

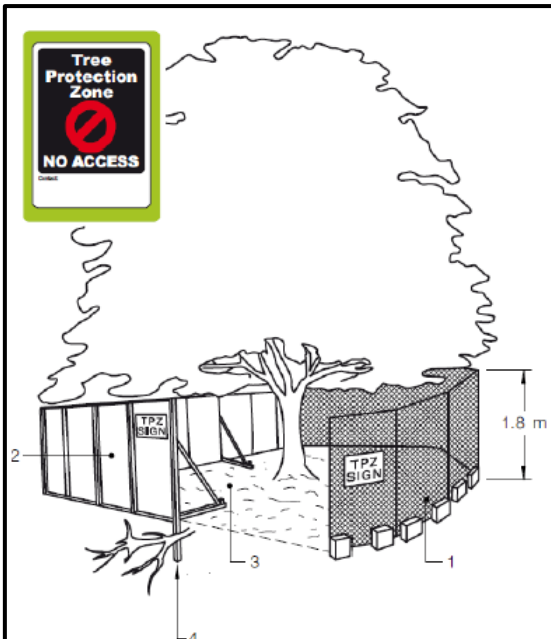
Attachment 6

“Vegetation Management Plan”

Vegetation Management Plan

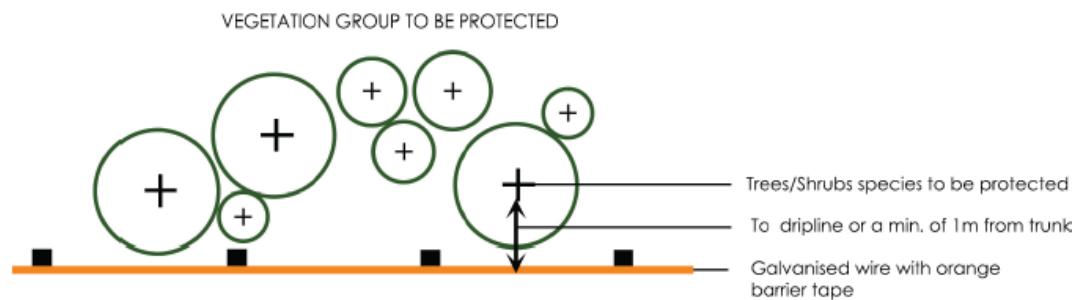
This Vegetation Management Plan (VMP) has been prepared and is to be implemented for both the clearing of the Proposed Protection Zone, 49 George Alexander Way, Coomera and the retention and protection of vegetation located external to the works area during clearing activities. The VMP is to be used as a tool during the clearing activities, identifying tasks to be undertaken, the timing of such works and responsible parties for the supervision/implementation of vegetation removal/retention on the Proposed Protection Zone.

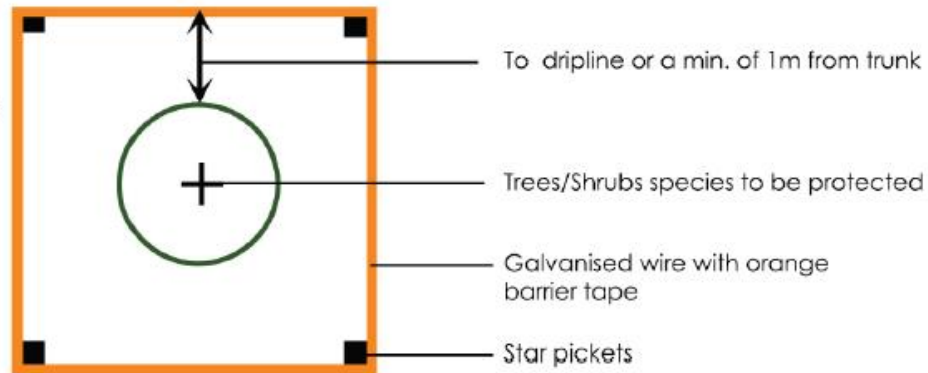
This plan identifies appropriate vegetation protection methods also addresses the necessary removal of vegetation as described within the Assessment. Strict implementation of the following methodologies is necessary to ensure vegetation not approved for removal is not damaged during works.

Element	Vegetation Management
Objectives	- To remove vegetation located within the identified clearing zone - To retain and protect existing vegetation external the clearing zones - To address and minimise potential fauna mortality associated with tree clearing as a part of the bushfire management process. - To reduce impacts from dust and erosion associated with tree-clearing works.
Action	- Tree-retention zones are to be clearly delineated on-site to ensure that all areas affected by this VMP are readily identifiable. - Vegetation external the Proposed Protection Zone onsite must be tagged/marked/delineated prior to commencement of tree clearing for easy identification (do not use permanent paints or similar) i.e. trees and copses of less mature vegetation/small trees will be retained within designated areas are to be clearly fenced according to the Australian Standard 4970 Protection of trees on development sites, similar to the below:  LEGEND: 1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet. 2 Alternative plywood or wooden piling fence panels. This fencing material also prevents building materials or soil entering the Tree Protection Zone (TPZ). 3 Mulch installation across surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ. 4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.



- During works, areas with batters adjacent to vegetation retention zones are also to incorporate sedimentation fencing:
- Vegetation to be retained where the drip line of a tree or group of trees (including saplings and regrowth) is located >5m from the extent of works may be fenced using orange construction barrier tape.





INDIVIDUAL TREE TO BE PROTECTED



- The existing vegetation to be retained will be managed during works and through the establishment and maintenance periods in accordance with the approved Vegetation Management Plan and Australian Standard AS 4970 Protection of trees on development sites to avoid any of the following:
 - Structural damage to the tree including root damage;
 - Compaction of the root plate including parking of any vehicles;
 - Filing of soil within the tree protection zone (TPZ) and/or drip zone;
 - Storage of any building materials within the drip zone; and
 - Long-term harm to the health of the tree.
- The project superintendent must adequately protect from damage any vegetation on private and/or public property which is not designated for removal in association with this development
- Hygiene management is to be applied to all stages of the proposed action (pre-clearing, clearing and maintenance). This requires that prior to entering the work area all tools, equipment, vehicles and all landscape materials (including but not limited to, soils.

	Mulch, gravel and potted or ex-ground plants) are to be cleaned free of Nut Grass propagules <i>Cyperus esculentus</i> and <i>Cyperus rotundus</i>. • Any existing Nut Grass present on site is fully controlled and shows no signs of active growth prior to the acceptance by Council of the commencement of the 'On Maintenance' period. • All landscape materials including but not limited to soils, mulch, gravel, potted or ex-ground plants, pavers, timber etc. to be used in landscape treatments on this site are to be of 'Fire Ants' and Fire Ant eggs. • All landscape material being source from areas currently identified as potential Fire Ant risk areas must be checked by a suitably qualified professional and certified that: ○ No risk of transportation of Fire Ants exist; and ○ That all materials are free from Fire Ant contamination. • All contractors working on the Proposed Protection Zone are to be informed of all provisions specified under this VMP • All 'vegetation retention zones' are to be appropriately protected by sediment erosion controls and detail is to be reflected within future operational works development applications and within/on any revised sediment and erosion control plans submitted to Council for approval. • Cleared vegetation is to be disposed of in accordance with accepted measures including: ○ All felled trees are sorted for millable timber. Millable timber is sold for use as usable timber/fencing etc. ○ All non-suitable timber is sheered and mulched for reuse within the Proposed Protection Zone by contractors. ○ Reduction of wastes are maximised by doing large scale felling to ensure all removed vegetation is contained and mulched. ○ Soils are screened from the mulch piles and utilised for top soil. • Remaining debris not disposed of in either of the above methods is to be removed off-site by the owner to an approved green-waste disposal facility. • The following activities are not permitted within the drip zones of trees to be retained (i.e. trees not designated for removal): ○ Storage and mixing of materials; ○ Vehicle parking or manoeuvring; ○ Liquids disposal; ○ Machinery repairs or refuelling; ○ Site office and/or shed erection;
--	---

	○ Lighting of fires; ○ Rubble, soil or debris stockpiling; and ○ Excavation. ● If root/crown damage (or other significant disturbance) to retained trees occurs/is required during approved clearing works on the Proposed Protection Zone, works are to cease and treatment by a suitably qualified Arborist (i.e. root truncations, crown thinning) is to be implemented. ● Any retained tree with deadwood overhanging road reserve or public open space that may constitute a hazard to members of the public as determined by a qualified Arborist will be pruned in accordance with AS 4373- 1996 Pruning of Amenity Trees. ● A QPWS-recognised fauna spotter-catcher is to ensure safe dispersal of fauna into areas of retained vegetation during clearing works ● Effective sediment and erosion control devices are to be identified and provided at in association with clearing works. ● Site access locations will be located external to vegetation retention zones.															
Performance Indicators	● Tree-clearing activities are restricted to identified areas. ● Construction fencing and sediment/erosion control devices are installed and maintained at all times in accordance with an approved erosion and sediment control plan ● A fauna spotter catcher is present during all clearing works and all encountered fauna are safely dispersed with no injury sustained ● Retained vegetation is to demonstrate healthy conditions: <table><tr><th>Grade</th><th>Condition</th><th>Descriptor</th></tr><tr><td>1</td><td>Healthy</td><td>Leaves green, no abnormal leaf loss</td></tr><tr><td>2</td><td>Fair</td><td>Leaves green, some yellowing of leaves, but <20% of canopy affected</td></tr><tr><td>3</td><td>Poor</td><td>Many leaves yellow or brown, substantial reduction in canopy extent since last measurement</td></tr><tr><td>4</td><td>Dead</td><td>Leaves brown or absent, little of the canopy remaining</td></tr></table>	Grade	Condition	Descriptor	1	Healthy	Leaves green, no abnormal leaf loss	2	Fair	Leaves green, some yellowing of leaves, but <20% of canopy affected	3	Poor	Many leaves yellow or brown, substantial reduction in canopy extent since last measurement	4	Dead	Leaves brown or absent, little of the canopy remaining
Grade	Condition	Descriptor														
1	Healthy	Leaves green, no abnormal leaf loss														
2	Fair	Leaves green, some yellowing of leaves, but <20% of canopy affected														
3	Poor	Many leaves yellow or brown, substantial reduction in canopy extent since last measurement														
4	Dead	Leaves brown or absent, little of the canopy remaining														
Frequency/ Deadline	● Identification of retained vegetation prior to commencement of clearing works. ● Construction/tree protection fencing is to be installed prior to commencement of any site works. ● Implement tree clearing works upon receipt of tree clearing approval - completion within 12 months. ● QPWS-recognised fauna spotter-catcher to be present on-site prior to and during all vegetation-clearing works.															

	• All sediment/erosion control devices installed prior to works commencing
Person Responsible	• The Project Superintendent is responsible for informing all contractors, sub-contractors, consultants and government authorities working on the Proposed Protection Zone of the provisions of this VMP. • A QPWS-recognised fauna spotter-catcher is to be contracted for fauna capture/relocation as necessary. • A suitably qualified Arborist is responsible for assessing and implementing any remediation works to damaged vegetation retained within protection zones areas if/where required. • A suitably qualified consultant is responsible for installing and monitoring erosion and sediment control devices.
Reporting and Reviewing	• The project superintendent is responsible for reporting to Council where actions specified in this VMP are not undertaken and/or compromised. • The project superintendent is responsible for commissioning all consultants necessary for implementing this VMP (i.e. clearing contractors, arborist, wildlife spotter catchers etc.). • A licenced Wildlife Spotter Catcher is responsible for all fauna capture/dispersal works. • The owner/project superintendent is responsible for the implementation of this VMP.
Corrective Action	• If vegetation not identified for removal is disturbed during clearing or building works, the need for supplementary rehabilitation works is to be negotiated between the project superintendent and City of Gold Coast. • If retained trees show signs of ill health (i.e. poor or dead), likely causes are to be determined, methods of mitigating such effects are to be identified in consultation with a suitably qualified Arborist and Council officers, and mitigation measures to improve growth conditions are to be put in place. • All works required at the interface of the 'vegetation retention zone' and earthworks where any encroachment is necessary into the drip zone of a retained tree shall incorporate preventative and remedial actions according to the Australian Standard AS 4970 Protection of Trees on development sites. These include: ○ Arborist must be present on site during tree civil earthworks at the interface of retained vegetation. ○ The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. ○ Where roots within the TPZ are exposed by excavation, temporary root protection should be installed to prevent them drying out. This may include mulch, jute mesh or hessian sheeting as multiple layers over exposed roots excavated soil profiles,

	extending to the full depth of the root zone. Root protection sheeting should be pegged in place and kept moist during the period that the root zone exposed. ○ Of the grade it to be raised the material should be coarser or more porous than the underlying material. Depth and compaction should be minimised. ○ Where the project arborist identifies roots to be pruned within or at the outer edge of the TPZ, they should be pruned with a final cut to undamaged wood. Pruning cuts should be made with sharp tools such as secateurs, pruners, handsaws or chainsaws. Pruning wounds should not be treated with dressings or paints. It is not acceptable for roots within the TPZ to be 'pruned' with machinery such as backhoes or excavators. ○ If root zones are overlapping the opinion of the suitably qualified Arborist shall be sought regarding as to what remedial action is required. • Where a tree shows signs of any loss in structural integrity or a potentially unsafe condition, then in the opinion of a suitably qualified Arborist and Council officers the tree shall be either stabilised or removed to avoid any future danger/risk. • Where sediment and erosion control structures fail, likely causes are to be identified and additional measures installed.
--	--