



# Arboricultural (Tree) Report Guidelines

**Prepared by:**

Parks and Recreation Team  
Hornsby Shire Council  
296 Peats Ferry Road  
Hornsby NSW 2077

## Table of Contents

Summary .....	3
1. Introduction .....	3
2. Objective .....	3
3. In What situation is a Tree Report Required? .....	3
4. Residential application Reports .....	4
4.1 Tree Health Management or Removal .....	4
4.1.1 Who should prepare a Arboricultural Report? .....	4
4.1.2 What should be included in an Arboricultural Health Management or Removal Report? .....	4
5. Arboricultural Impact Assessments for Development .....	5
5.1 Development and preparation of an Arboricultural Impact Assessment (AIA) .....	5
5.2 What is the Purpose of an Arboricultural Impact Assessment? .....	5
5.3 When is an AIA required? .....	5
5.4 Council requirements when submitting an Arboricultural Impact Assessment (AIA) Report .....	6
6. Root Mapping Report .....	8
6.1.1 What is a Root Mapping Report? .....	8
6.1.2 Who should prepare a Root Mapping Report? .....	8
6.1.3 When is a Root Mapping Report required? .....	8
6.1.4 What should be included in a Root Mapping Report? .....	8

## Summary

Currently the management of the Urban Forest is a contentious issue and can lead to litigation in some cases identifying a need for a formalised process to undertake tree related matters. Hornsby Shire Council is placing a standard on the type of tree reports required or requested in relation to both development applications and residential tree applications. This standard provides a bench mark for what will be accepted at lodgement of a Development Application or Residential Tree Application, to ensure that reports have accurate and concise arboricultural information within them, and that all recommendations are exhaustive towards managing the existing and future urban canopy within the Shire.

The purpose of this document is to provide guidance in the preparation of Arboricultural Reports for Tree and Vegetation applications as supporting evidence and Development Applications.

## 1. Introduction

These guidelines have been prepared to assist applicants and Arborists to understand Hornsby Shire Council's requirements for the preparation of, Arboricultural Reports.

Most trees within the Shire are protected by the Tree and Vegetation Chapter of the Hornsby Local Environmental Plan. This document along with the Hornsby Development Control Plan should be referred to when preparing plans and documentation.

## 2. Objective

To ensure the preservation of existing and future Urban Forest and the existing green character (environment) of the Shire where ever possible and appropriate to do so.

## 3. In What situation is a Tree Report Required?

The requirement for a detailed tree or multiple tree report can be provided to or requested by Council **for two situations** as follows:

- a) Residential applications for tree related works as supporting evidence in relation *Hornsby Shire DCP Tree Preservation Measures Part 1B.6*, in the form of a Tree Remediation or Removal Report.
- b) As part of a Development Application in the form of an Arboricultural Impact Assessment (AIA) (see Section 4.0), or, Root Mapping Report (RMR) (see Section 6.0)

## 4. Residential application Reports

### 4.1 Tree Health Management or Removal

#### 4.1.1 Who should prepare an Arboricultural Report?

Arboricultural Reports are to be prepared by a Consulting Arborist with a Qualification Framework (AQF) Level 5 in Arboriculture or Horticulture (Arboriculture). When preparing an Arborist Report the Arborist is not an advocate for any party, but has an overriding duty to assist Council in making an impartial decision. The Report is to contain a statement by the Arborist as follows:

- That the report prepared by the Arborist reflects the expert opinion of the Arborist; and
- That the Arborist is acting independently of and not as the advocate for the owner of the subject tree(s);
- That the Arborist is not to receive a commission to prune or remove the tree(s) which is the subject of the Arborist Report;
- Reports are to be submitted in an accepted academic format. All resource material, including calculation formulae is to be clearly referenced using a format accepted by (e.g. Harvard).

#### 4.1.2 Council requirements for Arboricultural Health Management or Removal Report?

The following information is the minimum required to be contained within such a report:

- a) A **Cover page** with report title, the client who commissioned the report and the address of the site to which the report relates;
- b) The name of the Arborist who undertook the site inspection and carried out the assessment, their qualifications and contact details and a statement consistent with clause 3.2.1 (located in the appendices)

*Note: Reports that are not prepared by a Consulting Arborist with a Qualification Framework (AQF) Level 5 in Arboriculture or Horticulture (Arboriculture) will not be accepted at application lodgement by Council.*

- c) **Summary** of the report;
- d) **Introduction** which dates the site inspection undertaken and includes the brief for undertaking the report;
- e) **Description** - background relevant to the report;
- f) **A Site map/plan with aerial image or survey** of the site showing the location of all trees referred to in the report and giving them an individual identifying reference number. This reference number is to be used to identify the tree within the text of the report;
- g) **Methodology detailing** the methods or techniques used in data collection to formulate the report;
- h) **The tree Data Table** of each tree is to be identified by both common name and botanical name, height, canopy spread and diameter at breast height (Dbh taken at 1.3m above ground);
- i) Observations of physical features relating to the root crown, trunk and canopy.
- j) **Analysis section to discuss** relevant industry research of the observational data collected such as



detailed information regarding structural dysfunction, wounds, impacts on root zones, pests and diseases or other observations pertaining to tree health;

- k) **Conclusion** section which uses the analysis of the data collected to formulate a decision about the observations made;
- l) **Recommendation** section outlining management strategies for remediating tree health, pruning and/or removal works (compliant with AS 4373-2007). This section must address **ALL** options available in the circumstances, including reasons as to why they are, or are not, being recommended;
  - Where removal of a tree is recommended, supporting documentary evidence is to be provided to illustrate/support findings. Recommendations for removal are to be based on arboricultural findings only. Removals where the reason given is to permit a proposed development will not be accepted;
- m) Provision in writing from the client commissioning the report clearly outlining the elements of the brief which should be located within the appendix of the report.
- n) **Appendices** - where reference is made to other Arboricultural reports, full copies of those reports are to be included as an Appendix.
  - Where reports contain reference to diagnostic testing of trees, results which support the report must be included as an Appendix and are to be provided in a clear legible format and unaltered.

## 5. Arboricultural Impact Assessments for Development

### 5.1 Development and preparation of an Arboricultural Impact Assessment (AIA)

An AIA should be prepared as part of the development design process to identify any site constraints posed by trees. This information will enable conclusions to be formed on whether there are design and construction options which can be employed to successfully retain trees that may be impacted by a development proposal.

### 5.2 What is the Purpose of an Arboricultural Impact Assessment?

An AIA should be used to assist with designing the proposed development and overall development process (i.e. construction methods) to avoid, minimize or mitigate impacts to trees and it will also encompass the necessary tree management strategy for that particular proposal.

The AIA identifies tree impacts, necessary tree removal, transplants and retention, once all design options have been explored.

### 5.3 When is an AIA required?

Council's document titled Development Application Submission Guideline found on Council's website identifies when an AIA is required to be lodged with a Development Application. Alternatively, if a pre-lodgement meeting has been held with Council's Planning Department, the need for an AIA will in most cases be identified at that time. However, following the preliminary assessment of your application Council may identify the necessity for an AIA.

#### 5.4 Council requirements when submitting an Arboricultural Impact Assessment (AIA) Report

- a) The AIA must be prepared by a Consulting Arborist with an Australian Qualification Framework (AQF) Level 5-Diploma in Arboriculture or Horticulture (Arboriculture).

*Note: Reports that are not prepared by a Consulting Arborist with a Qualification Framework (AQF) Level 5 in Arboriculture or Horticulture (Arboriculture) will not be accepted at application lodgement by Council.*

- b) **The following information is the minimum required to be contained within an AIA submitted to Council (please note bold is used for suggested report headings):**

- 1) **Cover page** with report title, the client who commissioned the report and the address of the site to which the report relates;
- 2) A **Summary** of the report;
- 3) **Introduction** which includes the brief for undertaking the report and date of the site inspection;
- 4) **Description** - background information relevant to the report (i.e. previous site use or condition);
- 5) **Methodology** - the Methods or Techniques used in data collection required for the report;
- 6) **Tree Data and Observations Table** - each tree is to be identified by both common name and botanical name, Tree Physical Dimensions: - height, canopy spread and diameter at breast height (Dbh taken at 1.3m above ground), Safe Useful Life Expectancy (SULE), Tree Protection Zone (TPZ), Structural Root Zone (SRZ) measurements;
- 7) **Analysis** of the data collected, where collected data is discussed. This may include detailed information regarding structural dysfunctions, wounds, impacts on root zones, pests and diseases, etc.;
- 8) **Discussion** on analysis of the potential effects of a proposed development on existing and proposed trees based on the recorded tree data covering impacts to tree health, modifications to habit (i.e. canopy modifications) and or root zones;
- 9) **Recommendations** for methods to avoid or minimise potential damage to trees on the site and, where appropriate, on immediately adjoining properties. This would include, but is not limited to recommendations on the following issues:
  - a) Specification of design alterations and/or construction methods which will be employed to avoid or minimise impacts to trees being retained such as the use of pier and beam construction as opposed to strip footings;
  - b) Specification of trees being retained and trees being removed;
  - c) **Tree Protection and Management Programme** addressing the following subsections:
    - d) Proposed construction methods to minimise damage to identified trees e.g. use of pier and beam construction as opposed to strip footings;
    - e) Specifications for tree protection measures should be applied as prescribed in AS 4970-2009;
    - f) Specification of remedial tree works pre and post development compliant with AS 4373-2007 and AS 4970-2009, if necessary, and in line with recommendations;
    - g) Proposed inspection schedule to assess tree health for the various stages of development such as site establishment, construction work, hard and soft landscaping practical completion and

occupancy certification;

- h) Specification and scheduling of necessary tree care/maintenance required before, during and post construction (such as watering and fertilising trees).

10) **Tree Protection Plans** which incorporates elements from the recommendations but not limited to the following:

- a) All trees must be clearly numbered and correspond with the tree data.
- b) Location of site sheds
- c) Location of protection fencing
- d) Trees identified to have trunk and canopy protection measures
- e) TPZ areas to be mulched (in accordance with recommendations/conditions of consent)
- f) Location of Haulage roads
- g) Location Building storage materials
- h) Location Building waste area's
- i) Location Site toilets being used (Where applicable and must be outside the TPZ)
- j) Location of installations of services and methodology to be used.

11) **Appendices Section to include:**

- i. **Credentials and Conduct Statement:** All reports are to include the name of the Arborist who undertook the site inspection and carried out the assessment, their qualifications and contact details and a statement consistent with clause 3.2.1;

*Note: Reports that are not prepared by a Consulting Arborist with a Qualification Framework (AQF) Level 5 in Arboriculture or Horticulture (Arboriculture) will not be accepted at application lodgement by Council.*

- ii. **Diagnostic Testing** -Where the results of diagnostic testing of trees is being provided to support the report these results must be included as an Appendix; results are to be provided in a clear legible format and unaltered.
- iii. **Root Mapping Reports** (see Section 6.0) where requested as additional information they must be included as an Appendix; results must be provided in a clear legible format and unaltered.

12) **Bibliography**

## 6. Root Mapping Report

### 6.1.1 What is a Root Mapping Report?

A Root Mapping Report provides information on the roots that are located along a particular line of excavation. This information is used to determine whether the siting of a proposed building or structure is appropriate. It is used to help calculate the level of root severance that would result from the proposed works and therefore the impact the proposed works may have on the structural stability of the tree and its likely capacity to survive such works.

Generally, information such as root numbers, depth and diameter is obtained by using sensitive methods of excavation such as hand excavating or pneumatic tools to dig a trench down to a specified depth along the line of the proposed excavations.

### 6.1.2 Who should prepare a Root Mapping Report?

This document is to be prepared by an Arborist with a minimum qualification of Australian Qualification Framework Level 5. All reports are to include the name of the Arborist who actually undertook the site inspection and carried out the assessment, their qualifications and contact details.

*Note: Reports that are not prepared by a Consulting Arborist with a Qualification Framework (AQF) Level 5 in Arboriculture or Horticulture (Arboriculture) will not be accepted at application lodgement by Council.*

### 6.1.3 When is a Root Mapping Report required?

Following preliminary assessment of your application, Council may identify the necessity for the submission of a Root Mapping Report. If you have used the Pre-lodgement DA process, the need for these documents will in most cases have been identified at that time.

### 6.1.4 What should be included in a Root Mapping Report?

The location of excavation lines should be determined by the Arborist undertaking the works in consultation with Council. A general guide however, is that they should be located along the lines where excavation would be necessary to construct the proposed development.

The trench is to be excavated to a depth as indicated by Council or to the maximum depth at which tree roots are likely to grow given the soil type and site conditions. All excavation is to be carried out by hand and in a manner that will minimise root damage. Mattocks and crow bars are not to be used for excavation. Small hand tools or an air knife, vacu-dig, or water jetting should be used to excavate the required area.

**As a minimum requirement, Root Mapping Reports should include the following information:**

1. Cover page with report title, the client who commissioned the report and the address of the site to which the report relates;
2. A summary of the report;
3. Introduction which dates the site inspection undertaken and includes the brief for undertaking the



report;

4. Description - background relevant to the report;
5. The Methods or Techniques section used in data collection used to formulate the report;
6. A site map/plan of the site showing the location of all trees referred to in the report and giving them an individual identifying reference number. This reference number is to be used to identify the tree within the text of the report;
7. Tree Data Section Table: Each tree is to be identified by both common name and botanical name, Tree Physical Dimensions: - height, canopy spread and diameter at breast height (Dbh taken at 1.3m above ground), the location and number of tree roots found is to be provided;
8. A plan showing the location of all excavation lines in relation to the existing site conditions.
9. Photographs of the completed excavation lines. The photographs are to include points of reference so that their location and orientation can be determined;
10. A schedule of findings for each individual excavation line which impacts on a given tree.

This schedule is to include:

- The total linear distance of the excavation line;
  - The linear distance along the excavation that the root was located;
  - The depth at which the root was encountered and the diameter of the root;
  - Any visual variations in roots observed are to be noted e.g. highly visible lenticels;
  - A section with X (depth) and Y (Length) axis indicated, of the completed trench and all findings. All material found within;
11. **Analysis** section of the data collected, where collected data is discussed. This may include detailed information regarding structural defects, wounds, impacts on root zones, pests and diseases, etc.;
  12. **Discussion** on analysis of the potential effects of a proposed development on existing and proposed trees based on the recorded tree data covering impacts to tree health, modifications to habit (i.e. canopy modifications) and or root zones;
  13. **Recommendations** for methods to mitigate the potential damage to trees on the site and, where appropriate, on immediately adjoining properties.