

Vegetation Impact Assessment Guideline

EHTM Attachment 4B

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The procedures within this document are currently being reviewed by the Native Vegetation Council.

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Abbreviations

Term / Acronym	Meaning
AH Act	Aboriginal Heritage Act 1988 (SA)
DEW	Department for Environment and Water (SA)
DIT or the Department	Department for Infrastructure and Transport
DTS	Director, Technical Services
DPC-AAR	Department of Premier and Cabinet – Aboriginal Affairs and Reconciliation
ED	Executive Director
EHIA	Environment and Heritage Impact Assessment
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EHTM	Environment and Heritage Technical Manual
FES Act	Fire and Emergency Services Act 2005
LG Act	Local Government Act 1999
LSA Act	Landscape South Australia Act 2019
NVB	Department for Environment and Water (SA), Native Vegetation Branch
NVC	Native Vegetation Council
NV Act	Native Vegetation Act 1991
NVAP	Native Vegetation Assessment Panel
NV Regulations	Native Vegetation Regulations 2017
PDI Act	Planning, Development and Infrastructure Act 2016
PEA	Principal Environmental Advisor
RC Act	Rail Commissioner Act 2009
SEA	Senior Environmental Advisor
SCAP	State Commission Assessment Panel
SEB	Significant Environmental Benefit
SOP	Standard Operating Procedure
SRZ	Structural Root Zone
TPZ	Tree Protection Zone
VIA	Vegetation Impact Assessment

Glossary

Term	Meaning
Contract Documentation	Contract Scope and Technical Requirements; Functional and Operational Requirements; Contract or Project Scope
Contractors	Contractor engaged by the Department to undertake the planning, design or construction of a project (including maintenance projects)
Emergency Works	Emergency works are those required to rectify an immediate hazard to users of the transport infrastructure. This is further detailed in Section 3.2.1.
High Value Vegetation	<p>Refer to the Department’s Vegetation Survey Guidelines. High Value Vegetation is considered to be:</p> <ul style="list-style-type: none"> • Vegetation covered under the NV Act; • Regulated or significant tree under the PDI Act (including those that may be exempt from Development Approval); • Native and non-native vegetation located in and on the margins of waterways; • Vegetation covered by any other environmental/ heritage legislation; • Vegetation that is located on third party land (i.e. land not owned by the Department); • Any other vegetation that may be identified by the Department or the community as providing localised amenity or ecological value; and/or • Rail and Roadside Significant Sites.
Low Impact Method of Clearance	<p>A low impact method of vegetation clearance means selective control, minimal ground disturbance, cutting cleanly rather than breaking branches, slashing, trimming, mowing or rolling. Low impact methods reduce soil disturbance and potential weed invasion.</p> <p>Where clearance for maintenance activities is being undertaken using a ‘low impact method’, works (including access to the site) must ensure that vegetation disturbance is restricted to the minimum practicable extent and is in accordance with the Maintenance Specification and Contract Documentation. No vegetation should be removed outside the Maximum Cleared Width (refer to the Maintenance Specification).</p>
Maintenance Zone	The zone where regrowth vegetation is allowed to be routinely cleared to maintain clearance envelopes in accordance with the Department’s Operational Instruction 20.1 / Maintenance Master Specification Parts
Non-Frangible Plant	A plant with rigid, large or sturdy stems which will not readily break, bend or crash upon impact by a typical passenger vehicle, and which could be expected to inflict significant damage to the vehicle and possibly cause injury to vehicle occupants
Tree	A non-frangible plant with a stem diameter at maturity of 100mm or greater, measured at 1m above the natural ground level.
Shrub	A frangible plant not exceeding 3.5 m in height
Project Area	Area in which a project can have an effect on environmental and heritage aspects. Includes the construction, operational and maintenance footprints
Roadside furniture	General term covering all signs and devices for the control, guidance and safety of traffic, and the convenience of road users (for example signs, guide posts, safety barriers).
Live electrical apparatus	Any apparatus that is not electrically connected to earth (thereby, a potential difference (voltage) exists between it and earth). Note: the ‘earth wire’ should also be considered as ‘live’.

1 Introduction

The Vegetation Impact Assessment Guideline (the Guideline) forms Attachment 4B of the Department's Environment and Heritage Technical Manual (EHTM). This Guideline applies to a range of Department programs and projects including road, rail, marine and other infrastructure, as required. The Guideline applies to employees of the Department (direct or contracted) and others operating under the direction of the Department.

The purpose of the Guideline is:

- to identify the requirements for vegetation impact assessment (VIA) and mitigation measures to be undertaken/implemented during the planning, design, construction, operation and maintenance phases of a project or asset;
- to avoid or minimise vegetation impacts by ensuring procedures are followed and mitigation measures are applied; and
- to provide guidance for the obtainment of relevant vegetation removal approvals.

It is expected that, unless otherwise approved by the Department, Contractors undertaking the works described in this Guideline are suitably qualified professionals, listed on, or that can demonstrate their eligibility to be listed on, the Department's Professional and Technical Services Prequalification for Vegetation Services. Further, Contractors undertaking the assessment of native vegetation (as defined under the NV Act) must be accredited by the Native Vegetation Council (NVC).

Section 5 of this Guideline also forms the Department's Standard Operating Procedure (SOP) for the removal of native vegetation.

1.1 Structure of the Guideline

The Guideline consists of the following Parts:

- Part A – Vegetation Impact Assessment for Construction and Maintenance Activities
- Part B – Vegetation Clearance and Approval Requirements

1.2 Supporting Documentation

The following Departmental documentation (at a minimum) support or form part of assessments undertaken under this Guideline and are available via the Department's website:

- Vegetation Survey Guideline
- Vegetation Removal Request Form
- Environmental Weeds List
- Phytophthora (Dieback) Control Environmental Instruction
- Rail and Roadside Significant Sites Environmental Instruction and Site Assessment Form
- Restricted Clearance Roads List
- Herbicide Resistance Environmental Instruction

1.3 Performance Outcomes

In order to meet the performance requirements under this Guideline, unless specified otherwise in the Contract Documentation, the following shall be achieved:

- Vegetation impact assessment and reporting that demonstrates compliance with applicable legislation and relevant Standards and Guidelines;
- Identification of opportunities to minimise impacts to vegetation whilst providing/maintaining a safe operating environment for asset users and incorporating this into design development;

- Obtainment of the necessary approvals for vegetation impacts in accordance with legislation and relevant Standards and Guidelines; and
- Recommendation for the remediation (or offset) of vegetation impacts in accordance with the Department's Master Specification and legislation and as stipulated in this Guideline.

1.4 Green Infrastructure Commitment

The Department's Green Infrastructure Commitment provides a framework for project planning and decision making that supports the Government's goals for liveable, sustainable and resilient communities, and pro-actively seeks opportunities to deliver urban greening and improved amenity outcomes.

This Guideline is one of the Department's many delivery tools used to address the Green Infrastructure commitments. It aims to ensure that vegetation impacts are minimised and where impacts are unavoidable, that appropriate offsets are implemented in line with the Department's and State Government's Green Infrastructure commitments.

1.5 Legislative Context

Users of this Guideline are responsible for complying with relevant legislation and obtaining relevant approvals, permits or authorisations (where required by the Contract Documentation).

The following legislation may apply to Departmental construction, demolition, operation and maintenance activities associated with transport and building (including property) related infrastructure:

- *Native Vegetation Act 1991* (NV Act) and *Native Vegetation Regulations 2017* (NV Regulations)
The NV Act and subordinate regulations are applicable where impact to native vegetation is proposed as a result of the works.
- *Planning, Development and Infrastructure Act 2016* (PDI Act) and *Planning, Development and Infrastructure (General) Regulations 2017*
The PDI Act and subordinate regulations are applicable where impacts to regulated or significant trees or local and/or state heritage listed places (including vegetation) are proposed as a result of the works.
- *Landscape South Australia Act 2019* (LSA Act)
The LSA Act provides details regarding impacts and management of declared weeds and water affecting activities.
- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
The EPBC Act applies to any action which is likely to have a significant impact on a Matter of National Environmental Significance. Referral and approval may be required if wetlands of international importance, threatened species/ecological communities and/or migratory species listed under the EPBC Act are potentially impacted. The approval process under the EPBC Act will vary depending on the nature of the project and the level of assessment required. For the purpose of maintenance activities, Section 43B of the EPBC Act should be considered. Any referrals under the EPBC Act are to be endorsed by the Director of Technical Services (DTS) prior to submission.
- *Aboriginal Heritage Act 1988* (AH Act)
Section 23 of the AH Act specifies that it is an offence to damage, disturb or interfere with any Aboriginal site, object or remains without the prior authority of the Minister responsible for Aboriginal Affairs and Reconciliation. Aboriginal 'scarred trees' and 'canoe trees', including dead trees, are sites of Aboriginal significance and therefore may not be pruned or removed without prior approval under the AH Act.
- *Fire and Emergency Services Act 2005* (FES Act)
The FES Act sets out responsibilities for the control of vegetation in order to prevent, control and suppress fires.

- *Local Government Act 1999* (LG Act)

The Department's [Operational Instruction 20.1 Care, Control & Management of Roads \(Highways\) by the Commissioner of Highways](#) (Operational Instruction 20.1) outlines the responsibility for the operation and maintenance of roads and/or highways that will be undertaken by the Commissioner of Highways when exercising powers or assuming responsibilities under Part 2 of Chapter 11 of the LG Act 1999, in pursuance of the conferral of those powers and responsibilities to the Commissioner of Highways by operation of Section 26 of the Highways Act 1926.

- *Highways Act 1926* (Highways Act)

Under the *Highways Act 1926* the Commissioner of Highways has the power to remove or cut back any tree or vegetation on or overhanging a road under the Commissioner of Highway's care, control and management, or an adjoining portion of road, 'for the purposes of road safety'.

- *Rail Commissioner Act 2009* (RC Act)

The Rail Commissioner has powers to carry out works, including remove or cut back any tree or vegetation on or overhanging rail infrastructure. These powers may be subject to approvals under other legislation.

PART A

Vegetation Impact Assessment for Construction and Maintenance Activities

2 Vegetation Impact Assessment and Removal Approval Process

The process outlined in this section is intended as a guide. Actual requirements will differ depending on the type of vegetation present; nature of impact and the project phase.

As detailed in Part 2 “Environment and Heritage Impact Assessment” of the EHTM, assessment of environmental impacts (including impacts to vegetation) is integrated in the Department’s Program and Project Management Framework (PPMF). The PPMF describes how the Department should manage the development of programs and projects. It provides guidance on the key activities, minimum deliverables, decisions, and approvals within each phase of the Project lifecycle. These stages are outlined in Table 2-1 along with the expected level of vegetation impact assessment and/or obtainment of approvals for each phase.

Table 2-1 Summary of PPMF Stages and Associated Level of Vegetation Assessment

PPMF Stage	Description	Level of Vegetation Assessment
Initialisation	Building the foundation for the program or project through establishing the need, engaging the team, and identifying and assessing options.	N/A
Proving	Proving the option identified in the initialisation phase is suitable and ensuring the way forward is achievable.	Preliminary Vegetation Impact Assessment Refer to Section 2.1.1
Pre-Delivery	Firming up the scope and approach for delivery, identifying and addressing any remaining information gaps and ambiguities, and ensuring commitment to delivery of a project or program prior to going to market.	Detailed Vegetation Impact Assessment Refer to Section 2.1.2
Procurement	Delivery strategy is implemented and the delivery is put to the market for tender. Final preparation to ensure readiness for delivery	N/A
Delivery	Asset is constructed by the delivery contractor, handed over and put into operation	Detailed Vegetation Impact Assessment Refer to Section 2.1.2

The process followed in the Proving phase, where the scope of a project is undefined or there may be a range of alignment/location options to be assessed, will differ to the Pre-delivery or Delivery phase where the scope is defined and/or a preferred design and construction methodology is known. The Mitigation Hierarchy (refer Section 2.2) shall be applied and documented at all project phases.

This process relates to all vegetation: native vegetation, regulated and significant trees, amenity vegetation, vegetation under heritage protections, and declared and environmental weeds.

2.1 Vegetation Impact Assessments

A preliminary Vegetation Impact Assessment (VIA) should be undertaken during the project Proving phase. A detailed VIA shall be undertaken during the Pre-Delivery/Procurement/Delivery phase when the project has a preferred design and is at a level that is generally representative of the final design.

Once a preferred design has been selected, the detailed VIA should be utilised to inform construction methodologies and minimise impacts to vegetation as per the mitigation hierarchy.

2.1.1 Proving Phase

The preliminary VIA should identify potential impact minimisation options influencing planning and design decisions (e.g. via informing the Multi-Criteria Analysis process).

The preliminary VIA will identify physical features including:

- High value vegetation,
- ecologically sensitive areas,
- vegetation that is protected under Commonwealth or State legislation,
- vegetation of high conservation value,
- environmental areas of special significance (e.g. seasonal habitats, wetlands),
- amenity vegetation,
- Roadside and Railside Significant Sites,
- declared and/or environmental weeds, and
- potential or actual plant pathogens (e.g. phytophthora, phylloxera).

The preliminary VIA will also:

- identify the need to undertake a vegetation survey (if not already undertaken),
- consider the mitigation hierarchy and identify options to avoid or minimise impacts,
- inform the qualitative risk assessment process detailed in Austroads (2021) Guide to Road Design Part 6 and/ or project options development/ assessment,
- identify if and what other information may be required in this or subsequent phases,
- identify if the project works have the potential to have a significant impact on Matters of National Environmental Significance under the EPBC Act Guidelines (trigger a referral under the EPBC Act) and provide recommendation regarding how this could be mitigated,
- determine the recommended approval pathway with reference to timing implications,
- identify and recommend alternative opportunities for vegetation offsets including Significant Environmental Benefit (SEB) Offsets in lieu of payment into the Native Vegetation Fund (refer to Section 5.4).

It may be possible or necessary to undertake a vegetation survey at this stage to gather baseline information or if the scope of the project is well defined/ relatively stable. Vegetation surveys will be undertaken in accordance with Department's Vegetation Survey Guideline and/ or Native Vegetation Council requirements where the project is likely to affect native vegetation as defined under the NV Act. Where there is native vegetation to be surveyed, the NVC report and relevant assessment method templates must be used.

The outcome of the preliminary VIA may be summarised in the vegetation survey report, EHIA report, planning report and/ or the design report etc.

2.1.2 Pre-Delivery/ Delivery Phase

Once the detailed project scope and/ or the preferred design is known, if there is a need for further investigation, the preliminary VIA should be reviewed and updated to become the detailed VIA. Where a vegetation survey was not conducted as part of the preliminary VIA, vegetation survey is required at this phase.

The outcome of the detailed VIA process shall address the following, as a minimum:

- Detail all vegetation to be impacted, both directly and indirectly, throughout the Project Area during the construction and operation of the project. The vegetation type, quality, quantity, value and legislative status should be clearly identified;
- Details of how the mitigation hierarchy (refer Section 2.2) has been applied (can be at the micro scale e.g. to individual trees, or applied more broadly to areas of vegetation);

- The potential impact to fauna (due to the impacts to vegetation) is to be discussed (with reference to the Department's Fauna Impact Assessment Guideline);
- Provide an assessment to determine if there are likely to be any Significant Impacts on Matters of National Environmental Significance (under the EPBC Act Guidelines) based on the project design and construction methodology. This assessment must include the recommendation to complete (or otherwise) a self-assessment under the EPBC Act (note that such assessment would be completed as a separate scope of works/deliverable);
- Details of declared plants and environmental weeds to be impacted and the associated management/controls required. A phytophthora risk assessment in accordance with the Department's Environmental Instruction;
- Where works are within the Tree Protection Zone (TPZ) or Structural Root Zone (SRZ) (as determined in accordance with Australian Standard AS4970-2009), the need to obtain specialist arborist advice during design development and/or construction should be recommended;
- Details of any specialist arborist advice obtained;
- Prepare and provide approval application and supporting documentation to the Department (as required by the Master Specification) for review and lodgement.

The impact assessment may require a multidisciplinary team, which would generally include an ecologist (or arborist/tree health specialist), environmental impact assessment specialist, project manager and/or designer.

The remediation/vegetation offset strategy should be determined in consultation with the project design team and the Department's Project Manager and should be reflected in the approval application documentation. Where engagement with third parties is required, this is to be undertaken as per Section 2.4.

Vegetation removal drawings referencing information from the vegetation survey (e.g. tree numbers and impacts), are to be included in the standard drawing package when a project will result in impacts to vegetation. The planning report and design report should address the findings of the VIA, including impacts and mitigation measures (per Master Specification Part PC-ENV3).

Vegetation impact assessment and approval processes will be undertaken in accordance with Master Specification Parts PC-ENV1, PC-ENV2 and relevant legislation.

Confirmation or clarification of impacts and offset will be undertaken during these phases of the project. Some impacts can only be understood once construction works have commenced, for example root impacts may only be quantified during ground disturbing works; sight distance pruning requirements may be unclear until preliminary pruning occurs. Previously obtained or new approval documentation is to be amended and/or lodged, as required.

2.2 Mitigation Hierarchy

The mitigation hierarchy, as adopted from the NV Regulations, is to be addressed for impacts to native vegetation, regulated/significant trees, trees under heritage protection, and amenity vegetation. The mitigation hierarchy only applies to declared plants and weeds that are considered to provide amenity, cultural or other significance.

Mitigation Hierarchy: demonstrate how the following has been achieved, or if not, explain why

Avoidance – measures should be taken to avoid clearance of vegetation wherever possible.

Minimisation – if clearance cannot be avoided, measures should be taken to minimise the duration, intensity and extent of impacts of the clearance on biological diversity to the fullest possible extent (whether the impact is direct, indirect or cumulative).

Rehabilitation or Restoration – measures should be taken to rehabilitate ecosystems that have been degraded, and to restore ecosystems that have been destroyed, by impacts of clearance of native vegetation that cannot be avoided or minimised.

Offset – any adverse impact on vegetation or ecosystems that cannot be avoided or further minimised should be offset in accordance with this Guideline and in the case of native vegetation, as per the NVC Significant Environmental Benefit (SEB) Guidelines.

2.3 Vegetation Approval Pathways and Offset Strategy

Once a detailed VIA has been undertaken and the impacts identified, the appropriate approval pathway needs to be followed and an offset strategy determined in consultation with the Department Project Manager. More than one approval (including legislative and Departmental) may be required and as such, all approval and offset pathways under Part B of this Guideline (Vegetation Clearance and Approval Requirements) must be consulted.

Impacts to trees and other vegetation protected under the AH Act need to be approved by the Minister for Aboriginal Affairs and Reconciliation in accordance with the AH Act. Impacts to Aboriginal culturally significant or culturally modified trees requires prior approval, even if the works are considered 'maintenance'.

Impacts to vegetation protected under the EPBC Act need to be assessed and approved in accordance with EPBC Act requirements; refer to the Australian Government Department of Agriculture, Water and the Environment, EPBC Act publications and resources.

2.4 Engagement

The Department's Operational Instruction 20.1 states that the relevant Local Council shall be consulted prior to vegetation removal within a road reserve, unless an immediate hazard exists to road users. An approving authority may require evidence of Local Council consultation.

Where vegetation to be impacted is located on private property, consultation with the landowner should be undertaken by the Department's Project Manager, unless otherwise stated in Contract Documentation.

Where vegetation removal is likely to have significant community interest or result in adverse community reaction (for example, where the vegetation has high ecological, local heritage or amenity value) engagement with the local community shall be undertaken in accordance with the Department's Master Specification or as advised by the Department's Communications and Stakeholder Engagement Directorate.

As outlined in the Department's EHIA Guideline, the level of stakeholder and community engagement on vegetation aspects should be determined on a project by project basis and defined as early as possible after project initiation. The level of engagement will be determined in consultation with the Department's Project Manager and incorporated into the project's Community and Stakeholder Engagement Strategy (or similar).

3 Construction and Maintenance Activities

The Department (or its Contractors) carries out a variety of construction, demolition, operation and maintenance activities associated with transport and property related infrastructure. This section summarises common Departmental activities where vegetation clearance may be required. All works should be planned to avoid or minimise impacts to vegetation whilst ensuring provision of a safe and effective environment for users of the infrastructure.

When undertaking VIAs, it is important to determine whether the proposed activities comprise new works, maintenance works or works required to ensure public safety, as this will inform the approval pathway for vegetation clearance works (note, there may be a combination of types of work; e.g. new works and maintenance). The approval pathways and offset for vegetation impacts are outlined in Part B of this Guideline.

3.1 New Works – Infrastructure Construction and Demolition

Vegetation is required to be removed for a variety of activities associated with road, rail, marine, property, buildings and any other Departmental related infrastructure. These activities (not associated with maintenance) include, but are not limited to:

- construction of road, rail and bridge infrastructure;
- construction and demolition of buildings (demolition is only considered New Work if vegetation impacts extend beyond maintenance clearance allowances);
- installation of signs, fences, railings, safety barriers, gates or safety cameras;
- installation of traffic control devices and traffic islands;
- installation of road and infrastructure lighting and Intelligent Transport Systems infrastructure, including conduit trenching;
- installation of rail (including light rail) electrical infrastructure including signals, masts, gantries and substations;
- construction of rest areas;
- installation of amenities or equipment for the use, enjoyment or protection of the public;
- creation of borrow pits, campsites, bores and dams;
- creation of construction and maintenance turnaround points (e.g. on outback roads);
- installation/extension of culverts;
- shoulder sealing and shoulder widening beyond the existing maintenance zone;
- establishment of safe sight lines and sight triangles at road intersections and rail crossings (note, subsequent removal of regrowth in these areas is considered a maintenance activity, not new works) (refer to Section 3.3 below);
- establishment of clear zones;
- initial removal of non-frangible trees/vegetation in the road reserve that present a hazard to errant vehicles leaving the road (refer to Section 3.2 below);
- marine dredging in a previously undisturbed area and/or where dredge spoil disposal to previously un-impacted area of seagrass as well as other marine works (e.g. piling, temporary barges etc); and
- landscaping, revegetation or beautification works.

3.2 Clearance for Public Safety

The Department undertakes works to maintain or improve public safety; for example, removing non-frangible hazardous trees located adjacent to the travelled way. The Project Manager will advise if works are being undertaken to ensure public safety.

The NVC Guidelines for the Management of Roadside Native Vegetation and Regrowth Vegetation provide a framework for vegetation clearances that need to be undertaken for safety measures related to sight distances, intersections, clearance adjacent to the travelled way, or other safety concerns that cause a risk to people or property. The public safety framework does not apply to any clearances associated with new works or upgrades of infrastructure.

Category 1 - Clearance for the establishment of safe sight lines and sight triangles at road intersections and rail crossings:

- Clearance must be consistent with Austroads Guide to Road Design: Part 4: Intersections and Crossings – General (2009) or AS 1742:2007 Manual of uniform traffic control devices, Part 7: Railway Crossings, to fall within this Category and to be exempt from the requirement to provide an SEB.
- Maintenance of regrowth within areas where clearance has previously been undertaken does not require approval.

Category 2 - Clearance of non-frangible trees that present a hazard to errant vehicles leaving the road

Clearance must be within the zones shown below, and only of non-frangible vegetation, to fall within this Category and be exempt from the requirement to provide an SEB:

Sealed Roads

- ≤80 km/hr up to 2 m from the edge of travelled way
- >80 km/hr up to 3 m from the edge of travelled way

Unsealed Roads

- Up to 2 m either side of the grader line edge, capped at a total width including the travelled way itself of up to 12 m

Category 3: Clearance beyond Category 1 and Category 2 zones

An assessment of alternative options to reduce the hazard should be undertaken in accordance with the Mitigation Hierarchy (refer Section 2.2). Vegetation removal for public safety should only occur when all other feasible options have been assessed and discounted.

3.2.1 Emergency Works

Emergency works are those required to urgently rectify an immediate hazard to users of the transport infrastructure (e.g. a tree identified as structurally unsound), and where there is insufficient time to seek prior approval due to the imminent and unacceptable risk of personal injury or property damage. Vegetation is considered to be an immediate hazard if:

- there is an immediate danger that a tree or limb will fall because of disease, damage or any other cause;
- there is a real and unacceptable risk of personal injury or damage to property if failure occurs;
- the condition of the tree has been assessed by an arborist or person with expertise in the area of plant health, or by any other suitable person (including Departmental staff or their contractors, Country Fire Service, State Emergency Services or South Australian Police) acting in an emergency situation or in any other situation that gives rise to an immediate risk of personal injury or damage to property; and
- the clearance is confined to removing the limb or other part of the plant causing the danger and only extends to total removal of the tree if that is necessary to remove the existing immediate danger.

Note:

Additionally, the Department can only prune or remove a tree deemed to be an immediate hazard if it is on or overhanging a road under the care, control and management of the Commissioner of Highways (as per s26A *Highways Act 1926*), or vegetation that is on or overhanging rail infrastructure (as per the *Rail Commissioner Act 2009*). Trees growing on private property, including Council land, that do not

overhang such road or rail infrastructure, but are deemed to be an immediate hazard, will need to be directed to the Local Council for their action in accordance with the *Local Government Act 1999*.

Under the PDI Act, emergency removal or pruning work involving a regulated or significant tree can be undertaken without first having sought or received development approval. The emergency work must, so far as is reasonably practicable, be undertaken to cause the minimum amount of damage to the tree. As soon as practicable after the emergency work is undertaken, the State Commission Assessment Panel (SCAP) must be notified and if required, a retrospective Development Application submitted.

Where the emergency works involve impacts to a culturally significant or culturally scarred tree(s), liaison with Department of Premier and Cabinet – Aboriginal Affairs and Reconciliation (DPC-AAR) is to be undertaken to determine the need for further assessment and approvals under the AH Act.

Where a tree has been assessed by an arborist as not posing an immediate hazard and/or unacceptable safety risk, and is situated outside the ownership or maintenance responsibilities of the Department, the information should be directed in writing to the responsible authority (Local Council or landowner) in a timely manner for their records and action where required.

3.3 Maintenance

The Department carries out a variety of maintenance activities associated with:

- transport infrastructure including road, rail and marine assets;
- transport user safety; and
- Departmental properties and building facilities.

3.3.1 Maintenance and/or Repair of Infrastructure

Removal of regrowth (less than 20 years old for native vegetation) and seasonal growth (e.g. annual weeds, grasses) or other vegetation may be required for maintenance, repair and protection of transport infrastructure and other departmental assets including, but not limited to:

- road shoulders;
- established road/rail clearance envelopes, clear zones and safe sight lines;
- culverts, drains (including headwalls and open drains) and verges;
- cut rock faces;
- bridge abutments;
- fences, railings, barriers or gates;
- traffic control devices, safety cameras, traffic islands;
- infrastructure lighting, Intelligent Transport Systems infrastructure, and departmental signs;
- rail (including light rail) electrical infrastructure including signals, masts, gantries and substations;
- parking bays or roadside rest areas including amenities or equipment on or adjacent to a road for the use, enjoyment or protection of the public;
- stacking sites (including rehabilitation);
- landscaping, revegetation or beautification works;
- land owned or managed by the department, to:
 - prevent or inhibit the outbreak of fire or spread of fire;
 - maintain buildings and infrastructure (including fences);
- campsites, bores, dams and Maintenance Turnaround Points; or
- borrow pits (including rehabilitation).

Note that in accordance with the NV Regulations, native vegetation is permitted to be cleared without conditions for a number of activities, including within 10 m of an existing building or 20 m from a dwelling

(refer to the DEW website for more details on pathways for clearance approval). No approval is required if controlling regrowth using low impact methods and if minimum clearance is undertaken.

Vegetation may be cleared to allow machinery access to the infrastructure/asset for maintenance purposes (for example moving machinery from a road through native vegetation to access an eroding/slumping batter for stabilisation works). This clearance shall be restricted to the minimum area practicable (e.g. minimum clearance for the required maintenance machinery access) or to the area of previous impact. If this vegetation has not been previously cleared for the construction or maintenance of the infrastructure, clearance can be considered a maintenance activity (with offset relevant for Maintenance works) as long as the impact is less than or equal to Native Vegetation Level 2 criteria (refer Section 5.3). If clearance is beyond Native Vegetation Level 2 criteria shall be considered as New Works.

Regrowth in proximity to infrastructure is controlled in accordance with the 'Maximum Cleared Width' documented in the Maintenance Specification or as defined in Contract Specific Requirements.

No approval is required if controlling regrowth in accordance with the NV Act and the Department's SOP (Part B of this Guideline).

3.3.2 Maintenance for Protection or Function of Infrastructure

Protection of infrastructure includes vegetation removal or pruning to maintain the long term functionality of departmental assets. An arborist (or person with equivalent plant health training) must make the determination as to whether the vegetation has a high likelihood of damaging infrastructure (or its function) in the short to medium term, and should be pruned or removed as a maintenance activity.

Minor pruning of vegetation growing on private property but overhanging into the road/rail reserve can be pruned to the property boundary without the need for approval.

Where vegetation is growing on an easement (which has been established for the Department's access for infrastructure maintenance), vegetation can be removed or pruned to the easement boundary without the need for approval by the property owner, however, adequate notification to the property owner of such works should be provided.

All pruning is to be undertaken in accordance with the Australian Standard AS4373-2007 Pruning of Amenity Trees. Refer to Part B of this Guideline to determine the need for approval for such works.

Where clearance involves native vegetation, NV Regulations 8(2) and 8(9) most often apply to Departmental activities.

3.3.3 Fire Management

Protection of infrastructure may require vegetation clearance for protection of property and/or to prevent or inhibit the outbreak or spread of fire, in accordance with NV Regulations 9(1) and 9(2), and the Department's responsibilities under the *Fire and Emergency Services Act 2005*. South Australian Country Fire Service approval is required in some instances.

3.3.4 Marine Maintenance

The Department manages a number of public marinas and boating facilities in South Australia. The Department is responsible for maintaining a safe, navigable passage for vessels to access those facilities and dredging is sometimes required to maintain such access. Dredging activities may include the disposal of the dredge spoil.

Where a maintenance dredging activity occurs in an area already impacted through past dredging activity (e.g. where seagrass meadows have already been impacted/cleared either during dredging works or during dredge spoil disposal works), an offset for native vegetation (e.g. seagrass) removal is not required. An offset will be required (i.e. treated as New Works) when new disposal sites are used and where those sites have known native vegetation according to Coast Protection Board mapping, or site inspection.

3.3.5 Safe Sight Distance at Road and/or Rail Junctions and Intersections

The Department will control seasonal growth and vegetation at locations outlined in Operational Instruction 20.1, where such growth and vegetation are restricting road and rail Approach Sight Distance and Safe Intersection Sight Distance as defined in accordance with the relevant Austroads Guide.

No approval is required for maintenance removal of regrowth in areas where clearance for sight lines and sight triangles has previously been undertaken.

3.3.6 Clearance Envelopes – Road and Rail

The Department is required to maintain vegetation clearance envelopes for road and rail infrastructure. Appendix A defines the range of clearance envelopes that are the maintenance responsibility of the Commissioner of Highways and the Rail Commissioner. For the majority of the Department's road network, the 'standard' clearance envelope is applied. However, there are a number of roads within the network that may be defined as:

- a restricted clearance road – refer to the Department's Restricted Clearance Roads List; or
- an oversize route – refer to routes categorised as '4.0 m Wide Load Carrying Vehicle' on the Ravnet online database.

The pruning or removal of vegetation within the clearance envelope may be carried out without approval with only a few exceptions (refer Section 5.3). Assessment may be required to determine if the works are considered 'maintenance works', or 'new works'; new works require approval and offset.

4 Non-Conformances

Vegetation impact without appropriate approval, is considered by the Department to be a 'non-conformance'.

The causes of a non-conformance must be investigated and reported as part of seeking retrospective approval. Measures must be implemented to prevent a reoccurrence of a similar non-conformance.

Where a non-conformance has or may have resulted in a tree damaging activity (including root impacts), advice from a suitably qualified arborist (or other plant health expert) shall be obtained as part of the investigation, to determine the risk to public safety and infrastructure, and or advice on appropriate remediation action required.

The party responsible for the non-conformance/ clearance will be responsible for all follow up assessments and reporting, as well as providing the required offset and seeking retrospective approval.

Appropriate remediation works must be undertaken to rehabilitate the site of the non-conformance and ensure that there is no net loss of biodiversity or amenity values.

In the event of illegal clearance under the NV Act, a report summarising the incident and measures proposed to remediate the clearance will be required and must be provided to the Department (for endorsement) and then to the NVC.

Note that fines or penalties may apply under legislation; these will be borne by the party responsible for the non-conformance/clearance. An SEB or other offset may also be required.

PART B

Vegetation Clearance and Approval Requirements

5 Native Vegetation

5.1 Legislative Context

The NV Act provides protection for native vegetation in South Australia and sets out a process for applying to clear native vegetation. The NV Act is only applicable in certain parts of the state and, therefore, native vegetation subject to the NV Act is only present in certain parts of the state.

In accordance with Section 29 of the NV Act, native vegetation must not be cleared unless permitted under the NV Act or the NV Regulations. The NV Regulations require that clearance is undertaken in accordance with a SOP or a Management Plan that has been approved by the NVC.

Under the NV Act, the removal of native vegetation may be seriously at variance with the 'Principles of Clearance', if the vegetation meets criteria under one or more of thirteen principles (see NV Act Schedule 1 – Principles of native vegetation clearance or NVC Information Sheet no. 10). The Principles most commonly applied to vegetation impact assessments for Department activities include the following (other Principles may apply):

- a) it comprises a high level of diversity of plant species;
- b) it has significance as a habitat for wildlife;
- c) it includes plants of a rare, vulnerable or endangered species;
- d) the vegetation comprises the whole, or a part, of a plant community that is rare, vulnerable or endangered;
- e) it is significant as a remnant of vegetation in an area which has been extensively cleared;
- 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 NV Regulations include a risk assessment pathway. For clearance under Division 5 of the Regulations (such as works on behalf of the Commissioner of Highways; Rail Commissioner; new dwelling or building works, or infrastructure works), proponents must demonstrate compliance with the Mitigation Hierarchy (refer to Section 2.2 of this Guideline or Regulation 5 of the NV Regulations).

Under the NV Act, vegetation impact approval is conditional on the achievement of a SEB. The NVC may give consent to the clearance of native vegetation if it is satisfied that actions will be taken that will result in an SEB. The achievement of an SEB is a condition of approval for activities under Schedule 1 Part 6 of the Regulations (e.g. Works on behalf of the Commissioner of Highways).

The NVC Policy for a Significant Environmental Benefit - Under the NV Act and NV Regs, describes matters that the NVC or its delegate will take into account when considering what constitutes an SEB, and when administering SEB credits and third party SEBs. Provision of an SEB does not negate the responsibility to avoid or minimise impact to vegetation.

With reference to the NVC Guidelines (2020 – or subsequent current version) *Guidelines for the Management of Roadside Native Vegetation and Regrowth Vegetation Under Native Vegetation Regulation 11(23)*, where native vegetation is exempt from requiring NVC removal approval/offset, such vegetation should be considered in this Guideline as amenity vegetation.

5.2 Native Vegetation Assessment Process

The general process as detailed in Section 2.1 is to be adopted when undertaking a vegetation impact assessment involving native vegetation subject to the NV Act. The native vegetation survey is required to be undertaken by an NVC Accredited Consultant and all documentation is to be in accordance with NVC requirements (refer to the SA Department for Environment and Water website).

Where the data for native vegetation is not included in the Department's vegetation survey datasheet (along with data for amenity vegetation, regulated and significant trees) a standalone table shall be developed during the VIA, detailing the assumed extent of impacts for each individual tree/group/area. The purpose of this table is to justify the loss factor utilised to calculate the SEB and provide clarification to construction contractors regarding the scope of the approved impacts to vegetation. An example of what is expected is as follows:

ID	Description	Loss Factor	Potential Impact (Remove/ Prune/ Root Impacts)
Group B	Group of Scattered Tree <i>Acacia melanoxylon</i> (Blackwood Wattle) – 5 adults and 10 individuals over dense <i>Phalaris +/- Dactylis glomerata</i> fringed by sparse <i>Conyza bonariensis</i>	0.5	Remove 50% of the trees within the group
Tree 6	<i>Eucalyptus leucoxylon ssp pruinosa</i>	0.4	Canopy pruning as shown in reference photo
Tree 7	<i>Eucalyptus leucoxylon ssp pruinosa</i>	1	Removal of the tree

5.3 Native Vegetation Impact Approval Pathway

Construction and maintenance activities with potential to impact native vegetation are listed in Section 3. The approval pathways for native vegetation clearance are based on the activity and the level of impact as identified in:

- Table 5.1: New Works
- Table 5.2: Public Safety Works
- Table 5.3: Maintenance Works

The tables identify scenarios for which approval is required, the relevant approving authorities (both internal and external) and whether a remediation offset is required. Where an activity is not covered in the tables, advice should be sought from the Department’s Technical Services Environment and Sustainability Unit. Where the offset has been presented as a ratio (i.e. 2:1), the offset unit rate value is to be as per that nominated in the PDI (Fees, Charges and Contributions) Regulations for a regulated tree offset in lieu of on-ground replanting (refer to Section 6.4 for more information on how to apply this offset ratio).

In addition to native vegetation removal approval requirements, other legislative approvals may be required for impacts to vegetation.

Table 5.1: Approval and Off-Set Requirements – Native Vegetation – New Works (refer Section 3.1 for description)

Activity	Impact Level ^{1,2}		Removal		Major Prune ³	
	Agricultural	Pastoral	Approval	SEB/Offset	Approval	SEB/Offset
<p>Where Removal or Pruning is associated with the following activities:</p> <ul style="list-style-type: none"> Infrastructure construction for roads, rail, marine and property. Building or dwelling construction (including schools, hospitals and prisons). Other new works as listed in Section 3.1 of this document. 	<p>Level 1 <u>Patches</u> – 500 m² (0.05 ha) or less AND/OR <u>Scattered Trees</u> – 5 trees or less</p>	<p>Level 1 <u>Patches</u> – 3 ha or less AND/OR <u>Scattered Trees</u> – 5 trees or less</p>	SEA	Fixed \$500	SEA	Fixed \$500
	<p>Escalating Factors to Level 2 approval: Clearance involves any trees with a trunk circumference measured at 1m above the ground of (for multi stemmed trees, measure the largest trunk/stem):</p> <ul style="list-style-type: none"> 50cm or more for Agricultural zone, or 30cm of more for the Pastoral zone, AND/ OR The works have a high likelihood of impact to a listed species or threatened community under either the NP&W Act or EPBC Act, AND/ OR There is an associated application within the last 5 years¹. 					
	<p>Level 2 <u>Patches</u> – greater than 0.05 ha but less than or equal to 0.5 ha AND/OR <u>Scattered Trees</u> – 6 to 20 trees</p>	<p>Level 2 <u>Patches</u> – greater than 3 ha but less than or equal to 10 ha AND/OR <u>Scattered Trees</u> – 6 to 20 trees</p>	PEA	Refer Section 5.4	PEA	Refer Section 5.4
	<p>Escalating Factors to Level 3 approval:</p> <ul style="list-style-type: none"> If the clearance is seriously at variance with Principle of Clearance 1(b), 1(c), or 1(d)⁴ 					
	<p>Level 3 Clearance beyond Level 2 AND <u>Total Biodiversity Score</u> – less than or equal to 250</p>	<p>Level 3 Clearance beyond Level 2 AND <u>Total Biodiversity Score</u> – less than or equal to 2500</p>	NVB [Endorsed by PEA]	Refer Section 5.4	NVB [Endorsed by PEA]	Refer Section 5.4
<p>Escalating Factors to Level 4 approval:</p> <ul style="list-style-type: none"> If the clearance is seriously at variance with Principle of Clearance 1(b), 1(c), or 1(d)⁴ 						
<p>Level 4 Clearance beyond Level 2 AND <u>Total Biodiversity Score</u> – greater than 250</p>	<p>Level 4 Clearance beyond Level 2 AND <u>Total Biodiversity Score</u> – greater than 2500</p>	NVAP [Endorsed by DTS ⁵]	Refer Section 5.4	NVAP [Endorsed by DTS ⁵]	Refer Section 5.4	

SEA – Senior Environmental Advisor, PEA- Principal Environmental Advisor, NVB – Native Vegetation Board, NVAP – Native Vegetation Assessment Panel, DTS – Directors, Technical Services, ED – Executive Director

1 – In accordance with the *NVC Guide for applications to clear native vegetation* – Under the NV Act and NV Regulations, an associated application includes:

- An application to clear native vegetation was approved or has been applied for on the same property title within the last 5 years, regardless of whether the applicant was the owner of the land at the time of the previous application.
- Where the applicant is not the owner of the land or clearance will occur on land not subject to a property title (e.g. road reserve), an application to clear native vegetation was approved or has been applied for within 5 km of the proposed clearance area and directly related to the current application (i.e. for the same project, development or piece of infrastructure) within the last 5 years.

An associated application would only escalate an approval level if the combination of the applications would constitute a higher level and the two applications are clearly directly and inextricably associated (e.g. one wouldn't occur in the absence of the other, and the consideration of clearance in one application would have direct and significant bearing on the other).

2 – Scattered Trees and/or Areas – This includes Dead Trees with a trunk circumference equal to or greater than 1 m (for trees on Kangaroo Island) or 2 m (for all other trees) measured at 300 mm above natural ground level AND that provide habitat for threatened species listed under the EPBC Act. Refer NV Info Sheet No. 28 – Dead Trees for more details.

3 – No Approvals or offsets for Minor Pruning. Minor Pruning is considered in the *NVC Guide for calculating a Significant Environmental Benefit* to be an impact to a scattered tree of less than 25%

4 – Principle 1(b) – it has significance as habitat for wildlife; Principle 1(c) – it includes plants of a rare, vulnerable or endangered species; Principle 1(d) – the vegetation comprises the whole, or a part, of a plant community that is rare, vulnerable or endangered.

2 – Endorsement required by ED if the SEB is greater than or equal to \$550,000.

Table 5.2: Approval and Off-Set Requirements – Native Vegetation – Public Safety Works (refer Section 3.2 for description)

Activity	Impact Level ¹		Removal		Major Prune ²	
	Agricultural	Pastoral	Approval	SEB/Offset	Approval	SEB/Offset
Category 1: New clearance for the establishment of safe sight lines and sight triangles at road intersections and rail crossings.	Levels 1 to 4	Levels 1 to 4	SEA (Level 1 and 2 only) PEA	2:1 (SEB not required under NV Act)	SEA	Not Required
Category 2: Clearance of non-frangible trees/vegetation in the road reserve that present a hazard to errant vehicles leaving the road. <ul style="list-style-type: none"> On sealed roads with a speed limit of ≤80 km/hr: Clearance within 2 m from edge of travelled way AND mitigation hierarchy has been applied. On sealed roads with a speed limit of >80 km/hr: clearance within 3 m from edge of travelled way AND mitigation hierarchy has been applied. On unsealed roads: clearance up to 2 m either side of the edge of the grader line (capped at a total width including the travelled way itself of up to 12 m) AND mitigation hierarchy has been applied. 	Levels 1 and 2 <u>Patches</u> – less than or equal to 0.5 ha AND/OR <u>Scattered Trees</u> – 6 to 20 trees	Levels 1 and 2 <u>Patches</u> – less than or equal to 10 ha AND/OR <u>Scattered Trees</u> – 6 to 20 trees	PEA	2:1 (SEB not required under NV Act)	PEA	Not Required
	Level 3 Clearance beyond Level 2 AND Total Biodiversity Score – less than or equal to 250	Level 3 Clearance beyond Level 2 AND Total Biodiversity Score – less than or equal to 2500	NVB [Endorsed by PEA]	2:1 (SEB not required under NV Act)	NVB [Endorsed by PEA]	Not Required
	Level 4 Clearance beyond Level 2 AND Total Biodiversity Score – greater than 250	Level 4 Clearance beyond Level 2 AND Total Biodiversity Score – greater than 2500	NVAP [Endorsed by DTS ³]	2:1 (SEB not required under NV Act)	NVAP [Endorsed by DTS ³]	Not Required
Category 3: Clearance beyond Category 1 and Category 2 zones.	Levels 1 to 4	Levels 1 to 4	NVAP [Endorsed by DTS ³]	2:1 unless SEB not required by NVC Guidelines	NVAP [Endorsed by DTS ³]	Nil unless SEB required by NVC Guidelines
Emergency Works <ul style="list-style-type: none"> Urgent works to remove or rectify an immediate hazard⁴ and /or To repair/protect transport infrastructure in an emergency situation 	Removal of trees (including dead trees) with trunk diameter equal to or greater than 100 mm measured at 1 m above the natural ground level. For advice regarding the presence of Aboriginal culturally significant or culturally modified tree refer to Section 3.2.1.		DIT Officer (advise SEA after removal)	Not Required	DIT Officer (advise SEA after removal)	Not Required

SEA – Senior Environmental Advisor, PEA- Principal Environmental Advisor, NVB – Native Vegetation Board, NVAP – Native Vegetation Assessment Panel, DTS – Directors, Technical Services, ED – Executive Director

1 – Escalating factors as per Table 5.1

2 – No Approvals or offsets for Minor Pruning. Minor Pruning is considered in the NVC Guide for calculating a Significant Environmental Benefit to be an impact to a scattered tree of less than 25%

3 – Endorsement required by ED if the SEB is greater than or equal to \$550,000.

Table 5.3: Approval and Off-Set Requirements – Native Vegetation – Maintenance Works (refer Section 3.3 for description)

Activity	Description	Removal		Major Prune ¹	
		Approval	SEB/Offset	Approval	SEB/Offset
<p>Where Pruning or Removal is associated with a Maintenance activity listed in Section 3.3 and Appendix A.</p> <p>Where Vegetation is:</p> <ul style="list-style-type: none"> causing damage to infrastructure (or rendering infrastructure unable to function as required), or structurally unsound and poses a real safety risk to person/property 	<p>Controlling regrowth² in the following situations:</p> <ul style="list-style-type: none"> Pruning vegetation or controlling regrowth within the clearance envelope Removing regrowth in drains and culverts, around road/ rail side fixtures and related infrastructure Removing regrowth to the outer edge of shoulder and in turnouts, drains and culverts; in areas where clearance for sight lines and sight triangles has previously been established; and designated stacking sites, borrow pits, campsites, dams, cliffs/cuttings etc if undertaken in accordance with Maintenance Specification and this Guideline Clearance of native vegetation causing natural resources management problems can be cleared in accordance with the Native Regulation 8 (16)³. <i>Acacia longifolia</i> (Coastal Wattle) may be pruned/removed up to an additional 2.0 m beyond the defined clearance envelope. In the Natural Resources South East region, Coastal Wattle can be cleared to the property boundary³ 	Not Required (As long as using Low Impact Method)	Not Required	Not Required	Not Required
	<p>Trees with trunk diameter equal to or greater than 100 mm measured at 1m above the natural ground level. Vegetation protected by an Electrified Rail Vegetation Waiver.</p>	SEA	Not Required unless impact deemed significant (2:1 offset)	Not Required	Not Required
	<p>Trees (including dead trees) which have a trunk diameter equal to or greater than 100 mm measured at 1 m above the natural ground level AND that provide habitat for threatened species listed under the NPW Act. No approval or offset is required for any other dead vegetation.</p>	SEA	2:1	Not Required	Not Required
Emergency Works	Refer to Table 5.2	-	-	-	-

SEA – Senior Environmental Advisor

1 – No Approvals or offsets for Minor Pruning. Minor Pruning is considered in the *NVC Guide for calculating a Significant Environmental Benefit* to be an impact to a scattered tree of less than 25%

2 – Native vegetation regrowth on roadsides is considered by NVC to be a maintenance activity within 20 years from the time of legal clearance (*NVC Guidelines for the Management of Roadside Native Vegetation and Regrowth Vegetation*).

3 – Refer NVC’s Guidelines for Clearance of Native Vegetation causing Natural Resources Management Problems and specific information sheets at: <https://www.environment.sa.gov.au/topics/native-vegetation/clearing/landscape-management-problems>. Species include coastal and sallow wattle (*Acacia longifolia*), box mistletoe (*Amyema miquelii*), bulrushes (*Typha domingensis*), common reeds (*Phragmites australis*), water milfoil (*Myriophyllum spicatum*), and western coastal wattle (*Acacia cyclops*).

4 – Should be based on the recommendations of a suitably qualified Arborist or person with expertise in the area of tree health, or by any other suitable person acting in an emergency situation

5.4 Native Vegetation Remediation Measures

The NVC Guide for calculating a *Significant Environmental Benefit under the Native Vegetation Act 1991 and Native Vegetation Regulations 2017*, sets out the methodologies for determining the remediation effort required to achieve an SEB. The assessment method used will depend on the type of vegetation impacted (i.e. a patches versus scattered trees) and the location of the vegetation. The method enables a quantitative calculation of the required SEB. NVC endorsed assessment methodologies include:

- Scattered Tree Assessment Method – removal of scattered remnant trees (refer to the NVC *Guide for calculating a Significant Environmental Benefit* for a definition of ‘scattered tree’);
- Bushland Assessment Method – where proposed clearance consists of a patch or patches of native vegetation in the agricultural areas of the State (excluding Landscape regions SAAL and AW); and
- Rangelands Assessment Method – where proposed clearance consists of a patch or patches of native vegetation in the pastoral areas of the State within the SAAL and AW Landscape regions.

The two pathways to achieve an SEB under the NV Act are:

1. SEB delivery via payment into the Native Vegetation Fund; or
2. SEB delivery via on-ground works (which can be direct, via Accredited Third Party Provider, or use of an SEB Credit).

If the SEB is required as a result of an approved activity undertaken under the NV Regulations, the applicant has a choice of either providing an on-ground SEB, or a payment SEB. The Department is committed to the delivery of SEB requirements as detailed in the following sub-sections.

5.4.1 Payment to the Native Vegetation Fund

Payment into the Native Vegetation Fund is the Department’s preferred SEB delivery mechanism.

5.4.2 Payment to Accredited Third Party Providers – On-Ground Works

For major works, or packages of works, requiring an offset obligation greater than 150 SEB Points (refer to the NVC *Guide for calculating a Significant Environmental Benefit*), opportunities to provide on-ground SEB Offsets via an NVC Accredited Third Party Provider, in lieu of paying into the Native Vegetation Fund, shall be identified by the Contractor undertaking the VIA. This should occur during the Proving phase, or as early as possible in the Pre-delivery phase, and provided to the Department for assessment and approval.

Use of the Third Party Provider option will only be considered if the SEB can be delivered for an equivalent or lesser cost (including allowance for the level of involvement required to negotiate third party offsets and manage contracts with providers). Additionally, the use of the Third Party Provider option will only be considered if it does not result in a delay to the NVC approval process.

5.4.3 Project Related On-Ground Works

The NVC *Policy for a Significant Environmental Benefit* details the requirements for establishing on-ground SEB areas. Where on-ground works are undertaken, all offset areas are to be audited (by the Department or its contractors) 12 months after the clearance approval decision date and annually during the maintenance period, or as otherwise required in compliance with NVC approval conditions. Performance indicators and targets are to be detailed in an NVC approved Management Plan.

Where on-ground works are required, the Department can consider the use of Accredited Third Party Providers. Contractor’s proposing to deliver an SEB via on-ground works shall seek approval from the Department.

Provision of on-ground SEB (commissioned by the Department) is restricted to situations where:

- vegetation and rehabilitation at or within the vicinity of the site is required as a direct result of project requirements (including approval conditions and community expectations). This may include site protection works to stabilise batter slopes or rehabilitate stockpile sites, or landscaping to maintain the amenity of the area. However, where the vegetation and rehabilitation activities are occurring within a road reserve, they shall not be used to provide on-

ground SEB, so that future operational, maintenance or construction activities do not impact SEB areas;

- plantings are a condition of clearance consent under the NV Act or the EPBC Act; or
- delivery of SEB through payment to the Native Vegetation Fund has a significantly greater cost than delivery through on-ground works.

5.4.4 SEB Credits

Where the Department undertakes voluntary SEB or environmental initiatives by either undertaking actions not linked to an existing vegetation clearance, or exceeding a required SEB, those initiatives may, subject to NVC endorsement, be used as credit towards SEB requirements for other projects.

The NVC has a Credit Register of established and potential SEB sites. Where a suitable site is available for use, this shall be identified by the Contractor undertaking the VIA in lieu of paying into the Native Vegetation Fund. As per Section 5.4.2, consideration should occur during the Proving phase, or as early as possible in the Pre-delivery phase, and be provided to the Department for assessment and approval. Additionally, due to the requirement for direct negotiations with landowners, the conditions for consideration of the use of SEB Credits will be the same as for the use of Third Party Providers.

5.5 Remediation Considerations for Borrow Pits

Extraction from borrow pits and quarries often occurs over many years. Rehabilitation of borrow pit sites should be undertaken progressively as the material is used. Exhausted or obsolete pits should be rehabilitated by:

- spreading any remaining over-burden;
- reshaping the pit to reduce erosion potential (flatten pit faces to a slope <6:1);
- scarifying/ripping the pit floor to improve permeability, reduce the likelihood of it holding water and to encourage natural regeneration of the site; and
- constructing diversion drains around the edge of the pit to minimise erosion.

Offsets requirements for borrow pits may be reduced on the basis of restoration activities over the site, subsequent to the clearance. However, the reduction can only be applied if the rehabilitation works commence within 7 years of the majority of the clearance occurring. Due to the potentially long life span of a borrow pit, this reduction in SEB offset requirements is unlikely to be achievable in most instances.

5.6 Approval Documentation and Reporting to NVC

Documentation required for a native vegetation clearance is detailed in Table 5-1. The Department reports to the NVC at the end of each financial year on the status of all native vegetation clearance approvals (including those granted under delegation and approved by NVB or NVAP) as well as on the progress of SEB delivery. The reporting shall include spatial information.

Table 5-1 Documentation Requirements for Native Vegetation Clearance Applications

Level of Clearance	Required Documentation
Level 1 and Level 2	DIT Vegetation Removal Request Form; Native Vegetation Clearance Data Report, (Level 1 specific template to be used for Level 1 impacts); Scoresheet(s); photos; maps/plans; and shapefile;
Level 3 and Level 4	Application Covering Letter to NVC, DIT Vegetation Removal Request Form, Native Vegetation Clearance Data Report; Scoresheet(s); photos; maps/plans; and shapefile

6 Regulated and Significant Trees

6.1 Legislative Context

The *Planning, Development and Infrastructure Act 2016* (PDI Act) requires that approval be obtained prior to undertaking a 'tree damaging activity' in relation to 'regulated' trees and/ or 'significant' trees in areas subject to the PDI Act, except where an exclusion or exemption applies (refer to Appendix B). Trees may also be protected by the PDI Act where they are registered as a State Heritage item/place.

Regulated and significant trees are defined in *the Planning, Development and Infrastructure (General) Regulations 2017* (PDI Regulations) as follows:

- Regulated trees – any tree with a trunk circumference of 2.0 m or more; or, in the case of trees that have multiple trunks, those that have trunks with a total circumference of 2.0 m or more and an average circumference of 625 mm or more, measured at a point 1.0 m above natural ground level;
- Significant trees – a regulated tree with a trunk circumference of 3.0 m or more or, in the case of a tree with multiple trunks, those that have trunks with a total circumference of 3.0 m or more and an average circumference of 625 mm or more, measured at a point 1.0 m above natural ground level

The controls for regulated and significant trees apply to all parts of Metropolitan Adelaide and some other areas of the State (refer to Regulations for detailed description of where the Act applies).

Tree damaging activities in relation to regulated and significant trees are defined in the PDI Act and the PDI (General) Regulations. Where tree damaging activities are associated with new works, public safety and maintenance activities (refer Section 3), development approval may be required under Section 131 of the PDI Act unless an exemption applies (refer to Appendix B).

6.2 Regulated and Significant Tree Assessment Process

The general process as detailed in Section 2.1 is to be adopted when undertaking a vegetation impact assessment involving regulated or significant trees (as defined in the PDI Act). When determining the approvals pathway for any proposed impacts to regulated or significant trees, potential exemptions (from the definition of development or from the requirement to obtain development approval) are to be considered. Further details regarding potentially applicable exemptions are provided in Appendix B of this Guideline.

6.3 Regulated and Significant Trees Impact Approval Pathway

Where development approval is deemed to be required for tree damaging activities, an application shall be submitted to the State Commission Assessment Panel (SCAP) for assessment as a Crown Development. Where Development Approval for tree damaging activities is not required, internal departmental approval may still be necessary and appropriate pathways shall be applied.

Refer to Table 6.1 to determine the appropriate approval authority for tree damaging activities to regulated and significant trees.

Table 6.1: Approval and Off-Set Requirements – Regulated and Significant Trees

Activity			Removal		Major Prune	
	Approval or exemption status	Tree legislative status	Approval	Offset ³	Approval	Offset
Tree damaging activity in relation to regulated and significant trees incidental to: <ul style="list-style-type: none"> • New works (refer Section 3.1) • Maintenance (refer Section 3.3)¹ 	Development Approval under PDI Act required – no exclusion or exemption applies	Regulated tree	Minister for Planning and Local Government [Endorsed by PEA]	2:1	Minister for Planning and Local Government [Endorsed by PEA]	Not required
		Significant tree	Minister for Planning and Local Government [Endorsed by PEA]	3:1	Minister for Planning and Local Government [Endorsed by PEA] ⁴	Not required
	No approval under PDI Act – exclusion or exemption applies ²	Regulated tree	DTS or Rail Commissioner ⁵	2:1	DTS ⁴ or Rail Commissioner ⁵	Not required
		Significant tree	DTS or Rail Commissioner ⁵	3:1	DTS ⁴ or Rail Commissioner ⁵	Not required

PEA – Principal Environmental Advisor, DTS – Director, Technical Services

1 – Provided pruning for maintenance purposes is restricted to less than 30% of the crown of the tree and is with the purpose of providing clearance envelope provisions, this is considered minor pruning and approval is not required. Where Major pruning is undertaken (i.e. greater than 30% of the crown of the tree this is considered a major prune and approvals as per the table are required. Dead trees (meeting regulated and significant size) requirements do not require approval or offset from removal (unless also covered under the NV Act)

2 – Refer to Appendix B and PDI Act and PDI Regulations. Includes the exemptions under the Highways Act and Rail Commissioners Act

3 – As per PDI Regulations

4 – Where approval is also being sought for removal from the DTS, include major prune impacts as part of same approval process i.e. seek endorsement/ approval from DTS only

5 – On land adjacent railway land in accordance with PDI (General) Regulations – Schedule 13(2)(1)(w)(iii)(B)

6.4 Remediation Measures

Table 6.1 identifies the required offset ratios to be applied when regulated and significant tree impacts occur. Where development approval has been granted, the offset ratio of 2:1 for regulated trees (i.e. two replacement trees to offset the loss of one regulated tree) and 3:1 for significant trees (i.e. three replacement trees to offset the loss of one significant tree) will be required. This is defined in the PDI Regulations.

The above offset shall also be adopted for removal of regulated and significant trees where exclusions or exemptions for development approval apply.

An offset may be provided by:

- a payment into the Planning and Development Fund, where development approval is required and it is not feasible to provide replacement plantings on-ground, at the amount stipulated in the approval conditions or required under PDI (Fees, Charges and Contributions) Regulations 2019, Schedule 1, Part 5;
- a payment into the Department's Amenity Planting Fund (refer Section 7.1.3) or equivalent council tree fund where development approval is not required, and it is not feasible to provide replacement plantings on-ground, at the amount stipulated in the PDI (Fees, Charges and Contributions), Schedule 1, Part 5, and at the relevant offset ratios outlined above;
- undertaking on-ground works within or adjacent to the project or infrastructure site. This may be undertaken as part of a landscaping program and would provide replacement trees at the required offset ratio in the form of semi-matured indigenous species, or in accordance with development approval conditions. On-ground plantings shall not be located to prevent future upgrade works; or
- a combination of replacement plantings on-ground and payment into a fund at the amount identified above.

7 Amenity Vegetation and Declared Plants and Weeds

Definition regarding the approval and offset requirements for amenity vegetation and weeds is provided below.

Where vegetation is not considered as native vegetation (under the NV Act) or regulated or significant trees (under the PDI Act), then it would generally be referred to as either amenity vegetation or Declared Plants/Weeds. This includes native vegetation located in areas not covered by the NV Act (which would be considered as amenity vegetation).

The general process as detailed in Section 2.1 is to be adopted when undertaking a vegetation impact assessment involving amenity vegetation or Declared Plants/ Weeds.

7.1 Amenity Vegetation

Planted vegetation fulfils both functional and aesthetic roles in urban and rural environments. Vegetation in urban areas contributes to the liveability of places in many ways. Street trees and other vegetation improve the visual amenity of our cities and towns. They can also have important cultural or heritage associations (e.g. memorial avenues or trees planted to mark a special event or occasion). Landscape plantings provide screening between the road or rail and adjacent properties and provide shade for users of the transport system.

In the context of this Guideline planted vegetation is referred to as Amenity Vegetation and is defined as a tree or shrub by virtue of its size and/or aesthetic qualities that provides amenity. In this context, amenity trees/shrubs do not include native vegetation under the NV Act or declared plants or environmental weeds, with the exception of weeds that have amenity value. Amenity trees and shrubs are usually planted, but may include self-sown plants especially those of significant size, form, or with other values.

In circumstances where native vegetation has been identified, but is located outside of the area covered by the NV Act, any impact shall be approved and offset in accordance with this Part.

7.1.1 Legislative Context

Provided all other legislative requirements have been satisfied, the Commissioner of Highways and Rail Commissioner have certain powers in specific circumstances to remove or cut back vegetation (refer Section 1.5).

7.1.2 Amenity Vegetation Impact Approval Pathway

Except where required by other legislation, internal Departmental approval pathways shall apply for any impact to amenity vegetation. Refer to Table 7.1 to determine the appropriate approval authority for impact to amenity vegetation.

Table 7.1: Approval and Off-Set Requirements – Amenity Vegetation

Activity	Description	Removal		Major Prune	
		Approval	Offset ²	Approval	Offset
New Works – Pruning or removing of amenity vegetation (refer Section 3.1) ⁴	Amenity vegetation – that is part of an amenity planting, including windbreaks. All amenity vegetation, regardless of size, requires approval and an offset	SEA	1:1 ¹	SEA	N/A
	Amenity vegetation – Removal/pruning of the vegetation may cause adverse public opinion (including Local Government)	DTS	1:1 ¹	DTS	N/A
	Native vegetation (not covered by NV Act) – regardless of size, requires approval and an offset	SEA	2:1 ¹	SEA	N/A
	Native vegetation (not covered by NV Act) – Removal/pruning of the vegetation may cause adverse public opinion (including Local Government)	DTS	2:1 ¹	DTS	N/A
Public safety (refer Section 3.2) ³ : • Emergency works	Urgent works, in an emergency situation, to remove or rectify an immediate hazard and/or to repair/protect transport infrastructure in an emergency situation	DIT Road Maintenance Lead ³	N/A	DIT Road Maintenance Lead ³	N/A
Public safety (refer Section 3.2) ⁴ : • Sight line establishment • Removal of road side vegetation presenting a hazard	Clearance for the establishment of safe sight lines and sight triangles at road intersections and rail crossings Clearance of non-frangible amenity trees/vegetation in the road reserve that present a hazard to errant vehicles leaving the road or based on arborist/ tree health expert advice	SEA	N/A	SEA	N/A
Maintenance (refer Section 3.3) ⁴	Pruning or removing of amenity vegetation for maintenance activities as defined in Section 3.3	SEA (whole tree removal only)	N/A	N/A	N/A

SEA – Senior Environmental Advisor, DTS – Director, Technical Services

1 – May only be varied under the approval of the DTS

2 – Offset relates to both an area and individual plants/trees

3 – Should be based on the recommendations of a suitably qualified Arborist or person with expertise in the area of tree health, or by any other suitable person acting in an emergency situation

4 – No offset or approval is required for the pruning or removal of dead amenity vegetation unless such vegetation provides habitat for threatened species listed under the EPBC Act or the NPW Act

7.1.3 Remediation Measures

Remediation of impacts is required to ensure no net loss of vegetation quantity. The offset rates are provided in Table 7.1. Offset ratios for amenity vegetation are to be provided at a rate of 1:1 (loss:offset) unless otherwise approved by the DTS. The 1:1 offset ratio for amenity vegetation reflects the value of the vegetation in comparison to vegetation under the PDI Act for regulated trees (2:1) and significant trees (3:1).

For impacts to vegetation deemed to have significant amenity or cultural or community value, and where an offset is not required under legislation, a 2:1 offset can be applied at the discretion of the approving authority. For example, a large remnant tree that is growing very close to the road and causing damage to infrastructure could be pruned or removed as part of a maintenance activity and may not necessarily require an offset. In this instance, the tree could be deemed to hold significant amenity and/or community value by the vegetation impact assessor and a 2:1 offset could be recommended to the approval authority.

The offset for amenity tree impacts may be provided by:

- a payment into the Department's Amenity Planting Fund or equivalent council Urban Tree Fund, at the unit rate amount stipulated in the Planning, Development and Infrastructure (Fees, Charges and Contributions) Regulations 2019, Schedule 1, Part 5;
- undertaking on-ground works within or adjacent to the project or infrastructure works. This may occur as part of a project's landscaping program; or
- a combination of replacement plantings on-ground and payment into a fund at the amounts identified above.

The Department's Amenity Planting Fund was established to provide a more efficient and strategic approach to offsetting, as often it is not feasible or economic for the Department to deliver the required offset on-ground (e.g. where space is limited or small numbers make replanting and maintenance costs prohibitive). The cumulative funds will be distributed annually at the end of each financial year by Technical Services, and may be used for specific environmental projects managed by the Department, or provided to a council, a Landscape Board or conservation-focussed organisation to fund environmental programs.

The contractor undertaking the VIA may propose an alternative offset strategy where the visual impact from amenity vegetation loss is considered significant, e.g. substantial removal of screening vegetation between a row of houses and an adjacent rail line. Alternatively, as part of a specific project or activity (or where deemed appropriate by the Department Project Manager or SEA/PEA), an agreement can be made with the relevant local council, the regional Landscape Board or a community group, to fund landscaping, revegetation, bush-care or weed control work in the local area in order to offset the removal of amenity vegetation. Funding should be equivalent to the amount that would have been paid into the Department's Amenity Planting Fund, unless endorsed by DTS.

7.2 Declared Plants and Weeds

7.2.1 Legislative Context

Declared plants are weeds that are regulated under the *Landscape South Australia Act 2019* (LSA Act) due to their threat to primary industry, the natural environment and public safety. Plants are declared under the provisions of the LSA Act relating to their movement, sale, notification and control. Information about declared plants is available on the Department of Primary Industries and Regions (PIRSA) Biosecurity SA Division website. Landowners, including government agencies, are required to control declared plants. Landscape Boards have responsibility for administering and managing the control of declared plants in road reserves.

Environmental weeds are plants that cause or have the potential to cause negative environmental, social or economic impact. The Department's Environmental Weeds list identifies species that are common in transport corridors.

When declared or environmental weeds are potentially impacted, and unless they have amenity value, removal rather than pruning should be the outcome. It is uneconomic (and may be illegal) to prune a weed species which then may proliferate, increasing the future maintenance burden.

Permits for the movement of Declared Plants may also be required under the LSA Act.

7.2.2 Declared Plant and Environmental Weed Impact Approval Pathway

Except where required by other legislation, internal Departmental approval pathways apply for impacts to declared and environmental weeds. Refer to Table 7.2 to determine the appropriate approval authority for impact to declared or environmental weeds.

Where the removal of declared plants and environmental weeds are proposed, consideration should be given to potential community concerns if the plants have amenity value; are of local cultural or heritage value (e.g. a memorial avenue); or may provide important habitat for threatened fauna species (e.g. blackberries as habitat for Southern Emu-wrens; exotic pines as a food source for Yellow-tailed Black-cockatoos). Consultation may be required with the relevant Landscape Board (e.g. for movement of declared plant material on roads) and/or the Local Council (e.g. for information on memorial avenues).

7.2.3 Remediation Measures

The removal of weeds and other self-seeded vegetation would not normally require an offset unless required under legislation or as identified in Table 7.2.

Where non-legislated offset for weed removal is required, this shall be provided through the mechanisms identified for amenity vegetation.

Table 7.2: Approval and Off-Set Requirements – Weeds and Other Self-Seeded Vegetation
 Species identified in the LSA Act and the Department’s Environmental Weeds List

Activity	Description	Removal		Major Prune	
		Approval	Offset	Approval	Offset
Pruning or removal incidental to: <ul style="list-style-type: none"> • New works (refer Section 3.1) • Public Safety (refer Section 3.2)² • Maintenance (refer Section 3.3) 	Pruning or removing vegetation that is a declared plant under the LSA Act or a DIT listed environmental weed or self-seeded vegetation (excluding native vegetation and circumstances as identified below)	N/A	N/A	N/A	N/A
	Vegetation is part of an amenity planting, including windbreaks or providing habitat for species listed under the EPBC Act or NPW Act ¹ .	SEA	1:1 [new works only]	SEA	N/A
	Removal/pruning of the vegetation may cause adverse public opinion (including Local Government)	DTS	1:1 [new works only]	N/A	N/A

SEA – Senior Environmental Advisor, DTS – Director, Technical Services

1 – No offset or approval is required for the pruning or removal of dead weeds amenity vegetation unless such vegetation provides habitat for threatened species listed under the EPBC Act or the NPW Act

2 – The emergency clearance of vegetation that is considered to post a hazard should be based on the recommendations of a suitably qualified Arborist or person with expertise in the area of tree health, or by any other suitable person acting in an emergency situation

8 Reporting

Unless specified otherwise in Contract Documentation the following reporting applies to each phase of the project. Reporting shall be provided to the Department's Technical Services Environment and Sustainability Unit for review and acceptance.

8.1 Proving

During the Proving phase of a project, vegetation impact assessment information may be required for input into an options assessment, the EHIA Report and to inform the cost estimation of the project.

Preliminary Vegetation Impact Assessment information

The outcomes of a preliminary vegetation impact assessment (refer to the assessment outcomes detailed in Section 2.1.1) and supporting documentation are to be incorporated into the vegetation survey report (if undertaken at this stage) and EHIA report. The VIA should also be summarised in the planning and/or design reports. Where multiple project options are being assessed and compared, the preliminary VIA outcomes are to be reported in a suitable location to inform such option comparisons.

8.2 Pre-Delivery/ Delivery

During the Pre-Delivery/ Delivery phase of the project, vegetation impact assessment may be required for input into the EHIA Report, to inform project design and the approvals pathway for the project.

Detailed Vegetation Impact Assessment information

The outcomes of a detailed vegetation impact assessment (refer to the assessment outcomes detailed in Section 2.1.2) and supporting documentation are to be incorporated into the vegetation survey report and the EHIA report. The VIA should also be summarised in the planning and/or design reports.

Reporting requirements for the vegetation survey are detailed in the Department's Vegetation Survey Guideline and are not repeated here.

AND/ OR

Detailed Design Reports

As part of the detailed design reports for a project, a vegetation removal drawing package is required which 'overlays' the design onto the vegetation survey layers to justify all trees, shrubs and areas of vegetation that will require removal for the works. Vegetation must be individually numbered on drawings and in reports (consistent with the vegetation survey/any arborist assessment) to enable the identification of particular trees, shrubs or areas of vegetation.

For all trees to be retained, the drawings must detail the Tree Protection Zone and Structural Root Zone (as per AS 4970). Refer to PC-ENV2 "Environmental Protection Requirements".

The design report should include a section which summarises the impact to vegetation and impact mitigation measures, including arborist assessments where applicable, as per Master Specification Part PC-ENV3.

AND

Vegetation Removal Requests

The nature of the deliverable(s) will be determined by the level and type of identified impact.

Where internal Department endorsement/approval is required, the Department's Vegetation Removal Request Form must be completed and submitted for consideration.

Where NVB or NVAP approval is required, all clearance applications are to be prepared in accordance with the NVC's *Guide for Applications to Clear Native Vegetation under the NV Act and NV Regulations* (July 2020, and subsequent revisions).

Where SCAP approval is required, a Crown Development Application Form is required to accompany a cover letter, addressing information required for assessment of the development.

Where approval is required by a regulator not detailed above, the SEA should be consulted to confirm the nature of the vegetation removal application, prior to lodgement.

The following information is only to be provided during the Delivery phase of a project once construction has commenced.

Vegetation Removal Register

The following minimum information is to be included in the vegetation removal register and associated notifications to the Department:

- A register and plan of all vegetation (including individual areas of native vegetation and regulated/significant trees) that has been removed. The plan must show all vegetation removed in accordance with numbering used in the VIA and vegetation removal approval documentation.
- A summary of vegetation impacted during the reporting period as well as the cumulative impact since commencement of the project works.
- Details of any offset payments made following the removal of the vegetation.
- With respect to native vegetation (protected under the NV Act), where the impact is less than approved for clearance, a shapefile detailing actual impacts must be provided with the register.

8.3 Realisation

During the Realisation phase vegetation maintenance activities will be undertaken. Deliverables identified in the Pre-delivery and Delivery phases above may be required to enable maintenance or public safety actions to be undertaken.

Appendix A - Clearance Envelopes – Road and Rail

Clearance Envelopes

This Appendix includes details of clearance envelopes relevant to both road and rail infrastructure. Reference to this appendix should be made when determining the nature of the proposed vegetation removals to facilitate new works or maintenance works.

1. Roads and Multiple Use Paths

Vegetation control undertaken on roads is outlined in the Department's Operational Instruction 20.1.

A clearance envelope across the full width of the travelled way is necessary to allow for the safe passage of legal height vehicles.

A range of clearance envelopes have been defined (see below) and are the maintenance responsibility of the Commissioner of Highways or the Rail Commissioner. Vegetation clearance extents are required to manage the clearance envelope intervention levels for roads, as defined in the Maintenance parts of the Department's Master Specification.

For the majority of the Department's road network the standard clearance envelope is applied, however, there are a number of roads within the network that may be defined as a restricted clearance or 4.0m wide load carrying vehicle network.

The clearance of vegetation within the clearance envelope may be carried out without the need for approval with only a few exceptions (refer Section 3).

Where trees of high environmental, aesthetic or social significance are identified, exceptions may be applied to enable these trees to be retained within a defined clearance envelope.

All pruning of limbs encroaching into the clearance envelope must be undertaken in accordance with AS 4373-2007 and the Department's Master Specification. Pruning may extend beyond the clearance envelope to the nearest growth point or collar, to protect the tree from infection or disease and minimise the development of weakly attached growth.

a) Standard clearance – urban and rural highways

The Commissioner of Highways may clear vegetation within an envelope 6.0 m high extending to either the edge of shoulder or 1.0 m behind the guidepost, whichever is the greater, and where kerbed to 1.0 m beyond the face of the kerb/ median shoulder where present.

The Commissioner of Highways may also clear vegetation within 1.0 m around roadside furniture, 1.0m behind safety barrier (or in accordance with manufacturer's/ supplier's requirements) and 1.0 m each side of the invert of longitudinal drains.

For regional/ outback unsealed roads, clearance can occur to the back of the existing windrow providing that this location is within the standard formation width for the respective road classification (refer to Master Specification M11 Maintenance for further details regarding road classification cross sections).

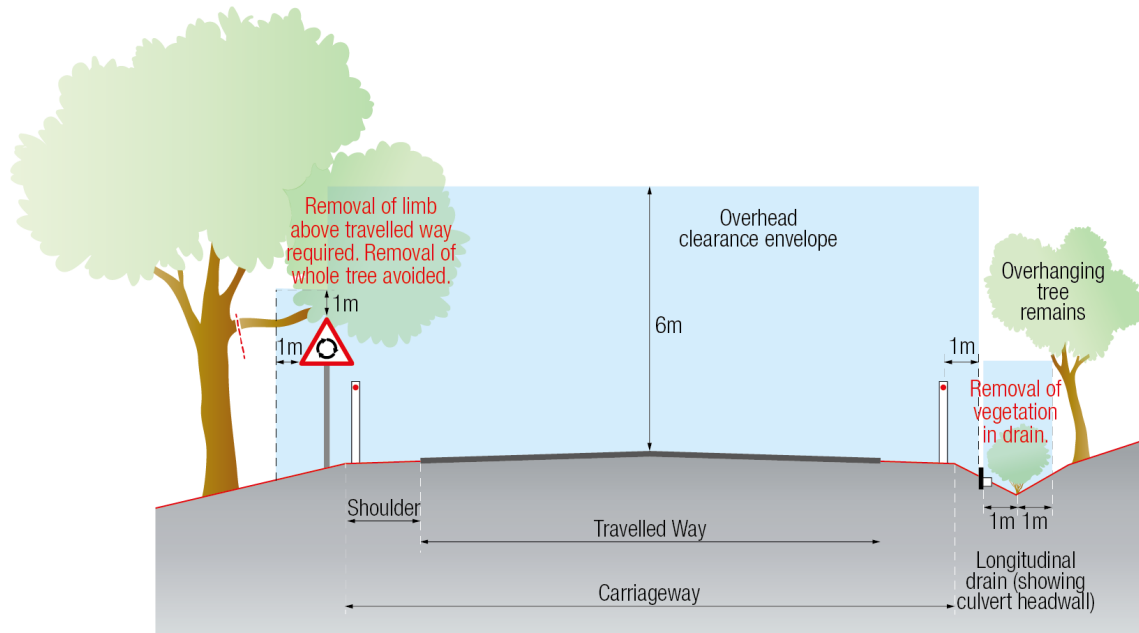


Figure A.1 Standard vegetation clearance (kerbed and unkerbed)

b) Restricted clearance – mature vegetation

Where existing mature vegetation makes it impracticable to achieve the standard vegetation clearance, as is often the case in the Adelaide hills area, the Commissioner of Highways may clear vegetation (with the exception of whole trees with a butt diameter >100 mm) within an envelope 6.0 m high extending to the kerb or 1.0 m beyond the edge of travelled way in unkerbed areas (as indicated in Figure A.2). Sections of DIT maintained roads for which restricted clearance envelopes apply can be found at <http://www.dit.sa.gov.au/standards/home>

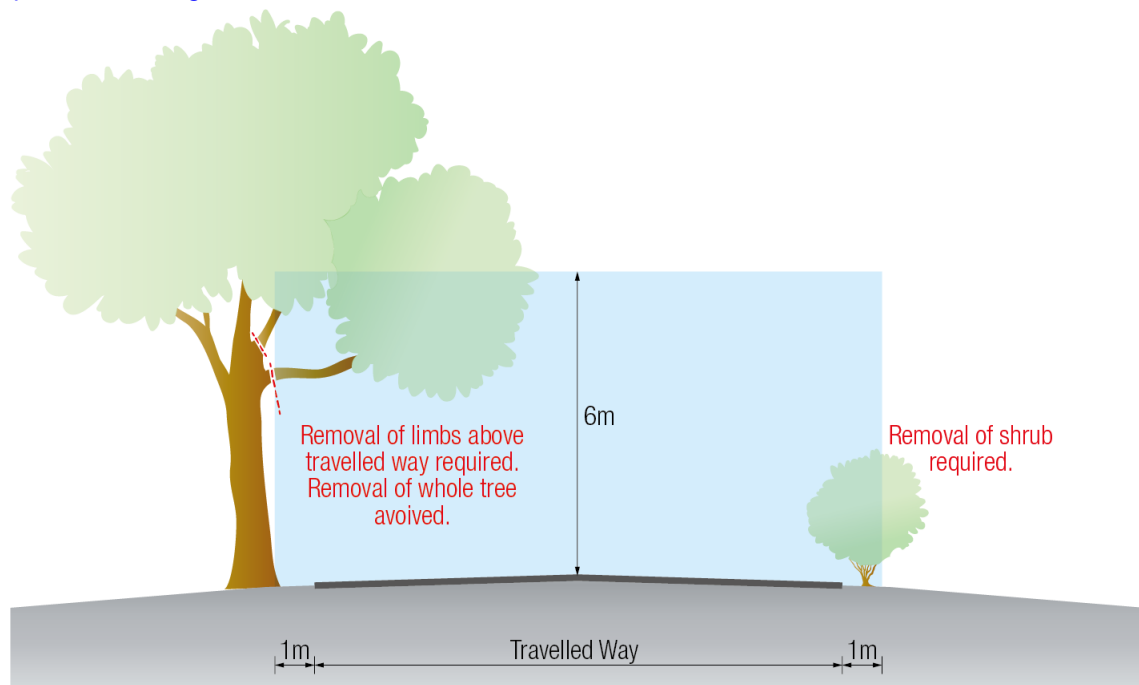


Figure A.2 Restricted clearance – mature vegetation (kerbed and unkerbed)

c) Restricted clearance – dedicated parking

Where dedicated parking lanes or areas are adjacent to the travelled way, the Commissioner of Highways may clear vegetation within an envelope 6.0 m high extending to the edge of travelled way (as shown in Figure A.3). The trimming of vegetation over the parking lane or area shall be the responsibility of Council unless agreed otherwise in writing with the Commissioner of Highways.

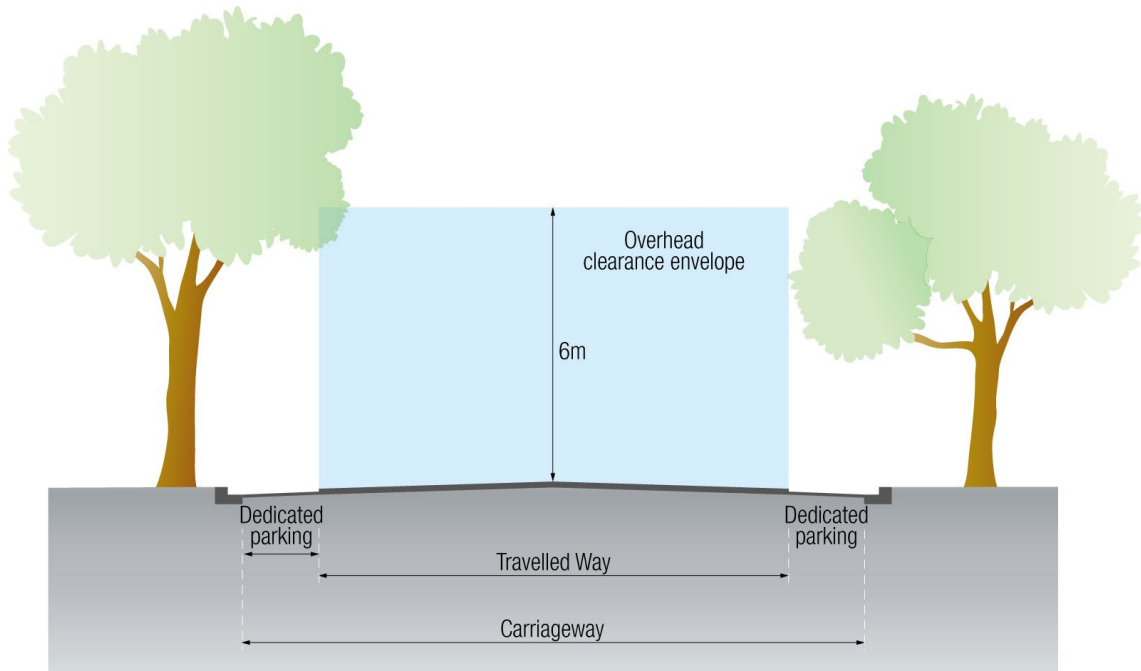


Figure A.3 Restricted clearance – dedicated parking

d) Medians

For medians, the Commissioner of Highways may clear vegetation on the median to a height of 6.0 m within 1.0 m of the edge of the median shoulder or face of kerb (as indicated in Figure A.4).

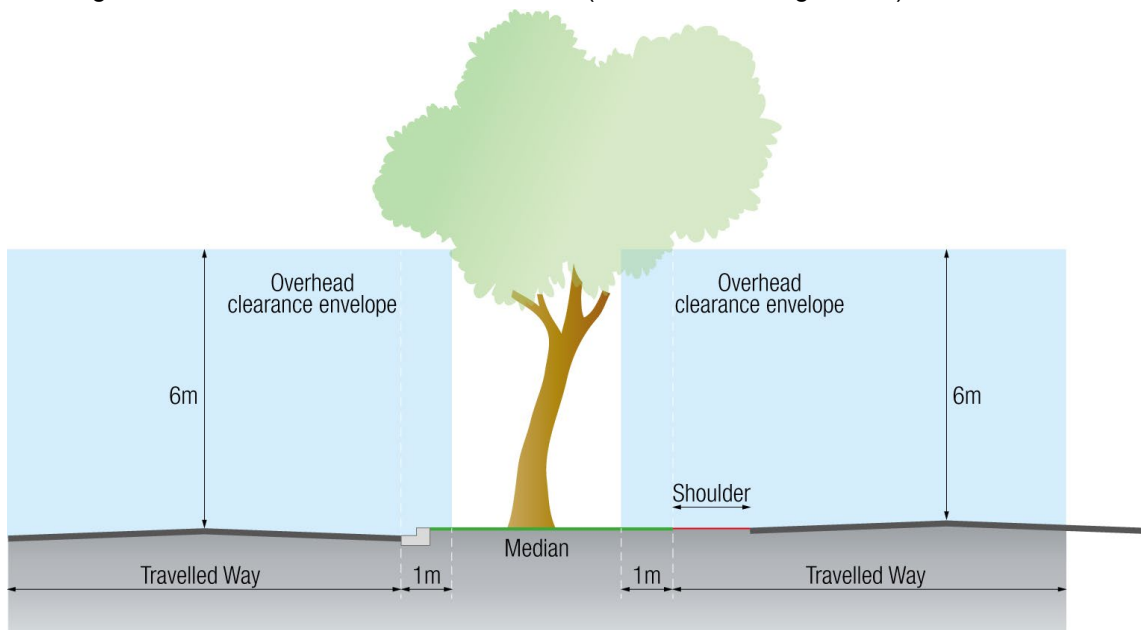


Figure A.4 Clearance over medians (greater than 60 km/h)

e) Oversize Vehicle Routes

For the 4.0 m wide load carrying vehicle network, the Commissioner of Highways may clear vegetation within an envelope 7.5 m high and 10.0 m wide to the edge of shoulder or the guidepost, whichever is the greater, and where kerbed to the face of the kerb/ median shoulder where present (refer to Figure A.5). The route is mapped online at <http://maps.sa.gov.au/RAVNet/index.html>.

f) Multiple use paths

Where a multiple use path (including veloways, shared use paths, and cycle paths) is maintained by the Commissioner of Highways, the Commissioner of Highways may clear vegetation within an envelope 6.0 m high extending to a maximum of 1 m beyond the edge of the seal or edge of path, if unsealed (refer Figure A.6).

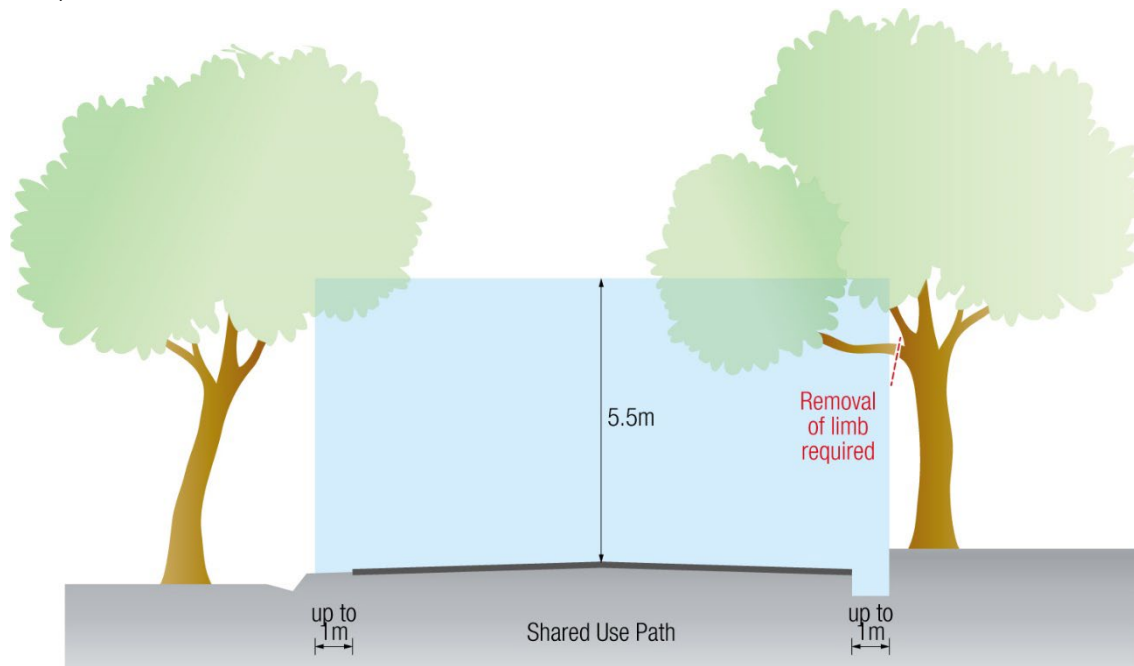


Figure A.6 Clearance for shared use paths

g) Cut rock faces

Tree roots can destabilise cut rock faces, jacking rocks apart and causing rock falls onto roads. Vegetation clearance envelope requirements have been developed for cut rock faces in order to maintain the stability of those cuttings.

Where a designated cut rock face is maintained by the Commissioner of Highways, the Commissioner of Highways may clear the rock face itself and an area extending a distance of 5.0 m beyond the crest of the rock face, or to the boundary of the road reserve, whichever is closer (as shown in Figure A.7). To ensure this is achieved, the Commissioner of Highways may clear the following types of vegetation:

- with roots expected to grow to a diameter greater than 10 mm (which could include trees and some understorey shrubs, but is unlikely to include grasses and low growing herbs), and
- with part or all of the stem(s) growing within 5.0 m of the crest, measured at ground level.

There may be some instances where larger trees/shrubs growing beyond the clearance envelope described above have roots that are deemed to be destabilising the rock face (via an arborist assessment and geotechnical engineering advice). In these instances, if there is an unacceptable safety risk to road users, the tree(s) may be removed as a Maintenance Activity.

A register of designated cut rock faces is available on request from the Department's Technical Services – Geotechnical unit.

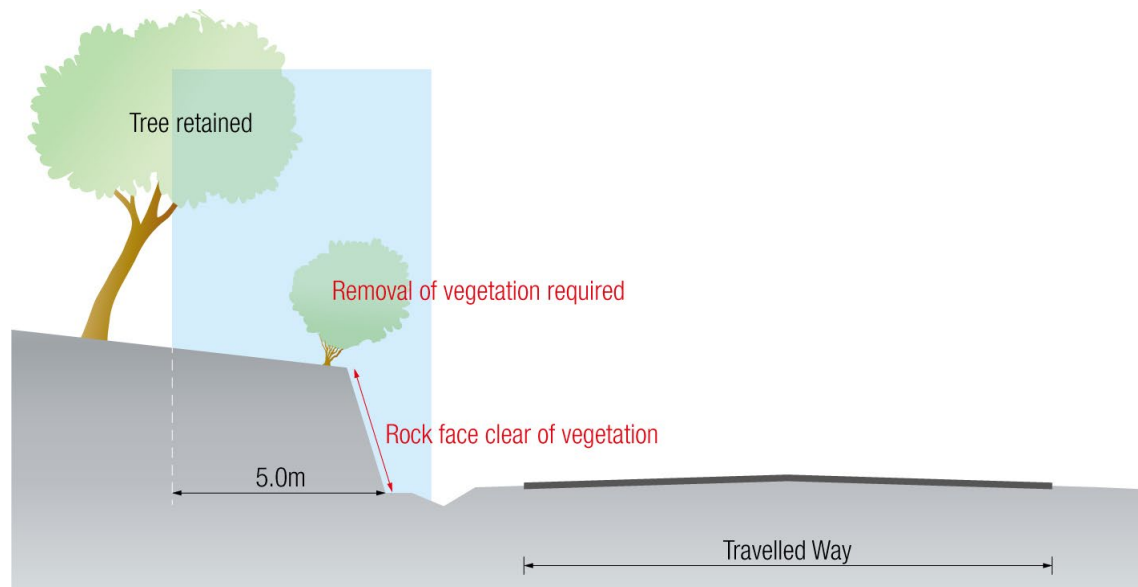


Figure A.7 Clearance requirements for cut rock faces

h) Fast growing species

Coastal wattle (*Acacia longifolia* var. *longifolia*) is a fast-growing species that is prevalent on some roadsides in the South East of the state. The Commissioner of Highways may prune Coastal Wattle up to an additional 2.0 m beyond the relevant clearance envelope or to the property boundary (whichever is greatest), in the Limestone Coast Landscape Board region. Refer to NVC Native Vegetation Information Sheet 20.

2. Clearance Envelopes – Light and Heavy Rail

Vegetation control undertaken within the rail corridor is for the purposes of operating a safe rail network in accordance with the *Rail Commissioner Act 2009*.

The pruning or removal of vegetation within the clearance envelope may be carried out without approval with only a few exceptions (refer Section 5.3). Maintenance of the clearance envelope may be carried out without the need for vegetation clearance approval, except where an Electrified Rail Vegetation Waiver is in place. A list of Electrified Rail Vegetation Clearance Waivers can be obtained via enquiry of the Department's Technical Services.

All pruning of limbs encroaching into the clearance envelope must be undertaken in accordance with AS 4373-2007 "Pruning of Amenity Trees" and the Master Specification. Pruning may extend beyond the clearance envelope to the nearest growth point or collar, to protect the tree from infection or disease and minimise the development of weakly attached growth.

a) Standard vegetation clearance envelope – electrified heavy rail

Where heavy rail lines have been electrified, the Rail Commissioner may clear vegetation within a 360° clearance envelope of 5.0 m around any live electrical apparatus within the overhead wiring system, as shown in Figure A.8. This consists of a 3.0 m electrical exclusion zone and an additional 2.0 m to ensure that the exclusion zone can be safely maintained at all times.

The clearance envelope will be vertically infinite to minimise risk of objects fouling the track or damaging the overhead wiring system. In exceptional circumstances, where the Electrified Rail Vegetation Waiver process has been applied, vegetation may be permitted to remain within the clearance envelope (but outside the electrical exclusion zone).

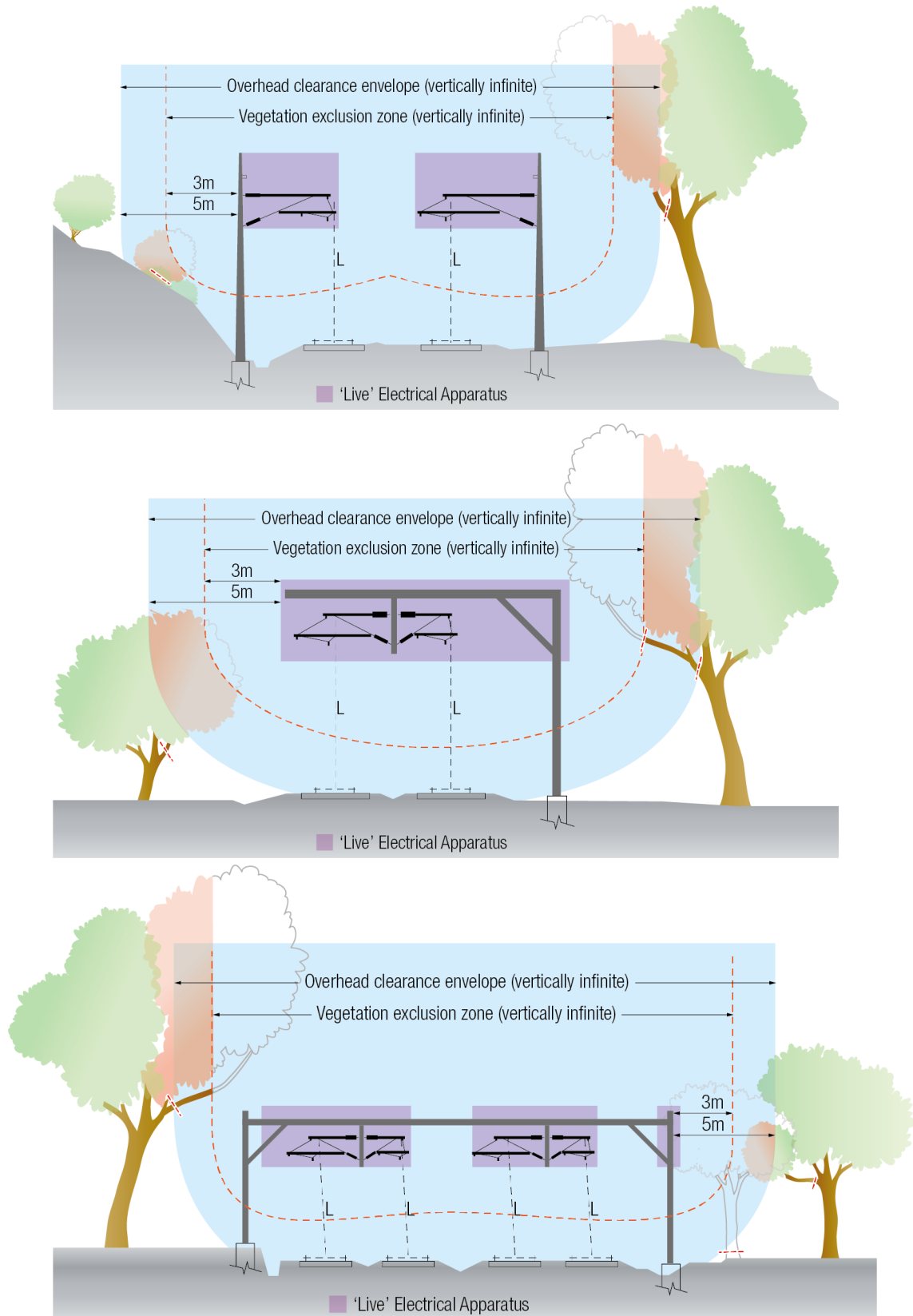


Figure A.8 Clearance around heavy rail live electrical apparatus (multiple configurations)

b) Standard vegetation clearance envelope – non electrified heavy rail

For non electrified heavy rail lines, the Rail Commissioner may clear vegetation in an envelope vertically infinite, to a width 1.0 m beyond the railway track formation, refer Figure A.9.

Maintenance access tracks along the rail corridor may be cleared to a height of 6.0 m over the width of the access track.

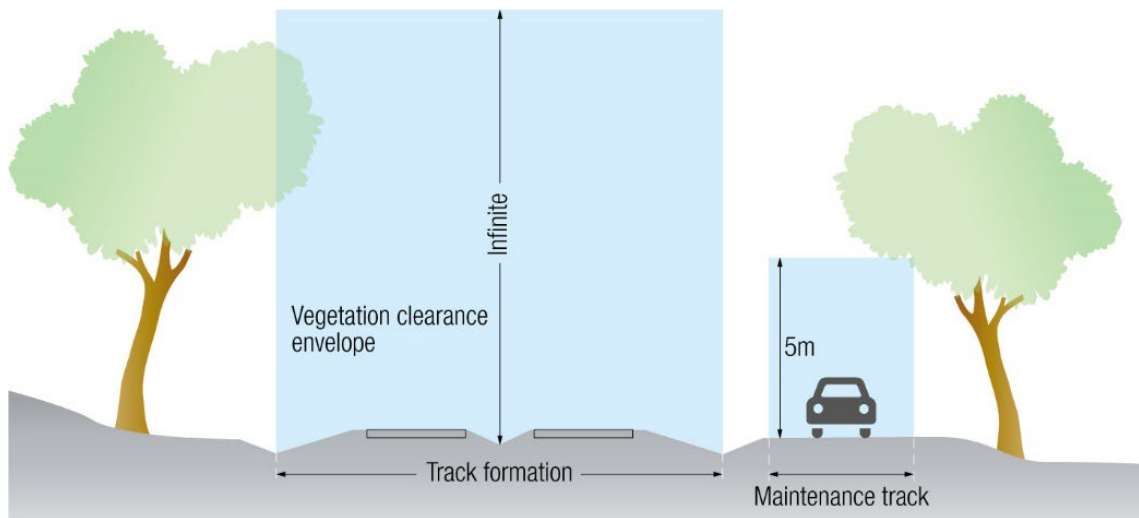


Figure A.9 Clearance envelope for protection and operation of non electrified heavy rail

c) Standard vegetation clearance envelope – light rail

For light rail, the Rail Commissioner may clear vegetation in an envelope vertically infinite, to a width 1.0 m beyond the track formation, refer Figure A.10.

Additionally, the Rail Commissioner will maintain a vertically infinite clearance of 1.0 m around electrical infrastructure, such as posts and wires.

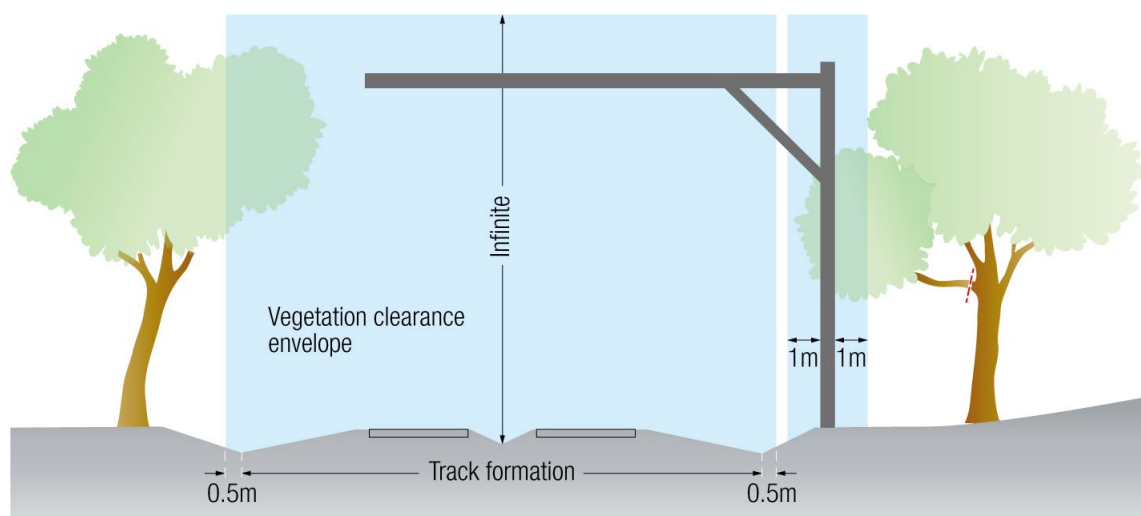


Figure A.10 Clearance envelope for protection and operation of light rail

Appendix B – Development Approval Exemptions for Regulated and Significant Trees

Approval Exemptions for Regulated and Significant Trees

Table B.1 provides for circumstances where development approval under the *Planning Development and Infrastructure Act 2016* (the PDI Act) and *Planning Development and Infrastructure (General) Regulations Act 2017* (the PDI (General) Regulations) may not be required for tree damaging activities to regulated or significant trees. In general development approval will not be required for tree damaging activity where the (colour coded to table below):

- a) PDI Act does not apply to the land on which the tree-damaging activity is proposed;
- b) Activity does not constitute tree damaging activity of a regulated tree and is therefore not “development” within the meaning of the PDI Act; or
- c) Activity does constitute development but is exempt from the requirement from development approval.

Each circumstance shall be considered on a case-by-case basis to determine whether development approval is required. Other circumstances may exist and shall be assessed as required. Additional exemptions may apply under the PDI Act (not detailed in the table below) that are more general in nature and not specific to the Commissioner of Highways or the Rail Commissioner.

For the purpose of brevity, the table below paraphrases the relevant legislation and assumes it has been identified that the affected tree(s) is a regulated tree within the meaning of the PDI Act.

Table B.1. Possible Exclusions and Exemptions to Obtaining Development Approval.

Legislation	Possible exemption	Possible application
Highways Act 1926 – section 20(5)	Land acquired by the Commissioner for Highways under s 20(1) of the Highways Act.	Land acquired by the Commissioner for Highways other than: <ul style="list-style-type: none"> (a) in relation to State Heritage places; (b) land to be used for the purposes of a lease or licence granted in respect of a road that vests, or land that remains vested in the Commissioner section 21A of the Act; (c) circumstances prescribed by regulation (none currently) (s 20(6)).
Rail Commissioner Act 2009 - section 9(3)	Land acquired by the Rail Commissioner under s 9(1) of the Rail Commissioner Act.	Land acquired by the Rail Commissioner other than: <ul style="list-style-type: none"> (a) in relation to State heritage places; or (b) circumstances prescribed by regulation (none currently) (s 9(4)).
PDI Act – section 3	Trees that are not regulated within the meaning of s 3 of the PDI Act.	Trees located within 10 m of an existing dwelling or an existing in-ground swimming pool (other than in relation to a tree of the species <i>Agnois Flexuosa</i> (Willow Myrtle) or any tree of the genus <i>Eucalyptus</i>) (reg 3F(4)(a)).
PDI (General) Regulations – regulation 3F	See also reg 3F (1) and (2) of the PDI (General) Regulations. (Note: regulated trees include significant trees).	Certain species of trees prescribed by regulation (reg 3F(4)(b)), Trees belonging to a class of plants to which a declaration by the Minister under Part 9 Division 1 of the Landscape South Australia Act 2019 applies (reg 3F(4)(l)). Trees that may not be cleared without the consent of the Native Vegetation Council under the Native Vegetation Act 1991 (reg 3F(4)(d)). Trees planted as part of a woodlot, orchard or other form of plantation created for the purpose of growing and then harvesting trees or any produce (reg 3F(4)(e)).

Legislation	Possible exemption	Possible application
PDI A-t - section 3 PDI (General) Regulation - regulation 3F(6)	Acts or activities which do not constitute tree damaging activity.	Maintenance pruning not likely to affect adversely the general health and appearance of a tree (s 3). Pruning that does not remove more than 30% of the Crown of the tree or is required to remove dead or diseased wood, or branches that pose a material risk to a building, or branches located in an area frequently used by people that pose a material risk to people (reg 3F(6)).
PDI (General) Regulation - Regulation 3C and Schedule 4 clause 18	Acts or activities excluded by regulation from constituting tree-damaging activities.	Other than in relation to a State Heritage place, tree damaging activity to a tree that is: <ul style="list-style-type: none"> • within the family of <i>Melaleuca styphelioides</i> (Prickly-leaved Paperbark) or <i>Lagunar43atersoniana</i> (Norfolk Island Hibiscus). • within 20 m of a dwelling in a Medium or High Bushfire Risk area within a Hazards(Bushfire Protection) Overlay under the Planning and Design Code. • on land under the care and control of the Minister who has primary responsibility for the environment and conservation in the State. • on land under the care and control of the Board of the Botanic Gardens and State Herbarium. • dead.
PDI (General) Regulations – reg 106 and Schedule 13(2)(1)(w)(iii)	Certain tree damaging activity undertaken or sponsored by a State Agency.	Tree damaging activity that is on land— (A) on which a road is located or is proposed to be built or widened; and (B) that is under the care, control and management of the Commissioner for Highways.
PDI (General) Regulations – reg 106 and Schedule 13(2)(1)(w)(iii)	Certain tree damaging activity undertaken or sponsored by a State Agency.	Tree damaging activity — (A) on railway land as defined in Schedule 4 clause 14(7); or (B) on land adjacent to railway land and is, in the opinion of the Rail Commissioner, detrimentally affecting the use of, or activities or operations on, the railway land.

Note that the colour coding in the table is reflective of the possible exemption scenarios that have been colour coded in the introduction of this Appendix.

By way of guidance, among others, common circumstances in which a road may come to be under the Commission’s care, management and control include where:

- a) It is acquired by, or vested in, the Commissioner of Highways under sections 20(1) and 21A of the Highways Act;
- b) It is within a council area and the Commissioner of Highways has assumed the care, control and management if it under section 26(3) of the Highways Act. Note this is not applicable where only notification to Council under 26(2) of the Highways Act has been made;
- c) It is a public road outside an area of council (section 27CA of the Highways Act), and
- d) It is a controlled access road (section 30A(3) of the Highways Act).

Where there is uncertainty regarding the applicability of (a) and (b), the Department’s Project Manager may be consulted.