

Attachment G

Tree Assessment

Yarralumla Brickworks Precinct Tree Assessment Update

Client: DOMA

Tree Assessment Update and Historical Tree
Assessment Package

Prepared by dsb Landscape Architects
5 March 2023

Company	DOMA	Date	5 March 2023
Attention	Nadia Hight and Alex Moulis	This Page +	34
From	Michael Reeves	Project No.	4702
Project	Yarralumla Brickworks Precinct		
Subject	Tree Assessment Update		

Project History

dsb Landscape Architects was previously engaged by the ACT Land Development Agency to undertake a tree assessment and report on Blocks 1, 20 and 7 Section 102 Yarralumla (The Yarralumla Brickworks Precinct).

dsb Landscape Architects has been providing tree assessment services at Yarralumla Brickworks to the Land Development Agency since 2013

A Tree Assessment Report and Tree Management Report was prepared Project Number 3272 and dated 25 November 2015.

The Assessment Methodology and Assessment Criteria for this report is provided at Appendix A.

This 25 November 2015 Tree Management Report is provided as Appendix B.

DOMA GROUP and BLOC were preparing an Estate Development Plan submission to ACT Government in January 2020. dsb Landscape Architects were engaged to provide arborist services to support this EDP submission.

Upon advice from Mr Mark Diehm of Tree Protection Unit, a Tree Assessment Update rather than a completely new tree assessment and report, would be sufficient. dsb Landscape Architects prepared this update base on reinspection of the precinct. The full extent of Blocks 1, 20 and 7 Section 102 Yarralumla (The Yarralumla Brickworks Precinct) was investigated, and the current condition of the trees in 2020, recorded.

This Tree Assessment Update was issued on 17 January 2020 and is provided as Appendix C.

DOMA engaged dsb Landscape Architects in February 2023 to undertake a further tree assessment review of the Yarralumla Brickworks Precinct and to report on the current inspection and to include previous tree assessment reporting as Appendices so that a complete tree assessment history is provided in the one document.

Assessor History

Arborist Paul Scholtens and Registered Landscape Architect Michael Reeves conducted the tree assessments in 2013 and later 2015 and are familiar with the location, the asbestos remediation works by CAPCORP, the trees and the weather over this extended period.

dsb Landscape Architects' arborist Paul Scholtens and Registered Landscape Architect Michael Reeves attended to Blocks 1, 20 and 7 Section 102 Yarralumla (The Yarralumla Brickworks Precinct) on Wednesday 15 January 2020.

dsb Landscape Architects' Registered Landscape Architect Michael Reeves attended to and inspected the full extent of Blocks 1, 20 and 7 Section 102 Yarralumla (The Yarralumla Brickworks Precinct) on Thursday 23 February 2023.

The 2015 and 2020 tree assessment documentation were reviewed. Reference was made of the photographic records contained within the 2015 assessment and comparison made with conditions observed in 2023.



Assessment History Generally

In 2015 most of the assessments were POOR with some MEDIUM. There was extensive evidence of Elm Leaf Beetle and most of the Pinus ponderosa were exhibiting evidence of fungal attack to the foliage.

In 2020 there was evidence that the 2015 POOR trees had further deteriorated. Of the 2015 MEDIUM trees, some had deteriorated to POOR and others had maintained the MEDIUM assessment.

The reinspection of January 2020 was at the end of three successive dry years of 2017, 2018 and 2019. Rainfall in 2019 was 40% below the long-term average.



Google Earth Image January 2021

Climate Conditions 2020 - 2023

Rainfall average for 2020 was 25-45% above long-term average.

Bureau of Meteorology Annual Climate Summary for the ACT in 2021 and 2022 records 2021 as a wet year with rainfall totals 50% above average with the fifth wettest year on record. There were very few days (3) in 2021 with temperatures above 35 degrees whereas 2019 had 33 days above 35 degrees. 2021 was generally wet and cool.

2022 is characterised as wet with warm nights. Rainfall was above average. Daytime temperatures were below average and night-time temperatures were above average.



Google Earth Image March 2022

2023 Reinspection - Generally

Reinspection of the Yarralumla Brickworks Precinct in February 2023 revealed that the trees generally have responded to the better climatic conditions of 2020 – 2023 with increased vigor and increased health and canopy density.

This is evidenced by greater volume of leaves and needle in the tree canopies. There is greater leaf and needle density across a larger area of the tree canopies.

Tip and branch extension as evidence of the increased vigor of the trees is variable across the precinct.

Trees of 2015/2020 POOR and/ or trees approaching Safe Useful Life Expectancy (SULE) showed to a reduced extent, evidence of denser canopies and new tip extension, branch extension and trunk girth expansion.

Trees of 2015/2020 MEDIUM and younger age MEDIUM show up to 1 metre of tip extension and consequent increased canopy density, branch extension and trunk girth expansion.

Better quality trees at the 2015 and 2020 assessments have thrived in the better climatic conditions of 2020-2023.

Poor quality trees at the 2015 and 2020 assessments have improved in the health and canopy density assessment criteria with the better climatic conditions.

Stress related conditions such as fungal needle attack in *Pinus ponderosa* is less evident in the quarry. It was evident also that the density of the vegetation in the quarry was less than in 2020. On the quarry slopes, some large trees had fallen, pine wildings had been removed or thinned and weed species had been controlled.

Assessment Criteria

The Suburban Land Agency Tree Assessment assesses,

- Arboricultural Assessment, with ranks of Exceptional, High, Medium, and Poor, and
- Urban Amenity Assessment, with ranks of Exceptional, High, Medium, and Low.

The Arboricultural Assessment rates the tree over eleven criteria of which the two criteria influenced by the better climatic conditions are,

- Canopy Density, and
- Health/Condition.

Canopy Density is assessed as

- Full Canopy - 80-100% Canopy
- Partial Canopy - 80-20% Canopy, and
- Spare Canopy - <20% canopy.

Health Condition is assessed as

1. Poor
2. Fair
3. Good
4. Excellent

Review of the 2015/2020 assessment data revealed that 7% of the trees were of full canopy and the remainder had partial or sparse canopy.

2023 inspection revealed that most trees had a full canopy.

Review of the 2015/2020 assessment data revealed that most trees were assessed as either Poor or Fair.

2023 inspection revealed that most trees were assessed as either Fair or Good.



This change, because of better climatic conditions, to two of the eleven criteria that are included in the Arboricultural Assessment of trees is not sufficient to result in changes to the assessment.

Significant Change

A significant change to the trees of the Yarralumla Brickworks Precinct is the management of trees and weeds in the areas adjacent to Denham Street (2015 Assessment Group A). Understorey weeds have been removed and the canopy of trees has been lifted. The resultant landscape is more amenable. The landscape assessment for this group remains unchanged as a result of the maintenance works.

The other change is the loss of trees within the southern extent of Block 7. The construction of the Dudley Street roundabout and the access road into Block 7 has resulted in the loss of pine trees and reduction in the extent of the *Quercus cerris* plantation.



Southern extent of Block 7 Google Earth Image March 2019



Southern extent of Block 7 Google Earth Image March 2022

2023 Inspection Assessment Commentary

The 2015 Tree Management Report provided commentary on ten areas with the Yarralumla Brickworks Precinct. This report can be found at Appendix B. The 2020 Tree Assessment Update can be found at Appendix C.

This Tree Management Report identifies and reports on areas of similar landscape characteristics.

1. General Commentary
2. Brickworks Quarry
3. Plantations adjacent to Denman Street
4. Pine Plantation – South-eastern edge of Block 7
5. Southern extent of Block 7
6. Western extent of Block 7
7. Central area of Block 7
8. Northern area of Block 7
9. Brickworks surrounds in Block 1
10. Block 20

2023 Inspection Commentary includes,

1. General Commentary

It is recommended that the tree assessment survey from 2015 be reviewed and updated for trees dead and/or removed in the intervening period.

2. Brickworks Quarry

Commentary provided in 2015 and 2020 reports remains unchanged except for the improvement in performance (Canopy Density and Health Condition). Arboricultural Assessment and Urban Amenity Assessment rankings for individual trees remain unchanged.

3. Plantations adjacent to Denman Street

Commentary provided in 2015 and 2020 reports remains unchanged except for the improvement in performance (Canopy Density and Health Condition). Arboricultural Assessment and Urban Amenity Assessment rankings for individual trees remain unchanged.

4. Pine Plantation – South-eastern edge of Block 7

Commentary provided in 2015 and 2020 reports remains unchanged except for the improvement in performance (Canopy Density and Health Condition). Arboricultural Assessment and Urban Amenity Assessment rankings for individual trees remain unchanged.

5. Southern extent of Block 7

Commentary provided in 2015 and 2020 reports remains unchanged except for the improvement in performance (Canopy Density and Health Condition). Arboricultural Assessment and Urban Amenity Assessment rankings for individual trees remain unchanged.



Dudley Street roundabout and access road construction are in place. *Quercus cerris* plantation is approximately 50% of previous. Management thinning and maintenance of this plantation is outstanding.

6. Western extent of Block 7

Commentary provided in 2015 and 2020 reports remains unchanged except for the improvement in performance (Canopy Density and Health Condition). Arboricultural Assessment and Urban Amenity Assessment rankings for individual trees remain unchanged.

Management of this landscape with a landscape renewal plan remains current.

7. Central area of Block 7

Commentary provided in 2015 and 2020 reports remains unchanged except for the improvement in performance (Canopy Density and Health Condition). Arboricultural Assessment and Urban Amenity Assessment rankings for individual trees remain unchanged.

8. Northern area of Block 7

Commentary provided in 2015 and 2020 reports remains unchanged except for the improvement in performance (Canopy Density and Health Condition). Arboricultural Assessment and Urban Amenity Assessment rankings for individual trees remain unchanged.

9. Brickworks surrounds in Block 1

Commentary provided in 2015 and 2020 reports remains unchanged except for the improvement in performance (Canopy Density and Health Condition). Arboricultural Assessment and Urban Amenity Assessment rankings for individual trees remain unchanged.

10. Block 20

Commentary provided in 2015 and 2020 reports remains unchanged except for the improvement in performance (Canopy Density and Health Condition). Arboricultural Assessment and Urban Amenity Assessment rankings for individual trees remain unchanged.

This Tree Assessment Update has been prepared by

A handwritten signature in blue ink, appearing to read 'M. Reeves'.

Director dsb Landscape Architects

Registered Landscape Architect AILA #486

If we can be of any further assistance to you in regard to the project, please do not hesitate to contact me.

Regards,



Michael Reeves

Director dsb Landscape Architects

Registered Landscape Architect AILA #486



1. QUALITY ASSURANCE

Contact information:

DSB Partners Pty Ltd
Trading as dsb Landscape Architects
ABN 94 052 528 293

Directors: Adam Barker, David Pearce and Michael Reeves

Canberra

1.34 Level 1
33 Allara Street
Canberra City ACT 2601

Melbourne

331/173 City Road
Southbank, VIC 3006

Phone: (02) 6285 1955
Email: dsb@dsbla.com.au
Web: www.dsbla.com.au

Quality assurance information

Report title: Yarralumla Brickworks Precinct Tree Assessment Update _____
Job number: 4702 _____
Date: 5 March 2023 _____
Prepared by: Michael Reeves _____
Reviewed by: david Pearce _____

Issue history

Issue Number	Issue Date	Details	Authorised by
1	5 March 2023	Tree Assessment Update	Mr

Appendix A

Suburban Land Agency Tree Assessment Methodology and Assessment Criteria

Suburban Land Agency

TREE ASSESSMENT METHODOLOGY

PHOTO ASSESSMENT INFORMATION AND CODES

The following provides detail information on the codes used in the Tree Assessment data collection form and used in the Yarralumla Brickworks Precinct Tree Assessment – Tree Management Report 3272 25 November 2015 by dsb Landscape Architects.

Number: Reference Number. Each tree/group of trees is numbered to link Plan and Report

GENERAL TREE DATA

Assessment Date: Date field assessment carried out.

Assessor: Name of field assessor.

Tree Location: Accurate location, ACT grid coordinates, Stromlo Projection, Eastings and Northings of tree position.

Species: Tree species identification, Botanical and Common Name

Height: Tree height in metres.

Canopy Spread: Tree canopy diameter in metres shown as the maximum crown width of the tree.

Trunk Circumference: Tree trunk circumference in millimetres, measured 1 metre above ground level.

Number of Trunks: Number of trunks at 1 metre above ground level.

QUALITY CLASSIFICATION

Regulated Tree:

Regulated tree in accordance with the *ACT Tree Protection Act, 2005*

Y – Yes

N – No

Arboricultural Assessment:

E Exceptional tree. Mature specimen. Grand appearance and stature. Well balanced. Little or no epicormic growth and/or dead wood.

H Mature specimen. Good appearance and structure. Little or no epicormic growth and/or dead wood.

Juvenile or adolescent specimen or group of trees or regeneration that does not meet the requirements of the Act but which is



of good form and health with potential to become a Regulated tree or the potential to contribute to the landscape or urban amenity in the future.

M Mature specimen. Sparse or pale coloured foliage. Epicormic growth and/or dead wood throughout the crown. Evidence of some branch fall. Less than desirable form.

Juvenile or adolescent specimen or group of trees or regeneration that does not meet the requirements of the Act which has some negative characteristics but with cost effective maintenance and/or management has the potential to become a Regulated tree or the potential to contribute to the landscape or urban amenity in the future.

P Mature, senescent, or other specimen tree of poor form or with significant die back or sparse foliage. Disease, decay, hollows, large limb drop, included bark forks. Short life expectancy.

Urban Amenity Contribution

E Exceptional quality. A tree that meets at least two of the following qualities –

- High Visual/Scenic Quality
- High Unique Species
- High Habitat Quality
- High Cultural /Heritage Value
- High Social Value
- High Scientific Value

(Note: A tree, as an example, may be considered “Exceptional” on the basis of high scientific importance but be of poor form and condition and represent a significant hazard).

H High quality. A tree of good form and condition without significant defects and which when managed does not represent a significant hazard or an unreasonable financial impost.

M Medium quality. A tree of reasonable form, structure and health and not likely to represent a significant hazard.

P Poor quality. A tree of poor form, structure or health or in decline or likely to represent a significant hazard.

Recommendations

Recommendations are based on professional arborist and landscape architect’s judgement following evaluation of the overall components of the full assessment.

R&M Retain and manage the tree

R Remove the tree

ARBORICULTURAL CHARACTERISTICS

Canopy Density: Relative density of canopy foliage:

3 - Full canopy (80% to 100%)

2 - Part canopy (20% to 80%)

1 - Sparse canopy (<20%)

Canopy Dead Wood: Amount of dead wood in the canopy as a % of the canopy:

3 - 0% to 20%

2 - 20% to 60%

1 - 60% to 100%

Insect Occurrence: Evidence of insect attack:

3 - None

2 - Moderate

1 - Significant

Disease: Evidence of disease present:

3 - None

2 - Moderate

1 - Significant

Epicormic Growth: Presence of epicormic growth:

3 - None

2 - Moderate

1 - Significant

Mistletoe: Presence of mistletoe in canopy:

3 - None

2 - Up to 5 clumps moderate

1 - More than 5 clumps

Form: Canopy balance and distribution of the relative to the normal habit of the tree species:

4 - Typical of species

3 - Stunted

2 - Unbalanced/lopsided canopy

1 - Trunk lean approx. 30° or more off vertical

Age: Approximate age:

- 4 - Juvenile
- 3 - Adolescent
- 2 - Mature
- 1 - Senescent

Habitat Value: Habitat value provided by tree e.g. considering nesting hollows, seed pods etc:

- 4 - Food source or nesting hollows for endangered species,
- 3 - Limited habitat potential,
- 2 - No identifiable habitat,
- 1 - Potential for harbouring pest species.

Disturbance Tolerance: Tolerance to disturbance within the tree protection zone based on species characteristics and site conditions:

- 3 - High, tree species generally tolerant of some disturbance,
- 2 - Medium, tree species that may tolerate limited disturbance,
- 1 - Low, tree species generally highly sensitive to disturbance.

Risk Potential: Risk potential, structural integrity, associated with trunk and major branches:

- 3 - Low risk potential, good structural integrity with low risk potential and may require minimal or no horticultural maintenance,
- 2 - Medium risk potential , poor branch unions, narrow angle branch forks or multiple leaders etc where risk can be mitigated by tree surgery and horticulture maintenance techniques,
- 1 - Significant risk potential, decay within trunk or major branches, prevalence of hollows or decay, depressed sections of the trunk, storm damage etc where risk can be mitigated by extensive tree surgery or horticultural techniques.

Health/Condition: Overall health and condition of the tree based on arboricultural assessment crown and trunk of the tree:

- 4: Excellent
- 3: Good
- 2: Fair
- 1: Poor

URBAN AMENITY CHARACTERISTICS

Contribution to Existing Landscape: What level of contribution does the tree make to the existing landscape setting?

3 - Significant

2 - Moderate

1 - None

Potential Contribution to Future Landscape: What level of contribution does the tree potentially have for future landscape settings?

3 - Significant

2 - Moderate

1 - None

Visual / Scenic: Visual and scenic quality of the tree when viewed from within and beyond the site based on the form, condition, species, health and size:

3 - Significant

2 - Moderate

1 - Low

Unique species: Based on the rarity or commonness of the species in the region or growing at the extent or outside of its normal range and the abundance of the species within its geographic range:

2 - Rare

1 - Common

Habitat Quality: Based on the potential to retain or attract native fauna:

3 - Provides significant habitat to native birds or arboreal animals,

2 - Ability to retain or attract native birds or arboreal animals,

1 - No habitat opportunity for native fauna or known to harbour exotic pests

Cultural Value: Does the tree have cultural/heritage value?

2 - Yes

1 - No

Social Value: Does the tree possess social benefit? e.g. is there community connection to its planting or location?

2 - Yes

1 - No

Scientific Value: Does the tree possess scientific interest? e.g. genetic, stunted growth/habitat, climatic range.

2 - Yes

1 - No

Remnant Species: Is the tree a remnant species?

2 - Yes

1 – No

TREE PROTECTION / MANAGEMENT

Tree Protection Zone and Conditions: The tree protection zone defines the minimum distance from the outer edge of the tree canopy or the face of the trunk of the tree for any groundwork under the canopy of the tree that is likely to harm the tree including building, trenching, material storage, changing soil levels, compacting or contaminating the soil. The tree protection zones are based on the Quality Classification ratings.

3 - For Exceptional Quality Trees – erect 1.8m high chain link fence at least 5m from the canopy or 4m from the trunk, whichever is the greater.

2 - For High Quality Trees – erect 1.8m high chain link fence at least 2m from the canopy or 4m from the trunk, whichever is the greater.

1 - For Medium Quality Trees – erect 1.8m high chain link fence at least 2m from the canopy or 4m from the trunk, whichever is the greater.

Condition for the establishment and maintenance of the tree protection zones should include the following:

- (a) For especially tall and/or slender trees or trees noted as having exposed roots – as recorded in Arboricultural Notes
- (b) Tree protection zone fenced prior to commencement of any demolition/construction
- (c) Fencing to be maintained during construction phase
- (d) No storage of materials or machinery within the Tree Protection Zone

Potential to Reduce Risk: Are there arboricultural/horticultural works that can be carried out to reduce potential risks?

3 - Significant works

2 - Moderate works

1 - None

Potential to improve amenity value: Are there arboricultural/horticultural works that can be carried out to improve the potential amenity value of the tree.

3 - Significant works

2 - Moderate works

1 - None

ARBORICULTURAL NOTES

Detailed notes on specific arboricultural issues associated with the tree if not covered in the characteristics assessment.



AMENITY NOTES

Detailed notes on specific landscape amenity values of the tree if not covered in the characteristics assessment.

LANDSCAPE TREE GROUPS

The assessment of landscape trees that are clearly identifiable as dense uniform landscape groups to be assessed as groups for their potential contribution to future urban amenity. The groups are to be considered and assessed on the same bases as individual trees.

3 - An identifiable group of trees that when considered as a whole meet at least one of the values for Tree Quality Classification of Exceptional Quality.

2 - A clearly identifiable group of landscape trees that includes trees that meet the requirements for assessment under the Tree Protection Act, 2005 and has the potential to contribute to the future urban amenity.

1 - A clearly identifiable group of landscape trees that may include trees that do not meet the requirements for assessment under the Tree Protection Act, 2005 and has the potential to contribute to the future urban amenity.

Appendix B

Tree Management Report Project Number 3272 and dated 25 November 2015.



dsb Landscape Architects

14 Hannah Place, Deakin, ACT, 2600
02 6285 1955 dsb@dsbla.com.au www.dsbla.com.au

**YARRALUMLA BRICKWORKS PRECINCT
TREE ASSESSMENT**
Tree Management Report
3272 - 25 November 2015



Company	Land Development Agency	Date	24 November 2015
Attention	Irena Sharp	This Page +	6
From	Michael Reeves	Project No.	3272
Project	Yarralumla Brickworks Precinct Tree Assessment		
Subject	Tree Management Report		

dsb Landscape Architects

14 Hannah Place, Deakin, ACT, 2600
02 6285 1955 dsb@dsbla.com.au www.dsbla.com.au

Yarralumla Brickworks Precinct Tree Assessment

Tree Management Report

The following Tree Management Report provides general commentary on the quality of the trees assessed within the scope of the project and any management issues that arose from the assessment.

The project extent includes Blocks 1, 20 and 7 Section 102 Yarralumla and an additional 30m buffer area adjacent. No buffer is provided to the Yarralumla residential area between Denman Street and Bentham Street and adjacent to Lane Poole Place. Groups A to AF refer to Tree Assessment groups from this Tree Assessment.

This Tree Management Report identifies and reports on areas of similar landscape characteristics.

1. General Commentary
2. Brickworks Quarry
3. Plantations adjacent to Denman Street
4. Pine Plantation – South-eastern edge of Block 7
5. Southern extent of Block 7
6. Western extent of Block 7
7. Central area of Block 7
8. Northern area of Block 7
9. Brickworks surrounds in Block 1
10. Block 20

1. General Commentary

dsb landscape Architects has provided tree assessment services to Land Development Agency across this site since 2013.

- The predominant species within the site is *Pinus radiata* (weed species), *Pinus ponderosa* and *Pinus sylvestris* and *Ulmus procera* and various tree and shrub weed species.
- Generally the condition of the trees has deteriorated since the last vegetation assessment across the project site.
- Within the Quarry, the trees are Pines of low quality. *Pinus ponderosa* (a dominant species) is subject to a fungal attack to the needles and these trees have a limited life span due to this. *Pinus sylvestris* is an unreliable species in the Canberra area.



- The majority of trees in the quarry are located on steep slopes and risk and performance assessment concludes that removal is recommended. Most of the pines within the quarry are at, or approaching, the end of their useful life. Many trees have died since the last assessment.
- A number of resident planted trees are located along the eastern boundary. The social value of these trees may warrant consideration for retention.
- Within Block 7, the Pines generally are of low quality. The isolated elm trees and extensive surrounding elm suckers are subject to elm leaf beetle that uncontrolled will result in a limited life span for these elms. The pines within Block 7 are at, or approaching, the end of their useful life. Areas of elms, elm suckers, blackberry and urban weed tree species are common and extensive. A group of better quality pine trees are located adjacent to the railway remnants.
- On the south east corner of Block 7 is located a copse of Oak trees that have good landscape and amenity potential. The Pines located on the ridge above these oaks contribute to the landscape setting for the project.
- Adjacent to Dunrossil Drive, on the south western edge of Block 7 is an 8m high unmanaged dense thicket of urban weed tree species and other weed species. Individual senescent pines are located through this area.
- Along the western edge of the brickworks, the pines are at, or approaching, the end of their useful life and the understory is an unmanaged dense thicket of urban weed tree species and other weed species.
- Generally the landscape is unmanaged and weed species (both trees and shrubs (blackberry) and grasses) are prevalent.
- The project site and surrounds would benefit from a landscape renewal plan to,
 - identify the limited number of trees to be retained,
 - manage removal of the poor quality and senescent trees,
 - determine the replacement landscape and
 - develop an implementation and staging strategy to direct the replacement landscape installation.

2. Brickworks Quarry

Tree species located within the quarry include,

- *Pinus radiata* (a weed species),
- *Pinus ponderosa* – generally affected by a fungal disease in the canopy needles. This leads to the decline of the trees. Examples of this fungal attack can be found adjacent to the Forestry School in Banks Street Yarralumla,
- *Pinus sylvestris* – generally poorly performing and an unreliable species in the Canberra area, and
- *Ulmus procera* – affected by Elm Leaf Beetle.

Generally the trees are poorly performed with poor form and structure. Trees are self sown. Most have inherent faults in the tree structure. The majority are located on the steep side slopes of the quarry excavation.

There are isolated better performing individuals located on undisturbed ground outside of the quarry disturbance. Some of the better performing individual trees warrant a 'retain and manage' assessment.



The tree management recommendation for the quarry area as a landscape unit is implementation of a removal strategy. This recommendation is based on the limited opportunity to reduce risk or enhance amenity by horticultural practices and the limited opportunity to enhance the quality of individual trees. This recommendation is based on the limited landscape benefit of retaining the better performing individuals where the resultant landscape is wide spaced individual trees.

3. Plantations adjacent to Denman Street

A *Quercus palustris* plantation is located adjacent to Denman Street. This plantation is poorly performing and has been degraded by neglect and being progressively overgrown by weed understorey and weed tree species. Additional Groups A, B & C of unmaintained and unmanaged weed tree species are located adjacent to Denman Street. Group A is wind blown self seeded pines within the extent of the *Quercus palustris* plantation. Group B is *Quercus* sp. regrowth from a pile of dumped acorns with pine wildings within. Group C is *Quercus* sp. regrowth from a pile of dumped acorns with elm trees and suckers established from bird droppings.

Group H is an isolated collection of large elms and oaks of poor quality requiring work to warrant retention.

The tree management recommendation is the removal of the weed species and establishment of tree management practices to enhance the *Quercus palustris* plantation.

4. Pine Plantation – South-eastern edge of Block 7

Group D refers to the *Pinus radiata* plantation located on the south eastern edge of Block 7. A component of this plantation is located within Block 7 and a component is located within the 30m buffer adjacent to Block 7.

The component within Block 7 consists of wide spaced mature specimens of *P. radiata* with form typical of the species. The risk is of large limb fall.

The component within the 30m buffer consists of close plantation spacing with high canopy on straight poles with typical plantation form and of lesser risk.

This pine plantation is located on the high point of the precinct landform and provides a significant contribution to existing and potential landscape character. This plantation is a significant visual / scenic landscape element.

The tree management recommendation is retention and management of sufficient parts of this plantation so as to provide visual screening of development within the precinct boundaries. Removal of wide spaced mature trees should be subject to a 'visual screening of development' test.

5. Southern extent of Block 7

Trees in this locality include,

- Individual trees of a remnant pine plantation, located on high ground adjacent to overhead power lines, and
- *Quercus cerris* plantation located on lower ground to the south.

This combination of pines on the high ground and oaks on the lower ground presents and forms a visual screen of the precinct from views to the south.



The individual pine trees are of better than lowest quality but include inherent risk from dual leaders and other inherent faults.

The oak plantation is in need of management and selective thinning to alleviate overcrowding issues and to promote the longevity of the plantation.

The tree management recommendation is retention and management of sufficient parts of this plantation so as to provide visual screening of the development within the precinct boundaries. Removal of individual trees of a remnant pine plantation should be subject to a 'visual screening of development' test.

6. Western extent of Block 7

The western extent of Block 7 includes Groups AF, V, O and E.

This locality includes dense vegetation 8-10m high with isolated 20m+ high senescent pine trees, occasional pine wildings and urban weed tree species and shrub species. This area is a visually prominent component of the brickworks/Westbourne Woods landscape character. This area provides a visual screen and vegetative separation of the Yarralumla Brickworks Precinct from Dunrossil Drive and Cotter Road.

Species immediately identifiable include,

- Ulmus procera,
- Sorbus sp.,
- Fraxinus sp.,
- Crataegus sp.,
- Wild Roses,
- Celtis australis,
- Blackberry,
- Robinia pseudoacacia,
- Boxthorn,
- Photinia sp.,
- Broom,
- St Johns Wort and
- Prunus cerasifera nigra

There is evidence of senescent pine trees falling. Fallen timber and broken trunks are found across these Groups. Current ACT Government open space policy is to provide dense planting adjacent to high risk tree plantations to discourage recreational activity and reduce the possibility of accident. This dense understorey of urban tree and shrub weed species provides this exclusion service. Yarralumla residents that continue to use pedestrian paths through this area for recreational activity are at risk of accident from falling trees and branches from the senescent pine trees.

This vegetated area on the western edge of the Yarralumla Brickworks Precinct has conflicting issues.

This vegetated area would be a bushfire asset protection zone (APZ) for development within the precinct. Management of this APZ would include reduction of the fuel load (removal of dense vegetation) consistent with the bushfire risk. Removal of vegetation promotes high risk recreational activity beneath the senescent pine trees.

Retention of the existing weeds and pines is inconsistent with prudent bushfire planning.

Removal of the existing weeds and pines is inconsistent with maintenance of the landscape character of the area.



The western extent of Block 7 and surrounds would benefit from a landscape renewal plan to;

- identify the limited number of trees to be retained,
- manage the removal of the poor quality and senescent trees,
- manage the removal of weed species,
- determine the replacement landscape and
- develop an implementation and staging strategy to direct the replacement landscape installation.

This landscape renewal plan is recommended.

7. Central area of Block 7

This central area of Block 7 contains individual trees of a remnant pine plantation. Most are isolated, poorly performing and exhibiting poor form with clear poles and high canopy tops. There are isolated better performing groups and individuals on the edges and scattered through this area. Within this area are significant *Ulmus procera* sucker regrowth thickets with *Robinia pseudoacacia* weed trees and suckers and understorey weeds of blackberry, privet and boxthorn.

Retention of the small number of better performing trees and removal of the poorly performing trees will result in wide spaced retained trees and the loss of landscape character.

The tree management recommendation is removal of trees and weeds.

8. Northern area of Block 7

This area of Block 7 contains dense *Ulmus procera* sucker fields extending from the Denman Street edge through to the pines located over the heritage railway formations. Adjacent to the heritage railway formations is a cluster of mature, but younger than adjacent Group AF, pine trees. The quality of these trees is variable with a mixture of 'remove' and 'retain and manage'.

Retention of this group of pines adjacent to the railway formations may enhance the precinct.

This group of pines has good landscape and amenity potential and management of the trees is not a significant cost.

Selective thinning to favour the better quality individual trees will result in an enhanced arboricultural and urban amenity assessment for this area overlapping with the heritage railway formations.

The tree management recommendation is to undertake selective thinning and management of the remaining trees to achieve a landscape character coinciding with the railway formations. Remove the dense *Ulmus procera* sucker fields.

9. Brickworks surrounds in Block 1

The Brickworks complex includes isolated trees in random locations across the area. In addition, there is an extensive and significant vegetative edge along the southern and western fence line. This is an unmaintained and unmanaged dense group of weed tree and urban weed species. This forms a significant landscape edge to



the brickworks complex.

Tree 405 is an isolated individual pine tree with better qualities than most trees within the brickworks.

Tree management recommendation is retention and management of trees within this heritage precinct in accordance with the Heritage Plan.

Tree 443 is located on top of a high wall in close proximity to the brickworks buildings. Should this tree fall, it is likely to cause substantial damage to the adjacent brickworks buildings. Removal should be considered in favour of the heritage structures.

Trees 408 and 409 are in close proximity to heritage buildings. These are aggressive weed trees and left to grow in these locations are likely to result in damage to the adjacent structures. Removal should be considered in favour of the heritage structures.

Other trees within the brickworks complex should be considered for potential damage to heritage structures and appropriate action considered.

10. Block 20

Block 20 consists of,

- Group AD located on the northern edge of the asbestos remediation area,
- Group AF located on the southern edge of the asbestos remediation area, and
- resident installed plantings associated with the Lane Poole Place residential area to the north of the fencing to the brickworks and the asbestos remediation area.

Within Group AD are a number of large, better quality *Ulmus procera* trees that have the potential to contribute positively to the landscape character of the area. Retention and management is recommended.

Group AF consists of senescent pines and weed species. Commentary at 7. A landscape renewal plan is recommended.

Resident installed plantings include Groups Y, Z, AA, AB and AC. Group Y is a young planting of *Casuarina* along the fence line. Group Z is a collection of *Fraxinus* and *Liquidamber* trees within mown lawn. Group AA is an ordered planting of plum and apple tree species within mown lawn. Group AB is two rows of Lombardy Poplars adjacent to mown lawn. Group AC is a tight grouping of mature *Ulmus procera* located along the edge of the golf course fence at the northern extent of Group AF.

Retention and management is recommended.

QUALITY ASSURANCE

Contact information

dsb Partners Pty Ltd
Trading as **dsb Landscape Architects**
ABN 94 052 528 293 ACN 052 528 293

Directors: Michael Reeves, Adam Barker & David Pearce

Deakin Chambers
14 Hannah Place
Deakin ACT 2600

Phone 02 6285 1955
Email dsb@dsbla.com.au
Web www.dsbla.com.au

Quality Assurance Information

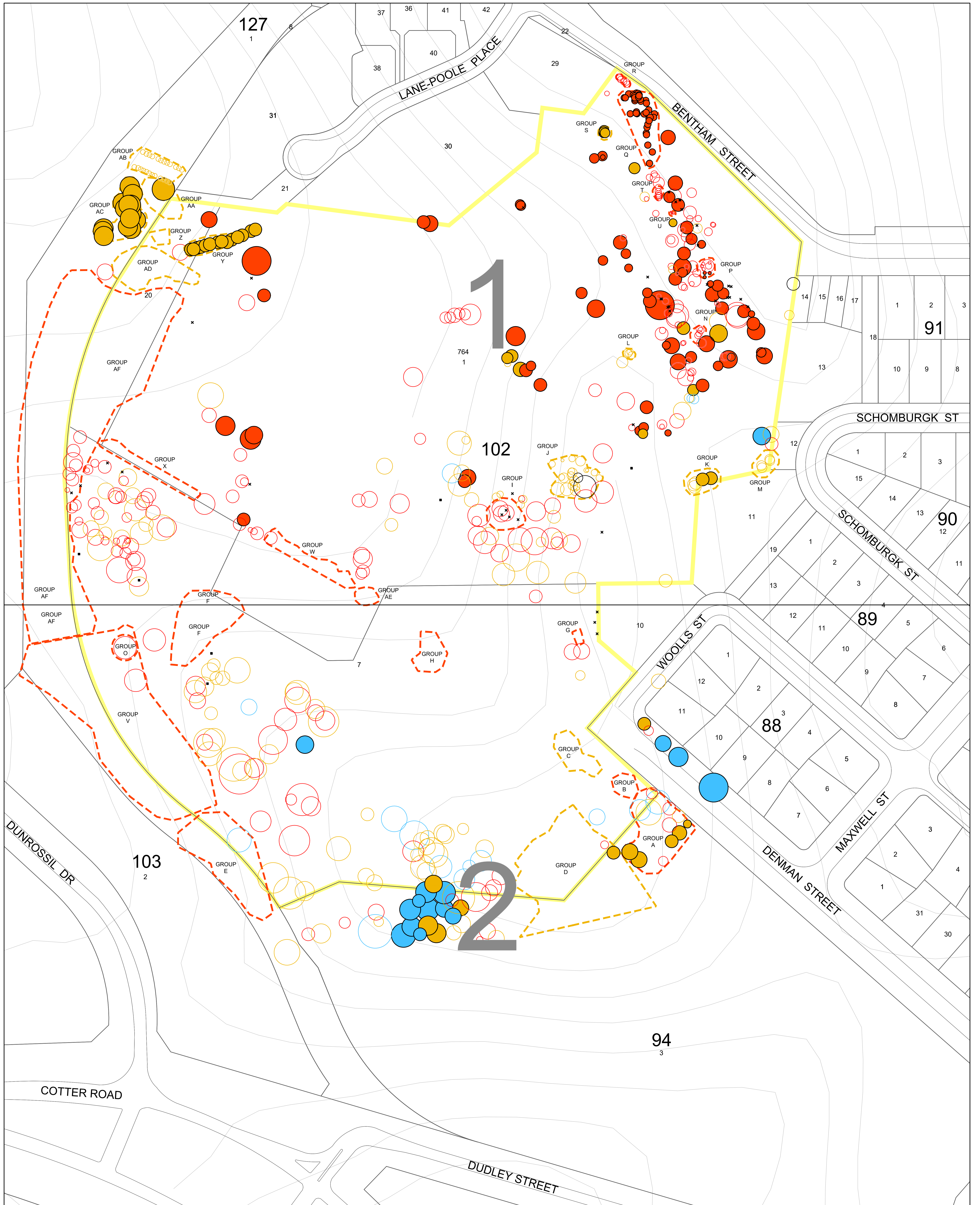
Project: Yarralumla Brickworks Precinct Tree Assesment – Tree Management Report

Job number: 3272
Date: 24 November 2015
Prepared by: Michael Reeves
Reviewed by: Paul Scholtens

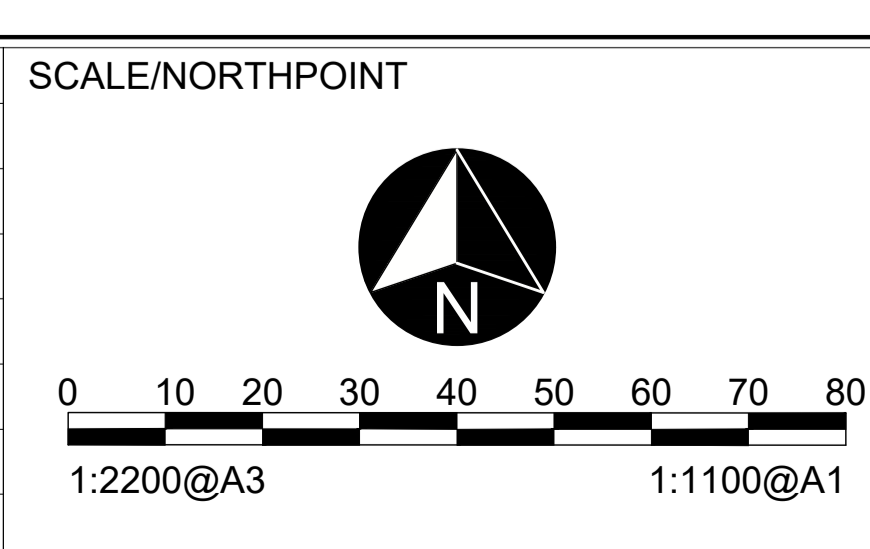
Issue History

Issue Number	Issue Date	Details	Authorised by
1	24 /11/2015	Tree Management Report	Ps



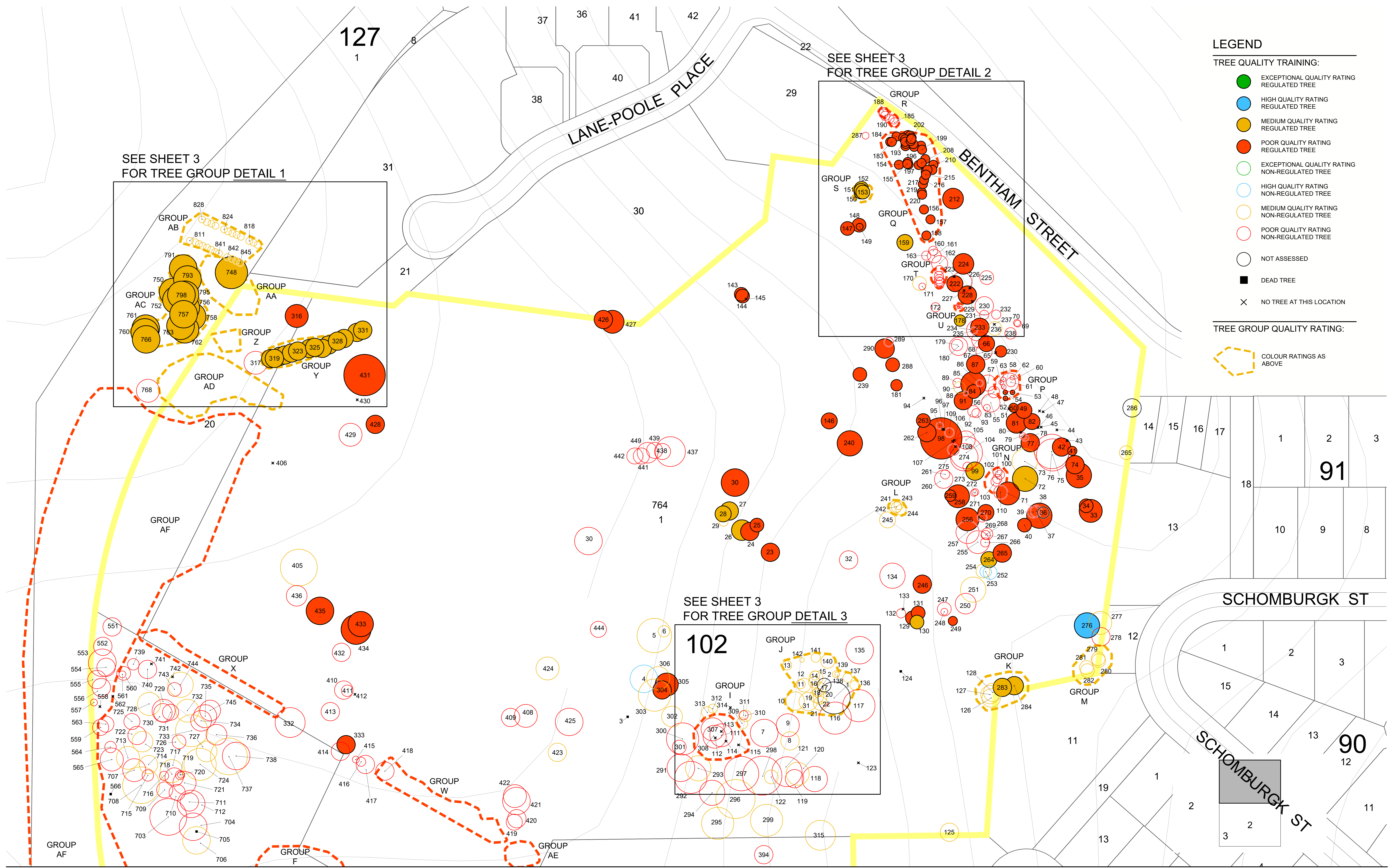


AMENDMENT			
No.	DESCRIPTION	Approved by	Drawn by



PROJECT
**CANBERRA BRICKWORKS
 PRECINCT
 TREE ASSESSMENT**

DRAWING TITLE		
ARBORCULTURAL AMENITY ASSESSEMENT Site Plan		
PROJECT NUMBER P01192	DRAWING NUMBER 00	AMENDMENT
AutoCAD Saved: 12/21/2015	Plotted: 12/21/2015 11:21	By: ERM



LEGEND

TREE QUALITY TRAINING:

- EXCEPTIONAL QUALITY RATING REGULATED TREE
- HIGH QUALITY RATING REGULATED TREE
- MEDIUM QUALITY RATING REGULATED TREE
- POOR QUALITY RATING REGULATED TREE
- EXCEPTIONAL QUALITY RATING NON-REGULATED TREE
- HIGH QUALITY RATING NON-REGULATED TREE
- MEDIUM QUALITY RATING NON-REGULATED TREE
- POOR QUALITY RATING NON-REGULATED TREE
- NOT ASSESSED
- DEAD TREE
- × NO TREE AT THIS LOCATION

TREE GROUP QUALITY RATING:


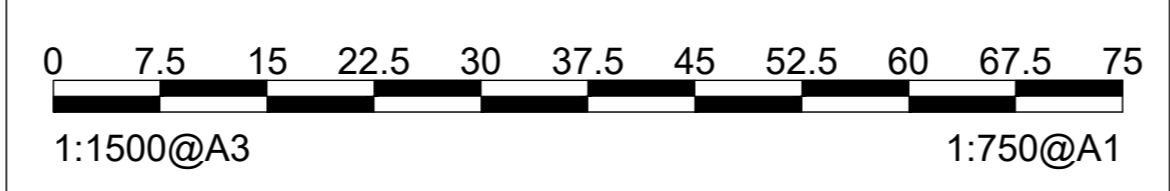
- COLOUR RATINGS AS ABOVE

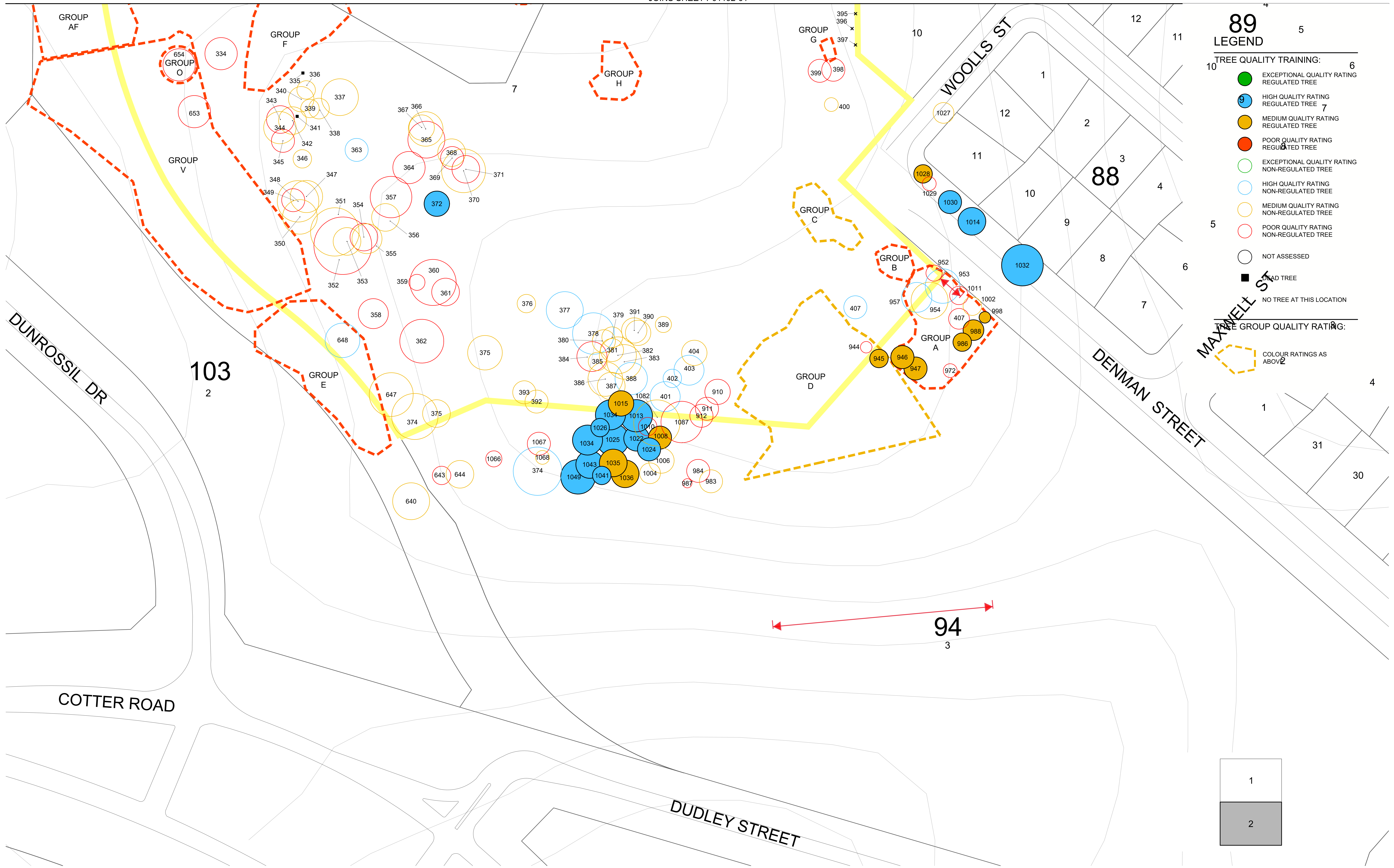
SEE SHEET 3 FOR TREE GROUP DETAIL 1

SEE SHEET 3 FOR TREE GROUP DETAIL 2

SEE SHEET 3 FOR TREE GROUP DETAIL 3

JOINS SHEET P01192-02

NO.	AMENDMENT	APPROVED BY	DATE	REVISED BY	NOTES:	SCALE/NORTHPOINT	DIRECTORATE/DEPARTMENT	PROJECT	DRAWING TITLE	
						  1:1500@A3 1:750@A1		CANBERRA BRICKWORKS PRECINCT TREE ASSESSMENT STUDY	ARBORCULTURAL AMENITY ASSESSMENT Site Plan	
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89 LEGEND

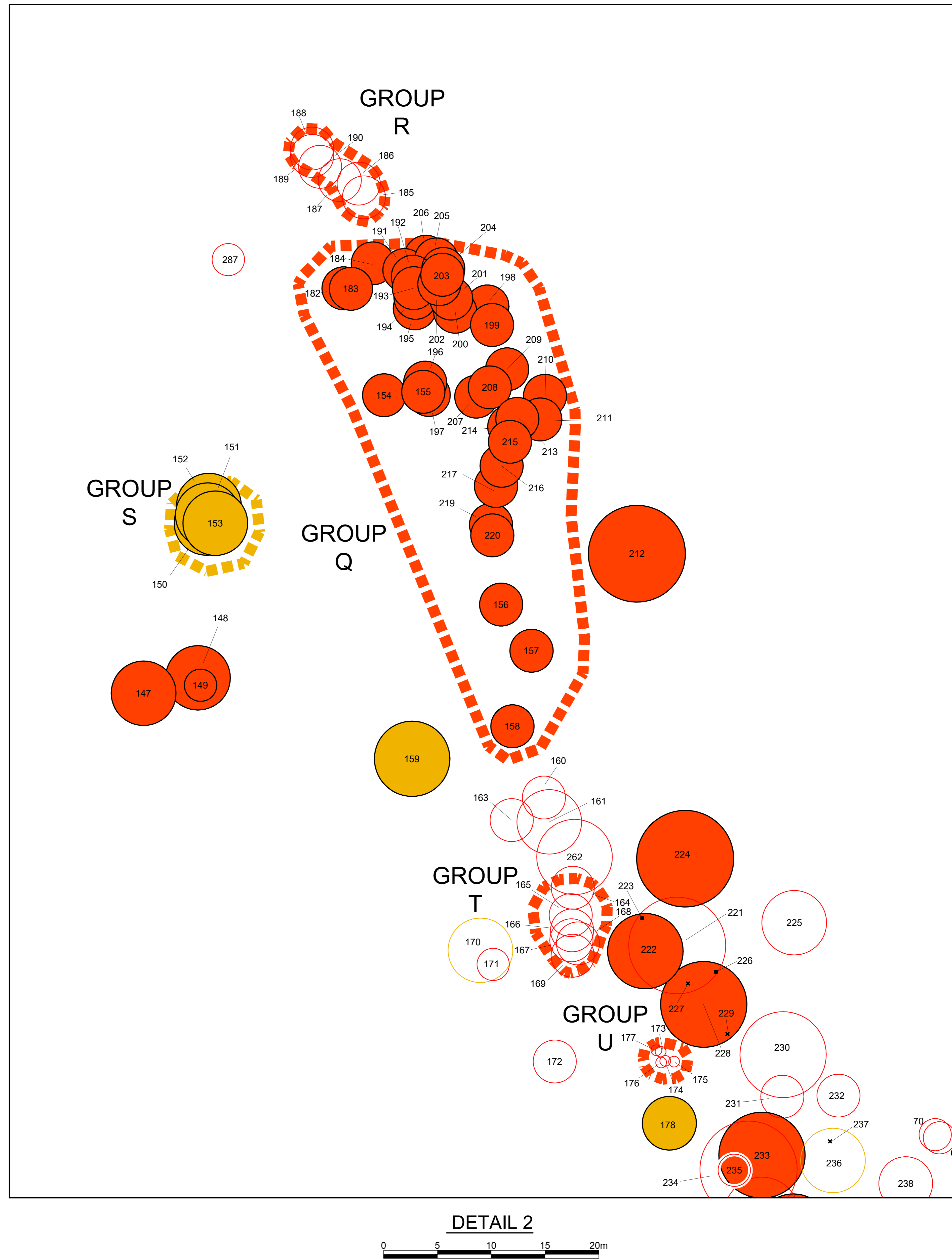
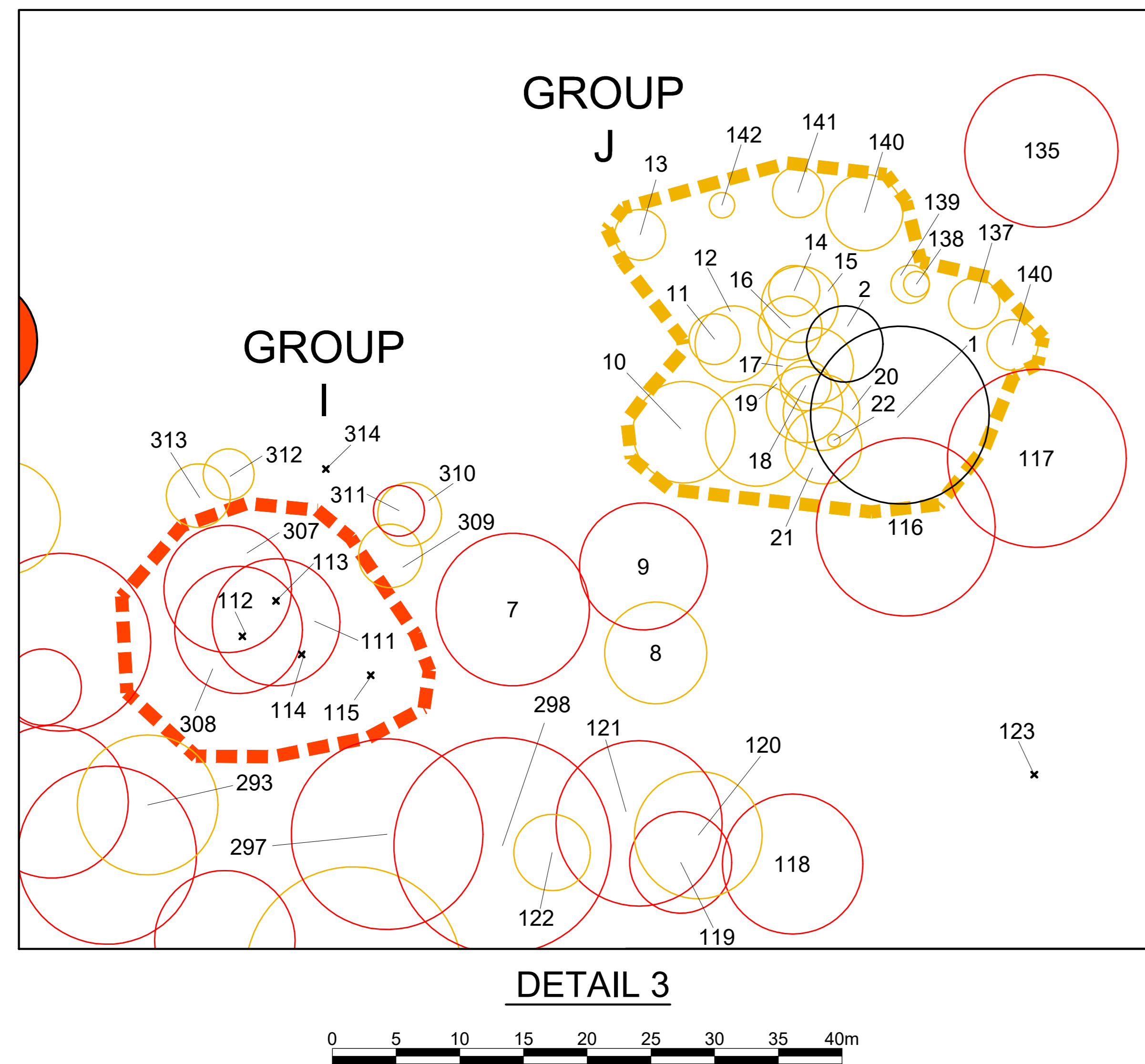
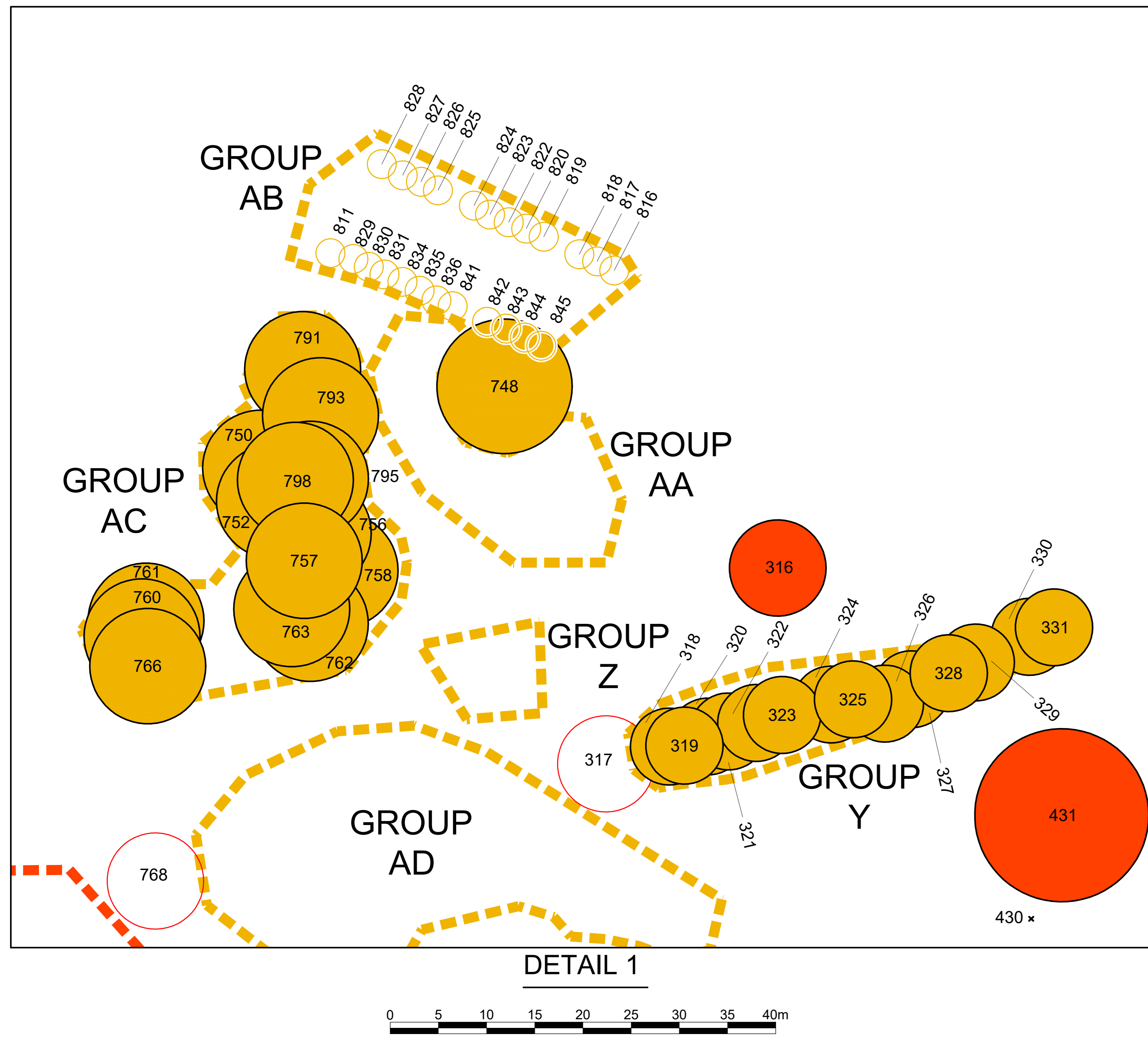
TREE QUALITY TRAINING:

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- 9 ● HIGH QUALITY RATING REGULATED TREE
- 7 ● MEDIUM QUALITY RATING REGULATED TREE
- 6 ● POOR QUALITY RATING REGULATED TREE
- 5 ○ EXCEPTIONAL QUALITY RATING NON-REGULATED TREE
- 4 ○ HIGH QUALITY RATING NON-REGULATED TREE
- 3 ○ MEDIUM QUALITY RATING NON-REGULATED TREE
- 2 ○ POOR QUALITY RATING NON-REGULATED TREE
- 1 ○ NOT ASSESSED
- DEAD TREE
- NO TREE AT THIS LOCATION

TREE GROUP QUALITY RATING:

- 10 ● COLOUR RATINGS AS ABOVE

NO.	AMENDMENT	APPROVED BY	DATE	REVISED BY	NOTES	SCALE/NORTHPOINT	DIRECTORATE/DEPARTMENT	PROJECT	DRAWING TITLE		
						 0 7.5 15 22.5 30 37.5 45 52.5 60 67.5 75 1:1500@A3 1:750@A1		CANBERRA BRICKWORKS PRECINCT TREE ASSESSMENT STUDY	ARBORCULTURAL AMENITY ASSESSMENT Site Plan		
								PROJECT NUMBER P01192	DRAWING NUMBER 02	AMENDMENT AutoCAD Saved: 21/12/2015 Plotted: 21/12/2015 11:24:21 AM By:ERM	



LEGEND

- TREE QUALITY TRAINING:**
- EXCEPTIONAL QUALITY RATING REGULATED TREE
 - HIGH QUALITY RATING REGULATED TREE
 - MEDIUM QUALITY RATING REGULATED TREE
 - POOR QUALITY RATING REGULATED TREE
 - EXCEPTIONAL QUALITY RATING NON-REGULATED TREE
 - HIGH QUALITY RATING NON-REGULATED TREE
 - MEDIUM QUALITY RATING NON-REGULATED TREE
 - POOR QUALITY RATING NON-REGULATED TREE
 - NOT ASSESSED
 - DEAD TREE
 - ×
 NO TREE AT THIS LOCATION

TREE GROUP QUALITY RATING:

- COLOUR RATINGS AS ABOVE

NO.	AMENDMENT	APPROVED BY	DATE	REVISED BY	NOTES:

SCALE/NORTHPOINT



SCALE AS SHOWN

DIRECTORATE/DEPARTMENT

PROJECT

**CANBERRA BRICKWORKS
PRECINCT
TREE ASSESSMENT STUDY**

DRAWING TITLE
**ARBORCULTURAL AMENITY
ASSESSMENT
Details**

PROJECT NUMBER	DRAWING NUMBER	AMENDMENT
P01192	03	
AutoCAD Saved: 21/12/2015	Plotted: 21/12/2015 11:26:52 AM	By:ERM

Appendix C

Tree Assessment Update issued on 17 January 2020

Company	DOMA GROUP and BLOC	Date	17 January 2020
Attention	David Murphy	This Page +	3
From	Michael Reeves	Project No.	3862
Project	Yarralumla Brickworks Precinct		
Subject	Tree Assessment Update		

dsb Landscape Architects

14 Hannah Place, Deakin, ACT, 2600
02 6285 1955 dsb@dsbla.com.au www.dsbla.com.au

David Murphy,

dsb Landscape Architects was previously engaged by the ACT Land Development Agency to undertake a tree assessment and report on Blocks 1, 20 and 7 Section 102 Yarralumla (The Yarralumla Brickworks Precinct).

A Tree Assessment Report and Tree Management Report was prepared Project Number 3272 and dated 25 November 2015.

dsb Landscape Architects has been providing at Yarralumla Brickworks, tree assessment services to the Land Development Agency since 2013.

DOMA GROUP and BLOC are preparing an Estate Development Plan submission to ACT Government. dsb Landscape Architects have been engaged to provide arborist services to support this EDP.

dsb Landscape Architects has been engaged in discussions with ACT Tree Protection Unit regarding arborist services to support this EDP. Mr Mark Diehm indicated that a completely new Tree Assessment Report would not be required and that a Tree Assessment Update of the Tree Assessment and Report prepared in 2015, based upon recent inspection of the site, would be sufficient.

dsb Landscape Architects' arborist Paul Scholtens and Registered Landscape Architect Michael Reeves attended to Blocks 1, 20 and 7 Section 102 Yarralumla (The Yarralumla Brickworks Precinct) on Wednesday 15 January 2020. Arborist Paul Scholtens and Registered Landscape Architect Michael Reeves have conducted the tree assessments in 2013 and later 2015 and are familiar with the location, the asbestos remediation works by CAPCORP, the trees and the weather over this extended period.

The full extent of Blocks 1, 20 and 7 Section 102 Yarralumla (The Yarralumla Brickworks Precinct) was investigated and the current condition of the trees recorded.

In 2015, the predominant species within the site is *Pinus radiata* (weed species), *Pinus ponderosa* and *Pinus sylvestris* and *Ulmus procera* and various tree and shrub weed species. This remains the case and apart from isolated tree deaths in the period 2015 to 2020 the trees within the precinct remain.

In 2015 it was noted that generally the condition of the trees had deteriorated since the 2013 vegetation assessment. In 2020 a similar deteriorating condition assessment prevails. In 2015, the predominant condition was POOR with a cohort of MEDIUM quality trees. In 2020, the majority of the trees are POOR and the greater proportion of trees previously assessed as MEDIUM are now POOR.

In 2015, it was reported that within the Quarry, the trees are Pines of low quality. *Pinus ponderosa* (a dominant species) is subject to a fungal attack to the needles and these trees have a limited life span due to this. *Pinus sylvestris* is an unreliable species in the Canberra area. The majority of trees were assessed POOR with Group J MEDIUM. In 2020, the POOR trees have deteriorated further and the Group J MEDIUM trees have maintained this assessment. Some of the MEDIUM assessment isolated trees adjacent to the Denman Street fence have deteriorated with Tree 296 now POOR.



The majority of trees within the quarry are located on steep slopes and in 2015 an opinion was expressed that there may be a risk of falling trees. Evidence from the 2020 inspection revealed that very few pines have fallen in the intervening period despite the deterioration in their condition. Most of the pines within the quarry are at or approaching the end of their safe useful life. Retention for landscape and amenity purposes may be considered in the short term whilst other landscape plantings are establishing.

A number of resident-planted trees are located along the eastern boundary. In 2015 their assessment was HIGH and MEDIUM. In 2020 these assessments remain unchanged.

In 2015, it was reported that within Block 7, the Pines generally are of low quality. The isolated elm trees and extensive surrounding elm suckers are subject to elm leaf beetle that uncontrolled will result in a limited life span for these elms. The pines within Block 7 are at, or approaching, the end of their useful life. Areas of elms, elm suckers, blackberry and urban weed tree species are common and extensive. A group of better-quality pine trees are located adjacent to the railway remnants.

In 2020, within Block 7 the pines have deteriorated further and POOR assessment prevails. The blackberry are less predominant. The Elms and suckers are extensive and the condition is POOR. The better-quality pine trees adjacent to the railway embankments have deteriorated further and are now commonly POOR. A number of pines within this area are of less-worse condition and, should weather conditions improve, they may be worthy of retention with extensive remedial attention (Trees 733, 727, 724, 737, 738, 723, 713, 708, 714 and 718).

Along the western and southwestern perimeter of the precinct, the pines reported in 2015 as senescent and at the end of their safe useful life have deteriorated further and continue their POOR assessment.

Along the northern boundary, on the access from Lane Poole Place the planted mound remains under maintenance by the adjacent lessees. The row of Casuarina adjacent to the security fence has deteriorated in condition but retains the MEDIUM assessment.

In 2015, it was reported of a *Quercus palustris* plantation located adjacent to Denman Street. This plantation is poorly performing and has been degraded by neglect and being progressively overgrown by weed understorey and weed tree species. Additional Groups A, B & C of unmaintained and unmanaged weed tree species are located adjacent to Denman Street. Group A is wind blown self seeded pines within the extent of the *Quercus palustris* plantation. Group B is *Quercus* sp. regrowth from a pile of dumped acorns with pine wildings within. Group C is *Quercus* sp. regrowth from a pile of dumped acorns with elm trees and suckers established from bird droppings.

Group H is an isolated collection of large elms and oaks of poor quality requiring work to warrant retention.

In 2020, these trees adjacent to Denman Street have deteriorated further with current POOR assessment common.

If we can be of any further assistance to you in regard to the project please do not hesitate to contact me.

Regards,

A handwritten signature in blue ink that reads "M. Reeves". The signature is fluid and cursive, with the first name "Michael" and the last name "Reeves" clearly legible.

Michael Reeves

Director

Registered Landscape Architect AILA #486

1. QUALITY ASSURANCE

Contact information:

DSB Partners Pty Ltd
Trading as dsb Landscape Architects
ABN 94 052 528 293

Directors: Adam Barker, David Pearce and Michael Reeves

Canberra

Deakin Chambers
14 Hannah Place
Deakin ACT 2600

Melbourne

331/173 City Road
Southbank, VIC 3006

Phone: (02) 6285 1955

Email: dsb@dsbla.com.au

Web: www.dsbla.com.au

Quality assurance information

Report title: Yarralumla Brickworks Tree Assessment Update _____

Job number: 3862 _____

Date: 17 January 2020 _____

Prepared by: Michael Reeves _____

Reviewed by: Paul Scholtens _____

Issue history

Issue Number	Issue Date	Details	Authorised by
1	17/1/20	Yarralumla Brickworks Tree Assessment Update	Ps





dsb

Landscape
Architects

CANBERRA

1.34 Level 1 33 Allara Street
Canberra City
ACT 2601

MELBOURNE

331/173 City Road
Southbank - Melbourne
VIC 3006

t: 02 62851955

e: dsb@dsbla.com.au

www.dsbla.com.au



S O C I A L



dsb_landscapearchitects