</i> sp.	Ash			
<i>Gazania linearis</i>	Gazania			
<i>Gazania</i> sp.	Gazania	Yes		
<i>Gomphocarpus cancellatus</i>	Broad-leaf Cotton-bush			

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Species Name	Common Name	Declared++	WoNS++	Introduced species
<i>Heliotropium europaeum</i>	Common Heliotrope			Yes
<i>Heliotropium</i> sp.	Heliotrope			
<i>Helminthotheca echioides</i>	Ox-tongue			
<i>Hordeum distichon</i>				
<i>Hordeum marinum</i>	Sea Barley-grass			Yes
<i>Hordeum vulgare</i>	Barley			Yes
<i>Lactuca serriola</i>	Prickly Lettuce			Yes
<i>Lactuca serriola</i> f. <i>serriola</i>	Prickly Lettuce			Yes
<i>Lagunaria patersonii</i>	Pyramid Tree			
<i>Lagurus ovatus</i>	Hare's Tail Grass			
<i>Limonium companyonis</i>	Sea-lavender			Yes
<i>Limonium</i> sp.	Sea-lavender			
<i>Lolium perenne</i>	Perennial Rye-grass			Yes
<i>Lycium ferocissimum</i>	African Boxthorn	Yes	Yes	
<i>Lythrum hyssopifolia</i>	Lesser Loosestrife			
<i>Malva</i> sp.	Mallow			
<i>Marrubium vulgare</i>	Horehound	Yes		
<i>Matthiola</i> sp.	Stock			
<i>Melia azedarach</i>				
<i>Mesembryanthemum crystallinum</i>	Common Iceplant			Yes
<i>Mesembryanthemum</i> sp.	Iceplant			Yes
<i>Olea europaea</i> ssp.	Olive	Yes		
<i>Oncosiphon suffruticosum</i>	Calomba Daisy	Yes		
<i>Onopordum acanthium</i>	Scotch Thistle			
<i>Opuntia puberula</i>	Prickly Pear	Yes	Yes	
<i>Opuntia</i> spp.	Prickly Pear	Yes	Yes	
<i>Opuntia stricta</i>	Erect Prickly Pear	Yes	Yes	
<i>Palmae</i> sp.				
<i>Paspalum dilatatum</i>	Paspalum			Yes
<i>Paspalum</i> sp.				
<i>Phalaris aquatica</i>	Phalaris			Yes
<i>Pinus halepensis</i>	Aleppo Pine	Yes		
<i>Pinus</i> sp.	Pine			
<i>Piptatherum miliaceum</i>	Rice Millet			Yes
* <i>Pistacia vera</i>	Pistachio			
<i>Plantago coronopus</i> ssp.	Bucks-horn Plantain			
<i>Plantago lanceolata</i> var.	Ribwort			Yes
<i>Portulacaria afra</i>	Dwarf Jade Plant			
<i>Prunus</i> sp.	Plum			
<i>Punica granatum</i>	Pomegranate			
<i>Reichardia tingitana</i>	False Sowthistle			
<i>Reseda alba</i>	White Mignonette			
<i>Reseda luteola</i>	Wild Mignonette			
<i>Reseda</i> sp.	Mignonette			
<i>Ricinus communis</i>	Castor Oil Plant			Yes
<i>Rumex</i> sp.	Dock			
<i>Salvia verbenaca</i> var.	Wild Sage			Yes
<i>Scabiosa atropurpurea</i>	Pincushion			Yes
<i>Schinus molle</i>	Pepper-tree			Yes
<i>Sisymbrium officinale</i>	Hedge Mustard			
<i>Sisymbrium</i> sp.	Wild Mustard			
<i>Solanum elaeagnifolium</i>	Silver-leaf Nightshade	Yes	Yes	
<i>Solanum nigrum</i>	Black Nightshade	Yes	Yes	
<i>Sonchus oleraceus</i>	Common Sow-thistle			Yes

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Species Name	Common Name	Declared++	WoNS++	Introduced species
<i>Sonchus</i> sp.	Sow-thistle			
<i>Tamarix aphylla</i>	Athel Pine	Yes	Yes	
<i>Trifolium arvense</i> var. <i>arvense</i>	Hare's-foot Clover			
<i>Trifolium</i> sp.	Clover			
<i>Vicia sativa</i> ssp. <i>sativa</i>	Common Vetch			Yes
<i>Vulpia</i> sp.	Fescue			
<i>Yucca gloriosa</i>	Yucca			
TOTALS		18	8	37

++ under the LSA Act.

*species highlighted by Council as an ongoing issue along roadside corridors.

WoNS= Weeds of National Significance (listed under the LSA Act)

Declared = (listed under LSA Act)

21.5 Appendix 5. Complete list of RMS Sites, condition, benchmark community and vegetation association.

RMS	VCS	Benchmark community	Vegetation association
001	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus socialis</i> and <i>E. gracilis</i> Mallee over <i>Melaleuca lanceolata</i> and <i>Acacia ligulata</i> .
002	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus odorata</i> Mallee over <i>Acacia ligulata</i> and +/- <i>Myoporum platycarpum</i>
003	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus odorata</i> Mallee over <i>Acacia notabilis</i> and <i>Senna artemisioides</i> ssp. <i>X coriacea</i> .
004	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Melaleuca brevifolia</i> and <i>Nitraria billardierei</i> Shrubland
005	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> Open Mallee over <i>Acacia ligulata</i> and <i>A. notabilis</i>
006	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> and <i>E. odorata</i> over <i>Acacia notabilis</i> and <i>Senna</i> spp.
007	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus socialis</i> Mallee over <i>Senna artemisioides</i> ssp. <i>petiolaris</i>
008	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus socialis</i> Mallee over <i>Maireana brevifolia</i> and <i>Senna artemisioides</i>
009	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Senna artemisioides</i> ssp. <i>X coriacea</i> with <i>Acacia</i> spp. Shrubland
010	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus odorata</i> Mallee over <i>Senna</i> spp. and <i>Acacia oswaldii</i>
011	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> +/- <i>E. largiflorens</i> Mallee over <i>Acacia</i> spp. and <i>Rhagodia parabolica</i>
012	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus gracilis</i> Open Mallee over <i>Senna</i> spp.
013	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus socialis</i> & <i>E. odorata</i> over <i>Senna</i> spp.
014	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus socialis</i> , <i>E. odorata</i> , <i>E. gracilis</i> Mallee over <i>Senna</i> spp.
015a	Medium	NA 4 Low Woodlands & Open Mallee with Dense to Mid dense Shrub & / or Spinifex and sedge Understorey	<i>Eucalyptus incrassata</i> over <i>Rhagodia parabolica</i> +/- <i>Triodia scariosa</i>
015b	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> and <i>Eucalyptus brachycalyx</i> Mallee over <i>Senna</i> spp.
016	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> Mallee over <i>Senna artemisioides</i> and <i>Acacia notabilis</i>
017	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus socialis</i> +/- Mixed Mallee over <i>Senna</i> spp.
018	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus socialis</i> Mallee over <i>Senna artemisioides</i> ssp.
019	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> +/- Mixed <i>Eucalyptus</i> spp. Mallee over <i>Senna</i> spp.
020	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus phenax</i> +/- Mixed <i>Eucalyptus</i> spp. Mallee over <i>Senna</i> spp.
021	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus socialis</i> +/- Mixed <i>Eucalyptus</i> spp. Mallee over <i>Senna</i> spp.
022	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus odorata</i> Mallee over <i>Callitris gracilis</i>
023	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> and <i>E. oleosa</i> Mixed Mallee over <i>Callitris gracilis</i>
024	Medium	NA 4 – Low Woodlands & Open Mallee with dense to mid-dense shrub &/or Spinifex and sedge understorey	<i>Eucalyptus socialis</i> Mallee over <i>Senna artemisioides</i> ssp.

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025	Medium	NA 4 – Low Woodlands & Open Mallee with dense to mid-dense shrub &/or Spinifex and sedge understorey	<i>Eucalyptus incrassata</i> mixed Mallee over chenopod shrubs
026	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus odorata</i> and <i>E. incrassata</i> Mallee over <i>Melaleuca acuminata</i> , <i>Acacia oswaldii</i> and <i>Rhagodia parabolica</i>
027	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus porosa</i> and <i>E. socialis</i> Mixed Mallee over <i>Callitris gracilis</i>
028	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Senna artemisioides</i> ssp. <i>X coriacea</i> Shrubland
029	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus odorata</i> +/- <i>E. socialis</i> Mixed Mallee over <i>Nitraria billardierei</i>
030	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus socialis</i> Mallee over <i>Acacia hakeoides</i>
031	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus socialis</i> Mallee over <i>Senna artemisioides</i> ssp. <i>X coriacea</i>
032	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus socialis</i> over <i>Senna artemisioides</i> ssp. <i>X coriacea</i> and <i>Acacia oswaldii</i>
034	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus odorata</i> , <i>E. gracilis</i> Mixed Open Mallee over <i>Acacia ligulata</i> .
035	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus socialis</i> Mallee over <i>Senna</i> spp.
036	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus gracilis</i> Mallee over <i>Senna artemisioides</i> ssp. <i>X coriacea</i>
037	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Acacia ligulata</i> shrubland +/- <i>Eucalyptus socialis</i>
038	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus socialis</i> and <i>E. porosa</i> Mallee over <i>Senna</i> spp.
039	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus porosa</i> Mallee over <i>Senna</i> spp.
040	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus leptophylla</i> Mallee over <i>Acacia</i> spp. and <i>Senna artemisioides</i> ssp. <i>petiolaris</i>
041	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus leptophylla</i> with <i>E. porosa</i> Mallee over <i>Acacia ligulata</i> and <i>A. notabilis</i>
042	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus leptophylla</i> over <i>Senna artemisioides</i> ssp. <i>petiolaris</i> and chenopod shrubs
043	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus porosa</i> Mallee over <i>Acacia oswaldii</i> and <i>Pittosporum angustifolium</i>
044	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus porosa</i> Mallee over <i>Acacia</i> spp.
045	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus porosa</i> Mallee over <i>Acacia hakeoides</i>
046	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus porosa</i> Mallee over <i>Senna artemisioides</i> ssp. <i>petiolaris</i>
047	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus porosa</i> Mallee over <i>Pittosporum angustifolium</i> and <i>Eremophila longifolia</i>
048	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus brachycalyx</i> Mallee over <i>Senna artemisioides</i> ssp. <i>X coriacea</i> and <i>Pittosporum angustifolium</i>
049	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus leptophylla</i> and <i>E. socialis</i> and <i>E. odorata</i> Mallee over <i>Pittosporum angustifolium</i> .
050	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus socialis</i> Mallee over <i>Senna</i> spp.
051	Medium to High	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus porosa</i> Mallee over <i>Senna artemisioides</i>
052	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understorey	<i>Eucalyptus porosa</i> Mallee over <i>Senna artemisioides</i> ssp. and <i>Geijera linearifolia</i>

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053	Medium to High	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> , <i>E. odorata</i> and <i>E. socialis</i> Mixed Mallee over <i>Senna</i> spp. and <i>Acacia</i> spp.
054	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus</i> spp. Mixed Mallee over chenopod shrubs
055	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus</i> spp. Mixed Mallee over <i>Pittosporum angustifolium</i> and Chenopod shrubs.
056	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus oleosa</i> and <i>E. socialis</i> Mixed Mallee over <i>Atriplex nummularia</i> ssp.
057	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus brachycalyx</i> and <i>E. dumosa</i> Mixed Mallee over <i>Senna artemisioides</i> ssp. <i>petiolaris</i> with <i>Pittosporum angustifolium</i>
058	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus oleosa</i> ssp. <i>ampliata</i> and <i>E. porosa</i> Mixed Mallee over chenopod shrubs
059	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus socialis</i> and <i>E. gracilis</i> Mixed Mallee over <i>Acacia oswaldii</i>
060	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> and <i>E. socialis</i> Mixed Mallee over <i>Senna</i> spp. and <i>Acacia oswaldii</i>
061	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus socialis</i> and <i>E. gracilis</i> Mixed Mallee over <i>Acacia</i> spp.
063	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> Mixed Mallee over <i>Acacia</i> spp. Shrubland
064	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus gracilis</i> and <i>E. porosa</i> Mixed Mallee over <i>Acacia</i> spp. and <i>Senna</i> spp.
066	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> , <i>E. gracilis</i> and <i>E. socialis</i> Mixed Mallee over <i>Acacia oswaldii</i>
067	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus odorata</i> over <i>Alectryon oleifolius</i> ssp. <i>canescens</i> and <i>Senna artemisioides</i> ssp. <i>petiolaris</i>
068	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus gracilis</i> Mallee over <i>Acacia oswaldii</i>
069	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus oleosa</i> ssp. <i>ampliata</i> Mallee over <i>Pittosporum angustifolium</i>
070	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus oleosa</i> ssp. <i>ampliata</i> and <i>E. brachycalyx</i> Mixed Mallee over <i>Pittosporum angustifolium</i>
071	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus gracilis</i> and <i>E. dumosa</i> Mixed Mallee over <i>Geijera linearifolia</i> and chenopods shrubs
072	Medium to High	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus</i> spp. Mixed Mallee over <i>Geijera linearifolia</i>
073	Medium to High	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus gracilis</i> and <i>E. dumosa</i> Mallee over <i>Nitraria billardiarei</i> and <i>Geijera linearifolia</i>
074	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus socialis</i> Mallee over chenopod shrubs
075	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus gracilis</i> and <i>E. socialis</i> Mixed Mallee over chenopod shrubs
076	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus gracilis</i> Mixed Mallee over <i>Nitraria billardiarei</i> and chenopod shrubs
077	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus gracilis</i> , <i>E. porosa</i> and <i>E. socialis</i> Mixed Mallee over <i>Acacia</i> spp., chenopod shrubs
078	Low to Medium	NA 9.2 – Low Woodlands on Coastal Dunes and Shell Grit Ridges	<i>Myoporum insulare</i> and <i>Olearia axillaris</i> shrubland
079	Medium to High	NA 9.1 Shrublands and Low Shrublands on Coastal Dunes and Shell-grit Ridges	<i>Alyxia buxifolia</i> and <i>Myoporum insulare</i> Shrubland
080	Medium	NA 9.2 – Low Woodlands on Coastal Dunes and Shell Grit Ridges	<i>Melaleuca lanceolata</i> Low Woodland

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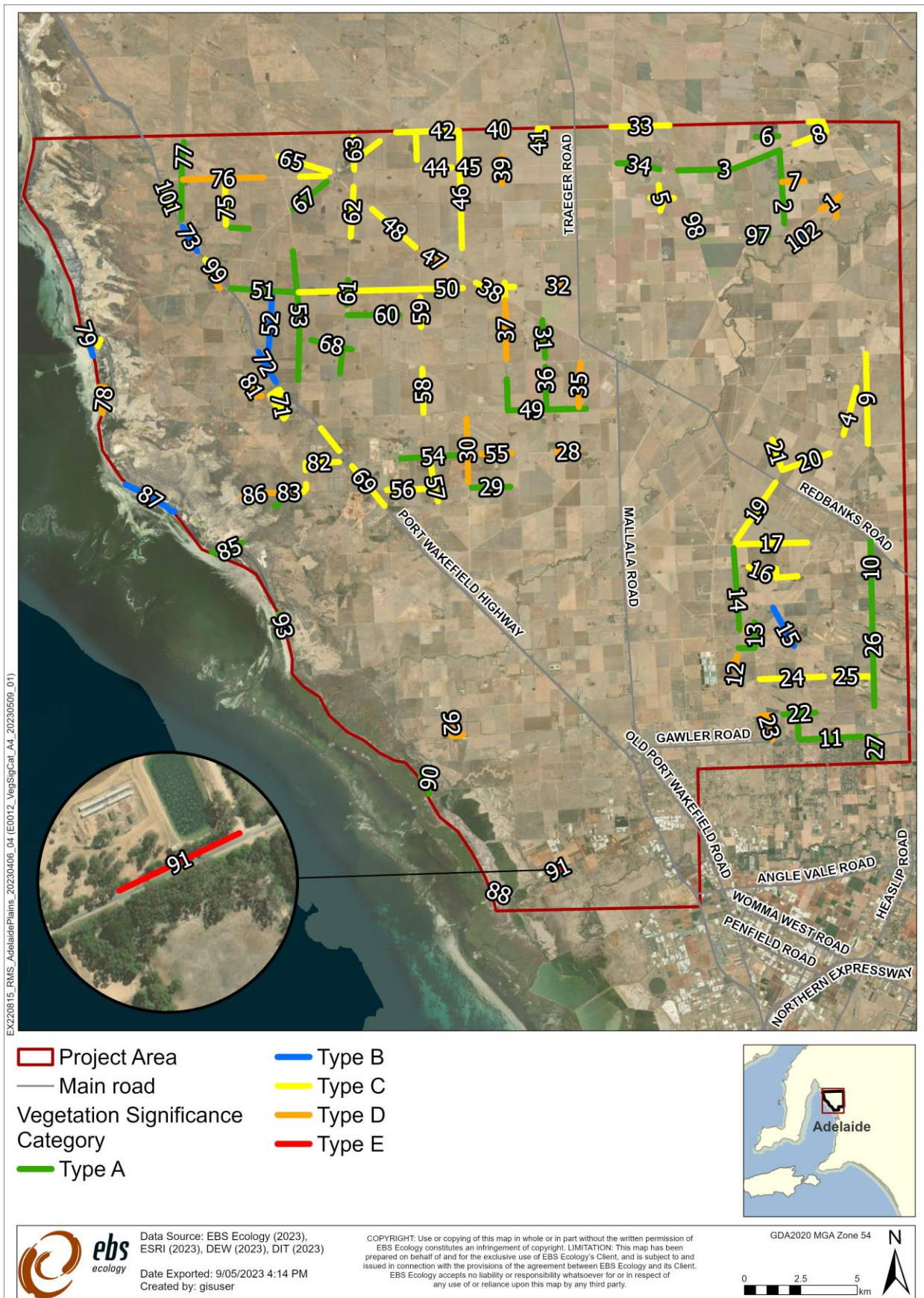
RMS	VCS	Benchmark community	Vegetation association
081	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus gracilis</i> and <i>E. dumosa</i> over <i>Geijera linearifolia</i> and <i>Threlkeldia diffusa</i>
082	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Nitraria billardierei</i> and <i>Melaleuca brevifolia</i> shrubland +/- <i>Eucalyptus</i> spp.
083	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus oleosa</i> and <i>E. gracilis</i> Mixed Open Mallee over <i>Atriplex paludosa</i> and <i>Nitraria billardierei</i>
084	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Acacia</i> spp. and <i>Santalum acuminatum</i> shrubland
085a	High	NA 10.2 – Samphire low shrublands with infrequent inundation/Lower salinity	<i>Salicornia</i> spp. and <i>Tecticornia</i> ssp. Shrubland
085b	Medium	NA 9.1 Shrublands and Low Shrublands on Coastal Dunes and Shell-grit Ridges	<i>Olearia axillaris</i> Shrubland
086a	Medium	NA 10.2 – Samphire low shrublands with infrequent inundation/Lower salinity	<i>Salicornia</i> spp. and <i>Tecticornia</i> ssp. Shrubland
086b	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Senna artemisioides</i> ssp. <i>X coriacea</i> Shrubland
087	Medium to High	NA 9.1 Shrublands and Low Shrublands on Coastal Dunes and Shell-grit Ridges	<i>Myoporum insulare</i> and <i>Alyxia buxifolia</i> Tall shrubland
088	Medium	NA 9.1 Shrublands and Low Shrublands on Coastal Dunes and Shell-grit Ridges	<i>Olearia axillaris</i> shrubland over <i>Nitraria billardierei</i> and <i>Atriplex paludosa</i> ssp.
090	Medium	NA 10.2 – Samphire low shrublands with infrequent inundation/Lower salinity	<i>Salicornia</i> spp. Shrubland
091	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Maireana brevifolia</i> Shrubland over exotic grasses
093a	Medium to High	NA 10.2 – Samphire low shrublands with infrequent inundation/Lower salinity	<i>Sarcornia</i> spp. and <i>Tecticornia</i> spp. Shrubland
093b	Medium	NA 9.2 – Low Woodlands on Coastal Dunes and Shell Grit Ridges	<i>Myoporum insulare</i> and <i>Olearia axillaris</i> Shrubland +/- <i>Tecticornia</i> spp.
095	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus gracilis</i> Open Mallee over <i>Senna</i> spp.
097	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus oleosa</i> Mallee over <i>Eremophila longifolia</i>
098	Low to Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus porosa</i> , <i>E. odorata</i> and <i>E. phenax</i> Mixed Mallee over <i>Acacia ligulata</i> and <i>A. notabilis</i>
099	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus gracilis</i> and <i>E. dumosa</i> Mixed Mallee over <i>Geijera linearifolia</i>
100	Low	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Acacia oswaldii</i> shrubland over chenopod shrubs
101	Medium	NA 5 – Mallee & Woodlands with Open Chenopod and Sclerophyll Shrub understory	<i>Eucalyptus brachycalyx</i> and <i>Eucalyptus gracilis</i> Mallee over <i>Geijera linearifolia</i>
102	Medium	NA 7.1 Riparian Woodlands	<i>Eucalyptus camaldulensis</i> Open Woodland over <i>Phragmites australis</i>

RMS = Road Marker Site, VCS = Vegetation Condition Score.

21.6 Appendix 6. Adelaide Plains Council approval requirements.

Activity	Application Form
Fence Line Clearance	Consult with Council and Native Vegetation Management Unit. Application to Alter a Public Road - Section 221 of the Local Government Act 1999.
Driveway and access clearance	Application to Alter a Public Road - Section 221 of the Local Government Act 1999.
Firewood Collection	Not permitted.
Seed and Plant Material Collection	Council permit to Collect Native Plant Material issued to DEW permit holders.
Revegetation Within a Road Reserve	Application to Alter a Public Road - Section 221 of the Local Government Act 1999.
Fire Management Related Clearance	Consultation required with Council.
Cultivating and Cropping	Generally not permitted, requires consultation with Council
Grazing	Generally not permitted, requires consultation with Council.
Tree Removal or Pruning	Submit customer request to Council via info@apc.sa.gov.au or call Council's Customer Service 8527 0200
Over-dimensional Vehicle Request	National Heavy Vehicle Regulator Portal: https://www.nhvr.gov.au/about-us/nhvr-portal
Weed Control & Slashing	Submit customer request to Council via info@apc.sa.gov.au or call Council's Customer Service 8527 0200.
Other Verge Alterations: <ul style="list-style-type: none"> • Drain installation • Landscaping • Other verge affecting activities 	Application to Alter a Public Road - Section 221 of the Local Government Act 1999.

21.7 Appendix 7. Significant vegetation within the Adelaide Plains Council.



21.8 Appendix 8. Contact details

Body	Description	Contact details	Further information
Native Vegetation Branch (NVB)	The NVB is a work unit within DEW, that provides support to administer the <i>Native Vegetation Act 1991</i> . The NVB can provide advice regarding clearance application and native vegetation management plans.	Address: Native Vegetation Council GPO Box 1047 Adelaide 5001 SA Email: nvc@sa.gov.au	The following forms are available from the <u>Guidelines for the Management of Roadside Native Vegetation and Regrowth Vegetation Under Native Vegetation Regulation 11(23) (NVC 2020b)</u> : <ul style="list-style-type: none"> • Annual Works Clearance Proposal Form under Regulation 11(23) – Verge clearance >1m. • Clearance Proposal Form under Regulation 11(23) - Public Safety Framework.
Native Vegetation Council (NVC)	The NVC is an independent body established by the Native Vegetation Act 1991. The NVC monitors the overall condition of the state's vegetation and makes decisions on a wide range of matters concerning native vegetation in South Australia.	Address: Native Vegetation Council GPO Box 1047 Adelaide 5001 SA Email: nvc@sa.gov.au	
Contry Fire Service (CFS)	The CFS works alongside the <u>SA Metropolitan Fire Service</u> and <u>State Emergency Service</u> , and with local government to help with strategies for fuel reduction and to educate the community about bushfires and fire safety.	Address: Spurling Circuit off Mudla Wirra Road, Wasleys Phone: 08 8522 6088 Fax: 08 8522 6404 Postal: PO Box 1506 Willaston SA 5118 DX: 51803 Email: CFS.Region2@eso.sa.gov.au	The following form is available from SA CFS <u>Guide for managing Native Vegetation to reduce the impact of Bushfire (CFS 2020)</u> : <ul style="list-style-type: none"> • Application to manage native vegetation to reduce the impact of Bushfire Clearance.
Department of Environment and Water (DEW)	DEW works in partnership with a number of boards and committess to help protect and strengthen the states heritage and natural resources. This includes NVC and Landscape Boards etc	Phone: 8204 1910 Address: Ground Floor, 81-95 Waymouth Street Adelaide SA 5000	If a permit is needed under the <i>National Parks and Wildlife Act 1972</i> and can be requested from the Department for Environment and Water Permit Unit on (08) 8463 4841 or online at http://www.environment.sa.gov.au/Do_It_Online/Plant_permits . The Permit Unit can also provide guidance on seed collection methods.
Northern and Yorke Landscape Board (NYLB)	The Northern and Yorke Landscape Board delivers a diverse range of programs and projects for the <u>Northern and Yorke region</u> . We manage the	Yorke & Mid North Regional Office Address: 155 Main North Road Clare 5453 Phone: (08) 8841 3444	Website: https://www.landscape.sa.gov.au/ny/ Native vegetation management: https://www.landscape.sa.gov.au/ny/plants-and-animals/native-plants-and-animals/native-vegetation-management

	<p>region's landscapes using the principles of <u>community action planning</u>.</p>		<p>Pest plants: https://www.landscape.sa.gov.au/ny/plants-and-animals/pest-plants-and-animals/pest-plants-weeds Pest animals: https://www.landscape.sa.gov.au/ny/plants-and-animals/pest-plants-and-animals/pest-animals</p>
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112 Hayward Avenue
Torrensville, SA 5031
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t. 08 7127 5607

