









LEGEND - Landscape Management & Protection Sheets 131 - 147

-  EXTENT OF WORKS
Refer Civil Engineers Plans
-  TREE / VEGETATION TO BE RETAINED
-  TREE TO BE REMOVED
-  VEGETATION NOT SURVEYED TO BE REMOVED
Location determined using aerial imagery
-  AREA OF IMPACT OF CIVIL WORKS
Refer EIS
-  TREE PROTECTION ZONE (TPZ) OF REGISTERED TREE
Canopy dripline plus 2m
-  1800 HIGH TEMPORARY PROTECTIVE FENCING
Chain link mesh panels to be maintained for duration of site construction works
-  PROPOSED WORKS
Refer civil and landscape plans

Landscape Management & Protection Notes

1. GENERAL
 - 1.1. These notes must be read in conjunction with the requirements outlined in *TCCS Reference Document 04 – Landscape Management and Protection Plans*.
 - 1.2. It is the responsibility of the developer to ensure that all territory assets are protected from damage.
 - 1.3. No works other than those identified on the approved LMPP are to take place within the Tree Protection Zone (TPZ) of an existing tree. No construction activities such as storage, parking, stockpiling, site sheds, construction access, washdown, excavation, etc. are accepted without approval.
 - 1.4. Prior to construction all protection measures indicated on the approved LMPP **MUST** be implemented. The project team must notify TCCS Urban Treescapes in writing once the protection measures have been installed (via TCCS_CPUTDDCoord@act.gov.au).
2. SITE ACCESS – Also refer to vehicle access within the Tree Protection Zone. *This section of notes is applicable for all developments.*
 - 2.1. Site access must be strictly through the access points identified on this plan. Access through unleased land that is not identified on the approved LMPP is **STRICTLY PROHIBITED**.
3. STORAGE OF MATERIALS

This section of notes is applicable for all developments.

 - 3.1. The storage of construction materials and the parking of vehicles or equipment on verges or adjacent public open spaces is not permitted without prior approval from TCCS.
 - 3.1.1. Only storage and parking locations on unleased land identified on this LMPP are approved.
4. SITE ACCOMMODATION

This section of notes is applicable for all developments.

 - 4.1. Site sheds, site amenities, storage sheds, skips, billboards, or containers are **STRICTLY PROHIBITED** from being placed on unleased land unless identified on the approved LMPP, and Public Unleased Land Permit.
 - 4.1.1. Only site amenities on unleased land identified on this LMPP are approved.
5. FENCING

This section is applicable for all development sites adjacent to unleased land. Protection fencing must be identified on the LMPP to protect territory assets adjacent to the development site.

 - 5.1. Protection Fencing
 - 5.1.1. Fencing must be erected **BEFORE** commencement of any construction activities on site, this includes but is not limited to starting of demolition works, delivery of machinery or materials, stockpiling, storage, etc.
 - 5.1.2. Fencing must be erected in the location, alignments and material indicated on the approved LMPP and must stop access throughout construction.
 - 5.1.3. Fencing must remain in place for the entirety of the project duration, and maintained in good, safe working order until Operational Acceptance (OA) is granted. Removal before OA is granted must be approved by TCCS in writing.
 - 5.1.4. Fencing must be 1800mm rigid mesh temporary fence panels supported by steel posts and concrete bases. Support posts driven into the ground are **STRICTLY PROHIBITED**.
 - 5.1.5. All connecting fixtures/hardware must be securely mounted so fencing cannot be dismantled and removed by the public.
 - 5.1.6. The use of alternative fencing materials must be discussed with, and approved by, TCCS.
 - 5.1.7. Fencing must be setback from footpaths and civil infrastructure as per *TCCS Reference Document 04 – Landscape Management and Protection Plans* requirements, unless otherwise noted on the approved LMPP.
6. CANOPY PROTECTION

This section of notes is applicable where the existing canopy of a tree on unleased land is likely to be impacted by construction works. The following canopy protection requirements are mandatory.

 - 6.1. The developer is responsible to prevent damage to tree canopies and protect all existing tree canopies from construction activities.
 - 6.2. Pruning of existing canopies is **STRICTLY PROHIBITED** unless identified on the approved LMPP.
 - 6.3. Where additional canopy impacts to the approved LMPP are identified, the following requirements are mandatory:
 - 6.3.1. Identify any pruning requirements by notionally indicating on a photograph where the limbs may need to be pruned or tied back and submit this to TCCS Urban Treescapes.
 - 6.3.2. Where directed by TCCS, a suitably qualified arborist with a minimum Certificate 5 qualification must be engaged to identify the canopy impacts and propose the preferred tie back of limbs or extent of pruning required.
 - 6.3.3. Where root pruning is identified, refer to tree root protection of these notes.
 - 6.4. Branch pruning of trees on unleased land. *This section of notes is applicable wherever pruning is required to trees on unleased land. All pruning activities MUST be indicated on the approved LMPP.*
 - 6.4.1. All pruning and tying of branches must be undertaken by suitably qualified arborists with a minimum Certificate 3 qualification, and as per best practices as defined in AS 4373.
 - 6.4.2. Where practical branches should be tied back, clear of the work, and pruning should only be used as last resort.
7. TRUNK/BRANCH PROTECTION

This section is applicable where work is required within the Tree Protection Zone (TPZ) of an existing tree. Trunk protection MUST be installed when work is required within the TPZ of a tree.

 - 7.1. Protection battens must be put in place before commencing the Works and maintained in good condition throughout the work period. Protection battens can only be removed at the completion of the Works.
 - 7.2. Trunk protection (as per current AS 4970 requirements)
 - 7.2.1. Loosely wrap the trunk requiring protection in a thick layer of hessian.
 - 7.2.2. Use minimum 2m lengths of timber for the trunk protection and install at base of trunk for full circumference of tree. Space battens so gaps between battens are no greater than 20mm. Battens must be untreated timber, free of nails, screws or bolts.
 - 7.2.3. Lash battens to tree using straps, rope or hessian webbing ensuring the battens are secure against the tree, but not too tight on the trunk. Battens must be lashed at the top, bottom and middle as a minimum.
 - 7.3. Branch protection (as per current AS 4970 requirements)
 - 7.3.1. Where low hanging branches greater than 100mm in diameter will be damaged by the Works, they will require additional protection.
 - 7.3.2. Loosely wrap the branches requiring protection in a thick layer of hessian.
 - 7.3.3. Use timber cut to length to suit the branch requiring protection and install to full circumference of branch. Space battens so gaps between battens are no greater than 20mm. Battens must be untreated timber, free of nails, screws or bolts.
 - 7.3.4. Lash battens to tree using straps, rope or hessian webbing ensuring the battens are secure against the tree, but not too tight on the trunk. Battens must be lashed at the top, bottom and middle as a minimum.
8. DEMOLITION WITHIN THE TREE PROTECTION ZONE – Also refer to canopy protection, trunk/branch protection and Root protection notes

This section of notes is applicable where existing infrastructure is required to be demolished within the Tree Protection Zone (TPZ) of an existing tree.

 - 8.1. Any demolition work within TPZ areas, that is not indicated on the endorsed plan, is not approved by TCCS Urban Treescapes.
 - 8.2. If demolition works additional to the approval are required, an updated LMPP must be provided to TCCS for re-endorsement before commencing the Works.
 - 8.3. Demolition of old pavement within TPZ
 - 8.3.1. Where an existing driveway is to be used for construction access, and is proposed to be replaced, all construction work is to be completed prior to removal of the driveway. This is to ensure the tree roots do not dry out before work is completed.
 - 8.3.2. To minimise root damage, the removal of the existing pavement shall be carefully done in small, staged sections and only to the depth of the existing constructed pavement profile (surface layer and base layer), so as to not cause damage to tree roots.
 - 8.3.3. No vehicles or machinery are allowed within the TPZ, and vehicles and machinery must always stay outside of this zone during the removal of the old pavement material.
9. EXCAVATION WITHIN THE TREE PROTECTION ZONE – Also refer to demolition within the Tree Protection Zone and tree root protection

This section of notes is applicable where excavation within the Tree Protection Zone (TPZ) of a tree on unleased land is approved by TCCS. All excavations within the TPZ must be shown on the LMPP, otherwise if excavation is not shown on the LMPP the impact on the trees caused by the excavation is considered unapproved.

 - 9.1. The term 'Excavation' in relation to this section means any earthworks greater than 50mm in depth from the existing surface level, including trenching for services.
 - 9.2. Only the excavations identified on this LMPP are approved within the TPZ.
 - 9.3. Excavation within the Structural Root Zone (SRZ) of a tree as outlined in AS 4970, is **STRICTLY PROHIBITED**.
 - 9.4. Excavation within the TPZ must be executed using either under-boring, hydro-excavation or hand digging techniques, unless an alternative method has been documented and endorsed by TCCS Urban Treescapes.
 - 9.5. Where identified by TCCS Urban Treescapes, excavation to expose roots may be required to be undertaken by low-pressure hydro-excavation using a fan shaped nozzle head that is kept 150mm from soil profile.
 - 9.6. A suitably qualified arborist must be present when excavations through the TPZ of a tree are being executed.
 - 9.7. No roots greater than 30mm in diameter are to be cut, refer to tree root protection of these notes.
 - 9.8. If additional excavation within the TPZ is identified to be required through the construction period, the developer/contractor must seek approval for this excavation from TCCS **BEFORE** starting the Works.
10. TREE ROOT PROTECTION – Also refer to demolition within the Tree Protection Zone and excavation within the Tree Protection Zone

This section is applicable where existing tree roots are found in excavation locations.

 - 10.1. Most tree roots are found within the top 300 mm depth of soil.
 - 10.2. Maintain the good health of the trees that have had disturbance in their root zone by continual watering. At no time shall the disturbed area be allowed to dry out to the detriment of the tree health.
 - 10.3. Where root damage has been caused, the developer must seek advice from an arborist about measures to minimise the impact of the damage on the tree health (i.e. additional watering, fertilising, etc.).
 - 10.4. All exposed roots must be backfilled/covered with soil immediately.
 - 10.4.1. Backfill around tree roots must be in accordance with AS 4970 to match finished levels. Where site soil is unable to be re-used, soil meeting MITS 09A Topsoil soil requirements must be used unless otherwise approved.
 - 10.4.2. Where roots cannot be covered immediately the roots must be protected from desiccation by lightly watering or covering with hessian which must be kept moist.
 - 10.4.3. Where proposed works come in contact with tree roots, a layer of geotextile fabric must be placed over the roots and underneath any new pavement or infrastructure (driveways and footpaths for example).
 - 10.5. Root pruning
 - 10.5.1. Cutting of roots should be the last resort and only undertaken if no other option is available.
 - 10.5.2. Roots greater than 30mm in diameter must not be cut. If roots greater than 30mm in diameter are required to be cut, approval from TCCS Urban Treescapes must be sought before cutting.
 - 10.5.3. All roots shall be cut with suitable professional equipment and by suitably qualified arborists with a minimum Certificate 3 qualification.
 - 10.5.4. Any roots that are required to be removed must be cut cleanly with clean and sharp arborist onsite. Tree roots are not to be ripped, torn, or pulled away from the root mass.
11. VEHICLE ACCESS WITHIN THE TREE PROTECTION ZONE

This section of notes is applicable where any vehicle movement is required through the Tree Protection Zone (TPZ) of an existing tree. All access through the TPZ of an existing tree must be indicated on the approved LMPP.

 - 11.1. Vehicle access through the TPZ of an existing tree is **STRICTLY PROHIBITED** unless indicated and approved on the project LMPP.
 - 11.2. Vehicle access within the structural roots zone (refer to current AS 4970) is **STRICTLY PROHIBITED**.
 - 11.3. Vehicle access through a low hanging canopy (less than 3.5m clearance from existing ground to the lowest major limb) is **STRICTLY PROHIBITED**.
 - 11.4. Clearly mark out the approved access route onsite so vehicles do not deviate from the approved route.
 - 11.5. Access route stabilisation within the TPZ
 - 11.5.1. Place a minimum 200mm layer of organic 25mm wood chip mulch on the area of the TPZ the vehicle route passes through. The mulch layer is to be maintained at this thickness under vehicle routes as long as access is required.
 - 11.5.2. Place a protective board (Rumble board) over the mulch ensuring each board is securely connected to the next board (as required) with gaps no greater than 30mm between boards.
 - 11.5.3. Boards must be kept in place and in good condition for as long as access is requirements.
 - 11.5.4. Alternative stabilisation methodology for an access route, such as to enable access for heavy vehicles, must be based on a design by a suitably qualified designer and must be approved for use by TCCS.
 - 11.6. Where vehicles are likely to conflict with branches, branch protection must be implemented. Refer to canopy protection and trunk/branch protection for limb protection requirements.
 - 11.7. If pruning of a tree is required to facilitate access, refer to canopy protection for pruning requirements.
 - 11.8. Vehicle access through the TPZ of an existing tree must not be closer than 3m to the trunk of the tree (unless otherwise agreed with TCCS).
12. RECTIFICATION OF UNLEASED LAND

This section of notes is applicable to all developments.

 - 12.1. At the finalisation of the development works, the territory assets in unleased land adjacent to the development must be unaltered and in the same or better condition than before the development works commenced, unless adjustments to these assets have been approved by TCCS.
 - 12.2. Where territory assets on unleased land have been damaged by the development, these assets must be fully rectified at the cost of the developer to the requirements in the TCCS Municipal Infrastructure Technical Specifications, or the requirements in the Composite Verge Landscape Plan, as approved by TCCS.
13. SITE SPECIFIC PROTECTION MEASURES

This section is where the proponent or TCCS can insert additional site-specific protection requirements to the above.

NOT FOR CONSTRUCTION