



Wingecarribee Shire Council Roadside Management Plan

April 2019



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Endorsement and adoption

On 20/03/2019, the Environment and Sustainability Advisory Committee endorsed the Final Draft Roadside Management Plan (ES 3/19).

On 10/04/2019, Council adopted the Roadside Management Plan for Council's operational use (MN 163/19).

Table of changes

Version	Brief Description
DRAFT	Prior to presentation to Environment and Sustainability Committee
1.1	Endorsement and adoption of the RMP

Acknowledgements

Preparation of the Roadside Management Plan (RMP) and coordination of key components of the RMP by Russell Moule (Environmental Officer).

Production of the position statements and environmental guidelines by Neil Dufty (Principal of Molino Stewart Pty Ltd) with input from Council internal stakeholders - and graphic artwork produced by Melissa Wykes.

Production of the mapping product by Ian Perkins (Coordinator Natural Resource Projects).

Review of heritage details by Melissa Wiya (Aboriginal Community Development Officer) and Sarah Websdale Farnese (Strategic Planner - Heritage Projects).

Photographs by Jason Rothery (Tree and Vegetation Assessment Officer).

Review of the RMP by Therese Smart (Environment & Health Systems Coordinator) and Gillian Sutherland-Harris (Environment & Health Policy Officer).

Internal stakeholders include the managers (and delegates) of the following:

- roads assets
- roads construction and maintenance
- roadside vegetation
- water and sewer
- traffic engineers
- environment
- development assessment

This project has been assisted by the New South Wales Government through its Environmental Trust and supported by LGNSW.



1. Introduction

1.1. About the Roadside Management Plan

The Wingecarribee Shire Council (Council) Roadside Management Plan (RMP):

- provides a background and context of council managed roads ([section 1 - section 4](#))
- identifies threats and issues relating to roadside environments ([section 5](#))
- presents a method for prioritising roadside environmental management ([section 6](#))
- outlines environmental management actions ([section 7](#)).

1.1.1. Precursors to drafting the RMP

This part is an overview of the precursors to drafting the RMP.

The RMP was developed to integrate elements of the *Wingecarribee Shire Council Integrated Roadside Environmental Management Framework* project. The elements include a geographic information system (GIS) roadside prioritisation model and associated mapping product, position statements and environmental guidelines.

This project utilised grant funding provided by the NSW Environmental Trust, managed by LGNSW. This funding was established to build the capacity of councils to embed the value of natural assets in roadside reserves into the Integrated Planning and Reporting (IP&R) systems of councils.

The grant funding supported a subproject, focused on the development of position statements and environmental guidelines, which was completed by environmental consultants Molino Stewart in conjunction with key Council stakeholders.

Council staff in-kind contributions formed a major part of the project through interviews; contribution and review of position statements and environmental guidelines; and development of the RMP. This process captured corporate knowledge and also acted to improved awareness within Council of environmental management.

To a large extent, the RMP replaces the former Wingecarribee Roadside Management Plan (1998) and Tree Management Plan and Procedure Manual (2005); and complements the current Street Tree Master Plan.

The structure of the RMP is based on the Local Government New South Wales Roadside Vegetation Management Plan template.

1.1.2. Who is the RMP for

Council staff (including its contractors) must use the three key components of the RMP for their various functions that have the potential to interact with the environment - especially roadside vegetation - within Council managed roads. Council staff can easily identify these functions and access these key components as identified in Figure 1.

Although the RMP is primarily intended for Council staff it may also be used by the wider community to assist with roadside environmental management. For example public authorities may choose to implement the Environmental Guidelines, developers may be required to implement Environmental Guidelines, or the general public may want to have a better understanding of roadside environmental management.

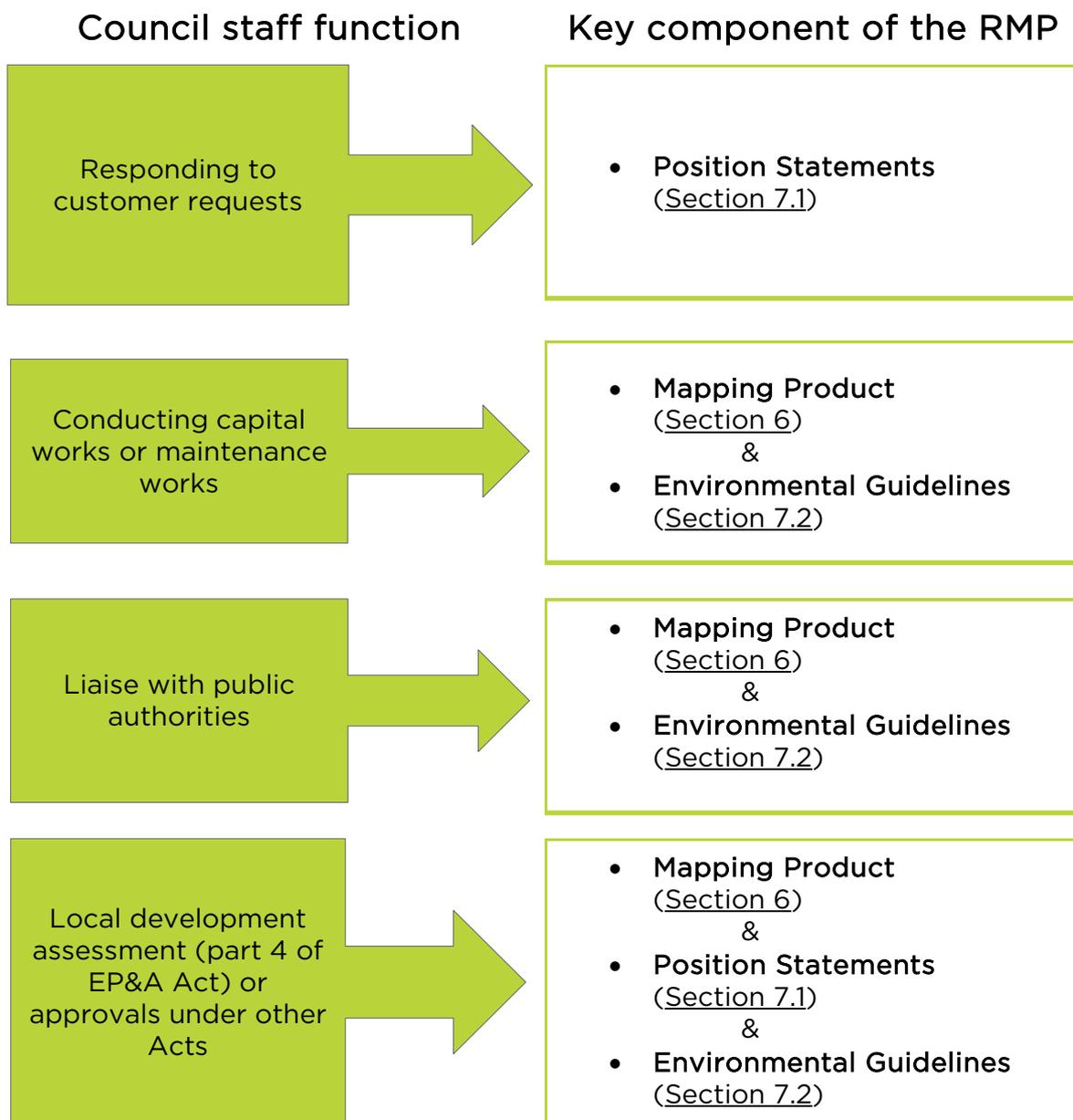


Figure 1. Relevant Council functions and where to locate the key components.

1.1.3. The three key components of the RMP

This part identifies the three key components and where they are located in the RMP (Figure 2).

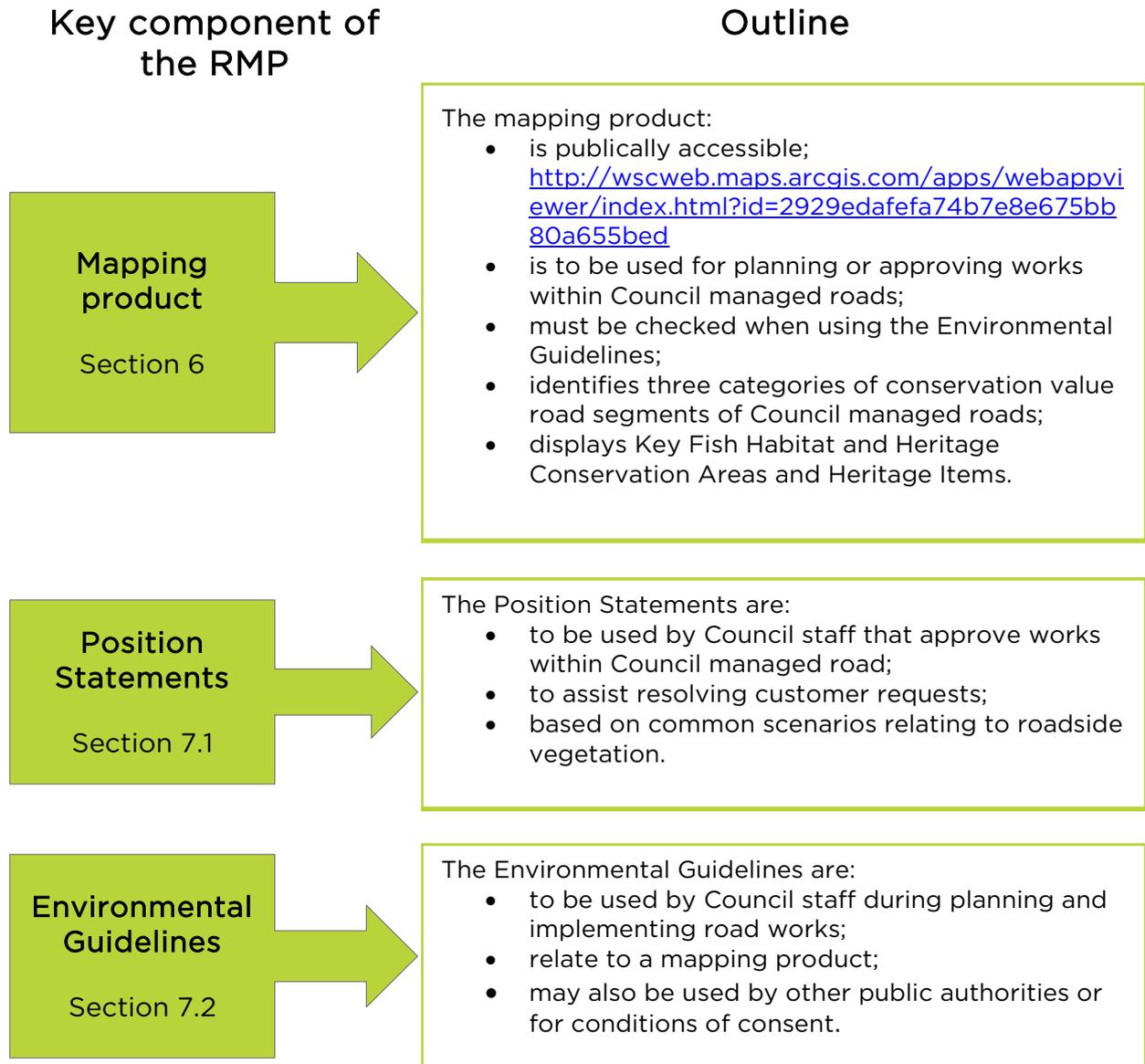


Figure 2. Overview of the key components of the RMP

1.1.4.Vision

The vision is that the RMP is accessible, usable, strategic, and maintained so that it supports Council staff achieve the principles of ecologically sustainable development relating to Council managed roads.

1.1.5. Objectives

The objectives of the RMP are:

- To integrate the GIS Roadside Prioritisation Model, Position Statements and Environmental Guidelines into a single reference point – so that it provides Wingecarribee Shire Council staff with a framework for roadside environmental management whilst balancing other (at times conflicting) objectives.
- To ensure efforts are implemented during both planning and work phases to firstly avoid and then where this is unachievable, to minimise impact in areas of conservation value – with the importance placed on high then medium conservation value.

1.1.6. Review and maintenance process

The RMP and associated tools will be subject to a review after the first six months from initial adoption and then every 12 months after adoption. Amendments may occur as a result of changes to legislation, staff resourcing and budget allocation and consideration of feedback from internal and external stakeholders. The review will include consultation with key stakeholders involved in the development of this document.

Feedback on the RMP can be provided to Council making reference to the file number 7810/29.

New versions of the RMP and a summary of amendments will be tabled in the beginning of the RMP.

1.2. Early road history

This section is for the wider audience and provides the history of some of the existing road network.

When early European explorers such as Hamilton Hume first came to this area they relied predominately on local Aboriginal people to guide them. In 1814 Hume, his brother John and an Aboriginal man made their way to the Berrima-Bong Bong district, marking the route they took.

Two years later this route was followed by men ordered by Surveyor-General John Oxley. The route later became known as the Great South Road, parts of which are now known as Old South Road, Eridge Park Road and Moss Vale Road.

In 1818 Hume, at the request of Governor Macquarie, accompanied Dr Charles Throsby and surveyor James Meehan on an expedition to find a route from Bong Bong to Jervis Bay. The party led by Throsby and coastal Aboriginal people established a route down Meryla Pass to Kangaroo Valley. In 1819 Throsby found a

new route from Illawarra to Robertson (Hume, 1966; and Fairley, 1997). It is not clear if current roads follow their paths.

The establishment of villages in the area set the stage for the development of further road networks such as the grid layout or 'Hoddle grid' as seen in Berrima, developed by the surveyor Robert Hoddle.

This early road network was the forerunners of the Wingecarribee road network.

1.3. Current road network

This section is for the wider audience and identifies the extent of the Council managed road network. It introduces the term 'road segment' that is a key attribute used in the Council's mapping product.

The current road network is made up of state, regional and local roads. Council is responsible for maintaining over 1140 km of regional and local roads. There are over 820 km of sealed roads and 320 km of unsealed roads. There is a ratio of about 1:7 regional to local roads.

Each road within this network is divided into smaller sections referred to as 'road segments'. These segments have varying lengths and are logically coded and referenced in Council's Road Register. This register will be continuously modified as either new roads are created (e.g. part of new subdivisions) or as roads are closed.

2. Relevant legislation

This section is a general introduction for the wider audience into the legislative framework around roadside management. Legislation is a key consideration to the development (and maintenance) of the Position Statements and Environmental Guidelines.

Council management of roadside reserves is governed by a range of mostly NSW legislation. This includes Acts of Parliament, subordinate legislation (e.g. Regulations) and Environmental Planning Instruments. In addition, there is Commonwealth environmental legislation. Some legislation may give powers to public authorities or determining authorities to carry out their functions. For example, Council has some powers under the *Environmental Planning and Assessment Act 1979* and the *Roads Act 1993*. However other Authorities also have powers under these Acts for example the NSW Department of Planning and the NSW Roads and Maritime Services. Legislation also identifies the planning approvals required to conduct various types of works. Other legislation protects the environment including water, soil, heritage and biodiversity. There are various enforcement functions under most of these laws.

The below list was identified during the research phase of the *Integrated Roadside Environmental Management Framework* project.

Commonwealth

- Environment Protection and Biodiversity Conservation Act 1999

NSW

- Biodiversity Conservation Act 2016
- Biosecurity Act 2015
- Civil Liability Act 2002
- Dividing Fences Act 1991
- Environmental Planning and Assessment Act 1979
- Fisheries Management Act 1994
- Local Government Act 1993
- Local Land Services Act 2013
- National Parks and Wildlife Act 1974
- Protection of the Environment Operations Act 1997
- Roads Act 1993
- Rural Fires Act 1997
- Trees (Disputes Between Neighbours) Act 2006
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011
- State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017
- Wingecarribee Local Environmental Plan 2010

2.1. Environmental planning

Relevant to environmental management, public authorities (including Council) are subject to various planning pathways for their works under the *Environmental Planning and Assessment Act 1979* (EP&A Act) – and have a duty to consider environmental impact. They may also have other environmental responsibilities under the relevant Act that empower them as a public authority. The hierarchy of avoid, minimise and mitigate is fundamental in the consideration of environmental impact and the associated development of safeguards and mitigation measures. An environmental assessment may identify specific environmental safeguards or mitigation measures, or may rely on standard operating procedures.

2.2. Environmental Planning for Council works

Council staff responsible for carrying out Council works are required to complete an environmental assessment. Council has an environmental assessment process that is used for Environmental Assessment under Part 5 of the EP&A Act for works that are permitted without consent. This is commonly called a Review of Environmental Factors (REF). This process is also used to determine if works are exempt from planning approval and if they meet the additional requirements for exempt development. Other approvals, licences or permits that may be required to carry out works are also identified through this process.

Council's Environmental Assessment Form is used to document the environmental assessment process. The completed form must be approved and signed by staff with delegation from the General Manager to authorise assessments under Part 5 of the EP&A Act. The process is not complete until the signed form is registered in Council's Document Management System prior to works commencing.

Resources are available to assist Council staff completing the form such as hyperlinks within the form; the Environmental Impact Assessment Map Set on Council mapping; and Environment & Sustainability staff.

Consideration of the environment and environmental management can occur during the longer-term program development and during the shorter-term project or works development.

Council's Capital Works Planning and Implementation System is a long term planning program driven by a range of factors including customer requests, developer contributions, and internal and external consultation.

The key components of the RMP i.e. mapping product and Environmental Guidelines will be critical for environmental consideration during the planning phase of future works.

2.3. Relationship between other public authorities

Public authorities may have various legislation that authorise their works including within roadside reserves. However, consultation with, or notification to Council (including Council as a road authority) is required in most cases. This may provide both authorities with the opportunity to exchange information.

3. Links with Council’s Integrated Planning and Reporting Framework

This section identifies where the RMP fits within Council’s framework for planning and reporting. This section may be important for upper management and the community.

The Integrated Planning and Reporting Framework (as shown in Figure 3) provides Council with a structure for establishing local priorities and linking these priorities to Council’s operational functions.

Central to the Integrated Planning and Reporting Framework is the Community Strategic Plan (CSP) which reflects the community’s aspirations and needs for the future and also acknowledges priorities and strategies of the state government.



Figure 3. Council Integrated Planning and Reporting Framework

The Roadside Vegetation Management Plan supports key goals in the CSP and helps to manage the often conflicting objectives of protecting the environment and also providing safe, maintained roads for residents and visitors to the shire. Specific goals in the CSP relating to these objectives are:

4.1 - Wingecarribee’s distinct and diverse natural environment is protected and enhanced

4.1.1 - Conserve the key natural resources of the Shire water catchments, arable land, key wildlife corridors and scenic landscapes

3.4 We have safe, maintained and effective assets and infrastructure

3.4.1 Work in partnership to ensure a safe road network

The RMP sits under the Council Operations Environment Policy which outlines Council's commitment to minimising potential and actual environmental impacts of its activities and operations.

It provides specific guidance for the planning, communication, and implementation of activities that interact with roadside vegetation, undertaken in line with our Delivery Program and Operational Plan.

4. Description of roadside vegetation and other environmental values

This section is a general description for the wider audience about the vegetation in Council managed roads. It identifies that environmental values are captured in the mapping product. These values are considered in the Position Statements and Environmental Guidelines.

There are two broad differences in roadside vegetation within Council managed roads; street trees within the urban street environment, and vegetation along rural roads outside the urban, township and village boundaries.

4.1. Urban streets

The existing streetscape character of the main urban centres and villages are described in Council's Street Tree Master Plan which comments on the appearance of the main roads and some of the roads beyond. It also describes the vegetation, building fronts and street infrastructure such as the historic kerb and gutter in towns such as Berrima (Figure 4).

The RMP will not expand further on heritage but suggests referring to the Street Tree Master Plan section 5.

The relevant Development Control Plan and the Wingecarribee Local Planning Strategy 2015-2031 may provide more detail on the values of heritage conservation as well as the existing character of the towns and villages.

Heritage items and conservation areas can be made visible in the mapping product to highlight their proximity to urban streets.

There are also riparian areas of Key Fish Habitat mapped in urban areas.

Given the majority of urban streets have a mixture of ornamental and remnant street trees they are mostly classified as 'Low' conservation roads, however there may be some high or medium conservation roads where there are threatened species, or a concentration of remnant vegetation.



Figure 4. Historic kerb and gutter along urban streets adjoining a heritage item and within a heritage conservation area.

4.2. Rural roads

The network of roads in-between the urban areas generally supports a rural setting, and many roads are lined with native vegetation (e.g. Figure 5). Some of these rural roads are bound by large areas of National Parks and State Forests. These areas are often referred to as ‘the green in between’.

Heritage items and Key Fish Habitat also mapped in rural areas.

The majority of the ‘High’ and ‘Medium’ conservation road segments are within the rural roads. This is a result of the larger portion of native vegetation along rural roads compared to urban streets. There is a vast diversity of native vegetation across the road network. This diversity results from different soil types; a rainfall gradient of around 1800 mm to 670 mm per year (east to west respectively); the landscape position and features affecting temperature (e.g. cool air drainage and ponding) – together with land use and associated disturbance regimes. A combination of these factors has produced around 70 different plant community types within the Wingecarribee local government area. Plant community types are a NSW classification based on inherent attributes and characteristics of the vegetation structure, growth form and plant species.

The areas of native vegetation may contain threatened species or their habitat and some of the native vegetation plant community types are related to threatened ecological communities. The conservation value category assigned to a road segment by the GIS roadside prioritisation model is increased where these are known or predicated to occur. This is explained more in section 6.



Figure 5. Native vegetation along a rural road that is also part of a threatened ecological community.

Native vegetation in NSW is broadly defined as a plant native to New South Wales if it was established in New South Wales before European settlement and includes trees (including any sapling or shrub or any scrub), understorey plants, groundcover (being any type of herbaceous vegetation) and plants occurring in a wetland.

5. Roadside environmental management threats and community interests

This section is a general introduction for anyone wanting to understand some of the threats and opportunities facing roadside environmental management.

5.1. Roadside environmental management threats and issues

Roadside reserves are complex environments due to competing values. For example development pressure and road safety can threaten roadside environments containing nationally listed threatened species (see Figure 6). Such threats may be (or be part of) or increase the impact of the Key Threatening Processes.

Many of these threats and issues can be resolved through effective environmental management (later detailed in section 7).



Figure 6. Nationally listed threatened species Black Gum (*Eucalyptus aggregata*) growing within a Council managed roadside in Sutton Forest.

The Department of the Environment, Water, Heritage and the Arts (2013) provide guidance that new roads, infrequent road verge maintenance or widening an existing road that would require clearing of native vegetation that contains nationally listed threatened species or a threatened ecological community is likely to be significant under the EPBC Act. They also suggest that a substantial expansion or modification to utilities (e.g. overhead or underground services) requiring such clearing is also likely to be significant under the EPBC Act.

5.1.1. Growth Corridors

Wingecarribee Shire is within easy reach of the Sydney, Canberra and the Illawarra growth areas. Future landuse planning priorities and decisions for the Shire are covered by the NSW government's South East and Tablelands Regional Plan 2036. This Plan is our blueprint of balancing growth and the natural environment for the next two decades. It identifies that an additional 3,300 dwellings need to be planned for in the shire up to 2036.

The development of greenfield housing sites and increased traffic flow on the shires roads, including previously smaller rural or unmaintained roads, will result in the need to upgrade the quality and safety of road infrastructure. Increased housing development and population growth therefore poses a real threat to roadside vegetation.

5.1.2. Community Expectations

A safe road network is a high priority for residents of Wingecarribee Shire as documented in our Community Strategic Plan.

Community focus on the condition of our local roads was further highlighted in the 2017 Community Satisfaction Survey. This survey identified that the condition of local roads was the number one concern for residents and an area where they were least satisfied.

The survey acknowledges that local road condition is likely to always be a focus for residents because "perpetually, the condition of roads can always be improved" (Micromex Research, 2017).

5.1.3. Key threatening processes

Biosecurity threats, climate change, and habitat loss are some of the key threatening processes (KTP) adversely affecting threatened species and threatened ecological communities. Such processes can also cause species or ecological communities that are not threatened to become threatened. On this basis, a KTP can be listed under Schedule 4 of the *Biodiversity Conservation Act* or Schedule 6 of the *Fisheries Management Act*. In addition, KTP can be listed under the Commonwealth *Environmental Protection and Biodiversity Conservation Act*.

Avoidance or minimisation of KTP is interwoven in the Position Statements and Environmental Guidelines.

The KTP most relevant to roadsides resulting from road works are in Table 1.

Table 1. Relevant key threatening processes resulting from road works

Threat	Action	Key threatening processes
Climate change	Activities that cause greenhouse gas emissions (such as energy use) have the potential to be (or be part of) or increase the impact of the corresponding KTP.	<ul style="list-style-type: none"> • Anthropogenic Climate Change
Habitat loss	Development such as infrastructure improvement (e.g. new or widening roads or the installation or replacement of bridges and culverts) has the potential to be (or be part of) or increase the impact of the corresponding KTP.	<ul style="list-style-type: none"> • Bushrock removal • Clearing of native vegetation • Loss of hollow-bearing trees • Removal of dead wood and dead trees • Removal of large woody debris from New South Wales rivers and streams • Alteration to the natural flow regimes of rivers and streams and their floodplains and wetlands • Degradation of native riparian vegetation along New South Wales water courses • Installation and operation of instream structures and other mechanisms that alter natural flow regimes of rivers and streams
Bushfire	Inappropriate fire management has the potential to be (or be part of) or increase the impact of the corresponding KTP.	<ul style="list-style-type: none"> • High frequency fire resulting in the disruption of life cycle processes in plants and animals and loss of vegetation structure and composition
Biosecurity	Spread or movement of certain materials such as excavated material from one road to another - or the failure to effectively manage biosecurity threats has the potential to be (or be part of) or increase the impact of the corresponding KTP.	<ul style="list-style-type: none"> • Infection of native plants by <i>Phytophthora cinnamomi</i> • Introduction and establishment of Exotic Rust Fungi of the order Pucciniales pathogenic on plants of the family Myrtaceae • Invasion and establishment of exotic vines and scramblers • Invasion and establishment of Scotch Broom (<i>Cytisus scoparius</i>) • Invasion of native plant communities by <i>Chrysanthemoides monilifera</i> • Invasion of native plant communities by exotic perennial grasses • Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants



5.2. Community interests, values and activities

The competing values of roadside reserves make these areas complex environments to manage for community interests, values and activities. Some of the complexity for management is resolved through the Position Statements and Environmental Guidelines.

5.2.1. Road safety

As previously identified, a safe road network is a high priority for residents of Wingecarribee Shire. Construction and maintenance of roads is core business for Council. Improvements and maintenance of the road network are managed through the Capital Works Program and other maintenance programs.

Works within roadside reserves can have negative effects on the environment if not effectively managed. The Environmental Guidelines have been developed as a minimum standard for environmental management whilst balancing competing objectives.

5.2.2. Adjoining land management

Routine agricultural management activities (or 'RAMA') associated with construction or maintenance of boundary fences has the potential to adversely affect roadside vegetation if not managed effectively. The Position Statement and Environmental Guideline relating to fence lines provide clear criteria and guidance for decision makers to balance competing objectives.

The threat of bushfire may be a concern in areas of vegetation. The NSW Rural Fire Service makes the determination of a hazard complaint. The Position Statement provides more context on how requests are handled.

Parts of Wingecarribee are well known for historic gardens and their resemblance to the European countryside. This style of property management has the potential to either clash with biodiversity objectives of preserving native vegetation – or to encroach into the adjacent roadsides. The Position Statements provide context on how these interests are handled.

Land management activities of adjoining land can be sympathetic or supportive to the roadside environment through environmentally responsible land management such as private land conservation actions.

5.2.3. Biodiversity and heritage conservation

Council road reserves provide natural resources that may offer valuable opportunities for biodiversity programs such as securing collections of threatened species as managed by the Australian National Botanic Gardens.

Grant funding (through contract weed management) plus Bushcare/Landcare Network volunteer and Council labour have been invested within road reserves.

Certain properties, buildings and places are considered to be of local heritage significance and have legislative protection to ensure their conservation.

Examples include sections of Old Argyle Road and Old South Road/ Eridge Park Road/ Moss Vale Road. In addition to individually listed heritage streets, the public domain elements of heritage conservation areas (of which streets are a major component) are integral to the significance of the area as a whole.

Roadside vegetation may also consist of culturally modified trees with several examples recorded in the NSW Aboriginal Heritage Information Management System (AHIMS). Such trees are also referred to as 'scarred or carved trees'. They are both a reminder of the past, and a contemporary expression of cultural knowledge. There are also other Aboriginal items recorded in or adjoining Council maintained roads.

5.2.4. Firewood collection

Firewood is a resource that some in the community have access to on property they manage, while others purchase firewood from suppliers. Council does not support the collection of firewood from within its managed roads.

Removal of dead wood and dead trees is listed as a key threatening process. Council will investigate and if appropriate, pursue legal action against those collecting firewood in Council roadside reserves.

5.2.5. Illegal dumping

Litter control and rubbish dumping was identified as an environmental priority by the community in the 2017 Community Satisfaction survey. Roadsides are illegal dumping hot-spots.

Illegal dumping has significant social, environmental and financial costs including:

- introduction of undesirable species into bushland
- pollution of our waterways
- risks to human health, and
- deterrence of tourists, who are major contributors to our economy.

Council supports the reporting of illegal dumping by contacting Council or visit the NSW EPA's 'RID Online' website.

6. Roadside environmental management priority

This section is to be read by anyone wanting to have a better understanding of the mapping product and how it relates to Council’s roadside environmental management priorities.

6.1.About the mapping product

This part provides explanation about the mapping product derived from the GIS roadside prioritisation model. It is useful for anyone who wants to know more about each layer in the mapping product.

The process used to prioritise roadsides for environmental management is based on the GIS roadside prioritisation model. The associated mapping product produced from this model is a refinement of the 2014 project *Wingecarribee Protect and Grow Roadsides Program: a Data Driven Strategic Approach*.

The GIS roadside prioritisation model produces the three categories of conservation value road segments and displays other data (Figure 7) that are integrated with the Environmental Guidelines.

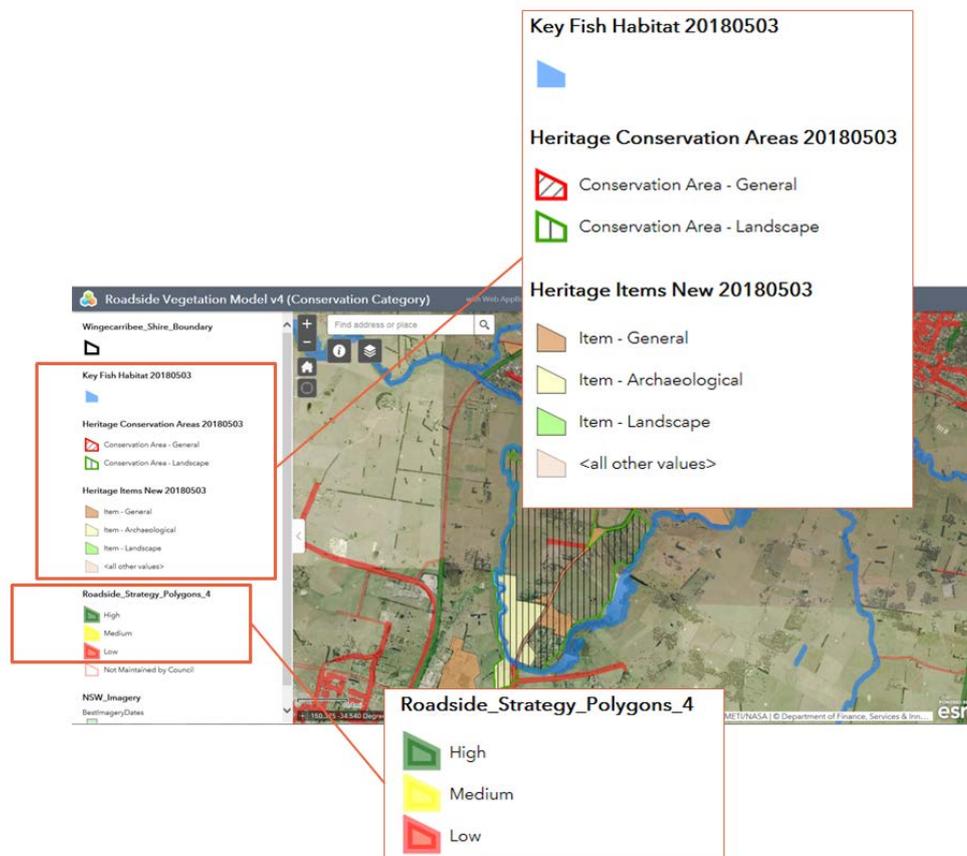


Figure 7. Image displaying the categories of conservation value road segments and displays other data from the mapping product.

6.1.1.The three categories of conservation value

The GIS roadside prioritisation model uses Council's existing road segments as the basis for three categories of conservation value. These categories are referred to as 'High', 'Medium' and 'Low' conservation value road segments. The three categories are based on a variety of data sources described below in section 6.4.

Generally, the high and medium conservation value road segments are outside of the urban areas. There are exceptions where urban road segments are categorised as high conservation values for example roads that contain threatened species such as Paddys River Box as street trees.

Categories may change over time as new data becomes available. The 'High' category is the most important roadsides to protect and must have the greater efforts to avoid or minimise impact during the planning or during work phases. This is evident in the Environmental Guidelines (section 7.2). Certain Environmental Guidelines identify that further investigation may be required to determine if a significant impact on threatened species is likely.

6.1.1.1.The 'High' conservation value road segments

This 'High' category uses available data of threatened species or threatened ecological communities within the road segment. The threatened species data includes records with an accuracy of 100m or less and includes all flora records and/or some fauna records. The fauna records used are of the 'Site Managed' fauna species from the Office of Environment and Heritage Saving Our Species program.

Some threatened species records were excluded from the model including records with an accuracy of greater than 100m. In addition, fauna records that are not 'Site Managed' fauna species to tease out bird 'fly-overs' (for example).

The threatened ecological community data will use the current available native vegetation mapping. There will be a transition between mapping products over time - beginning with Eco Logical Australia (2003) - then transition to Office of Environment and Heritage (in draft) late 2019.

This category does not imply that threatened species or ecological communities are limited to these roads. Threatened species records are representative of previous sighting results e.g. Figure 8. See section 6.5.2 for other threatened species data limitations.



Figure 8. Downy Wattle (*Acacia pubescens*) a threatened species recorded in a Council managed roadside in Aylmerton

A threatened species is typically a plant or animal at risk of extinction. A threatened ecological community (TEC) is a naturally occurring group of native plants, animals and other organisms living in a unique habitat that are at risk of extinction. Threatened species and threatened ecological community can be listed under the NSW *Biodiversity Conservation Act 2016*, NSW *Fisheries Management Act 1994* or Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*.

6.1.1.2. The ‘Medium’ conservation value road segments

The ‘Medium’ category relies on available data of native vegetation in the road segment. It does not use threatened species (or other species) records, or data of threatened ecological communities – as this is captured in the ‘high’ category. This does not mean that there are no threatened species or threatened ecological communities in the road segment – simply that no data available. The native vegetation data will use the current available native vegetation mapping. There will be a transition between mapping products over time – beginning with Eco Logical Australia (2003) – then transition to Office of Environment and Heritage (in draft) late 2019.

6.1.1.3. The ‘Low’ conservation value road segments

The ‘Low’ category occurs where Council does not have available data on threatened species, threatened ecological communities or native vegetation within the road segment. This does not mean that there are no threatened species or threatened ecological communities (or native vegetation) in the road segment – simply that no data available. Despite absence of these data, Environmental Guidelines provide guidance on avoiding and minimising impact (see Section 7.2).

6.1.2. Other data displayed in the mapping

The mapping product displays other data that needs to be considered during planning of works – and to be viewed in conjunction with the environmental guidelines used during works.

These data include certain riparian corridors mapped as Key Fish Habitat; and Heritage Items and Conservation Areas. The data sources are identified in section 6.4. These layers can be turned on as required. Heritage data does not include records of Aboriginal items or places as maintained in the NSW Aboriginal Heritage Information System – due to the public availability of the mapping product and the sensitivity of certain cultural heritage.

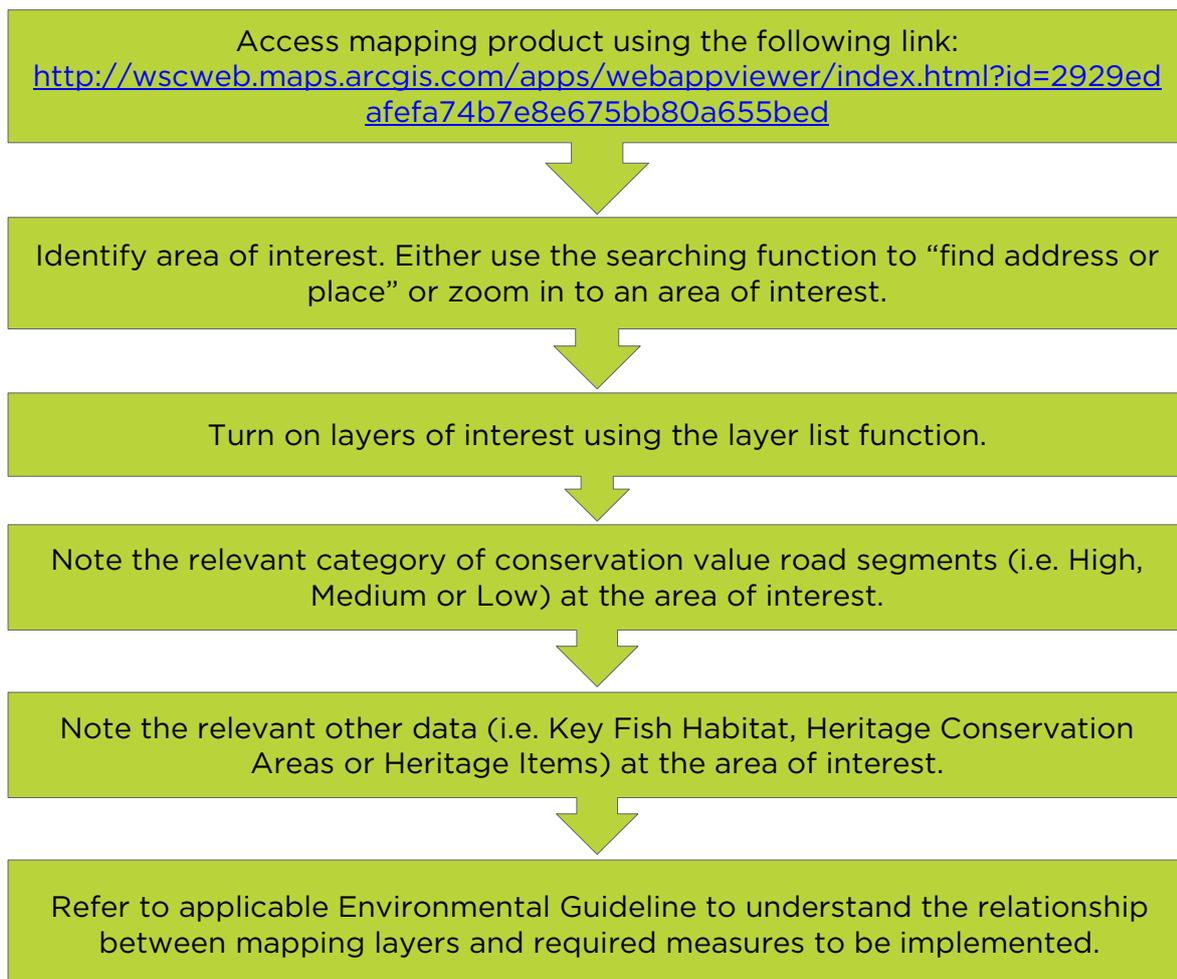
Certain Environmental Guidelines will require consultation with the relevant Authority to determine if their approval is required.

6.2. How to use the mapping product

This part of the section is guidance for Council staff (or others) needing to use the mapping product.

The mapping product needs to be considered during planning of works and viewed in conjunction with the Environmental Guidelines. A location or layer of interest can be activated using the various functions in the mapping product (Figure 9).

To use the mapping product, the relevant person is to implement the following:



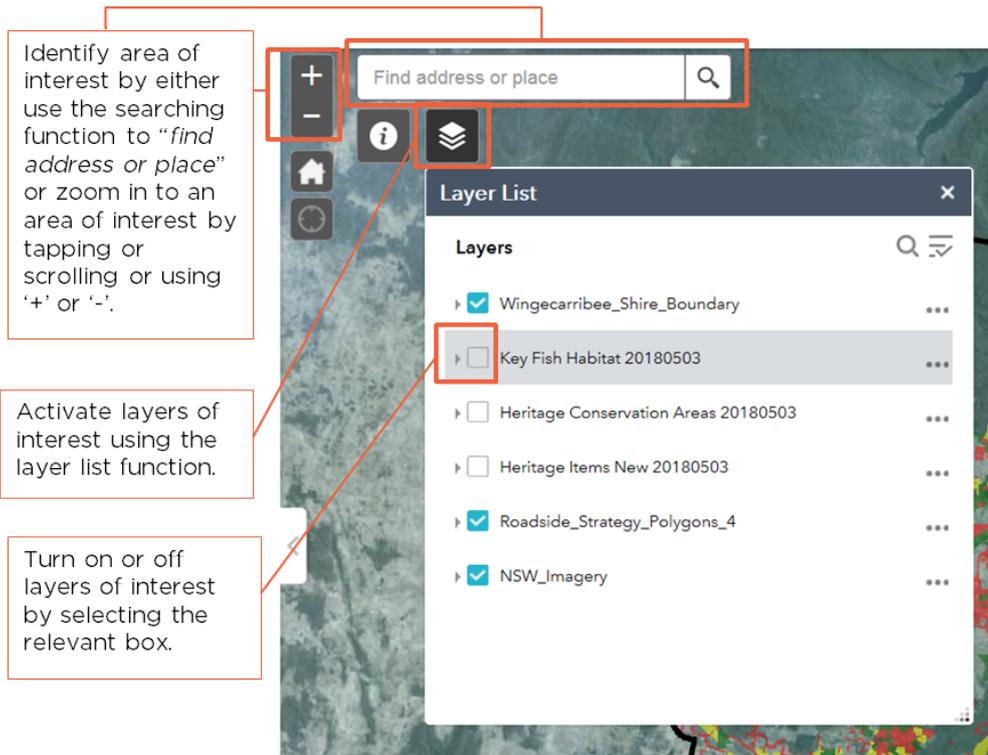


Figure 9. Image displaying how to locate an area or layer of interest in mapping product

New features of the mapping product are likely to be developed including the capacity for devices to display and track current location - making it easier to identify and track current location.

6.3. Access to the mapping product

Access to the GIS roadside prioritisation model mapping product is via the link:

<http://wscweb.maps.arcgis.com/apps/webappviewer/index.html?id=2929edafefa74b7e8e675bb80a655bed>

6.4. Data sources

The following part of this section identifies the data sources used in the GIS roadside prioritisation model for the mapping product (Table 2).

Table 2. Data used in GIS roadside prioritisation model

Attribute	Custodian	Title	Source	Council Corporate naming
GIS roadside prioritisation model	Wingecarribee Shire Council	Roadside Vegetation Model v4 (Conservation Category)	http://wscweb.maps.arcgis.com/apps/webappviewer/index.html?id=2929edafefa74b7e8e675bb80a655bed	\\svr-ems-01\GIS_Data\Natural Resources Team\Roadside Vegetation Management\Roadside Vegetation Management Strategy.gdb Layer name: Roadside_Strategy_Polygons_40
Threatened species	Office of Environment and Heritage	NSW BioNet Species Sightings Data Collection	http://www.bionet.nsw.gov.au/	WSCPROD.NATRES.Flora_Threatened and WSCPROD.NATRES.Fauna_Threatened
Threatened Ecological Communities	Wingecarribee Shire Council	Eco Logical Australia (2003) Wingecarribee Biodiversity Strategy, Phase One.	https://datasets.seed.nsw.gov.au/dataset/vegetation-mapping-wingecarribee-lga-vis_id-23889aa49	WSCPROD.NATRES.Vegetation_Final
Threatened Ecological Communities	Office of Environment and Heritage	Office of Environment and Heritage (in draft) Fine-scale vegetation mapping of Wingecarribee Shire, New South Wales Southern Highlands	In production	
Native Vegetation	Wingecarribee Shire Council	Eco Logical Australia (2003) Wingecarribee Biodiversity Strategy, Phase One.	https://datasets.seed.nsw.gov.au/dataset/vegetation-mapping-wingecarribee-lga-vis_id-23889aa49	WSCPROD.NATRES.Vegetation_Final
Native Vegetation	Office of Environment	Office of Environment and Heritage (in draft) Fine-	In production	



	and Heritage	scale vegetation mapping of Wingecarribee Shire, New South Wales Southern Highlands		
Key Fish Habitat	Department of Primary Industries	Fairfull, S. (2013) Fisheries NSW Policy and Guidelines for Fish Habitat Conservation and Management. NSW Department of Trade and Investment, Regional Infrastructure and Services. Wollongbar.	Contact NSW DPI or pdf available: https://www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/key-fish-habitat-maps	WSCPROD.NATRES.Key_Fish_Habitat
Heritage Items	Department of Planning and Environment	Environmental Planning Instrument - Heritage	https://datasets.seed.nsw.gov.au/dataset/environmental-planning-instrument-heritage-her/resource/data_quality_report/pdf	WSCPROD.GISADMIN.Heritage_Items_New
Heritage Conservation Areas	Department of Planning and Environment	Environmental Planning Instrument - Heritage	https://datasets.seed.nsw.gov.au/dataset/environmental-planning-instrument-heritage-her/resource/data_quality_report/pdf	WSCPROD.GISADMIN.Heritage_Conservation_Areas



6.5. Data limitations

This part highlights some limitations with data used in the GIS roadside prioritisation model.

6.5.1. General data limitations

It must be acknowledged that there are limitations with the use of data. Many of these data (Table 2) are managed by various NSW Agencies. There may be instances where the relevant Agency has more current records than Council. This may be due to the frequency of Council's data updates.

The accuracy of information may rely on the persons making the record, the Agency responsible for accepting the record, or how the record is spatially displayed.

The outputs from the GIS roadside prioritisation model will change over time as new data becomes available. The model provides Council with a snapshot of roadside values at a point in time.

The data included in the GIS roadside prioritisation model is a non-exhaustive list and other environmental aspects information may need to be considered during environmental impact assessment.

6.5.2. Threatened species data limitations

Threatened species records (from BioNet) within Council managed roads are likely to increase in numbers and localities over time (e.g. through environmental assessment Figure 10 and Figure 11). In addition, species or ecological communities not currently listed as threatened may become listed in the future.

The Office of Environment and Heritage state that BioNet data should only ever be viewed as an indication of which species might be present in an area, and will not provide the full distributions of species.

Some records do not necessarily equate to exact locational details, and must be interpreted with reference to their geographic accuracy.



Figure 10. The threatened species Dwarf Phyllota (*Phyllota humifusa*) recorded in 2017 during planning for road widening project along Wombeyan Caves Road, High Range.

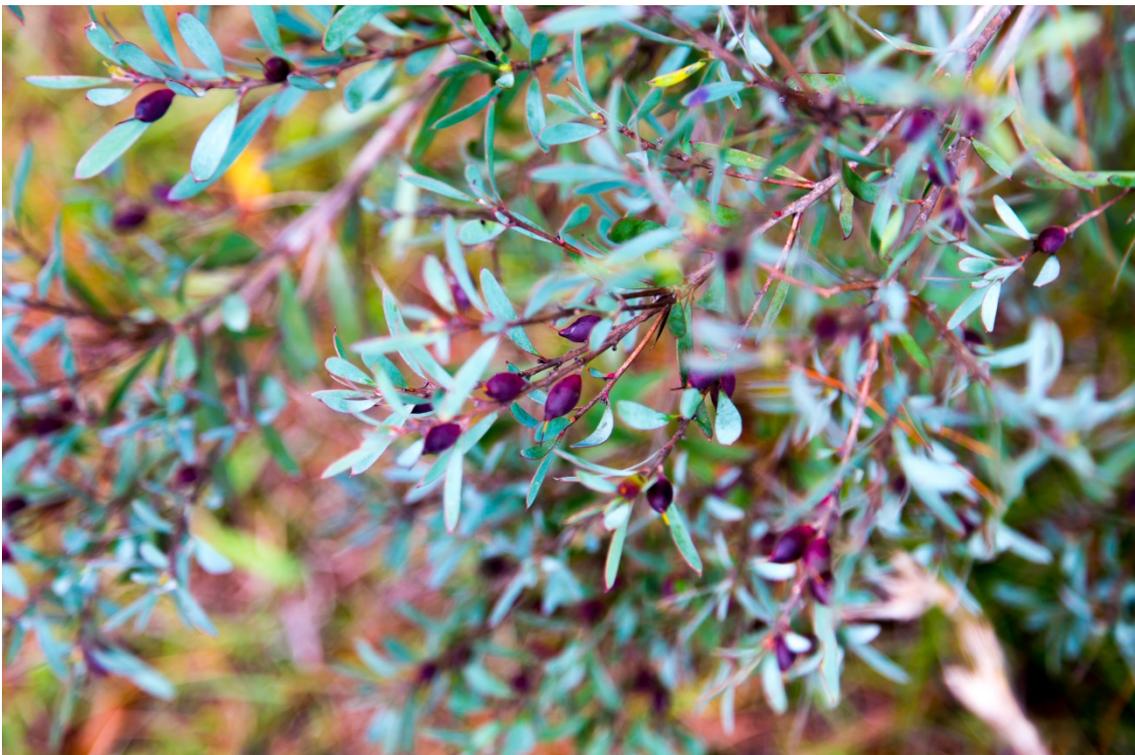


Figure 11. The threatened species Mittagong Geebung (*Persoonia glaucescens*) recorded in 2015 during environmental impact assessment along Wilson Drive, Balmoral.

7. Roadside environmental management

This section of the RMP includes the key components of Council's roadside environmental management framework. This section is to be read by Council staff to gain an understanding in their roles and responsibilities relating to roadside environmental management. It can also be used by other public authorities where relevant. This is briefly presented below in Table 3.

Council has the capacity to manage environmental impact through implementation of the Position Statements and Environmental Guidelines.

Key to roadside environmental management is the planning and implementation of actions to address threats through the 'avoid, minimise and mitigate' hierarchy.

Table 3. Roles and responsibilities relating to roadside environmental management

Council function	Management action
Responding to customer requests	Use Position Statements to process customer request
Conducting capital works or maintenance works	Use Environmental Guidelines to plan and to manage works
Liaise with Public Authorities	Share information in the RMP such as Environmental Guidelines
Local development assessment (part 4 of EP&A Act) or approvals under other Acts	Use both Position Statements or Environmental Guidelines to assist with assessment and conditions of consent
Maintaining and providing access to the RMP.	RMP maintained and communicated by Environment and Sustainability branch

7.1. Position Statements

This part of the RMP is primarily for Council staff that respond to customer requests that have the potential to interact with the environment in Council managed roads – especially roadside vegetation.

This part is also for other Council staff involved with approvals that have the potential to interact with the environment – especially roadside vegetation within

Council managed roads. This may include Council staff that assess local development (part 4 of EP&A Act) or approvals under other Acts (e.g. Local Government Act or Roads Act).

7.1.1. About the Position Statements

A set of Position Statements have been developed in order to provide a single reference point for all Council staff involved in responding to (community) customer requests that may result in the implementation or approval of works within Council managed roads and that interact with the environment – especially roadside vegetation. These are located in Appendix 1.

The objective of the Position Statements is to assist managing environmental impact whilst balancing other Council functions associated with management of roads.

Council has a range of Policies or Plans that cover or partially cover customer requests. The position statements have been prepared based on common scenarios. They will reference relevant Policy or Plans where applicable.

Position statements are similar to a Policy that will relate to works that Council will conduct or approve; or will not conduct or approve. They are the formalised agreed position that Council takes on a particular matters relating to customer requests within a road reserve.

The Position Statements were developed based on a literature review, Council internal stakeholder engagement and small group interviews. This quantitative and qualitative data was gathered by consultants from Molino Stewart using grant funding.

They are underpinned by legislation, safety standards, Council's roles and responsibilities, and budget allocation – at the time of their development.

7.1.2. Customer requests

Customers can make requests via a number of avenues as detailed on Council's Website. These requests are logged and sent to the appropriate Council Officer via its customer service management system (Conquest).

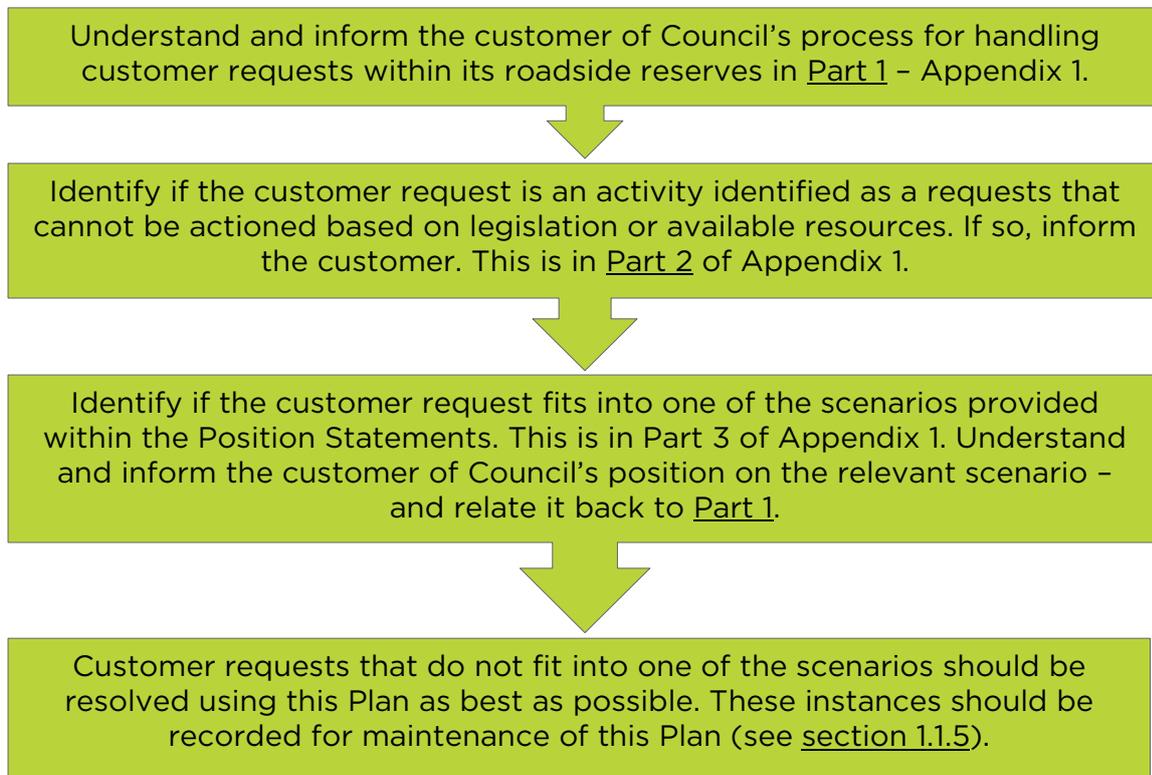
7.1.3. How to make a customer request

Customer requests can be made in the following ways:

- In person: Civic Centre, 68 Elizabeth St Moss Vale NSW 2577
- Phone: (02) 4868 0888
- Fax: (02) 4869 1203
- Email: mail@wsc.nsw.gov.au
- Submit an enquiry or notification to Wingecarribee Shire Council: www.wsc.nsw.gov.au/contact
- [Snap Send Solve](#) App

7.1.4. How to use the Position Statements

To use the Position Statements, the relevant Council Officer processing a customer request is to implement the following:



7.1.5. When to use the Position Statements

The Position Statements are to be used by Council staff responding to customer requests that have the potential to interact with the environment - especially roadside vegetation for within Council managed roads.

These Position Statements may also be used by Council staff assessing local development assessment (part 4 of EP&A Act) or approvals under other Acts (e.g. Local Government Act or Roads Act) - that have the potential to interact with the environment - especially roadside vegetation for within Council managed roads.

7.2. Environmental Guidelines

This part of the RMP is primarily for Council staff that plan and implement capital or maintenance works.

It is also for Council staff that either: receive notice about (or have comment on) works by other public authorities; or Council staff that assess local development (part 4 of EP&A Act); or approvals under the Roads Act.

7.2.1. About the Environmental Guidelines

The Environmental Guidelines are made publically available and in the RMP located in Appendix 2. They are based on common activity within Council managed roads.

The Environmental Guidelines were developed using NSW Environmental Trust grant funding and based on quantitative and qualitative data gathered by consultants from Molino Stewart. This data included a literature review, Council internal stakeholder engagement and small group interviews.

These Environmental Guidelines relate to the output of the GIS roadside prioritisation model including the three categories of conservation value (described in section 6).

The environmental guidelines were developed with an emphasis on visual presentation, conciseness and usability and have been prepared by a graphic artist using Council's style guide and corporate colours.

They have been developed in order to provide a single reference point for all those involved in the implementation or approval of works within Council managed road reserves that interact with the environment - especially roadside vegetation. They have been primarily developed for Council staff (or contractors) conducting capital or maintenance works.

The objective of the Environmental Guidelines is to provide guidance on environmental management in relation to specific activities occurring within Council managed roads. This guidance acknowledges that such activities are necessary for road maintenance and construction or other infrastructure.

Wherever possible, the Environmental Guidelines are structured to firstly avoid impact to certain environmental aspects. Where avoidance is not possible, the guidance is on how to minimise the impact.

The environmental management actions are included within the general note block, guideline drawing or identified in the environmental aspects icons listed (Figure 12).

Each Environmental Guideline will display relevant environmental aspect icons. There are a total of 9 icons that cover the following environmental aspects:

- Air
- Fauna
- Vegetation
- Biosecurity
- Heritage
- Waste
- Community
- Soil
- Water

The Environmental Guideline instructs the user to refer to the Environmental Aspects Key (Appendix 2). This key is separate to the set of Environmental Guidelines and identifies relevant safeguard/mitigation measures to be implemented.

7.2.2. Structure of the environmental guidelines

The relevant person will need to be familiar with the layout and structure of the Environmental Guidelines. The main components of the Environmental Guidelines are displayed in Figure 12.

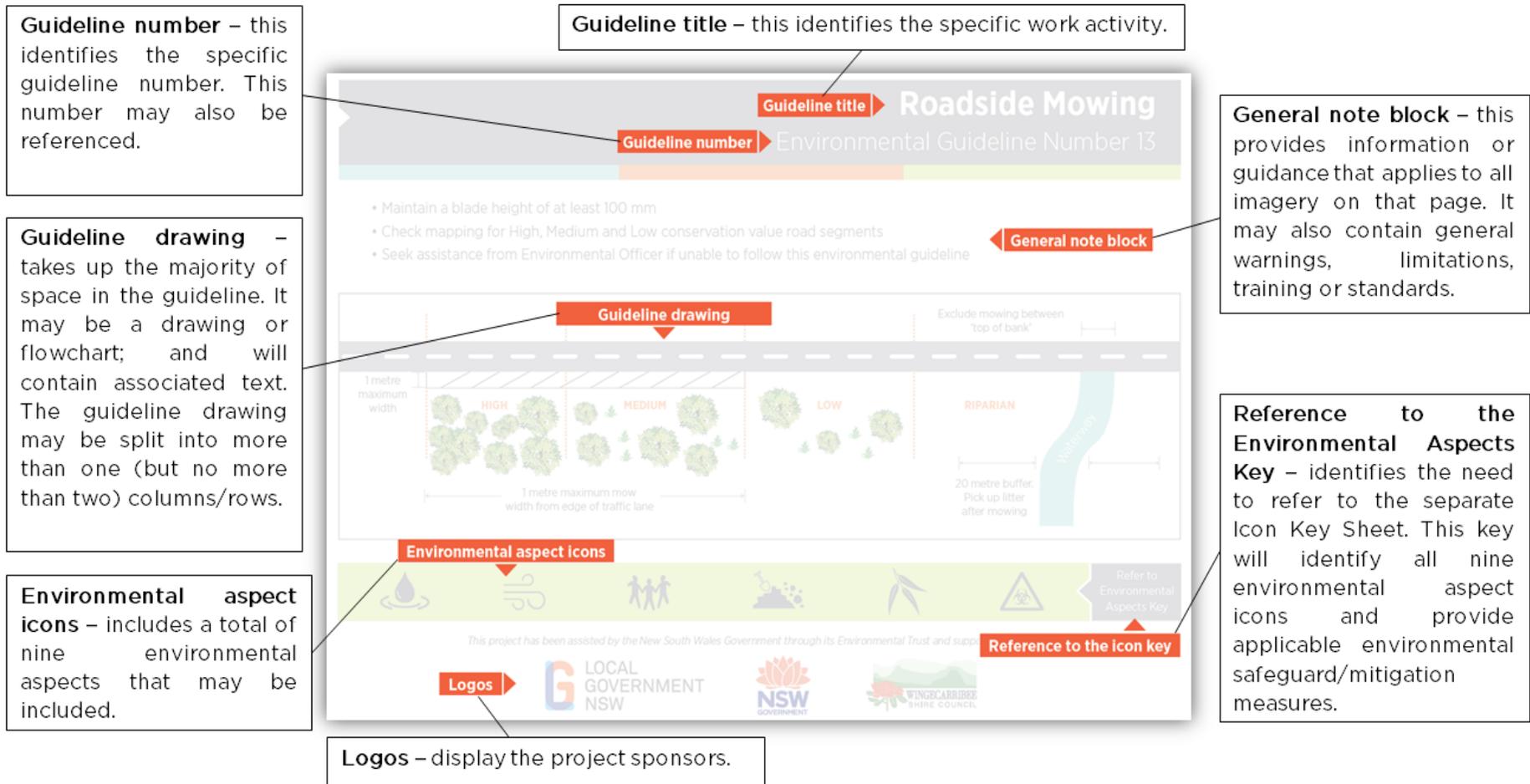
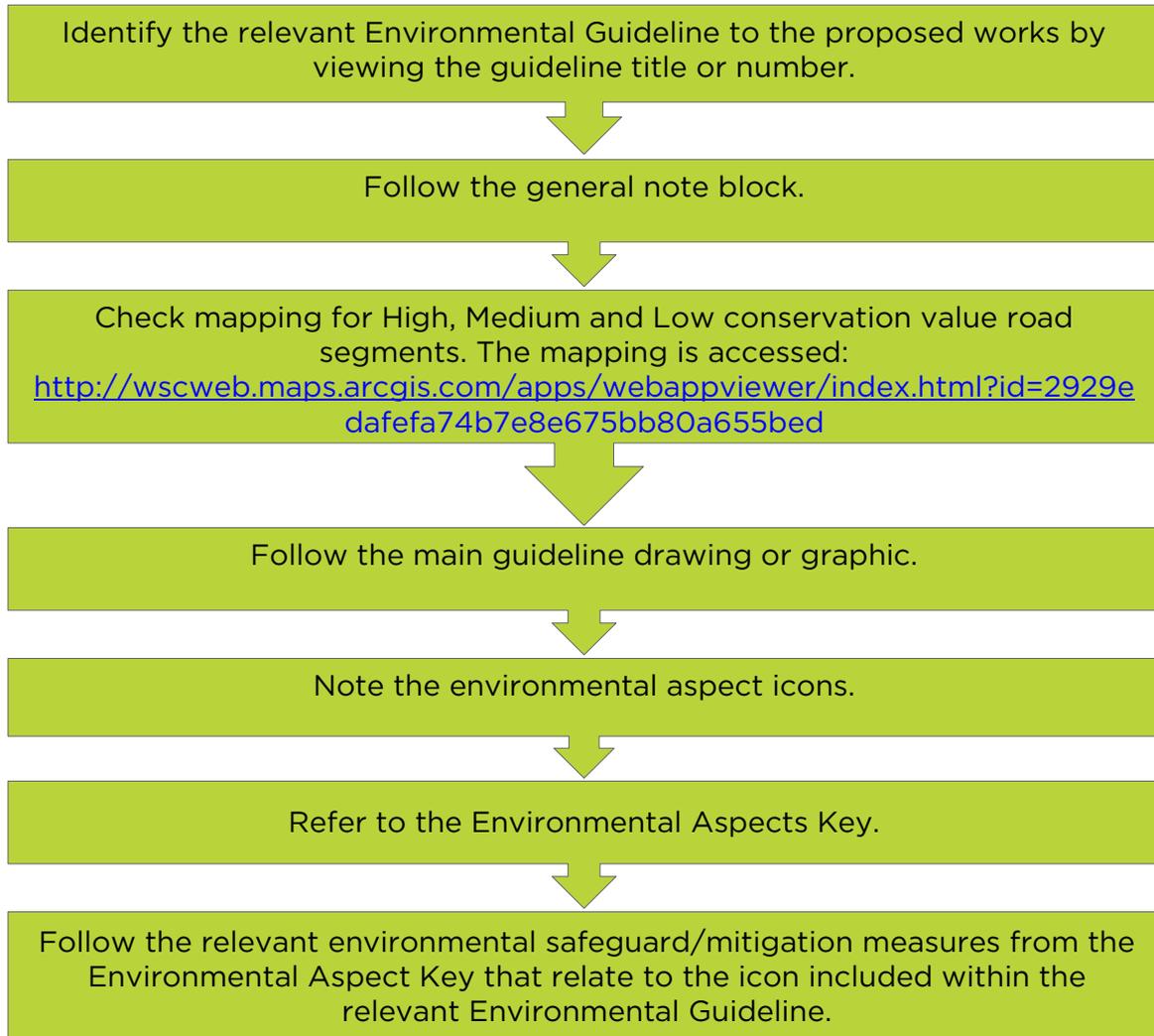


Figure 12. The structure of the environmental guidelines



7.2.3. How to use the Environmental Guidelines

Relevant persons are to follow the steps below when using the Environmental Guidelines:



7.2.4. When to use the Environmental Guidelines

A brief outline of when to use the Environmental Guidelines is tabled below (Table 4) with additional information below.

Table 4. Outline of when to use the Environmental Guidelines

Who	When
Council staff (or contractors)	Whenever planning and implementing Council’s capital or maintenance works – and when there is a relevant Environmental Guideline.
Council staff	Whenever providing conditions of consent (e.g. under Part 4 of EP&A Act or s138 of Roads Act or s68 of the <i>Local Government Act 1993</i>) – and when there is a relevant Environmental Guideline.
Public Authorities	Wherever possible – and where there is a relevant Environmental Guideline.
Developers	Whenever made a condition of consent*.

*there may be inconsistencies in the Environmental Guidelines relating to the roles of specific Council staff referenced as responsible for certain actions. In such cases, the Consent Authority may provide guidance on relevant responsibilities.

The Environmental Guidelines will be used by Council staff as a minimum standard to manage environmental impact of certain works. The relevant Environmental Guidelines can be referenced in an environmental assessment. It should be noted that more robust environmental safeguards or mitigation measures may be implemented in place of these Environmental Guidelines.

If Council staff (or contractors) cannot comply with the relevant Environmental Guideline they will need to ensure that the activity has a specific and current environmental assessment.

Council acknowledges that there may be inconsistencies between Council and other public authorities staffing structure, processes or policies that may present difficulties with strictly following an Environmental Guideline. The overall aim is to share information and provide options to avoid and minimise environmental impacts. If public authorities cannot comply with the relevant Environmental Guideline they will still need to comply with relevant legislation.

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Appendix 1 – Position Statements

Part 1. Essential preface

Council acknowledges through the Council Operations Environment Policy that its activities interact with the environment. Council is committed to protecting the environment, preventing pollution and continually improving the sustainability of Council operations. This includes protecting and conserving threatened biodiversity.

Customer requests for works or activities (tabled below in part 3) to be carried out within a Council managed road reserve are managed through Council's Customer Request System.

Council will assess customer requests for work in roadside reserves based on assessment criteria (tabled below in part 3) and scheduled into a prioritised works program.

In situations where works are not a high priority or as otherwise specified in the table below, Council may approve customers to conduct works or activities at their cost in a Council roadside reserve.

It is illegal for residents to prune, modify, remove or damage a Council controlled tree or vegetation without prior Council approval. Council can issue fines for illegal clearing within Council managed roads. If Council is aware of illegal clearing in roadsides not managed by Council, it may notify the relevant authorities.

Customers wishing to undertake works or activities in a Council roadside reserve are likely to require approval under Section 138 of the *Roads Act 1993*. If approved, the works may be subject to certain conditions such as copies of insurances, traffic management plans, surveys, arborist or ecologist reports. Some activities may require Development Consent under Part 4 of the [Environmental Planning and Assessment Act 1979](#) such as certain types of fencing, earthworks and driveway construction and for the construction of roads.

Part 2. Works or activities not actioned

Some customer requests cannot be actioned based on legislation or available resources. These include:

- **Non-Council roads** – these are public roads owned by other authorities such as Department of Industry – Lands & Water, or Roads and Maritime Services. Council needs to seek permission under the Roads Act 1993 to conduct our works and activities on these roads. There may be exceptions whereby other road authorities may place control of non-Council roads

under Council's management through an agreement. Customers should submit requests to undertake works or activities to the appropriate road authority.

- **Firewood collection** – Customer requests to conduct firewood collection in Council roadside reserves will not be supported or carried out. This activity within road reserves may pose traffic hazards and Council is committed to protecting the environment. Removal of dead wood and dead trees is listed as a Key Threatening Process under the Biodiversity Conservation Act 2016. Council will investigate and if appropriate, pursue legal action against those collecting firewood in Council roadside reserves.
- **Driveway crossings** – Customer requests to construct or enlarge driveway crossings (and associated drainage works) will not be actioned by Council as it is the responsibility of the property owner to initially construct and maintain their driveway and associated drainage. All property access ways must be located to firstly avoid then minimise the loss of any roadside vegetation.
- Council will not action works to improve private property views, solar access, decrease leaf, flower and fruit drop or to reduce the impact of animals.

Part 3. Works or activities, statement and assessment criteria

Works or activities	Statement	Assessment criteria used by relevant Council Officer
Unformed Council roads	Unformed Council roads consist of access tracks, paper roads, fire trails and are managed through Council Policy. Council will program works if obligated e.g. for road safety, bushfire management, weed management.	<ul style="list-style-type: none"> • Council's Road Register
Roadside mowing	<p>Council mows prescheduled roads generally to a maximum of 1.5m from edge of seal where achievable. Roads are not mown for aesthetics.</p> <p>Customer requests to conduct additional roadside mowing will be considered based on the assessment criteria within sub arterial, local major and local minor roads only. Council does not expect residents or rate payers to obtain Council approval for the routine mowing of existing lawn of their adjoining nature strip. New</p>	<ul style="list-style-type: none"> • Bushfire – NSW Rural Fire Service determination of hazard complaint • Wollondilly and Wingecarribee Bush Fire Risk Management Plan and Bushfire Environmental Assessment



	lawns require Council approval.	<p>Code.</p> <ul style="list-style-type: none"> • Road safety – Austroads, RMS supplements & Australia Standards • Council’s Road Register
Overgrown vegetation	‘Overgrown Vegetation’ is generally when land or premises is considered to be not in a safe or healthy condition. Customer requests to maintain overgrown vegetation will be considered based on the assessment criteria.	<ul style="list-style-type: none"> • Definition of ‘Overgrown Vegetation’ as per the Local Orders Policy (Order 21)
Tree or other vegetation planting	Customer requests to plant a tree or other vegetation planting in Council roadside reserves will be assessed using the assessment criteria. Customers may donate a tree and if suitable Council may consider planting. The ongoing watering of the tree is the customer’s responsibility. Council will not grant approval for residents to plant shrubs and low branching trees in roadside reserves as the Street Tree Master Plan considers these to be hazardous as they obscure sight lines and limit access for pedestrians and motorists.	<ul style="list-style-type: none"> • Council’s Street Tree Master Plan • Council’s Urban Tree Policy
Road safety - tree or other vegetation removal	Customer requests to conduct works on a tree or other vegetation for road safety (e.g. clear zones or line of sight) will be assessed based on the assessment criteria.	<ul style="list-style-type: none"> • Austroads Guides • RMS supplements • Australian Standards • Council Standard Drawings
Biosecurity	Customer requests to manage priority weeds within Council roadside reserves are assessed based on the assessment criteria. Council may occasionally conduct (or approve) weed management other than priority weeds (e.g. environmental weeds) on Council roads if there is a strategic biodiversity benefit; however there are limited resources and no legislative obligation to manage these weeds.	<ul style="list-style-type: none"> • South East Regional Strategic Weed Management Plan • Biosecurity Act 2015



	<p>Customer requests to manage rabbit warrens occurring in Council roadside reserves, will be programmed for treatment. Council will not support customers doing this type of work on Council land.</p>	
<p>Hazardous trees</p>	<p>Customer requests to conduct works on a hazardous tree (e.g. tree's structure) within Council roadside reserves are assessed based on the assessment criteria. All responses will be based on the outcome of the inspection. Where tree roots are claimed to be causing damage, they must be reasonably exposed within private property for Council's Officer to make an appropriate assessment.</p> <p>Council Arborists will prioritise works on a scheduled works program in the following order:</p> <ul style="list-style-type: none"> • Risk to public safety, property and other infrastructure; • Establishing and maintaining healthy and structurally sound trees; and • Maintaining habitat for wildlife. <p>Work prioritisation is determined by a risk score of 10 – 12 High, 7 – 9 Medium and a 0 – 6 Low. The risk score will also determine the re-inspection of the tree(s).</p>	<ul style="list-style-type: none"> • Council's Urban Tree Policy • Council's Tree Risk Management Plan • Council's Street Tree Master Plan
<p>Tree management responsibility</p>	<p>The land manager is responsible (including cost) for the total tree management when the tree's trunk (or root buttress) is 60% or greater on their land based on a registered survey. Where 50% (10% variance greater or less) of the tree's trunk (or root buttress) based on a registered survey is located between shared boundary, both land managers are responsible (including cost) for the tree management.</p>	
<p>Trees and fences</p>	<p>Requests for the Council to maintain Council controlled trees or other vegetation for the purposes of repair or replacement of fences will not be actioned. Furthermore, Council does not fix fences if vegetation falls on to them,</p>	



	<p>although if requested, will endeavour to make safe if stock are present.</p> <p>If notified to Council, Council managed trees that fall on fences will be programmed for action. Trees that are not managed by Council, that fall on fences will only be made safe in the road reserve.</p> <p>The type or standard of fences may not require approval from Council if they satisfy the requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Approval is required for all other fences.</p> <p>Customers can maintain Council controlled trees or other vegetation for the purposes of repair or replacement of fences:</p> <ul style="list-style-type: none"> if authorised under the Local Land Services Act 2013; and if work is conducted outside of the road reserve; and if it is limited to the removal of only those parts of plants either touching, growing through or overhanging a boundary fence from Council land onto the customer's land <p>Note: this only applies to 'rural' zoned land. Approval may be required in non-rural areas - as identified by the State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017.</p> <p>Council will consider approval of clearing of Council roadside reserves related to new fence construction in limited situations with regard to biodiversity and heritage conservation. If it can be demonstrated that the Council controlled trees or other vegetation proposed to be maintain for fences is outside heritage conservation areas; and not within a heritage item; and is not steep or highly erodible land or protected riparian land; and is non-native vegetation; and not occupied by protected fauna, then Council may approve additional clearing. Otherwise, in situations where sections of fencing</p>	
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	needs to be constructed and Council controlled trees or other vegetation is requested to be removed, Council suggests that the fence is setback into the customer's property. This may give enough space to construct the fence, retaining roadside vegetation and the ability to maintain each side of the fence without Council approval.	
Drainage	Customer requests to conduct drainage works within Council roadside reserves are assessed based on the assessment criteria.	<ul style="list-style-type: none"> • Council's Stormwater Management Policy and Stormwater Management Procedure
Driveway crossings	Customer requests to construct or enlarge driveway crossing (and associated drainage works) will not be actioned by Council as it is the property owners' responsibility to initially construct and maintain their driveway and associated drainage. All property access ways must be located to firstly avoid then minimise the loss of any roadside vegetation.	
Bushfire mitigation	<p>Bushfire mitigation activities are undertaken by Council within Council managed road reserves if required in the Bush Fire Risk Management Plan or an existing Asset Protection Zone (APZ) is present or if directed by the RFS as a result of a hazard complaint.</p> <p>Customer requests to conduct bushfire mitigation activities in areas not covered by the above are to be referred to the RFS as a hazard complaint.</p>	<ul style="list-style-type: none"> • NSW Rural Fire Service determination of hazard complaint • Wollondilly and Wingecarribee Bush Fire Risk Management Plan and Bushfire Environmental Assessment Code. • Winmap APZ layer
Overhead /underground services	Customer requests to conduct works on overhead or underground services within Council roadside reserves are subject to approval from the relevant authority. This may include Endeavour Energy for electricity, Telstra for telecommunications, Jemena for gas. Council is the relevant authority for water and sewer assets. Customer requests to conduct works on	



	<p>Council managed assets are subject to approval under Section 68 of the Local Government Act 1993. These works can only be conducted by Council.</p>	
<p>Road widening</p>	<p>Customer requests for the Council to widen a road may be considered and accommodated into the Council's works program where applicable.</p> <p>Road widening works can be triggered by a number of factors such as, road safety, road capacity, parking and drainage. Council staff will assess the feasibility and priority of road widening projects through the project scoping and annual budget process. These works are considered and assessed through councils capital works scoping and annual budget process, with reference to associated policies, plans and strategies.</p> <p>Council officers develop a detailed four year capital works program through the annual budget process which is considered and adopted by Council.</p> <p>Road widening can also be triggered by development or maintenance requirements and such works are managed by Council's Development Assessment team and Infrastructure Services team respectively.</p>	
<p>Landscaping</p>	<p>Customer requests to carry out landscaping limited to tree and other vegetation planting in Council roadside reserves are assessed based on the assessment criteria.</p> <p>In addition, Council may action landscaping in situations to address a road safety issue such as deep tyre ruts in the nature strip.</p> <p>Council does not expect residents or rate payers to obtain Council approval for the routine mowing or general turf management of their adjoining nature strip.</p>	<ul style="list-style-type: none"> • Council's Street Tree Master Plan • Council's Urban Tree Policy



Appendix 2 – Environmental Guidelines

Following pages comprise of the Environmental Guidelines in the below order:

- **Key to Environmental Aspects**
- **Ancillary works** Environmental Guideline Number 1
- **New or Widening Roads** Environmental Guideline Number 2
- **Table Drain Maintenance** Environmental Guideline Number 3
- **Access Construction (various)** Environmental Guideline Number 4
- **Open Channel Maintenance** Environmental Guideline Number 5
- **Underground Services** Environmental Guideline Number 6
- **Overhead Services** Environmental Guideline Number 7
- **Rehabilitation** Environmental Guideline Number 8
- **Clearzones** Environmental Guideline Number 9
- **Line of Sight** Environmental Guideline Number 10
- **Hazardous tree** Environmental Guideline Number 11
- **Trees and Fences** Environmental Guideline Number 12
- **Roadside Mowing** Environmental Guideline Number 13
- **Roadside Weed Spraying** Environmental Guideline Number 14

Environmental Aspects Key



Air

- Where possible, conduct dust producing activities when there is no wind/ light wind
- Operate the plant efficiently to reduce the emissions or offensive noise
- Ensure works are scheduled for normal operating hours to avoid invasive noise
- Minimise emissions by turning off plant when not in use



Biosecurity

- Clean machinery, vehicles and footwear at a designated wash down facility before arriving at each new work site
- Weeds present in stockpiles should be managed before they set seed and before the material is used on site
- Avoid using in mulch in high conservation value areas
- When transporting weed-contaminated material ensure that loads are securely covered to contain seeds or other propagules



Community

- Prepare and use a community engagement plan for road widening and construction works, and roadside clearing
- Work in residential areas is restricted to 07:00-20:00 (08:00-20:00 on Sat/Sun or Public holidays)
- If approached, explain the intended works to members of the community
- Follow Council's Pesticide Notification Plan (if applicable)
- Comply with restrictions of a Total Fire Ban



Fauna

- Prepare and use plan to manage impact on fauna using habitat e.g. hollow bearing trees (if applicable)
- All reasonable efforts must be taken to ensure animals occupying the site are not harmed
- If an animal is injured or orphaned during works the Site Leader must immediately contact WIRES on Ph. 1300 094 737
- Retain natural features such as logs, leaf litter, fallen timber, rocks, etc. in the roadside reserve where possible



Heritage

- Ensure an AHIMS basic search has been conducted for the impact site within the last 12 months
- If Aboriginal objects or Aboriginal places are identified (e.g. in AHIMS search) ensure there are no impacts to these objects/places by maintaining a no-go zone
- Limit impacts to disturbed land where possible
- If any Aboriginal or European heritage items are discovered, then work at the site should cease immediately. The item should be reported to Project Manager



Soil

- Erosion and sediment control procedures to comply with the 'Blue Book'
- Prevent vehicle and machinery use on wet soils if rutting and soil compaction can occur
- Do not increase the cover of soil under trees and shrubs by pushing or dumping soil within the canopy line



Vegetation

- Avoid and/or minimise impacts to vegetation including for access, during works, for storage of materials, and for ancillary works
- Use Australian Standard 4373-2009 Pruning of Amenity Trees for pruning techniques
- Follow Rehabilitation Environmental Guideline for areas of disturbed soil



Waste

- Reduce the generation of waste where possible
- Excess spoil and other waste to be removed from work site and disposed of lawfully
- Waste materials should be loaded into a truck and covered
- Ensure Safety Data Sheets and Spillkits are available onsite
- Project Manager should be notified immediately if contaminated materials are suspected. Such material shall be disposed lawfully



Water

- Minimise disturbance.
- Carry out erosion and sediment control measures according to the 'Blue Book'
- Inspect and maintain control measures daily - and before and after heavy rain
- Refuelling is to be undertaken a minimum of 20 metres away from drains and waterways

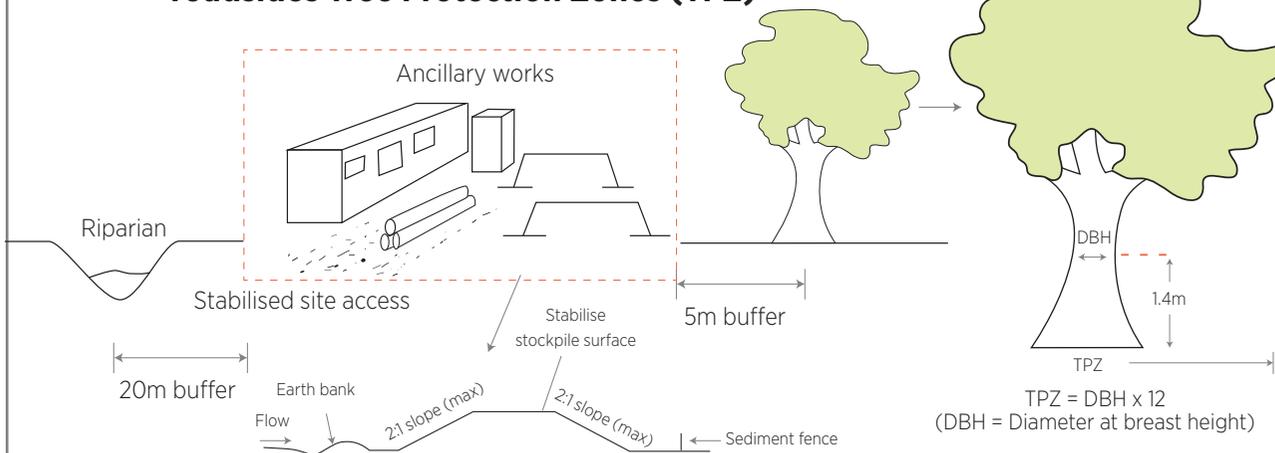
This project has been assisted by the New South Wales Government through its Environmental Trust and supported by LGNSW

Ancillary Works

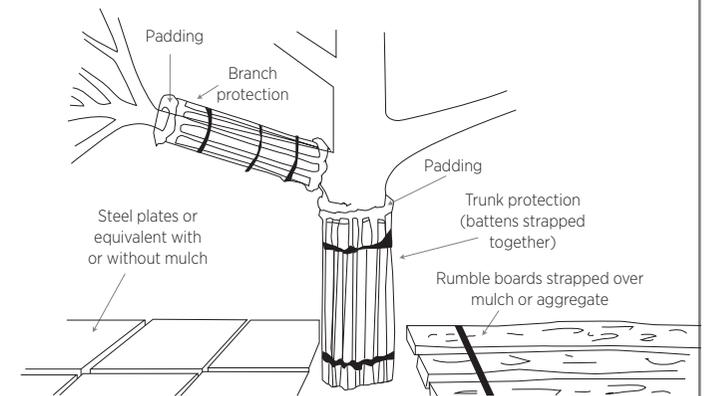
Environmental Guideline Number 1

- Ancillary works includes:
 - Parking plant and equipment
 - Accessways
 - Stockpiles
 - Temporary construction yards
 - Temporary laydown areas
 - Temporary structures
- Follow steps 1-3 below
- Check mapping for High, Medium and Low conservation value road segments

Step 1 - Avoid High and Medium conservation value roadsides Tree Protection Zones (TPZ)



Step 2 - If can't avoid, minimise impact in TPZ



Step 3 - Contact Council's Environmental Officer if unable to comply



Refer to
Environmental
Aspects Key

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New or Widening Roads

Environmental Guideline Number 2

- Check mapping for High, Medium and Low conservation value road segments
- New or widening roads in High conservation value road segments is likely to have a significant impact on matters of national environmental significance. Further investigation is required

PLANNING

Step 1

Avoid impact to high conservation value roadsides by:

- Improving alternative route (existing)
- Apply to RMS to reduce speed limit
- Construct new road in an alternative route (land to be aquired) in areas with little or no native vegetation (See drawing on this page)



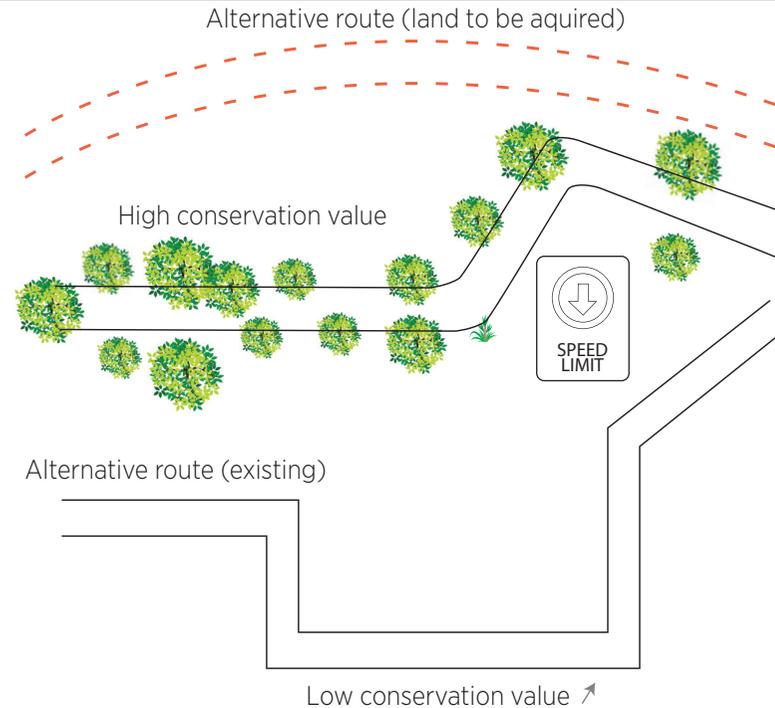
Step 2

If not able to avoid impact then start environmental assessment during survey phase - so that environmental information can be included in the plan and influence the design



Step 3

Consider during the design phase the alternative designs to demonstrate options to minimise impact to high conservation value roadsides. Include Ancillary works in design



DURING WORKS

Follow relevant environmental guidelines such as:

- Ancillary Works
- Table Drain Maintenance
- Underground services
- Rehabilitation



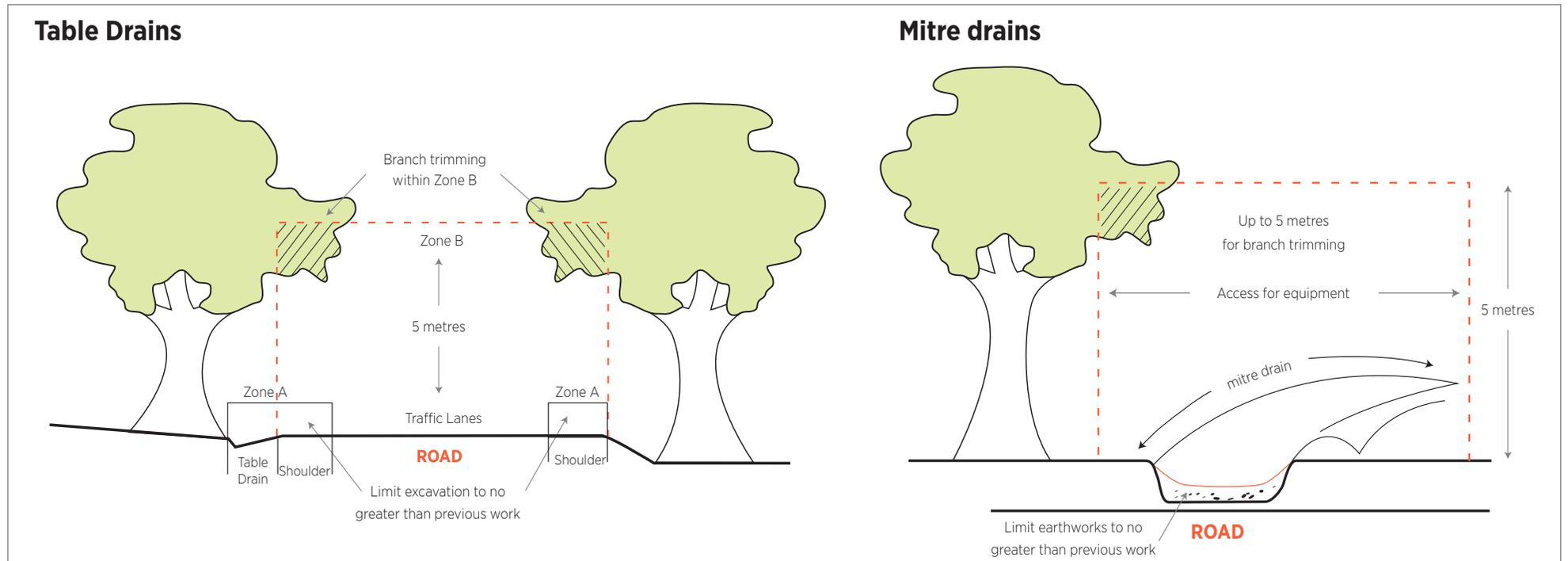
Refer to
Environmental
Aspects Key

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Table Drain Maintenance

Environmental Guideline Number 3

- Any impacts outside Zones A and B will require environmental assessment - contact Council's Environmental Officer
- Check mapping for High, Medium and Low conservation value road segments
- This is further environmental guidance (not replacement) of the other Council standard drawings



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Access Construction (various)

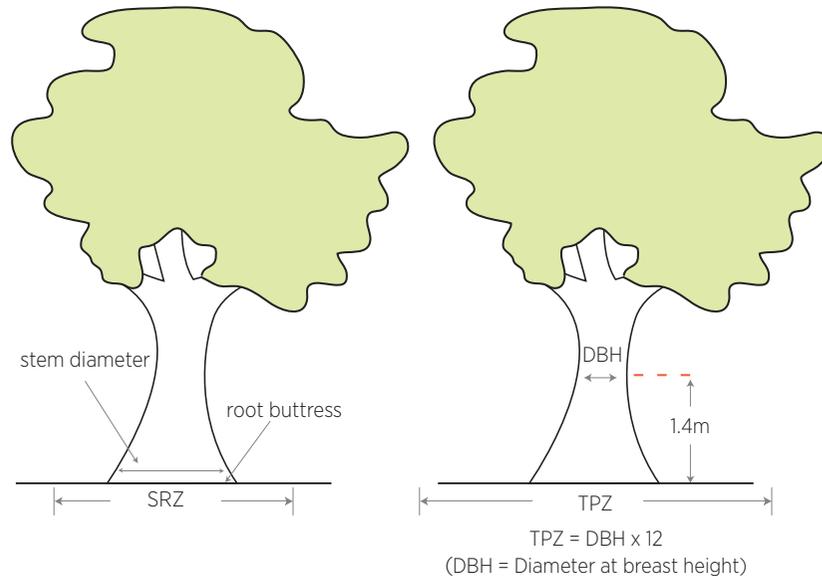
Environmental Guideline Number 4

- Check mapping for High, Medium and Low conservation value road segments
- Avoid constructing access in High conservation value road segments and follow below steps
- Seek assistance from Environmental Officer if unable to follow this environmental guideline

Step 1 - Calculating the Tree Protection Zone (TPZ) and the Structural Root Zone (SRZ)

SRZ can be calculated using AS 4970-2009. Some are tabled below:

SRZ radius (m)	Stem diameter (m)
1.5	0.15 or less
2	0.3 or less
3	0.8 or less
4	1.6 or less
5	2.7 or less

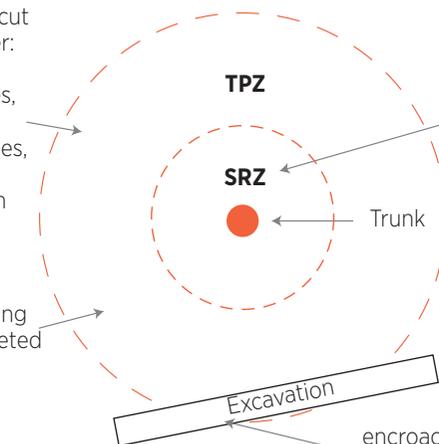


Step 2 - Work outside the TPZ

Step 3 - If this is not possible, use the precautions below

If unavoidable to cut roots outside SRZ, cut roots smaller:
 30mm for 5 metre trees,
 50mm for 5.15 metre trees,
 70mm for trees > 15 m

Any root cutting must be completed with sharp cutting equipment



Do not encroach the SRZ. Encroachment includes: excavation, parking, soil level changes, soil completion or contamination

encroachment no more than 10% in TPZ area



Refer to Environmental Aspects Key

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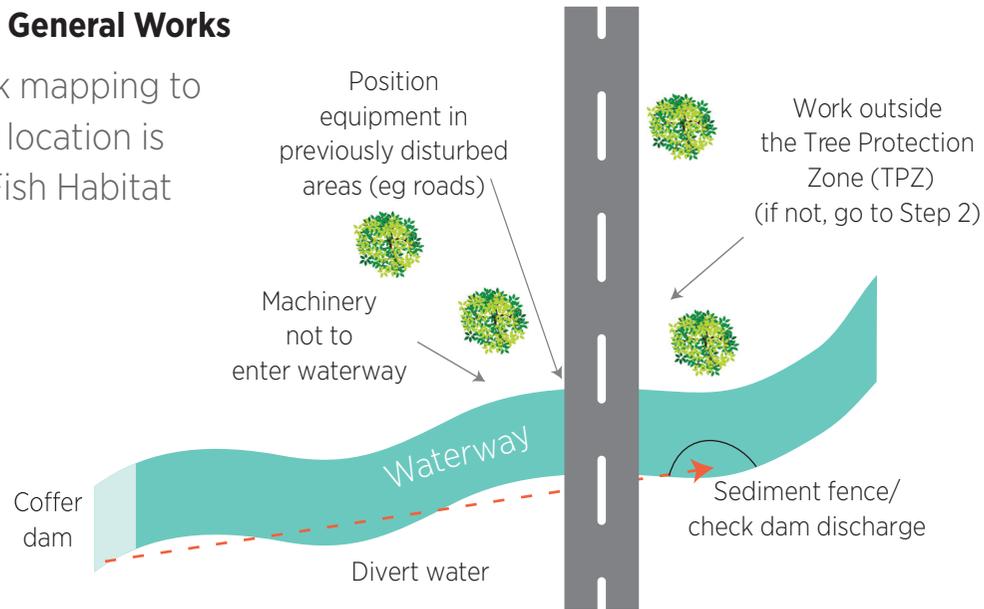
Open Channel Maintenance

Environmental Guideline Number 5

- Use the Table Drain Maintenance environmental guideline for mitre drain and table drain maintenance
- Use Underground Services environmental guideline for installation of new pipes
- Check mapping for High, Medium and Low conservation value road segments
- Seek assistance from Environmental Officer if unable to follow this environmental guideline

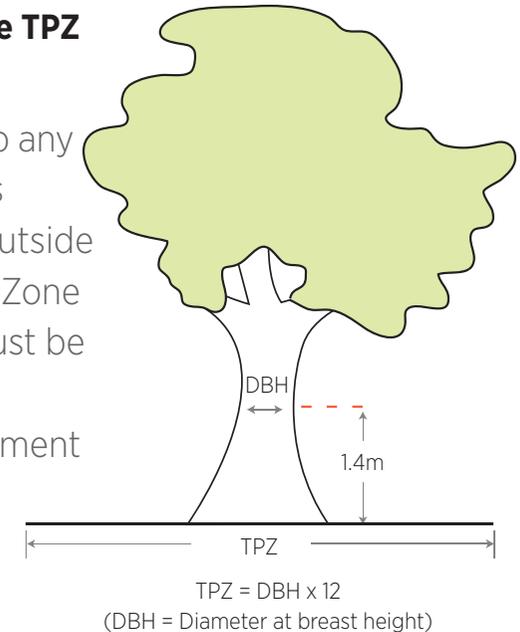
Step 1 - General Works

- Check mapping to see if location is Key Fish Habitat



Step 2 - Working in the TPZ

- Calculate the TPZ
- Within the TPZ, keep any impact to tree roots less than 10% and outside the Structural Root Zone
- Any root cutting must be completed with sharp cutting equipment
- Do not rip roots with excavating machinery



Refer to
Environmental
Aspects Key

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Underground Services

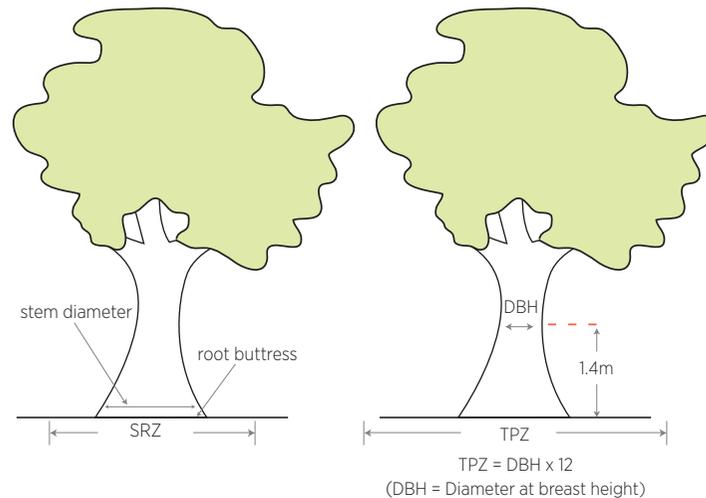
Environmental Guideline Number 6

- Check mapping for High, Medium and Low conservation value road segments
- Avoid High conservation value roadsides especially if installing new infrastructure
- A substantial expansion or modification of underground services in in High conservation value road segments is likely to have a significant impact on matters of national environmental significance. Further investigation is required
- Seek assistance from Environmental Officer if unable to follow this environmental guideline

Step 1 - Calculating the Tree Protection Zone (TPZ) and the Structural Root Zone (SRZ)

SRZ can be calculated using AS 4970-2009. Some are tabled below:

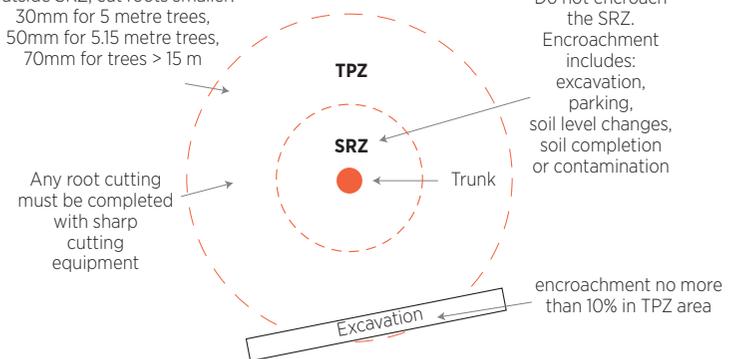
SRZ radius (m)	Stem diameter (m)
1.5	0.15 or less
2	0.3 or less
3	0.8 or less
4	1.6 or less
5	2.7 or less



Step 2 - Work outside the TPZ

Step 3 - If this is not possible, use the precautions below

If unavoidable to cut roots outside SRZ, cut roots smaller:
 30mm for 5 metre trees,
 50mm for 5.15 metre trees,
 70mm for trees > 15 m



For emergency works notify Council's Tree Officer if more than 10% encroachment in TPZ or if SRZ is encroached



Refer to
Environmental
Aspects Key

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Overhead Services

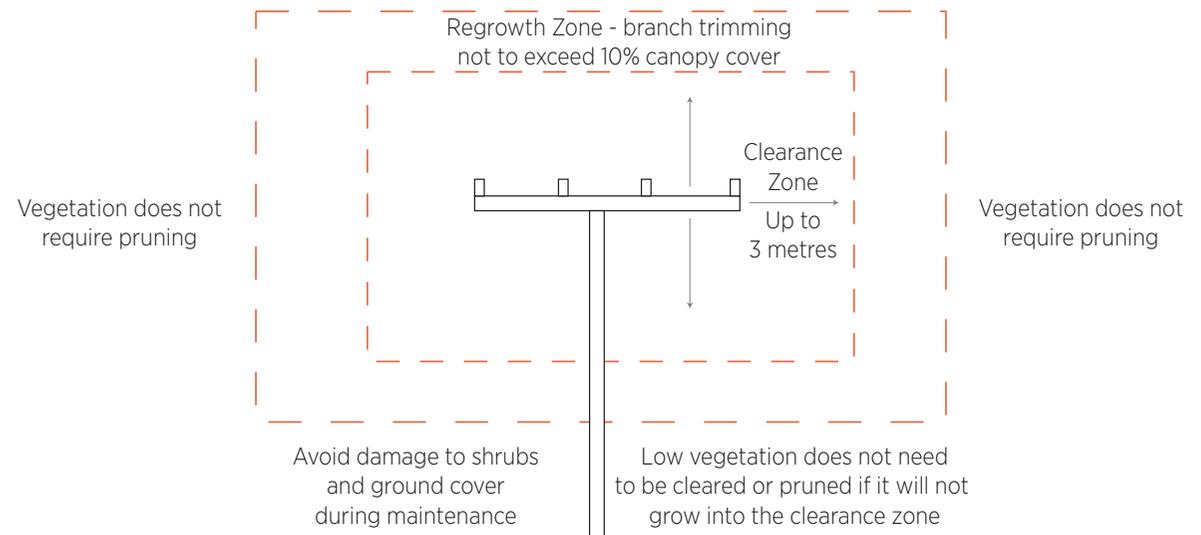
Environmental Guideline Number 7

- If trees are within 3 metres of Endeavour Energy power lines, only vegetation management workers authorised by Endeavour Energy are permitted
- Check mapping for High, Medium and Low conservation value road segments
- A substantial expansion or modification of overhead services in High conservation value road segments is likely to have a significant impact on matters of national environmental significance. Further investigation is required

Construction

- Avoid installing new infrastructure in High conservation value segments if possible
- Position new infrastructure in areas free of native vegetation or use less impacting technology eg. ABC bundled wires

Maintenance



Refer to
Environmental
Aspects Key

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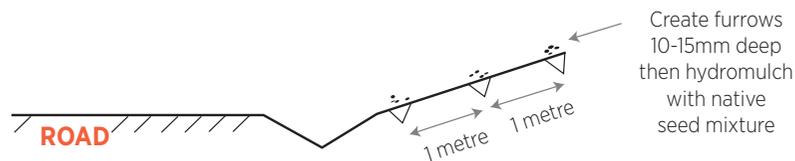
Rehabilitation

Environmental Guideline Number 8

- Check mapping for High, Medium and Low conservation value road segments
- To be used when soil disturbance is outside the traffic lanes
- Revegetate within 10 days of completion of works
- Site must have 60% cover in 20 days and 70% cover in 2 months
- Maintain until established
- Seek assistance from Environmental Officer if unable to follow this environmental guideline

Rehabilitation in rural area

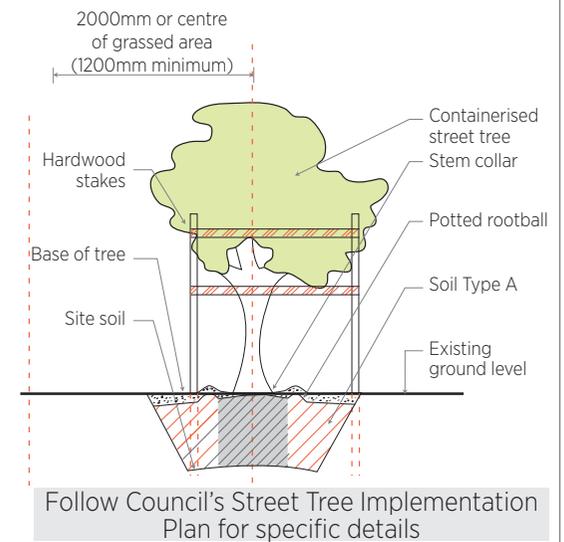
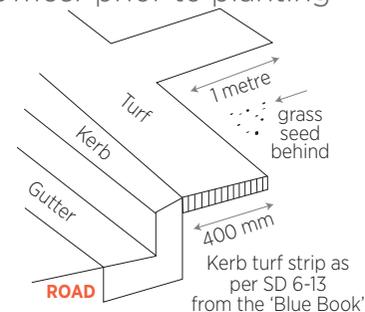
- Use native seed mix in hydro mulch and apply in High and Medium conservation value roadsides - can use sterile exotic grasses in Low conservation
- Discuss with Council's Environmental Officer the inclusion of tubestock planting



Hydromulch and/or tubestock planting - site must have 60% cover in 20 days and 70% cover in 2 months

Urban Street Rehabilitation

- Plant using species from and position as per Council's Street Tree Master Plan
- Discuss with Council's Tree Officer prior to planting



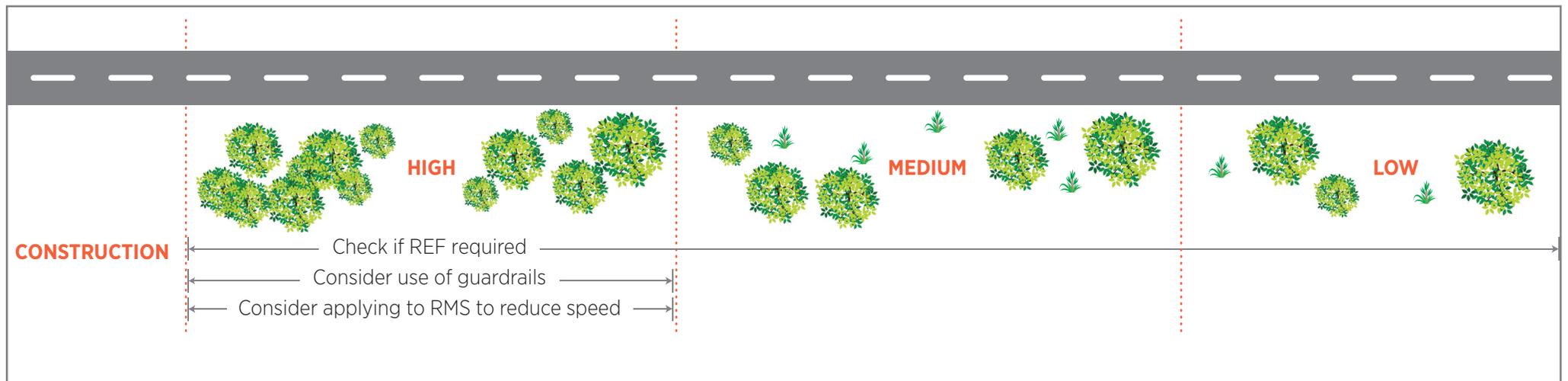
Refer to Environmental Aspects Key

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Clear Zones

Environmental Guideline Number 9

- Check mapping for High, Medium and Low conservation value road segments
- Construction of a Clear Zone in High conservation value road segments (or maintenance other than at a frequency of every 1 – 2 years) is likely to have a significant impact on matters of national environmental significance. Further investigation is required
- Use of Austroads or RMS Guidelines to calculate extent of clearing. Seek assistance from Road Engineers to access these guidelines
- Seek assistance from Environmental Officer if unable to follow this environmental guideline



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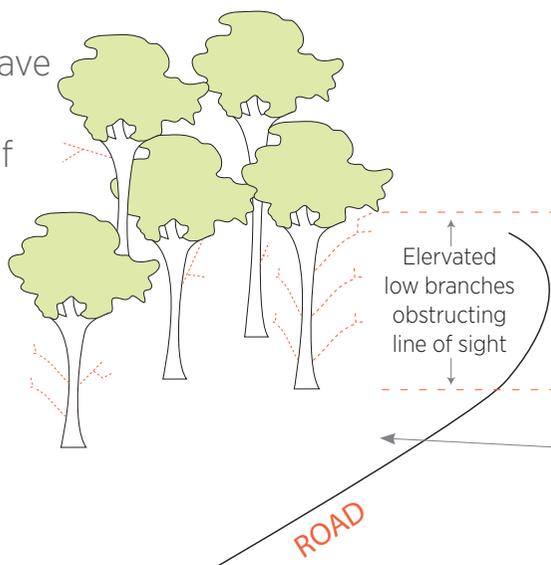
Line of Sight

Environmental Guideline Number 10

- Check mapping for High, Medium and Low conservation value road segments
- Construction of Line of Sight in High conservation value road segments (or maintenance other than at a frequency of every 1 – 2 years) is likely to have a significant impact on matters of national environmental significance. Further investigation is required
- Seek assistance from Environmental Officer if unable to follow this environmental guideline

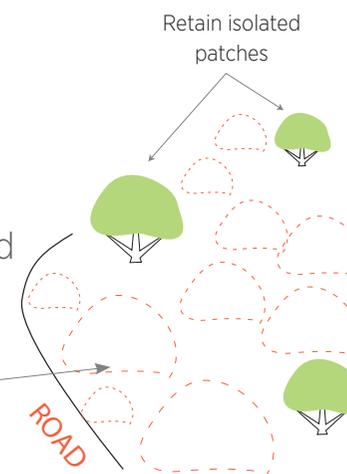
Trees

- Tree species can have canopy raised to push foliage out of the line of sight. This may be acceptable tolerating isolated tree trunks in an otherwise clear envelope



Groundcovers

- Retain all ground cover as they are unlikely to pose vegetation encroachment



Shrubs

- Shrub species may be retained - tolerating isolated patches obstructing an otherwise clear envelope may be acceptable
- Preference to retain threatened species or protected species



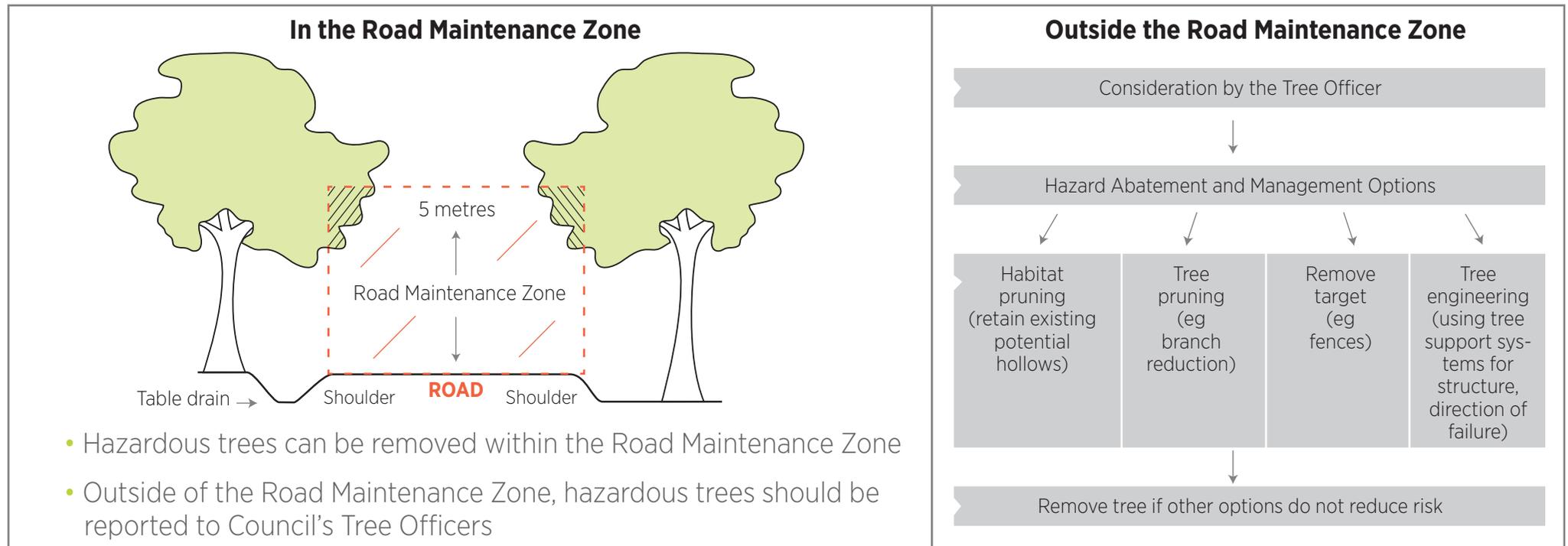
Refer to
Environmental
Aspects Key

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Hazardous Trees

Environmental Guideline Number 11

- Check mapping for High, Medium and Low conservation value road segments
- Seek assistance from Environmental Officer if unable to follow this environmental guideline
- This is further environmental guidance (not replacement) of other Council standard drawings



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Trees and Fences

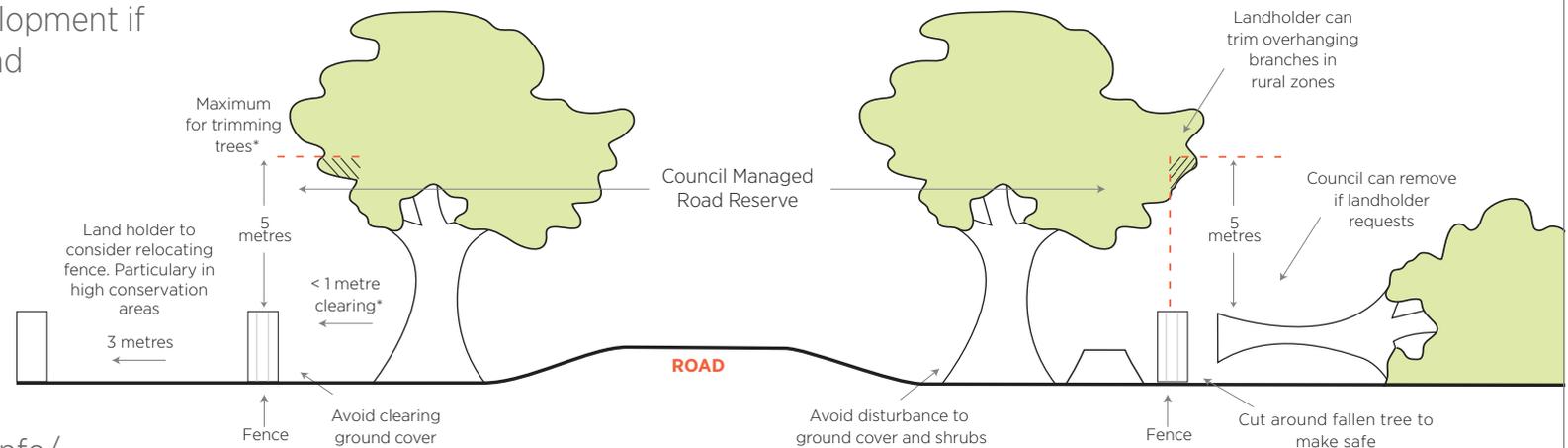
Environmental Guideline Number 12

- Check mapping for High, Medium and Low conservation value road segments
- Seek assistance from Environmental Officer if unable to follow this environmental guideline
- In rural land zones, a landholder may clear to the minimum extent necessary (on their land only) for fencing

Construction

- Construction of new fencing in roadside reserves is an exempt development if following SEPP (Exempt and Complying Development Codes)
- Use fauna friendly fencing (e.g. no barbed wire) in high and medium conservation value road segments - more details at www.wires.org.au/wildlife-info/wildlife-factsheets/making-friendly-fencing

Maintenance



- No vegetation clearing in Council Managed Road Reserve. Asterisk (*) indicates exception for the Road Authority



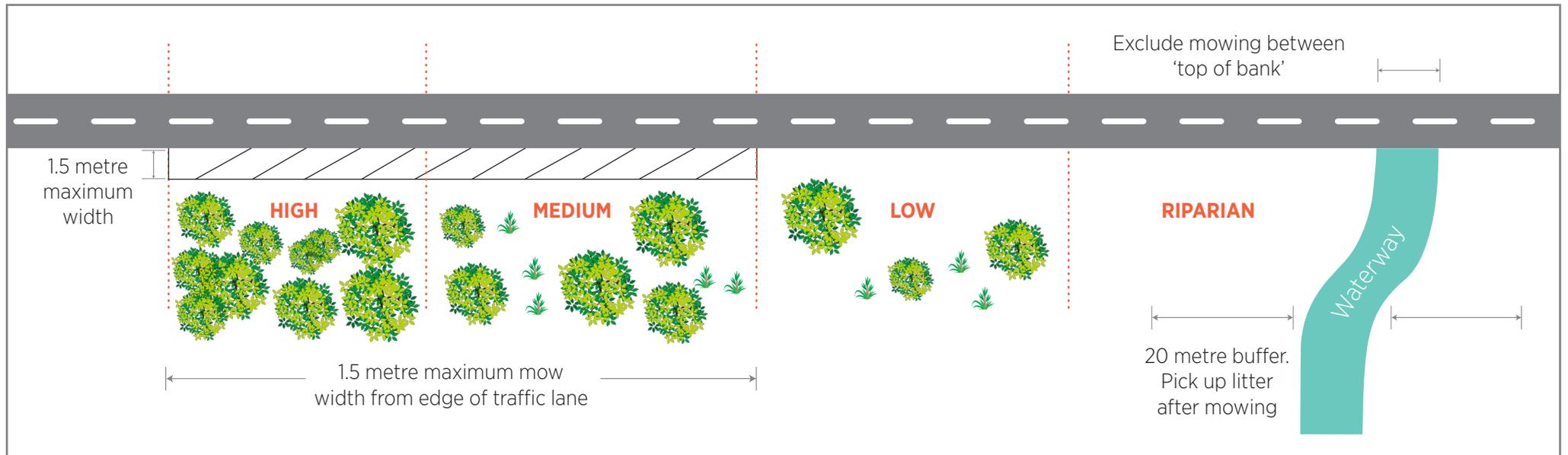
Refer to
Environmental
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Roadside Mowing

Environmental Guideline Number 13

- Maintain a blade height of at least 100 mm
- Check mapping for High, Medium and Low conservation value road segments
- Seek assistance from Environmental Officer if unable to follow this environmental guideline



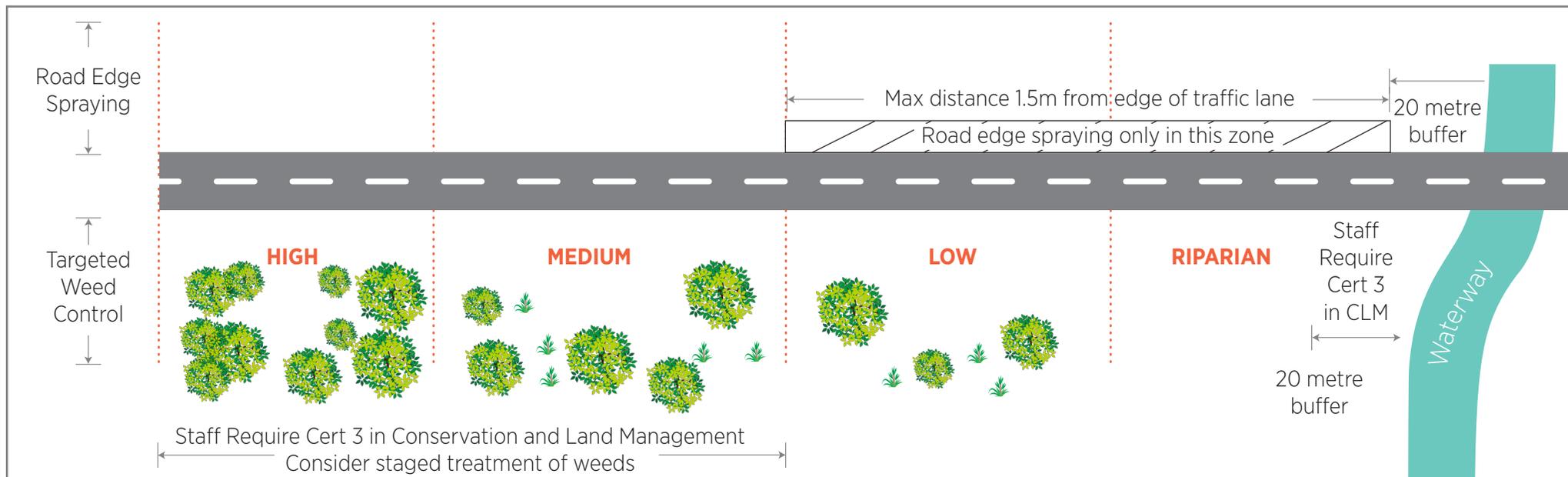
Refer to
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Roadside Weed Spraying

Environmental Guideline Number 14

- Follow Council's Pesticide Notification Plan
- Staff applying chemicals must have ChemCert
- Follow Chemical label
- Maximum 0.5 metre spray around guard rail, guideposts and signs in all zones
- To avoid off target damage, use a targeted approach and selective herbicide
- Check mapping for High, Medium and Low conservation value road segments



Refer to
Environmental
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