1.5.2020

Brett Simpson
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PO Box 57
Campbelltown NSW 2560

HORTICULTURAL Management Services
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Dear Brett,

RE: ARBORIST ASSESSMENT, REGARDING PROPOSED COMMUNITY RECYCLING CENTRE AT HEPHER ROAD, CAMPBELLTOWN NSW

1.0 INTRODUCTION AND BACKGROUND

Horticultural Management Services were engaged to conduct an Arboriculture Assessment Report with particular regard to the Commonwealth Environment Protection and Biodiversity Conservation Act 1999, with reference made to the Office of Environment and Heritage (OEH) (formerly National Parks and Wildlife Services), Threatened Species Conservation Act 1995, Biosecurity Act 2015 and Campbelltown City Council, Tree Management Plan (TMP) regarding a proposed community recycling centre.

A site investigation was undertaken on Thursday 9th April 2020 to assess the proposed recycling centre's vegetation constraints and adjoining site trees overall health, structural integrity and identification of other physical conditions that may be present as per Annexure A Proposed Architectural Plans.

Based upon site observations, various illegal dumping areas containing domestic rubbish was noted, furthermore, the site is heavily weed infected with various environmental weeds including trees, shrubs, grasses and groundcovers listed under the Biosecurity Act 2015 requiring that every practical step should be taken to control and eradicated the weeds from the study area. Weed species noted included but not limited to; Broad leaf privet, Pyracantha, Cotoneaster, Asparagus fern, African/Wild Olive, Sweet Briar, Fireweed and Blackberry.

The purpose of this report is to identify the trees within and or adjoining the recycling development site, provide information on their individual current health and condition, determine their remaining life expectancy and significance in the landscape and assess their suitability for retention/preservation.

This assessment takes into consideration the ecological qualities of all trees and other significant vegetation on the site and its biotic, ecological, historical and visual significance.

Information contained in this report covers only the subject trees that were assessed and reflects the condition of the subject trees on site at the time of inspection.

2.0 SITE LOCATION

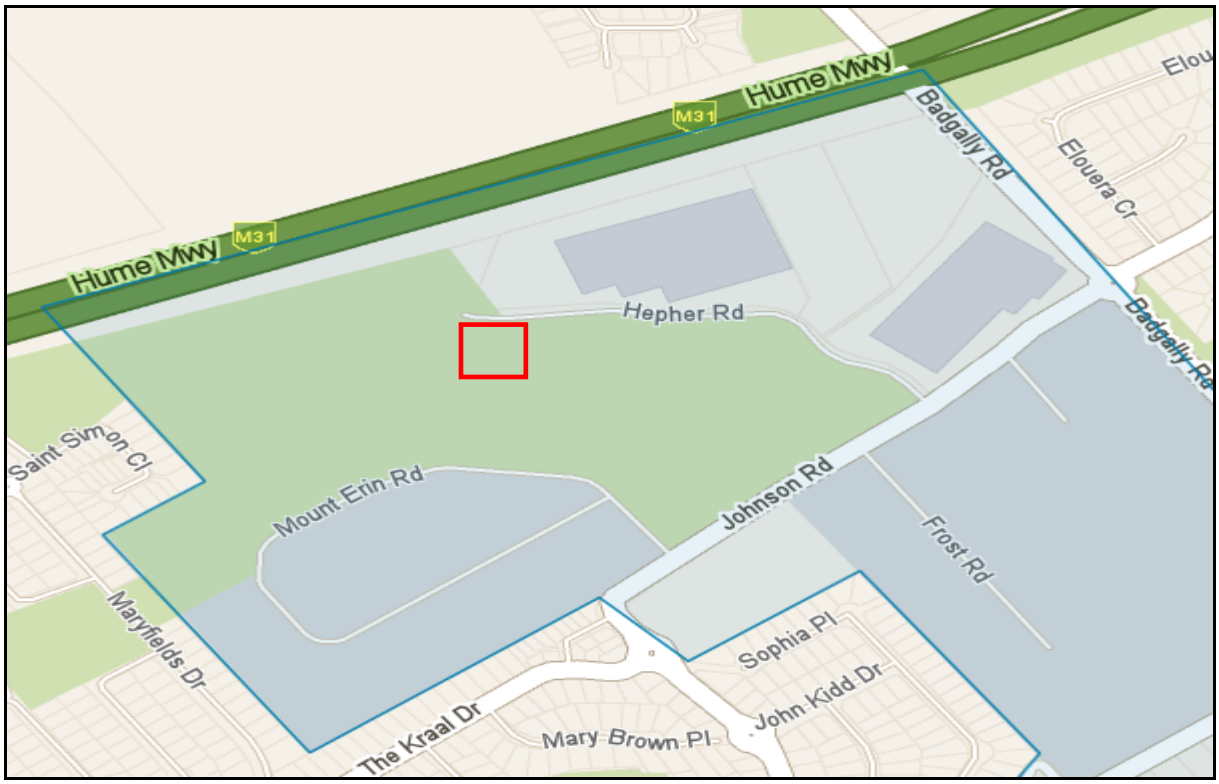

Figure 1 Shows the location of the study site. Source *whereis.com.au*

2.1 AERIAL SITE LOCATION

Figure 2 Shows an aerial location of the study site. Source *Nearmaps.com*

3.0 AIMS

To detail the condition of the trees and consider the location and condition of such in relation to their surrounds.

Provide as an outcome of the assessment, the following:

- Carry out an inspection of the subject trees within and adjacent to the site/s and site conditions,
- Assess the condition of the subject tree(s),
- A description of the tree's and other vegetation on the subject site,
- Observations made,
- Discussion on the tree's in their current landscape,
- Determine the subject trees' Landscape Significance including cultural, environmental and aesthetic values,
- Consider the benefits of retention or removal of the trees for the medium to long-term benefit of the tree's and on-going public safety,
- Provide recommendations for Tree Management, if or as required, within the context of a development application,
- Prepare site specific tree protection specifications for trees recommended for retention,

4.0 SITE DESCRIPTION AND PROPOSED DEVELOPMENT

Relevant site plans and or documents were viewed prior to undertaking the Arborist Assessment.

A site plan accompanies this report and identifies all trees located on and or adjoining this proposed development site, which may be impacted upon.

The site is identified as Hepher Road, Campbelltown NSW.

The sites contain a mixture of introduced exotic and native planted vegetation observed.

Based upon site observations, various illegal dumping areas containing domestic rubbish was noted, furthermore, the site is heavily weed infected with various environmental weeds including trees, shrubs, grasses and groundcovers listed under the Biosecurity Act 2015 requiring that every practical step should be taken to control and eradicated the weeds from the study area. Weed species noted included but not limited to; Broad leaf privet, Pyracantha, Cotoneaster, Asparagus fern, African/Wild Olive, Sweet Briar, Fireweed and Blackberry.

The purpose of this report is to identify the trees within and or adjoining the recycling development site, provide information on their individual current health and condition, determine their remaining life expectancy and significance in the landscape and assess their suitability for retention/preservation.

5.0 METHODOLOGY

This report was determined as a result of a comprehensive site inspection. The subject trees were inspected by Horticultural Management Services (HMS).

The comments and recommendations in this report are based on findings from this site inspection. Each tree has been provided with identification number for reference purposed denoted on the attached tree location plan and correlating with the Tree Assessment Schedule and as discussed within the report.

The method of assessment applied to the proposed development site is adapted from the principles developed by the Local Government Tree Resources Association (LGTRA). This recognised form of assessment considers the trees health/condition and subsequent stability, both in the long and short term at the time of the assessment and including but not limited to;

- Species identification (botanical and common),
- Height and form,
- Observations made including an evaluation of the tree's health and vigour using Crown spread and cover, foliage size, colour, extension growth, presence of disease or pest infestation, canopy density, presence of deadwood, dieback and epicormic growth as indicators,
- Condition, using visible evidence of structural defects, instability, evidence of previous pruning and physical damage as indicators,
- Suitability of the tree to the site and its existing location; in consideration of damage or potential damage to services or structures, available space for future development and nuisance issues,
- Likely future amenity based on a visual assessment,
- The trees tolerance to development impacts based on surface observations,
- Significance -specific heritage, cultural or intrinsic importance,
- Amenity value -as shade, windbreak etc or subjective, aesthetic values,
- Habitat value -both as an individual tree and as part of an ecological community,
- Observations of soil conditions and likely root spread,
- Overall condition assessment and suitability,
- Hazard/failure potential of tree to damage property or result in death,
- Safe Useful Life Expectancy (SULE) after Barrell (1995),

Retention Value, was based on the subject tree's Remaining Life Expectancy Range and Landscape Significance. The Retention Value was modified where necessary to take in consideration the subject tree's health, structure and site suitability.

Landscape Significance, was determined by assessing the combination of the cultural, environmental and aesthetic values of the subject trees. Whilst these values are subjective, a rating of high, moderate, low or insignificant has been allocated to the trees. This provides a relative value of the trees' Landscape Significance which may aid in determining their Retention Value. A more detailed explanation is outlined in Section 5.3 Landscape Significance.

Tree height and canopy spread, were estimated only. Diameter at Breast Height (DBH) was determined by measuring the main stem at 1.4m above ground. Photos were taken of the subject trees and subject site for the inclusion in this tabled report. The components of **tree risk assessment** include the trees failure potential or in the case of the proposed, an environment conductive to tree failure.

5.1 VISUAL TREE ASSESSMENT

The inspection was limited to a visual examination of the subject trees from ground level.

This assessment process is used to determine the sustainability of each tree in the landscape. The assessment of each tree was made using Visual Tree Assessment (VTA).

All trees were assessed from the ground without dissection, probing or coring. No woody tissue testing was undertaken as part of this assessment.

Destructive, resistance testing, or aerial inspections have not been undertaken as part of this assessment. The health of the trees was determined by assessing the following:

a) Foliage size and colour,
b) Pest and disease infestation noted,
c) Extension growth,
d) Canopy density and form,
e) Percentage of deadwood noted/observed,
f) Presence of epicormic growth observed,
g) Visible evidence of structural defects or instability,
h) Evidence of previous pruning or physical damage,
i) Observations made including an evaluation of the tree's health and vigour using Crown spread and cover, foliage size, colour, extension growth, presence of disease or pest infestation, canopy density, presence of deadwood, dieback and epicormic growth as indicators,
j) Condition, using visible evidence of structural defects, instability, evidence of previous pruning and physical damage as indicators,
k) Suitability of the tree to the site and its existing location; in consideration of damage or potential damage to services or structures, available space for future development and nuisance issues,

6.0 TREE IDENTIFICATION ASSESSMENT SUMMARY

Risk Matrix	Catastrophic Urgent- Tree requires immediate removal due to WH&S concerns.	Major Tree requires removal as part of development application.	Moderate TPO Exempt due to species, height requirements and or approved to be removed by Council.	Low Tree to be retained, protected and monitored

Tree Number	Tree Species	Height	DBH @ 1.4m	SRZ Required	TPZ Required	Tree Age * Young * Semi Mature * Mature * Over Mature	Tree Health * Good * Fair * Poor * Dead	Tree Structure * Good * Fair * Poor	SULE Rating	Ecological Significance * High * Moderate * Low * Nil	Landscape/ Visual Significance * High * Moderate * Low * Nil	Tree to be Retained and Arborist Comments * Yes * No
1.	Narrow leaf ironbark *Eucalyptus crebra*	6m	280mm	2m	3.4m	Mature	Good	Good	3	Nil to Low	Low	Yes, based on AS4970-2009 Protection of Trees on Development Sites, this tree is sufficiently distanced to be retained, protected, and monitored. No works are within its TPZ.
2.	Narrow leaf ironbark *Eucalyptus crebra*	17m	760mm	3.1m	9.2m	Mature	Good	Good	3	Moderate	Moderate	Yes, based on AS4970-2009 Protection of Trees on Development Sites, this tree is sufficiently distanced to be retained, protected, and monitored. No works are within its TPZ.

3.	Forest Red Gum *Eucalyptus tereticornis*	10m	590mm	2.7m	7.1m	Mature	Good	Good	3	Nil to Low	Low	Yes, based on AS4970-2009 Protection of Trees on Development Sites, this tree is sufficiently distanced to be retained, protected, and monitored. No works are within its TPZ.
4.	Forest Red Gum *Eucalyptus tereticornis*	7m	290mm	2m	3.5m	Mature	Good	Good	3	Nil to Low	Low	Yes, based on AS4970-2009 Protection of Trees on Development Sites, this tree is sufficiently distanced to be retained, protected, and monitored. No works are within its TPZ.
5.	Forest Red Gum *Eucalyptus tereticornis* *Firethorn* *Pyracantha spp*	7m 3m	270mm Multi trunk	N/A N/A	N/A N/A	Mature Mature	Good Good	Good Good	3 3B	Nil to Low Nil	Low Nil	No, this minor clump of regrowth swamp oaks and nuisance environmental weed species are required to be removed as they are located within the proposed recycling development envelope They are proposed to be replaced upon completion with appropriate species works within the new landscape plans.

6.	Forest Red Gum *Eucalyptus tereticornis*	7m	290mm	2m	3.5m	Mature	Good	Good	3	Nil to Low	Low	Yes, based on AS4970-2009 Protection of Trees on Development Sites, this tree is sufficiently distanced to be retained, protected, and monitored. No works are within its TPZ.
7.	Swamp She Oak *Casuarina glauca* *Regrowth Clump*	8m	200mm	N/A	N/A	Mature	Good	Good	3	Low	Low	No, this minor clump of regrowth swamp oaks and nuisance environmental weed species are required to be removed as they are located within the proposed recycling development envelope They are proposed to be replaced upon completion with appropriate species works within the new landscape plans.

Figure 3 Shows a detailed list of trees observed and assessed in relation to this application. All species were identified, assessed and referenced against Councils Tree Preservation Guidelines by a Qualified Horticulturist and AQF Level 5 Arborist (Dip Arb).

7.0 TREE LOCATION PLAN

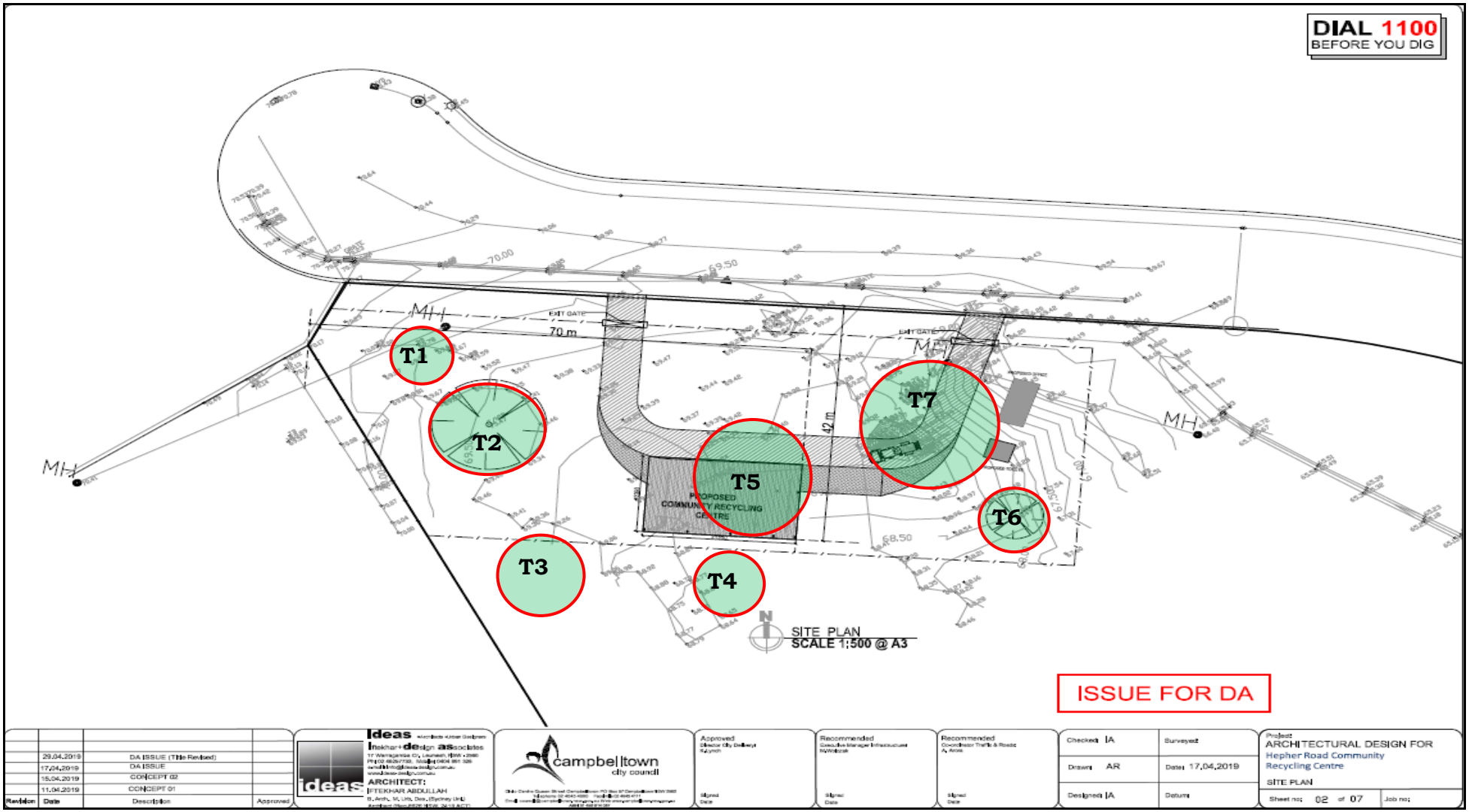

Figure 4 Shows the trees location based upon the plans provided.

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8.0 TREE REMOVAL PLAN LOCATION PLAN

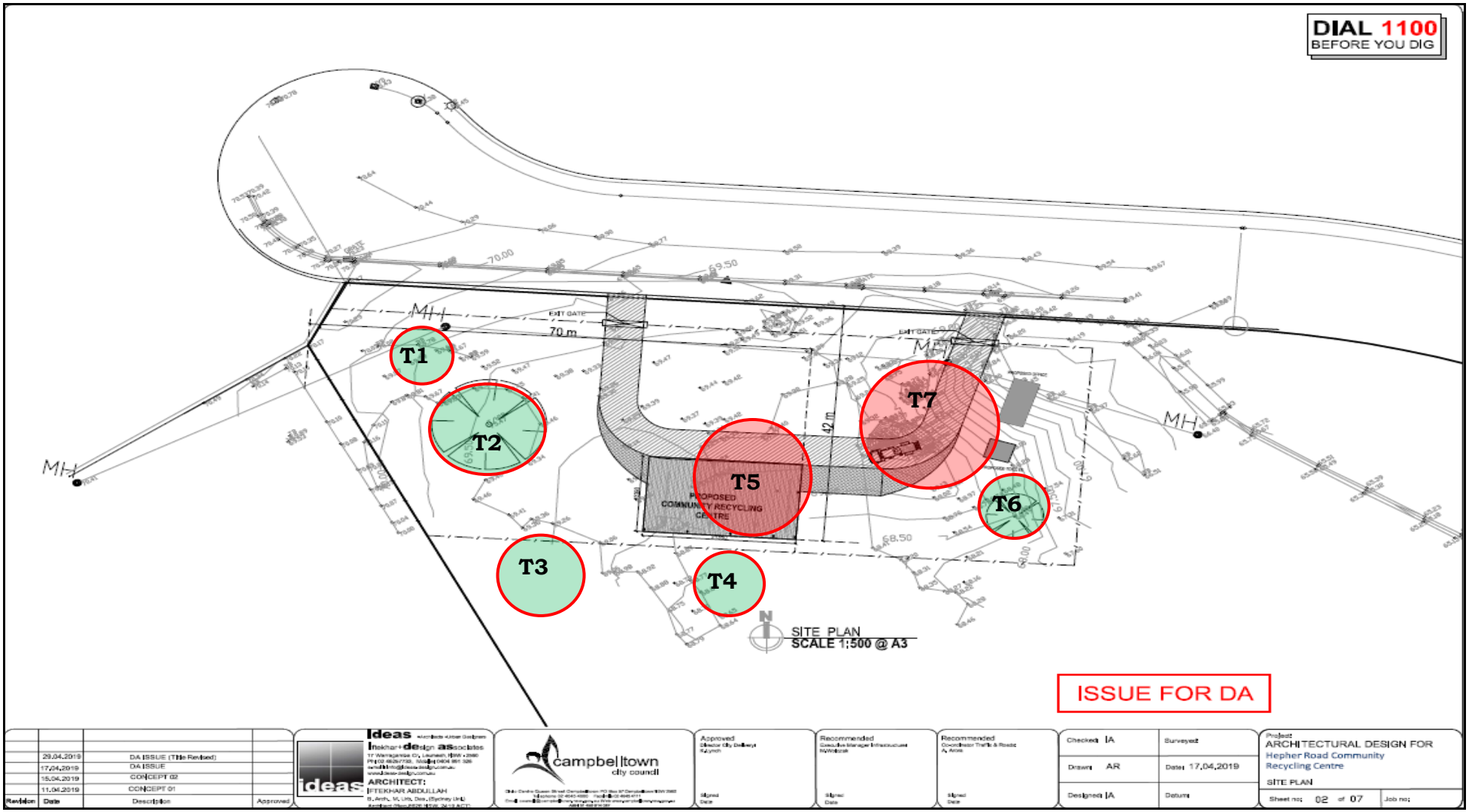

Figure 5 Shows the trees required to be removed based upon the plans tabled.

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9.0 RECOMMENDATIONS

After close visual and physical investigation of the trees condition (VTA) the results from the field investigations indicated the following;

Based on the proposed recycling centre development layout, Trees Numbered 1, 2, 3, 4 and 6 are sufficiently distanced to be retained in accordance with *Australian Standards - AS 4970-2009 Protection of trees on development sites* through best practice arboricultural techniques including tree protection measures with no impacts to the trees TPZ and or SRZ being anticipated.

The following points may be considered for the proposed scope of works under this application;

- Avoid large changes to the surface structure due to modification of the tree's moisture / surface feeding roots,
- Minimise disturbance to any site native vegetation surrounding the site,
- A Qualified Arborist/Horticulturalist undertakes any Arboricultural works,
- Removal of introduced exotic weeds be undertaken within the trees TPZ,
- **ANY** trenching near the trees TPZ that is required is to be hand dug to ensure minimal disturbance to additional surface feeding roots,
- Any tree roots discovered are cut cleanly with root pruning device by a qualified horticulturist of arborist,
- Any proposed work located near the trunk or outer canopy of the trees drip line, were services are known to be in the vicinity, any excavation for services should be hand dug to ensure minimal impact to the trees surface feeding and support roots,
- No building waste is to be disposed of/or stored near the tree trunk or drip zones of any trees,
- In order to ameliorate impact of any development, standard erosion and sediment controls are recommended,
- Regular watering is to be undertaken in hot dry periods to alleviate any short-term stress or loss of available water,
- A qualified Arborist should monitor these trees over a twelve (12) month period to evaluate the trees recovery and provide technical information to Council as required.

No long-term impacts or adverse effects are anticipated to local fauna; furthermore, there are no unforeseen circumstances that would warrant this application to be declined.

10.0 CONCLUSION

The trees which are the subject of this report are protected under Campbelltown City Council Tree Preservation Order (TPO).

Consideration of retaining mature significant vegetation to the area was paramount. After close visual and physical investigation of the site trees condition the results from field investigations are as follows.

Majority of tree sites and vegetation consist of TPO Exempt species as they are nuisance environmental weed species i.e. Firethorn, Privet, African olive.

Based on the proposed recycling centre development layout, Trees Numbered 1, 2, 3, 4 and 6 are sufficiently distanced to be retained in accordance with *Australian Standards - AS 4970-2009 Protection of trees on development sites* through best practice arboricultural techniques including tree protection measures with no impacts to the trees TPZ and or SRZ being anticipated.

Approval is recommended for the removal of Trees Groups Numbered 5 and 7 due to their location within the proposed recycling plant layout, excavation and considered scope of works. These groups of vegetation consist of minor/juvenile Eucalypts, Swamp Oaks and nuisance environment weed species.

Furthermore, based on the proposed layout, access requirements, considered construction requirements within the trees present location and site modifications, they are unable to be retained, therefore, they are supported to be removed and replaced with advanced trees in the landscape master plan.

The removal of this tree from this site will not have an adverse effect on the environment as indicated whether a viable local population of a species or an endangered ecological community will be placed at risk of extinction as a result of the proposal; or whether a significant area of known habitat will be modified or removed and has been also taken into consideration and has not been triggered by this tree application.

As stated, this tabled report is a snapshot of the existing trees structural condition, health and condition at that particular point in time on site and should be used as a guide when assessing this Development Application.

In summary, there are no unforeseen tree/vegetation issues that would arise out of the proposed recycling centres development scope of works that would require modification to the proposal.

Should you require further clarification or assistance regarding this letter, please call me on 0425 308 275.

Scott Freeman
Horticultural Management Services
Diploma of Arboriculture (AQF L5)
International Society of Arboriculture (ISA) Tree Risk Assessment TRAQ Certified
Diploma of Horticulture
Diploma of Conservation and Land Management

SITE PHOTOS

Figure 1 Shows Tree 2 with African Olive requiring removal.

Figure 2 Shows Pyracantha (weed species) from a distance on site.

Figure 3 Shows again Pyracantha and grass weed species.

Figure 4 Shows the cleared site area for the recycling centre.

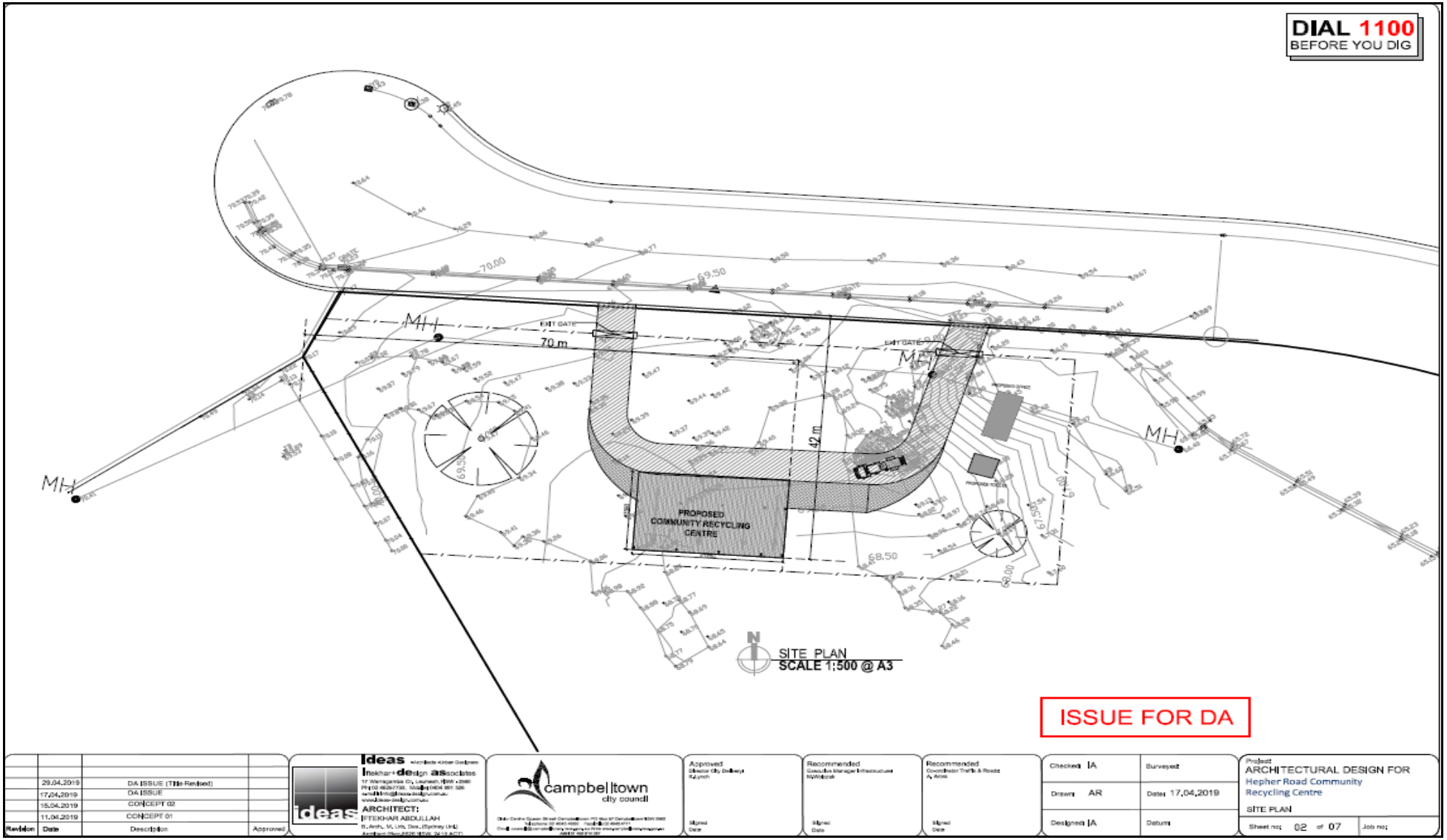
Figure 5 Shows the site looking towards the street.

Figure 6 Shows illegal dumped rubbish to be removed.

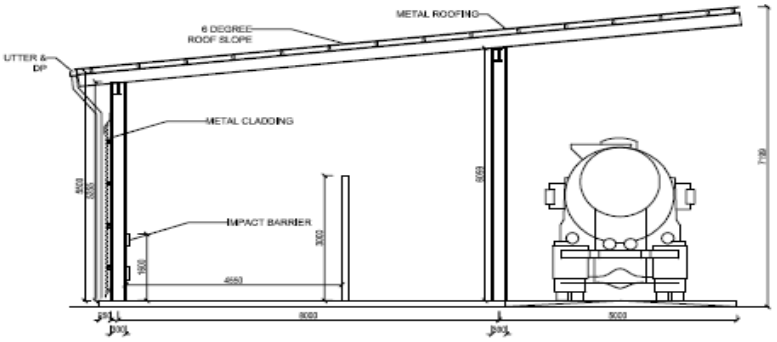
Figure 7 Shows African olive adjoining Tree 2 to be removed.

Figure 8 Shows African olive around the Tree 1 based that is required to be removed.

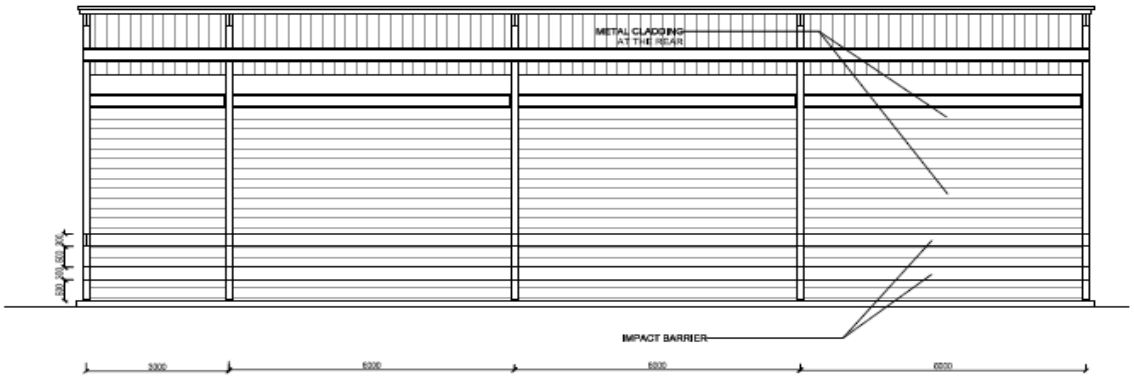
ANNEXURE A: PROPOSED ARCHITECTURAL PLANS



DIAL 1100
BEFORE YOU DIG



EAST ELEVATION
SCALE 1:100 @ A3



NORTH ELEVATION
SCALE 1:100 @ A3

ISSUE FOR DA

Revision	Date	Description	Approved
	29.04.2019	DA ISSUE (Title Revised)	
	17.04.2019	DA ISSUE	
	15.04.2019	CONCEPT 02	
	11.04.2019	CONCEPT 01	

Ideas
Iftekhar design associates
ARCHITECT:
IFTEKHAR ABDULLAH
B. Arch., M. Urb. Des. (Sydney UNI.)

campbelltown city council

Approved
Director City Delivery
K.Lynch
Sign
Date

Recommended
Executive Manager Infrastructure
M.Wilcock
Sign
Date

Recommended
Coordinator Traffic & Roads
A. Arora
Sign
Date

Checked IA
Drawn AR
Designed IA
Surveyed
Dated 17.04.2019
Datum

Project
ARCHITECTURAL DESIGN FOR
Hepher Road Community Recycling Centre
NORTH AND EAST ELEVATIONS
Sheet no: 05 of 07
Job no:

ANNEXURE B: PROPOSED LANDSCAPE MASTER PLAN

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ANNEXURE C: TREE PROTECTION FENCING (If or as required)