



ARBORICULTURAL DEVELOPMENT IMPACT ASSESSMENT REPORT

Sydney Metro Line Wide Works, Campsie NSW

REVISION E

23rd March 2022

**Prepared for
Systems Connect**

Prepared by

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Executive Summary

This Revision E of the Arboricultural Development Impact Assessment Report has been commissioned by Systems Connect to update our previous Revision C (Commissioned by AMBS Ecology & Heritage Pty Ltd) to report on trees within the site of Sydney Metro Line Wide Works, Campsie NSW. The site is the location of a 33-kilovolt electricity cable that will be part of the infrastructure for the Sydney Metro City & Southwest (SMCSW) Sydenham to Bankstown works. The cable will be required for energy transmission between an existing Ausgrid electrical substation (about one kilometre south of Canterbury Station in Earlwood) and a new traction substation to be located in Campsie. Installation of the cable will generally involve trenching along the alignment. In some places this will require the clearing or trimming of trees or other vegetation. This Report outlines the health, condition and stability of all trees within areas that may be impacted by the proposed development as well as their viability for retention within the context of the proposed works.

This report has been prepared in response to Condition E5 of the Conditions of Approval, which requires that an independent experienced and suitably qualified arborist prepare a comprehensive Tree Report(s) before removing any trees. The report(s) must identify the impacts of the CSSI on trees and vegetation within and adjacent to the Construction footprint. The report(s) must include (in summary):

- (a) a description of the conditions of the tree(s) and its amenity and visual value;
- (b) consideration of all options to avoid tree removal; and
- (c) measures to avoid the removal of trees or minimise damage to existing trees and ensure the health and stability of those trees to be protected.

On the 12th of December 2020, Glenn Bird of Birds Tree Consultancy attended site and inspected the subject trees from the ground. Glenn was accompanied by Systems Connect personnel including Kate Truscott, Wee Tee and Dean Kellet, and ecologist Dr James Schlunke. The entire length of the route was traversed on foot and input was provided regarding minimising adverse impacts on trees and other flora.

On 16th of July 2021 This report was revised at the request of Systems Connect to assess the impact of the realignment of the bulk power conduit on Tree 6.

On 23 March 2022 This report was revised at the request of Systems Connect to assess the impact of required construction transport on Tree 97.

A total of 105 trees were assessed. Nine of these will be subject to a major encroachment and will need to be removed. The crown of Tree 97 is impacted by the required construction transport to such extent that this tree is not viable to be retained. An additional tree (Tree 12) has significant decay and cambium damage and is recommended for removal. Four trees subject to a major encroachment may be able to be retained, but only with revisions to design and construction techniques. A number of other trees will be subject to encroachment but could be retained under the supervision of the Site Arborist. Note that "Tree 3" is a grove of small trees or large shrubs that is a planted hedge of *Syzygium paniculatum*. This grove is between 3-4m wide, and trees are planted at approximately 1m centres. This grove consists of approximately 100 individual plants of which between 10-20 will be impacted and required to be removed (with the exact number to be determined once clearing limits are defined on site). Thus, the total number of trees to be removed is ten, plus the 10-20 stems from the hedge.

The Tree Protection Zone (TPZ) of Trees 2, 3, 4, 5, 6, 8, 99, 100, 101 and 102 are encroached by the proposed construction and required earthworks by a major encroachment as defined by

AS4970-2009 Protection of Trees on Development Sites. These trees will not be viable to be retained and are recommended for removal.

The TPZ of Trees 1, 9, 22, 44, 45, 46, 48, 57, 59, 62, 68, 69, 77, 87, 89, 90, 91, 94 will be encroached by the proposed development by greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of the impediment to root development posed by the compacted road base of the existing roadway and these species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, these trees will be viable to be retained under the proposed development with supervision and direction by the Site Arborist.

The Tree Protection Zone (TPZ) of Trees 10, 19, 88 and 95 will be encroached by a major encroachment which has the potential to significantly impact the viability of these trees. The proposed excavation is outside of the Structural Root Zone (SRZ) being the area of root development required for the stability of the tree. The SRZ's for Trees 10, 19, 88 and 95 are an area with a radius of 3.6m, 3.5m, 3.3m and 2.6m, respectively. Revised design and construction methods will be required in order for these trees to be retained. These revisions include:

1. Re-alignment of proposed line and trench outside of the TPZ of the tree where possible.
2. All excavation within the TPZ to be carried out by non-destructive excavation techniques under the supervision of the Site arborist (minimum qualification AQF Level 5). Approved nondestructive techniques include an Air Knife or, if an Air Knife is not able to be used, a Vacuum truck strictly limited to pressures less than 1000Psi.
3. No tree roots greater than 30mm are to be cut within the TPZ and the new cable is to be threaded either through or under the roots.
4. Encroachment within the TPZ is to be to the maximum extent shown on the drawings.

If these revised methods are not able to be implemented the viability of these trees will be reduced and we would recommend the removal of these trees.

The crown of Tree 97 will be impacted by the proposed construction traffic. The transformer is required to be transported through this area and the transporter and transformer have dimensions of a height of 5050mm, width of 3800mm. This will result in more than 50% of the crown of this tree impacted. Crown reduction pruning would leave this tree with poor form and unbalanced canopy. We recommend the removal of this tree and replacement with suitable replacement species.

The canopies of Trees 10, 19 and 20 may be impacted by construction machinery during the excavation phase of the works. All works within the canopy of these trees are to be carried out under the supervision of the Site Arborist. Where there is a potential impact on the canopy, canopy reduction pruning is to be carried out by a qualified arborist minimum qualification AQF Level 3 under the supervision of the Site Arborist. All pruning is to be carried out in accordance with AS4373-2007 *Pruning of Amenity Trees*. There is to be no other impact on the canopy of the subject trees. If further impacts are noted these are to be brought to the attention of the Site Arborist.

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1.0 Scope of Works

1.1 Background

This Revision E of the Arboricultural Development Impact Assessment Report has been commissioned by Systems Connect to update our previous Revision D to report on trees within the site of Sydney Metro Line Wide Works, Campsie NSW. The site is the location of a 33-kilovolt electricity cable that will be part of the infrastructure for the Sydney Metro City & Southwest (SMCSW) Sydenham to Bankstown works. The cable will be required for energy transmission between an existing Ausgrid electrical substation (about one kilometre south of Canterbury Station in Earlwood) and a new traction substation to be located in Campsie. Installation of the cable will generally involve trenching along the alignment. In some places this will require the clearing or trimming of trees or other vegetation. This Report outlines the health, condition and stability of all trees within areas that may be impacted by the proposed development as well as their viability for retention within the context of the proposed works.

Revision E of this report has been commissioned to include the potential impact of the required construction traffic on Tree 97.

This report has been prepared in response to Condition E5 of the Conditions of Approval, which requires that:

“The Proponent must commission an independent experienced and suitably qualified arborist, to prepare a comprehensive Tree Report(s) before removing any trees as detailed in the documents listed in Condition A1. The Tree Report may be prepared for the entire CSSI or separate reports may be prepared for individual areas where trees are required to be removed. The report(s) must identify the impacts of the CSSI on trees and vegetation within and adjacent to the

Construction footprint. The report(s) must include:

- (a) a description of the conditions of the tree(s) and its amenity and visual value;*
- (b) consideration of all options to avoid tree removal, including relocation of services, redesign or relocation of ancillary components (such as substations, fencing etc.) and reduction of standard offsets to underground services; and*
- (c) measures to avoid the removal of trees or minimise damage to existing trees and ensure the health and stability of those trees to be protected. This includes details of any proposed canopy or root pruning, root protection zone, excavation, site controls on waste disposal, vehicular access, storage of materials and protection of public utilities.*

A copy of the report(s) must be submitted to the Planning Secretary before the removal or pruning of any trees, including those affected by site establishment Work. All recommendations of the report must be implemented by the Proponent, unless otherwise agreed by the Planning Secretary.”

1.2 Methods

On the 12th of December 2019, Glenn Bird of Birds Tree Consultancy attended site and inspected the subject trees from the ground. There was no aerial inspection carried out. A Visual Tree Assessment was undertaken in accordance with Visual Tree Assessment (VTA) guidelines (Mattheck and Breloer, 1994). Tree heights were measured using a Nikon Forestry 550 Heightmeter. Glenn was accompanied by Systems Connect personnel including Kate Truscott, Wee Tee and Dean Kellet, and ecologist Dr James Schlunke. The entire length of the route was traversed on foot and input was provided regarding minimising adverse impacts on trees and other flora.

1.3 Structure

The structure of this report is as follows:

- Sections 3, 4 and 5 respond to Condition E5 (a). Section 3 provides a brief description of each tree assessed. Section 4 provides an assessment of the Landscape Significance of each tree, based on the standardised rating system developed by the Institute of Australian Consulting Arborists, and is a factor of the health and condition of the tree, vitality, the form of the tree, environmental, cultural, amenity and heritage value. Section 5 provides the Tree Retention Value of each tree.
- Sections 6 and 7 respond to Condition E5 (b). Options to avoid tree removal along the proposed route were discussed on-site during the inspection on 12 December. Section 6.1 defines Tree Protection Zones (TPZs) for each tree and assesses the encroachment of the route on the TPZs. Section 6.2 considers the likely impact on each tree and makes recommendations on which trees can be retained and which trees will need to be removed. Section 7 summarises the outcome and makes recommendations regarding revised design and construction methods that may be able to be implemented to protect trees of high retention value.
- Section 8 responds to Condition E5 (c) and provides a range of tree protection measures to be implemented prior to and during construction.

2.0 Site Analysis

2.1 Site

The subject site is Sydney Metro Line Wide Works, Campsie NSW. The subject trees are located within or adjacent to the boundaries of this site. The works include the installation of new electrical cables including trenching to the extent shown on drawings.

2.2 Topography

Refer to detail survey for greater detail of levels. All of the trees with the exception of trees 1 to 20 are in close proximity to the existing kerbs and roadways.

2.3 Identification

Trees were defined in accordance with the definition provided in the Conditions of Approval, i.e., "Long lived woody perennial plant greater than (or usually greater than) 3m in height with one of relatively few main stems or trunks". Trees are as identified in the attached inspection forms in Appendix C and shown in Tree location Plan A01 in Appendix D.

2.4 Soils

Soil material and horizons were not tested for this report.

2.4 Documentation

This Revision E includes the realignment of the bulk power conduit as defined by Aurecon Design Drawing AN20739 Dated 09/12/2020.

The following trees were inspected from the ground and the following items identified. Please refer also to the attached inspection data in Appendix A.

3.1. Tree 1. *Corymbia maculata*

This mature tree is approximately 23m tall with a canopy spread of 13m. It has a single trunk with a diameter at breast height (DBH) of 550mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.2. Tree 2. *Banksia integrifolia*

This mature tree is approximately 11m tall with a canopy spread of 5m. It has a single trunk with a DBH of 250mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.3. Tree 3. *Syzygium paniculatum*

This is a grove of planted trees with a representative height of approximately 6m tall with a canopy spread of 3m. It has a representative DBH of 120mm. This grove of trees is in good health and condition and consists of approximately 100 individuals that are spaced at approximately 1m centres.

3.4. Tree 4. *Banksia integrifolia*

This mature tree is approximately 9m tall with a canopy spread of 4m. It has a single trunk with a DBH of 240mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.5. Tree 5. *Banksia integrifolia*

This mature tree is approximately 9m tall with a canopy spread of 6m. It has a single trunk with a DBH of 240mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.6. Tree 6. *Banksia integrifolia*

This mature tree is approximately 7m tall with a canopy spread of 4m. It has a single trunk with a DBH of 220mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.7. Tree 7. *Banksia integrifolia*

This mature tree is approximately 8m tall with a canopy spread of 5m. It has a single trunk with a DBH of 280mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.8. Tree 8. *Casuarina spp*

This mature tree is approximately 18m tall with a canopy spread of 8m. It has a single trunk with a DBH of 455mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.9. Tree 9. *Casuarina spp*

This mature tree is approximately 19m tall with a canopy spread of 13m. It has a single trunk with a DBH of 615mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.10. Tree 10. *Eucalyptus grandis*

This mature tree is approximately 29m tall with a canopy spread of 21m. It has a single trunk with a DBH of 1255mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.11. Tree 11. *Eucalyptus saligna*

This mature tree is approximately 18m tall with a canopy spread of 8m. It has a single trunk with a DBH of 380mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.12. Tree 12. *Eucalyptus saligna*

This mature tree is approximately 14m tall with a canopy spread of 6m. It has a single trunk with a DBH of 310mm. This tree is in fair health and condition with minimal deadwood and epicormic growth. There is evidence of a wound. Damage to the trunk visually appears to be approximately 75% of the cambium. This tree is recommended for removal.

3.13. Tree 13. *Eucalyptus saligna*

This mature tree is approximately 16m tall with a canopy spread of 4m. It has a single trunk with a DBH of 240mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.14. Tree 14. *Casuarina spp*

This mature tree is approximately 11m tall with a canopy spread of 6m. It has a single trunk with a DBH of 255mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.15. Tree 15. *Tristaniopsis laurina*

This mature tree is approximately 5m tall with a canopy spread of 4m. It has multiple (3) co-dominant trunks from the base with an aggregate DBH of 300mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.16. Tree 16. *Syncarpia glomulifera*

This mature tree is approximately 8m tall with a canopy spread of 5m. It has a single trunk with a DBH of 310mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.17. Tree 17. *Syncarpia glomulifera*

This mature tree is approximately 5m tall with a canopy spread of 2m. It has a single trunk with a DBH of 130mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.18. Tree 18. *Syncarpia glomulifera*

This mature tree is approximately 8m tall with a canopy spread of 4m. It has a single trunk with a DBH of 270mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.19. Tree 19. *Eucalyptus robusta*

This mature tree is approximately 28m tall with a canopy spread of 18m. It has a single trunk with a DBH of 1035mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.20. Tree 20. *Eucalyptus robusta*

This mature tree is approximately 28m tall with a canopy spread of 15m. It has a single trunk with a DBH of 915mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.21. Tree 21. *Callistemon viminalis*

This mature tree is approximately 5m tall with a canopy spread of 4m. It has multiple co-dominant trunks from the base with an aggregate DBH of 48mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.22. Tree 22. *Melaleuca salicina*

This mature tree is approximately 10m tall with a canopy spread of 6m. It has twin co-dominant trunks from 1.5m above the base with a DBH of 450mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.23. Tree 23. *Elaeocarpus reticulatis*

This semi-mature tree is approximately 4m tall with a canopy spread of 1m. It has a single trunk with a DBH of 50mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.24. Tree 24. *Elaeocarpus reticulatis*

This semi-mature tree is approximately 4m tall with a canopy spread of 2m. It has a single trunk with a DBH of 75mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.25. Tree 25. *Elaeocarpus reticulatis*

This mature tree is approximately 3m tall with a canopy spread of 1m. It has a single trunk with a DBH of 100mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.26. Tree 26. *Callistemon viminalis*

This mature tree is approximately 5m tall with a canopy spread of 4m. It has a single trunk with a DBH of 205mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.27. Tree 27. *Callistemon viminalis*

This mature tree is approximately 6m tall with a canopy spread of 6m. It has twin co-dominant trunks from the base with an aggregate DBH of 520mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.28. Tree 28. *Callistemon viminalis*

This mature tree is approximately 6m tall with a canopy spread of 4m. It has twin co-dominant trunks from the base with an aggregate DBH of 380mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.29. Tree 29. *Callistemon viminalis*

This mature tree is approximately 4.5m tall with a canopy spread of 3m. It has a single trunk with a DBH of 220mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.30. Tree 30. *Callistemon viminalis*

This mature tree is approximately 2m tall with a canopy spread of 2m. It has a single trunk with a DBH of 90mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.31. Tree 31. *Stenocarpus sinuatus*

This mature tree is approximately 4m tall with a canopy spread of 2m. It has a single trunk with a DBH of 110mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.32. Tree 32. *Callistemon viminalis*

This mature tree is approximately 4.5m tall with a canopy spread of 3m. It has a single trunk with a DBH of 275mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.33. Tree 33. *Olea europaea*

This mature tree is approximately 4.5m tall with a canopy spread of 3m. It has a single trunk with a DBH of 300mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.34. Tree 34. *Callistemon viminalis*

This mature tree is approximately 4m tall with a canopy spread of 3m. It has a single trunk with a DBH of 300mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.35. Tree 35. *Callistemon viminalis*

This mature tree is approximately 4m tall with a canopy spread of 3m. It has multiple co-dominant trunks from the base with an aggregate DBH of 355mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.36. Tree 36. *Callistemon viminalis*

This mature tree is approximately 6m tall with a canopy spread of 7m. It has multiple (3) co-dominant trunks from the base with an aggregate DBH of 600mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.37. Tree 37. *Callistemon viminalis*

This mature tree is approximately 4m tall with a canopy spread of 3m. It has a single trunk with a DBH of 380mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.38. Tree 38. *Callistemon viminalis*

This mature tree is approximately 4m tall with a canopy spread of 3m. It has twin co-dominant trunks from the base with an aggregate DBH of 430mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.39. Tree 39. *Callistemon viminalis*

This mature tree is approximately 5m tall with a canopy spread of 3m. It has a single trunk with a DBH of 485mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.40. Tree 40. *Callistemon viminalis*

This mature tree is approximately 5m tall with a canopy spread of 4m. It has a single trunk with a DBH of 315mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.41. Tree 41. *Callistemon viminalis*

This mature tree is approximately 7m tall with a canopy spread of 3m. It has a single trunk with a DBH of 240mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.42. Tree 42. *Callistemon viminalis*

This mature tree is approximately 9m tall with a canopy spread of 6m. It has a single trunk with a DBH of 240mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.43. Tree 43. *Callistemon viminalis*

This mature tree is approximately 8m tall with a canopy spread of 6m. It has a single trunk with a DBH of 380mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.44. Tree 44. *Callistemon viminalis*

This mature tree is approximately 7m tall with a canopy spread of 5m. It has twin co-dominant trunks from the base with an aggregate DBH of 435mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.45. Tree 45. *Callistemon viminalis*

This mature tree is approximately 7m tall with a canopy spread of 6m. It has a single trunk with a DBH of 490mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.46. Tree 46. *Callistemon viminalis*

This mature tree is approximately 9m tall with a canopy spread of 6m. It has multiple (3) co-dominant trunks from the base with an aggregate DBH of 475mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.47. Tree 47. *Melaleuca bracteata*

This mature tree is approximately 6m tall with a canopy spread of 3m. It has a single trunk with a DBH of 115mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.48. Tree 48. *Callistemon viminalis*

This mature tree is approximately 10m tall with a canopy spread of 8m. It has multiple (3) co-dominant trunks from the base with an aggregate DBH of 765mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.49. Tree 49. *Tristaniopsis laurina*

This mature tree is approximately 5m tall with a canopy spread of 3m. It has a single trunk with a DBH of 200mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.50. Tree 50. *Callistemon viminalis*

This mature tree is approximately 10m tall with a canopy spread of 7m. It has twin co-dominant trunks from the base with an aggregate DBH of 280mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.51. Tree 51. *Callistemon viminalis*

This mature tree is approximately 5m tall with a canopy spread of 4m. It has twin co-dominant trunks from the base with an aggregate DBH of 190mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.52. Tree 52. *Callistemon viminalis*

This mature tree is approximately 8m tall with a canopy spread of 3m. It has a single trunk with a DBH of 245mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.53. Tree 53. *Callistemon viminalis*

This mature tree is approximately 8m tall with a canopy spread of 6m. It has a single trunk with a DBH of 324mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.54. Tree 54. *Olea europaea*

This mature tree is approximately 3m tall with a canopy spread of 1m. It has a single trunk with a DBH of 50mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.55. Tree 55. *Corymbia ficifolia*

This mature tree is approximately 5m tall with a canopy spread of 5m. It has a single trunk with a DBH of 350mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.56. Tree 56. *Fraxinus griffithii*

This mature tree is approximately 6m tall with a canopy spread of 5m. It has multiple co-dominant trunks from the base with an aggregate DBH of 255mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.57. Tree 57. *Callistemon viminalis*

This mature tree is approximately 8m tall with a canopy spread of 6m. It has multiple co-dominant trunks from the base with an aggregate DBH of 445mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.58. Tree 58. *Tristaniopsis laurina*

This mature tree is approximately 2m tall with a canopy spread of 2m. It has a single trunk with a DBH of 105mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.59. Tree 59. *Tristaniopsis laurina*

This mature tree is approximately 9m tall with a canopy spread of 6m. It has a single trunk with a DBH of 415mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.60. Tree 60. *Fraxinus griffithii*

This mature tree is approximately 6m tall with a canopy spread of 6m. It has a single trunk with a DBH of 215mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.61. Tree 61. *Jacaranda mimosifolia*

This mature tree is approximately 8m tall with a canopy spread of 7m. It has a single trunk with a DBH of 400mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.62. Tree 62. *Jacaranda mimosifolia*

This mature tree is approximately 10m tall with a canopy spread of 8m. It has a single trunk with a DBH of 545mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.63. Tree 63. *Tristaniopsis laurina*

This mature tree is approximately 9m tall with a canopy spread of 5m. It has a single trunk with a DBH of 430mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.64. Tree 64. *Lophostemon confertus*

This mature tree is approximately 10m tall with a canopy spread of 7m. It has a single trunk with a DBH of 335mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.65. Tree 65. *Lophostemon confertus*

This mature tree is approximately 8m tall with a canopy spread of 7m. It has a single trunk with a DBH of 240mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.66. Tree 66. *Lophostemon confertus*

This mature tree is approximately 8m tall with a canopy spread of 5m. It has a single trunk with a DBH of 240mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.67. Tree 67. *Lophostemon confertus*

This mature tree is approximately 7m tall with a canopy spread of 5m. It has a single trunk with a DBH of 280mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.68. Tree 68. *Callistemon viminalis*

This mature tree is approximately 8m tall with a canopy spread of 6m. It has multiple (3) co-dominant trunks from the base with an aggregate DBH of 465mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.69. Tree 69. *Callistemon viminalis*

This mature tree is approximately 9m tall with a canopy spread of 7m. It has multiple (3) co-dominant trunks from the base with an aggregate DBH of 420mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.70. Tree 70. *Callistemon viminalis*

This mature tree is approximately 8m tall with a canopy spread of 6m. It has multiple (3) co-dominant trunks from 0.4m above the base

with an aggregate DBH of 410mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.71. Tree 71. *Tristaniopsis laurina*

This mature tree is approximately 9m tall with a canopy spread of 6m. It has a single trunk with a DBH of 400mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.72. Tree 72. *Callistemon viminalis*

This mature tree is approximately 7m tall with a canopy spread of 5m. It has a single trunk with a DBH of 275mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.73. Tree 73. *Tristaniopsis laurina*

This semi-mature tree is approximately 5m tall with a canopy spread of 3m. It has a single trunk with a DBH of 115mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.74. Tree 74. *Callistemon viminalis*

This mature tree is approximately 9m tall with a canopy spread of 7m. It has a single trunk with a DBH of 370mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.75. Tree 75. *Callistemon viminalis*

This mature tree is approximately 7m tall with a canopy spread of 5m. It has a single trunk with a DBH of 310mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.76. Tree 76. *Tristaniopsis laurina*

This mature tree is approximately 8m tall with a canopy spread of 6m. It has a single trunk with a DBH of 340mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.77. Tree 77. *Callistemon viminalis*

This mature tree is approximately 9m tall with a canopy spread of 7m. It has multiple co-dominant trunks from the base with an aggregate DBH of 475mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.78. Tree 78. *Callistemon viminalis*

This mature tree is approximately 6m tall with a canopy spread of 6m. It has a single trunk with a DBH of 340mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.79. Tree 79. *Callistemon viminalis*

This mature tree is approximately 8m tall with a canopy spread of 7m. It has a single trunk with a DBH of 350mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

- 3.80. Tree 80. *Tristaniopsis laurina***
This mature tree is approximately 9m tall with a canopy spread of 6m. It has a single trunk with a DBH of 370mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.81. Tree 81. *Callistemon viminalis***
This mature tree is approximately 7m tall with a canopy spread of 7m. It has a single trunk with a DBH of 400mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.82. Tree 82. *Callistemon viminalis***
This mature tree is approximately 5m tall with a canopy spread of 4m. It has a single trunk with a DBH of 230mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.83. Tree 83. *Lophostemon confertus***
This mature tree is approximately 9m tall with a canopy spread of 7m. It has a single trunk with a DBH of 340mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.84. Tree 84. *Tristaniopsis laurina***
This mature tree is approximately 6m tall with a canopy spread of 4m. It has a single trunk with a DBH of 215mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.85. Tree 85. *Tristaniopsis laurina***
This mature tree is approximately 8m tall with a canopy spread of 7m. It has a single trunk with a DBH of 290mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.86. Tree 86. *Syncarpia glomulifera***
This mature tree is approximately 9m tall with a canopy spread of 6m. It has a single trunk with a DBH of 310mm. This tree is in fair health and condition with a thinning canopy, moderate deadwood and minimal epicormic growth.
- 3.87. Tree 87. *Syncarpia glomulifera***
This mature tree is approximately 9m tall with a canopy spread of 6m. It has a single trunk with a DBH of 355mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.88. Tree 88. *Eucalyptus nicholii***
This mature tree is approximately 11m tall with a canopy spread of 9m. It has a single trunk with a DBH of 920mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.89. Tree 89. *Liquidambar styraciflua***

This mature tree is approximately 11m tall with a canopy spread of 9m. It has a single trunk with a DBH of 550mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.90. Tree 90. *Liquidambar styraciflua*

This mature tree is approximately 10m tall with a canopy spread of 8m. It has a single trunk with a DBH of 460mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.91. Tree 91. *Liquidambar styraciflua*

This mature tree is approximately 9m tall with a canopy spread of 8m. It has a single trunk with a DBH of 450mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.92. Tree 92. *Liquidambar styraciflua*

This mature tree is approximately 10m tall with a canopy spread of 8m. It has a single trunk with a DBH of 360mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.93. Tree 93. *Liquidambar styraciflua*

This mature tree is approximately 10m tall with a canopy spread of 8m. It has a single trunk with a DBH of 435mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.94. Tree 94. *Liquidambar styraciflua*

This mature tree is approximately 11m tall with a canopy spread of 7m. It has a single trunk with a DBH of 510mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.95. Tree 95. *Platanus x hybrida*

This mature tree is approximately 16m tall with a canopy spread of 10m. It has a single trunk with a DBH of 535mm. The canopy is unbalanced to the east due to line clearing. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.96. Tree 96. *Ulmus parvifolia*

This mature tree is approximately 12m tall with a canopy spread of 11m. It has a single trunk with a DBH of 315mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.97. Tree 97. *Ulmus parvifolia*

This mature tree is approximately 11m tall with a canopy spread of 10m. It has a single trunk with a DBH of 360mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.98. Tree 98. *Ficus rubiginosa*

This mature tree is approximately 14m tall with a canopy spread of 13m. It has multiple co-dominant trunks from the base with an aggregate DBH of 800mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.99. Tree 99. *Callistemon viminalis*

This mature tree is approximately 7m tall with a canopy spread of 7m. It has multiple co-dominant trunks from the base with an aggregate DBH of 455mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.100. Tree 100 *Callistemon viminalis*

This mature tree is approximately 7m tall with a canopy spread of 5m. It has a single trunk with a DBH of 560mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.101. Tree 101 *Callistemon viminalis*

This mature tree is approximately 7m tall with a canopy spread of 6m. It has a single trunk with a DBH of 330mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.102. Tree 102 *Callistemon viminalis*

This mature tree is approximately 7m tall with a canopy spread of 7m. It has multiple co-dominant trunks from the base with an aggregate DBH of 370mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.103. Tree 103 *Callistemon viminalis*

This mature tree is approximately 7m tall with a canopy spread of 7m. It has a single trunk with a DBH of 400mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.104. Tree 104 *Callistemon viminalis*

This mature tree is approximately 7m tall with a canopy spread of 7m. It has a single trunk with a DBH of 400mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.105. Tree 105 *Sapium sebiferum*

This mature tree is approximately 16m tall with a canopy spread of 9m. It has a single trunk with a DBH of 905mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

4.0 Landscape Significance of Trees

4.1 Landscape Significance

The significance of a tree within the landscape is a factor of the health and condition of the tree, vitality, the form of the tree, environmental, cultural, amenity and heritage value.

4.2 Methodology of Determining Landscape Significance

For the purpose of this report, the Significance of a Tree, Assessment Rating System (STARS) as developed by the Institute of Australian Consulting Arborists (IACA) has been implemented. Please refer to Appendix A for greater detail of this assessment system. This system defines Landscape Significance for individual trees as High, Medium or Low Significance.

4.3 Landscape Significance of Subject Trees

Based on our assessment of the subject trees and implementation of the IACA Significance of a Tree, Assessment Rating System, the Landscape Significance of the Subject Trees was determined as shown in Table 1.

Tree no.	Species	Landscape Significance
1.	<i>Corymbia maculata</i>	High
2.	<i>Banksia integrifolia</i>	Medium
3.	<i>Syzygium paniculatum</i>	Medium
4.	<i>Banksia integrifolia</i>	Medium
5.	<i>Banksia integrifolia</i>	Medium
6.	<i>Banksia integrifolia</i>	Medium
7.	<i>Banksia integrifolia</i>	Medium
8.	<i>Casuarina spp</i>	Medium
9.	<i>Casuarina spp</i>	Medium
10.	<i>Eucalyptus grandis</i>	High
11.	<i>Eucalyptus saligna</i>	Medium
12.	<i>Eucalyptus saligna</i>	Medium
13.	<i>Eucalyptus saligna</i>	Medium
14.	<i>Casuarina spp</i>	Medium
15.	<i>Tristaniaopsis laurina</i>	Medium
16.	<i>Syncarpia glomulifera</i>	High
17.	<i>Syncarpia glomulifera</i>	Medium
18.	<i>Syncarpia glomulifera</i>	Medium
19.	<i>Eucalyptus robusta</i>	High
20.	<i>Eucalyptus robusta</i>	High
21.	<i>Callistemon viminalis</i>	Medium
22.	<i>Melaleuca salicina</i>	Medium
23.	<i>Elaeocarpus reticulatis</i>	Medium
24.	<i>Elaeocarpus reticulatis</i>	Medium
25.	<i>Elaeocarpus reticulatis</i>	Medium
26.	<i>Callistemon viminalis</i>	Medium
27.	<i>Callistemon viminalis</i>	Medium
28.	<i>Callistemon viminalis</i>	Medium
29.	<i>Callistemon viminalis</i>	Medium
30.	<i>Callistemon viminalis</i>	Medium
31.	<i>Stenocarpus sinuatus</i>	Medium

32.	<i>Callistemon viminalis</i>	Medium
33.	<i>Olea europaea</i>	Medium
34.	<i>Callistemon viminalis</i>	Medium
35.	<i>Callistemon viminalis</i>	Medium
36.	<i>Callistemon viminalis</i>	Medium
37.	<i>Callistemon viminalis</i>	Medium
38.	<i>Callistemon viminalis</i>	Medium
39.	<i>Callistemon viminalis</i>	Medium
40.	<i>Callistemon viminalis</i>	Medium
41.	<i>Callistemon viminalis</i>	Medium
42.	<i>Callistemon viminalis</i>	Medium
43.	<i>Callistemon viminalis</i>	Medium
44.	<i>Callistemon viminalis</i>	Medium
45.	<i>Callistemon viminalis</i>	Medium
46.	<i>Callistemon viminalis</i>	Medium
47.	<i>Melaleuca bracteata</i>	Medium
48.	<i>Callistemon viminalis</i>	Medium
49.	<i>Tristaniopsis laurina</i>	Medium
50.	<i>Callistemon viminalis</i>	Medium
51.	<i>Callistemon viminalis</i>	Medium
52.	<i>Callistemon viminalis</i>	Medium
53.	<i>Callistemon viminalis</i>	Medium
54.	<i>Olea europaea</i>	Medium
55.	<i>Corymbia ficifolia</i>	Medium
56.	<i>Fraxinus griffithii</i>	Medium
57.	<i>Callistemon viminalis</i>	Medium
58.	<i>Tristaniopsis laurina</i>	Medium
59.	<i>Tristaniopsis laurina</i>	Medium
60.	<i>Fraxinus griffithii</i>	Medium
61.	<i>Jacaranda mimosifolia</i>	Medium
62.	<i>Jacaranda mimosifolia</i>	Medium
63.	<i>Tristaniopsis laurina</i>	Medium
64.	<i>Lophostemon confertus</i>	Medium
65.	<i>Lophostemon confertus</i>	Medium
66.	<i>Lophostemon confertus</i>	Medium
67.	<i>Lophostemon confertus</i>	Medium
68.	<i>Callistemon viminalis</i>	Medium
69.	<i>Callistemon viminalis</i>	Medium
70.	<i>Callistemon viminalis</i>	Medium
71.	<i>Tristaniopsis laurina</i>	Medium
72.	<i>Callistemon viminalis</i>	Medium
73.	<i>Tristaniopsis laurina</i>	Medium
74.	<i>Callistemon viminalis</i>	Medium
75.	<i>Callistemon viminalis</i>	Medium

76.	<i>Tristaniopsis laurina</i>	Medium
77.	<i>Callistemon viminalis</i>	Medium
78.	<i>Callistemon viminalis</i>	Medium
79.	<i>Callistemon viminalis</i>	Medium
80.	<i>Tristaniopsis laurina</i>	Medium
81.	<i>Callistemon viminalis</i>	Medium
82.	<i>Callistemon viminalis</i>	Medium
83.	<i>Lophostemon confertus</i>	Medium
84.	<i>Tristaniopsis laurina</i>	Medium
85.	<i>Tristaniopsis laurina</i>	Medium
86.	<i>Syncarpia glomulifera</i>	Medium
87.	<i>Syncarpia glomulifera</i>	Medium
88.	<i>Eucalyptus nicholii</i>	Medium
89.	<i>Liquidambar styraciflua</i>	Medium
90.	<i>Liquidambar styraciflua</i>	Medium
91.	<i>Liquidambar styraciflua</i>	Medium
92.	<i>Liquidambar styraciflua</i>	Medium
93.	<i>Liquidambar styraciflua</i>	Medium
94.	<i>Liquidambar styraciflua</i>	Medium
95.	<i>Platanus x hybrida</i>	High
96.	<i>Ulmus parvifolia</i>	Medium
97.	<i>Ulmus parvifolia</i>	Medium
98.	<i>Ficus rubiginosa</i>	Medium
99.	<i>Callistemon viminalis</i>	Medium
100.	<i>Callistemon viminalis</i>	Medium
101.	<i>Callistemon viminalis</i>	Medium
102.	<i>Callistemon viminalis</i>	Medium
103.	<i>Callistemon viminalis</i>	Medium
104.	<i>Callistemon viminalis</i>	Medium
105.	<i>Sapium sebiferum</i>	Medium

Table 1 - Landscape Significance

5.0 Subject Tree Retention Value

5.1 Tree Retention Value Methodology

For the purpose of this report, the Tree Retention Values have been assessed by incorporating Landscape Significance Values as determined in 4.0 with the Useful Life Expectancy of the subject trees and assessing the retention values based on the Tree Retention Value Priority Matrix as developed by the Institute of Australian Consulting Arborists (IACA). Please refer to Appendix B for greater detail of this Tree Retention Value Priority Matrix. This matrix defines Landscape Significance for individual trees as High, Medium or Low Retention Value as well as Priority for Removal.

5.2 Retention Value of Subject Trees

Based on our assessment of the subject trees and implementation of the IACA Tree Retention Value Priority Matrix, the Retention Values of the Subject Trees were determined as shown in Table 2.

Tree no.	Species	Retention Value
1.	<i>Corymbia maculata</i>	High
2.	<i>Banksia integrifolia</i>	Medium
3.	<i>Syzygium paniculatum</i>	Medium
4.	<i>Banksia integrifolia</i>	Medium
5.	<i>Banksia integrifolia</i>	Medium
6.	<i>Banksia integrifolia</i>	Medium
7.	<i>Banksia integrifolia</i>	Medium
8.	<i>Casuarina spp</i>	Medium
9.	<i>Casuarina spp</i>	Medium
10.	<i>Eucalyptus grandis</i>	High
11.	<i>Eucalyptus saligna</i>	Medium
12.	<i>Eucalyptus saligna</i>	Medium
13.	<i>Eucalyptus saligna</i>	Medium
14.	<i>Casuarina spp</i>	Medium
15.	<i>Tristaniaopsis laurina</i>	Medium
16.	<i>Syncarpia glomulifera</i>	High
17.	<i>Syncarpia glomulifera</i>	Medium
18.	<i>Syncarpia glomulifera</i>	Medium
19.	<i>Eucalyptus robusta</i>	High
20.	<i>Eucalyptus robusta</i>	High
21.	<i>Callistemon viminalis</i>	Medium
22.	<i>Melaleuca salicina</i>	Medium
23.	<i>Elaeocarpus reticulatis</i>	Medium
24.	<i>Elaeocarpus reticulatis</i>	Medium
25.	<i>Elaeocarpus reticulatis</i>	Medium
26.	<i>Callistemon viminalis</i>	Medium
27.	<i>Callistemon viminalis</i>	Medium
28.	<i>Callistemon viminalis</i>	Medium
29.	<i>Callistemon viminalis</i>	Medium
30.	<i>Callistemon viminalis</i>	Medium
31.	<i>Stenocarpus sinuatus</i>	Medium
32.	<i>Callistemon viminalis</i>	Medium
33.	<i>Olea europaea</i>	Medium
34.	<i>Callistemon viminalis</i>	Medium
35.	<i>Callistemon viminalis</i>	Medium
36.	<i>Callistemon viminalis</i>	Medium
37.	<i>Callistemon viminalis</i>	Medium

38.	<i>Callistemon viminalis</i>	Medium
39.	<i>Callistemon viminalis</i>	Medium
40.	<i>Callistemon viminalis</i>	Medium
41.	<i>Callistemon viminalis</i>	Medium
42.	<i>Callistemon viminalis</i>	Medium
43.	<i>Callistemon viminalis</i>	Medium
44.	<i>Callistemon viminalis</i>	Medium
45.	<i>Callistemon viminalis</i>	Medium
46.	<i>Callistemon viminalis</i>	Medium
47.	<i>Melaleuca bracteata</i>	Medium
48.	<i>Callistemon viminalis</i>	Medium
49.	<i>Tristaniopsis laurina</i>	Medium
50.	<i>Callistemon viminalis</i>	Medium
51.	<i>Callistemon viminalis</i>	Medium
52.	<i>Callistemon viminalis</i>	Medium
53.	<i>Callistemon viminalis</i>	Medium
54.	<i>Olea europaea</i>	Medium
55.	<i>Corymbia ficifolia</i>	Medium
56.	<i>Fraxinus griffithii</i>	Medium
57.	<i>Callistemon viminalis</i>	Medium
58.	<i>Tristaniopsis laurina</i>	Medium
59.	<i>Tristaniopsis laurina</i>	Medium
60.	<i>Fraxinus griffithii</i>	Medium
61.	<i>Jacaranda mimosifolia</i>	Medium
62.	<i>Jacaranda mimosifolia</i>	Medium
63.	<i>Tristaniopsis laurina</i>	Medium
64.	<i>Lophostemon confertus</i>	Medium
65.	<i>Lophostemon confertus</i>	Medium
66.	<i>Lophostemon confertus</i>	Medium
67.	<i>Lophostemon confertus</i>	Medium
68.	<i>Callistemon viminalis</i>	Medium
69.	<i>Callistemon viminalis</i>	Medium
70.	<i>Callistemon viminalis</i>	Medium
71.	<i>Tristaniopsis laurina</i>	Medium
72.	<i>Callistemon viminalis</i>	Medium
73.	<i>Tristaniopsis laurina</i>	Medium
74.	<i>Callistemon viminalis</i>	Medium
75.	<i>Callistemon viminalis</i>	Medium
76.	<i>Tristaniopsis laurina</i>	Medium
77.	<i>Callistemon viminalis</i>	Medium
78.	<i>Callistemon viminalis</i>	Medium
79.	<i>Callistemon viminalis</i>	Medium
80.	<i>Tristaniopsis laurina</i>	Medium
81.	<i>Callistemon viminalis</i>	Medium

82.	<i>Callistemon viminalis</i>	Medium
83.	<i>Lophostemon confertus</i>	Medium
84.	<i>Tristaniopsis laurina</i>	Medium
85.	<i>Tristaniopsis laurina</i>	Medium
86.	<i>Syncarpia glomulifera</i>	Medium
87.	<i>Syncarpia glomulifera</i>	Medium
88.	<i>Eucalyptus nicholii</i>	Medium
89.	<i>Liquidambar styraciflua</i>	Medium
90.	<i>Liquidambar styraciflua</i>	Medium
91.	<i>Liquidambar styraciflua</i>	Medium
92.	<i>Liquidambar styraciflua</i>	Medium
93.	<i>Liquidambar styraciflua</i>	Medium
94.	<i>Liquidambar styraciflua</i>	Medium
95.	<i>Platanus x hybrida</i>	High
96.	<i>Ulmus parvifolia</i>	Medium
97.	<i>Ulmus parvifolia</i>	Medium
98.	<i>Ficus rubiginosa</i>	Medium
99.	<i>Callistemon viminalis</i>	Medium
100.	<i>Callistemon viminalis</i>	Medium
101.	<i>Callistemon viminalis</i>	Medium
102.	<i>Callistemon viminalis</i>	Medium
103.	<i>Callistemon viminalis</i>	Medium
104.	<i>Callistemon viminalis</i>	Medium
105.	<i>Sapium sebiferum</i>	Medium

Table 2 – Tree Retention Value

6.0 Impact of Development

6.1 Tree Protection Zone

Tree Protection Zones (TPZs) have been defined for the subject trees in order to define the encroachment of the proposed development in accordance with AS4970-2009. The TPZs required have been taken as a circular area with a radius 12 x the diameter at breast height of the tree. This requirement is in line with Australian Standard AS 4970-2009 Protection of Trees on Development Sites. This standard defines a maximum of 10% encroachment to be minimal encroachment. Any encroachment over 10% requires the site arborist to give consideration as to the viability of the tree due to the proposed development.

Tree no.	Species	TPZ Radius (m)	Encroachment (%)
1.	<i>Corymbia maculata</i>	6.6	15
2.	<i>Banksia integrifolia</i>	3	100
3.	<i>Syzygium paniculatum</i>	2	100

4.	<i>Banksia integrifolia</i>	2.88	100
5.	<i>Banksia integrifolia</i>	2.88	100
6.	<i>Banksia integrifolia</i>	2.64	100
7.	<i>Banksia integrifolia</i>	3.36	0
8.	<i>Casuarina spp</i>	5.46	100
9.	<i>Casuarina spp</i>	7.38	15
10.	<i>Eucalyptus grandis</i>	15.06	25
11.	<i>Eucalyptus saligna</i>	4.56	0
12.	<i>Eucalyptus saligna</i>	N/A	N/A
13.	<i>Eucalyptus saligna</i>	2.88	0
14.	<i>Casuarina spp</i>	3.06	0
15.	<i>Tristaniopsis laurina</i>	3.6	0
16.	<i>Syncarpia glomulifera</i>	3.72	0
17.	<i>Syncarpia glomulifera</i>	2	0
18.	<i>Syncarpia glomulifera</i>	3.24	0
19.	<i>Eucalyptus robusta</i>	12.42	30
20.	<i>Eucalyptus robusta</i>	10.98	8
21.	<i>Callistemon viminalis</i>	2	0
22.	<i>Melaleuca salicina</i>	5.4	12
23.	<i>Elaeocarpus reticulatis</i>	2	0
24.	<i>Elaeocarpus reticulatis</i>	2	0
25.	<i>Elaeocarpus reticulatis</i>	2	0
26.	<i>Callistemon viminalis</i>	2.46	0
27.	<i>Callistemon viminalis</i>	6.24	0
28.	<i>Callistemon viminalis</i>	4.56	0
29.	<i>Callistemon viminalis</i>	2.64	0
30.	<i>Callistemon viminalis</i>	2	0
31.	<i>Stenocarpus sinuatus</i>	2	0
32.	<i>Callistemon viminalis</i>	3.3	0
33.	<i>Olea europaea</i>	3.6	0
34.	<i>Callistemon viminalis</i>	3.6	0
35.	<i>Callistemon viminalis</i>	4.26	0
36.	<i>Callistemon viminalis</i>	7.2	0
37.	<i>Callistemon viminalis</i>	4.56	0
38.	<i>Callistemon viminalis</i>	5.16	0
39.	<i>Callistemon viminalis</i>	5.82	0
40.	<i>Callistemon viminalis</i>	3.78	0
41.	<i>Callistemon viminalis</i>	2.88	0
42.	<i>Callistemon viminalis</i>	2.88	0
43.	<i>Callistemon viminalis</i>	4.56	10
44.	<i>Callistemon viminalis</i>	5.22	15
45.	<i>Callistemon viminalis</i>	5.88	18
46.	<i>Callistemon viminalis</i>	5.7	18
47.	<i>Melaleuca bracteata</i>	2	0

48.	<i>Callistemon viminalis</i>	9.18	30
49.	<i>Tristaniopsis laurina</i>	2.4	0
50.	<i>Callistemon viminalis</i>	3.36	0
51.	<i>Callistemon viminalis</i>	2.28	0
52.	<i>Callistemon viminalis</i>	2.94	0
53.	<i>Callistemon viminalis</i>	3.888	0
54.	<i>Olea europaea</i>	2	0
55.	<i>Corymbia ficifolia</i>	4.2	10
56.	<i>Fraxinus griffithii</i>	3.06	0
57.	<i>Callistemon viminalis</i>	5.34	12
58.	<i>Tristaniopsis laurina</i>	2	0
59.	<i>Tristaniopsis laurina</i>	4.98	10
60.	<i>Fraxinus griffithii</i>	2.58	0
61.	<i>Jacaranda mimosifolia</i>	4.8	0
62.	<i>Jacaranda mimosifolia</i>	6.54	10
63.	<i>Tristaniopsis laurina</i>	5.16	8
64.	<i>Lophostemon confertus</i>	4.02	10
65.	<i>Lophostemon confertus</i>	2.88	0
66.	<i>Lophostemon confertus</i>	2.88	0
67.	<i>Lophostemon confertus</i>	3.36	0
68.	<i>Callistemon viminalis</i>	5.58	22
69.	<i>Callistemon viminalis</i>	5.04	16
70.	<i>Callistemon viminalis</i>	4.92	10
71.	<i>Tristaniopsis laurina</i>	4.8	0
72.	<i>Callistemon viminalis</i>	3.3	0
73.	<i>Tristaniopsis laurina</i>	2	0
74.	<i>Callistemon viminalis</i>	4.44	0
75.	<i>Callistemon viminalis</i>	3.72	0
76.	<i>Tristaniopsis laurina</i>	4.08	0
77.	<i>Callistemon viminalis</i>	5.7	20
78.	<i>Callistemon viminalis</i>	4.08	10
79.	<i>Callistemon viminalis</i>	4.2	10
80.	<i>Tristaniopsis laurina</i>	4.44	10
81.	<i>Callistemon viminalis</i>	4.8	10
82.	<i>Callistemon viminalis</i>	2.76	0
83.	<i>Lophostemon confertus</i>	4.08	10
84.	<i>Tristaniopsis laurina</i>	2.58	0
85.	<i>Tristaniopsis laurina</i>	3.48	10
86.	<i>Syncarpia glomulifera</i>	3.72	10
87.	<i>Syncarpia glomulifera</i>	4.26	15
88.	<i>Eucalyptus nicholii</i>	11.04	33
89.	<i>Liquidambar styraciflua</i>	6.6	20
90.	<i>Liquidambar styraciflua</i>	5.52	15
91.	<i>Liquidambar styraciflua</i>	5.4	15

92.	<i>Liquidambar styraciflua</i>	4.32	10
93.	<i>Liquidambar styraciflua</i>	5.22	10
94.	<i>Liquidambar styraciflua</i>	6.12	15
95.	<i>Platanus x hybrida</i>	6.42	30
96.	<i>Ulmus parvifolia</i>	3.78	0
97.	<i>Ulmus parvifolia</i>	4.32	50
98.	<i>Ficus rubiginosa</i>	9.6	10
99.	<i>Callistemon viminalis</i>	5.46	30
100.	<i>Callistemon viminalis</i>	6.72	30
101.	<i>Callistemon viminalis</i>	3.96	33
102.	<i>Callistemon viminalis</i>	4.44	42
103.	<i>Callistemon viminalis</i>	4.8	0
104.	<i>Callistemon viminalis</i>	4.8	0
105.	<i>Sapium sebiferum</i>	10.86	0

6.2 Development Impact

Tree that have been identified in 6.1 as impacted by the proposed works are as follows:

6.2.1. Tree 1. ***Corymbia maculata***

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 15% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.

6.2.2. Tree 2. ***Banksia integrifolia***

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be totally encroached by the proposed development. This tree will not be viable to be retained under the proposed development.

6.2.3. Tree 3. ***Syzygium paniculatum***

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be totally encroached by the proposed development. This tree will not be viable to be retained under the proposed development.

6.2.4. Tree 4. ***Banksia integrifolia***

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be totally encroached by the proposed development. This tree will not be viable to be retained under the proposed development.

6.2.5. Tree 5. ***Banksia integrifolia***

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be totally

encroached by the proposed development. This tree will not be viable to be retained under the proposed development.

6.2.6. Tree 6. *Banksia integrifolia*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be totally encroached by the proposed development. This tree will not be viable to be retained under the proposed development.

6.2.7. Tree 8. *Casuarina spp*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be totally encroached by the proposed development. This tree will not be viable to be retained under the proposed development.

6.2.8. Tree 9. *Casuarina spp*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 15% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.

6.2.9. Tree 10. *Eucalyptus grandis*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 25% which is significantly greater than the minor encroachment as defined by AS 4970-2009. This tree will not be viable to be retained under the proposed development without design and construction method revisions.

6.2.10. Tree 12. *Eucalyptus saligna*

This tree is recommended for removal.

6.2.11. Tree 19. *Eucalyptus robusta*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. This tree will not be viable to be retained under the proposed development without design and construction method revisions.

6.2.12. Tree 20. *Eucalyptus robusta*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 8% which is less than the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.

- 5.2.13. Tree 22. *Melaleuca salicina***
 The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 12% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of existing structures and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.
- 5.2.14. Tree 43. *Callistemon viminalis***
 The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.
- 5.2.15. Tree 44. *Callistemon viminalis***
 The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 15% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of existing structures and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.
- 5.2.16. Tree 45. *Callistemon viminalis***
 The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 18% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of existing structures and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.
- 5.2.17. Tree 46. *Callistemon viminalis***
 The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 18% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of existing structures and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.
- 5.2.18. Tree 48. *Callistemon viminalis***

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of the impediment to root development posed by the compacted road base of the existing roadway and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development with supervision and direction by the Site Arborist.

5.2.19. Tree 55. *Corymbia ficifolia*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.

5.2.20. Tree 57. *Callistemon viminalis*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 12% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of existing structures and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.

5.2.21. Tree 59. *Tristaniopsis laurina*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.

5.2.22. Tree 62. *Jacaranda mimosifolia*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.

5.2.23. Tree 63. *Tristaniopsis laurina*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 8% which is less than the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.

- 5.2.24. Tree 64. *Lophostemon confertus***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.
- 5.2.25. Tree 68. *Callistemon viminalis***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of the impediment to root development posed by the compacted road base of the existing roadway and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development with supervision and direction by the Site Arborist.
- 5.2.26. Tree 69. *Callistemon viminalis***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 16% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of existing structures and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.
- 5.2.27. Tree 70. *Callistemon viminalis***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.
- 5.2.28. Tree 78. *Callistemon viminalis***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.
- 5.2.29. Tree 79. *Callistemon viminalis***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.
- 5.2.30. Tree 80. *Tristaniopsis laurina***

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.

5.2.31. Tree 81. *Callistemon viminalis*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.

5.2.32. Tree 83. *Lophostemon confertus*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.

5.2.33. Tree 85. *Tristaniopsis laurina*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.

5.2.34. Tree 86. *Syncarpia glomulifera*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.

5.2.35. Tree 87. *Syncarpia glomulifera*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 15% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of existing structures and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.

5.2.36. Tree 88. *Eucalyptus nicholii*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 33% which is significantly greater than the minor encroachment as defined by AS 4970-2009. This tree will not be viable to be retained under the

proposed development without design and construction method revisions.

- 5.2.37. Tree 89. *Liquidambar styraciflua***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 20% which is significantly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of the impediment to root development posed by the compacted road base of the existing roadway and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development with supervision and direction by the Site Arborist.
- 5.2.38. Tree 90. *Liquidambar styraciflua***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 15% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of existing structures and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.
- 5.2.39. Tree 91. *Liquidambar styraciflua***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 15% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of existing structures and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.
- 5.2.40. Tree 92. *Liquidambar styraciflua***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.
- 5.2.41. Tree 93. *Liquidambar styraciflua***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.
- 5.2.42. Tree 94. *Liquidambar styraciflua***

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 15% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of existing structures and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.

5.2.43. Tree 95. *Platanus x hybrida*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. This tree will not be viable to be retained under the proposed development without design and construction method revisions.

5.2.44. Tree 97. *Ulmus parvifolia*

The crown of Tree 97 will be impacted by the proposed construction traffic. The transformer is required to be transported through this area and the transporter and transformer have dimensions of a height of 5050mm, width of 3800mm. This will result in more than 50% of the crown of this tree impacted. Crown reduction pruning would leave this tree with poor form and unbalanced canopy. This tree is not viable for retention.

5.2.45. Tree 98. *Ficus rubiginosa*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 10% which is equal to the minor encroachment as defined by AS 4970-2009. This tree will be viable to be retained under the proposed development.

5.2.46. Tree 99. *Callistemon viminalis*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. This tree will not be viable to be retained under the proposed development.

5.2.47. Tree 100. *Callistemon viminalis*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. This tree will not be viable to be retained under the proposed development.

5.2.48. Tree 101. *Callistemon viminalis*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 33% which is significantly greater than the minor encroachment as defined by AS 4970-2009. This tree will not be viable to be retained under the proposed development.

5.2.49. Tree 102. *Callistemon viminalis*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 42% which is significantly greater than the minor encroachment as defined by AS 4970-2009. This tree will not be viable to be retained under the proposed development.

7.0 Recommendations

Tree 12 has significant decay and cambium damage to the trunk which places this tree at increased risk of failure. In consideration of the future development and the number of targets and therefore increased hazard posed, this tree is recommended for removal.

The Tree Protection Zone (TPZ) of Trees 2, 3, 4, 5, 6, 8, 99, 100, 101 and 102 are encroached by the proposed construction and required earthworks by a major encroachment as defined by *AS4970-2009 Protection of Trees on Development Sites*. These trees will not be viable to be retained and are recommended for removal.

Tree 3 is a grove of small trees or large shrubs that is a planted hedge of *Syzygium paniculatum*. This grove is between 3-4m wide, and trees are planted at approximately 1m centres. This grove consists of approximately 100 individual plants of which between 10-20 will be impacted and required to be removed.

The TPZ of Trees 1, 9, 22, 44, 45, 46, 48, 57, 59, 62, 68, 69, 77, 87, 89, 90, 91, 94 will be encroached by the proposed development by greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of the impediment to root development posed by the compacted road base of the existing roadway and these species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, these trees will be viable to be retained under the proposed development with supervision and direction by the Site Arborist.

The Tree Protection Zone (TPZ) of Trees 10, 19, 88 and 95 will be encroached by a major encroachment which has the potential to significantly impact the viability of these trees. The proposed excavation is outside of the Structural Root Zone (SRZ) being the area of root development required for the stability of the tree. The SRZ's for Trees 10, 19, 88 and 95 are an area with a radius of 3.6m, 3.5m, 3.3m and 2.6m respectively. Revised design and construction methods will be required in order for these trees to be retained. These revisions include:

1. Re-alignment of proposed line and trench outside of the TPZ of the tree where possible.
2. All excavation within the TPZ to be carried out by non-destructive excavation techniques under the supervision of the Site arborist (minimum qualification AQF Level 5). Approved nondestructive techniques include an Air Knife or, if an Air Knife is not able to be used, a Vacuum truck strictly limited to pressures less than 1000Psi.
3. No tree roots greater than 30mm are to be cut within the TPZ and the new cable is to be threaded either through or under the roots.
4. Encroachment within the TPZ is to be to the maximum extent shown on the drawings.

If these revised methods are not able to be implemented the viability of these trees will be reduced and we would recommend the removal of these trees.

The crown of Tree 97 will be impacted by the proposed construction traffic. The transformer is required to be transported through this area and the transporter and transformer have dimensions of a height of 5050mm, width of 3800mm. This will result in more than 50% of the crown of this tree impacted. Crown reduction pruning would leave this tree with poor form and unbalanced canopy. We recommend the removal of this tree and replacement with suitable replacement species.

The canopies of Trees 10, 19 and 20 may be impacted by construction machinery during the excavation phase of the works. All works within the canopy of these trees are to be carried out under the supervision of the Site Arborist. Where there is a potential impact on the canopy, canopy reduction pruning is to be carried out by a qualified arborist minimum qualification AQF Level 3 under the supervision of the Site Arborist. All pruning is to be carried out in accordance with *AS4373-2007 Pruning of Amenity Trees*. There is to be no other impact on the canopy of the subject trees. If further impacts are noted these are to be brought to the attention of the Site Arborist.

All other trees are viable to be retained and are to be protected as defined below.

Recommendations for tree retention or removal are summarised as follows:

Tree no.	Species	Recommendations	Comments
1.	<i>Corymbia maculata</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist. Tree Protection Fencing to be installed in accordance with 8.3.
2.	<i>Banksia integrifolia</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
3.	<i>Syzygium paniculatum</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
4.	<i>Banksia integrifolia</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
5.	<i>Banksia integrifolia</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
6.	<i>Banksia integrifolia</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
7.	<i>Banksia integrifolia</i>	Retain	Tree Protection Fencing to be installed in accordance with 8.3.
8.	<i>Casuarina spp</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
9.	<i>Casuarina spp</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist. Tree Protection Fencing to be installed in accordance with 8.3.
10.	<i>Eucalyptus grandis</i>	Retain if possible	Viable to be retained with revised design and construction methods in accordance with section 7.0 of this report. Tree Protection Fencing to be installed in accordance with 8.3.

11.	<i>Eucalyptus saligna</i>	Retain	Tree Protection Fencing to be installed in accordance with 8.3.
12.	<i>Eucalyptus saligna</i>	Remove	Damage to cambium to approximately 75% of trunk.
13.	<i>Eucalyptus saligna</i>	Retain	Tree Protection Fencing to be installed in accordance with 8.3.
14.	<i>Casuarina spp</i>	Retain	Tree Protection Fencing to be installed in accordance with 8.3.
15.	<i>Tristaniopsis laurina</i>	Retain	Tree Protection Fencing to be installed in accordance with 8.3.
16.	<i>Syncarpia glomulifera</i>	Retain	Tree Protection Fencing to be installed in accordance with 8.3.
17.	<i>Syncarpia glomulifera</i>	Retain	Tree Protection Fencing to be installed in accordance with 8.3.
18.	<i>Syncarpia glomulifera</i>	Retain	Tree Protection Fencing to be installed in accordance with 8.3.
19.	<i>Eucalyptus robusta</i>	Retain if possible	Viable to be retained with revised design and construction methods in accordance with section 7.0 of this report. Tree Protection Fencing to be installed in accordance with 8.3.
20.	<i>Eucalyptus robusta</i>	Retain	Tree Protection Fencing to be installed in accordance with 8.3.
21.	<i>Callistemon viminalis</i>	Retain	
22.	<i>Melaleuca salicina</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
23.	<i>Elaeocarpus reticulatis</i>	Retain	
24.	<i>Elaeocarpus reticulatis</i>	Retain	
25.	<i>Elaeocarpus reticulatis</i>	Retain	
26.	<i>Callistemon viminalis</i>	Retain	
27.	<i>Callistemon viminalis</i>	Retain	
28.	<i>Callistemon viminalis</i>	Retain	
29.	<i>Callistemon viminalis</i>	Retain	
30.	<i>Callistemon viminalis</i>	Retain	
31.	<i>Stenocarpus sinuatus</i>	Retain	
32.	<i>Callistemon viminalis</i>	Retain	
33.	<i>Olea europaea</i>	Retain	
34.	<i>Callistemon viminalis</i>	Retain	
35.	<i>Callistemon viminalis</i>	Retain	
36.	<i>Callistemon viminalis</i>	Retain	
37.	<i>Callistemon viminalis</i>	Retain	
38.	<i>Callistemon viminalis</i>	Retain	
39.	<i>Callistemon viminalis</i>	Retain	
40.	<i>Callistemon viminalis</i>	Retain	
41.	<i>Callistemon viminalis</i>	Retain	
42.	<i>Callistemon viminalis</i>	Retain	
43.	<i>Callistemon viminalis</i>	Retain	

44.	<i>Callistemon viminalis</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
45.	<i>Callistemon viminalis</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
46.	<i>Callistemon viminalis</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
47.	<i>Melaleuca bracteata</i>	Retain	
48.	<i>Callistemon viminalis</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
49.	<i>Tristaniopsis laurina</i>	Retain	
50.	<i>Callistemon viminalis</i>	Retain	
51.	<i>Callistemon viminalis</i>	Retain	
52.	<i>Callistemon viminalis</i>	Retain	
53.	<i>Callistemon viminalis</i>	Retain	
54.	<i>Olea europaea</i>	Retain	
55.	<i>Corymbia ficifolia</i>	Retain	
56.	<i>Fraxinus griffithii</i>	Retain	
57.	<i>Callistemon viminalis</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
58.	<i>Tristaniopsis laurina</i>	Retain	
59.	<i>Tristaniopsis laurina</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
60.	<i>Fraxinus griffithii</i>	Retain	
61.	<i>Jacaranda mimosifolia</i>	Retain	
62.	<i>Jacaranda mimosifolia</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
63.	<i>Tristaniopsis laurina</i>	Retain	
64.	<i>Lophostemon confertus</i>	Retain	
65.	<i>Lophostemon confertus</i>	Retain	
66.	<i>Lophostemon confertus</i>	Retain	
67.	<i>Lophostemon confertus</i>	Retain	
68.	<i>Callistemon viminalis</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
69.	<i>Callistemon viminalis</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
70.	<i>Callistemon viminalis</i>	Retain	
71.	<i>Tristaniopsis laurina</i>	Retain	
72.	<i>Callistemon viminalis</i>	Retain	
73.	<i>Tristaniopsis laurina</i>	Retain	
74.	<i>Callistemon viminalis</i>	Retain	

75.	<i>Callistemon viminalis</i>	Retain	
76.	<i>Tristaniopsis laurina</i>	Retain	
77.	<i>Callistemon viminalis</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
78.	<i>Callistemon viminalis</i>	Retain	
79.	<i>Callistemon viminalis</i>	Retain	
80.	<i>Tristaniopsis laurina</i>	Retain	
81.	<i>Callistemon viminalis</i>	Retain	
82.	<i>Callistemon viminalis</i>	Retain	
83.	<i>Lophostemon confertus</i>	Retain	
84.	<i>Tristaniopsis laurina</i>	Retain	
85.	<i>Tristaniopsis laurina</i>	Retain	
86.	<i>Syncarpia glomulifera</i>	Retain	
87.	<i>Syncarpia glomulifera</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
88.	<i>Eucalyptus nicholii</i>	Retain if possible	Viable to be retained with revised design and construction methods in accordance with section 7.0 of this report.
89.	<i>Liquidambar styraciflua</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
90.	<i>Liquidambar styraciflua</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
91.	<i>Liquidambar styraciflua</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
92.	<i>Liquidambar styraciflua</i>	Retain	
93.	<i>Liquidambar styraciflua</i>	Retain	
94.	<i>Liquidambar styraciflua</i>	Retain	Excavation within the TPZ to be carried out under the direction and supervision of the Site Arborist.
95.	<i>Platanus x hybrida</i>	Retain if possible	Viable to be retained with revised design and construction methods in accordance with section 7.0 of this report.
96.	<i>Ulmus parvifolia</i>	Retain	
97.	<i>Ulmus parvifolia</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
98.	<i>Ficus rubiginosa</i>	Retain	
99.	<i>Callistemon viminalis</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
100.	<i>Callistemon viminalis</i>	Remove	Not viable to be retained due to encroachment by the proposed works.

101.	<i>Callistemon viminalis</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
102.	<i>Callistemon viminalis</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
103.	<i>Callistemon viminalis</i>	Retain	
104.	<i>Callistemon viminalis</i>	Retain	
105.	<i>Sapium sebiferum</i>	Retain	

8.0 Pre-Construction Tree Protection Measures

8.1 General

All tree protection works shall be carried out before excavation, grading and site works commence. Tree protection works shall be inspected and approved by a Consulting Arborist meeting AQF Level 5 prior to construction works commencing in accordance with 5.4 of AS4970-2009 *Protection of Trees on Development Sites*.

Storage of materials, mixing of materials, vehicle parking, disposal of liquids, machinery repairs and refueling, site office and sheds, and the lighting of fires, stockpiling of soil, rubble or any debris shall not be carried out within the TPZ of existing trees. No backfilling shall occur within the TPZ of existing trees. Trees shall not be removed or lopped unless specific instruction is given in writing by the Site Environmental Coordinator.

8.2 Identification

All trees that are designated to be retained and protected shall be clearly identified and all TPZs surveyed.

8.3 Protective Fence

Tree protection fencing is to be erected to protect Trees 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20. This fencing is to be erected prior to any materials being brought on site or before any site, civil works or construction works commence. The fence shall enclose a sufficient area so as to prevent damage to the TPZ as defined on Appendix D Tree Protection Plan and as defined in 5.1 above. Fence to comprise 1800mm high chain wire mesh fixed to 50mm diameter Galvanised steel posts. Panels should be securely fixed top and bottom to avoid separation. No storage of building materials, tools, paint, fuel or contaminants and the like shall occur within the fenced area.

It is not practical to install fencing to all trees along the alignment as the majority of the trees are street trees.

9.0 Site Management Issues

9.1 Soil Compaction

Plant and pedestrian traffic during the construction period has the potential to cause soil compaction. Compaction of the soil within the TPZ will reduce the voids between soil peds or particles therefore will reduce the gaseous exchange capacity of the root

system and water percolation. No pedestrian or plant access is permissible to the TPZ. This is particularly critical around trees 1 – 20. No work is to be carried out within the TPZ during wet weather or when soil is wet.

9.2 Site Access

Sufficient access is required to enable efficient construction. It is essential to delineate access zones or corridors which will provide suitable access without damaging the existing trees to be retained or causing compaction to the root zone. All construction traffic, both vehicular and pedestrian will be diverted outside of the Tree Protection Zones by Tree Protection Fencing to the trees defined in 8.3.

9.3 Excavation within Tree Protection Area

No excavation is to be carried out within the TPZs of retained trees without the permission and supervision of the site arborist (AQF5)

9.4 Possible Contamination / Storage of Materials

The construction site will require the use of many chemicals and materials that are possible contaminants which if not managed will pose a risk to the existing trees. These possible contaminants include fuels, herbicides, solvents and the like. A Site Environmental Plan shall be provided, and this specific risk identified and addressed.

10.0 Tree Protection Measures During Construction

10.1 Possible Contaminants

Do not store or otherwise place bulk materials and harmful materials under or near trees. Do not place spoil from excavations within the TPZs. Prevent wind-blown materials such as cement from harming trees. All possible contaminants are to be stored in a designated and appropriate area with secure chemical spill measures such as a bund in place.

10.2 Physical Damage

Prevent damage to tree. Do not attach stays, guys and the like to trees. No personnel, plant, machinery or materials are to be allowed within the tree protection fencing.

10.3 Compaction

No filling or compaction shall occur over tree roots zones within tree protection fenced areas. Where construction occurs close to or the TPZ of trees to be retained it shall be necessary to install protection to avoid compaction of the ground surface. This protection is to be planks supported clear of the ground fixed to scaffolding.

10.5 Trenching

Trenching is necessary within the TPZs of trees as defined in 6.1. All trenching works within TPZ's is to be carried out under the supervision of the AQF Level 5 qualified Site Arborist.

10.6 Site Sheds / Amenities/ Storage

Site sheds, site amenities, ablutions and site storage shall be in the area clear of all TPZ. Chemicals and potential contaminants are to be stored appropriately and this

storage area is to be enclosed by a chemical spill bund to prevent the potential run off of contaminants in the event of a spillage or accident.

11.0 References

Mattheck, C. Breloer, K. 1993, The Body Language of Trees: A Handbook for Failure Analysis, 12th Impression 2010 The Stationery Office.
AS4970-2009 Protection of Trees on Development Sites: Standards Australia

12.0 Disclaimer

This Appraisal has been prepared for the exclusive use of the Client and Birds Tree Consultancy.

Birds Tree Consultancy accepts no responsibility for its use by other persons. The Client acknowledges that this Appraisal, and any opinions, advice or recommendations expressed or given in it, are based on the information supplied by the Client and on the data inspections, measurements and analysis carried out or obtained Birds Tree Consultancy and referred to in the Appraisal. The Client should rely on the Appraisal, and on its contents, only to that extent.

Every effort has been made in this report to include, assess and address all defects, structural weaknesses, instabilities and the like of the subject trees. All inspections were made from ground level using only visual means and no intrusive or destructive means of inspection were used. For many structural defects such as decay and inclusions, internal inspection is required by means of Resistograph or similar. No such investigation has been made in this case. Trees are living organisms and are subject to failure through a variety of causes not able to be identified by means of this inspection and report.

IACA Significance of a Tree, Assessment Rating System (STARS) © (IACA 2010) ©

In the development of this document IACA acknowledges the contribution and original concept of the Footprint Green Tree Significance & Retention Value Matrix, developed by Footprint Green Pty Ltd in June 2001.

The landscape significance of a tree is an essential criterion to establish the importance that a particular tree may have on a site. However, rating the significance of a tree becomes subjective and difficult to ascertain in a consistent and repetitive fashion due to assessor bias. It is therefore necessary to have a rating system utilising structured qualitative criteria to assist in determining the retention value for a tree. To assist this process all definitions for terms used in the *Tree Significance - Assessment Criteria* and *Tree Retention Value - Priority Matrix*, are taken from the IACA Dictionary for Managing Trees in Urban Environments 2009.

This rating system will assist in the planning processes for proposed works, above and below ground where trees are to be retained on or adjacent a development site. The system uses a scale of *High*, *Medium* and *Low* significance in the landscape. Once the landscape significance of an individual tree has been defined, the retention value can be determined.

Tree Significance - Assessment Criteria



1. High Significance in landscape

- The tree is in good condition and good vigour;
- The tree has a form typical for the species;
- The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age;
- The tree is listed as a Heritage Item, Threatened Species or part of an Endangered ecological community or listed on Councils significant Tree Register;
- The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity;
- The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values;
- The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa *in situ* - tree is appropriate to the site conditions.

2. Medium Significance in landscape

- The tree is in fair-good condition and good or low vigour;
- The tree has form typical or atypical of the species;
- The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area
- The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street,
- The tree provides a fair contribution to the visual character and amenity of the local area,
- The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa *in situ*.

3. Low Significance in landscape

- The tree is in fair-poor condition and good or low vigour;
- The tree has form atypical of the species;
- The tree is not visible or is partly visible from surrounding properties as obstructed by other vegetation or buildings,
- The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area,
- The tree is a young specimen which may or may not have reached dimension to be protected by local Tree Preservation orders or similar protection mechanisms and can easily be replaced with a suitable specimen,
- The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa *in situ* - tree is inappropriate to the site conditions,
- The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms,
- The tree has a wound or defect that has potential to become structurally unsound.


Environmental Pest / Noxious Weed Species

- The tree is an Environmental Pest Species due to its invasiveness or poisonous/ allergenic properties,
 - The tree is a declared noxious weed by legislation.
- Hazardous/Irreversible Decline**
- The tree is structurally unsound and/or unstable and is considered potentially dangerous,
 - The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.

The tree is to have a minimum of three (3) criteria in a category to be classified in that group.

Note: The assessment criteria are for individual trees only, however, can be applied to a monocultural stand in its entirety e.g. hedge.

Appendix B Tree Retention Values

		Significance				
		1. High	2. Medium	3. Low		
		Significance in Landscape	Significance in Landscape	Significance in Landscape	Environmental Pest / Noxious Weed Species	Hazardous / Irreversible Decline
Estimated Life Expectancy	1. Long >40 years					
	2. Medium 15-40 Years					
	3. Short <1-15 Years					
	Dead					
<p><u>Legend for Matrix Assessment</u></p> <div style="text-align: right;"> <small>INSTITUTE OF AUSTRALIAN CONSULTING ARBORICULTURISTS</small>  <small>MANAGING URBAN TREES®</small> </div>						
		Priority for Retention (High) - These trees are considered important for retention and should be retained and protected. Design modification or re-location of building/s should be considered to accommodate the setbacks as prescribed by the Australian Standard AS4970 <i>Protection of trees on development sites</i> . Tree sensitive construction measures must be implemented e.g. pier and beam etc if works are to proceed within the Tree Protection Zone.				
		Consider for Retention (Medium) - These trees may be retained and protected. These are considered less critical; however their retention should remain priority with removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted.				
		Consider for Removal (Low) - These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.				
		Priority for Removal - These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.				

REFERENCES

Australia ICOMOS Inc. 1999, *The Burra Charter – The Australian ICOMOS Charter for Places of Cultural Significance*, International Council of Monuments and Sites, www.icomos.org/australia

Draper BD and Richards PA 2009, *Dictionary for Managing Trees in Urban Environments*, Institute of Australian Consulting Arboriculturists (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.

Footprint Green Pty Ltd 2001, *Footprint Green Tree Significance & Retention Value Matrix*, Avalon, NSW Australia, www.footprintgreen.com.au

Appendix C - Tree Inspection Data

Birds Tree Consultancy

Consulting Arborist • Project Management • Horticultural Consultancy • Landscape Management

Inspection Data
Campsie

10-Jan-20

Tree no.	Species	Height (m)	Spread(m)	DBH (mm)	TPZ Radius (m)	Maturity	Trunk (single, twin, multiple @)	Trunk lean	Form/Crown shape	Branching Habit	Crown Distribution	Distortion Due	Stability	Branching Structure	Pruning History	Defects	Damage	Overall Health & Vigour	Canopy Density	Foliage	Deadwood	Epicormic Growth	Pest Infestation	Disease	Life expectancy	Env. & Landscape significance	Retention Value	Notes/Comments
1	Corymbia maculata	23	13	550	6.6	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High	
2	Banksia integrifolia	11	5	250	3	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
3	Syzygium paniculatum	6	3	120	2	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
4	Banksia integrifolia	9	4	240	2.88	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
5	Banksia integrifolia	9	6	240	2.88	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
6	Banksia integrifolia	7	4	220	2.64	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
7	Banksia integrifolia	8	5	280	3.36	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
8	Casuarina spp	18	8	455	5.46	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
9	Casuarina spp	19	13	615	7.38	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
10	Eucalyptus grandis	29	21	1255	15.06	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High	
11	Eucalyptus saligna	18	8	380	4.56	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
12	Eucalyptus saligna	14	6	310	3.72	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Evidence of decay	Damage to cambium, Wound	Fair	Normal	Normal	<5%	<5%	Borers	No evidence	5-15y	Medium	Medium	Damage to cambium to approximately 75% of trunk. Remove
13	Eucalyptus saligna	16	4	240	2.88	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
14	Casuarina spp	11	6	255	3.06	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
15	Tristaniaopsis laurina	5	4	300	3.6	Mature	Multiple (3) @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
16	Syncarpia glomulifera	8	5	310	3.72	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	High	High	
17	Syncarpia glomulifera	5	2	130	2	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
18	Syncarpia glomulifera	8	4	270	3.24	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
19	Eucalyptus robusta	28	18	1035	12.42	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High	
20	Eucalyptus robusta	28	15	915	10.98	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High	
21	Callistemon viminalis	5	4	48	2	Mature	Multiple @ base	NIL	Normal	Normal	Balanced		Stable	Stable	Topped, Line clearance	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
22	Melaleuca salicina	10	6	450	5.4	Mature	Twin @ 1500	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
23	Elaeocarpus reticulatis	4	1	50	2	Semi-mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	Medium	
24	Elaeocarpus reticulatis	4	2	75	2	Semi-mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	Medium	

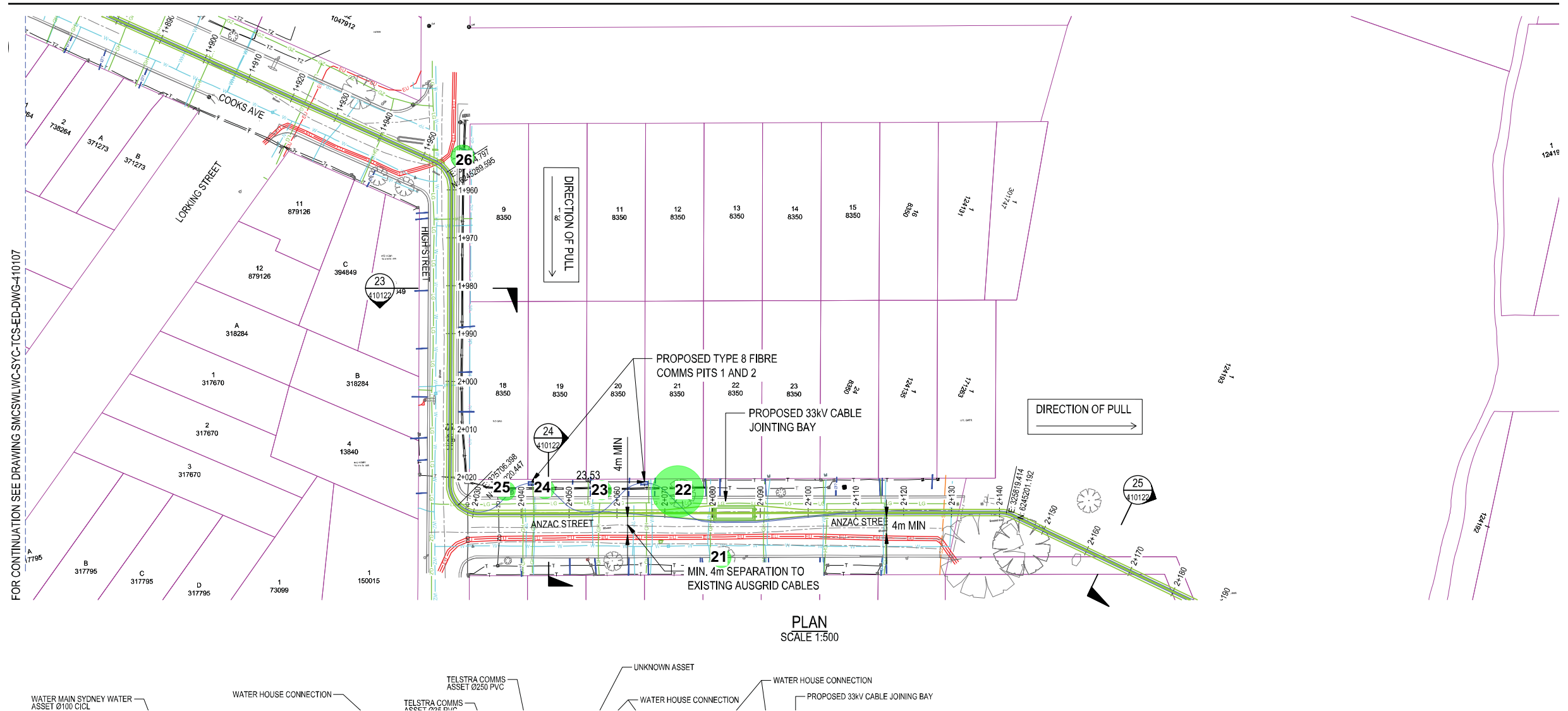
Tree no.	Species	Height (m)	Spread(m)	DBH (mm)	TPZ Radius (m)	Maturity	Trunk (single, twin, multiple @)	Trunk lean	Form/Crown shape	Branching Habit	Crown Distribution	Distortion Due	Stability	Branching Structure	Pruning History	Defects	Damage	Overall Health & Vigour	Canopy Density	Foliage	Deadwood	Epicormic Growth	Pest Infestation	Disease	Life expectancy	Env. & Landscape significance	Retention Value	Notes/Comments
25	Elaeocarpus reticulatis	3	1	100	2	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	Medium	
26	Callistemon viminalis	5	4	205	2.46	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
27	Callistemon viminalis	6	6	520	6.24	Mature	Twin @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
28	Callistemon viminalis	6	4	380	4.56	Mature	Twin @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
29	Callistemon viminalis	4.5	3	220	2.64	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
30	Callistemon viminalis	2	2	90	2	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
31	Stenocarpus sinuatus	4	2	110	2	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
32	Callistemon viminalis	4.5	3	275	3.3	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
33	Olea europaea	4.5	3	300	3.6	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
34	Callistemon viminalis	4	3	300	3.6	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
35	Callistemon viminalis	4	3	355	4.26	Mature	Multiple @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
36	Callistemon viminalis	6	7	600	7.2	Mature	Multiple (3) @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence, Topped	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
37	Callistemon viminalis	4	3	380	4.56	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
38	Callistemon viminalis	4	3	430	5.16	Mature	Twin @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
39	Callistemon viminalis	5	3	485	5.82	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
40	Callistemon viminalis	5	4	315	3.78	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
41	Callistemon viminalis	7	3	240	2.88	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
42	Callistemon viminalis	9	6	240	2.88	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
43	Callistemon viminalis	8	6	380	4.56	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
44	Callistemon viminalis	7	5	435	5.22	Mature	Twin @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
45	Callistemon viminalis	7	6	490	5.88	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
46	Callistemon viminalis	9	6	475	5.7	Mature	Multiple (3) @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
47	Melaleuca bracteata	6	3	115	2	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
48	Callistemon viminalis	10	8	765	9.18	Mature	Multiple (3) @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	

Tree no.	Species	Height (m)	Spread(m)	DBH (mm)	TPZ Radius (m)	Maturity	Trunk (single, twin, multiple @)	Trunk lean	Form/Crown shape	Branching Habit	Crown Distribution	Distortion Due	Stability	Branching Structure	Pruning History	Defects	Damage	Overall Health & Vigour	Canopy Density	Foliage	Deadwood	Epicormic Growth	Pest Infestation	Disease	Life expectancy	Env. & Landscape significance	Retention Value	Notes/Comments
49	Tristaniopsis laurina	5	3	200	2.4	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
50	Callistemon viminalis	10	7	280	3.36	Mature	Twin @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
51	Callistemon viminalis	5	4	190	2.28	Mature	Twin @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
52	Callistemon viminalis	8	3	245	2.94	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
53	Callistemon viminalis	8	6	324	3.888	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
54	Olea europaea	3	1	50	2	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
55	Corymbia ficifolia	5	5	350	4.2	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
56	Fraxinus griffithii	6	5	255	3.06	Mature	Multiple @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
57	Callistemon viminalis	8	6	445	5.34	Mature	Multiple @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
58	Tristaniopsis laurina	2	2	105	2	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
59	Tristaniopsis laurina	9	6	415	4.98	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
60	Fraxinus griffithii	6	6	215	2.58	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
61	Jacaranda mimosifolia	8	7	400	4.8	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
62	Jacaranda mimosifolia	10	8	545	6.54	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
63	Tristaniopsis laurina	9	5	430	5.16	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
64	Lophostemon confertus	10	7	335	4.02	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
65	Lophostemon confertus	8	7	240	2.88	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
66	Lophostemon confertus	8	5	240	2.88	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
67	Lophostemon confertus	7	5	280	3.36	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
68	Callistemon viminalis	8	6	465	5.58	Mature	Multiple (3) @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
69	Callistemon viminalis	9	7	420	5.04	Mature	Multiple (3) @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
70	Callistemon viminalis	8	6	410	4.92	Mature	Multiple (3) @ 400	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
71	Tristaniopsis laurina	9	6	400	4.8	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
72	Callistemon viminalis	7	5	275	3.3	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	

Tree no.	Species	Height (m)	Spread(m)	DBH (mm)	TPZ Radius (m)	Maturity	Trunk (single, twin, multiple @)	Trunk lean	Form/Crown shape	Branching Habit	Crown Distribution	Distortion Due	Stability	Branching Structure	Pruning History	Defects	Damage	Overall Health & Vigour	Canopy Density	Foliage	Deadwood	Epicormic Growth	Pest Infestation	Disease	Life expectancy	Env. & Landscape significance	Retention Value	Notes/Comments
73	Tristaniopsis laurina	5	3	115	2	Semi-mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
74	Callistemon viminalis	9	7	370	4.44	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
75	Callistemon viminalis	7	5	310	3.72	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
76	Tristaniopsis laurina	8	6	340	4.08	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
77	Callistemon viminalis	9	7	475	5.7	Mature	Multiple @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
78	Callistemon viminalis	6	6	340	4.08	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
79	Callistemon viminalis	8	7	350	4.2	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
80	Tristaniopsis laurina	9	6	370	4.44	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
81	Callistemon viminalis	7	7	400	4.8	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
82	Callistemon viminalis	5	4	230	2.76	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
83	Lophostemon confertus	9	7	340	4.08	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
84	Tristaniopsis laurina	6	4	215	2.58	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	Line clearance	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
85	Tristaniopsis laurina	8	7	290	3.48	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
86	Syncarpia glomulifera	9	6	310	3.72	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Fair	Thinning	Normal	15%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
87	Syncarpia glomulifera	9	6	355	4.26	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
88	Eucalyptus nicholii	11	9	920	11.04	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
89	Liquidambar styraciflua	11	9	550	6.6	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
90	Liquidambar styraciflua	10	8	460	5.52	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
91	Liquidambar styraciflua	9	8	450	5.4	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
92	Liquidambar styraciflua	10	8	360	4.32	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
93	Liquidambar styraciflua	10	8	435	5.22	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
94	Liquidambar styraciflua	11	7	510	6.12	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
95	Platanus x hybrida	16	10	535	6.42	Mature	Single	NIL	Normal	Normal	SE	Pruning	Stable	Stable	Line clearance	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High	
96	Ulmus parvifolia	12	11	315	3.78	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
97	Ulmus parvifolia	11	10	360	4.32	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
98	Ficus rubiginosa	14	13	800	9.6	Mature	Multiple @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
99	Callistemon viminalis	7	7	455	5.46	Mature	Multiple @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
100	Callistemon viminalis	7	5	560	6.72	Mature	Multiple @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
101	Callistemon viminalis	7	6	330	3.96	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
102	Callistemon viminalis	7	7	370	4.44	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
103	Callistemon viminalis	7	7	400	4.8	Mature	Multiple @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
104	Callistemon viminalis	7	7	400	4.8	Mature	Multiple @ base	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
105	Sapium sebiferum	16	9	905	10.86	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	

Appendix D Tree Location Plans

Tree Protection Plans



Legend

- Tree to be Retained and Protected
- Tree viable to be retained with design/construction amendments
- Tree to be Removed/Not Viable to be retained
- Tree Protection Zone (TPZ) in accordance with AS4970-2009

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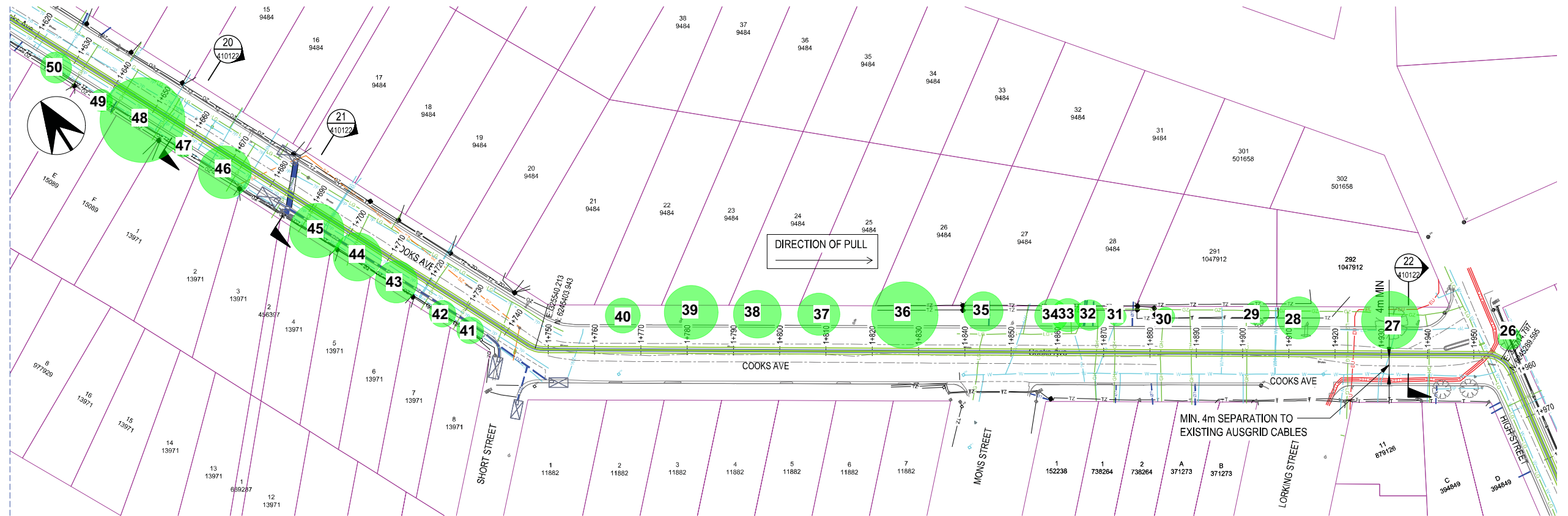
Project: Campsie - Sydney Metro Line

Client: Systems Connect

DWG: A02 REV E

Plan: Tree Location Plan 02

Date: 23 Mar 2022 Scale : 1:1000 @ A3



Legend

- Tree to be Retained and Protected
- Tree viable to be retained with design/construction amendments
- Tree to be Removed/Not Viable to be retained
- Tree Protection Zone (TPZ) in accordance with AS4970-2009

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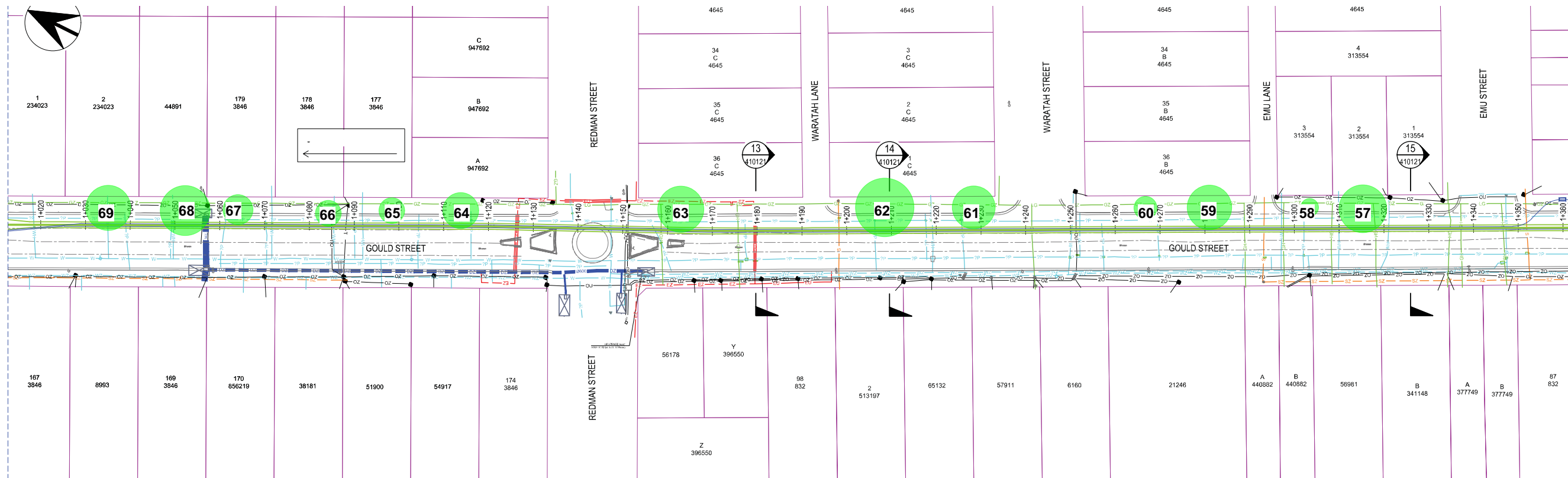
Project: Campsie - Sydney Metro Line

Client: Systems Connect

DWG: A03 REV E

Plan: Tree Location Plan 03

Date: 23 Mar 2022 Scale : 1:1000 @ A3



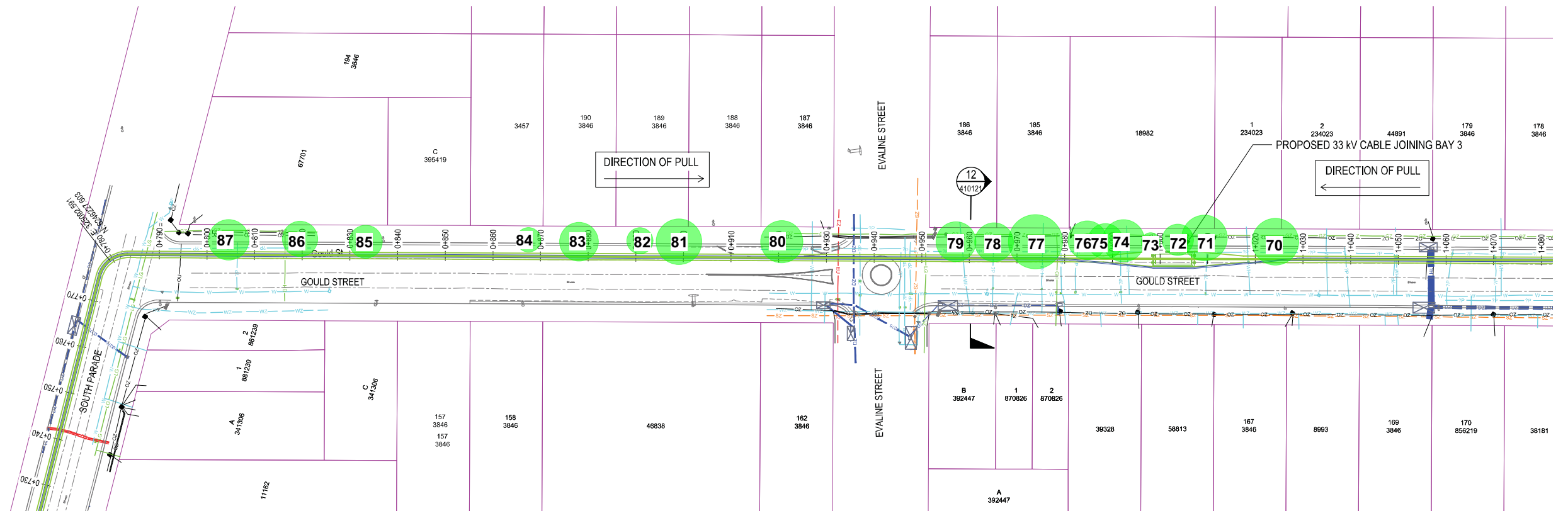
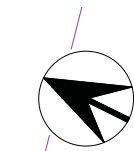
Legend

- Tree to be Retained and Protected
- Tree viable to be retained with design/construction amendments
- Tree to be Removed/Not Viable to be retained
- Tree Protection Zone (TPZ) in accordance with AS4970-2009

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Project: Campsie - Sydney Metro Line
 Client: Systems Connect
 DWG: A05 REV E
 Plan: Tree Location Plan 05
 Date: 23 Mar 2022 Scale : 1:1000 @ A3



Legend

-  Tree to be Retained and Protected
-  Tree viable to be retained with design/construction amendments
-  Tree to be Removed/Not Viable to be retained
-  Tree Protection Zone (TPZ) in accordance with AS4970-2009

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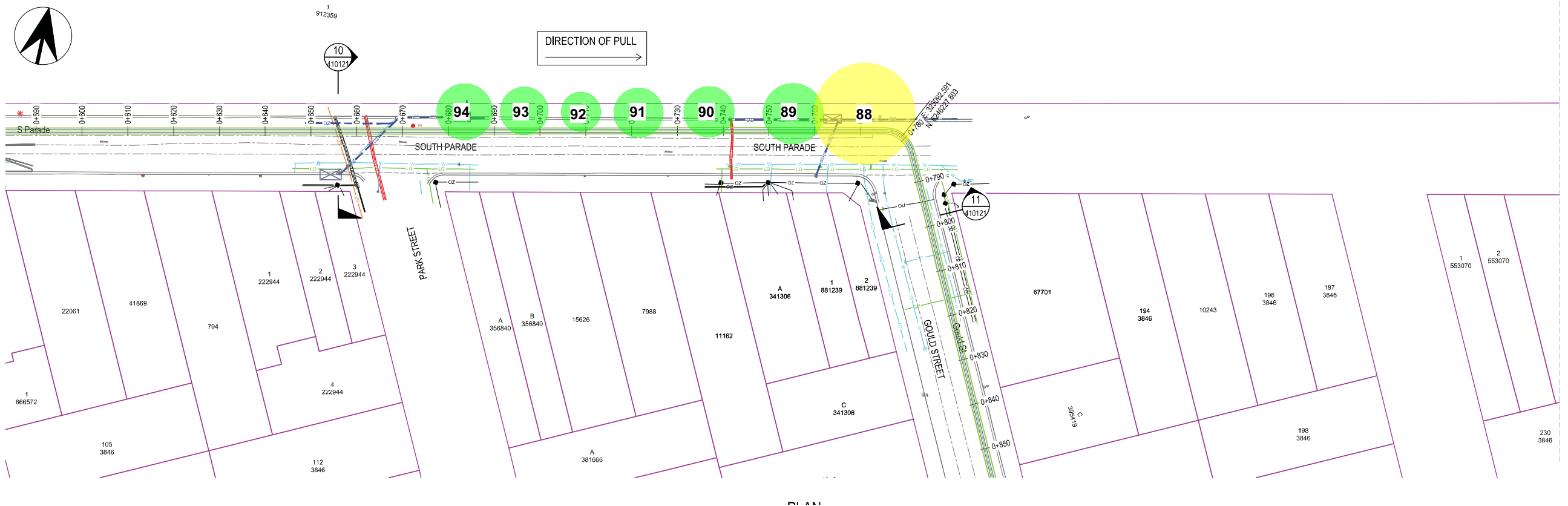
Project: Campsie - Sydney Metro Line

Client: Systems Connect

DWG: A06 REV E

Plan: Tree Location Plan 06

Date: 23 Mar 2022 Scale : 1:1000 @ A3



Legend

- Tree to be Retained and Protected
- Tree viable to be retained with design/construction amendments
- Tree to be Removed/Not Viable to be retained
- Tree Protection Zone (TPZ) in accordance with AS4970-2009

Birds Tree Consultancy

0438 892 634

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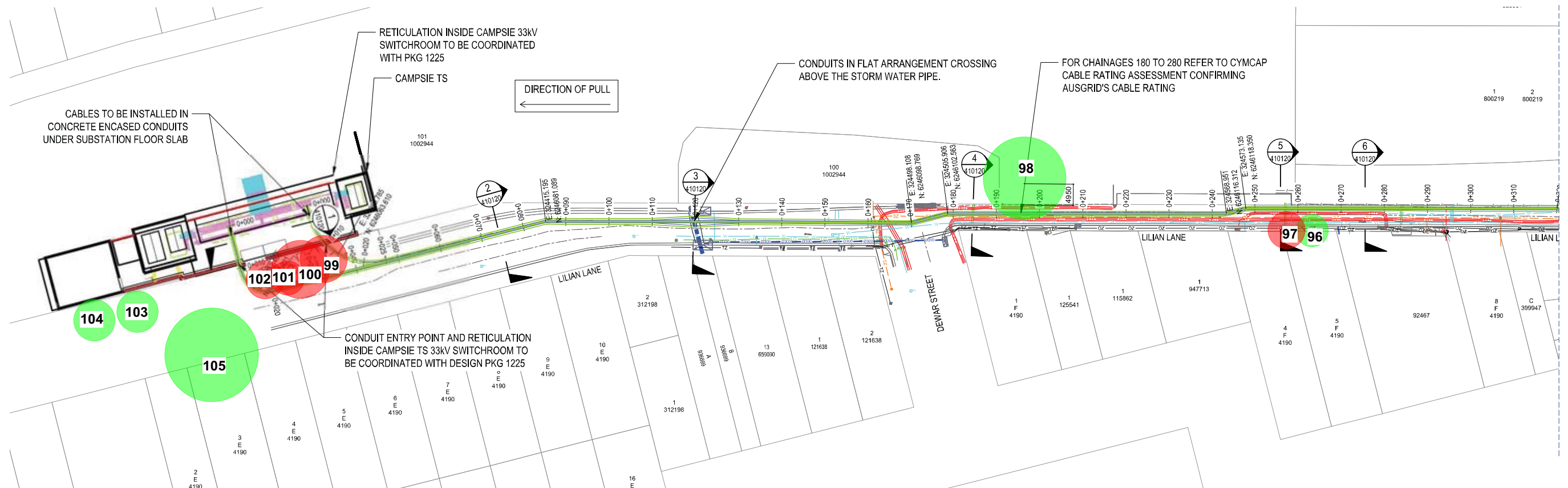
Project: Campsie - Sydney Metro Line

Client: Systems Connect

DWG: A07 REV E

Plan: Tree Location Plan 07

Date: 23 Mar 2022 Scale : 1:1000 @ A3



Legend

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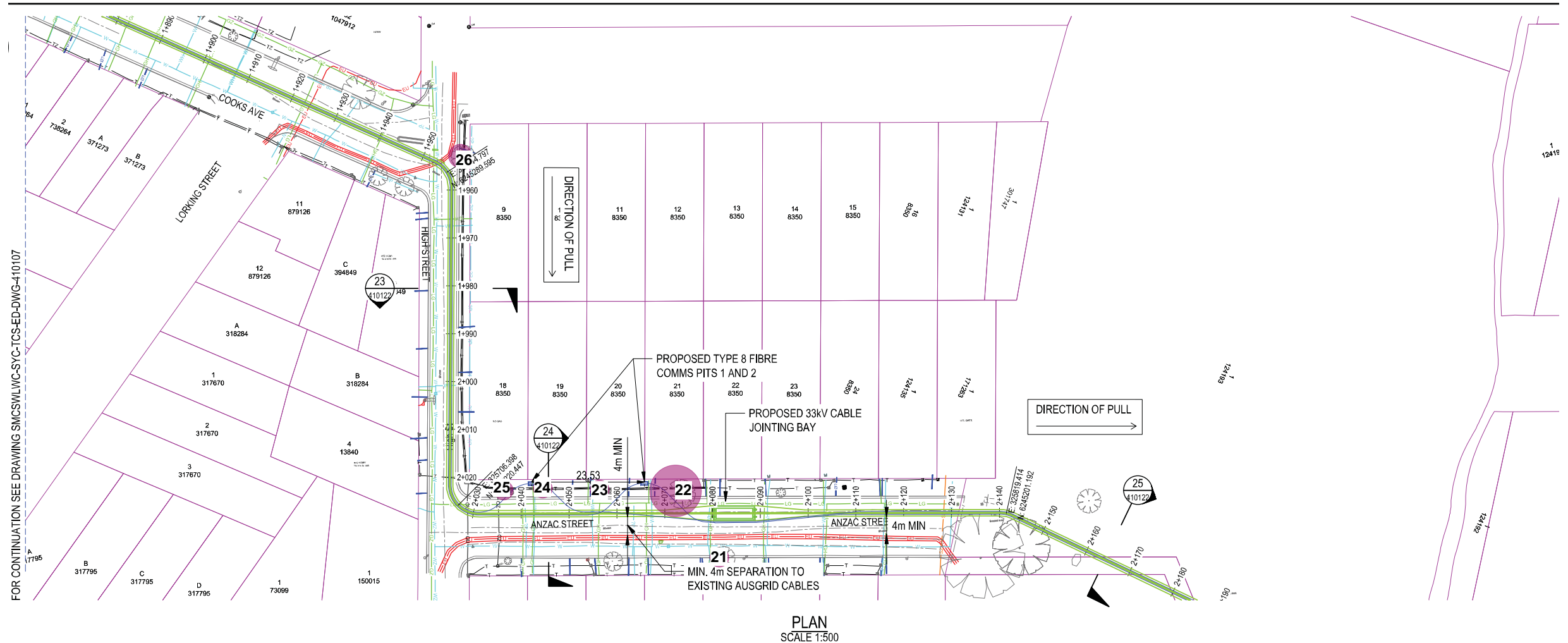
Project: Campsie - Sydney Metro Line

Client: Systems Connect

DWG: A09 REV E

Plan: Tree Location Plan 09

Date: 23 Mar 2022 Scale : 1:1000 @ A3



WATER MAIN SYDNEY WATER
ASSET 0100 CICL

WATER HOUSE CONNECTION

TELSTRA COMMS
ASSET 0250 PVC

UNKNOWN ASSET

WATER HOUSE CONNECTION

WATER HOUSE CONNECTION
PROPOSED 33kV CABLE JOINTING BAY

Legend

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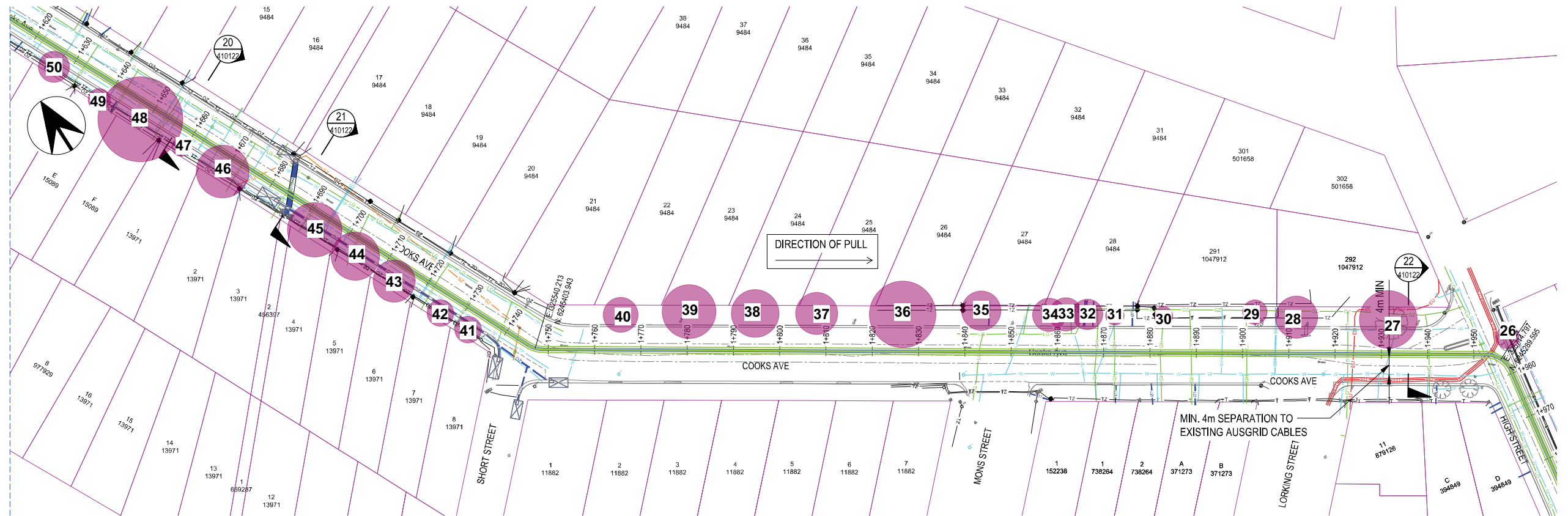
Project: Campsie - Sydney Metro Line

Client: Systems Connect

DWG: A11 REV E

Plan: Tree Protection Zone Plan 02

Date: 23 Mar 2022 Scale : 1:1000 @ A3



Legend

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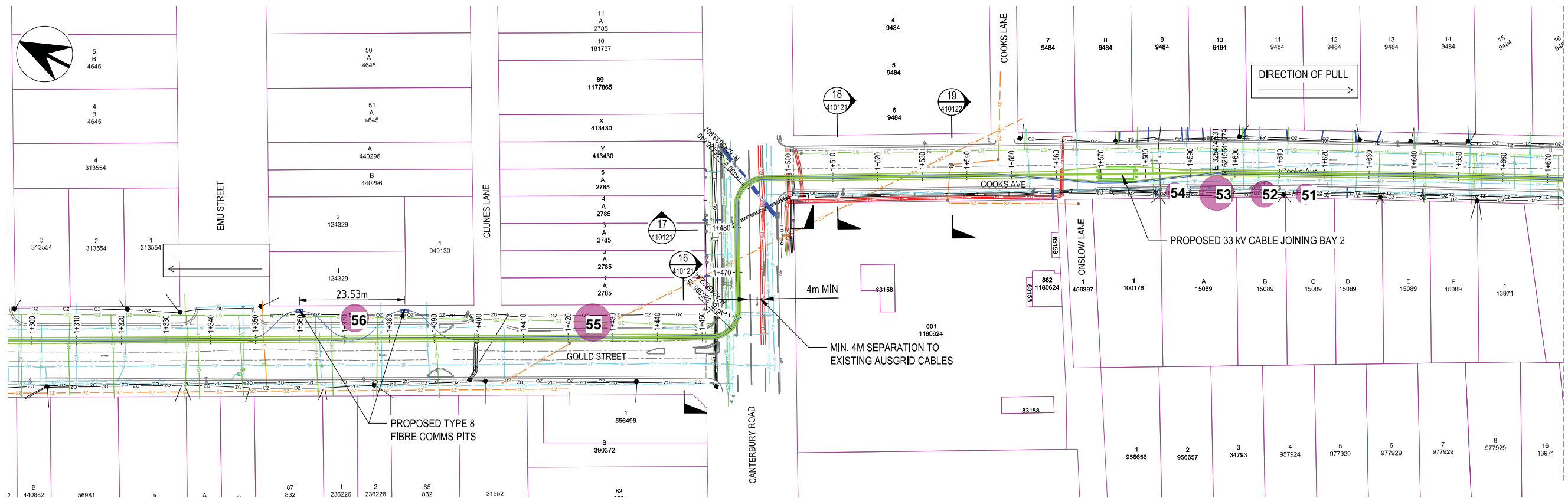
Project: Campsie - Sydney Metro Line

Client: Systems Connect

DWG: A12 REV E

Plan: Tree Protection Zone Plan 03

Date: 23 Mar 2022 Scale : 1:1000 @ A3

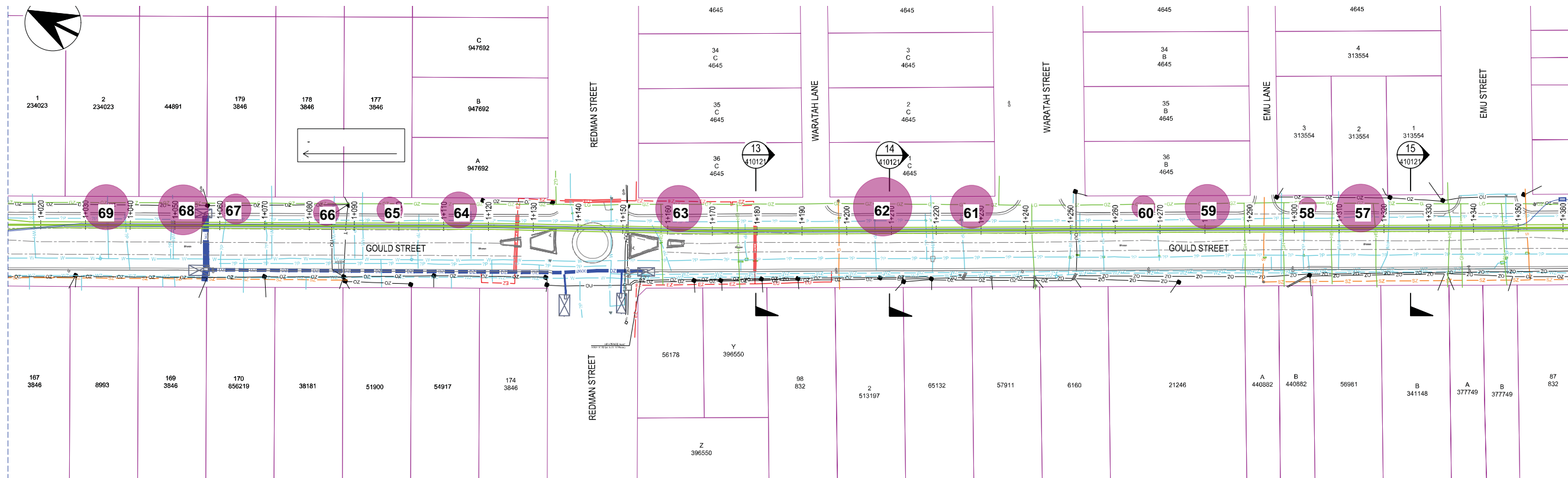


Legend



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- Tree Protection Zone (TPZ) in accordance with AS4970-2009

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Project: Campsie - Sydney Metro Line
 Client: Systems Connect
 DWG: A13 REV E
 Plan: Tree Protection Zone Plan 04
 Date: 23 Mar 2022 Scale : 1:1000 @ A3



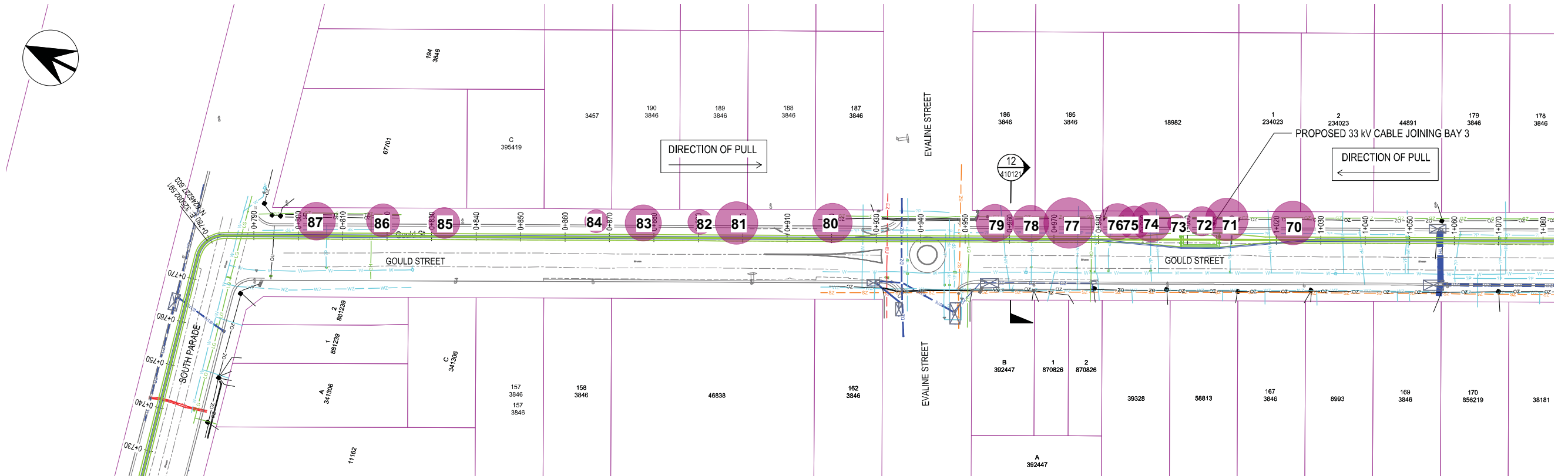
Legend

-  Tree to be Retained and Protected
-  Tree viable to be retained with design/construction amendments
-  Tree to be Removed/Not Viable to be retained
-  Tree Protection Zone (TPZ) in accordance with AS4970-2009

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Project: Campsie - Sydney Metro Line
Client: Systems Connect
DWG: A14 REV E
Plan: Tree Protection Zone Plan 05
Date: 23 Mar 2022 Scale : 1:1000 @ A3



Legend

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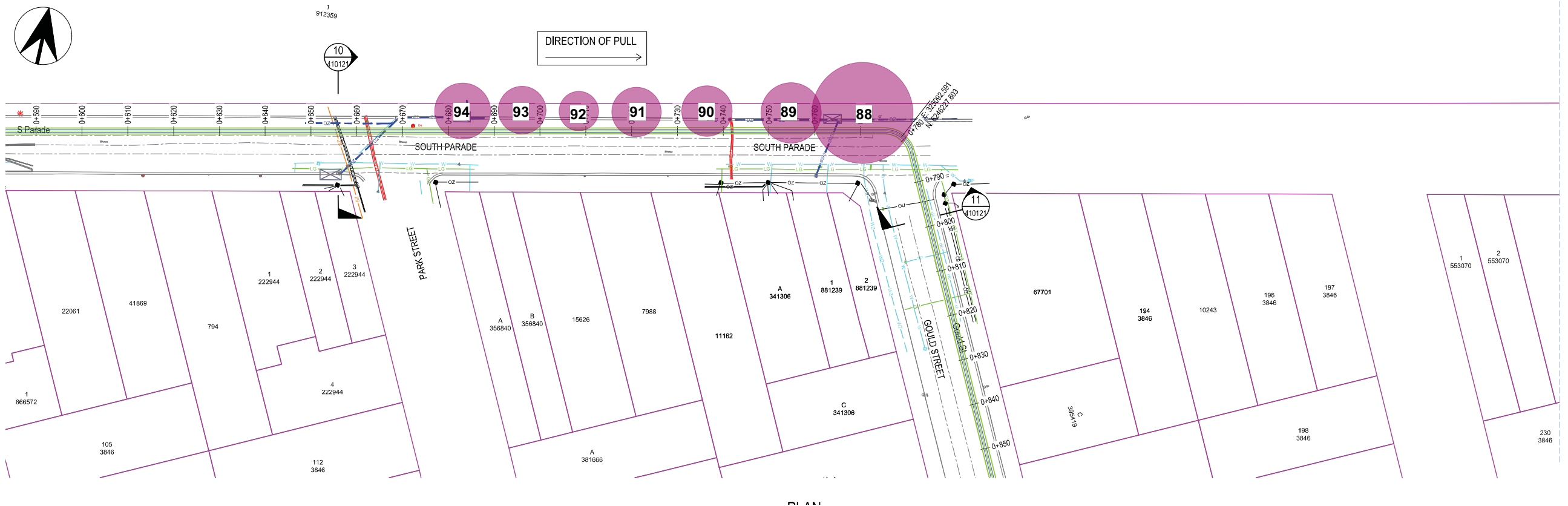
Project: Campsie - Sydney Metro Line

Client: Systems Connect

DWG: A15 REV E

Plan: Tree Protection Zone Plan 06

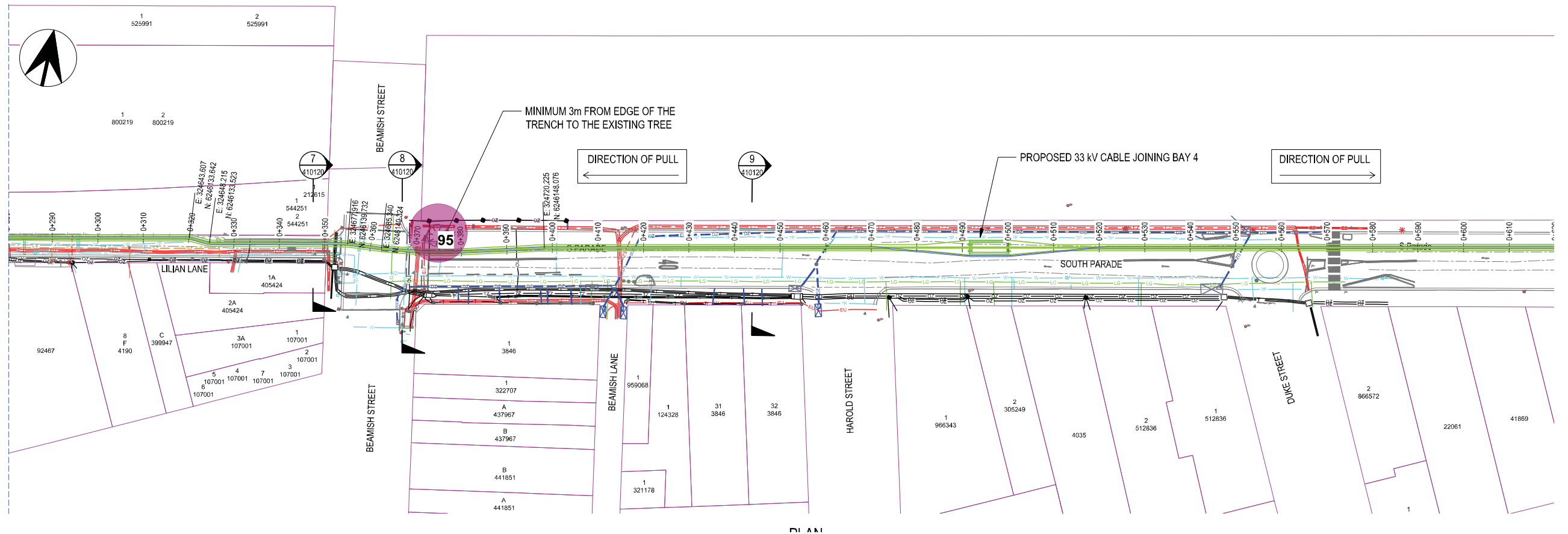
Date: 23 Mar 2022 Scale : 1:1000 @ A3



- Legend**
- Tree to be Retained and Protected
 - Tree viable to be retained with design/construction amendments
 - Tree to be Removed/Not Viable to be retained
 - Tree Protection Zone (TPZ) in accordance with AS4970-2009

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Project: Campsie - Sydney Metro Line
 Client: Systems Connect
 DWG: A16 REV E
 Plan: Tree Protection Zone Plan 07
 Date: 23 Mar 2022 Scale : 1:1000 @ A3



Legend

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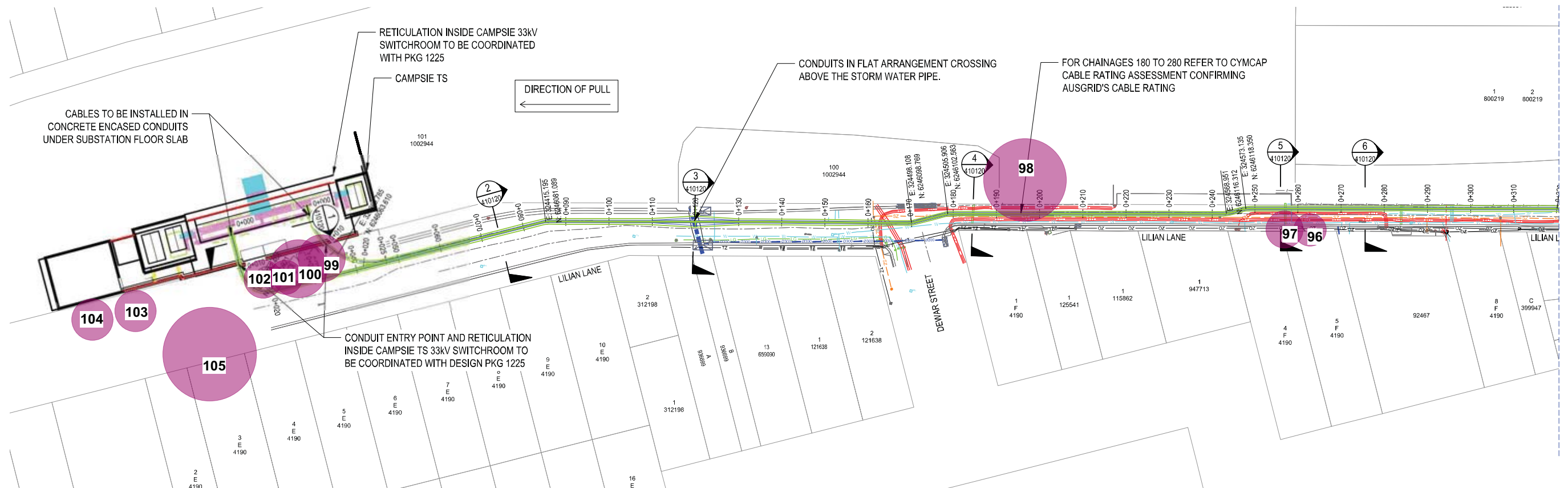
Project: Campsie - Sydney Metro Line

Client: Systems Connect

DWG: A17 REV E

Plan: Tree Protection Zone Plan 08

Date: 23 Mar 2022 Scale : 1:1000 @ A3



Legend

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Project: Campsie - Sydney Metro Line
 Client: Systems Connect
 DWG: A18 REV E
 Plan: Tree Protection Zone Plan 09
 Date: 23 Mar 2022 Scale : 1:1000 @ A3