

SC6.8 City Plan Policy – Environmental management plans

1 Purpose

This City Plan policy provides guidance on how to prepare the following management plans:

- (a) ~~Covenant management plans (CMP)~~ Vegetation management plans (VMP);
- (b) Fauna management plans (FMP);
- (c) Rehabilitation management plans (RMP); and
- (d) ~~Vegetation management plans (VMP)~~ Covenant management plans (CMP).

For the purposes of this policy the abovementioned management plans are collectively referred to as Environmental management plans (EMPs). The abovementioned management plans should be prepared following and based on any previously required ecological site assessment, prepared in accordance with SC6.7 City Plan policy – Ecological site assessments and/or any related conditions of approval.

2 Application

This City Plan policy assists with satisfying the assessment benchmarks in the City Plan, which relate to the preparation of environmental management plans, as outlined in the table below:

Table 1: Application – Environmental management plans

Section or table in the code	Assessment benchmark reference	Type of environmental management plan required / Section in policy
Environmental significance overlay code		
Table 8.2.6-2 – Environmental significance overlay code – for assessable development	Fauna management PO22	Fauna management plan Section SC6.8.6
Table 8.2.6-2 – Environmental significance overlay code – for assessable development	Tenure, ownership and management arrangements PO25	Covenant management plan Section SC6.8.8
Table 8.2.6-2 – Environmental significance overlay code – for assessable development	Rehabilitation PO26	Rehabilitation management plan Section SC6.8.7
Vegetation management code		
Table 9.4.14-2 – Vegetation management code – for assessable development	Vegetation management plan PO1/AO1	Vegetation management plan Section SC6.8.5

This City Plan policy may also apply when an EMP is required as a condition of a development approval.

3 About Environmental management plans

Environmental management plans:

- (a) describe how the proposed development will impact on the ecological features of the site; and
- (b) identify how impacts will be avoided, minimised and managed so the assessment benchmarks of the relevant code can be met.

3.1 Documentation

The findings are to be documented in a written report in either hard copy or digital form (including spreadsheets containing GPS points for all species records).

3.2 Level of detail required

The level of detail required for the particular EMP is outlined in the sections below and is the minimum requirement.

Note: In some circumstances, additional information may be required depending on site specific conditions.

3.3 Study area

The study area is the entire property that is the subject of the development application. Consideration should also be given to potential impacts adjacent to the study area.

3.4 Consultant qualifications and experience

Covenant management plan and Rehabilitation management plan

The consultant responsible for the preparation of a CMP or RMP is to be appropriately qualified and experienced with tertiary qualifications in environmental science, botany, restoration ecology, natural area restoration, bushland restoration or another related discipline. They should have demonstrated experience in undertaking rehabilitation works and report preparation within the South East Queensland Bioregion.

Fauna management plan and Vegetation management plan

The consultant responsible for the preparation of a FMP or VMP is to be appropriately qualified and experienced with tertiary qualifications in environmental science, botany, ecology or another related discipline. They should have demonstrated experience in undertaking flora and fauna surveys, conservation assessments and report preparation within the South East Queensland Bioregion.

Arborist

Arborist reports are to be prepared by a qualified arborist with a minimum Australian Qualification Framework (AQF) Level 5 in Arboriculture.

Fauna Spotter Catcher

Fauna spotter catcher duties and associated reporting is to be undertaken by a DEHP-licensed fauna spotter catcher. Fauna spotter catchers are required to be present on site in the following circumstances:

- prior to booking a pre-start meeting to undertake the pre-clearing fauna spotter catcher report;
- at the pre-start meeting;
- immediately prior to the commencement of works (clearing and/or dewatering);
- for daily pre-clearance inspection of the clearing front;
- for each machine in operation;
- as stated in the FMP and any relevant conditions of approval; and
- for clearing or disturbance of standing or stockpiled vegetation.

4 Preparing an Environmental management plan

The primary role of an EMP is to provide clear management strategies, which will be used to manage ecological features before, during and after the construction phase. The plan should contain sufficient detail on how the construction site and activities will be undertaken to ensure the integrity of ecological features are upheld.

Where EMPs do not sufficiently address the management of ecological features during construction, Council may request further information.

5 Vegetation management plan

The primary role of a Vegetation Management plan (VMP) is to provide clear vegetation management strategies before, during and after the construction phase. The plan should clearly identify all clearing activities, address the protection of vegetation, guide activities directly affecting vegetation, and ensure the survival and vigour of retained vegetation.

5.1 Validity period of the Vegetation management plans

Where a VMP is submitted and approved, the plan will remain valid for the length of the currency period of the associated operational works (OPW) application.

5.2 Level of detail

A VMP should demonstrate that all potential risks to assessable vegetation before, during and after the construction phase of a development have been considered. -The document must also demonstrate that clearing and management actions are implemented to minimise these risks. The level of detail required within a VMP is determined by the type and degree of works to be undertaken and the underlying ecological values of the site.

For the removal of tree(s) on residential premises, only a basic VMP may be required to be submitted to Council. -This basic management plan should include sufficient detail to clearly identify the vegetation including location of tree(s), buildings, structures and property boundaries.

This policy outlines the key content which is common to most sites; however, additional information may be required in some circumstances depending on site specific conditions.

Process for preparing and implementing a Vegetation management plan

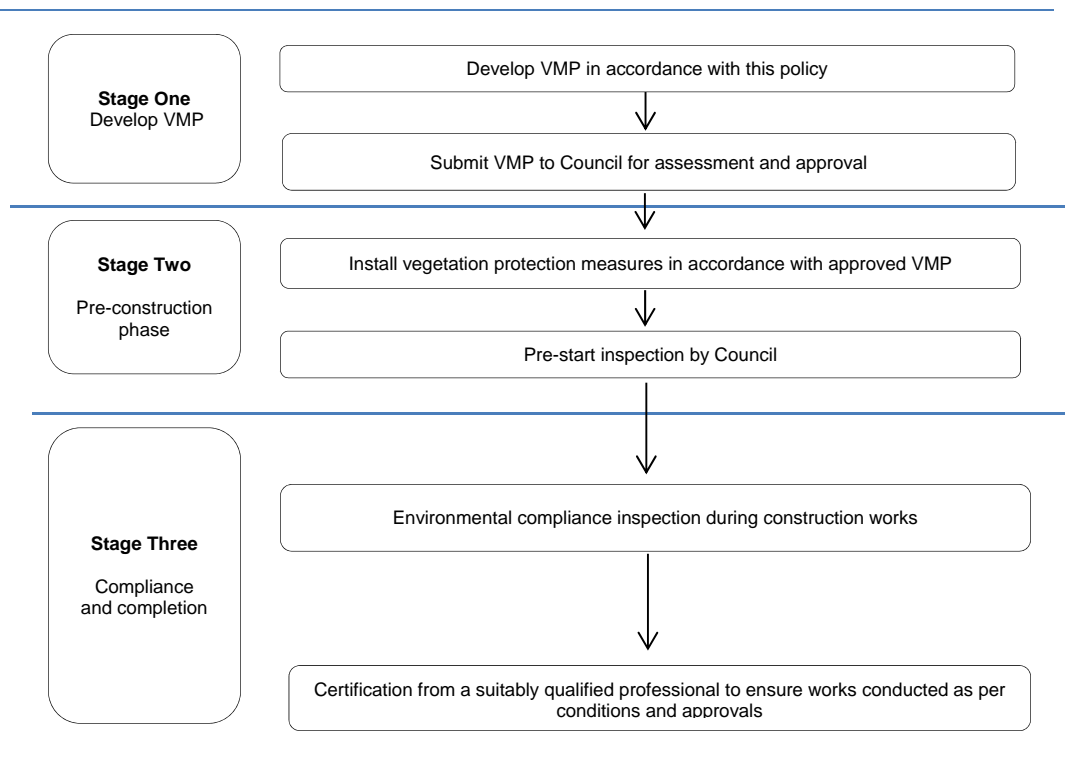


Figure SC6.8-41
Process for developing a Vegetation management plan

5.3 Stage 1: Develop Vegetation management plan

Part A: Site works plan

The level of detail and information to be included in the site works plan is dependent on the complexity of the site and project. The plan(s) should clearly and accurately depict the features being represented and either be overlaid, or be comparable with plans of the proposed development.

Once approved, these plans are to be used by experienced on-ground contractors during the construction and operational phases of development.

The following is recommended content to be included in a VMP site works plan:

- (a) Location:
 - site location and boundary;
 - scale and north point; and
 - location of existing and approved buildings, structures, services and roads.
- (b) Vegetation on and adjacent to the site:
 - existing vegetation communities;
 - assessable vegetation;
 - significant weed infestations;
 - matters of environmental significance as mapped on the **Environmental significance – vegetation management** overlay map including major trees on adjacent properties (this may also include ecological corridors in some instances).
 - national, state and local significant species listed under the *Environmental Protection & Biodiversity Conservation Act 1999* (EPBC), *Nature Conservation Act 1992* (NCA) and City Plan policy SC6.7, respectively;
 - remnant vegetation mapped under the *Vegetation Management Act 1999* (VMA);
 - habitat trees; and
 - significant fauna feed trees.
- (c) Additional information relevant to the site may include:
 - contours for topographically constrained sites;
 - covenants and open space; and
 - location of wetlands, drainage lines and waterway corridors.
- (d) Construction management:
 - vegetation to be retained, relocated, cleared or damaged;
 - habitat trees to be managed during construction;
 - location of vegetation protection measures (e.g. tree protection zone (TPZ) fencing, vehicle access points, signage, exclusion zones and tree guards);
 - vegetation clearing staging plan;
 - direction of vegetation clearing;
 - location of fauna friendly and/or exclusion fencing or other protection measures;
 - location and type of erosion and sediment control measures; and
 - location of stockpiles, site office, parking and storage areas.

Part B: Supporting text

The supporting text forms the body of the report and details specific information such as management strategies, protocols, specifications, species lists and procedures. Suggested content includes:

- (a) Assessable vegetation:
 - vegetation particulars, including species name, common name, height and girth, tree protection zone, radial distance of canopy and structural root zone;
 - particulars of national, state, local significant species and remnant vegetation;
 - existing vegetation communities, including information about upper, mid and ground stratum;
 - particulars of how vegetation is proposed to be damaged, retained or relocated; and
 - a statement of the reasons for the damage and any relevant factors associated with the purpose of the proposed damage.
- (b) Management of retained vegetation:
 - Particulars of protective measures for retained vegetation during works in accordance with *Australian Standard AS4970-2009 Protection of trees on development sites* with particular reference to the following:

- List and specify vegetation protection measures including protective fencing, signage, exclusion zones and tree guards;
 - As a minimum, protective fencing must uphold [the AS4970-2009 -Protection of trees on development sites specifications](#), unless another method providing a comparable level of protection is sufficiently justified within the VMP;
 - list of prohibited activities within the [tree protection zone \(TPZ\)](#);
 - other tree protection measures such as branch and trunk protection;
 - vegetation to be retained adjacent to hardstand areas or structures will require an arborist report prepared by a qualified arborist with a minimum Australian Qualification Framework (AQF) Level 5 in Arboriculture;
 - cold pour concreting techniques to be implemented where applicable;
 - vegetation damage should occur in accordance *AS4373-2007 Pruning amenity trees*; and
 - maintenance of tree protection measures during construction.
- (c) Clearing and disposal:
- Outline vegetation clearing methods:
 - advice from an arborist when work is proposed within the TPZ of vegetation to be retained; and
 - type of equipment and methods to be used for specific clearing tasks (e.g. tree-felling grab attachment for the controlled felling of habitat trees, matressing and decelerated felling).
 - Re-use of vegetation and disposal:
 - hollow limbs of felled vegetation to be sawn off and translocated into a nominated protected area;
 - felled vegetation to be recycled (mulched, chipped, or milled) and incorporated into the landscape features, batter stabilisation or other approved site works; -and
 - non-recyclable debris must be transported to a green waste or recycling facility.
- (d) Roles and responsibilities:
- A requirement of the VMP is to ensure the document and all approved plans and conditions are available during all vegetation clearing works on site and to all relevant personnel such as the project manager, site manager, construction leading hands, relevant contractors, relevant machine operators and other site personnel. -The VMP should concisely identify the role and responsibilities of all persons that might be involved with the management of vegetation during construction activities.
- (e) Arborist report (where conditioned):
- Arborist reports are to be prepared by a qualified arborist with a minimum Australian Qualification Framework (AQF) Level 5 in Arboriculture (refer to [table Table SG6.8-12](#)).

5.4 Stage Two: Pre-construction phase

- (a) Install vegetation protection measures:
- Prior to the pre-start meeting and commencement of works, all vegetation protection measures must be installed as per the approved VMP.
- (b) Prior to booking a pre-start meeting:
- the pre-clearing arborist report to be received by Council (where applicable); and
 - the pre-clearing fauna spotter catcher report to be received by Council (where applicable).
- (c) Pre-start meeting:
- Prior to any vegetation clearing or damage onsite, a pre-start meeting with Council- is required. The pre-start will ensure:
 - all retained vegetation is clearly marked and protection measures installed correctly;
 - compensatory planting and nest box installation has been undertaken where conditioned as part of the OPW application;
 - contractors are aware of relevant documentation and their obligations;
 - a copy of the stamped approved tree clearing plan, decision notice and relevant approved plans are required on site (to be provided by the developer or developers' representative);

- arborist present;
- sediment and erosion control is installed and satisfactory; and
- fauna spotter catcher to be present, pre-clearance report received by Council and required surveys undertaken.

Where any of the pre-start requirements have not been met, the pre-start may be terminated and an additional meeting and re-inspection fee required.

5.5 Stage Three: Compliance and completion

Council inspections may occur during construction to ensure vegetation protection measures and clearing methodologies are performed in compliance with the VMP and conditions of development.

Council may condition certification from an arborist or environmental consultant to demonstrate all works have been conducted in accordance with *AS4373-2007 Pruning amenity trees*, *AS49702009 Protection of trees on development sites*, relevant plans and approvals.

5.6 Appendix 1: Arborist report

An arborist report (where conditioned) must be prepared in accordance with *Australian Standard AS4970-2009 Protection of trees on development sites*. Where relevant, the arborist report should include:

Table SC6-8-12: Arborist report format

Arborists details	<ul style="list-style-type: none"> ● arborist's name; ● company name; and ● qualifications and experience of the arborist carrying out the inspection and reporting.
Methods	<ul style="list-style-type: none"> ● methods or techniques used in the inspection.
Health and vigour	<p>Appraisal for all trees to be identified and assessed including:</p> <ul style="list-style-type: none"> ● stage of growth; ● predicted gross morphology; ● crown framework; and ● extent of root system.
Proposed vegetation works	<p>Details of all proposed vegetation works (including proposed clearing or retention works) to ensure:</p> <ul style="list-style-type: none"> ● the survival, ongoing health and vigour of retained vegetation (given proximity to buildings and areas where works are to be undertaken) including any necessary reductions (crown, thinning, root truncations) to accommodate footings and foundations, and protective devices (protective fences, root curtains/barriers) to minimise construction impacts.
Tree site plan	<ul style="list-style-type: none"> ● indicate all required tree protection zones (TPZ) and structural root zones (SRZ) for the vegetation immediately adjacent to the proposed area of works.
Recommendations	<ul style="list-style-type: none"> ● provide relevant recommendations.
Supporting evidence (where appropriate)	<ul style="list-style-type: none"> ● photographs; ● test results; and ● statements.

6 Fauna management plan

The primary role of a Fauna Management Plan (FMP) is to provide clear fauna management strategies to minimise the risk of harm and to provide for the welfare of fauna during approved vegetation clearing and construction activities.

6.1 Validity period of the Fauna management plans

Where a FMP is submitted and approved, the plan will remain valid for ~~6~~ **six (6)** months from the date of approval unless conditioned otherwise. Should works not be substantially underway within this time, an updated FMP will need to be submitted to Council [for approval](#).

6.2 Level of detail

The level of information to be included in the FMP is dependent on the complexity of the site and project. A FMP must demonstrate that all potential risks to native fauna before, during and after the construction phase of development have been considered. The document must also demonstrate, to Council’s satisfaction, that management actions will be implemented to minimise these risks.

Process for preparing and implementing a Fauna management plan

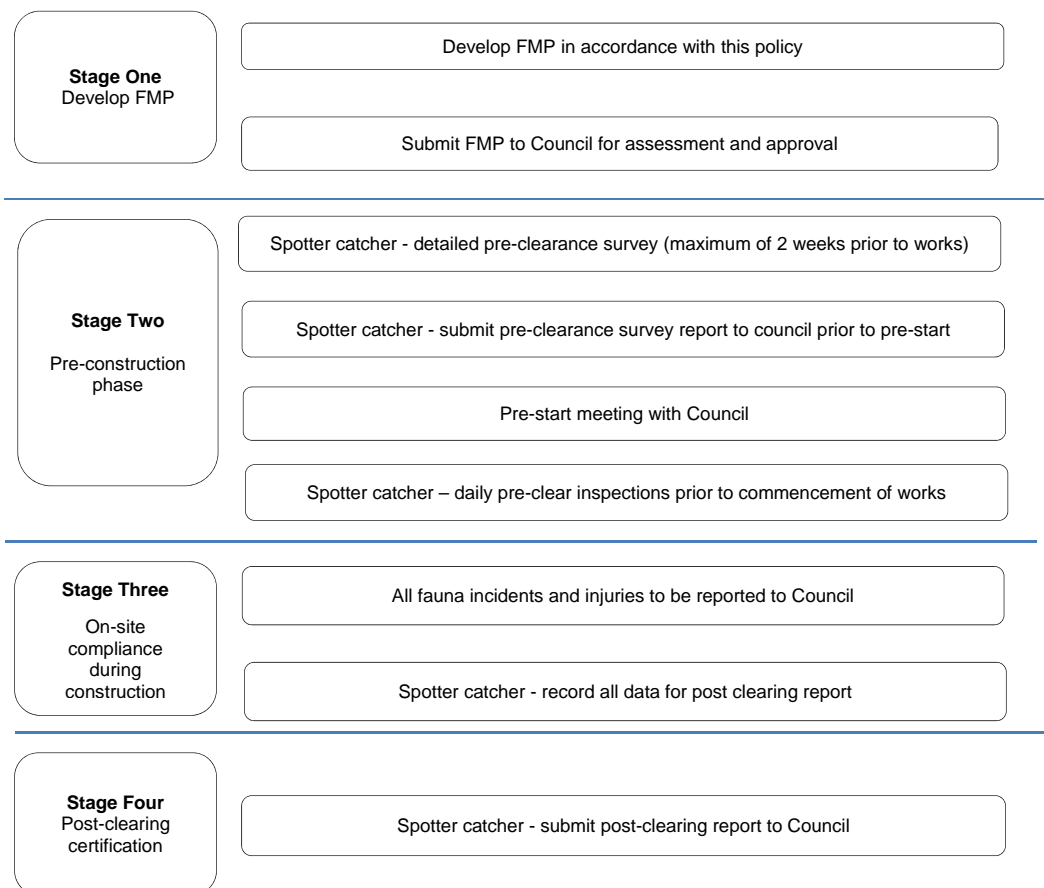


Figure SC6.8-22
Process for developing a Fauna management plan

6.3 Stage one: Develop Fauna management plan

Part A: Site works plan

The level of detail and information ~~It is expected to be included in~~ the FMP ~~consist of a~~ site works plan ~~and a stand-alone directional clearing plan is dependent on the complexity of the site and project.~~ The plan(s) should clearly and accurately depict the features being represented and either be overlaid, or be comparable with plans of the proposed development.

Once approved, these plans are to be used by experienced on-ground contractors such as fauna spotter catchers and machine operators.

The following is recommended content to be represented in a FMP site works plan:

- (a) Location:
- site location and boundary;
 - scale and north point; and
 - location of existing and approved buildings, structures, services and roads.

- (b) Ecological/-habitat values:
- habitat trees and features such as scats, scratches, log-piles, termitarium, burrows, hollows, stags, fruit and seed falls, fallen logs, ground diggings, rocky outcrops, nests and breeding sites;
 - fauna movement corridors, pathways or habitat links;
 - watercourse corridors, waterbodies and wetlands;
 - location and extent of koala and habitat on or directly adjacent to the subject site; and
 - information about the site and surrounding area relevant to fauna management (e.g. surrounding vegetated areas, aquatic habitats, values, barriers and threats) that might require the formulation of management strategies.
- (c) Significant fauna:
- National, state and local significant species listed under the *Environmental Protection & Biodiversity Conservation Act 1999* (EPBC), *Nature Conservation Act 1992* (NCA) and SC6.7 City Plan policy – Ecological site assessments respectively;
 - habitat trees and unique fauna habitats (e.g. threatened or significant vegetation communities);
 - significant fauna feed trees; and
 - vegetation on and adjacent to the site:
 - existing vegetation communities; and
 - location of protected vegetation.

~~Construction management (this section should contain sufficient information about managing the construction stage to enable it to be read and understood in isolation of the remainder of the document) This section should also include details on:~~

~~The following is recommended content to be represented in a FMP stand-alone directional clearing plan:~~

~~(a) The directional clearing plan should contain all aspects of fauna management during the construction phase. The following is recommended content to be included in a FMP directional clearing plan:~~

- direction of vegetation clearing;
- sequential clearing plan;
- potential fauna release into locations as close to the site as possible ~~areas adjacent to the site~~ (area must be able to support the animal being released);
- location of vegetation to be retained, relocated, removed or damaged;
- aquatic fauna treatments (dewatering locations, floating booms etc.);
- location of habitat trees and other ecological values to be managed during construction; and
- location of fauna fencing (fauna permeable or fauna exclusion), fauna over/underpasses or any other specific management treatments.

Part B: Supporting text

The supporting text forms the body of the report and details specific information such as management strategies, protocols, specifications, species lists and procedures.

- (a) Site fauna and habitat values:
- A summary of field validated site ecological features, including previous environmental reporting and site assessments undertaken to inform the preparation of the FMP including:
 - fauna habitat and breeding places;
 - fauna species recorded on site;
 - fauna expected to use the site (this can be based on historical database searches such as Wildlife Online and the Gold Coast Flora and Fauna Database); and
 - details of significant fauna that might be affected by construction activities.

(b) Fauna management:

- Strategies and actions that will be completed prior to the commencement of works ([Section 6.84 Appendix 3](#))
 - ensure the correct equipment and machinery is available for spotter catchers and operators prior to booking a pre-start meeting;
 - avoid clearing in active breeding seasons for native species; and
 - avoid construction activities through creek crossings and waterbodies during periods of rainfall.
- Strategies and actions that will be implemented during the construction phase ([Section 6.85 Appendix 3](#)) These may include:
 - details and specifications of terrestrial fauna management treatments (where relevant), such as:
 - (i) fauna exclusion/friendly fencing;
 - (ii) frequency of trench and deep excavation inspections for entrapped fauna;
 - (iii) fauna escape ramps or escape devices for trenches or deep excavations;
 - (iv) exclusion zones around nests/breeding areas;
 - (v) rates of vegetation clearing for complex habitats (~~Section 6.8 Appendix 3~~);
 - (vi) rates of vegetation clearing for koala habitat and/or areas supporting arboreal fauna (AO16 of the Environmental significance overlay code); **and**
 - (vii) soft felling techniques (e.g. tree-felling grab attachment for controlled felling of habitat trees, matressing and decelerated felling).
 - details and specifications of aquatic fauna management treatments (where relevant), such as:
 - (i) surface water dewatering methods – e.g. pumping, excavation, spillways, rate of dewatering;
 - (ii) aquatic fauna capture – e.g. fish traps, netting, artificial channels, dewatered sediment searches; and
 - (iii) aquatic fauna protection - e.g. floating booms, protective mechanisms (e.g. mesh or caging) for pumps to prevent entrapment, maintaining fish passage and regular inspection of traps.
 - Special considerations, **such as**:
 - (i) adequate number and positioning of traps;
 - (ii) maintain fish passage during clearing in waterways (where relevant);
 - (iii) relocation of habitat features; and
 - (iv) potential requirement for specialised fisheries permits.

Note: The capture and release of fauna associated with dewatering activities may require permits under State legislation (e.g. Fisheries Act 1994). To prevent delays associated with obtaining permits, spotter catchers should be consulted as early in the development process as possible.
 - general construction considerations relating to fauna management, such as:
 - (i) maximum rates of clearing;
 - (ii) communication during construction operations (pre-start meetings, two way radios etc.); and
 - (iii) avoid disturbance to potential or active breeding sites.

- details relating to the presence of spotter-catchers on site (e.g. when and how many); and
 - complexity of the site – is more than one fauna spotter catcher required (general rule is one fauna spotter catcher per machine).
 - Details relating to fauna handling and management, including:
 - details on capture and release (potential receiving sites and release methodologies);
 - follow-up monitoring of relocated fauna where there is a potential of threatening processes occurring in proposed release locations, which may impact the health and continuation of the species in the release location; and
 - management of injured animals (including handling/transport to wildlife carers or veterinarians, and considerations/methods for circumstances where on-site euthanasia may be required).
 - Management of ecological values and features present within and adjacent to the construction footprint, including recommendations for specific construction management requirements (e.g. elevated work platforms) where appropriate.
 - Specifications and locations of nest boxes and/or artificial tree hollows.
 - Management of significant species (where applicable).
- Note: Consultation is to occur with a spotter catcher and contractor to ensure the correct equipment, machinery and fauna protection mechanisms have been factored into the FMP.**
- (c) Vegetation management:
- a summary of vegetation communities on site and associated vegetation management activities. If a VMP is to accompany the FMP, a brief summary of vegetation management activities and reference to the VMP will be sufficient.
- (d) Additional information:
- any proposed/approved MCU/ROL plan(s) of development;
 - correspondence or a statement from a Department of Environment and Heritage Protection (DEHP) licensed fauna spotter catcher confirming they have assessed the site; and
 - a list of specialised equipment or machinery that may be required on site such as an elevated work platform (EWP), tree felling grab attachments or suitable excavator bucket attachments (e.g. GP or stick rake buckets for stick/log piles etc.). Ensure additional requirements are communicated to the project manager/contractors to ensure the equipment is on site.
- (e) Roles and responsibilities:
- A requirement of the FMP is to ensure the document, plus all approved plans and conditions, are available on site during construction works, and to all relevant personnel such as the project manager, site manager, construction leading hands, relevant contractors, relevant machine operators and other site personnel.
 - identify the role and responsibilities of all persons involved with the management of fauna during construction activities; and
 - outline key contacts including:
 - (i) nearest veterinary surgery for injured wildlife;
 - (ii) Wildcare;
 - (iii) site supervisor; and
 - (iv) Council contact.

6.4 Stage Two: Pre-construction phase

The actions identified below must be undertaken prior to a pre-start meeting being held.

- (a) Detailed pre-clearance survey:

- A detailed pre-clearance survey must be undertaken by a DEHP-licensed fauna spotter catcher no more than two weeks prior to the commencement of works. –Where vegetation clearing does not commence within two weeks of the pre-clearance assessment, Council may require that an updated pre-clearance assessment be conducted.
 - The fauna spotter is to determine the best methodology for accessing fauna presence in habitat and hollow bearing trees if not already addressed in the FMP.
- (b) Pre-clearance report:
- The pre-clearance report must be submitted to Council for review and approval at least one (1) week prior to the pre-start meeting. The fauna spotter should ensure –all data and fields of the pre-clearance report are addressed (refer to **Table SC6.8-23**).
- (c) Installation of fauna management controls:
- All fauna management controls such as nest boxes and fauna friendly/exclusion fencing must be installed prior to the pre-start meeting.
- (d) Waterbody pre-clearance to be undertaken by fauna spotter catcher prior to the commencement of dewatering.
- Allocate the spotter catcher sufficient time to undertake pre-clearance activities prior to commencement of dewatering activities (dependant on size and complexity of waterbody).
- Note: Spotter catcher(s) must be present during all surface water dewatering activities where fauna is likely to be present in a waterbody. For large or complex waterbodies several spotter catchers may be required.**
- (e) Daily pre-clearance inspection:
- Prior to the commencement of vegetation clearing each day, the spotter catcher is to conduct a thorough active search of the clearing front to ensure no fauna has moved back into the area.
- Note: Pre-clearance surveys must take place every morning along the clearing front prior to the machines being started or commencement of any works.**
- (f) Pre-start meeting:
- Prior to vegetation clearing or damage, a pre-start meeting with a Council officer is required. –The pre-start will ensure:
 - all relevant approved plans are on site;
 - all fauna and flora protection measures are installed and operational;
 - nest box installation has been undertaken where conditioned;
 - contractors are aware of relevant documentation and their obligations;
 - a copy of the stamped approved FMP, decision notice and supporting plans are required on site (to be provided by the developer or developers' representative); and
 - the fauna spotter catcher(s) are present and have undertaken the required surveys.
 - Where a pre-start is not passed as a result of non-compliance with the above, or the pre-clearance report was not submitted to Council, an additional meeting and re-inspection fee will be required.
 - Clearing of assessable vegetation and associated fauna habitat is not to commence until a development permit for operational works (vegetation clearing) is secured, a Council pre-start meeting has been completed, and a signed pre-start form issued.

6.5 Stage Three: On-site compliance during construction

To ensure compliance during construction works:

- (a) Council inspections typically occur during construction to ensure vegetation protection measures and clearing methodologies are compliant with the FMP, the pre-clearance report and conditions of development including:

- clearing or disturbance of standing or stockpiled vegetation does not occur without a fauna spotter catcher present;
 - the correct machinery or attachments are used for felling vegetation and moving vegetation stockpiles;
 - operators undertake clearing in the planned direction or sequential pattern as pre-determined in the FMP or by the fauna spotter catcher;
 - operators are ceasing works to enable the fauna spotter catcher to remove fauna; and
 - soft felling methods are used for habitat trees.
- (b) Fauna injuries, deaths and incidents must be reported to Council immediately by fauna spotter catchers or site personnel.
- (c) If the contracting fauna spotter catcher is replaced mid construction, Council must be notified, and a comprehensive handover must occur between the departing and newly appointed fauna spotter catchers. The departing fauna spotter catcher must submit their post clearing report to Council within one (1) week of changeover. Failure to submit a report in this instance will be deemed as a non-compliance of the conditions of the FMP.

6.6 Stage Four: Post-clearing certification

At the completion of vegetation clearing, a post-clearing report must be prepared and submitted to Council from the project fauna spotter catcher (refer to **Table SC6.8-44**). Specific timeframes and requirements for this assessment must be in accordance with any decision notice(s) issued by Council.

~~Clearing of assessable vegetation and associated fauna habitat is not to commence until a development permit for operational works (vegetation clearing) is secured, a Council pre-start meeting has been completed, and a signed pre-start form issued.~~

6.7 Appendix 2: Pre-clearance report format

Table SC6.8-23: Fauna spotter catcher pre-clearance report requirements

Introduction	<ul style="list-style-type: none"> • background; • site description; and • list all qualifications/permits of fauna spotters present for survey.
Pre-clearance survey methodology	<ul style="list-style-type: none"> • date and time of inspection; • survey methodology/techniques; • total survey effort; and • details of demarking habitat features (e.g. flagged with yellow flagging tape etc.).
Results	<ul style="list-style-type: none"> • known and potential habitat trees; • habitat features; • fauna and supporting habitat <u>including GPS coordinates</u>; • fauna confirmed and expected on site; <u>and</u> • listed threatened species - management actions for endangered, vulnerable and near threatened species (EVNT); <u>and</u> • <u>list of relocated fauna including release locations (Table SC6.8-3).</u>
Operational details	<ul style="list-style-type: none"> • specific recommendations for fauna management in addition to the FMP (i.e. tree climber required to remove fauna from hollow, use of borescopes to assess hollows and burrows, dewatering methodology etc.); • <u>requirement for any targeted trapping program in the lead up to commencement of clearing</u>; • contact details for vets/wildlife carers; • anticipated/scheduled dates of clearing; • potential relocation areas for terrestrial and aquatic fauna encountered during clearing; • rate of clearing; • identify (and provide contact details where possible) of relevant site personnel; and • additional machine attachments for managing fauna habitat trees and tree piles.

Table SC6.8-3: Fauna record for pre-clearance report

Date	Capture Location	Latitude	Longitude	Status	Scientific/ Common name	Release location	Latitude	Longitude	Comments/ Count

Table Notes

- Start Date: _____ Date of sighting/capture
- Capture Location: _____ Description of locality and nearest road (e.g. site address)
- Status: _____ Status of species as scheduled under the *Nature Conservation (Wildlife) Regulation 2006*
- Location of release description: _____ Address of release site, or name and address of veterinarian or wildlife carer

6.8 Appendix 3: Post-clearance report format

Table SC6.8-44: Fauna spotter catcher post-clearance report format

Background	<ul style="list-style-type: none"> client details; report purpose; site description; description of cleared area (size, location on site etc.); and list all qualifications/permits of fauna spotters present vegetation clearing (e.g. Rehabilitation Permit, Scientific Purposes, Animal Ethics, Damage mitigation permit).
Clearing operations	<ul style="list-style-type: none"> date(s) of clearing; date and time fauna spotter catcher is on site outlining: <ul style="list-style-type: none"> start time of daily pre clearance; start time of machinery/works. number of fauna spotter catchers on site and per machine; <u>summary details</u> of fauna captured/encountered (i.e. numbers, species, GPS coordinates and outcomes) (refer to Table 8.55); and <u>details of capture/release numbers, species and outcomes</u> (e.g. relocation, injury, death) (refer to Table SC6.8.55).
Management actions	<ul style="list-style-type: none"> clearing and fauna management: <ul style="list-style-type: none"> description of how site was cleared including machines used for clearing habitat trees where applicable; management techniques used to minimise risk of harm to fauna. GPS points of nest boxes and other compensatory measures; and additional habitat relocation and/or replacement undertaken.
Pre-start directives	<ul style="list-style-type: none"> description of any site-specific management actions identified at the pre-start meeting and a description of how they were managed.
Non-conformances	<ul style="list-style-type: none"> Non-conformances with the approved FMP, why it occurred, and how the situation was managed to minimise risk to fauna.

Table SC6.8-55: Fauna record for post-clearance report (to be taken from guidelines)

Date & time	Sighting/capture location	Latitude	Longitude	Count type	Status	Scientific/ Common name	Count	Release date & time	Release location	Latitude	Longitude	S	R1	R2	D	Comments

Table notes:

- Date & time Start date: Date of sighting/capture
- Sighting/capture location: Description of locality and nearest road (e.g. site address)
- Count type: Whether species is alive or dead, include eggs if relevant
- Status: Status of species as scheduled under the *Nature Conservation (Wildlife) Regulation 2006*
- Count: Number of individuals
- Release date & time: Date and time of release, including any details of storage and/or transportation if relevant
- Release location of release: Address of release site, or name and address of vet or wildlife carer

description

S
R1
R2
D

Self-dispersal

Release – no further action
Release with first aid to vet or carer (mark with 'V' for vet or 'C' for carer)
Death

6.9 Appendix 4: Habitat types and fauna management considerations

Table SC6.8-66: Fauna spotter catcher considerations for habitat types

Habitat type	Habitat overview	Fauna management considerations
Woodland/ Open Forest	<ul style="list-style-type: none"> Habitat complexity and structural diversity is variable and dependent upon the vegetation community. Fauna species diversity variable depending upon the vegetation community. Habitat features likely to be encountered: <ul style="list-style-type: none"> hollow-bearing trees hollow logs woody debris stags native bee hives leaf litter rocky outcrops. 	<ul style="list-style-type: none"> Clear understorey first in communities with higher structural complexity. Staged clearing. as outlined in the Fauna spotter catcher Pre-clearance report. Additional spotter catchers for sites with numerous habitat features (e.g. greater than 5 hollow-bearing trees). Need to relocate habitat features. Soft felling techniques for habitat features. Spotter catcher(s) present during vegetation stockpile disturbance. Potential presence of koalas requiring species-specific management.
Closed Forest/ Rainforest	<ul style="list-style-type: none"> High habitat complexity and structural diversity. Typically higher species diversity. Significant habitat opportunities, particularly for forest birds, reptiles and small ground-dwelling mammals. Habitat features likely to be encountered: <ul style="list-style-type: none"> hollow-bearing trees hollow logs decaying woody debris dense leaf litter rocky outcrops large rocks and boulders. 	<ul style="list-style-type: none"> Likely need to clear understorey first, with canopy trees to be cleared the next day. Staged clearing. as outlined in the fauna spotter catcher pre-clearance report. Need for more than one (1) spotter-catcher per machine during clearing. Need to relocate habitat features. Spotter catcher(s) present during vegetation stockpile disturbance. Potential presence of koalas and other threatened fauna species requiring species-specific management.
Grassland/ Paddock/ Scattered Canopy Trees	<ul style="list-style-type: none"> Low habitat complexity and a lack of structural diversity. Typically lower fauna species. Diversity relative to other habitat. Types (e.g. closed forest/rainforest). Limited habitat opportunities relative to other habitat types. Habitat features likely to be encountered: <ul style="list-style-type: none"> hollow-bearing trees and logs woody and anthropogenic debris burrows. 	<ul style="list-style-type: none"> Additional spotter catchers for sites with numerous habitat features (e.g. greater than 5 hollow-bearing trees). Need to relocate habitat features (e.g. tree hollows, hollow logs, native bee hives etc.). Soft felling techniques for habitat feature (e.g. hollow-bearing trees). Spotter catcher(s) present during vegetation stockpile disturbance. Potential presence of koalas requiring species-specific management.
Aquatic	<ul style="list-style-type: none"> Habitat complexity and structural diversity is variable and dependent upon the associated vegetation community. Fauna species diversity variable depending upon the type of aquatic 	<ul style="list-style-type: none"> Adequate number and positioning of traps to capture aquatic fauna during dewatering. Actively manage aquatic fauna through capture and relocation. More than one spotter catcher where there are

Habitat type	Habitat overview	Fauna management considerations
	<p>environment (e.g. permanent/ephemeral) and the associated vegetation community.</p> <ul style="list-style-type: none"> • Significant habitat opportunities, particularly for amphibians, reptiles, birds (including migratory birds, wetland birds and raptors) and fish. • Habitat features likely to be encountered: <ul style="list-style-type: none"> ○ sedges and macrophytes ○ hollow logs and woody debris ○ stags and rocks. 	<p>multiple aquatic habitats and/or terrestrial habitats on a site.</p> <ul style="list-style-type: none"> • May need to maintain fish passage during clearing within waterways. • Relocate habitat features. • Potential requirement for specialised fisheries permit.
Mangrove/ Intertidal	<ul style="list-style-type: none"> • Moderate habitat complexity and structural diversity. • Typically higher species diversity. • Significant habitat opportunities, particularly for birds, reptiles fish and macroinvertebrates. • Habitat features likely to be encountered: <ul style="list-style-type: none"> ○ mangroves ○ hollow logs ○ woody debris ○ rocks and walls. 	<ul style="list-style-type: none"> • Adequate number and positioning of traps to capture aquatic fauna during dewatering. • Need to actively manage aquatic fauna through capture and relocation. • May need to maintain fish passage during clearing within waterways. • Potential need to relocate habitat features (e.g. hollow logs). • Potential requirement for specialised fisheries permit.

7 Rehabilitation management plan

The primary role of a Rehabilitation management plan (RMP) is to provide clear rehabilitation management strategies to conserve and enhance biodiversity by increasing the extent and improving the condition of native vegetation.

Developers and their representatives are responsible for compliance with the rehabilitation management plan. The aim of the rehabilitation management plan is to ensure the rehabilitation zone is of a standard, which land holders (including future land holders) can maintain long-term.

7.1 Level of detail

The level of detail required within a RMP is determined by the type and degree of rehabilitation works to be undertaken on the site. RMP's are categorised as basic or detailed plans. **Figure SC6.8-33** will assist in determining the level of detail required in the RMP. This policy outlines key content ~~which~~ that is common to most rehabilitation sites; however, additional information may be required depending on site specific conditions.

Refer to the guideline on preparing an ecological restoration plan in the *South East Queensland Ecological Restoration Framework 2012* for further guidance on the level of detail required within an RMP.

7.2 Rehabilitation management plan process

Process for preparing and implementing a Rehabilitation management plan

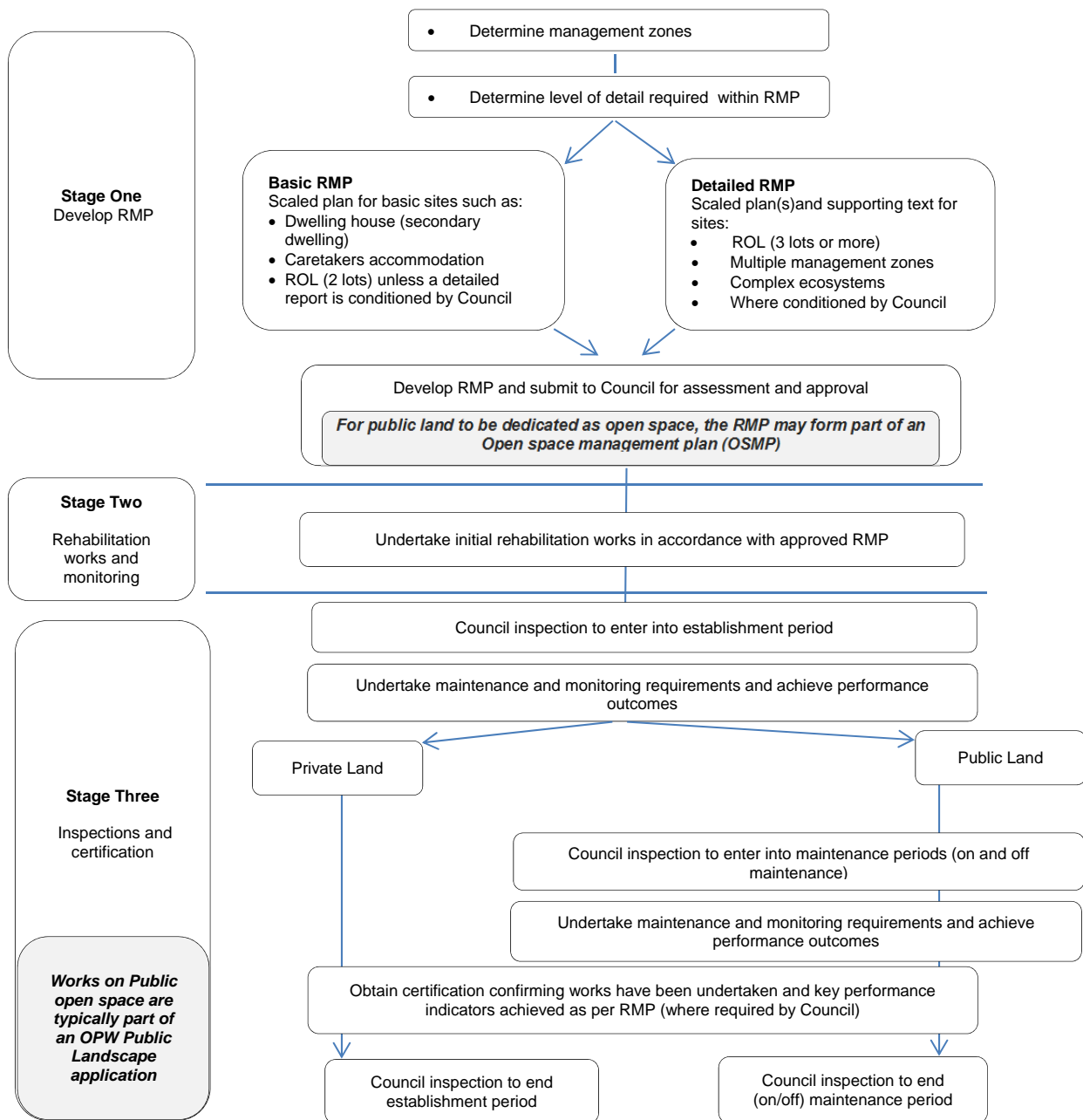


Figure SC6.8-33
Process for developing a Rehabilitation management plan

7.3 Plan preparation and content

A RMP is to be developed in accordance with the principles of the *South East Queensland Ecological Restoration Framework*. Based on the site assessment and the identified rehabilitation approach(es), the rehabilitation plan should comprise a site works plan and supporting text depending on the complexity of the site and the conditions of approval.

7.4 Establishment and maintenance periods

Establishment ~~and maintenance~~ periods ~~apply to private and public land and~~ have a standard minimum duration of twelve (12) months, unless conditioned otherwise.

~~Maintenance periods (on and off maintenance) apply only to public land and have a standard minimum duration of twelve (12) months, unless conditioned otherwise.~~

Longer establishment and/or maintenance periods should be considered for sites which are fragmented, disturbed or ~~border~~adjoin development.

7.5 Stage one: Develop Rehabilitation management plan

Part A: Site works plan

The level of detail and information to be included in the site works plan is dependent on the complexity of the site and project. The scaled plan(s) should clearly and accurately depict the features being represented and either be overlaid or be comparable with plans of the proposed development. For basic sites, as indicated in **Figure SC6-8-33**, a scaled site works plan should be sufficient to achieve approval for a basic RMP.

Once approved, the plan(s) is/are used by experienced on-ground contractors during the construction and operational phases of development.

Basic Rehabilitation management plan

Where applicable, the following content should be graphically depicted in a site works plan:

- (a) Location:
 - site location and boundary;
 - scale and north point; and
 - location of existing and approved buildings, structures, services and roads.
- (b) Management zones:
 - identify management zones (e.g. natural regeneration, assisted natural regeneration, reconstruction or fabrication as per the South East Queensland Ecological Restoration Framework); ~~and~~
 - outline rehabilitation requirements for each zone including weed control;
 - nominate establishment and maintenance periods; and
 - nominate key performance indicators (e.g. site clear of weeds, planting densities achieved by the end of the establishment period, etc.) and timeframes for achievement.
- (c) Additional information relevant to the site may include, but is not limited to:
 - location of wetlands, waterways and drainage lines;
 - bushfire, stormwater and essential service management requirements; and
 - site constraints (e.g. acid sulfate soils, steep slopes, retaining walls, flood prone areas).

Detailed Rehabilitation management plan

Where applicable, the following content should be graphically depicted in a detailed site works plan:

- (a) aAll components of a 'Basic site works plan';
- (b) mMaintenance area/zones;
- (c) wWeed control zones;
- (d) pProtective measures, such as:
 - tree guards and jute matting;
 - location of erosion and sediment controls; and
 - temporary and/or permanent fencing (e.g. livestock fencing) with design cross sections.
- (e) aAdditional information relevant to the site may include, but is not limited to:
 - contours for topographically constrained sites;
 - erosion and sediment control; and
 - photo monitoring points.

Part B: Supporting text

The supporting text reports on the main elements and strategies of the rehabilitation management process. This can be in report form, or incorporated into tables and text boxes on the site works plan.

Basic Rehabilitation management plan

Where applicable supporting text should address:

- (a) Management zones:
 - description of works to be undertaken in each area/zone.
- (b) Management and control of restricted and prohibited plants and recognised environmental weeds including:
 - list of weeds and control methods addressing weed control methods appropriate to the specific site conditions including names of chemical(s), method and rates of application.
- (c) Methodology:
 - planting schedule, spacing, module/palette and consideration of sourcing (if propagation required, local provenance should be addressed); ~~and~~
 - proposed species to be planted (where required)-); and
 - nominated establishment and maintenance periods of at least 12 months each with longer periods considered for sites which are fragmented, disturbed or border development.
- (d) Roles and responsibilities:
 - A requirement of the RMP is to ensure the document, all approved plans and conditions are available during rehabilitation works on site and to all relevant personnel such as the project manager, site manager, construction leading hands, relevant contractors, relevant machine operators and other site personnel; and
 - Concisely identify the role and responsibilities of all persons that might be involved with the management of vegetation during construction.
- (e) Performance indicators:
 - nomination of key performance indicators (e.g. site clear of weeds, planting densities achieved by the end of the establishment period, etc.) and timeframes for achievement.
- (f) Site specific considerations (where required):
 - sediment and erosion control measures to be implemented during establishment.

Detailed Rehabilitation management plan

Where applicable supporting text should address:

- (a) All components of the basic RMP.
- (b) Management of threats:
 - bushfire hazard (where required);
 - domestic farm/feral animals (where required); and
 - weather events.
- (c) Rehabilitation methodology:
 - proposed timing and staging of works;
 - cross sections demonstrating site preparation including stabilisation (jute matting), how mulch is to be spread (across whole area or rings), depth/preparation. of planting holes); and
 - sediment and erosion control measures to be implemented during establishment.
- (d) Ongoing management/maintenance regimes:
 - nominated establishment and maintenance periods of at least 12 months each with longer periods considered for sites which are fragmented, disturbed or border development;
 - schedules of works during establishment and maintenance periods including frequency and tasks such as:
 - timing of site preparation including fencing and planting / translocation of propagated plants (consider seasonality);
 - timing and frequency of weeding (not during high rainfall periods, consider seasonality); and

- frequency of watering & inspections to check health of plantings and top up mulch etc.;
- time allocated to perform various tasks (e.g. top up mulch, pruning, topdressing, etc.);
- coordination of services such as irrigation repair or civil infrastructure maintenance (such as stormwater) that may impact on the establishment and maintenance periods;
- tree management procedures such as tree protection zone (TPZ) fencing and tree guards;
- management and maintenance regimes for sediment and erosion control devices and irrigation (i.e. monthly and after rainfall events); and
- management and control of restricted and prohibited plants and recognised environmental weeds including:
 - special considerations (e.g. around waterways, leave root ball in situ on banks, frog-friendly herbicide, etc.).

(d)(e) Monitoring specifications:

- particulars of photo monitoring points;
- nomination of key performance indicators and when these should be achieved. Refer to **Table SC6.8-7Z** for examples; and
- defects liability for failed performance indicators such as replacement of dead plant species.

Table SC6.8-7Z provides a list of examples for the nomination of key performance indicators. These will vary between sites and the list provided is not exhaustive.

Table SC6.8-7Z: Examples of key performance indicators

Objectives	Performance indicators	Timeframes
Weed control methods have reduced restricted and prohibited plants and environmental weeds	<ul style="list-style-type: none"> ● site is 90% weed free; ● natural recruitment by native species not suppressed; and ● zero fruiting weed species. 	Achieved by: <ul style="list-style-type: none"> ● end of specified establishment period; ● end of specified maintenance period (public land); or ● prior to final certification.
Planted species are healthy and showing signs of growth	Less than 10% death rates of installed trees.	
Bank stabilisation is functional	<ul style="list-style-type: none"> ● plants have been installed and secured (where required); and ● stabilisation matting installed (where required). 	
Regeneration is occurring	Evidence of natural regeneration.	

7.6 Stage Two: Rehabilitation works and monitoring

Undertake initial weeding, site preparation and planting as per the approved RMP.

7.7 Stage Three: Inspections and certification

Inspections

Following completion of initial rehabilitation works, the applicant must arrange an inspection with Council to begin the establishment period. At the end of the establishment the applicant must arrange an inspection by Council to begin the maintenance periods (where applicable).

Interim inspections may also take place throughout the nominated establishment and maintenance periods and at the end of the maintenance periods (where applicable).

- (a) Inspections will assess compliance with the RMP and ensure:
- correct species and densities have been planted;
 - mulching to specifications;
 - fencing (area delineation/domestic animal exclusion);

- plant health, survival rates and weed cover percentages achieved;
- defect rectification works; and
- sediment and erosion control is operational.

Following inspections, if it is determined by Council that the nominated assessment benchmarks have not been achieved, the establishment or maintenance periods will continue until such time as Council determines the assessment benchmarks are satisfied.

The applicant must comply with any directions given by Council officers as a result of site inspections to ensure the nominated assessment benchmarks are achieved.

Certification

At the end of the establishment or maintenance period the applicant must provide to Council

- (a) certification from a suitably qualified professional that:
- all maintenance works/measures in the approved RMP have been undertaken on-site; and
 - the nominated performance criteria for the end of the establishment or maintenance period has been achieved.

The establishment or maintenance periods are not commenced or finished until written correspondence is issued by a Council -stating otherwise.

By the end of the maintenance period the rehabilitation must be of a standard that land holders (including future land holders) can maintain long-term.

8 Covenant management plan

The primary role of a Covenant management plan (CMP) is to provide detailed information to the future landholder on how to manage the statutory covenant area in perpetuity.

8.1 Level of detail

This policy outlines key content which is common to most covenant areas; however, additional information might be required in some circumstances depending on site specific conditions.

For a Covenant management plan template refer to Council's Statutory environmental covenants webpage: <http://www.goldcoast.qld.gov.au/environment/statutory-environmental-covenants-31811.html>.

8.2 Covenant management plan process

Process for preparing and implementing a Covenant management plan

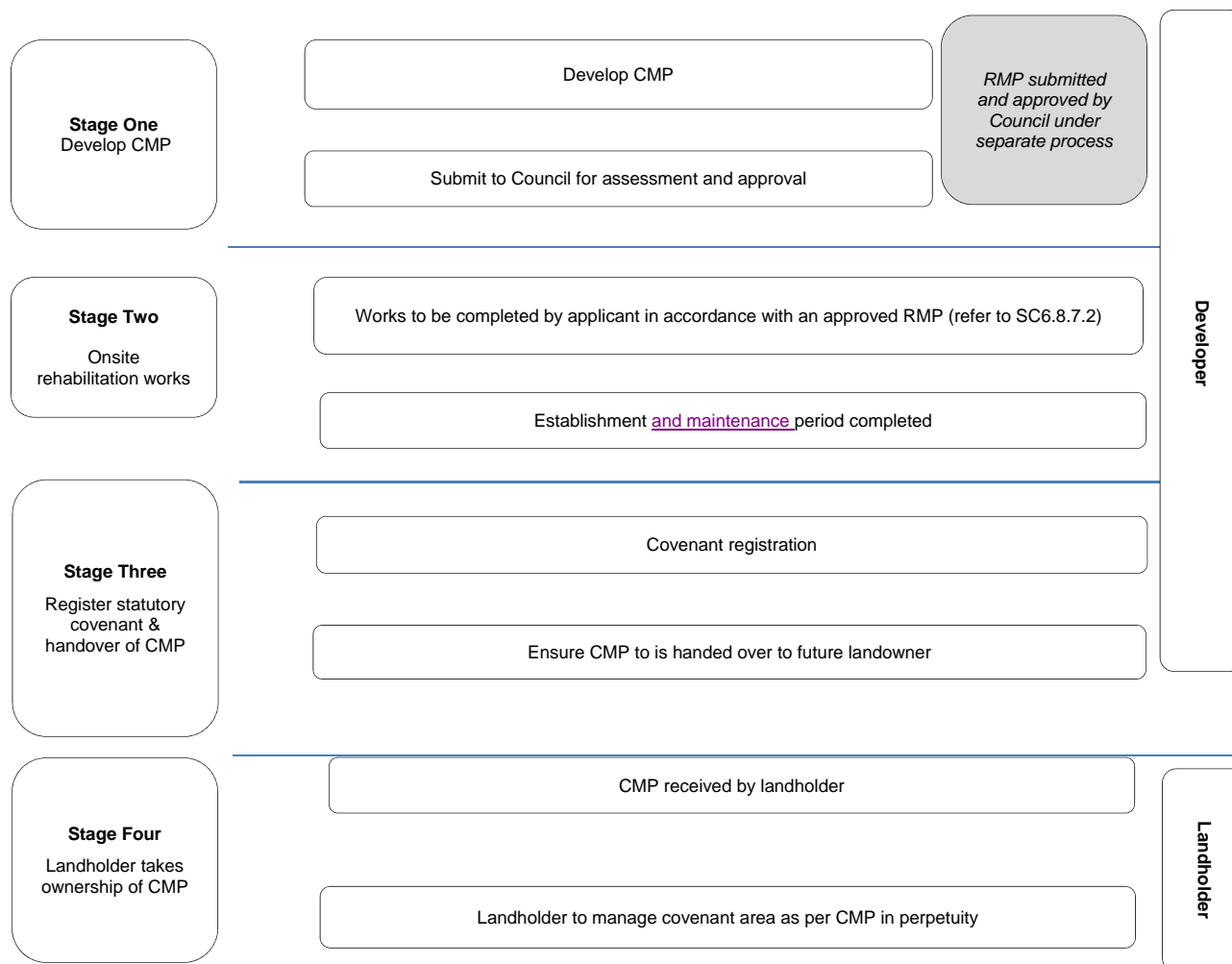


Figure SC6.8-44
Process for developing a Covenant management plan

8.3 Stage One: Develop Covenant management plan

The landholder is responsible for carrying out all works associated with this component of the plan.

8.3.1 Preparation of a Covenant management plan

The following content should be addressed in a CMP:

- An introduction explaining the documents purpose and the landholder's responsibilities
- A description of how the document is to be read, including the purpose of the covenant area and general requirements (landholders responsibilities as covenantee).
- Environmental covenant area(s) superimposed onto the development layout, including services and roads.
- Map location of covenant delineation (include fencing or bollards) where applicable and provide design details.
- List of all prohibited actions as stated within the conditions of the development approval. If there are any special considerations (such as bushfire or stormwater management requirements) graphically represent these areas and clearly describe requirements within supporting text.

- (f) List of expected weeds and their treatment. Ensure treatment descriptions can be understood by a landowner with little experience of restoration activities. Include a weed information table with photos for easy identification by landholders.
- (g) List appropriate planting species for the covenant area (where required).
- (h) Describe on-going maintenance of the covenant area that must occur following initial rehabilitation. Include a simple yearly maintenance schedule for landholders that is easy to follow.
- (i) Prohibited activities within the covenant area, such as:
- clearing, lopping or removal of any native plants, whether existing at the date of this approval or planted pursuant to conditions of this approval;
 - erection of any fixtures or improvements, including buildings or structures;
 - construction of any trails or paths;
 - depositing of any fill, soil, rock, rubbish, ashes, garbage, waste or other material foreign to the protected area;
 - keeping or permitting the entry of domestic animals or any other animals that are not indigenous to the Covenant Area; and
 - performance of any other acts which may have detrimental impact on the values of the covenant area.
- (j) Requirements to be fulfilled by the landholders (as covenantees) including:
- detailed landowner requirements and responsibilities (e.g. undertake regular inspections for weed outbreaks, fencing, bushfire and erosion issues); and
 - detailed methods relating to maintenance and enhancement of the covenant area, revegetation methods and species lists, monitoring requirements and useful resources and contacts.
- (k) How to update a CMP, or request permission for the relaxation of prohibited activity (e.g. removal of a dangerous tree). -Any updates should:
- be consistent with the purpose of the covenant (being the statutory covenant required to be registered pursuant to the conditions of this approval);
 - not alter the covenant area; and
 - not add or remove a party to the covenant.

8.4 Stage Two: Rehabilitation works, monitoring and certification rehabilitation

Undertake initial weeding, site preparation, planting and related works as per the approved RMP.

8.5 Covenant Registration

The applicant is responsible for the preparation of the instrument of covenant and any necessary subdivision plan to enable registration of the covenant and for lodgement of the covenant for registration.

8.6 Handover of landholder guide to managing statutory covenant area

The applicant is responsible for ensuring the CMP is provided to the landholder once the statutory covenant has been registered and the affected property is sold.

8.7 Stage four: Landholder responsibilities

The landholder is responsible for the management of the covenant area as per the CMP.