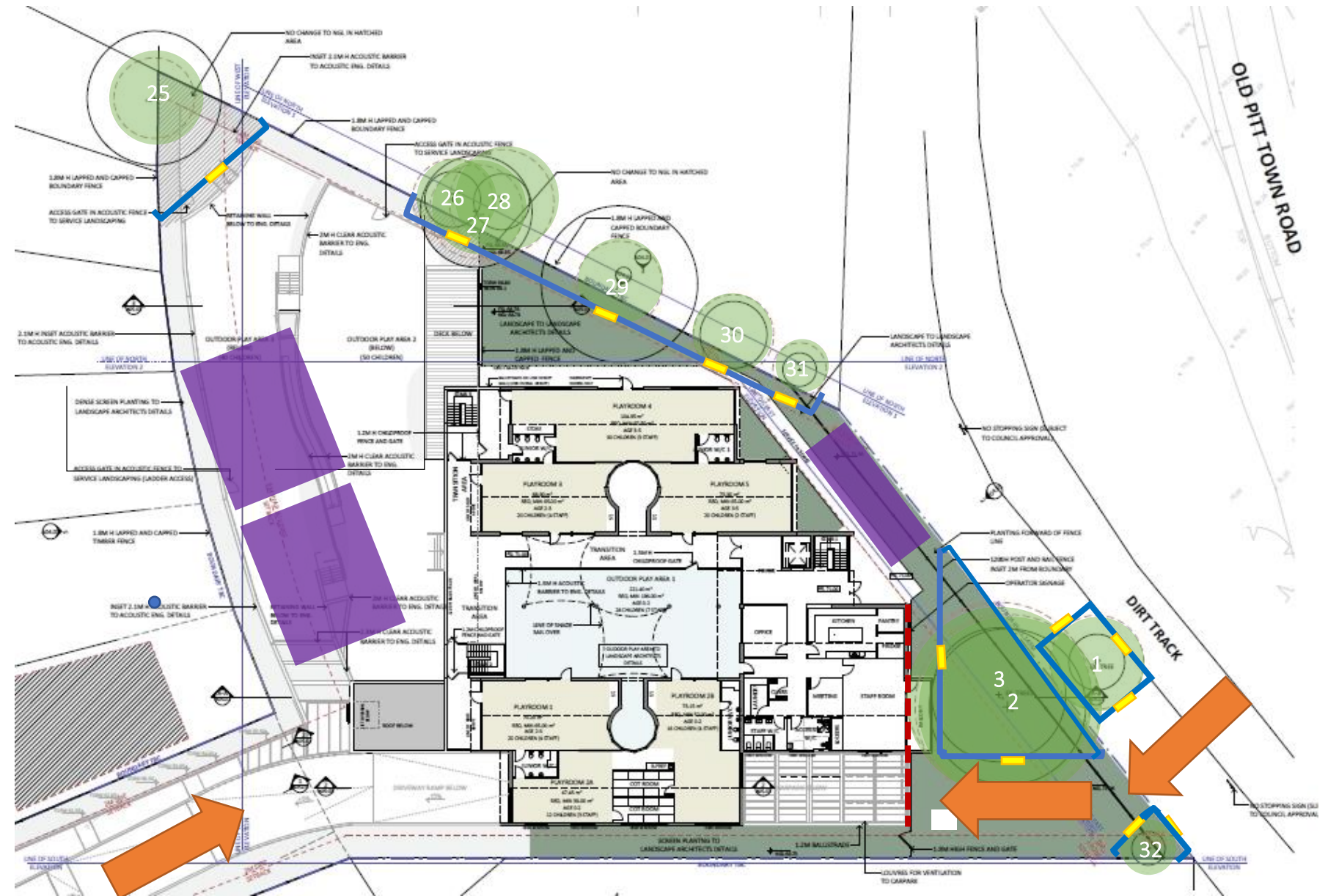


LEGEND
(TO BE READ IN CONJUNCTION WITH SHEET 2)

- TREE PROTECTION ZONE
- STRUCTURAL ROOT ZONE
- TREE REMOVAL (SPEC. 5)
- TPZ INCURSION
- PROTECTIVE FENCING (SPEC. 1)
- TPZ SIGNAGE (SPEC. 3)
- TEMPORARY STORAGE (SPEC. 10)
- SITE ENTRY (SPEC 10)
- ARBORIST SUPERVISION (EXCAVATION) (SPEC 9)



HOLD POINTS

PROJECT ARBORIST MUST PROVIDE COMPLIANCE FOR THE FOLLOWING STAGES;

- COMPLY TREE PROTECTION FENCING, MULCH AND SIGNAGE
- COMPLY THE RE-ALIGNMENT OF FENCING WHEN AND IF REQUIRED.
- MID CONSTRUCTION INSPECTIONS X 2
- FINAL COMPLIANCE REPORT PRIOR TO OC.

RETAINED TREE SCHEDULE

| # | COMMON NAME | TPZ (m) (radius) | SRZ (m) (radius) |
|----|----------------|---------------------|---------------------|
| 1 | IRONBARK | 4.2 | 2.25 |
| 2 | IRONBARK | 8.28 | 2.87 |
| 3 | FOREST RED GUM | 8.4 | 3.09 |
| 25 | IRONBARK | 4.2 | 2.37 |
| 26 | BLACK PINE | 3.6 | 2.13 |
| 27 | BLACK PINE | 4.2 | 2.2 |
| 28 | BLACK PINE | 4.68 | 2.37 |
| 29 | BRUSHBOX | 3.84 | 2.37 |
| 30 | CEDAR | 3.6 | 2.25 |
| 31 | PEPPERCORN | 2.4 | 2.0 |
| 32 | PAPERBARK | 2.52 | 1.91 |

NOTES

THIS TREE PROTECTION PLAN (TPP) MUST BE READ IN CONJUNCTION WITH THE TPP SPECIFICATIONS (TPP -SAD 0721 SHEET 2 OF 2) AND DA CONDITIONS. THE ARBORIST HAS RELIED ON INFORMATION SUPPLIED BY CLIENT AND OTHER CONSULTANTS, AND CANNOT VERIFY THAT ALL INFORMATION IS TRUE AND CORRECT SCALING OF PLAN CANNOT ALWAYS BE RELIED UPON; THEREFORE, SITE MEASUREMENTS ARE ALWAYS ENDORSED. WHERE CONSTRUCTION DEVIATES FROM PLANS, THESE TREE PROTECTION MEASURES MUST BE RE-ASSESSED PRIOR TO ANY WORKS TAKING PLACE.

TREE PROTECTION PLAN (TPP) SPECIFICATIONS (AS4970/2009)

SITE: 161 OLD PITT TOWN ROAD, BOX HILL

This document will stipulate tree protection measures with respect to tree management, in accordance with AS 4970-2009 for the above site. It provides practical guidelines /specifications for the trees retention to minimise any adverse impacts, as well as outline the scope of Arborist supervision and compliance for this project. This TPP also reference AS 4373-2007.

Site induction must be arranged by the site manager, and the Project Arborist must introduce this TPP to tree removal/practising arborist and builder/ Manager. Induction shall be signed by all contractors and records of this to be kept onsite , with the Project Arborist and PCA.

PROJECT ARBORIST CERTIFICATION POINTS

To ensure that contractors are following the guidelines stipulated in this TPP, the Arborist mandates that a Project Arborist (AQF Level 5) be instated as part of this Hold Points or Compliance Stages, will be stipulated on each Drawing in red, and must be adhered to.

1. TREE PROTECTION FENCING

Tree protection fencing must be of chain link wire and no less than 1.8 metres high and anchored down with concrete blocks/stirrups in a non-intrusive manner.

Tree protection fencing must be covered with shade cloth tightly woven to not allow cement debris/dust to contact any lower tree parts. See Figure 1 and 2. (Indicative only). Grounds within the tree protection fencing must contain mulch cover with a min 150mm thick layer atop tightly woven cover of Geotech fabric. Mulch to comprise material that complies with AS-4454-2003.

Fencing can be individual (Figure 1) or continuous (Figure 2).

2. TRUNK PROTECTION

Where specified, trunk protection must be as follows; wrap the circumference of the trunk with hessian or foam from ground to a min. height of 1.8 metres.

The hessian shall be overlaid with vertical timber battens covered (50mm x 100mm profile), from ground level or near to at least 1.8metres high.

Battens shall be spaced out with intervals not exceeding 100mm and be fixed in a non-intrusive manner, ideally strapped with hoop iron. Battens to be signposted. See Figure 3.

3. TPZ SIGNAGE

TPZ sign must be weatherproof and visible to contractors, and in accordance with AS4970-2009. Signage to read 'TREE PROTECTION ZONE': Entry not permitted without Project Arborist consultation. Sign must be A3 min. size and include Project Arborist details. See Figure 4.

4. GROUND PROTECTION

Where specified, rumble boards shall be installed to minimise soil compaction and consequential root damage , within the northern side setback and the front setback, in lieu of restrictive protection fencing, in accordance with AS4970/2009..

Rumble boards must be rigid and may consist of long timber beams minimum 90mm x 200mm or the like,



Figure 1: Tree Protection Fencing



Figure 2: Continuous fencing



Figure 3: Trunk protection



Figure 4: TPZ Signage

tightly fixed with metal straps allowing for small voids not exceeding 30mm.

Ply boards can be fixed where necessary to create a platform. The platform must be installed over layer of mulch min. 150mm and to comprise material that complies with AS-4454-2003. See Figure 5 (indicative only) .

Spreader plates can also be used. (Figure 6)

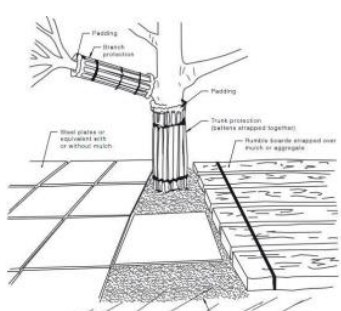


Figure 5: Rumble Boards (AS4970/2009)

5. TREE REMOVAL & PRUNING

Trees approved for removal must be flagged with red (X) denoting removal.

The removal of approved trees must be carried out by a suitably qualified practicing arborist with a min Cert 3 in Arboriculture. Trees are to be dismantled with rope access method and all tree parts carefully lowered into a drop zone and not damage retention trees. Trees to be removed in accordance with *Workover NSW – Amenity Tree Industry Code of Practice 1998*.

Stump grinding must be contained to the rootball only. Root chasing is not to occur.

The TPP will provide a Pruning Specification, where require *AS4373- 2007 Pruning of Amenity Trees*, and by a suitably qualified arborist, min AQF level 3.

Chipper trucks, EWPs etc. must station outside the TPZ of any retained trees.



Figure 6: Spreader plates

6. TPZ IDENTIFIED AND GROUND TREATMENT

The TPZ and the SRZ are to be defined (within the clients site only) on the ground with spray paint and confirmed by the Project Arborist. This is not valid for street trees. The porous grounds within the TPZ radius must be drenched with a soluble fertiliser, ideally Seosol, including crevices and control joints of the hardstand within the TPZ of trees, 4 weeks prior to any works commencing to encourage feeder root growth. Ground covers in the TPZ must be moved down to soil and covered with Geotech material , in prep for mulch cover.

7. DEMOLITION

Hand demolition of structures or hardstands in the TPZ of trees will be stipulated. Hand demolition uses small hand tools/picks etc. with no machinery permitted , and under the supervision of the Project Arborist.

Mechanical excavation can proceed at the Arborists discretion only.

Direction for demolition works ,to be pulled away from TPZ of trees, will be stipulated.

Access for demolition machinery is specified.

8. EXISTING NATURAL GROUND LEVELS (NGL)

The TPP will stipulate where no grade reduction or fill is to occur within specified radius of each tree. Where fill is required, this must be strictly Structural Soil®

9. EXCAVATION within the TPZ

This TPP will stipulate methods of excavation for each project.

Excavation within TPZ of trees must implement hand digging tools and /or hydro-excavation.

Roots encountered within the trenches that exceed 50mm diameter are deemed significant and must not be severed, but rather bridged over by way of suspended spans found on isolated piers.

Pier design must be flexible, and engineered to allow for their offset of piers, albeit marginal (min. 100mm), should pier holes reveal significant roots .

Piers are to be hand dug and engineered accordingly.

Piers holes must be lined internally , with Geotech fabric, before concrete pour.

Heavy duty builders plastic shall be placed atop the rumble boards prior to wall construction , so as to encapsulate cement dags

All excavation in the TPZ must be supervised and complied by the Project Arborist..

10. TEMPORARY MATERIALS STORAGE & SITE ENTRY

The following activities are excluded in the TPZ of trees; machine excavation (inc. trenching), storage/stockpiling of materials, parking of vehicles or plant, waste storage or dumping, construction waste wash-off, fill and other soil level changes temporary or permanent installation of utilities and signage.

Site Entry will be designated accordingly, with all attempts to avoid TPZs of trees.

11. CONSTRUCTION/STRUCTURES IN THE TPZ OF TREES

The Arborist advocates for a min. 3m distance from any structure to retained trees. This ensures adequate room for future growth, and in the case of well-established trees, will ensure trees are not removed based on physical distance exemptions from Council.

Where required the TPP will stipulate construction in the TPZ of trees is to be above grade, comprised of pier and above grade beam, and supported with pier footings.

The ground level (at underside of suspended slab) must be mowed down and covered with woven, heavy duty, Geotech fabric, prior to form works any concrete being poured. The fabric should extend outside the building footprint by up to 1.5m.

Where scaffolding is required, this must also be underlain with rumble boards.

Scaffolding should be shade clothed to collect any debris or dust and minimise canopy harm .

12. LANDSCAPE

No grade modifications to occur for landscaping where specified.

Any fence post holes, including Colorbond fencing, within the TPZ, must be hand dug under supervision of the Project Arborist.

Boundary masonry walls must be found on discontinues footings i.e. pier on above - grade beams. Beams can be as simple as steel lintels to create elevated spans.

Pier holes shall be hand dug under direct supervision of the Arborist.

Should roots be encountered within the pier holes, an off-set of the pier is require.

Any retaining walls within the TPZ trees must be constructed on small shallow discontinued pads or elevated spans supported with piers footing. Pier holes must be laced with tightly woven geofabric to act as an interface barrier between the soil and concrete.

Builders plastic cover must supplement the fence to ensure no cement dags splash the canopies

13. STORMWATER & BACKFILLING

Excavation for the stormwater must implement hand digging methods backfilling for stormwater pipes pits etc must reinstate the soil horizons and maintain soil profile to avoid perched water tables and cause undue harm to roots. This must be under supervision of the Project Arborist, and if roots are found, the pipe may slightly deviate accordingly.

Drainage pipes could be under bored, should site topography and RL allow.

Pipe cuts shall be sawn outside the TPZ of trees.

Preparing pipe connections with glues, chemicals etc., in the TPZ of trees, shall be underlain with impervious ground cover so no spillage contaminates native soils

14.. POST DEVELOPMENT CARE

Post development care of trees is recommended for a period of twelve (12) months, with quarterly inspections by the Project Arborist.

Such inspections will entail the Arborist checking health, condition, soil pH levels, soil drainage and moisture levels, canopy conflict/damage and general check on growing environment conditions. Any remedial works will be endorsed by the Arborist and will be in accordance with AS4970/2009 and AS4373/2007.