

POLICY REGISTER

TITLE: TREE MANAGEMENT POLICY (INTERIM POLICY)

STRATEGIC PLAN: NATURAL ENVIRONMENT

DIVISION: ENVIRONMENTAL AND COMMUNITY MANAGEMENT

POLICY:

1. That the Draft Interim Tree Management Policy be adopted.
2. That the update regarding the Draft Development Control Plan (DCP) – Tree Management be received and noted.
3. That a report be prepared on the options for:
 - a) Implementing ongoing monitoring by Council of very large trees on private property to assess the level of risk of such trees adversely impacting on public safety,
 - b) Council providing assistance to low income residents where Council assesses that pruning or removal is appropriate in respect of very large trees on the resident's property.
 - c) Options for including provisions relating to existing and proposed tree species and their location in relation to buildings and structures in order to avoid damage from the trees.

RESOLUTION: Minute No. C84/13 of Ordinary Meeting 26 March 2013

**DRAFT INTERIM TREE MANAGEMENT POLICY
LEICHHARDT COUNCIL**

DECEMBER 2012

Interim Tree Management Policy

This Policy outlines matters that Council will have regard to when assessing:

- Complying Work Tree Applications
- Tree Preservation Order Applications
- Development Applications which include or require works to be undertaken to Trees.

This Policy is designed to supplement the requirements of the Leichhardt Tree Preservation Order, and does not replace the requirement to adhere to the content of that document. This Policy should be read in conjunction with the following documents:

- *Leichhardt Tree Preservation Order*
- Leichhardt Urban Forest Policy
- Leichhardt Climate Change Adaptation Strategy
- Leichhardt Environmental Sustainability Strategy 2010-2014
- Leichhardt 2020+
- Australian Standard AS 4373-2007 Pruning of amenity trees
- Australian Standard AS 4970-2009 Protection of trees on development sites
- *Trees (Disputes Between Neighbours) Act 2006*

Key definitions

Australian Qualification Framework (AQF) – a quality assured national framework for education and training. This system provides nationally recognised and endorsed qualifications through a competency based training system.

Crown – the portion of the *Tree* consisting of branches and leaves and any part of the *Stem* from which branches arise.

Dead Tree – A *Tree* That is incapable of photosynthesis, that has no remaining living foliage or vascular tissue.

Protected Tree – Any *Tree* having a height of four(4) metres or greater and a trunk diameter (measured at one (1) metre from the ground level) of 200 millimetres or greater, growing on privately owned excluding any *Tree* that is listed as an ‘Exempt Species’.

Significant Tree means any ‘tree’ that is either, listed as a Heritage Item, located within a property that is listed as a Heritage Item or listed on Council’s Significant Tree Register or located within a Heritage Conservation Area.

Stem – the part of the *Tree* which supports branches, leaves, flowers and fruit and is also referred to as “the trunk”.

Structural Root Zone (SRZ) – The portion of the root plate comprised primarily of structural woody roots (integral with the soil profile) providing the main mechanical support and anchorage of a *Tree*. See AS 4970:2009 *Protection of trees on development sites* for guidance on calculating an SRZ.

Tree – A perennial plant having a single stem or relatively few woody stems, including palm trees and ferns, whether exotic (introduced) native or locally-indigenous species.

Tree of Landscape Significance – A *Tree* that rates as 1, 2 or 3 when assessed against the framework in Table 3 of Appendix F to this Policy.

Tree Protection Zone (TPZ) – a specified area above and below ground and is a radial distance from the centre of the stem set aside for the protection of a *Tree*’s roots and crown to provide for the viability and stability of the tree. See AS 4970:2009 *Protection of trees on development sites* for guidance on calculating a TPZ.

Urban forest – The conglomerate of *Trees* growing within urban areas on public and privately owned lands, including those growing within parks, reserves, streets and institutional land

Policy guidelines

This Policy applies to all proposed *Tree Works* on privately owned land.

1. Approvals process

1.1 Exempt Work – (No notification or Application to Council required)

C1 A Tree Application or Development Consent **is not required** for the following:

- a. removal or pruning of non-prescribed trees or vegetation including those species that are identified as *Undesirable species* as follows:
 - *Bambusa spp.* (Bamboo) [all types]
 - *Eriobotrya japonica* (Japanese Loquat)
 - *Ficus elastica* (Rubber tree)
 - *Ligustrum sinense* (Small-leaf privet)
 - *Ligustrum lucidum* (Large leaf privet)
 - *Musa spp.* (Banana)
 - *Nerium oleander* (Oleander)
 - *Toxicodendron succadeneum* (Rhus tree/Japanese Wax)
 - *Morus nigra* (Mulberry)
 - *Syagrus romanzoffianum* [syn. *Arecastrum romanzoffianum*] (*Cocos Palm/ Queen Palm*)
 - *Schefflera spp.* (Umbrella Tree/Umbrella Plant)
 - *Persea americana* (Avocado Pearl Tree)
 - *Ailanthus spp.* (Tree of Heaven)
 - *Lagunaria patersonia* (Norfolk Island Hibiscus)
 - *Mangifera indica* (Mango Tree)
- b. pruning or removal of trees that are less than 4 metres in height and have a trunk diameter of less than 200 mm, when measured at a height of 1 metre from the ground.
- c. lopping, topping or removal of trees required to comply with a direction under the *Electricity Supply Act 1995*, or any other act of Parliament or complying with a direction from any Emergency Service including the State Emergency Service.
- d. removal of torn limbs or dead wood such as individual branches but does not include whole trees.
- e. pruning of less than 10% of the canopy or root system up to once every growing season and only of branches less than 100 mm in diameter.
- f. insertion of root barriers, when this will result in less than 10% of the root system being removed and up to once every growing season.

1.2 Complying Work Tree Application – (Notification to Council required)

C1 Canopy pruning of Trees can be carried out if the owner of the *Tree* lodges a Complying Work Tree Application with Council. The property owner can carry out the works from 3 days after the Application is lodged, in the following circumstances:

- a. if the *Tree* is growing on the applicants' property; and

- b. it is proposed to prune more than 10% but less than 25% of the canopy; and
- c. all pruning will comply with Australian Pruning Standards AS 4373-2007 *Pruning of amenity trees*; and
- d. the pruning will be undertaken by a suitably qualified person (minimum qualification AQF level 3 Arboriculture); and
- e. canopy pruning of the *Tree* has not been undertaken within the previous 12 months.

1.3 Tree Preservation Order Application – (Consent from Council required)

- C1 Owners of *Trees* are required to make a Tree Preservation Order Application to obtain Council consent to undertake works in the following circumstances;
- a. any works not listed in Sections 1.1 and 1.2 of this Policy including:
 - i. works to a *Protected Tree* (a *Protected Tree* is any *Tree* having a height of 4m or greater and a trunk diameter of 200mm or greater)
- C2 Council may only grant approval to remove any *Tree* to which this section applies if:
- a. the *Tree* does not make a significant contribution to the aims of the *Tree Preservation Order*;
 - b. the *Tree* is a threat to structures or persons which cannot be remedied by reasonable protective measures;
 - c. the *Tree* is located where approved development is to be located;
 - d. replacement planting can better achieve the aims of the *Tree Preservation Order* within a reasonable time.
- C3 In considering whether to grant approval to remove a *Tree* under section 1.3 C2 Council will consider whether the *Tree* is unsuitable for site conditions. A *Tree* may be deemed to be unsuitable for site conditions if any of the following has been demonstrated, by the Applicant, through the provision of a professional report as requested by Council (in accordance with Attachment A, Table 1):
- i. the *Tree* is located where the prevailing environmental conditions are unsuitable; or
 - ii. the *Tree* is in a state of irreversible decline or is *Dead*; or
 - iii. the *Tree* poses a threat to human life or property; or
 - iv. the *Tree* is causing significant damage to public infrastructure which cannot be remediated by any other reasonable and practical means; or
 - v. the replacement of damaged or failed sewer pipes or storm water lines cannot reasonably be undertaken with the retention of the *Tree*; or
 - vi. the *Tree* is not deemed to be a *Tree of Landscape Significance*.
- C4 In circumstances where there is doubt as to the extent of damage to a structure Council may require the owner of the *Tree* to submit, to Council, a report prepared by a Consulting Engineer in association with an accredited Consulting Arborist (Minimum AQF Level 5 Arboriculture) and in accordance with Attachment 1 Section 1 to:
- a. establish that the impact is, in fact, caused by the *Tree*
 - b. examine feasible alternatives for the remediation of the impacts without the removal of the *Tree*

Note: Unsubstantiated opinion is considered an unsatisfactory basis for assessment of a the health and viability of a Protected Tree.

- C5 In circumstances where there is doubt as to the extent of damage to sewer pipes or stormwater lines Council may require the owner of a *Tree* to submit to Council a report prepared by a Licensed Plumber in association with a qualified Consulting Arborist (Minimum AQF Level 5 Arboriculture) and in accordance with Attachment 1 Section 1 to:
- a. assess the extent of the damage, taking into account the location and extent of the blockage or damage, photographic evidence of extracted roots or damaged pipes; and
 - b. examine feasible alternatives to tree removal including replacement, encasing, cleaving or relocation of the pipeline to avoid further root incursion.

1.4 Development Applications

- C1 A Development Application is required in the following situations:
- a. for the removal of a *Tree* which is listed as a Heritage Item in the *Leichhardt Local Environmental Plan 2000*
 - b. where proposed works involve a major incursion (greater than 10 percent) into a *Tree Protection Zone (TPZ)* as described in *AS 4970:2009 Protection of trees on development sites (Refer to Attachment A Section 3)*;
 - c. any other works not listed in Sections 1.1 (Exempt Work), 1.2 (Complying Work Tree Application) or 1.3 (Tree Preservation Order Application).
- C2 Where a Development Application has been submitted to Council for:
- a. alterations or additions to an existing building; or
 - b. the construction of a new building or associated works

and where the proposed works may impact a *Tree* within its *Tree Protection Zone (TPZ)* a separate Development Application will not be required. The proposed works will be considered as part of the original Development Application and the potential for impacts on a *Tree/s* will be assessed using the methodologies outlined in Attachment A, Table 1.

- C3 Where assessment of the potential impacts of a *Tree/s* upon a property or person is to be undertaken as part of the assessment of a Development Application Council will take the following into consideration:
- a. the health and condition of the *Tree/s* by utilising a Visual Tree Assessment and Hazard Assessment as outlined in Attachment A, Table 1;
 - b. the landscape significance of the *Tree/s* as determined in accordance with Table 3 of Attachment F;
 - c. the contribution that the *Tree/s* makes to the aims of the *Tree Preservation Order*.
- C4 Where a *Tree/s* is identified, as part of the assessment of a Development Application, as being a priority for retention the impacts of the proposed development works will be assessed against the requirements of AS4970-2009 '*Protection of trees on development sites*'

1.5 Conditions of Consent

- C1 Council may include conditions in the Notice of Determination for *Tree Preservation Orders* or in a Development Consent as follows:
- a. *Trees* that are required to be retained in accordance with a Development Consent must be protected from potential damage caused by construction activities in accordance with *AS 4970:2009 Protection of trees on development sites*.
 - b. additional conditions may be imposed as a Condition of Consent where it is considered that a Development Approval may result in risk of damage or pruning in excess of that permitted under Sections 1.1 and 1.2.
 - c. works to *Trees* subject to a Development Consent may only be undertaken following the issue of a Construction Certificate in relation to the determination.

1.6 Management of trees and vegetation on adjoining properties

- C1 Neighbours are able to prune the branches of a *Tree* overhanging their property where that pruning will be consistent with the:
- a. Exempt Works provisions of the *Tree Preservation Order*; and
 - b. as outlined in Section 1.1 of this Interim Tree Management Policy.
- C2 Where a *Tree* on an adjacent property has resulted in or has the potential to cause damage to property or injury to people utilising the adjoining land the adjoining land owner can seek to have the *Trees* removed, pruned or lopped;
- a. by approaching the *Tree* owner and request that the works be undertaken by the *Tree* owner; or
 - b. under the provisions of the *Tree (Disputes between Neighbours) Act 2006*.

1.7 Tree Replacement

- C1 The requirement for *Tree* replacement will be at the discretion of Council and will be required to implement the aims of the *Tree Preservation Order*.
- C2 Pot size of any replacement *Tree* required, by Council, will be at the discretion of Council and will generally be based on the size of the *Tree* that has received approval to be removed.

1.8 Process for review of decisions

- a. In the event that an applicant is dissatisfied with Council's determination in relation to a *Tree Preservation Order* application, or wishes to supply additional evidence or information in support of the application, the applicant may seek a review of the decision by writing to Council.
- b. The request for the review of a Council determination in relation to a *Tree* must be lodged within six (6) months of the date of Council's determination.
- c. The request for a review of a Council determination in relation to a *Tree* must contain the following information:
 - a. any additional information not already provided in support of the application; and

- b. an assessment of the *Tree* from a qualified Consulting Arborist and/or a Consulting Engineer or other accredited expert as appropriate in support of the application, at the applicant's cost. This should include the results and explanation of any diagnostic testing included in the assessment, where appropriate. (refer to Attachment A Section 1 for requirements of professional reports.
- d. Further Appeal may be made to the Land and Environment Court of New South Wales.

Attachment A - Documentation requirements

1. General requirements

Reports prepared by professionals such as qualified Arborists (AQF Level 5 Arborist), Structural Engineers and Licensed Plumbers are to establish a direct link between the tree and the reported impacts. In general, Council will require that the methodologies outlined in Table 1 of this attachment be used to assess and demonstrate existing or potential impacts of a *Tree/s*. Any further investigations that may be required are to be non-invasive in accordance with AS 4970:2009 '*Protection of trees on development sites.*'

a. Arborist reports – Examples of information that may be required/provided in an Arborists Report:

- i. information relating to the health or structural condition of the tree that cannot be seen from a ground-based inspection i.e. the documentation and assessment of observations resulting from an aerial (climbing) inspection;
- ii. testing of the tree with equipment such as a Resistograph, Picus Sonic Tomograph, or Arboradix Pole Sensor. These instruments can provide information relating to the percentage of sound wood remaining in partially decayed trunks, branches or roots;
- iii. the results of a non-invasive root investigation providing root mapping as a result of hand excavation under the supervision of an Arborist or excavation using an Airspade or Airknife;
- iv. Tree Management Plans that might include tree pruning specifications in accordance with AS 4373-2007 Pruning of amenity trees. These plans often document proposed pruning as 'marked up images' for clarification in terms of proposed/approved pruning;
- v. calculations relating to Structural Root Zones (SRZ) and Tree Protection Zones (TPZ) in accordance with AS4970-2009 Protection of trees on development sites;
- vi. Tree Protection Plans relating to development sites;
- vii. information relating to site conditions and suitability to the requirements of the *tree/s*.

b. Structural Engineer's Reports

- i. Applicants may also be required to provide a report from a Structural Engineer where property damage is alleged to be caused by a *tree* and the link to the *tree* is not obvious to the Council Arborist.
- ii. It is important that these reports contain the results of on site investigation (usually this will require non-invasive excavation undertaken by an Arborist (AQF Level 5 Arborist), to limit damage to the tree). Where damage is attributed to *tree* roots there must be a direct link established between the *tree* and the damage.
- iii. unsubstantiated opinion is not an acceptable basis for recommendations relating to the removal of significant *trees*. The report must demonstrate that there is considerable damage to significant structures that cannot be mitigated or remedied by means other than removal of a significant tree.

c. Appropriate Assessment Methodologies

Demonstrated Situation	Methodology for demonstration
The <i>Tree</i> is located where the prevailing environmental conditions are unsuitable.	A Tree Assessment accompanied by a report prepared by an AQF Level 5 Arborist. The report is to demonstrate and substantiate that the <i>Tree</i> is unsuitable for the prevailing environmental conditions.
The <i>Tree</i> is in a state of irreversible decline or is <i>Dead</i>	Attachment B – Visual Tree Assessment
The <i>Tree</i> poses a threat to human life or property	Attachment D – Assessing the risk relating to an observed structural flaw (hazard) in a Tree. The Tree will be assessed using a similar methodology and utilising a form such as that contained at Attachment G
The <i>Tree</i> is causing significant damage to public infrastructure which cannot be remediated by any other reasonable and practical means	A professional site assessment will need to be undertaken by an AQF Level 5 Arboriculture qualified Arborist and/or a qualified Consulting Engineer as requested by Council. Documentation may be required as outlined in this Attachment (Attachment A)
The <i>Tree</i> is causing considerable damage to significant structures on private property which cannot be mitigated or remediated by any other reasonable and practical means	A professional site assessment will need to be undertaken by an AQF Level 5 Arboriculture qualified Arborist and/or a Structural Engineer as requested by Council. Documentation may be required as outlined in this Attachment (Attachment A)
The replacement of damaged or failed sewer pipes or storm water lines cannot be undertaken with the retention of the <i>Tree</i>	Attachment B – Visual Tree Assessment. An additional report from a Licensed Plumber may be requested by Council.
The <i>Tree</i> is deemed to be a <i>Tree of Landscape Significance</i>	Attachment F (Table 3) – Determination of Retention Priorities will be applied by Councils Landscape Assessment Officer. The Tree may be classified as a Tree of Landscape Significance if it is classified as 1, 2 or 3 according to the criteria in Table 3.

Table 1: Appropriate Assessment methodologies

2. Tree Preservation Order Applications documentation requirements

Where Council requests that an Arborist's Report be submitted in support of a *Tree Preservation Order* Application, the following will apply:

The following information is required in the preparation of arboricultural reports to accompany *Tree Preservation Order* Applications made under this Policy:

The report is to be prepared by a qualified Consulting Arborist (AQF Level 5 Arboriculture). The report must be set out as a professional report with appropriate references to any literature cited in accordance with the Harvard Style referencing system.

The report must include the following information:

- the name, qualifications and contact details of the author;
- the property address and a sketch plan showing the location of the subject trees within the property. Each tree should be numbered on the plan to correspond with the report;
- details of the scope of the report and the methodology used in the assessment, including the date that the assessment was undertaken;
- supporting evidence such as photographs, where appropriate;
- recommendations for remedial action in consideration of all available and practicable options.

Table 1 below outlines the methodologies which Council considers are appropriate to be used to demonstrate the conditions outlined in section 1.3 C2 and C3 relating to *Tree Preservation Order* applications. Alternative methodologies may be used where it can be demonstrated to Council that the methodology is appropriate and will be implemented by a qualified Consulting Arborist (minimum AQF Level 5 Arboriculture).

3. Development Applications

Where Council requests that an Arborist's Report be submitted in support of a Development Application, the following will apply:

- a. The Arboricultural Report or Development Impact Assessment accompanying a Development Application must be prepared by a qualified *Consulting Arborist (AQF Level 5)* and must include the following information:
 - i. the name, qualifications and contact details of the author and details of whom the report was prepared for;
 - ii. a plan showing the accurate location of all existing trees within the site and on adjoining sites that are located within 10 metres of the footprint of the proposed development works, based on a detail site survey prepared by a Registered Surveyor;
 - iii. all of the trees shall be numbered on the plan and an accurate representation of the canopy dripline plotted on the drawing to scale;
 - iv. Tree Protection Zones (TPZ's) and Structural Root Zones (SRZ's) for each tree shall be calculated in accordance with *AS 4970:2009 Protection of trees on development sites* and shown hatched on the drawing to scale;
 - v. a schedule of all existing Trees, including their correct botanical and common names, estimated height and canopy spread, trunk diameter measured at 1.4 metres from ground level;
 - vi. an estimate of the current age and remaining Safe Useful Life Expectancy (SULE) of each tree;
 - vii. an evaluation of the amenity, ecological and heritage significance of each tree and its Retention Value (refer to Attachment F);
 - viii. an assessment of the potential impact of the proposed development on existing trees, including an evaluation of any incursions to the TPZ, SRZ or canopy from both proposed permanent and temporary (scaffolding, hoardings etc) structures. The assessment must include all buildings and structures, underground services, earthworks and landscape works. Assessment of impacts shall use *AS 4970:2009 Protection of trees on development sites* as a point of reference;
 - ix. details of any required pruning of the canopy to accommodate the proposed development;
 - x. recommendations for design or construction methods to avoid adverse impact on existing trees considered to be worthy of preservation;
 - xi. recommendations for replacement planting where appropriate;
 - A Tree Protection Plan including:

- a scale plan showing the location of all existing and proposed structures in relation to the existing trees and the position of any temporary tree protection devices proposed. The plan should clearly show those trees proposed to be retained, those to be pruned, those to be removed and any proposed to be relocated (transplanted) as part of the proposed works. The plan should also indicate TPZ's and SRZ's; and
- where trees are recommended for removal, sound justification for the removal of such trees based on the above evaluation.

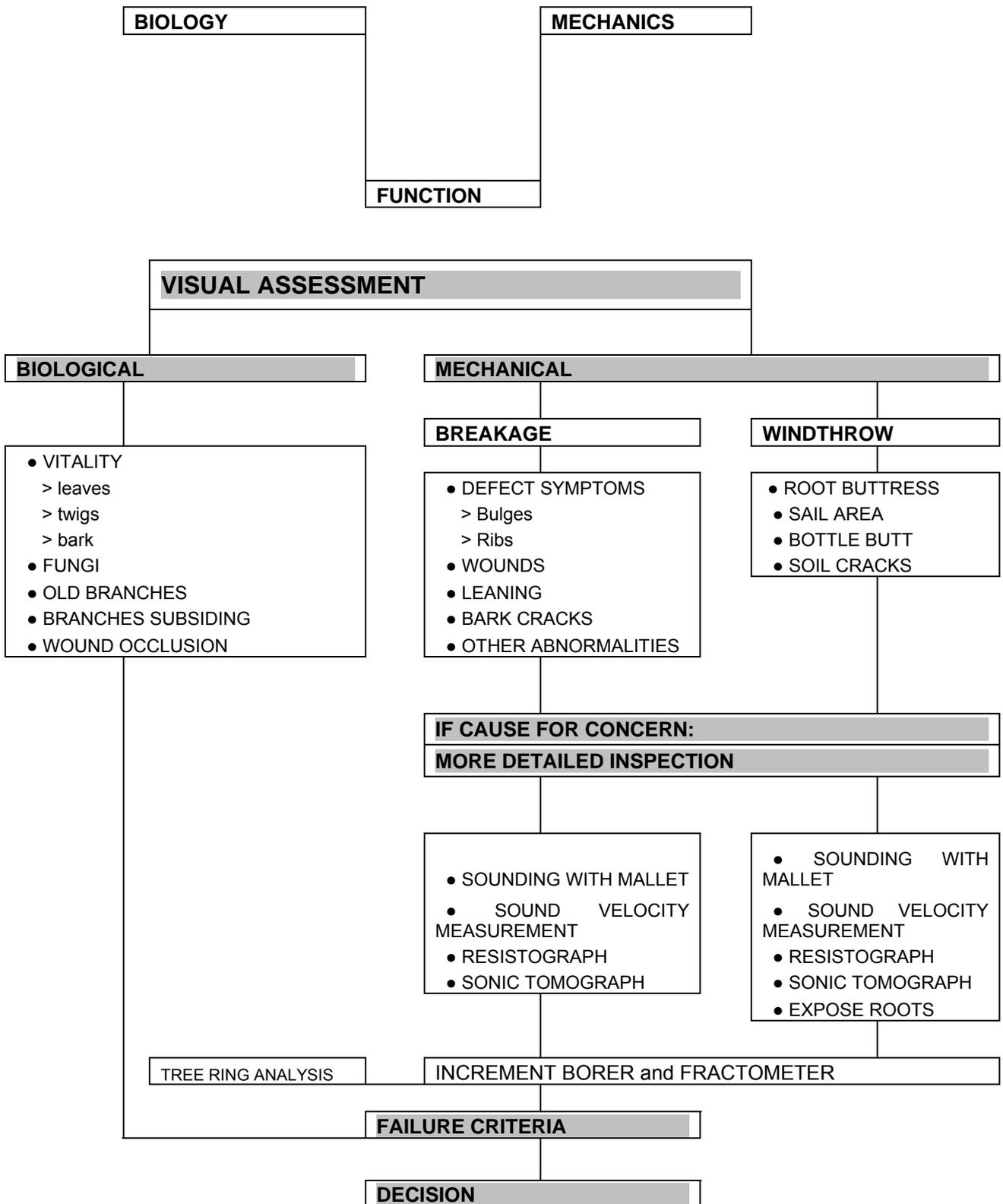
4. Requirements for proposed major incursions into a Tree's Tree Protection Zone (TPZ)

Where proposed Tree Works involve a major incursion into a Tree's Tree Protection Zone (TPZ) the following will apply:

Major incursions (greater than 10 percent as calculated in accordance with AS 4970:2009) to a *Tree's* TPZ will require more detailed investigations under the guidance of a Consulting Arborist (minimum AQF Level 5 Arboriculture). The project arborist must demonstrate that the tree/s would remain viable. This may require root investigation by non-destructive methods and with consideration of relevant factors in accordance with Clause 3.3.4 of AS 4970:2009. The results of the investigations are to be documented in the arboricultural report accompanying the Development Application, in addition to the requirements outlined in Section 2 of this Attachment:

- a. calculations of each subject *Tree's* TPZ and SRZ in accordance with AS 4970:2009 *Protection of trees on development sites* and shown hatched on a scale drawing;
- b. the extent of the proposed encroachment and area of the proposed investigations shall also be indicated on the scale drawing;
- c. details of the methodology used in the proposed investigations;
- d. details of the size, type, quantity, depth and orientation of the roots encountered and an assessment of the potential impact of root loss on the *Tree*; and
- e. any feasible options for retaining any substantial roots encountered (by amending design or construction methods) should be reviewed and discussed.

Attachment B – Visual Tree Assessment (VTA) procedure



Ref: Mattheck, Claus & Breloer, Helge (1994)

The Body Language of Trees - A handbook for failure analysis - Sixth impression (2001)

The Stationery Office, London, U.K.

Fig 120 page 196

Attachment C – Safe Useful Life Expectancy (SULE) procedure

* *Safe with an acceptable level of risk*

1	Estimate the age of the tree
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2	Establish the average life span of the species
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3	Determine whether the average life span needs to be modified due to local environmental situation
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4	Estimate remaining life expectancy
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Life Expectancy	=	average modified life span of species - age of tree
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5	Consider how health may affect safety (& longevity)
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6	Consider how tree structure may affect safety
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7	Consider how location will affect safety
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8	Determine safe life expectancy
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Safe Life Expectancy	=	life expectancy modified by health, structure and location
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9	Consider economics of management (cost vs benefit of retention)
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10	Consider adverse impacts on better trees
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11	Consider sustaining amenity - making space for new trees
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12	Determine SULE
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Safe Useful Life Expectancy	=	safe life expectancy modified by economics, effects on better trees and sustaining amenity
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Ref: Barrell, Jeremy (1996)
Pre-development Tree Assessment
 Proceedings of the International Conference on Trees and Building Sites (Chicago)
 International Society of arboriculture, Illinois, USA

Attachment D – Assessing the risk relating to an observed structural flaw (hazard) in a Tree

Arborist Qualifications:

Assessing arborists are to be suitably experienced with a minimum AQF Level 5 qualification if undertaking risk assessment of Trees in the municipality. The risk of the Tree impacting on property or people is to be assessed against the three questions outlined below, and demonstrated in an arboricultural report (in accordance with the requirements of Appendix A) of this report and using a suitable methodology such as the Quantified Tree Risk Assessment or another method that can be suitably demonstrated and supported in writing by the reporting arborist.

Hazard Assessment:

There are many methods available for assessing the risk relating to an observed structural flaw (hazard in a tree. For example:

Matheny and Clark (1994) have developed a rating system or model for quantifying the risks associated with trees in urban areas. This model takes into account three key factors, with each factor rated from 1 to 4 (i.e. a highest rating total of 12). The three key factors are:

- a. failure potential (extent and significance of defects present),
- b. size of defective part (e.g. small = less than 15cm diameter, large = greater than 75cm in diameter), and
- c. target rating (use and occupancy e.g. low = occasional use, high = constant use).

Norris (2007) states that essentially tree risk assessment requires inputs derived from the following:

- a. Is there a hazard or defect and how likely is it to fail?
- b. Is there a risk target?
- c. How much damage will the hazard cause if it impacts on the target?

Risk of tree failure will generally be assessed in relation to the probability of failure, the size of the part that may fail and the nature of the target.

Attachment E – Guidelines for tree replacement

The selection of the species of the new tree and its position within the site will generally be at the discretion of the applicant to determine. Residents are encouraged to seek professional horticultural advice when selecting and planting new trees. The following general guidelines are provided to assist in selecting the correct species and determining the most appropriate position for new trees to be planted.

When selecting species of trees for new planting, consideration should be given to:

- appropriateness of the species to the site soil conditions and depth and the available soil volume to support the tree;
- the ultimate (mature) size of the tree relative to the available space;
- appropriateness of the species to the climate of the area and microclimate of the site;
- the nature of the species (deciduous or evergreen);
- the suitability of the species to the site conditions;
- any nuisance characteristics of the species, such as shedding of fruit, bark and leaves relative to the position;
- the form and shape of the tree relative to the available space; and
- the character of the site and locality (does the species need to be sympathetic with any period plantings).

Tree species selection should always be done in consideration of the local environmental and soil conditions of the site and the available space (both above and below ground) to support the mature dimensions of the tree. The selection of appropriate species is critical to successful establishment and long term sustainability. Where necessary, the advice of a qualified Landscape Architect should be sought on the selection and placement of new trees within a site.

Locally-indigenous native species (those formerly occurring naturally within the local area) are the most beneficial in terms of providing habitat and food sources to native birds and animals and promoting biodiversity.

Most trees make some contribution to amenity, ecological and heritage values, regardless of the origin of the species. However, some species are considered to be Nuisance Species, Environmental Weed Species or Noxious Weeds, and the planting of these species is obviously discouraged.

Attachment F – Determination of retention priorities

METHODOLOGY FOR DETERMINING TREE RETENTION VALUE

The aim of this process is to determine the relative value of each tree for retention (i.e. its Retention Value) in the context of development. This methodology assists in the decision making process by using a systematic approach. The key objective of this process is to ensure the retention of good quality trees that make a positive contribution to these values and ensure that adequate space is provided for their long term preservation. The Retention Value of a tree is a balance between its sustainability in the setting in which it is located (the 'landscape') and its significance within that setting (landscape significance).

Step 1: Determining the Landscape Significance Rating

The 'landscape significance' of a tree is a measure of its contribution to amenity, heritage and ecological values. Whilst these values are fairly subjective and difficult to assess consistently, some measure is necessary to assist in determining the Retention Value of each tree. To ensure in a consistent approach, the assessment criterion shown in Table 3 should be used. A tree may be considered 'significant' for one or more reasons. A tree may meet one or more of the criteria in any value category (heritage, ecology or amenity) shown in Table 3 to achieve the specified rating. For example, a tree may be considered 'significant' and given a rating of 1, even if it is only significant based on the amenity criteria.

Based on the criterion in this table, each tree should be assigned a landscape significance rating as follows:

- 1 Significant
- 2 Very High
- 3 High
- 4 Moderate
- 5 Low
- 6 Very Low
- 7 Insignificant

Step 2: Determining Safe Useful Life Expectancy (SULE)

The sustainability of a tree in the landscape is a measure of its remaining lifespan in consideration of its current health, condition and suitability to the locality and site conditions. The assessment of the remaining lifespan of a tree is a fairly objective assessment when carried out by a qualified Consulting Arborist. Once a visual assessment of each tree is completed (using the Visual Tree Assessment criteria), the arborist can make an informed judgement about the quality and remaining lifespan of each tree. The Safe Useful Life Expectancy (SULE) methodology (refer Attachment C) can be used to categorise trees as follows:

- Long (Greater than 40 years)
- Medium (Between 15 and 40 years)
- Short (Between 5 and 15 years)
- Transient (Less than 5 years)
- Dead or hazardous (no remaining SULE)

The SULE of a tree is calculated based on an estimate of the average lifespan of the species in an urban area, less its estimated current age and then further modified where necessary in consideration of its current health, condition (structural integrity) and suitability to the site.

Step 3: Determining the Retention Value

The Retention Value of a tree is increased or diminished based on its sustainability in the landscape, which is expressed as its SULE. A tree that has a high Landscape Significance Rating, but low remaining SULE, has a diminished value for retention and therefore has an appropriate Retention Value assigned. Conversely a tree with a low Landscape Significance Rating even with a long remaining SULE, is also considered of low Retention Value. This logic is reflected in the matrix shown in Table 1.

Once the landscape Significance Rating and SULE category have been determined, the following matrix can be used to determine a relative value (or priority) for retention:

TABLE 1 – DETERMINING TREE RETENTION VALUES

	Landscape Significance Rating						
SULE	1	2	3	4	5	6	7
Long - greater than 40 years	High Retention Value						
Medium - 15 to 40 years			Moderate Retention Value				
Short - 5 to 15 years				Low Retention Value			
Transient - less than 5 years				Very Low Retention Value			
Dead or Hazardous							

Step 4:- Transfer Retention Values to the Tree Constraints Plan

The Retention Value of trees on development sites should be transcribed on a scaled site plan and colour coded. Together with Tree Protection Zones, this information assists in identifying the constraints imposed by trees to site layout and design (referred to as a “Tree Constraints Plan”). The Tree Constraints Plan forms a critical part of the site analysis and informs the design of proposed developments.

Step 5: Analysing the Implications for Proposed Development

The following tables describe the implications of the Retention Values on site layout and design:

TABLE 2 – TREE RETENTION PRIORITIES.

RETENTION VALUE	RECOMMENDED ACTION
"High"	<ul style="list-style-type: none"> • These trees considered worthy of preservation; as such careful consideration should be given to their retention as a priority. • Proposed site design and placement of buildings and infrastructure should consider the Tree Protection Zones as discussed in the following section to minimise any adverse impact. • In addition to Tree Protection Zones, the extent of the canopy (canopy drip-line) should also be considered, particularly in relation to high rise developments. Significant pruning of the trees to accommodate the building envelope or temporary scaffolding is generally not acceptable.
"Moderate"	<ul style="list-style-type: none"> • The retention of these trees is desirable. • These trees should be retained as part of any proposed development if possible, however these trees are considered less critical for retention. • If these trees must be removed, replacement planting should be considered in accordance with Council's Tree Replacement Policy to compensate for loss of amenity.
"Low"	<ul style="list-style-type: none"> • These trees are not considered to worthy of any special measures to ensure their preservation, due to current health, condition or suitability. They do not have any special ecological, heritage or amenity value, or these values are substantially diminished due to their SULE. • These trees should not be considered as a constraint to the future development of the site.
"Very Low"	<ul style="list-style-type: none"> • These trees are considered potentially hazardous or very poor specimens, or may be environmental or noxious weeds. • The removal of these trees is therefore recommended regardless of the implications of any proposed development.

TABLE 3 – DETERMINING LANDSCAPE SIGNIFICANCE RATING

RATING	HERITAGE VALUE	ECOLOGICAL VALUE	AMENITY VALUE
1. SIGNIFICANT	The subject tree is listed as a Heritage Item under the Local Environment Plan (LEP) with a local, state or national level of significance or is listed on Council's Significant Tree Register	The subject tree is scheduled as a Threatened Species as defined under the Threatened Species Conservation Act 1995 (NSW) or the Environmental Protection and Biodiversity Conservation Act 1999	The subject tree has a very large live crown size exceeding 100m ² with normal to dense foliage cover, is located in a visually prominent position in the landscape, exhibits very good form and habit typical of the species
	The subject tree forms part of the curtilage of a Heritage Item (building /structure /artefact as defined under the LEP) and has a known or documented association with that item	The tree is a locally indigenous species, representative of the original vegetation of the area and is known as an important food, shelter or nesting tree for endangered or threatened fauna species	The subject tree makes a significant contribution to the amenity and visual character of the area by creating a sense of place or creating a sense of identity
	The subject tree is a Commemorative Planting having been planted by an important historical person (s) or to commemorate an important historical event	The subject tree is a Remnant Tree, being a tree in existence prior to development of the area	The tree is visually prominent in view from surrounding areas, being a landmark or visible from a considerable distance.
2. VERY HIGH	The tree has a strong historical association with a heritage item (building/structure/artefact/garden etc) within or adjacent the property and/or exemplifies a particular era or style of landscape design associated with the original development of the site.	The tree is a locally-indigenous species, representative of the original vegetation of the area and is a dominant or associated canopy species of an Endangered Ecological Community (EEC) formerly occurring in the area occupied by the site.	The subject tree has a very large live crown size exceeding 60m ² ; a crown density exceeding 70% (normal-dense), is a very good representative of the species in terms of its form and branching habit or is aesthetically distinctive and makes a positive contribution to the visual character and the amenity of the area
3. HIGH	The tree has a suspected historical association with a heritage item or landscape supported by anecdotal or visual evidence	The tree is a locally-indigenous species and representative of the original vegetation of the area and the tree is located within a defined Vegetation Link / Wildlife Corridor or has known wildlife habitat value	The tree is a good representative of the species in terms of its form and branching habit with minor deviations from normal (e.g. crown distortion/suppression) with a crown density of at least 70% (normal); The subject tree is visible from the street and/or surrounding properties and makes a positive contribution to the visual character and the amenity of the area
4. MODERATE	The tree has no known or suspected historical association, but does not detract or diminish the value of the item and is sympathetic to the original era of planting.	The subject tree is a non-local native or exotic species that is protected under the provisions of this DCP.	The subject tree has a medium live crown size exceeding 25m ² ;The tree is a fair representative of the species, exhibiting moderate deviations from typical form (distortion/suppression etc) with a crown density of more than 50% (thinning to normal); and
			The tree is visible from surrounding properties, but is not visually prominent – view may be partially obscured by other vegetation or built forms. The tree makes a fair contribution to the visual character and amenity of the area.
5. LOW	The subject tree detracts from heritage values or diminishes the value of a heritage item	The subject tree is scheduled as exempt (not protected) under the provisions of this DCP due to its species, nuisance or position relative to buildings or other structures.	The subject tree has a small live crown size of less than 25m ² and can be replaced within the short term (5-10 years) with new tree planting
6. VERY LOW	The subject tree is causing significant damage to a heritage item.	The subject tree is listed as an Environment Weed Species in the Leichhardt Local Government Area, being invasive, or is a known nuisance species.	The subject tree is not visible from surrounding properties (visibility obscured) and makes a negligible contribution or has a negative impact on the amenity and visual character of the area. The tree is a poor representative of the species, showing significant deviations from the typical form and branching habit with a crown density of less than 50% (sparse).

ATTACHMENT G

Assessment of Tree Works Application

Reference number:

Address:

Number of trees:

	Tree 1	Tree 2	Tree 3	Tree 4
Consent is granted for tree removal				
Further information required i.e. arborists report				
Replacement tree to be planted				
Consent is granted to PRUNE				
% of overall live canopy				
Diameter of branches				

Application Type / Detail of proposed works	Tree 1	Tree 2	Tree 3	Tree 4
Removal – R Pruning - P				
Species				

	Tree 1	Tree 2	Tree 3	Tree 4
Age Young (Y) Semi Mature (SM) Mature (M) Over mature (OM) Dead (D)				
Vigour Excellent (E) Good (G) Fair (F) Poor (P)				
Form/Structure Excellent (E) Good (G) Fair (F) Poor (P)				
Tree Size (approximate) Height in metres & Spread of Canopy				
Major Defects sighted Yes (Y) No (N)				

AIMS OF THE ORDER	Tree 1	Tree 2	Tree 3	Tree 4
Ecological High (H) Medium (M) Low (L) None (N)				
Climatic High (H) Medium (M) Low (L) None (N)				
Amenity High (H) Medium (M) Low (L) None (N)				
Cultural High (H) Medium (M) Low (L) None (N)				

Assessment of Impacts on Built Environment (at time of inspection)	Tree 1	Tree 2	Tree 3	Tree 4
Shading High (H) Medium (M) Low (L) None (N)				
Relevance of property damage High (H) Medium (M) Low (L) None (N)				
Overcrowding High (H) Medium (M) Low (L) None (N)				
Damage to infrastructure ie pipes High (H) Medium (M) Low (L) None (N)				
Facilitate construction High (H) Medium (M) Low (L) None (N)				