

Eyre Peninsula Regional Roadside Vegetation Management Plan



Draft for Native Vegetation Council Approval

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Message from the EP LGA

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Executive Summary

This Eyre Peninsula Roadside Vegetation Management Plan 2017-2022 (EP RVMP) was developed by Dr. Kerri Muller of Kerri Muller NRM Pty. Ltd. for the Eyre Peninsula Local Government Association (EP LGA) on behalf of the eleven Councils of Eyre Peninsula and in collaboration with Natural Resources, Eyre Peninsula (NR EP) and the Native Vegetation Management Unit (NVMU) of the Native Vegetation Council (NVC).

This is the first Roadside Vegetation Management Plan (RVMP) that has been developed for a region rather than for a single Council district and is one of the first plans to be prepared under approval Pathway 3: Vegetation Management of the *Native Vegetation Regulations 2017*. These Regulations outline the circumstances where clearing native vegetation is permitted, outside of the clearance controls in the *Native Vegetation Act 1991* and thus stipulate activities that need to be included in a RVMP for endorsement by the NVC.

The contents of this EP RVMP were developed at two workshops in Wudinna during 2017 with Works Managers and other relevant staff from each of the 11 Councils, as well as representatives from EP LGA, Grain Producers SA, NR EP and NVMU. A key outcome was the need to develop an EP RVMP that was efficient and cost-effective to implement, whilst balancing the provision of a safe road network on Eyre Peninsula with conservation of the area's native vegetation, especially rare and threatened species that occur on roadsides.

The EP LGA region covers more than 230,000 km², and the eleven Councils within this area are responsible for over 13,000 km of local roads, mostly unsealed. This EP RVMP covers management of vegetation regrowth along those roadsides and contains the following clearance approvals for Regulation 11(23) under Pathway 3:

- Higher primary clearance envelopes (to 6m maximum height)
- Wider total clearance envelopes (primary and secondary) specified for road classifications
- Clearance of regrowth older than 5 years within the secondary envelope
- Use of high impact equipment to treat the clearance envelopes

A fit-for-purpose regional risk assessment program has been developed, in which the 11 Councils and NR EP will work together to apply the NVC's Mitigation Hierarchy to the Councils' Annual Works Programs. Vegetation of conservation significance that is likely to be impacted by roadside maintenance will be identified and the proposed activities for a given road section will be modified to mitigate risks, where needed, to protect native vegetation, minimise soil disturbance and avoid the spread of weeds, whilst maximizing efficiencies and providing safe road passage.

An action plan for on-going improvement of this EP RVMP includes proposals to develop mapping overlays to predict likely conservation impacts, train operators and contractors in plant identification, pursue funding for protective barriers for threatened plant species and undertake research into better roadside maintenance techniques and practices.

EP LGA and the 11 participating Councils endorsed this draft of the regional Eyre Peninsula Roadside Vegetation Management Plan prior to it being submitted to the Native Vegetation Council for their approval. The eleven participating Councils will consider and amend this draft in accordance with NVC comments, if required, to achieve approval.

This plan is adaptive and will require review in its first 12 months to evaluate the proposed Annual Works Risk Management Program.

Table 1: Quick Reference Guide to Clearance approvals covered by this Eyre Peninsula Roadside Vegetation Management Plan.

ACTIVITY	CLEARANCE APPROVAL	
	NOT REQUIRED	APPROVAL SOUGHT VIA EP RVMP
Roadside Maintenance Regulation 11(23) <i>Old 5(1)(y) and Old 5(1)(b)</i>	Maintenance of existing clearance for regrowth less than 5 years old with low impact methods or clearance within specified clearance envelopes.	Increased height and width of clearance envelopes , increased age of regrowth and routine use of high impact methods, managed through risk assessment program. (Section 5)
New Roads	Very minor clearance e.g. pruning of branches, removal of 1-2 common shrubs or saplings.	No. Separate NVC approval process. (Section 6.1)
Installation and Maintenance of Services	Maintenance of legally established clearance for services and access.	No. Separate NVC approval process. Council approvals via s221 Form. (Section 6.2)
Bushfire Prevention	All bushfire protection works carried out under an approved District Bushfire Management Plan (DBFM) under the <i>Fire and Emergency Services Act 2005</i> .	No. Separate CFS and NVC approval processes. (Section 6.3)
Clearance for Fencelines Regulation 8(14) <i>Old 5(1)(r), 5(1)(s)</i>	Trees on boundary; Branches over/through fence; Shrubs or bushes growing through the fence may be cleared within 1m of the fence.	No. Any clearance exceeding standards to NVC. Council approvals via s221 Form. (Section 6.4)
Clearance for Access to Adjoining Land Regulation 8(14)	Maximum 5m wide – normal access. Maximum 10m wide – machinery. (Careful site selection to minimise clearance)	No. Any clearance exceeding standards to NVC. Council approvals via s221 Form. (Section 6.5)
Pest Plant and Animal Control Regulation 8(15) <i>Old 5(1)(f), 5(1)(h)</i>	Very minor clearance e.g. pruning for access.	No. All but very minor clearance. Council approvals via s221 Form. (Section 6.6)
Removal of Plant Material Regulation 8(10) <i>Old 5(1)(q)</i>	Dead vegetation other than that defined in the Native Vegetation Regulations.	Public collection of firewood permitted, especially after hydroaxe or other clearance. Any persons wishing to collect plant material, needs approval from Council and DEWNR permit. (Section 6.7)
Maintaining Diversity on Roadsides Regulation 8(15), 11(25) <i>Old 5(1)(zj)</i>	Very minor clearance e.g. pruning for access.	No. Any measures involving burning, lopping or other disturbance of native vegetation needs NVC approval. Council approvals for burning or works in known infested areas. (Section 6.8)
Undeveloped road reserves	Very minor clearance e.g. pruning of branches or removal of one or two saplings or shrubs known to be common in the area	No. Any modification of native vegetation by direct clearance or changed practices needs NVC approval. Councils lease many undeveloped roads for grazing and cropping. (Section 6.9)
Recreational Use of Road Reserves Regulation 12(36)	Very minor clearance. e.g. pruning of branches or removal of 1-2 common shrubs or saplings	Council and NREP to apply mitigation hierarchy to new trails. Will be forwarded to NVMU, where appropriate. (Section 6.10)

NOTE: This EP RVMP constitutes NVC approval for activities detailed in Section 5. As well as the above requirements, 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 in doubt about any of these requirements, consultation with the relevant authority is recommended.

1. Background

1.1. Purpose and development of this EP RVMP

The purpose of the EP RVMP is to provide the eleven participating Eyre Peninsula Councils with a consistent and appropriate approach to managing roadside vegetation on Eyre Peninsula. Appendix A contains a Quick reference guide to the Native Vegetation Regulations relevant to roadside management that will be covered in this plan.

This EP RVMP replaces previous Roadside Vegetation Management Plans for the following eleven Councils that are members of the EP LGA, the districts of which are shown in Figure 1:

1. City of Whyalla
2. District Council of Franklin Harbour
3. District Council of Kimba
4. District Council of Cleve
5. District Council of Tumby Bay
6. City of Port Lincoln
7. District Council of Lower Eyre Peninsula
8. District Council of Elliston
9. Wudinna District Council
10. District Council of Streaky Bay
11. District Council of Ceduna

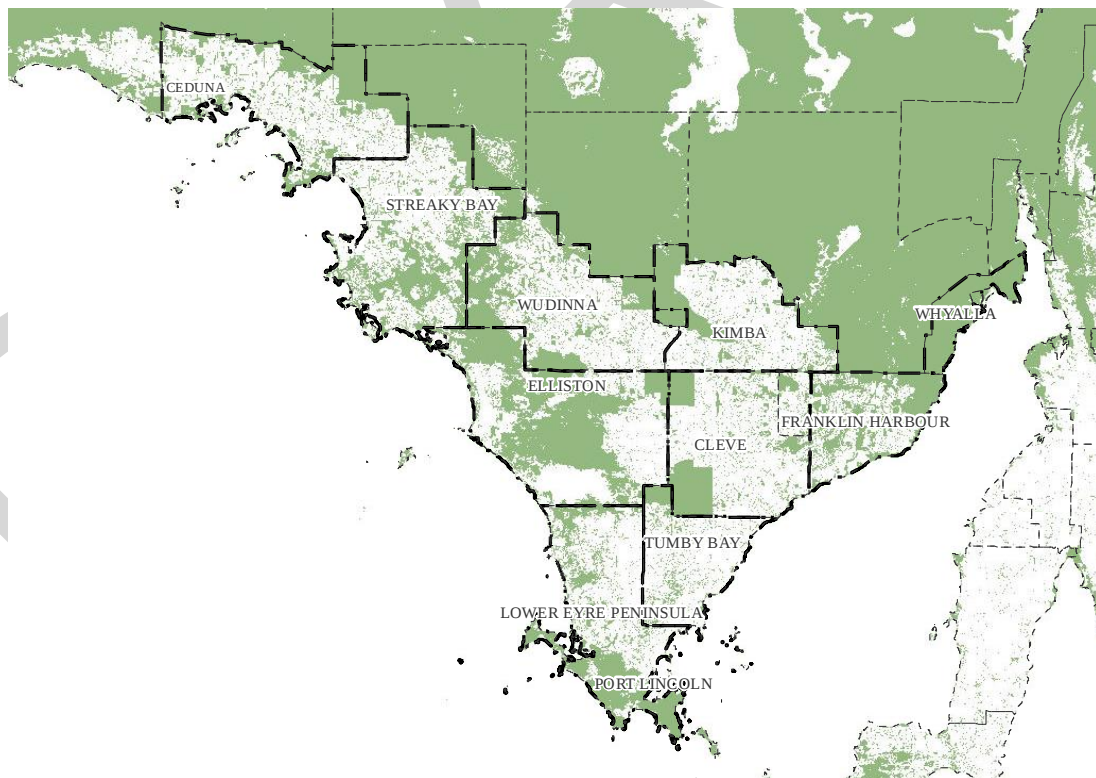


Figure 1: Local Government areas for the eleven Councils covered by this Eyre Peninsula Roadside Vegetation Plan.

A Steering Committee was convened to oversee the process of developing this EP RVMP. Members of the Steering Committee were: Tony Irvine (EP LGA, Chair), Jonathon Clarke (NR EP), Damian Windsor (District Council of Tumby Bay), Phil Cameron (District Council of Elliston), Russell Seaman (NVMU), Adam Schutz (NVMU) and Grant Lomman (Project Manager, NR EP).

An initial workshop was held in Wudinna on 3 April 2017 where issues were identified and direction for the EP RVMP was provided. Participants included Works Managers and other relevant staff from each of the 11 Councils as well as representatives from Grain Producers SA, NR EP and NVMU.

This workshop clearly identified the challenges of balancing the need to provide safe passage on Eyre Peninsula roads with the need to conserve native vegetation, especially rare and threatened species. As did the community engagement that was conducted via the State Government YourSay website.

A second workshop was held in Wudinna on 12 October 2017 where an assessment of public safety and native vegetation conservation risks was undertaken, key components of the draft EP RVMP were discussed, the mitigation hierarchy was applied (Appendix B) and the process for finalizing the plan and seeking endorsement by each of the eleven Councils and the Native Vegetation Council was developed.

The EP RVMP fulfills a legal requirement under the *Native Vegetation Act 1991* for clearance of native vegetation on roadsides outside of the NVC guidelines by the eleven Councils, or someone acting on behalf of one of those Councils, where the clearance complies with a Roadside Vegetation Management Plan (RVMP) that has been endorsed by the Native Vegetation Council. It is the first regional plan in SA. Other RVMPs have been prepared for single Council areas.

The EP RVMP:

- Identifies native plant communities and species of high conservation value on Eyre Peninsula roadsides
- Provides guidelines for undertaking activities on roadsides that may damage native vegetation, whilst balancing this with the Councils' needs to provide safe road passage (based on combined management of public safety and native vegetation risks)
- Details the consultation and approval processes for roadside activities that require clearance of native vegetation,
- Assesses the residual risk associated with roadside maintenance and describes an Annual Works Risk Assessment Program that the 11 Councils and NREP will undertake to mitigate impacts, and
- Identifies regional priorities for improving roadside vegetation management.

The Works Managers from each of the 11 Councils will have primary responsibility for implementing this EP RVMP and promoting it to Council staff and the community. All relevant Council managers, staff and contractors will be trained to ensure they can appropriately interpret this EP RVMP and act in accordance with it.

1.2. EP RVMP Objectives

The main objective of this EP RVMP is to:

Assist the eleven Councils to meet their legal requirements for the provision and maintenance of a **safe road network** and the **protection of roadside native vegetation** on Eyre Peninsula.

Other overarching objectives of this EP RVMP are to:

- **Avoid or minimise loss** of native roadside vegetation associated with Council activities when undertaking works to provide safe road passage
- **Maintain and enhance** the habitats and ecological functions of roadside corridors and road reserves
- **Increase awareness** and understanding of roadside vegetation management issues and constraints with Elected Members, managers, staff, contractors and the community, and
- Enable **good roadside vegetation practices** across Eyre Peninsula that are consistent, effective and generate long-term efficiencies and savings.

Additional, specific objectives are described at the beginning of each management issue in Section 5.

1.3. What is Roadside Vegetation?

Roadside vegetation is any vegetation growing on a road reserve, and includes vegetation on a developed roadside or undeveloped road reserve.

The "roadside" is the strip of land between the road formation and the boundary of the road reserve, which is usually also the boundary of the adjacent property (Figure 2 and Glossary). Roadside vegetation can range from intact native vegetation of high conservation value to areas completely devoid of native vegetation that are dominated by introduced species instead.

Native roadside vegetation often has significant conservation value and provides much needed ecosystem services, such as pollination (see Appendix C). Much of the native vegetation within the State has been cleared or highly disturbed and in some regions (including parts of Eyre Peninsula) roadsides support the last remaining examples remnant vegetation, and/or provide essential wildlife corridors.

Native roadside vegetation is susceptible to gradual degradation through a range of activities, partly because of its linear nature, which are controlled through the *Statewide Guidelines for the Management of Roadside Vegetation 2017* and this EP RVMP, once endorsed by NVC.



Figure 2: Road reserve showing the road formation and the roadsides.

What is a road?

The definition of a **Road** (from Roads (Opening and Closing) Act 1991) is —
 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
 in relation to a part of the State not within a council area—
 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
 a road or street opened under this Act or any other Act relating to the opening of new
 roads and streets; or
 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
 a road or street declared or dedicated under any other Act to be a public road or
 street,
 and includes part of a road.

Note that the whole road formation includes the carriageway (pavement), batter,
 table drains, shoulder and verge. See Glossary.

What is roadside vegetation?

For the purposes of this plan:

Roadside - Is defined as the strip of land between the road formation and the
 boundary of the road reserve. Where the **road formation** is the surface of the finished
 earthworks, excluding cut or fill batters (AustRoads, 2010; Glossary; Figure 2).

Roadside vegetation - Is any vegetation growing on a road reserve, and includes
 vegetation on a roadside (the area adjacent to a formed road), and vegetation
 growing on an unmade or undeveloped road reserve; this ranges from native
 vegetation of conservation value to vegetation dominated by introduced species.

1.4. How is native vegetation protected?

Native roadside vegetation in South Australia is protected or regulated under State and Commonwealth legislation.

1.4.1. *Native Vegetation Act 1991 and Native Vegetation Regulations 2017*

In South Australia, the clearance of native vegetation, including that along roadsides, is controlled under the **Native Vegetation Act 1991** and the **Native Vegetation Regulations 2017**. This means that any clearance of native vegetation on roadsides requires the permission of the Native Vegetation Council (NVC) unless a specific Regulation applies. The Native Vegetation Regulations 2017 contain four (4) streamlined approval pathways, of which one is Pathway 3: Vegetation Management that covers clearance for roadside management activities.

Pathway 3: Vegetation Management allows for ongoing management activities in which clearance of native vegetation, and regrowth if required, can occur as detailed in a Management Plan (approved by the NVC). Significant Environmental Benefit (SEB) offsets are not required for clearance undertaken as part of an approved management plan.

Regulation 11(23) – Roadside or rail corridor vegetation management, allows for clearance of vegetation on road reserves for the personal safety of those entering or passing the land, or of property on the land; or for controlling of pests on the land applicable to a roadside. The clearance can be undertaken by a local Council, or someone acting on behalf of the local Council, if the vegetation is growing on a road reserve in the area of the Council and the person undertaking the clearance complies with either the **NVC Guidelines for the Management of Roadside Vegetation 2017** or a management plan prepared by the local Council and approved by the NVC. This replaces the old 2012 Regulations 5(1)(y) and 5(1)(lb) for roadside maintenance and public safety.

Some roadside activities such as clearance for new road works (Pathway 4), fire prevention (Pathway 2) and service provision are dealt with under separate approval Pathways. Some of these activities may require the clearance to be compensated for through provision of SEBs; either on-ground native vegetation restoration or revegetation works, or payment into a fund that supports those works elsewhere in the region.

1.4.2. *Principles of Clearance (Schedule 1 of the Act)*

The NVC are required to administer the Act and are bound to only allow clearance in accordance with the following Principles of Clearance (Schedule 1 of the Act), this includes their ability to endorse any draft RVMPs.

Native vegetation should not be cleared if, in the opinion of the NVC —

- (a) it comprises a high level of diversity of plant species; or
- (b) it has significance as a habitat for wildlife; or
- (c) it includes plants of a rare, vulnerable or endangered species; or
- (d) the vegetation comprises the whole, or a part, of a plant community that is rare, vulnerable or endangered; or
- (e) it is significant as a remnant of vegetation in an area which has been extensively cleared; or
- (f) it is growing in, or in association with, a wetland environment; or
- (g) it contributes significantly to the amenity of the area in which it is growing or is situated.

The remaining principles (h) to (m) cover issues such as soil erosion, water quality and land use change, and will be considered by the NVC in relation to comments provided by the local NRM Board or relevant Minister.

1.4.3. Other statutes relevant to the protection and management of native fauna and flora on roadsides

Whilst Councils have primary responsibility for managing roadside vegetation within their Districts, as described above, there are many other pieces of legislation, which also regulate activities on roadsides.

- The **Local Government Act 1999** (Section 221) where any works on road reserves require permission of the local Council.
- The **National Parks and Wildlife Act 1972**, which prohibits the removal of native vegetation without a permit from reserves, wilderness protection zones, Crown land, public land or forest reserves in South Australia.
- The **Commonwealth Environment Protection and Biodiversity Conservation Act 1999**, which promotes the conservation of biodiversity by providing strong protection for nationally listed species of threatened indigenous plants and animals and important habitats. Any action that will have a significant effect on these species or habitats requires assessment and Commonwealth approval.
- The **Natural Resources Management Act 2004** which promotes sustainable and integrated management of the State's natural resources and makes provision for the protection of the State's natural resources.
- Numerous other Acts of parliament include, but are not limited to the *Fences Act 1975*, *Electricity Corporations Act 1994*, *Electricity Act 1996*, *Development Act 1993*, *Fire and Emergency Services Act 2005*, *Occupational Health, Safety and Welfare Act 1986* and *Road Traffic Act 1961*.

2. Eyre Peninsula's Roads

2.1. Regional context

In South Australia, the Commissioner of Highways (with assistance from DPTI) controls and maintains the trafficable section of major arterial roads pursuant to the *Highways Act 1926*. Local Councils are, however, responsible for the remainder of the road reserve, including the roadside vegetation, as well as being entirely responsible for all other roads within their district (pursuant to the *Local Government Act 1991*).

The Eyre Peninsula region covered by the 11 Councils comprises more than 230,000 km², extending from City of Whyalla in the east to Ceduna District Council in the west. It includes more than 1,800 kms of coastline, which is about one third of South Australia's coastline. Nearly 70% of the region's approximately 60,000 people live in the three urban areas of Whyalla, Port Lincoln and Ceduna (NREP 2017). Councils maintain over 13,000 kms of local roads, approximately 94% of which are unsealed (SMEC 2015).

Long transport routes that connect extensive infrastructure characterise the region, which includes four of SA's nine major export ports, three major regional airports and connections to the national road and rail networks (Figure 3). The region's economy is currently based on aquaculture, primary production and processing, whilst SA's mining, energy and defence sectors have ongoing potential for development. Heavy freight is already significant and may increase further as a result of future developments. In addition, the region has amongst the highest number of visitors of any of SA's non-metropolitan tourist regions.



Figure 3: Gazetted road-train routes on Eyre Peninsula. General freight (heavy black lines) and commodity routes (light black lines) from DPTI RAVnet website.

The annual number of road deaths and serious injuries is a traditional indicator of road safety in South Australia. Between 2010 and 2014, there were 21 fatal crashes, 161 serious crashes and 182 serious casualty crashes on Eyre Peninsula with higher numbers in the Lower Eyre Peninsula District Council and Whyalla City Council areas and for younger drivers (DPTI 2015). Approximately half of the casualty crashes (44%) occurred on roads with speed limits of 100 km/h or more and approximately two thirds occurred at 'midblock' locations, that is, away from intersections. The majority of accidents were the result of vehicle rollover or hitting a fixed object and 80% of the casualty crashes that occurred on Eyre Peninsula's roads in that period involved residents.

2.2. Transport Strategy

The EPLGA developed a Regional Transport Strategy (SMEC 2015) to provide the 11 Eyre Peninsula Councils with guidance on the management and development of roads across the region. It includes a review of State and regional plans, an updated regional planning framework, regional transport goals, defined routes, road classifications and action plans for Councils.

The Regional Transport Goals detailed in this strategy are to:

1. Reduce conflicts between tourist, passenger and freight vehicles;
2. Develop and manage an effective and consistent transport system for heavy vehicles;
3. Promote and assist regional tourism;
4. Implement consistent road classification levels across the region;
5. Reduce road accidents including fatigue related accidents;
6. Improve the efficiency of transport;
7. Manage environmental impacts (particularly native vegetation) without impacting road safety;
8. Promote and assist existing and developing industries, and;
9. Provide for Social Connectivity and Integration.

The 11 Councils worked together on the Regional Transport Strategy to develop a consistent approach to planning elements such as a common road classification system for roads with an average of more than 25 vehicles per day (SMEC 2015).

2.3. Community roadside survey results

An online engagement tool (hosted on the YourSAy website) was used to obtain information about the importance native vegetation on roadsides to the wider community. Responses were sought about areas of roadside vegetation that may require management for safety reasons, movement of agricultural machinery or because it contains native vegetation of conservation or aesthetic value.

A total of 101 responses were received (Figure 4). Road safety comments accounted for 32 responses; significant vegetation accounted for 27 responses; vehicle movement accounted for 40 responses and 2 responses were not categorised. The map of locations selected by respondents shows that comments were received for roads across the Eyre Peninsula.

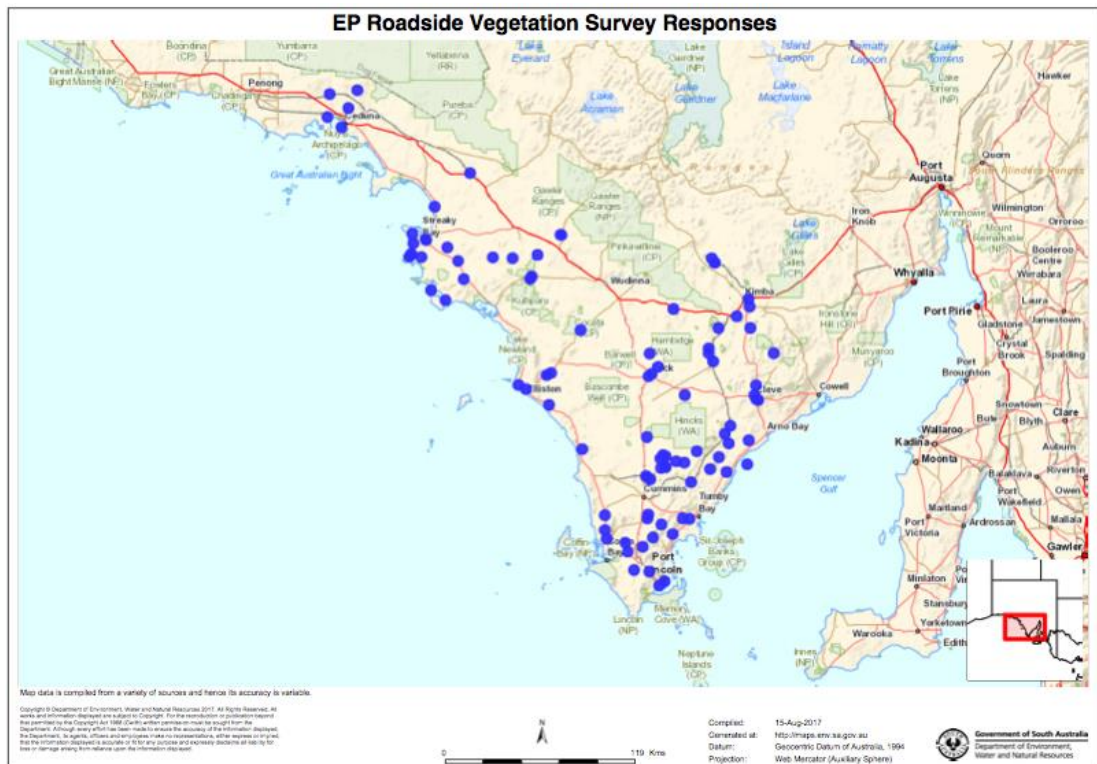


Figure 4: Eyre Peninsula roadside vegetation survey response locations.

2.4. EP RVMP Approach

Eyre Peninsula Councils have to expend their road budgets wisely to meet their infrastructure development and maintenance plans as effectively as possible. The region's size, remoteness, diversity and scattered population make this a challenging process both financially and logistically. In short, the Councils' ability to manage their roads is limited by their resources.

Key road management issues for Eyre Peninsula Councils include:

- Changing patterns of land ownership (there are fewer land owners with more properties; often requiring regular movement between properties with oversize agricultural equipment);
- Road Trains are now the 'normal' vehicle type for movement of grain from farm gate to storage and from storage to port (Figure 3)
- Current Overdimensional Code of Practice for Agricultural vehicles that permits loads up to 7.5m wide x 4.9m high (3.7m wide without escort vehicle) to travel on roads;
- The road network is historic and was often not designed for existing vehicle configurations – this means that there are substandard road widths, sight distances, geometry (curves and crests) and unsealed pavements (dust and loose surface hazards).
- PIRSA 2016-17 Harvest Estimates (PIRSA, March 2017) across Eastern, Western, and Lower Eyre Peninsula was 3.5 million tonnes (State total 11.1million) – all of this farm produce is moved by truck on public roads at some stage.

Participants at the first workshop in Wudinna (3rd April 2017) generated the following list of considerations for preparing this EP RVMP:

- Finding a regionally-appropriate balance between providing safe road passage and protecting native vegetation
- Preparing a RVMP that is cost-effective and complements asset development and management
- Developing a RVMP that will protect valuable native vegetation without requiring extensive and expensive vegetation surveys
- Recognizing that each Council is small, has economic development as a priority and roads need to be suitable for farming communities, thoroughfares, employment and economic sustainability, with consideration of the types of vehicles and volumes of vehicles accessing unsealed roads
- Having a clear definition of: what is roadside vegetation; what is the boundary of the road that needs to be maintained; and what techniques can be used to control vegetation regrowth
- Facilitating movement of large farm machinery between properties and from the 'farm gate' to the freight route
- Giving clearance activities longevity (e.g. 20 year maintenance schedule)
- Acknowledging that there are conflicting points of view and seek to manage potential conflicts through compromise and transparent risk management

It was also acknowledged that a common set of road categories would need to be used for this EP RVMP, and they are:

- A. Arterial – higher volume roads that provide an important freight, tourism or social function. Some Councils differentiate between sealed and unsealed, some do not.
- B. Collector – roads that feed to the arterial network and generally perform freight or social functions.
- C. Local Access (major) – provide for multiple property accesses, farm gate freight task
- D. Local Access (minor) – provide for farm gate freight task. Can include unformed roads and fire track type roads
- E. Unmade road reserves – recognised as an extra class by some Councils

3. Eyre Peninsula's Council Districts

This EP RVMP applies to all roadside reserves within the following 11 EP Council districts with the following exceptions:

- Road reserves within the Urban Area the Municipalities of the City of Whyalla, City of Port Lincoln and District Council of Ceduna
- Road reserves under the control of the Minister for Transport, Energy and Infrastructure, or another agency. (noting that vegetation beyond that immediately alongside the road surface is under Council's control)
- Roads that are legally created or exist under the Roads Opening and Closing Act 1991

3.1. Whyalla City Council

Population: c. 22,600 (2015)

Location: 70 km of Upper Spencer Gulf western coastline and approx. 18 km inland

Council area: approx. 1000 km², excluding the Urban Area of 41.5 km²

Road network: 100 kms of rural roads under Council control, remainder under DPTI management

Vegetation types: predominantly Bluebush shrub land, Western Myall-Bluebush woodland with areas of Black Oak woodland and Saltbush shrub land. These communities are widespread through the region. Some hilly areas have native trees, including Native Pine, chenopods and Porcupine grass.

Average rainfall: 276 mm/y (BoM), relatively low rates of regrowth

Roadside vegetation information: all roads surveyed and available on Councils' GIS

3.2. About District Council of Franklin Harbour

Population: c. 1,200

Location: 106km South of Whyalla on the Lincoln Highway

Council area: 2,283km²

Road network 80.72km sealed, 783km unsealed, 840km of rural roads under council control, remainder under DPTI control

Vegetation types: predominantly Mallee/Tea Tree scrub, Coastal areas contain Chenopod Shrublands, False sandalwood low lying coastal areas contain Samphire/Chenopod shrub-land and Grey Mangroves, Sea Lavender, Weeds present include African Boxthorn and annual grass weeds.

Average rainfall: 300 mm/y, relatively low rates of regrowth

Roadside vegetation information: no formal surveys conducted

3.3. About District Council of Kimba

Population: 1048

Location: located on the Eyre Highway, National Highway One, 155km west of Port Augusta and 315km east of Ceduna.

Council area: 3,500 km²

Road network: 1715 kms roads; 100 kms of which are sealed

Vegetation types: predominately open scrub or mallee formations on calcareous and infertile sandy soils. Overstorey dominated by multi-stemmed gums; Understorey dominated by sclerophyll or chenopod shrubs and hummock grasses, depending on rainfall and soil types.

Average rainfall: 348 mm/y (BoM)

Roadside vegetation information: no formal surveys conducted

3.4. About District Council of Cleve

Population: 1771

Location: in the middle of Eyre Peninsula, approximately halfway between Whyalla and Port Lincoln.

Council area: 5,295 km²

Road network: approximately 1545 kms unsealed roads; 93 kms sealed roads

Vegetation types: predominately mallee and broom bush.

Average rainfall: 400 mm/y (BoM)

Roadside vegetation information: no formal surveys conducted

3.5. About District Council of Tumby Bay

Population: 2610 (ABS 2016)

Location: Approximately 25km north of Port Lincoln to approximately 80km north of Port Lincoln, with coastline of approx 100km and extending up to 65km inland

Council area: 2616km²

Road network: Sealed Built-up 32km, Sealed Rural 28km, Unsealed Built-up 4km, Unsealed Rural 1046km

Vegetation types:

Average rainfall: 300-380 mm/y (BoM), relatively low rates of regrowth

Roadside vegetation information: no formal surveys conducted

3.6. About City of Port Lincoln

To be provided

Population:

Location:

Council area:

Road network:

Vegetation types:

Average rainfall:

Roadside vegetation information:

3.7. About District Council of Lower Eyre Peninsula

Population: 5,014

Location: southern end of Eyre Peninsula with frontage to both the Spencer Gulf and the Great Australian Bight with 709 km of coastline

Council area: approx. 4,754 km²

Road network: 142 km sealed, 1214 km unsealed. 229km under DPTI management

Vegetation types: not available

Average rainfall: 400 to 600mm/y, moderate rates of regrowth

Roadside vegetation information: no formal surveys conducted

3.8. About District Council of Elliston

Population: c. 1100

Location: 110 km from Port Lincoln township, extending 150 km along the coast in a westerly direction to c. 10 km west of Port Kenny, North to the township of Lock 90 km from Elliston township; 150kms of coastline.

Council area: 6,693km²

Road network: 1148 km

Vegetation types: Native pine, coastal ti-tree, Sheoak, Red gums, mallee

Average rainfall: 426 mm/y (BoM), relatively low rates of regrowth

Roadside vegetation information: no formal surveys conducted

3.9. About Wudinna District Council

Population: 1250 (2016 Census)

Location: Land locked by District Councils of Elliston (South), Kimba (East) and Streaky Bay (West) and the Gawler Ranges National Park (North).

Council area: 5,394 km²

Road network: 90km sealed, 1,612km unsealed of maintained roads under Council control, remainder under DPTI management.

Vegetation types: predominantly native Mallee and Wattle.

Average rainfall: 287 mm/y

Roadside vegetation information: no formal surveys conducted

3.10. About District Council of Streaky Bay

Population: c. 2100

Location: West coast of Eyre Peninsula, approximately 720 kms by road from Adelaide.

Council area: 6,232 km²

Road network: 99.11 sealed, 1634 unsealed.

Vegetation types:

Average rainfall: 350 mm/y

Roadside vegetation information: no formal surveys conducted

3.11. About District Council of Ceduna

To be provided

Population:

Location:

Council area:

Road network:

Vegetation types:

Average rainfall:

Roadside vegetation information: no formal surveys conducted

4. Peninsula's Native Vegetation

4.1. Why is Eyre Peninsula's roadside vegetation important?

Roadside vegetation is recognised as being ecologically, socially and economically important the world over (Breckwoldt *et al.*, 1990; Saunders and Hobbs, 1991).

In many agricultural landscapes, roadsides provide important refuge for threatened native species and ecosystems, and are often selected as benchmark sites to guide restoration activities (Spooner and Smallbone 2009). This is because the best soils and the higher rainfall areas were more extensively cleared for agriculture and in some cases the roadside vegetation may contain a significant proportion of remnant native vegetation for the area. Native vegetation provides agricultural, social, economic and ecological benefits on Eyre Peninsula (see Appendix C), which include providing habitats for a wide range of pollinators, connecting habitats, reducing erosion, acting as wind breaks and creating an attractive roadside environment for drivers and tourists.

4.2. Vegetation of conservation significance on Eyre Peninsula

Eyre Peninsula has a diversity of environments that provide habitats for many endemic plants and animals. The region forms an ecotone, where Australia's south-eastern and south-western bioregions join and create a unique regional biodiversity. Whilst large areas have been cleared for agriculture (55% of the pre-European vegetation cover) or modified through grazing of native vegetation, conservation is still a significant land use with over 100 conservation parks and over 650 heritage agreements across the Eyre Peninsula (NREP 2017). Roads transect and connect native vegetation patches across the region whether they are flanked by native vegetation or not and thus roadside vegetation management is a key regional conservation activity.

A Matters of National Environmental Significance (MNES) search, as required for the *Environmental Protection and Biodiversity Conservation Act 1999* (the EPBC Act), found 3 nationally threatened ecological communities and 78 nationally threatened species that may inhabit or utilise roadsides on Eyre Peninsula

Table 2).

Table 2: Summary of threatened species and communities on Eyre Peninsula, including results of the EPBC Act Matters of National Environmental Significance search¹.

Conservation matter	Status	Number
Commonwealth Marine Area	EPBC Listed	1
Nationally Threatened Ecological Communities	EPBC Listed	3
Nationally Threatened Species	EPBC Listed	78
Migratory Species (e.g. birds)	EPBC Listed	57
Nationally Important Wetlands	EPBC Listed	14
Regionally or Locally Threatened Communities	State	
Regionally or Locally Threatened Species	State	
Invasive species	National	36

¹ NRM Eyre Peninsula EPBC Act Protected Matters Report created 05/09/17 at 19:00:10 using the following tool:
<http://www.environment.gov.au/epbc/protected-matters-search-tool>

Eyre Peninsula blue gums (*Eucalyptus petiolaris*) are one of the three EPBC-listed threatened communities on Eyre Peninsula. They are considered to be Endangered and are highly likely to occur on roadsides in the Eyre Hills (Appendix D).

Patches of Peppermint box (*Eucalyptus odorata*) grassy woodlands, which are listed as Critically Endangered, occur in the EP RVMP area in the Eyre Hills.

The third EPBC-listed threatened community on Eyre Peninsula is the Subtropical and Temperate Coastal Saltmarsh community, which is listed as being Vulnerable. This community extends in a narrow band along the coast from south-eastern Queensland to central Western Australia. More information on these three EPBC-listed communities, including how to identify them, is provided in Appendix D.

Many of the EPBC-listed threatened species that are highly likely to use roadside vegetation as habitat and to assist movement through the landscape are birds, including migratory birds that are protected through international agreements, or plants such as rare wattles, native flowering shrubs and orchids.

Maps of threatened or rare flora and fauna have been compiled for the Eyre Peninsula as part of the Regional Species Conservation Assessment Project for the West region of South Australia (Gillam and Urban 2009). A total of 513 native vertebrate fauna and 1900 native plants have been mapped and can be used to assist Councils administer this EP RMVP. Gillam and Urban (2009) found that 13% of all fauna and 12% of all flora in the West Region (Port Augusta to the Western Australia border and north to the South Australian arid lands) were considered to be threatened, that is Vulnerable, Endangered or Critically Endangered. If species that were considered Rare or Near Threatened were included, then the percentage of species at risk increased to 69% of fauna and 71% of flora. Furthermore, 12% of fauna and 16% of flora species were categorized as being in decline. See https://www.environment.sa.gov.au/managing-natural-resources/plants-and-animals/Threatened_species_ecological_communities/Regional_significant_projects/Regional_Species_Conservation_Assessment_Project

Taken together, Gillam and Urban's 2000+ species maps show that there are 'threatened species hotspots' on Eyre Peninsula, especially in the lower Eyre Peninsula area where a combination of higher rainfall, diverse soil types, vegetation types and land forms in close proximity to each other support diverse and abundant landscapes (Figure 5). The majority of this area has been cleared for cropping and grazing, leaving only patches of remnant vegetation, some of which occurs on roadsides. Whilst there are large parks on the lower Eyre Peninsula (e.g. Coffin Bay and Lincoln National Parks), the main 'hotspots' are where the remnants are patchy and thus many species are at risk.

Gillanders *et al.* (2016) found that there were 303 species in the Eyre Peninsula NRM region that are listed in the SA threatened species list or the EPBC list. The eleven Council areas had between 114 (Whyalla) and 217 (Lower Eyre Peninsula) threatened species. They suggest that species with a high proportion of their EP NRM range in a given Council area may be useful as iconic species and have high conservation value due to their endemism (highly specific to that location). Most Council districts have areas of high conservation ranking as shown in Figure 6.

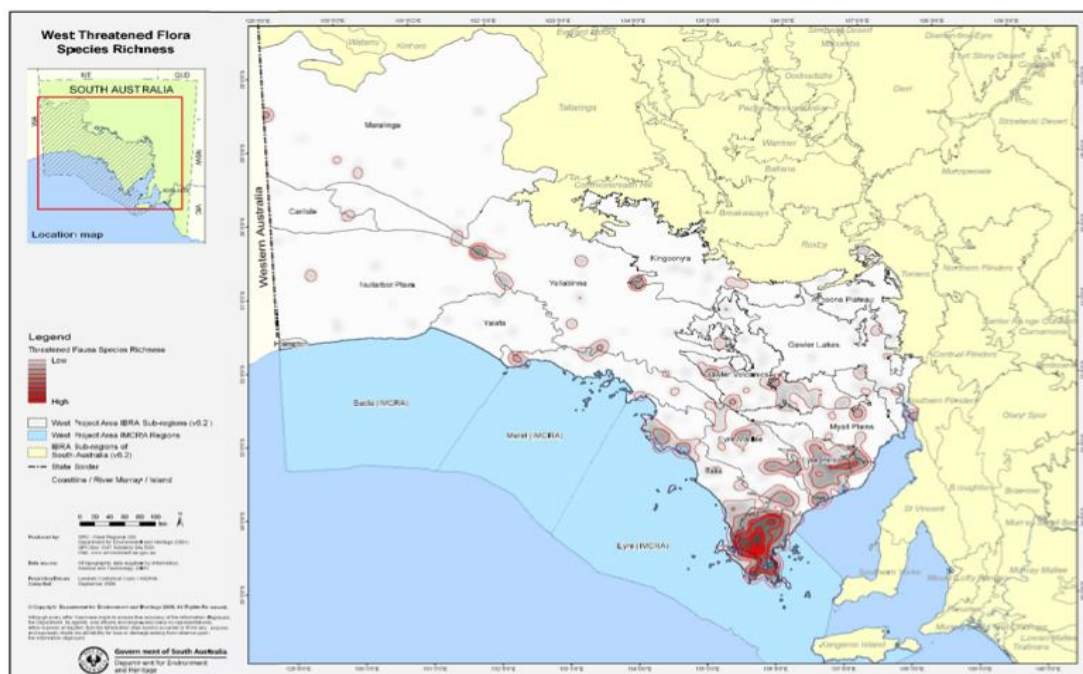


Figure 5: West Region threatened flora species diversity, showing threatened flora ‘hotspots’ in the lower Eyre Peninsula. Taken from Gillam and Urban (2009).

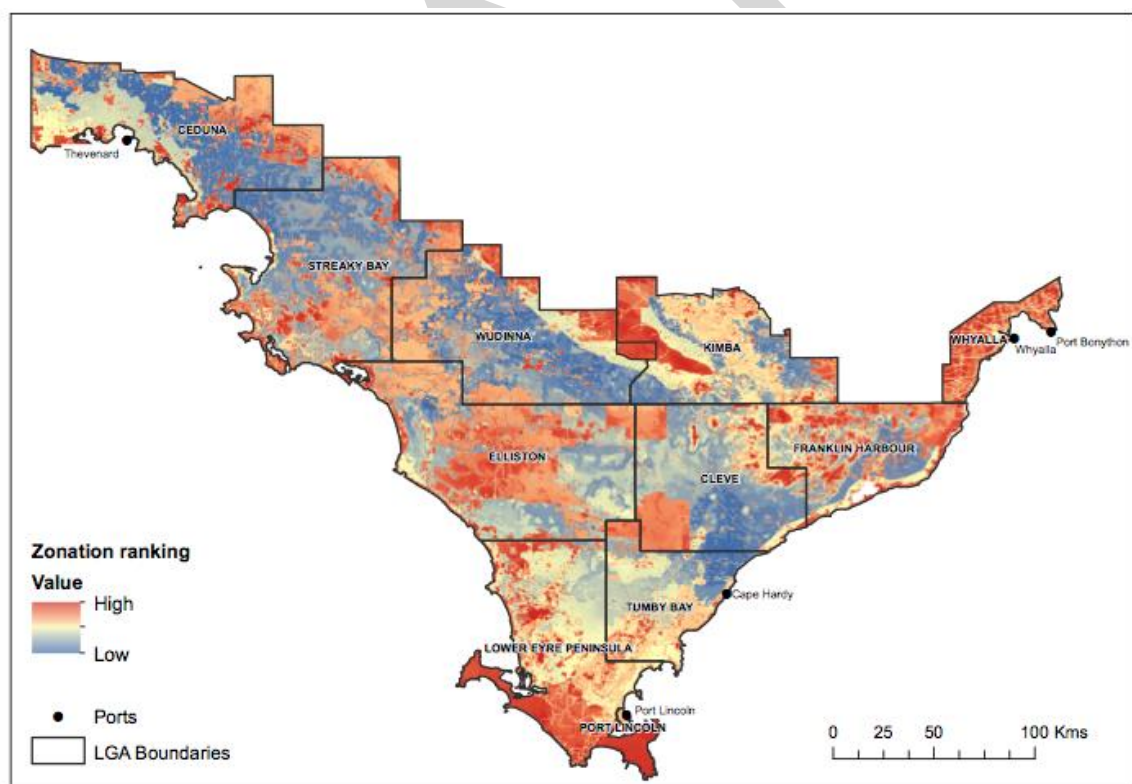


Figure 6: Zoning of conservation priority areas for the Eyre Peninsula region showing scores for each landscape cell between low (blue) and high (red) values. Taken from Gillanders et al. 2016.

4.3. Impacts of roads on native vegetation

Roads are transport corridors that are constructed as necessary for the movement of people and materials. Roads extend across the Eyre Peninsula landscape and link most coastal and terrestrial habitats, as such they have a range of direct and indirect impacts on native vegetation. Bennett (1991) conducted a review of published literature and found that there are five major impacts of road systems on wildlife:

- (i) Road reserves provide habitat for wildlife. Roadside vegetation has greatest value as a wildlife habitat when it comprises remnant or regenerated strips of indigenous vegetation.
- (ii) Roads, roadside habitats and the aerial space above roads facilitate the movement of animals (and plants) along the direction of the road reserve.
- (iii) Road reserves can act as a filter or barrier to the movements of wildlife through the landscape, thus dividing and isolating populations to varying extents.
- (iv) Roads are a source of mortality for wildlife. For some species, particularly those that are large, rare, or are regularly brought into contact with busy roads (e.g. migration pathways for EPBC-listed birds), road- kills can have a significant effect on conservation status.
- (v) Road systems are a source of biotic and abiotic effects on the surrounding landscape.

Bennett (1991) concluded that *"the extensive area occupied by road systems and the ecological impact of roads on wildlife means that they are too important to be neglected in conservation planning..... The reserved status of roads, their geographical extent and continuity, and their network structure provide valuable opportunities for retaining and expanding wildlife habitat in disturbed environments, and for restoring or enhancing continuity to natural elements in the landscape. However, wildlife managers and managers of road systems must investigate further and implement practical measures to reduce the isolating effects of roads that bisect natural environments, to minimize the mortality of animals on roads and to limit disturbance to the surrounding environment"*.

Roads create prominent barriers in the landscape, called 'infrastructure effect zones', that may impinge on the ability of intertidal saltmarsh and other ecological communities to adapt to sea level rise by moving inland over time (Gillanders *et al.* 2016). Gillanders *et al.* (2016) provide a breakdown of listed species distribution and barriers to movement of coastal communities at a Council scale. This shows that the Councils with the highest area of infrastructure barriers to plant movement are Ceduna and Franklin Harbour. There is more than 46 km² within 1km of seagrass beds that is impacted by roads, railways and pipelines, with Ceduna, Streaky Bay and Whyalla having the highest areas of infrastructure barriers to seagrass movement. Mangrove communities are also likely to encounter significant infrastructure barriers, particularly in Whyalla and Ceduna. Gillanders *et al.* (2016) suggest that Councils map and protect pathways for coastal communities to migrate inland as sea level rises and embed these into existing Council strategic documents, such as this EP RVMP.

4.4. Roadside Vegetation Classifications

Roadside vegetation within the local Council area can be surveyed for the purposes of providing specific information about the location, composition and conservation value of native plants along the roadsides and the extent of weed invasion. Other mapping products, such as NatureMaps can be used to get a more general understanding of roadside vegetation in a given area. The NVMU have prepared a map for the EP RVMP that can be accessed at:

<http://spatialwebapps.environment.sa.gov.au/naturemaps/?viewer=naturemaps&layerTheme=&scale=2311162.217155&layers=0ac81w0F7qrE008vyD3MSOvK00900B00JEH%2B28yNdY05cPqk2L9B2k3xRgNR3gnWv00ZRgf322%2BPZ%2F¢er=15109378.078136164%2C-3936010.6936526275>

Survey or mapping data can be used to conduct an assessment of the relative ecological value of the vegetation in each road segment, for which data is available, and at the landscape scale.

The overall significance rating in Table 3 provides a simple summary of the relative ecological value of the vegetation in each segment. This is based on a combination of two attributes: the *conservation priority rating for the vegetation association*, and the *overview condition* (e.g. extent of weed invasion) rating for the segment.

Considerations for mitigating increased clearance envelopes in the Annual Works Risk Management Program (Section 6), for example, will be based on the overall significance rating of a segment of roadside vegetation and its location and role within the landscape (e.g. intact wildlife corridor between two patches of native vegetation, edge of large conservation area, weedy verge).

There are five categories of roadside vegetation based on its overall significance that can be used (Table 3). These range from Category A with high priority vegetation association in excellent or good condition to Category E with little or no native vegetation present).

Table 3: Description of the categories of overall vegetation significance

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

Note: Even though some categories “may be disturbed”, this only means that disturbance of areas *without* native vegetation can occur, e.g. soil disturbance, and compaction by machinery or other means. Native vegetation in ALL categories (even D and E) must not be cleared, unless specifically outlined in an approved Roadside Vegetation Management Plan.

5. Roadside Vegetation Maintenance by Councils

Objectives:

- Balance the need to protect native roadside vegetation with the need to undertake public safety works.
- Maintain and enhance the diversity of species, genes, plant associations, habitats and connections in roadside vegetation, whilst providing a safe road passage;
- Avoid and/or mitigate adverse native vegetation impacts associated with approved and unauthorised activities on roadsides or in road reserves;
- Ensure best management practices for roadside maintenance are implemented; and
- Improve awareness of roadside vegetation management issues for local Council staff and contractors, other authorities and the community.

Roadside Maintenance refers to the clearance of regrowth vegetation (native and introduced) in order to **maintain** a road corridor or other established cleared or disturbed areas on road reserves.

Roadside vegetation is a valuable community asset that can **reduce road hazards** such as wind and sun glare, however, growth of limbs or plants into the carriageway can have **implications for public safety**. Native vegetation growing outside the carriageway may also pose a safety risk if a vehicle leaves the road.

The **highest priority is safety** of the road users. The conservation of native roadside vegetation is secondary but once safety has been addressed, the option that requires **the least disturbance of native vegetation of the lowest conservation significance** should be selected. This EP RVMP provides for safe passage but also requires **motorists to drive to the prevailing road and weather conditions**.

It is **essential** that vegetation along roadsides be trimmed (vertically and laterally) so as to provide safe clearance for road users. The degree of clearance required may vary according to the standard of the road, the type and volume of traffic and the characteristics of the vegetation.

Over-dimensional agricultural vehicles (7.6 m wide by 4.9 m high) are commonly driven along many roads of varying standards on Eyre Peninsula. This EP RVMP allows for movement of these vehicles and on-coming traffic, where feasible, but acknowledges that by law over dimensional vehicles must have a pilot vehicle, if > 3.6 m wide.

Along most rural roads, clearance to the necessary safety standard has already taken place, but regrowth may be encroaching back into the clearance space, often referred to as the **primary clearance envelope** (across the full width of the carriageway; Appendix E) or **secondary clearance envelope** (adjacent to the carriageway; Appendix E). This is consistent with AusRoads 2009 which states that a 'clear zone is the area adjacent to the traffic lane that should be kept free from features that would be potentially hazardous to errant vehicles...[it is]...a compromise between the recovery area for every errant vehicle, the cost of providing that area and the probability of an errant vehicle encountering a hazard...[it should be]..kept free of non-frangible hazards where economically and environmentally possible. Alternatively, hazards within the clear zone should be treated to make them safe or be shielded by a safety barrier'.

Regrowth may also be occurring on cleared or disturbed sites such as recently graded roadsides, borrow-pit sites and designated spoil heap sites.

General Roadside Vegetation Management Principles for Councils

- Use the **lowest, practicable impact methods** for the given activity, including minimal ground disturbance and cutting cleanly rather than breaking branches;
- **Limit grazing** to areas where little or no impact upon native vegetation is likely, for example, where there are mature native trees over exotic grasses.
- **Limit the use of herbicides** to spot spraying regrowth in the secondary envelope, spraying around roadside furniture; for selective weed control and to control weeds on firebreaks, when weather conditions minimise the likelihood of spray drift.
- Ensure graders and other high impact machinery **do not over run** the approved clearance envelopes.
- **Locate drains** in areas devoid of native vegetation, wherever the topography and road construction allow. Ensure that drains do not deposit sediment into native vegetation, waterways or neighbouring private land. Where possible, do not construct drains across the full width of the roadside vegetation to preserve habitat connectivity.
- **Retain low shrubs, native grasses and groundcovers** within the roadside verge that do not affect road safety. This will help prevent the loss of endangered understorey species, help prevent weed invasion and erosion, provide habitats for a wide range of agriculturally beneficial insects and can reduce roadside management costs.
- **Minimise soil disturbance and width of the clearance envelope.** Clearance envelopes will be maintained at the minimum width at which adequate safe passage is provided. Disturbance encourages weeds that compete with native species, spread into productive land and interfere with driver visibility; and thus should be minimised to minimise maintenance and off-site costs. Operational procedures include:
 - Park or turn machinery at a limited number of designated sites, without native vegetation, by preference;
 - Stockpile materials at a limited number of designated sites, preferable those which do not have native vegetation;
 - Clean equipment on site before moving to other sites;
 - Trim trees only when needed for public safety and in accordance with recognised arboriculture standards;
 - Dispose of debris from tree trimming in a manner that does not affect native vegetation, unless it is useful as habitat for wildlife. Scatter mulch sparsely amongst native vegetation;
 - Install roadside markers to identify sites with threatened plant species, train staff training and/or manage contractors carefully to minimise risks associated with native roadside vegetation clearance.
- **Retain native vegetation**, including dead timber, and integrate into NR EP revegetation programs, where possible. Particular care will be taken to preserve and enhance areas of native grasses, which can be difficult to distinguish from exotic grasses.
- **Clear exotic vegetation or use land that has already been cleared** for any proposed works in preference to clearing native roadside vegetation, wherever possible.
- Commence works with **clean machinery and start in areas of less degraded** vegetation and work towards the more degraded sites, wherever feasible. This will assist in the prevention of further spread of weeds and reduce on-going maintenance.

5.1. Proposed variance to the NVC Guidelines

Age of vegetation:

The following EP RVMP clearance envelopes apply to regrowth vegetation, that is, native vegetation that has grown in the road reserve since the road was built, regardless of the age of that vegetation (noting that guidelines say regrowth up to 5 years old can be cleared without NVC approval; Appendix A). The clearance envelopes do not apply to remnant vegetation that grew before the road was constructed, including trees that the road was constructed around, the clearance of which requires NVC approval prior to taking action.

Justification: long intervals between repeated works on a given section of road mean that large areas have regrowth older than 5 years in the approved clearance envelopes, which needs to be removed for public safety and Council's operations.

Treatment methods:

It is proposed that high impact methods are used to clear vegetation in the primary and secondary clearance envelope to the approved widths. Where the risks of high impact methods are found to be unacceptable through the Annual Works Risk Management Program (Section 6), low impact methods will be considered to mitigate impacts (note only low impact methods are allowed without NVC approval; Appendix A).

All clearance methods and procedures used (including earth moving equipment) will aim to treat only the vegetation growing higher than 15cm from the soil surface, to leave the soil undisturbed or minimise soil disturbance in the long-term to prevent weed infestation and preserve native groundcovers, unless whole non-frangible plants are being removed.

Justification: All Councils have earthmoving equipment that can be readily and cost-effectively used to clear regrowth within the approved clearance envelopes. None of the EP Councils have a hydroaxe and there is only one hydroaxe contractor for a limited time each year for all of Eyre Peninsula. The cutting level for any equipment will be set at 100-200mm above ground level to minimise soil disturbance.

Clearance envelope heights and widths:

The clearance envelopes for the different road categories as determined at the 12th October 2017 workshop in Wudinna are shown in 4, based on the road categories used for Western Eyre Peninsula. At the workshop it was suggested that the clearance envelopes be described as a total width rather than distance from furniture such as white posts, which can be a variable distance from the edge of the seal (1.5m to 3m from edge of seal on Eyre Peninsula). A total clearance envelope is also easier to enforce and to describe in a contract than distance from road furniture. The primary envelopes in Table 4 are the nominal widths of the travelled way for that road category. The secondary envelopes are the total clearance widths, including the primary envelope.

In some instances, Councils will be undertaking new clearance to achieve the clearance envelopes in Table 4, however, this will typically be between 1.5m and the maximum width of 3.5m from the edge of the travelled way on a given road section and will be subject to application of the mitigation hierarchy (Appendix B) through the Annual Works Risk Management Program (Section 6).

It is noted that this section does not apply to new road works including intersection realignments and road widening where the native vegetation being cleared is not the hazard itself but is instead incidental to the proposed works, which requires separate NVC approval and may require achievement of an SEB. It also does not include clearance outside the envelopes in Table 4, which would be considered Public Safety Category 3 clearance and would also require separate NVC approval and may require achievement of an SEB.

Operational notes for achieving clearance envelopes:

- The mitigation hierarchy will be applied such that clearance of native vegetation will be avoided or minimised by setting a default width of 2m wider than the travelled way on any given road section and only clearing wider envelopes (up to maxima in Table 4) on sections of Road Categories A to C when necessary for public safety reasons (e.g. commodity route, corners, intersections) or when common, fast-growing species are present.
- Council equipment is typically 2m wide so that is the minimum width of any given pass that can be managed in a cost-effective manner.
- Non-frangible vegetation will be cleared as needed, frangible will be maintained as a living cover over the verge, although there may be inadvertent loss due to verge topography that causes uneven mechanical cutting.
- Trees that have regrown (since the road was built) within 3m of the travelled way will be mechanically removed, where required, to ground level.
- Tree branches that extend into the clearance envelope will be cut at the collar to prevent regrowth into the envelope.

Exceptions may be identified from time to time that need to be considered by all parties through the Annual Works Risk Management Program (Section 6).

Table 4: Clearance envelopes for different road categories on Eyre Peninsula.

Road category	Clearance envelope		Comments
	Height	Width	
A Arterial road – important freight, tourism or social functions.	Primary: 6m Secondary: 4m	Primary: 8m Secondary: 15m	High volume roads; some Councils differentiate between sealed and unsealed, other do not.
B Collector road – feed arterial roads and have freight or social functions	Primary: 6m Secondary: 4m	Primary: 8m Secondary: 14m	Important farm-gate to port functions, major tourism routes, school bus, commuter traffic
C Local Access (major) – unsealed, multiple property access roads	Primary: 6m Secondary: 4m	Primary: 8m Secondary: 14m	High commuter traffic volumes; farm-gate freight routes; school bus routes
D Local Access (minor) – unsealed, may include unformed roads and fire tracks	Primary: 6m Secondary: 4m	Primary: 6m Secondary: 10m	Little traffic but likely to be farm-gate freight routes, important for fire access
E – unmade road reserves	Primary: 4m Secondary: N/A	Primary: 4m Secondary: N/A	Recognised as a separate category by some Councils

Justification for wider and higher clearance envelopes: Standard clearance envelopes on many of Eyre Peninsula's roads have not been maintained as constructed due to logistical and financial constraints. For minor roads, in particular, the maintenance schedule may be 20 years or more. This means that vegetation more than five years old is now present within the extent of the standard clearance envelope and/or the recorded width of Council's unsealed roads does not reflect actual on-ground variations in road width making achievement of standard clearance envelopes against recorded road widths difficult without causing serious damage to native vegetation.

Furthermore,

- The clearance envelope widths in Table 4 are the maximum proposed for each road category.
- These envelopes are considered to be appropriate for Eyre Peninsula's roads, which often have a compromised road surface (variable surface and geometry), because they will provide adequate visibility and safe passage for all road users (e.g. tourists, commuters) and vehicles (e.g. school buses, road-trains, large agricultural machinery).
- Clearance envelopes of these widths are also considered to be the most cost-effective for Councils to provide safe passage given their considerable budget and time constraints (note the low population base to area and road lengths for each Council in Section 3).
- The widest clearance envelopes in Table 4 are in line with AusRoads guidelines (allow 3-6m clear zone for non-frangible vegetation) and are equivalent to clearance maximums in the NVC 2012 Guidelines for Public Safety Cat 2 - 5(1)(b) – now Regulation 11(23).
- Rather than applying Regulation 11(23) case-by-case, this draft EP RVMP proposes to clear vegetation to the maximum widths in Table 4, as needed and as approved by DEWNR through the Annual Works Risk Management Program (Section 6).
- All unsealed roads have default speed limit of 100 km/h and cannot be signposted below 100km/h because if the speed limit is signposted, then the implication is that the driver can drive at that speed, although all drivers are expected to drive to the prevailing conditions. For that reason and because unsealed roads perform the same functions as sealed roads, unsealed roads on Eyre Peninsula need to be treated the same as sealed roads with regard to applying the public safety clearance envelopes.
- Many roads on Eyre Peninsula are built at natural ground level and therefore follow the landscape (unlike DPTI roads that tend to be built up). This means that wider clearance envelopes are needed to maintain the whole road formation, including the shoulder, verge and drainage functions, which are key structural elements of the made road.
- Clearance to the required envelopes will be staged over next 15-20 years; therefore, the implementation of the plan can be reviewed and adapted over time.
- The default clearance width will be 2m on either side beyond the travelled way for Categories A to C and 1.5m for Category D. Wider envelopes will only be implemented where there is a demonstrable public safety need and an acceptable native vegetation impact, as determined through the Annual Works Risk Management Program (Section 6).
- If wider envelopes are not considered necessary for public safety, then clearance will only occur to the minimum width (e.g. 2m either side of the travelled way), unless mitigating factors make it otherwise necessary (e.g. drainage, intersections, environmental factors).
- The clearance envelopes in Table 4 only apply to trees that have grown since the road was built, regardless of age, but do not apply to remnant vegetation that was growing before the road was built. The removal of remnant vegetation still requires separate NVC approval.
- Large trees (>100cm DBH) within the clearance envelopes would be retained where possible (e.g. along straight sections of road).
- Alternatives to clearance such as rope barriers were considered at the workshop but because they are very expensive, they are unlikely to be used unless alternate funding can be secured (Section 7).

CONSULTATION AND APPROVAL PROCEDURES FOR CLEARANCE FOR PUBLIC SAFETY

Council Approval Requirements

Any person seeking the removal of roadside vegetation for public safety purposes should lodge a Customer Action Request (CAR) with Council. Council may then request that the person complete the relevant application form.

NVC Approval Requirements

Council staff will work with NR EP to apply the mitigation hierarchy through the Annual Works Risk Management Program (Section 6).

If new clearance for public safety is proposed, Council should contact the NVMU who will advise whether separate approval is required.

New vegetation clearance for sight distance at intersections, or any other new clearance for public safety, needs to occur according to AusRoad Standards.

5.2. Annual Works Risk Management Program

5.2.1. Residual Risk assessment

The conservation and public safety risks associated with the roadside maintenance methods and clearance envelopes detailed in Section 5.2 are assessed here. These are considered to be residual risks given that the need to balance public safety and native vegetation conservation risks was a driver of the decisions made at the workshops that resulted in the contents of Section 5.2 – Roadside Maintenance.

The risk assessment is broken down into vegetation types (described below) and potential impacts (e.g. loss of species, individuals or populations), with potential impacts scored qualitatively as low, medium or high and with comments on the scoring (Table 5). The mitigation strategies suggested in the right most column will be tested, implemented and improved via the Annual Works Risk Management Program (below) and Action Plan (Section 7).

Common, fast-growing species: wattles, gums, mallees, hop bush, nitre bush, reeds and other very common native plants on Eyre Peninsula that grow quickly, reproduce readily and are dense or bushy at the driver's eye height.

Large trees (>70cm DBH): trees with this diameter may be remnant trees that the road was built around or if regrowth, they are more likely to be providing ecosystem services than smaller trees. Therefore, they have higher ecological function and higher conservation risk, if removed. They may also be listed species.

Listed species and communities: any individuals of these species and communities, especially saplings or young plants, have high conservation risk, if removed.

Low remnancy species or communities: some vegetation types on Eyre Peninsula have been mostly cleared and this means that some species have lower remnancy rates (percentage of pre-European cover remaining) than others. Plants or communities with low remnancy have a higher conservation risk, if cleared.

Thin strips: roadside vegetation provides important wildlife corridors, especially in areas that have been extensively cleared, and thus have high conservation value. Breaks of only 1-2m can reduce the movement of small birds, reptiles and other fauna. Clearance that removes the full width of native vegetation along a roadside has a high conservation risk, regardless of how common or rare the vegetation is. It is noted that wider corridors have higher value than thinner corridors but creating breaks in a corridor, no matter how thin the corridor is, has adverse impacts on connectivity in cleared or patchy landscapes.

Long-lived species: some plants are very long-lived (70+ years); some become large trees and some may remain relatively small stemmed, shrubby or patchy. These include she-oaks, banksias, flowering woody plants, native grasses and EPBC-listed samphires. Their long life spans mean that there is a high conservation risk, if removed.

Table 5: Residual risk assessment for the proposed methods and clearance envelopes.

Vegetation type	Conservation risk	Public safety risk	Comments	Mitigation strategies
Common, fast growing species	Low	High	At driver's eye level. Rapidly regrow or colonise roadsides between treatments.	Whole plant removal to full clearance width will have little conservation risk; increases efficiency.
Large trees	Medium to High	High	Non-frangible vegetation; may be remnant vegetation or valuable regrowth.	Assess risk for each road section. Avoid removal if >2m from edge. Install barriers. Preferentially retain on low traffic and straight roads.
Thin strips	High	Variable	Thin strips generally easier to look through than wider strips. May comprise large, non-frangible vegetation <2m to edge.	Assess road sections where proposed envelope will create gaps in roadside vegetation. Reduce clearance envelope width to minimum.
Listed species and Communities	High	Variable	Some species and communities are frangible, low growing and highly suited to the living verge environment.	Map and assess risk for each road section. Avoid disturbance, retain frangible species as close to road as possible. Reduce clearance width to 2m or less for non-frangible, depending on road use. Preferentially retain on low traffic roads.
Low remnancy	High	Variable		
Long-lived species	Medium to High	Variable		

5.2.2. Annual Works Risk Management Program

The risk management program detailed below and in Figure 7 will be undertaken in partnership with DEWNR to ensure that clearance impacts are mitigated, where listed species and other vegetation types of high conservation significance, as agreed by Councils and DEWNR, occur.

It has been developed in consultation with the Councils, NR EP and NVMU and is broadly seen as the right approach that enables all parties to participate and be engaged annually in achieving the right balance between public safety and native vegetation conservation. It is tailored to the level of mapping that is currently available but has the potential to be improved as mapping and operational efficiencies are also improved. It is also focused on each Council's annual works program and does not require forward planning, although it can be used to assess works at any time of year as additional activities are identified or required. It will foster the already strong working relationship between NR EP and the 11 Councils and will be continuously improved through meetings, workshops and program evaluation.

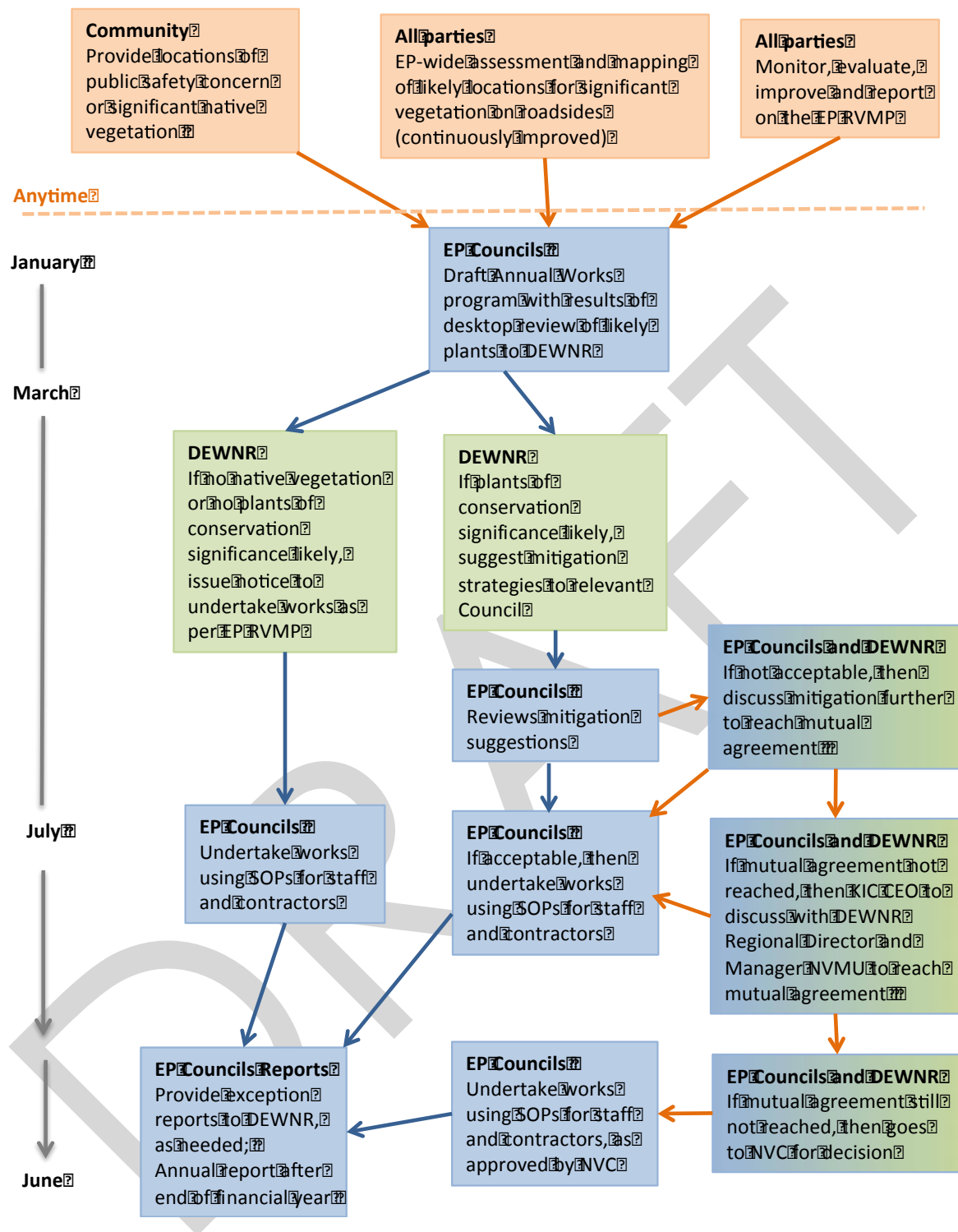


Figure 7: Schematic diagram of the Annual Works Risk Management Program.

The Annual Works Risk Management Program has the following steps (Figure 7):

1. Eyre Peninsula-wide assessment of likely locations of listed species and communities (National, State or Regional) or other plants of conservation significance along roadsides using available information (e.g. NatureMaps, GIS layers provided by Councils and NVMU).
2. Draft annual works program provided to DEWNR (NR EP) in March each year for the following financial year's works program. Desktop review is also provided to NR EP based on lists and maps of the likely locations of species of conservation significance (national, state or regional listed, low remnancy, landscape significance etc).
Note: the works program can be altered at any time and thus additional works may need to be assessed throughout the year even though the focus is on the planned annual works program.
3. DEWNR will consider the Annual Works with regard to proposed methods for vegetation treatment on a road-by-road basis. This is likely to be in the form of a spreadsheet of Council's works programs with operational comments alongside road segments and outputs of desktop vegetation assessment (see template in Appendix F). Note that only 'significant' clearance needs to be assessed, that is, clearance that is greater than 2m from the edge of the travelled way or areas of plants of conservation significance within 2m of the travelled way.
4. If no plants of conservation significance are considered likely to occur, then acknowledgement of notice to undertake works acceptable risk is issued by DEWNR – road segment scale. Councils then use their own SOPs and contract management procedures (includes contractor sign-off of SOPs) to undertake works to specifications in the EP RVMP (e.g. clearance widths, methods)
5. If plants of conservation significance are considered likely to occur, DEWNR will apply mitigation hierarchy and provide details of mitigation required (e.g. altered methods to reduce clearance impacts, patches/species/communities to avoid or protect).
6. Council reviews mitigation suggestions and provided that they meet safety and road usability requirements, then accept the mitigation to reduce harm to acceptable levels – road segment scale. Councils then use their own SOPs and contract management procedures (includes contractor sign-off of SOPs) to undertake agreed modified works.
7. If mitigation suggestions are not acceptable to Council, then DEWNR and Council staff discuss to reach mutual agreement. Failure to achieve mutual agreement elevates the decision to Council CEO, DEWNR Regional Director and NVMU Manager.
8. If mutual agreement is still not reached, then goes to Native Vegetation Assessment Panel (NVC) for decision.
9. Reporting of implementation against works program is provided by Councils to DEWNR after the end of financial year (includes methods and DEWNR vegetation assessment entered into Council's works spreadsheet linked to roads database; see Appendix F). Note Council will undertake spot checks on own and contractor works and provide exception reports to DEWNR.

Work flow for complaints to DEWNR – the complaint will be directed to the relevant local Council.

Work flow for complaints to NVMU – will need to be followed up as potential compliance breach.

Council Contract Management

Most Councils already have contract management procedures in place that require contractors to:

- Sign that they have read and understood the EP RVMP in the tender
- Sign a project sign on sheet that stipulates the road location, category, type and agreed width of the clearance area
- Be responsible for the remedy of any defects or omissions that are attributable to their operations
- Minimise soil disturbance by keeping cutting equipment 100-200mm above ground level, where practical
- Use DEWNR hygiene practices, where appropriate
- Cut, mulch and chip all material in the clearance zone
- Adhere to specified clearance heights and widths – with 'common sense approach' to improving sight distances on curves and at intersections
- Keep machinery within the clearance envelope, where practicable, noting protruding limbs should be removed (cleanly) at the collar
- Be aware that deviation from the parameters of the work permitted in the RVMP will result in a breach of the *Native Vegetation Act 1991*, which will be investigated and may result in a Non-Conformance Notice (with required mitigation works being required) and/or a fine being applied
- Be aware that DEWNR are consulted prior to the works program being finalised

If NVC serve a Notice 31 on any of the Eyre Peninsula Councils as owners of a given road where a breach has occurred, then the contractor will be responsible or contractually liable through these contract management arrangements, if a Contractor undertook the works that were in breach.

5.3. EP RVMP Roadside Maintenance Action Plan

Project	Who	When
Annual Works Risk Management Program – Establishment Conduct workshop with NR EP, Council Works Managers and NVMU to refine the program, identify roles, responsibilities, threats and opportunities, develop record keeping and risk assessment tools and determine evaluation questions.	All parties	After EP RVMP approval
Contractor and staff plant identification training. Plant identification training will be held for Council staff and contractors with a focus on the different vegetation types in the residual risk assessment (Section 6.1; e.g. common fast growing species as well as threatened or rare species). Develop tools to assist with on-site identification (e.g. grader operators guide).	NR EP, Councils	After EP RVMP approval
Eyre Peninsula wide assessment of likely locations of listed species and communities or other plants of conservation significance. This should be a relatively quick and easy project for a GIS analyst (in-house or contractor). Lists of relevant species and communities for Eyre Peninsula need to be developed.	GIS analyst, NR EP, NVMU	After EP RVMP approval
Annual Works Risk Management Program – Evaluation Evaluation and recommendations for improvement regarding: time commitments, efficiency and timeliness of works assessment and mitigation, costs, adequacy of mapping information, capacity to achieve clearance envelopes with minimal long term impacts on native vegetation.	All parties	12 months after commencement
Improve mapping and significant vegetation predictions Develop GIS to interrogate the available vegetation data against the proposed annual works program as part of the initial desktop review. Develop a process for improving mapping as more information/data becomes available. Undertake a regional vegetation over time, with priorities driven by the risk assessment.	Councils, EP LGA, NR EP	On-going
Seek funding for protective barriers or other on-ground works to protect significant vegetation (e.g. rope barriers for large trees).	NR EP, Councils	On-going
Develop and expand a blue marker scheme (or similar) for identifying and protecting significant roadside vegetation.	NR EP, Councils	On-going
Improve the YourSay website and develop a process for incorporating community inputs into risk management.	NR EP, Councils	On-going
Seek funds to undertake research and development into roadside management methods, including establishment of monitoring sites and case studies to evaluate different width clearance envelopes and different treatments.	All parties	On-going

6. Additional Roadside Vegetation Management Issues covered by this EP RVMP

This section of the EP RVMP:

- Identifies and describes activities and management issues that may impact on native roadside vegetation
- Provides guidelines to minimise or mitigate the likely impacts of these activities
- Details the consultation and approval processes that must be followed if roadside activities are being planned that involve clearance of native vegetation

For each activity or issue there is a standard text box entitled 'Consultation and Approval Processes' that identifies when 'clearance approval' is and isn't required. The term 'clearance approval' should be interpreted as:

- Native vegetation clearance approval is needed under the Native Vegetation Act 1991.
- The NVMU within DEWNR should be the first point of contact regarding such clearance. The NVMU may be able to approve clearance of a small amount of vegetation known to be common to an area without the need for a formal clearance application.
- The NVMU will determine whether the proposed clearance requires formal clearance approval from the Native Vegetation Council in the form of a Clearance Application.

The Quick Reference Guide (Appendix A) shows what is considered 'minor clearance' not needing NVC approval and what does need approval. Minor clearance refers to very minor and localised clearance, such as pruning of branches or removal of one or more tree saplings or shrubs that are known to be common in the area. If in doubt about what constitutes 'minor clearance', then contact the NVMU to clarify before undertaking the roadside management activity in question.

NVMU contact details

Both the Native Vegetation Management Unit and the Native Vegetation Council can be contacted at:

GPO Box 1047 ADELAIDE SA 5001

Telephone {insert phone number}

Fax {insert phone number}

Email nvc@sa.gov.au

Web www.environment.sa.gov.au/nativevegetation

NREP contact details

Natural Resources Centres and Offices are located in Ceduna, Port Lincoln, Cleve, Elliston, Streaky Bay, Whyalla, Tumby Bay and Wudinna.

See <http://www.naturalresources.sa.gov.au/eyrepeninsula/find-us> for contact details.

Council investigation and enforcement

In addition to penalties applicable under the *Native Vegetation Act 1991*, penalties of up to \$5,000 apply to the unauthorised interference, planting and/ or removal of roadside vegetation pursuant to Section 221 of the *Local Government Act 1999*. Council will adopt a consistent approach to the deterrence and investigation of, and response to, the unauthorised planting, interference and/ or removal of vegetation on our roadsides. This approach may include public notification of unauthorised vegetation damage via letters drops, signage and media engagement, remediation works including replacement plantings and/ or the prosecution of offenders. Council will also refer any unauthorised clearance of native vegetation on our roadsides to the Native Vegetation Management Unit (NVMU).

6.1. NEW ROADS

Objectives

- Ensure road construction activities meet road safety standards whilst minimising disturbance to roadside native vegetation.

Councils sometimes need to undertake new roadworks that involve clearance of mature or relatively undisturbed native vegetation. These works include construction of new roads along previously undeveloped road reserves, and the widening or realignment of existing roads. New roadworks also include the construction of new drains, stockpile sites, borrow pits or any other new works incidental to road construction or roadwork as defined in the **Local Government Act 1999**.

Clearance associated with new roadworks **requires approval by the Native Vegetation Council under Regulation 12(34)** via Pathway 4: Risk Assessment, which is a separate process to the RVMP.

These activities could have significant environmental impacts and it is important that the vegetation be assessed prior to the works. If significant vegetation is present it may be possible to modify the roadworks to reduce or avoid critical impact.

CONSULTATION AND APPROVAL PROCEDURES FOR NEW ROADWORKS

Clearance approval under Regulation 12(34) is required for new roadworks (such as construction, widening, realignment, new drains, borrow pits or stockpile sites) that involve clearance of native vegetation. *Where clearance is required for public safety, Regulation 11(23) may apply.*

NOTE: (1) This requirement does not apply to very minor and localised clearance, such as pruning of branches or removal of one or two tree saplings or shrubs that are known to be common in the area. If in doubt as to what constitutes minor clearance, consultation with the Native Vegetation Management Unit is recommended.

(2) Prior to any work being undertaken, it is recommended that the Native Vegetation Management Unit or a suitably qualified person with good plant identification skills be consulted. It is possible that the site may contain small, visually insignificant plant species, such as orchids or native grasses that are of particular conservation significance.

Local Councils are asked to contact the Native Vegetation Management Unit early in the planning and design stages of new roadworks, in order to obtain information about potential native vegetation issues and any associated clearance approval requirements under the Native Vegetation Act 1991, therefore minimising delays.

6.2. INSTALLATION AND MAINTENANCE OF SERVICES

Objective

- Maintain a safe operating environment whilst minimising adverse impacts of installation and maintenance of services on roadside native vegetation.

Traditionally, services such as powerlines, water supplies, gas and telecommunications have been established along roadsides and road reserves. Construction of these services can involve clearance of native vegetation, as can ongoing maintenance of those services.

New Services

Installation of any new services involving the clearance of native vegetation on roadsides requires a submission to the NVC under Native Vegetation Regulation 12(34) – Infrastructure. This regulation permits clearance of native vegetation for the construction or expansion of a building or infrastructure that the Minister for Environment and Conservation considers to be in the public interest, provided that it is undertaken in accordance with an NVC-approved Standard Operating Procedure.

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 environmental laws, including the *Native Vegetation Act 1991*. However, the carrier must comply with the requirements of the *Telecommunications Act* and the *Telecommunications Code of Practice 1997*.

Maintenance of Services

Maintenance works associated with electricity supply and other infrastructure, such as water and gas, are permitted under Native Vegetation Regulation 8(2) - Maintenance of Infrastructure. See A Guide to the Native Vegetation Regulations 2017 for more information,

http://www.environment.sa.gov.au/Conservation/Native_vegetation/Managing_native_vegetation.

In some circumstances, the service provider is required to give the relevant Council ten business days notice in writing outlining the proposed clearance. Such notice is not required if the service provider is acting in accordance with a Standard Operating Procedure approved by the NVC or in the case of emergency situations, such as the need to restore power following an outage.

A service provider undertaking vegetation clearance on a roadside for infrastructure maintenance purposes must follow guidelines issued by the NVC in relation to the protection of native vegetation from the spread of plant diseases or noxious weeds, or from unnecessary damage. A service provider must also follow guidelines and requirements included within this RVMP.

CONSULTATION AND APPROVAL PROCEDURES FOR CLEARANCE ASSOCIATED WITH INSTALLATION AND MAINTENANCE OF SERVICES

Council Approval Requirements

- Pursuant to s 221 of the Local Government Act 1999, any person wishing to construct new services within a road reserve must obtain prior approval from Council, unless that person has some other statutory authorisation to make the alteration.

NVC Approval Requirements

- Clearance approval is required for native vegetation clearance associated with any new services or maintenance of services in excess of existing standards (excluding carriers authorised under the Telecommunications Act 1997 to install a low impact facility) - refer to Regulation 12(34) – Infrastructure.

- Approval is not required for maintenance of existing clearances, i.e. clearance around powerlines pursuant to the Electricity Act 1996 – refer to Regulation 8(2) - Maintenance of Infrastructure.

6.3. BUSHFIRE PROTECTION

Objective

- Minimise the adverse effects of fire management on roadside native vegetation, whilst taking reasonable steps to inhibit the outbreak of fire on roadsides and the spread of fire along roadsides.

The **Fire and Emergency Services Act 2005** places an onus on Councils to take reasonable steps to prevent or inhibit the outbreak of fire on roadsides and the spread of fire through roadsides, i.e. Part 4A, Division 3 105G, states:

- (1) A council that has the care, control or management of land—*
- (a) in the country; or*
- (b) in a designated urban bushfire risk area, must take reasonable steps—*
- (c) to prevent or inhibit the outbreak of fire on the land; and*
- (d) to prevent or inhibit the spread of fire through the land; and*
- (e) to protect property on the land from fire; and*
- (f) to minimise the threat to human life from a fire on the land.*

Councils are also required to adhere to the **Native Vegetation Act Regulations 2017**, provide provisions to enable clearance and management of native vegetation for Bushfire Protection works, i.e. under **Regulation 9(1), Pathway 2: Fire Hazard reduction**. Achieving the goals of both Acts can be difficult and requires careful planning.

6.3.1. Guidelines – Bushfire Hazard Reduction

All bushfire protection works on roadsides will link with the **Upper Eyre Peninsula and Lower Eyre Peninsula Bushfire Management Plans** that covers works to protect assets or maintain fire tracks or fire breaks.

Prescribed burning of native vegetation, if followed up with weed control methods such as selective spraying or hand weeding, can be a useful management tool for lowering fuel levels. It is noted that fires can also encourage weeds that increase fire risk and can lead to loss of biodiversity over time if used too frequently or at the wrong time. Prescribed burn plans will be prepared and approved by CFS.

Where a well-vegetated road reserve adjoins cleared farmland, any required fuelbreak will be established on the cleared land rather than through clearance of roadside vegetation, by preference.

Councils will encourage and re-iterate the importance of **landowners having property-specific bushfire management plans and leaving early during fires**.

CONSULTATION AND APPROVAL PROCEDURES FOR BUSHFIRE PROTECTION

Council Approval Requirements

Removal of native vegetation on a roadside to reduce bushfire hazard requires the consent of the local Council. In granting any consent, Council will comply with relevant provisions of the Native Vegetation Regulations 2003, including Regulation 9(1) as outlined below.

CFS Approval Requirements

Advice and written approval from the CFS Regional Prevention Officer is required if any proposed bushfire prevention work on Council roadsides is not covered by the Upper Eyre Peninsula or Lower Eyre Peninsula Bushfire Management Plans.

If any proposed bushfire prevention works on Council roadsides are not covered by the rules and activities described in these documents, the CFS will refer the matter to the NVC for approval.

NVC Approval Requirements

The Native Vegetation Regulations 2003 contain provisions enabling the clearance and management of native vegetation for Bushfire Protection works. Under Regulation 9(1) - Fire Prevention and Control, native vegetation can be cleared if:

(i) the purpose of the clearance is to reduce combustible material on land, and

(ii) the clearance:

(A) is required or authorised by, and undertaken in accordance with, a bushfire prevention plan (equivalent to a Bushfire Management Plan under the Fire and Emergency Service Act 2005), or

(B) is undertaken in accordance with the written approval of the Chief Officer of SACFS.

Clearance approval from the NVC is required for any native vegetation clearance, which exceeds that allowable under Regulation 9(1).

NOTE:

- Reference to a Bushfire Prevention Plan is deemed to be that referred to under the Fire and Emergency Service Act 2005, as a Bushfire Management Plan.
- For the purpose of part B above, approval is from the Chief Officer of SACFS or authorised delegate – i.e. the CFS Regional Prevention Officer.
- There may be constraints under other legislation that need to be complied with, such as the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999.

6.4. CLEARANCE FOR FENCELINES

Objectives:

- Enable landholders to gain appropriate access to fencelines for maintenance and construction purposes, whilst minimising disturbance or loss of native vegetation.
- Encourage alternative approaches for erecting fences that minimise the clearance of roadside vegetation.

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.

In granting any consent, the local Council must comply with the following standards:

- Where the roadside vegetation consists largely of trees, only branches protruding through or overhanging the fence, or trees growing on the actual fence alignment, should be removed.
- Where shrubs or bushes are growing through the fenceline, those plants growing within 1 m of the fence alignment can be removed.

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

These standards take into account that the adjoining landholder can usually clear up to five metres in width on the private land abutting the road, thus allowing for vehicular access to the fence – refer to Regulation 8(14).



Figure 9: Fenceline strut arrangement for retaining trees along new fencelines.

Note: this approach may not be appropriate for smaller trees, and an effort should be made to avoid structural roots when placing the post hole for the strut next to the tree.

CONSULTATION AND APPROVAL PROCEDURES FOR CLEARANCE FOR FENCELINES

Council Approval Requirements

A landholder who wishes to clear any vegetation (native or exotic) on a road reserve to enable construction or maintenance of a boundary fence must obtain prior written approval from their local Council by submitting an s221 Application form for altering a road. When assessing the application, Council staff will have regard to the requirements of this RVMP and Council's policies.

Council may only approve clearance of native vegetation which complies with the following standards:

- Where the roadside vegetation consists largely of trees, only branches protruding through or overhanging the fence, or trees growing on the actual fence alignment can be removed.
- Where shrubs or bushes are growing through the fenceline, only those plants growing within one metre of the fence alignment can be removed.

NVC Approval Requirements

Clearance approval from the NVC is required for any clearance of native roadside vegetation along fencelines that exceeds the above standards.

Note: These standards take into account that the adjoining landholder can usually clear up to five metres width on the private land abutting the boundary fence - see Regulation 8(14).

Note: this regulation does not provide an automatic right to clear a five-metre strip on private land abutting a fence. If native vegetation on an adjacent property is located within five metres of a fence but does not impede reasonable access to the fence, the regulation cannot be used to clear that vegetation. Landholders should refer to the relevant information sheet published by the NVMU for further details.

6.5. CLEARANCE FOR ACCESS TO ADJOINING LAND

Objectives:

- Minimise the disturbance or loss of native vegetation when property access points are being constructed.

New access points are often needed from the road to adjoining land. For example, a primary producer may need new access to a paddock, possibly to cater for wide farm machinery or a new residential allotment may need a normal vehicular access. Access is generally for a single driveway only, unless the South Australian Country Fire Service supports additional access points for safety reasons.

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 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:** 5 m wide plus minimum clearance along the road reserve to provide adequate sight distance.
- **For wider farm vehicles:** 10 m wide plus minimum clearance along the road reserve needed to provide adequate sight distance.

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

Avoiding unnecessary clearance

- Care must be taken to avoid plant communities of conservation significance and naturally open areas such as native grassland, sedgeland and wetland.
- Where possible, access points will not be permitted on Category "A" road reserves.
- A suitably qualified person(s) should conduct an inspection to assess options for access points, and negotiate an access point that is safe and minimises disturbance to native vegetation.

CONSULTATION AND APPROVAL REQUIREMENTS FOR ACCESS TO ADJOINING LAND

Council Approval Requirements

All persons wishing to have any vegetation (native or exotic) on a road reserve removed to provide access to adjoining land must submit an s221 Application form for altering a road. In assessing the application, Council staff will have regard to the requirements of this EP RVMP.

Council may only approve clearance of native vegetation, which complies with the following standards:

- For normal vehicle access: five metres wide plus minimum clearance along the road reserve needed to provide adequate sight distance.
- For wider farm vehicles: ten metres wide plus minimum clearance along the road reserve needed to provide adequate sight distance.

In addition, approval is needed through the Native Vegetation Management Unit for any proposed clearance of native vegetation for access that exceeds the above standards.

6.6. PEST PLANT AND ANIMAL CONTROL

Objectives:

- Use best practice, low impact methods to control existing pest plants and animals, whenever possible, to minimise disturbance or damage to roadside native vegetation.
- Reduce the establishment of new pest plants and animals in road reserves

Pest plants and pest animals are commonly known as 'weeds' and 'feral animals'. They can invade rural land or natural habitats and because of their characteristics and/or location; they can cause economic, ecological, physical or aesthetic problems, often with significant potential impacts on local and regional biodiversity.

Pest plants and animals can be categorised as those that require control under legislation ("**declared**" species) and those that, whilst still damaging, are not considered significant enough to warrant legislative control at this stage.

The control of declared species on roadsides falls under the jurisdiction of NREP under the **Natural Resource Management Act 2004**; landholders are responsible for the control of pest species on their land and NRM Boards (or NRM Groups, where they exist) have the responsibility to control declared pest plants or pest animals on road reserves.

Within some local Council areas, **landholders** may be required to contribute to the control of pests on adjacent roadsides. Where landholders opt to control the pests on adjacent roadsides they must seek approval of NREP and the local Council. Local Councils can only give consent if they are acting in accord with the **Native Vegetation Act 1991** and have the relevant approvals or exemptions regarding clearance.

Management Principles to be adopted for Council works:

- Use minimum disturbance techniques such as hand-pulling (minimising soil disturbance) and 'cut-and-swab' with herbicide for small infestations of weeds;
- Work from the best areas of bush or areas of low weed infestation towards denser infestations and lesser value native vegetation;
- Use spot-spray and selective herbicides on days with low likelihood of spray drift to avoid off-target damage;
- Re-vegetate areas to provide effective long-term weed control; and
- Use an integrated pest-control approach, where possible.

It is a legal requirement that clearance of native vegetation during programs for the control of declared pest plants and animals must be kept to the minimum needed for effective control in accordance with advice from NREP.

The relevant NVC guidelines entitled "Clearance of Native Vegetation associated with the control of plant and animal pests" can be found on the NVC website: www.environment.sa.gov.au.

Advice on pest control methods and lists of declared species are available from NREP.

CONSULTATION AND APPROVAL PROCEDURES FOR PEST PLANT AND ANIMAL CONTROL

Council Approval Requirements

Any person wishing to undertake pest plant and/or animal control work on a roadside must submit an s221 - Application form for altering a road. In assessing the application, Council staff will have regard to the requirements of this EP RVMP.

NVC Approval Requirements

(a) Clearance approval is required where a proposed animal or plant control program is likely to cause significant damage to native roadside vegetation. "Significant" in this context includes:

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

(b) NREP have developed overall management strategies in consultation with the NVMU, which could reduce the need for consultation on a case-by-case basis.

(c) Where pest control works are planned (including by adjoining landowners) that could affect roadside native vegetation, NREP should be the first point of contact. The need for consultation with the NVMU can then be determined.

6.7. REMOVAL OF PLANT MATERIAL

Objectives

- Minimise the amount of plant material removed to prevent reduced vigour.

The removal of plant material from roadsides includes **collection of dead timber for firewood; cutting of live timber; seed collection; and flower harvesting.**

All such activities require the consent of the Local Council and other constraints may also apply, as set out below.

6.7.1. Collection of Dead Timber

Dead timber generally refers to woody debris from standing or fallen dead trees or branches. It does not usually encompass fine fuels² – which generally refer to grass, leaves, bark and twigs less than 6mm in diameter.

Dead timber on roadsides is not controlled under the **Native Vegetation Act 1991**, except in the case of **dead plants** in some parts of the state that provide habitat for nationally threatened species. Contact the NVMU for further details, including a fact sheet, *Dead trees as native vegetation*, also available at – http://www.environment.sa.gov.au/Conservation/Native_Vegetation/Managing_native_vegetation/Clearance_guidelines

Local Councils can **control collection of dead timber** under the **Local Government Act 1999**. Collection of dead timber should not be permitted unless necessary for fuel reduction in the **Upper Eyre Peninsula or Lower Eyre Peninsula Bushfire Management Plans**; to assist rabbit control; or to remove timber which is hazardous to traffic or fencing (e.g. in areas where the hydroaxe has recently been working). When permitting collection of dead timber, Councils will take care to prevent damaging surrounding native vegetation in the process of removal, and where possible, will not permit collection in areas of vegetation of high conservation significance.

6.7.2. Cutting of Live Timber

Any cutting of live timber, other than that allowed for roadside management under these guidelines, **requires the consent of local Council** and also clearance approval under the *Native Vegetation Act 1991*.

6.7.3. Seed Collection

Revegetation programs using local native species are strongly supported and roadsides are often ideal sites for seed collection. However, care is needed to minimise the damage to the parent plant and to avoid depleting the seed supply to such an extent that natural regeneration of plants on the roadside is affected.

The **collection of seeds, cuttings and specimens** from roadsides, requires the **consent of the local Council**.

² <http://www.cfs.sa.gov.au/site/home.jsp>

A **permit** is also needed under the **National Parks and Wildlife Act 1972** and can be requested from the Permit Unit, Department of Environment Water and Natural Resources, (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.

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**, a **permit** from the Department is **also needed**. It should be noted that expertise is required to know how and when to collect seed from some native plants to ensure collection of viable seed. Such expertise should be sought from NREP.

The collection of seeds, cuttings or other specimens from native plants **does not require consent from the Native Vegetation Council** provided that 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.

6.7.4. Flower Harvesting

The harvesting of flowers from roadsides requires the **consent of the local Council and clearance approval**.

The local 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 or amenity of the area.

CONSULTATION AND APPROVAL PROCEDURES FOR REMOVAL OF PLANT MATERIAL

Council Approval Requirements

- Public collection of roadside timber is permitted within the Eyre Peninsula Councils.
- Any person wishing to collect plant material (including seeds or fruit) on Council land must send a written request to Council, detailing all proposed collection locations and in the case of native plant material, their permit number from DEWNR.
- All other removal of plant material from a roadside (developed or unmade) requires the prior written approval of the local Council.

NVC Approval Requirements

Removal of native plant material from road reserves also requires clearance approval under the Native Vegetation Act 1991 in the following circumstances:

- removal of dead trees native to South Australia that have a trunk circumference of 2 metres or more (measured 300mm above the base of the tree) and provide or have the potential to provide habitat for nationally listed threatened animal species
- note that for this region, there are currently no nationally threatened fauna species that utilise hollows. However, check with a NREP for any updates and for information on regional threatened fauna species that require hollows before collection.
- any cutting of live timber outside the scope of the guidelines in this RVMP
- the harvesting of native flowers, seed or fruit (particularly commercial harvesting) if substantial damage to native vegetation is likely as a result.

DEWNR Permit Requirements

A permit from the Department for Environment, Water and Natural Resources (DEWNR) is required to collect native plant material from public land in South Australia. Native plant material includes flowers, seeds, leaves, cuttings and any other part of the plant. See further details under guidelines above.

6.8. MAINTAINING BIODIVERSITY ON ROADSIDES

Objectives for Maintaining Biodiversity

- Maintain and enhance native vegetation diversity on roadsides and in road reserves in order to conserve genetic material and habitats for other native plants and animals.

Biodiversity along roadsides is under **threat** from processes **other than direct clearance**. In some cases, there is evidence of a steady decline of native vegetation due to a wide range of factors, many of which are exacerbated by the long-narrow shape of roadside vegetation. Examples include: lack of natural regeneration, sprays and diseases.

Local Councils are encouraged to maintain high levels of awareness and undertake risk management with NREP before undertaking roadside works (see Section 5.2).

Burning or pollarding (pruning) to enhance native vegetation may constitute **clearance** in terms of the **Native Vegetation Act 1991** and therefore require clearance approval under the Act or the **Native Vegetation Regulations 2017**. For example burning an area may be required to promote natural regeneration in an area where species are declining. Or, removal of mistletoe or lopping of limbs may be proposed as a short-term means of protecting unhealthy host trees heavily infested with mistletoe. Such activities must be **carefully planned** and the results must be monitored and evaluated so that learning and improvement of management can occur.

Regulations 8(15) and 11(25) allow for the clearance of native vegetation to address some of these problems. Contact NREP or NVMU for advice on maintaining roadside biodiversity.

There are no legal requirements under the **Native Vegetation Act 1991** in relation to the control of **diseases of plants** along road reserves. However, Local Councils are encouraged to require that activities in areas that are known to be infested (e.g. *Phytophthora cinnamomi*), will only be permitted if they are conducted using best practice and minimal disturbance techniques.

Please report the death of groups of susceptible native plants to NREP.

Intentional **dumping of garden waste** on roadsides can create new weed infestations. The **Natural Resources Act 2004** can be used to control these activities if the plant material being dumped is from a declared species. Otherwise the **Local Government Act 1999** applies; under which a Local council can investigate illegal dumping, issue penalty notices and require clean up action.

CONSULTATION AND APPROVAL PROCEDURES FOR ECOLOGICAL PRESCRIBED BURNING

Council Approval Requirements

Any person or organisation wishing to conduct an ecologically prescribed burn on a roadside must obtain prior written consent from Council.

NVC Approval Requirements

Modification of native roadside vegetation for the maintenance of vegetation biodiversity using ecological prescribed burning under Regulations 8(15), 11(25)) or other disturbance methods requires clearance approval from the NVC. Seek advice from the NVMU at the beginning of the planning stage.

CONSULTATION AND APPROVAL PROCEDURES FOR PLANT DISEASES

Council Approval Requirements

Any activity occurring within a road reserve known to be infested with plant diseases requires consultation with their local Council. Consent will only be granted if works are to be conducted in accordance with appropriate guidelines.

Any person wishing to take action to control plant diseases on a Council roadside, must first apply for approval.

NVC Approval Requirements

There are no legal requirements under the Native Vegetation Act 1991 in relation to management of plant diseases along road reserves.

Clearance approval is required where modification of roadside vegetation using measures such as lopping is proposed as a tool to manage plant infestations and maintain diversity.

6.9. UNDEVELOPED ROAD RESERVES

Throughout Eyre Peninsula there are many surveyed road reserves that have never been developed as roads. Some are totally cleared and pass unmarked through farm paddocks. Although of low ecological value, these areas may be suitable for revegetation projects or SEB offsets. Other undeveloped road reserves have relatively undisturbed native vegetation and are of high conservation value.

6.9.1. LEASED ROADS

Many undeveloped road reserves are leased to adjoining landholders for **grazing or cropping**. In this situation, any clearance of native vegetation (e.g. for cropping purposes) would require clearance approval, as would any change in grazing practice, which increased the pressure on native vegetation.

6.9.2. ROAD CLOSURES

Proposed road closures by local Councils need careful consideration as these sites are often important for native vegetation conservation or as potential revegetation corridors. Both the opening and closing of roads is controlled in South Australia through the **Roads (Opening and Closing) Act 1991**.

CONSULTATION AND APPROVAL PROCEDURES FOR UNDEVELOPED ROAD RESERVES

The consultation and approval requirements of the EP RVMP apply generally to undeveloped road reserves. In addition, local councils should advise the NVMU about any proposed road closures.

Modification of native vegetation on *leased* roads, by direct clearance or changed grazing practice, requires NVC clearance approval.

6.10. RECREATIONAL USE OF ROAD RESERVES

Objective

- Minimise adverse impacts of the use of recreational activities on native roadside vegetation.

Road reserves (both developed and undeveloped) can provide **recreational opportunities** such as walking, horse and/or bicycle trails. All of these activities have the potential to significantly disturb native vegetation if not properly managed.

Development of additional walking, bicycle and/or horse trails on roadsides and/or unmade roads requires NVC approval.

The Councils do not support the "off-road" use of roadsides and unmade roads by recreational vehicles (i.e. 4WDs and motorcycles) due to the extensive damage that can be caused to both vegetation and soils.

Recreational trails will be part of an overall district or regional trails plan developed with NR EP (e.g. Eyre Peninsula Coastal Access Strategy) and Councils will apply the mitigation hierarchy (Appendix B) when developing new trails.

Council should also **consult with DPTI** and have regard to their trail ranking system when considering alternative uses of Council road reserves i.e. revegetation, granting of an Unmade Road Rental Permit etc.

"Off-Road" Recreational Vehicle Use

- Inappropriate "off-road" use of Council roadsides and unmade roads by recreational vehicles (i.e. 4WDs and motorcycles) is a recurring issue in some areas of the Council district. In some instances, significant damage to native vegetation has occurred as a result.
- Where public access is not required to a road reserve being targeted for use by off-road recreational vehicles, Council may give consideration to excluding public traffic from that section of road reserve pursuant to Section 359 of the *Local Government Act 1999*. Priority will be given to excluding recreational vehicles from those road reserves with native vegetation of the highest ecological value.
- Prior to deciding whether or not to exclude public traffic from a road reserve, Council will consult at a minimum with all adjacent landowners. Any decision to undertake a more comprehensive level of public consultation will be made with regard to the requirements of Council's Public Consultation Policy.

CONSULTATION AND APPROVAL PROCEDURES FOR RECREATIONAL TRAILS ON ROAD RESERVES

Council Approval Requirements

Permission is required from Council to conduct any planned recreational event within a road reserve.

Maintenance by others of existing recreational trails along road reserves requires the ongoing consent of the local Council (generally via Council approval of a long-term management plan).

Where the development of a new recreational trail might involve the clearance of native vegetation, Council will apply the mitigation hierarchy with NREP during the planning phase. NREP will advise on mitigation options and whether consultation with and/or clearance approval from the NVMU is required.

xx Councils do not permit "off-road" recreational vehicles activities on roadsides and/or unmade roads. Any unlawful off-road activities within road reserve areas will be reported by Council to the South Australian Police, and if damage to native vegetation occurs, the NVC.

NVC Approval Requirements

NVC clearance approval is required for any trail development involving anything other than minor clearance of native vegetation.

6.11. RESTORATION OF ROADSIDE VEGETATION

Objectives

- Prevent further degradation and encourage re-establishment of native vegetation within road reserves and roadsides.

Restoring roadside vegetation by revegetation of previously cleared roadsides or the rehabilitation of degraded roadsides is encouraged but is typically outside the budgets for most Eyre Peninsula Councils.

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

In addition replanting near powerlines must comply with the **Electricity (Principles of Vegetation Clearance) Regulations 2010** under the **Electricity Act 1996** that lists vegetation that can be planted or nurtured near public powerlines (Schedule 2); while at the same time selecting local native plant species, where possible. SA Power Networks also have information regarding vegetation management around powerlines (see <http://www.sapowernetworks.com.au>).

General advice regarding restoration can be obtained from NREP, organisations such as Trees For Life (Bush Care Sites) and community organisations.

Advice about local native species can be obtained from the Native Vegetation Management Unit.

CONSULTATION AND APPROVAL PROCEDURES FOR RESTORATION OF ROADSIDE VEGETATION

Council Approval Requirements

All environmental restoration, revegetation and other planting activities undertaken on roadsides require prior written approval from Council.

NVC Approval Requirements

Consultation with NREP or NVMU is encouraged where revegetation activities are proposed within open areas of native vegetation (i.e. areas possessing few if any tree or shrubs) as some areas of the State naturally had areas of open grassland, sedgeland and wetland. It is important that any revegetation works should attempt to replicate the natural vegetative structure and species composition.

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8. Abbreviations and Definitions

Some of the terms commonly used in relation to roadside vegetation management in South Australia are listed below and, in the case of road construction, illustrated in the following diagram unless specifically referenced; these terms have been defined for the purpose of these guidelines.

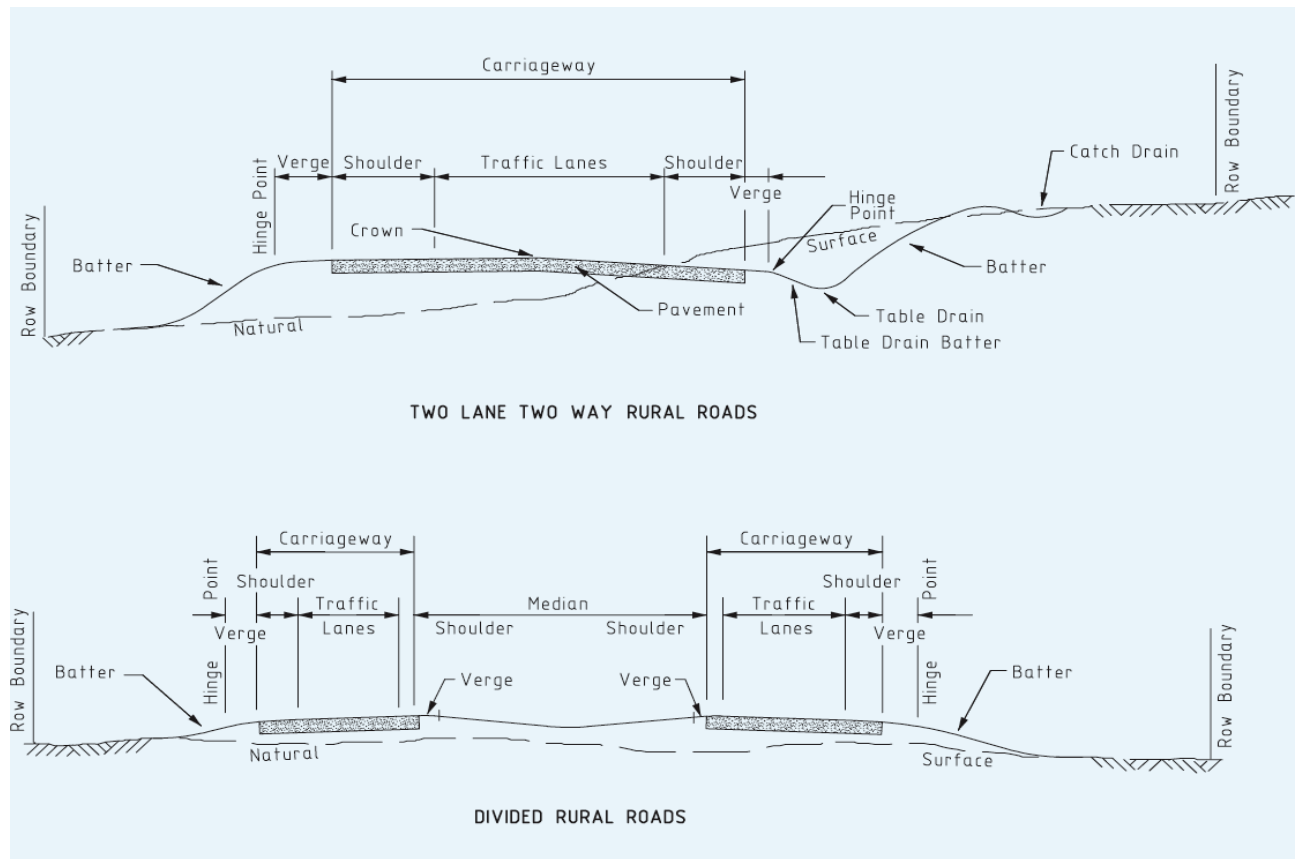


Figure 8 **Typical Cross Sections of rural roads** - Taken from *Rural Road Design: A Guide to the Geometric Design of Rural Roads* (Austroads, 2003).

- **Authorised delegate** - The Minister gazetted authority to approve clearance under Regulation 5(1)(b) (17 December 2009), to the Presiding Member, Native Vegetation Council, the Executive Officer, Native Vegetation Council or in their absence, the Manager Native Vegetation Biodiversity Management Unit, Department of Environment, Water and Natural Resources.
- **Biodiversity or biological diversity** - means the variety of life forms represented by plants, animals and other organisms and micro-organisms, the genes that they contain, and the ecosystems and ecosystem processes of which they form a part (*Native Vegetation Act 1991*).
- **Borrow pit** – an excavation from which earth material (borrow) is dug for use as fill elsewhere.
- **Carriageway** – that portion of a road or bridge devoted particularly to the use of vehicles, inclusive of the shoulders and auxiliary lanes (Austroads, 2003). (Shown on diagram).

Catch drain - a surface channel constructed along the high side of a road or embankment, outside the batter to intercept surface water (Austroads, 2003). (Shown on diagram).

Clearance - within context of the *Native Vegetation Act 1991*) means –

- (a) the killing or destruction of native vegetation;
- (b) the removal of native vegetation;
- (c) the severing of branches, limbs, stems or trunks of native vegetation;
- (d) the burning of native vegetation;
- (e) 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 (*Native Vegetation Act 1991*).

- **Clearance envelope** – the area where vegetation clearance is required to allow for the passage of legal height vehicles across the full width of the carriageway. The **secondary clearance envelope** includes the outer edges of the road formation – shoulders, road verge, drains and around roadside furniture and signs.

Dead plants –under the definition of **Native Vegetation**, means the class of plants, or parts of plants, comprising trees of a species indigenous to South Australia –

- (a) that have a trunk circumference (measured at a point 300 millimetres above the base of the tree) of –
 - (i) in the case of a tree located on Kangaroo Island – 1 metre or more; or
 - (ii) in any other case – 2 metres or more; and
- (b) that provide or have the potential to provide, or are a part of a group of trees or other plants (whether alive or dead) that provide, or have the potential to provide, a habitat for animals of a listed threatened species under the *Environment Protection and Biodiversity Conservation Act 1999* of the Commonwealth, is declared to be included in that definition.
- **Dead timber (firewood)** – generally refers to woody debris from standing or fallen dead trees or branches. It does not encompass fine fuels – such as grass, leaves, bark and twigs less than 6mm in diameter (SA CFS web-site).

Edge of travelled way - Sealed: The edge of the sealed portion of a carriageway ordinarily assigned to moving traffic or a marked edge line if marked.

- Unsealed: The edge of the grader line as defined in Local councils' infrastructure plans.

Formation - The surface of the finished earthworks, excluding cut or fill batters (Austroads, 2010).

Frangible vegetation – Frangible vegetation refers to plants with slender stems which give way break or uproot on impact.

Large tree - A tree (including a dead tree) where the circumference of the trunk of the tree is 2m or more, when measured at a height of 30cm from the base of the tree.

Local Council – is a 'council' constituted under the *Local Government Act 1999*; the principal role being "...to provide for the government and management of its area at the local level and, in particular—

- (a) to act as a representative, informed and responsible decision-maker in the interests of its community; and
- (b) to provide and co-ordinate various public services and facilities and to develop its community and resources in a socially just and ecologically sustainable manner; and
- (c) to encourage and develop initiatives within its community for improving the quality of life of the community; and
- (d) to represent the interests of its community to the wider community; and
- (e) to exercise, perform and discharge the powers, functions and duties of local government under this and other Acts in relation to the area for which it is constituted". (*Local Government Act 1999*, Chapter 2, Section 6).

Maintenance - defined as the adequate vertical and lateral clearance of roadside vegetation required for the safe movement of vehicles.

Modify - The manipulation of native vegetation to reduce the risk to public safety (e.g. pruning, removal of limbs).

Native Vegetation – means a plant or plants of a species indigenous to South Australia including a plant or plants growing in or under waters of the sea but does not include—

- (a) a plant or part of a plant that is dead unless the plant, or part of the plant, is of a class declared by regulation to be included in this definition; or
- (b) a plant intentionally sown or planted by a person unless the person was acting—
 - (i) in compliance with a condition imposed by the Council under this Act or by the Native Vegetation Authority under the repealed Act, or with the order of a court under this Act or the repealed Act; or
 - (ii) in pursuance of a proposal approved by the Council under Part 4 Division 2; or
 - (iii) in compliance with a condition imposed by a Minister, statutory authority or prescribed person or body under—
 - (A) the *River Murray Act 2003*; or
 - (B) the *Water Resources Act 1997*; or
 - (C) any other Act prescribed by the regulations for the purposes of this paragraph;

(*Native Vegetation Act 1991*, Section 3(1)).

Native Vegetation and Biodiversity Management Unit (NVBMU) – is a unit within the South Australian Government Department of Environment, Water and Natural Resources (DEWNR). This unit services the Native Vegetation Council.

Native Vegetation Council - is an independent body established under the *Native Vegetation Act 1991* and appointed by the Minister. It has broad representation, including Local Government, Primary Producers SA, persons with experience in Natural Resource Management, Planning and the Conservation Council of SA. The Native Vegetation Council is serviced by the Native Vegetation Management Unit.

Non-frangible native vegetation – Plants species with a stem diameter (at maturity) of 100mm or greater with rigid, large or sturdy stems which will not readily break, bend or crush upon impact by a typical passenger vehicle, and could be expected to

inflict significant damage to the vehicle and possibly cause injury to vehicle occupants. Measured at a height of 1 metre above natural ground category.

Pavement – That portion of a road designed for the support of, and to form the running surface for, vehicular traffic (Austroads, 2010). (Shown on diagram).

Public road - is

- (a) any road or land that was, immediately before the commencement of this Act, a public street or road under the repealed Act; or
 - (b) any road—
 - (i) that is vested in a council under this or another Act; or
 - (ii) that is placed under a council's care, control and management as a public road after the commencement of this Act, but not including an alley, laneway, walkway or other similar thoroughfare vested in a council; or
 - (c) any road or land owned by a council, or transferred or surrendered to a council, and which, subject to this Act, is declared by the council to be a public road; or
 - (d) any land shown as a street or road on a plan of division deposited in the Lands Titles Registration Office or the General Registry Office and which is declared by the council to be a public road; or
 - (e) any land transferred or surrendered to the Crown for use as a public road that was, immediately before the transfer, held by a person in fee simple or under a lease granted by the Crown,
- (and includes any such road that is within the boundaries of a public square);
(*Local Government Act 1999*, Section 4).

Public safety - The safety of persons or property, including the safety of—

- (a) the drivers of and passengers in vehicles; and
- (b) persons in or in the vicinity of (or likely to be in or in the vicinity of) roads, road infrastructure and public places; and
- (c) vehicles and any loads in or on them: (*Road Traffic Act 1961*)

Property Line - The boundary between a road reserve and the adjacent land (Austroads, 2010).

Reduce - The manipulation of native vegetation to lessen the likelihood of risk to public safety. This may include the removal or modification of native vegetation.

Regulated tree - A regulated tree under sub-regulation (1) of the *Development (Regulated Trees) Variation Regulations 2011*, is defined as:

- (a) a trunk with a circumference of 3 metres or more or, in the case of a tree with multiple trunks, has trunks with a total circumference of 3 metres or more and an average circumference of 625 millimetres or more, measured at a point 1 metre above natural ground level; and
- (b) regulated trees under sub-regulation (1) that are within the prescribed criterion under paragraph (a) are to be taken to be significant trees for the purposes of the Act.

Remove - The killing or destruction of native vegetation, removal of a plant or plants from the ground, or any other action that stops a plant or plants from surviving in their current location. This includes any other activity that causes the killing or destruction of native vegetation.

Regrowth vegetation - is any vegetation growing after clearance, this includes re-growing from root-stock, or germination of new plants from seed in the area previously cleared.

Road - 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 (*Roads (Opening and Closing) Act 1991*)

Road authority - In the *Road Traffic Act 1961* this means—

- (a) the Minister; or
- (b) the Commissioner of Highways; or
- (c) a council; or
- (d) anybody or person in whom the care, control or management of a road is vested.

Roadwork - means

- (a) the construction of a road; or
- (b) the maintenance or repair of a road; or
- (c) the alteration of a road; or
- (d) the construction of drains and other structures for the drainage of water from a road; or
- (e) the installation of fences, railings, barriers or gates; or
- (f) the installation of traffic control devices, traffic islands or parking bays; or
- (g) the improvement of a road including (for example)—
 - (i) landscaping and beautification; or
 - (ii) installation of road lighting; or
- (h) the installation of amenities or equipment on or adjacent to a road for the use, enjoyment or protection of the public; or
- (i) the installation of signs on or adjacent to a road for the use or benefit of the public; (*Local Government Act 1999*, Chapter 1, Section 4).

Road Furniture - A general term covering all signs, streetlights and protective devices for the control, guidance and safety of traffic, and the convenience of road users.

Road reserve - means land set aside for the purposes of a public road, whether or not it is being used for that purpose (*Natural Resources Management Act 1999*; and extends from property boundary on one side to property boundary on the other side.

Roadside - is defined as the strip of land between the road formation and the boundary of the road reserve.

Roadside vegetation - is any vegetation growing on a road reserve, and includes vegetation on a roadside, and vegetation growing on an unmade or undeveloped road reserve; this includes native vegetation of conservation value and vegetation dominated by introduced species.

Secondary clearance envelopes - are areas required to be kept clear of vegetation adjacent to the carriageway for adequate visibility of other traffic, signs and other roadside furniture.

Shoulder – The portion of formed carriageway that is adjacent to the traffic lane and flush with the surface of the pavement (Austroads, 2010). (Shown on diagram).

Sight distance - The distance over which a road user needs to have unobstructed sight to respond to a visual cue, or safely avoid a conflict.

Sight Triangle The area of land between two intersecting roadways over which vehicles on both roadways are visible to each driver (Austroads, 2010).

Significant Environmental Benefit - A Significant Environmental Benefit may require the road authority to offset an area of land for on- ground works or through payment to the Native Vegetation Fund. Payments will be distributed by the NVC to ensure an environmental benefit is achieved within the same region where the clearance occurs.

Table drain - The side drain of a road adjacent to the shoulder, having its invert lower than the pavement base and being part of the formation (Austroads, 2010). (Shown on diagram).

Travelled way - That portion of a carriageway ordinarily assigned to moving traffic, and exclusive of shoulders and parking lanes (Austroads, 2010).

Traffic Lane - A portion of the carriageway allocated for the use of a single line of vehicles. (Shown on diagram).

Unmade road - Means a road that is not sealed with bitumen (or other surfacing material) for use by motor vehicles. (*Roads (opening and closing) Regulations 2006*).

Undeveloped road – A surveyed road reserve which has never been developed as a road (some are totally cleared and pass unmarked through farm paddocks, and others retain native vegetation).

Verge – That portion of the formation not covered by the carriageway or footpath (Austroads, 2010). (Shown on diagram).

Abbreviations

DEWNR: Department of Environment, Water and Natural Resources

DPTI: Department of Planning, Transport and Infrastructure

EP RVMP: Eyre Peninsula Roadside Vegetation Management Plan

LGA: Local Government Association

NR EP: Natural Resources Eyre Peninsula

NVAP: Native Vegetation Assessment Panel

NVC: Native Vegetation Council

NVMU: Native Vegetation and Management Unit

RVMP: Roadside Vegetation Management Plan

SEB: Significant Environmental Benefit

Appendix A – Quick Reference Guide to Native Vegetation Regulations 2017 for roadside vegetation.

ACTIVITY	CLEARANCE APPROVAL	
	NOT REQUIRED	REQUIRED
New Roads	Very minor clearance e.g. pruning of branches, removal of 1-2 common shrubs or saplings.	All but very minor clearance. Separate approval process via Pathway 4.
Roadside Maintenance Regulation 11(23) Old 5(1)(y)	Maintenance of existing clearance with low impact methods or clearance with specified clearance envelopes.	Increased clearance or high impact methods to be used.
Public Safety Regulation 11(23) Old 5(1)(ib)	Maintenance of existing clearance with low impact methods	New clearance, increased clearance or high impact methods to be used.
Installation and Maintenance of Services	Maintenance of legally established clearance for services and access.	Any clearance for new services or maintenance of clearance in excess of existing standards. Separate approval process via Pathway 4.
Bushfire Prevention	All bushfire protection works carried out under an approved District Bushfire Management Plan (DBFM) under the <i>Fire and Emergency Services Act 2005</i> .	Any other clearance for fire prevention. Clearance may occur in accordance with CFS approval and notification to NVC via Pathway 2.
Clearance for Fencelines Regulation 8(14) Old 5(1)(r), 5(1)(s)	Trees on boundary; Branches over/through fence; Shrubs or bushes growing through the fence may be cleared within 1m of the fence.	Any clearance exceeding standards.
Clearance for Access to Adjoining Land Regulation 8(14)	Maximum 5m wide – normal access. Maximum 10m wide – machinery. (Careful site selection to minimise clearance)	Any clearance exceeding standards.
Pest Plant and Animal Control Regulation 8(15) Old 5(1)(f), 5(1)(h)	Very minor clearance e.g. pruning for access.	All but very minor clearance.
Grazing Regulation 8(5) Old 5(1)(zh)	Long-standing grazing practices via Pathway 1. Only where there is no native vegetation or just native trees with exotic grasses present.	Any direct clearance or new or changed grazing practices. Where native understorey or regenerating native vegetation present.
Cultivation and Cropping	Long-standing cropping or cultivation practices and no native vegetation present	Any cultivation or cropping where native understorey or regenerating native vegetation is present on the roadside.
Removal of Plant Material Regulation 8(10) 5(1)(q)	Dead vegetation other than that defined in the Native Vegetation Regulations.	Live timber, flowers or other vegetation removed e.g. brush-cutting Clearance of dead plants of a class declared by Regulation to be included in the definition of native vegetation.
Maintaining Diversity on Roadsides Regulation 8(15), 11(25) Old 5(1)(zj)	Very minor clearance e.g. pruning for access.	Any measures involving burning, lopping or other disturbance of native vegetation.
Undeveloped road reserves	Very minor clearance e.g. pruning of branches or removal of one or two saplings or shrubs known to be common in the area	Any modification of native vegetation by direct clearance or changed practices.
Recreational Use of Road Reserves Regulation 12(36)	Very minor clearance. e.g. pruning of branches or removal of 1-2 common shrubs or saplings	Any walking track (recreational trail) development that passes through or adjacent to native vegetation.

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

Appendix B – Mitigation Hierarchy

When deciding whether to consent to a proposal to clear under the [Native Vegetation Regulations 2017](#), the NVC will look at how you have considered the Mitigation Hierarchy. The Mitigation Hierarchy calls for proponents to plan their activity in the following order of importance:

- . **Avoid** impacts on native vegetation. This must be the first step in your planning. It includes planning to place infrastructure, buildings or other assets in a way that completely avoids impacts to biodiversity. For example, is there a particular location or time of year that you could clear that would avoid damaging native vegetation altogether?
- . **Minimise** the duration, intensity and/or extent of impacts on native vegetation (including direct, indirect and cumulative impacts), if clearance cannot be avoided.
- . **Rehabilitate or restore**, the ecosystems that have been degraded at the site of clearance, if adverse impacts cannot be minimised or avoided.
- . **Offset** to compensate for any significant residual adverse impacts that cannot be otherwise avoided, minimised and/or rehabilitated or restored, so that there is no net loss of biodiversity. Providing a [Significant Environmental Benefit \(SEB\) offset](#) is a requirement under the Regulations for activities that require a risk assessment (see list below).

You must **consider** the Mitigation Hierarchy as part of any activity to clear native vegetation under the Native Vegetation Regulations 2017.

Appendix C – Benefits of Roadside Vegetation

Agricultural and other economic benefits

Native biodiversity is often low in intensive cropping systems. Crops and pastures that are surrounded by native vegetation, however, have more abundant and diverse native fauna. This enhanced biodiversity increases crop production and reduces costs for the farmer by providing habitats for:

- Predators that assist farmers with pest control. Examples include: ladybugs that eat aphids, shield bugs that eat bollworms on wheat, kestrels and owls that eat rodents and grasshoppers, and
- Wild pollinators are twice as effective at pollinating crops as honey bees partly because crops have short flowering times and pollinators need to be active when the flowers are open. Even though the life cycles of many pollinators are also short, they overlap. It follows then that a more diverse pool of pollinators has a higher chance of pollinators being active at any time that the crop flowers are open. Furthermore, wild pollinators are not susceptible to varroa mite that has caused large losses of honey bees in Europe and the USA. Wild pollinators include hover flies, drone flies, tarantula wasps, chequered cuckoo bees and hummingbird moths. Insect pollination is needed for 75% of crops worldwide and was valued at €153 billion in 2005 (equivalent to 9.5% of world agricultural production).
- Reduce the velocity of water runoff, thus reducing scour and erosion of paddocks, road batters and embankments.
- Intact and mature native vegetation has lower maintenance needs than areas that are regenerating after being cleared with young plants and weeds.
- Roadside vegetation provides wind breaks that:
 - Reduce dust movement
 - Capture top soil
 - Shelter stock, reduce their need for food and water and ultimately leads to greater carrying capacity
 - Shelter crops and improve productivity
 - Stop movement of weed seeds into farming land and prevent weed establishment along roadsides, especially transport routes.

Social benefits

- Improves aesthetics, for the local community and tourists
- Promotes 'green and clean' agriculture and nature based tourism, which was identified as a key economic strategy in the EP NRM plan (NREP 2017).
- Visually breaks up the landscape and defines curves in roads that enhances driver alertness, creating a safer driving environment.
- Often contains attractive wildflower species and food foraging opportunities that contribute to the tourist appeal of a district.
- Represents an historic link to the various types of vegetation present at European settlement.
- Provides an educational tool and inspires revegetation projects.
- Screens roadside houses, infrastructure and businesses.

Habitat Connectivity

Roadsides on Eyre Peninsula connect coastal, wetland and terrestrial habitats and can be vital links across the landscape for plants and animals. Gaps of along a few metres in roadside vegetation can interrupt this connectivity especially for small animals, such as birds and reptiles, the movement of which are limited by what they see as the horizon or edge of their habitat. Bird watching is a major tourism industry that is set to increase as more Eyre Peninsula nature based tourism businesses commence operations, which will further increase the value of roadsides as bird habitats (NREP 2017).

Native plants and animals are reliant on these landscape connections to maintain their current populations and will be greatly reliant on being able to move across the landscape to 'keep pace' with climate change. In some cases, plants and animals will need to move several kilometres per decade to remain viable as the climate changes. For example, samphire communities will need to retreat as sea level rises and roads can either be a blockage or an aid to that movement. This is an important consideration for Councils managing coastal roads and deciding where to provide coastal access.

Conservation benefits

Roadside vegetation can be important habitat for rare and endangered species. It may contain the only remnant of some pre-European habitats and can also help to prevent species becoming endangered. For example the dinosaur ant (*Nothomyrmecia macrops*), which is essentially endemic to Eyre Peninsula, was not classified as being endangered by Sanetra and Crozier (2003) provided that no major clearing of mallee vegetation takes place on Eyre Peninsula. In particular, they found that maintaining long stretches of roadside mallee along the Eyre Highway No. 1 and adjacent areas will prevent the loss of local populations.

In south-eastern Australia, the age of the road appears to have an effect on the structure of the roadside vegetation. The oldest roads (<1870s) were more likely to have large hollow-bearing Eucalypts. Roads surveyed when broad-scale clearing commenced (1870–1879), and not the oldest roads, were found to be more intact in terms of the density of large pre-settlement trees, the range of tree stem-size classes and overall shrub diversity. By contrast, the youngest roads (post-1900s) had the greatest number of native conifer trees, but few shrubs or large Eucalypts. Again this is an important consideration for managers in making decisions about roadside tree management.

Appendix D – Descriptions of EPBC-listed threatened communities

D1: Eyre Peninsula Blue Gum (*Eucalyptus petiolaris*)

The Eyre Peninsula Blue Gum (*Eucalyptus petiolaris*) Woodland (EP Blue Gums) was nominated for EPBC listing by DEWNR as a threatened ecological community. This community occurs south of the Gawler Ranges mainly in the Koppio Hills, Cleve Hills and west of Marble Range where rainfall is higher than 370 mm per year (Figure D1). EP Blue Gums are mostly found on well-drained, moderate to high fertility soils associated with sheltered valleys, lower hill slopes and watercourses (EPBC 2013a).

The ecological community lies within the Eyre York Block bioregion within subregion EYB03–Eyre Hills, with outliers possibly occurring within subregion EYB04–Talia (Interim Biogeographic Regionalisation for Australia – IBRA Version 7), and only occurs in the Eyre Peninsula Natural Resource Management region (EPBC 2013a).

The typical structure of this ecological community is woodland but it may form open forest. Whilst the canopy is dominated or co-dominated by EP Blue Gums, other tree species may be present and the lower layers are likely to have high diversity. No fauna species have been found that are exclusively restricted to EP Blue Gum woodlands but they support the highest number of species per site of any vegetation types on Eyre Peninsula and some birds prefer EP Blue Gums.

How to identify EP Blue Gums

Growth form: medium-sized trees, to 15m high, or occasionally stunted, multi-stemmed tree on poorer sites.

Bark: rough near the base, then smooth, mottled grey to cream.

Leaves: glossy green, narrow and tapering, 7-25 cm long by 1-3.5 cm wide.

Buds/Flowers: large buds, in groups of 3, often ribbed, conical and pointed cap shorter than the base. Attractive flowers range in colour: pink, red and white, yellow.

Flowering time: late autumn to spring (May to November)

Fruiting time: throughout the year

Insert photos of EP Blue Gums, leaves, flowers and nuts

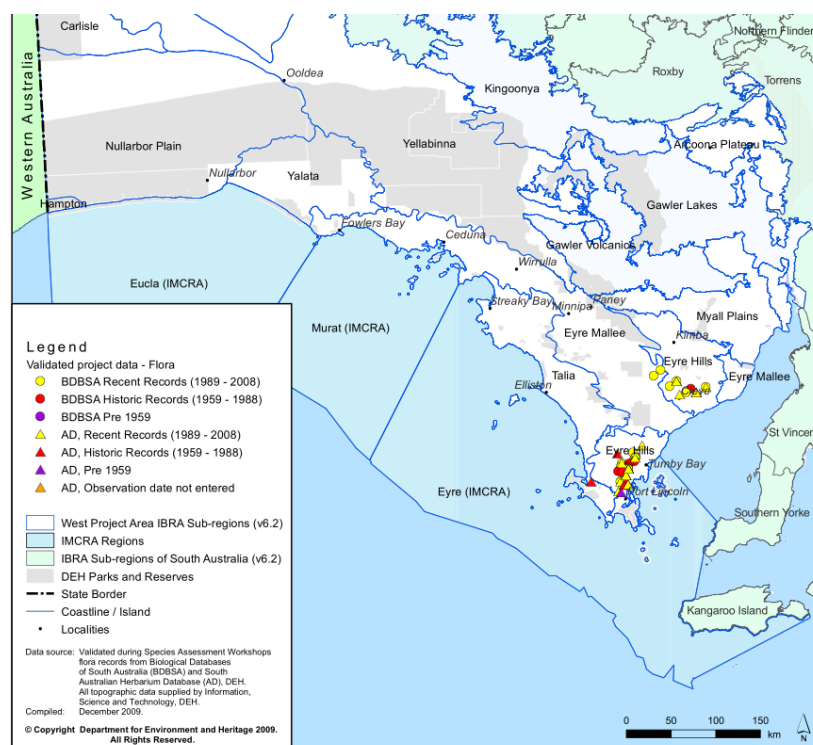


Figure D1: Distribution of Eyre Peninsula Blue Gums (*Eucalyptus petiolaris*) according to validated flora records. Taken from Gillam and Urban (2009).

D2: Peppermint box (*Eucalyptus odorata*) grassy woodlands

Peppermint box (*Eucalyptus odorata*) grassy woodlands were nominated for EPBC listing by DEWNR as a threatened ecological community. This community extends from the southern Flinders Ranges to Lake Alexandrina. Remaining patches of this ecological community typically occur on gentle to moderate slopes, hilltops and adjacent plains (EPBC 2007).

The typical structure of this ecological community is open to dense woodland. Whilst the canopy is dominated by Peppermint box, other tree species may be present and the lower layers are likely to have high diversity, including grasses and herbs. This ecological community is found.....need to check maps with DEWNR because there seems to be differences in different references.

How to identify peppermint box

Growth form: small mallee or medium tree, 4-15 m high.

Bark: rough grey-brown to black on trunks and branches, pale and smooth on upper limbs. Small mallees may be all smooth.

Leaves: dull, olive green, tapering, 5-15 cm long by 1-2 cm wide.

Buds/Flowers: buds in groups of about 11, slight ribs, conical cap equal to or shorter than the base.

Flowering time: autumn to spring

Fruiting time: throughout the year

Insert photos of peppermint box, leaves, flowers and nuts

Insert map of peppermint box once distribution of species/communities confirmed

D3: Subtropical and Temperate Coastal Saltmarsh

The Subtropical and Temperate Coastal Saltmarsh community was nominated for EPBC listing in the Vulnerable category in 2013. This community occurs within a relatively narrow band of the Australian coastline, from south-east Queensland to Shark Bay in Western Australia, spanning six State jurisdictions (Figure D3).

Coastal samphires occurring on islands within this geographic range are also included. Coastal saltmarshes are found in coastal areas subject to regular or intermittent tidal influence (EPBC 2013b). This community is typically restricted to the upper intertidal environment but may occur in other areas, such as open lagoonal estuaries.

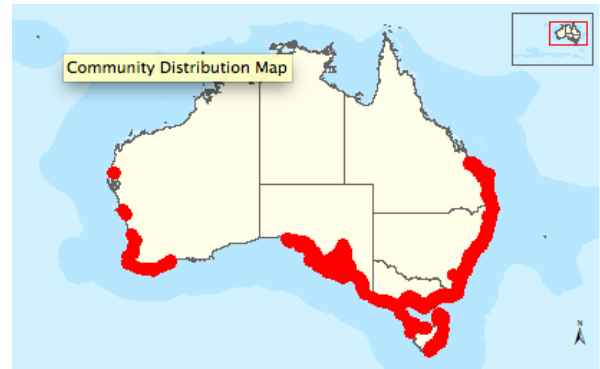


Figure D3: Distribution map of the Subtropical and Temperate Coastal saltmarsh EPBC-listed community.

In SA there are extensive supratidal saltmarsh communities, which occur above the normal tides, but are inundated by weather-assisted tides (e.g. storm surges in Spencer Gulf).

Groundwater connections may also be important in lakes such as Lake Newland. The seaward extent is determined by the depth, duration and timing of tidal submergence, physical disturbance by tides and waves, the type of substrate (e.g. muddy vs. rocky) and mangroves (is present). The landward extent was naturally determined by how far the tides reach but now infrastructure (e.g. roads, sea walls) more often determines its landward edge, which makes this community vulnerable to sea level rise unless infrastructure is built and operated to facilitate their retreat to higher land.

The typical structure of this ecological community is a mixture of salt-tolerant plants (halophytes) including: grasses, herbs, sedges, rushes and shrubs. Shrubs, herbs and succulent grasses dominate and are generally under 0.5 m high. The diversity of South Australia coastal saltmarshes is the highest with typically more than 100 species of plants, representing about 75% of all Australian saltmarsh plants, plus algae and diatoms.

How to identify Coastal Saltmarsh

Location: coastal areas, estuaries and bays with some tidal connection.

Soils: sandy or muddy.

Leaves: glossy green, narrow and tapering, 7-25 cm long by 1-3.5 cm wide.

Plants: dense to patchy area of salt-tolerant herbs, grasses and shrubs, may have bare sediment.

Insert photos of Coastal saltmarshes from EP

Appendix E: – Clearance envelopes from NVC Guidelines

Existing clearance can be maintained using **low impact methods** according to the guidelines without needing NVC approval but **increased clearance** or **high impact methods** need to be approved via this EP RVMP. Low impact methods of clearance include cutting cleanly rather than breaking branches, slashing, trimming, mowing or rolling with minimal soil disturbance. Major upgrades, such as widening of the existing road formation, are considered to be new roadworks and approval follows a separate clearance application process to the EP RVMP (Section 6).

Along most rural roads, clearance to the necessary safety standard has already taken place, but regrowth may be encroaching back into the clearance space, often referred to as the **primary clearance envelope** (across the full width of the carriageway; Figure E1) or **secondary clearance envelope** (adjacent to the carriageway; Figure E2). Regrowth may also be occurring on cleared or disturbed sites such as borrow-pit sites and designated spoil heap sites.

Regrowth may be removed without clearance approval, provided that **low-impact methods** are used (e.g. slashing, rolling, chainsaws) **and** the regrowth vegetation is **less than 5 years old**.

Note: this excludes regrowth on the road formation, including the shoulder and other areas where existing methods are high-impact, in which case high-impact can continue to be used. Where possible, low-impact methods should be considered in order to reduce soil disturbance and associated weed growth.

Any proposed activities that are **outside the clearance envelope** need to be approved by the NVC through an RVMP. Approval needs to be granted before such activities are undertaken.

Primary Clearance Envelopes

A **clearance envelope** is an area where vegetation clearance is required to allow for **legal height (4.6 m)** vehicles 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 **minimum clearance height of 5.0 m** will be maintained from the **edge of the sealed** carriageway or **edge of the grader line**, which is taken to be the edge of the carriageway on unsealed roads (Figure E1).

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

Secondary Clearance Envelopes

Secondary clearance envelopes are further areas to be kept clear of **regrowth vegetation adjacent to the carriageway** for adequate visibility of other traffic, signs and other roadside furniture.

- Secondary clearance envelopes extending up to **500 mm around roadside furniture** can be maintained (Figure E2)
- Additional clearance envelopes may be maintained on the **approach side of signs and delineation devices** to ensure they are clearly visible from a distance equivalent to the stopping sight distance for the speed environment of the road (Figure E3)
- At road intersections **where corners are created, existing verge clearance can be maintained** for safe sight distance according to Austroad standards.

Any new clearance for safe sight distance (i.e. clearance exceeding previously established safety standards) requires written approval under Regulation 11 (23).

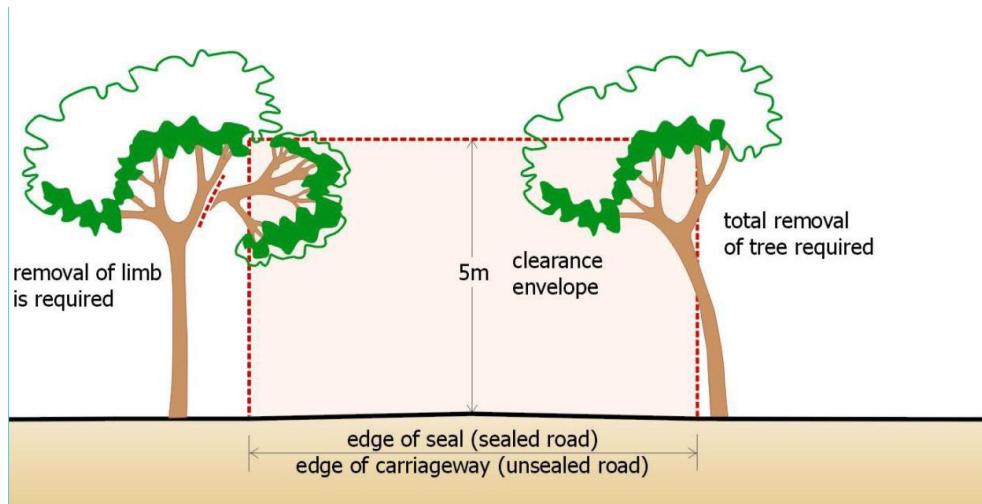


Figure E1: Maintenance of primary clearance envelope for sealed and unsealed roads.

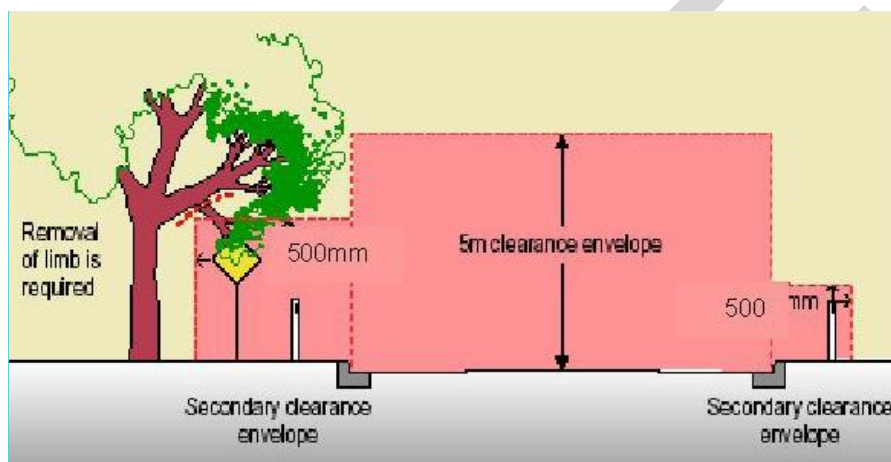


Figure E2: Secondary Clearance Envelope maintained around existing roadside furniture.

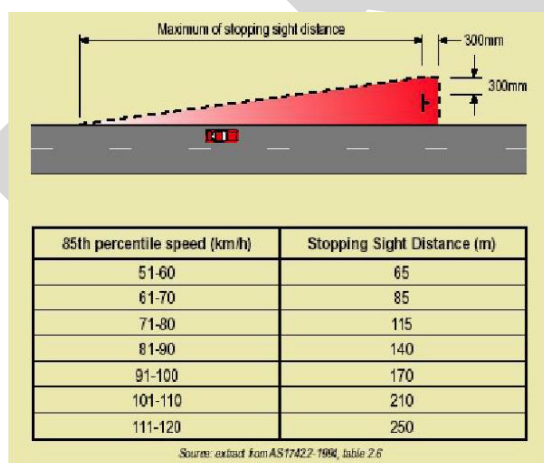


Figure E3: Secondary Clearance Envelope along road.

Appendix F – Annual Works Program Template

A template spreadsheet has been developed for Councils to use to submit their annual works program to NREP as part of the Annual Works Risk Management Program cycle.

This has been provided to Councils in electronic format, with instructions for completion, and includes columns for:

- Map reference number
- Council ID
- Road Name and section (From/ To)
- Length (km)
- Carriageway width (m)
- Clearance envelope width
- Whether the clearance envelope is >2m from the edge of the travelled way
- Clearance methods
- Desktop vegetation assessment results
- Comments

File: Template EP RVMP Works Programs.xlsx