Our Ref: PR20080
Date: **25 May 2022**

Crystal Atkinson
Senior Strategic Planner
Strategic Planning
Wagga Wagga Council

Dear Crystal

RE: INFORMATION REQUEST FOR DRAFT PLANNING PROPOSAL – COLLEGE AVENUE / HELY AVENUE, TURVEY PARK

Green Tape Solutions has been engaged to provide ecological advice in relation to proposed development at Turvey Park (2DP1183166 and 1DP1254451). Please find herewith our response to the issues raised in the Information Request letter dated 1st July 2021.

Item 1. Snapshots from multispectral aerial photography (February 2021) (attached) shows the cooling effects of trees bordering the site and the vegetation condition index showing these trees to be in a healthy state. Further assessment and confirmation on whether these trees will be retained needs to be provided.

Response:

The Majority of vegetation on the eastern and southern border of the site will now be retained. The future dwelling and driveway can be built to allow the retention of most of the trees along the streets. Figures 2a and 2b provided in this letter illustrate the tree retention maps.

Landscaping vegetation proposed within the development will also significantly compensate for any lost cooling effects from clearing vegetation lost in the long term. The proposed landscape plan will include 203 native trees to be planted across the development area enhancing both amenity and environmental values across the whole development site. The planting species list is outlined in the landscape plan and summarised in the Table 1.

Table 1:Proposed Landscaping species list (Extract from landscaping plan)

Plant List							
Image	ID	Qty	Common Name	Botanical Name	Scheduled Size	Mature Height	Mature Spread
	Trees						
	Brap	70	Kurrajong	Brachychiton populneus	1.5m Ht 45 Litre	15m	5m
	EucC	11	River Red Gum	Eucalyptus camaldulensis	2.0m Ht 45 L	25 - 30m	10 - 15m
	Eucmi	33	Grey Box	Eucalyptus microcarpa	2.0m 40 lt	20 - 25m	10 - 15m
	Epo	89	Red Box	Eucalyptus polyanthemos	40cm 1.8m ht	15 - 20m	6 - 10m
	Shrubs						
	Ground Covers						
	Grasses						
	Climbers						
	Succulent						
	Total	203					

Item 2. The Biodiversity Development Assessment advises the BOS threshold is calculated at 0.5ha and the total area of native vegetation to be removed was calculated at 3.7ha and that the threshold would not be exceeded and therefore BOS isn't triggered. 3.7ha exceeds the threshold of 0.5ha and requires a BDAR.

Response:

The assessment of the vegetation removal has been revised and the total amount of vegetation clearing as a result of the development (road, intersection and infrastructure) is calculated at 2,212m^2 (0.22ha). Mitigation measures can be implemented to avoid any impact from future dwelling and associate infrastructures. The detailed desktop assessment and impact assessment provided below also demonstrate why a Biodiversity Development Assessment Report (BDAR) is no longer require for this proposed development.

I. DESKTOP ASSESSMENT

The desktop assessment involved reviewing relevant environmental documents, databases, scientific journals, technical reports, maps and legislation (Commonwealth, State and Local) to identify ecological values with the potential to occur within and surrounding the site. Recent and historical aerial imagery was also reviewed to assist with the verification of desktop results. The results of the desktop assessment were used to inform the field survey design. The coordinates -35.1289, 147.3488 were used for searches requiring input of coordinates. The results of the assessment are provided in the appendices.

The following resources were reviewed:

- EPBC Act Protected Matters Search Tool with 10 km buffer accessed 31 th July 2021 (DAWE, 2021) (Appendix 1);
- NSW Office of Environment and Heritage (OEH) BioNet Atlas - Species Sightings searches, accessed 6th August 2021 (OEH, 2019c) (Appendix 2);
- NSW (OEH) Threatened Biodiversity online database (OEH, 2019d) , accessed 6th August 2021;
- OEH Native Vegetation Regulatory (NVR) map (OEH, 2019b) and Biodiversity Values Map and Threshold Tool (BMAT) (OEH, 2019a), accessed 6th August 2021 (Appendix 3);
- Relevant environmental datasets accessed through the Sharing and Enabling Environmental Data (SEED) portal (NSW Government, 2019), accessed 6st August 2021 (Appendix 4);
    - Department of Primary Industries (DPI) - Threatened Freshwater Fish Indicative Distributions;
    - DPI - Regulated Rivers;
    - Department of Finance, Services and Innovation (DFSI) – NSW Hydrography;
    - OEH – Critically Endangered Ecological Communities NSW and EPBC;
    - OEH – NSW Extant Native Vegetation (Keith and Simpson 2006) – Version 002;
    - OEH – NSW Wetlands;
    - OEH - Vegetation Classes of NSW (version 3.03 - 200m Raster) - David A. Keith and Christopher C. Simpson;
- DPI Threatened species lists (DPI, 2019b);
- Key Fish Habitat for the Wagga Wagga local government area (DPI, 2019a);

- Birdlife Australia Birdata (Birdlife Australia, 2019, eBird, 2019), accessed 6th August 2021;
- State Environmental Planning Policy (SEPP) No. 44: Koala Habitat Protection(NSW Government, 2016), accessed 6th August 2021;
- Atlas of Living Australia (ALA) species search (ALA, 2016), 6th August 2021 (Appendix 5); and,
- Aerial imagery (Google Earth Professional, 2012).

1. Topography

The landform of the project area is flat to gently undulating. The project area is situated within the Murrumbidgee River valley, with the Murrumbidgee River located 2.5km kilometres to the North.

No watercourses or drainage features intersect the project area.

2. IBRA Bioregion and Subregion

Under the Interim Biogeographic Regionalisation for Australia (IBRA) classification system (version 7; IBRA7), the site is located within the South Western Slopes Bioregion (DotEE, 2019).

The NSW South Western Slopes Bioregion is an extensive area of foothills and isolated ranges comprising the lower inland slopes of the Great Dividing Range extending from north of Cowra through southern NSW into western Victoria with an area of 8,657,426 ha. About 8,070,608 ha or 93.22% of this bioregion occurs in NSW, with the remainder in Vic. (IBRA 5.1). The NSW portion of the bioregion occupies about 10.1% of the state (NSW National Parks and Wildlife Service, 2003).

3. Landscape Region

The project area is located within the centre of the Wagga Wagga City Township, which has been previously extensively cleared for agricultural and residential use, road construction and urban development. Vegetation within the project area consists of slashed grassland and lawn with scattered native and exotic landscape trees.

4. Site Assessment

A site assessment was undertaken on 9th April 2020 to obtain an overview of the biodiversity values of the site and to assess whether the development would have any significant impacts on these values, including any requirements for the provision of an offset for vegetation clearing. In particular, the site assessment focused on identifying whether any native trees on site contain hollows and if so, whether these hollows currently support, or are likely to support, any conservation-significant species, including threatened fauna species listed under the EPBC and BC Acts. Nocturnal spotlighting (1 x 60 person-minute random traverse of the site and 1 x 60 person-minute fixed point spotlighting with aural point survey) and a dawn bird survey (1 x 60 person-minute random traverse) was undertaken to support the assessment.

The site is predominantly cleared of native vegetation, with small stands of native canopy trees scattered across the site. Canopy trees include a range of eucalypt species including locally occurring species such as some white box (*Eucalyptus albens*), sugar gum (*E. cladocalyx*) and very low numbers of white ironbark (*E. leucoxylon*), grey box (*E. microcarpa*), red box (*E. polyanthemos*), River red gum (*E. camaldulensis*), green mallee (*E. viridis*) and swamp mallet (*E. spathulata*) (Plates 1 and 2). Many of the native trees on site have been planted. Non-native species present on site include Arizona cypress (*Cupressus arizonica*), Judas-tree (*Cercis siliquastrum*), London planetree (*Plantanus x acerifolia*), pin oak (*Quercus palustris*), Chinese tallow (*Sapium sebiferum*), liquidamber (*Liquidamber styraciflua*) and desert ash (*Fraxinus oxycarpa*) (**Plate 1 and 2**).

The ground layer is highly modified as result of historical clearing and ongoing land management practices, including regular mowing, slashing and raking.

Plate 1: Native canopy trees

Plate 2: Representative image of cleared area within the site

The property provides low quality habitat resources for local fauna, being limited mainly to some shelter and foraging resources for highly mobile and mainly arboreal fauna such as birds, in particular urban-adapted and generalist species such as Noisy Miner (*Manorina melanocephala*), Crested Pigeon (*Ocyphaps lophotes*), Willy Wagtail (*Rhipidura leucophrys*).

No suitable breeding habitat for threatened fauna species was noted on site. A number of old-growth white box (*E. albens*) trees containing cavities may be suitable as nesting sites for more common fauna species. However, no species were sighted during the spotlighting activities and no nests were seen within any of the trees within or close-by to the development footprint.

The understorey layers across the site are highly modified and completely devoid of any structural habitat complexity including a lack of shrubs, low diversity native groundcover and a lack of any other terrestrial habitat features (e.g. fallen timber, rocky outcrops). Consequently, the site is considered to provide only poor habitat quality for native terrestrial fauna, including low breeding habitat and limited foraging values given the dominance of unpalatable weeds.

5. Mapping Extent of Native Vegetation Cover

Under the BAM (2020), native vegetation is defined in section 1.6 of the BC Act as any of the following types of plants native to New South Wales:

a) trees (including any sapling or shrub or any scrub)

b) understorey plants

c) groundcover (being any type of herbaceous vegetation)

d) plants occurring in a wetland.

A plant is native to NSW, if it was established in NSW before European settlement. This includes planted vegetation which is important as the development site and broader study area contains several native species plantings.

The extent of native vegetation in the project site was ground-truthed and mapped using up to date aerial imagery. Polygons were digitised in a GIS (QGIS 10.6) at a scale of between 1:1,000 and 1:5,000. The vegetation extent within the project site has been mapped as accurately as possible and is presented in **Figure 1.**

To assess percent of current extent of native vegetation, a landscape buffer of 1,500 metres was placed around the boundary of the development site in accordance with Section 4.2 of the Biodiversity Assessment Method (BAM) (**Figure 1**). Percent native vegetation cover in the landscape buffer was calculated using a combination of regional vegetation mapping and aerial imagery, in some cases making assumptions of native vegetation where no mapping exists.

Within a 1,500 m buffer around the project site, approximately 933ha has been cleared of native vegetation and is used as residential and / or commercial lots. Only 8.8ha of retained native vegetation is located within 1km north-west of the development site. This represents less than 1% of native vegetation covered within the buffer area 1,500m buffer (0-10% class as per the BAM).

6. River, Streams, Estuaries and Wetlands

The development site is located within the Murray-Darling Catchment, about 2.5 km south from the Murrumbidgee River. No named creeks, streams or waterways, ephemeral or otherwise, run through the development site. Movement of water outside of the development site is not evident through any feature, therefore the development site is unlikely to contribute to the flow of the nearby Murrumbidgee River.

An EPBC Protected Matters search completed on the 31st of July 2021 (Appendix 1) identified 4 wetlands of international importance, which are not located near enough to site to be considered significant. These wetlands would not be impacted by the proposal. Furthermore, no wetlands occur within the development site.

7. Habitat Connectivity

The site is located within a highly developed area of the Wagga Wagga township and thus biodiversity connectivity is very low. The development is surrounding by residential development. Connectivity within the development site is limited to the mature canopy trees spotted across the site and along the streets.

8. Areas of Geological Significance

No karsts, caves, crevices or cliffs or other areas of geological significance occur within the development site.

9. Areas of Outstanding Biodiversity Value

A review of the Areas of Outstanding Biodiversity Value (AOBV) map illustrates that no AOBV occur within the development site.

10. Additional features

The development site is located within predominately cleared land that does not possess large expanses of intact native vegetation with high biodiversity value. **Figure 2** illustrates the tree survey and retention map for the development site.

Location Map

Project: PR20080 - University Park Sub-Division, Wagga Wagga

- Site Boundary
- BAAM Assessment Area
- Retention Basin
- Movement Corridor
- Waterway

0 250 500 m

Author: Aaron Felton
Date: 09/08/2021
Version: VerA

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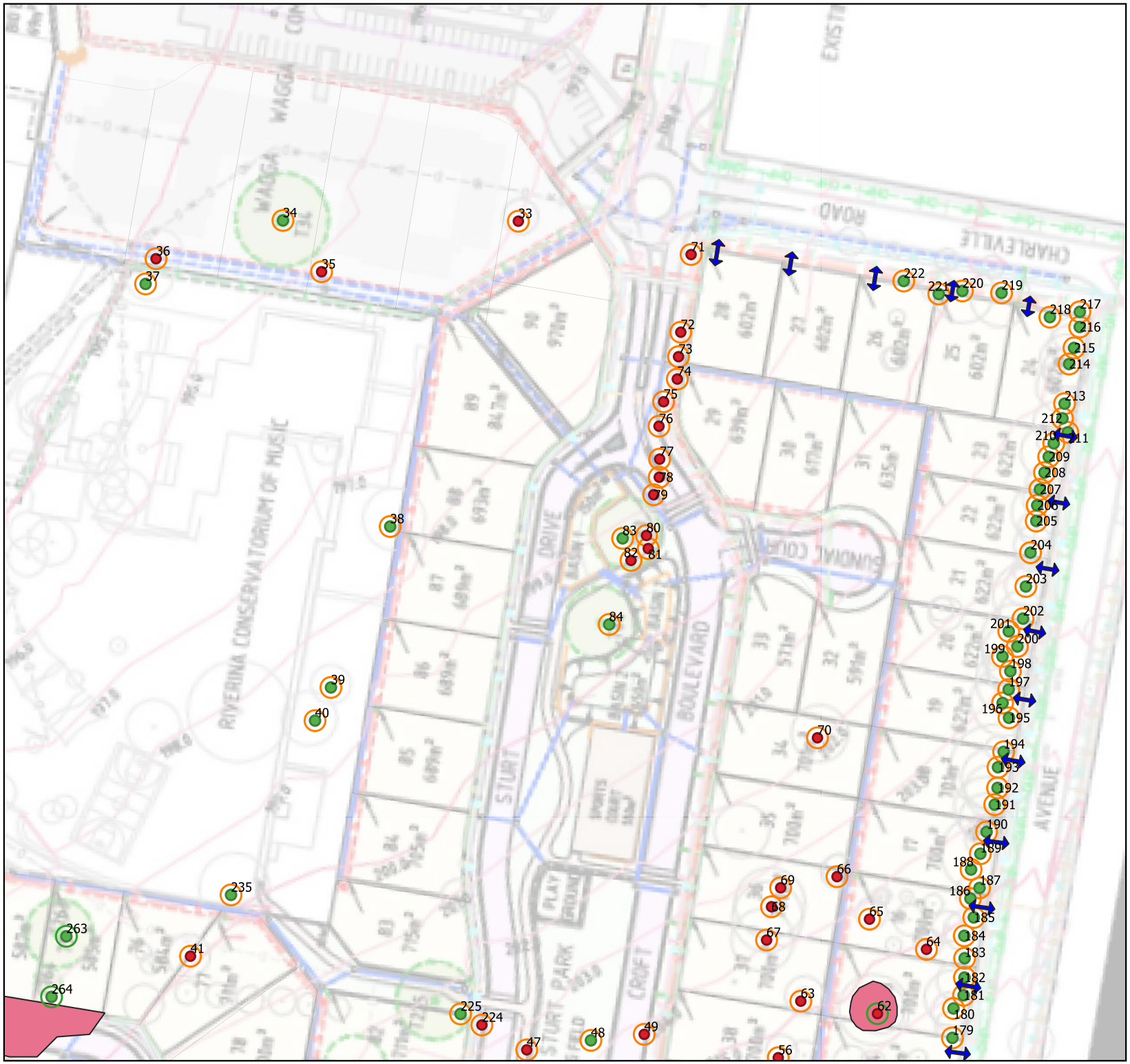

Figure : Tree Retention Map - Northern Section

Project: PR20080 - University Park Sub-Division, Wagga Wagga

- Site Boundary
- Clearing Extent

Tree Survey

- Trees to be retained
- Trees to be removed

Tree Survey

- Exotic / Non native trees
- Endemic trees
- Indicative 3m wide driveway (exact location of the future driveway to be defined by future owner and arborist)

0 25 50 75 m

Author: KM
Date: 24/05/2022
Version: VerB

Note: Tree sruvey undertaken by project arborist and surveyor

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Figure : Tree Retention Map - Southern Section

Project: PR20080 - University Park Sub-Division, Wagga Wagga

Site Boundary

Clearing Extent

Tree Survey

Trees to be retained

Trees to be removed

Tree Survey

Exotic / Non native trees

Endemic trees

Indicative 3m wide driveway (exact location of the future driveway to be defined by future owner and arborist)

0 25 50 75 m

Author: KM
Date: 24/05/2022
Version: VerB

Note: Tree sruvey undertaken by project arborist and surveyor

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Table 2 provides a summary of the main database searches undertaken as part of the desktop assessment and the results of these searches.

Table 2: Summary of desktop database searches and results

Database	Search Parameters	Desktop Assessment Results
EPBC Register of Critical Habitat (DAWE)	Project area coordinates + 10 km buffer	No critical habitat is identified on the register for the site and site locale.
EPBC Protected Matters Tool Report (DAWE)	Project area coordinates + 10 km buffer	Under the EPBC Act, the following have the potential to occur within the site locale (10 km buffer): • 3 threatened ecological communities; • 21 listed threatened species; • 10 migratory species; and • 4 wetlands of international importance.
BioNet Atlas (NSW) – Species Sightings	Project area coordinates + 10 x 10 km buffer (0.1º cell):	23 fauna and flora species listed as threatened under Schedule 1 of the BC Act have been recorded within the site locale (10 km x 10 km search area).
OEH Threatened Biodiversity	By region – South western slopes – inland slopes IBRA subregion	A total of 148 listed species were identified as known to occur or potentially occurring within the sub-region. Past field surveys have not identified any threatened species on site.
OEH NVR Map	Project area and site locale	The site is mapped as land excluded from the land management framework.
OEH Biodiversity Values Map and Threshold Tool	Project area and site locale	No part of the site is mapped as supporting biodiversity values on the BV map.
OEH Sharing and Enabling Environmental Data (SEED) portal	Project area and site locale	No Plant Community Types are identified on Seed mapping
OEH Travelling Stock Reserves – Conservation Values 2017	Project area and site locale	No TSR value present on site
OEH Key Threatening Processes (KTPs)	All KTPs listed in NSW	A total of 34 KTPs are listed under the BC Act for the state of NSW.
Noxious Weeds Act 1993 – DPI NSW WeedWise	North West region	108 taxa are identified as Priority Weeds for the region.
Key Threatening Processes (KTPs) listed under the	All listed KTPs	A total of eight (8) KTPs are listed under the FM Act, however not all apply to

Database	Search Parameters	Desktop Assessment Results
Fisheries Management Act 1994 (FM Act)		terrestrial matters. And are not relevant to this project site.
DPI Key Fish Habitat	Wagga Wagga LGA	The project area is not located within mapped Key Fish Habitat.
Atlas of Living Australia (ALA)	Project area coordinates + 10 km buffer	A total of 324 species have been recorded within the site locale. This list was generated to be used as resource to inform the site assessment, particularly with respect to the occurrence of flora and fauna species not listed under State or Commonwealth legislation.

II. ASSESSMENT OF IMPACTS AND MITIGATION MEASURES

The construction of the roads, intersection and infrastructures will require the removal of 74 mature trees on site, of which six (6) are endemic to the area and 37 are native trees of Australia, and some regrowth vegetation within the existing vegetated patches. Using high resolution aerial imagery and overlaying the area with the proposed development footprint, the extent of native vegetation to be removed from the site has been calculated as 0.22 ha (Figure 2). The clearing footprint remains under the threshold of 0.5ha and no BDAR is required.

The development will result in minimal disturbance of native vegetation. Where this disturbance cannot be avoided, the vegetation is of poor quality (confirmed by the arborist – arborist report provided in Appendix 6) and provides no habitat for any threatened species listed either under the State or Federal legislation. Importantly, opportunities to further minimise native vegetation clearance has been investigated and most of the vegetation along the street can now be retained through appropriate mitigation measures outlined in Table 3.

Table 3: Mitigation Measures

Phases	Mitigation Measures
Design Phase	Most the trees located along the Hely Avenue and Fernleigh Road are located at the front of the proposed lots. The tree protection zones of retained vegetation are outlined in Figure 2. Future dwellings will be placed so that no impact of minimal encroachment into the roots system of the retained trees to avoid any additional clearing.
	Future Dwellings will need to assess the trees with-in their own design parameters & make necessary tree removal applications.
	Watering and gaseous exchange vents can be installed in the area of the driveway that passes within the dripline of the retained vegetation along the street or the prescribed tree protection zone area. The number and location of the vents are to be determined by a Consultant Arboriculturist in correlation with the house builder. Pervious 3m wide driveway may also be an alternative option to ensure the impact to the roots system is

	minimised. Site-specific arboricultural advice will likely be required at the time of the future dwelling design and construction phase. The location of the driveways will be provided by the future landowners following discussion with a qualified arborist.
	If walls or a driveway or other structures are to be constructed near a protected tree, careful excavation is to be undertaken manually by using non-motorized hand tools to determine the location of first order and lower order structural roots with a diameter of 20mm or greater, without damaging them. Site-specific arboricultural advice will likely be required at the time of the future dwelling design and construction phase.
Construction Phase (Road and infrastructure only)	Appropriate weed control and hygiene measures should be implemented immediately prior to and during construction to reduce the likelihood of introducing and spreading priority and significant environmental weed species, as identified within the *Riverina Regional Strategic Weeds Management Plan*. Any significant weed infestations (including priority weed species and infestations of environmental weed species which may present management issues) should be treated prior to any vegetation clearing, ground disturbance, removal or stockpiling of material. Materials should not be stockpiled within areas where significant weed infestations are or were previously present and should be regularly monitored for evidence of seed germination and re-infestation
	Trees to be retained as part of the development and on adjoining land should be protected during the construction of the road and infrastructure by fencing off the tree protection zone at either a radius of 12 times the diameter at breast height (DBH; measured at 1.3 m above ground level) measured from the trunk or to the dripline of the canopy. This exclusion fencing shall consist of star-pickets with high-visibility caps and high-visibility barrier mesh, with weather-proof signage attached to notify site personnel that works within the TPZ of individual are to be excluded or minimised. Stockpiles must not be placed within the TPZ. Vehicles (including light vehicles and machinery) are not to be parked within the TPZ of any individual trees. Where works are required within the TPZ of individual trees, TPZ fencing is to be returned to the correct location as soon as works have been completed. Works within the TPZs of individual trees should be minimised to ensure the long-term retention and viability of these trees.
	Appropriate erosion and sediment control (ESC) measures are to be implemented prior to commencement of any vegetation clearing works or ground disturbance.
	Visibly mark the extent of the areas to be cleared prior to clearing with flagging tape or similar. No disturbance should occur outside the clearance zone or within exclusion zones with appropriate approvals and/or further assessments.
	The construction contractor shall take all reasonable and practicable management measures to avoid environmental harm and environmental nuisance to native fauna.

	An appropriately experienced and suitably qualified fauna spotter catcher is to be engaged to manage fauna prior to and during vegetation clearing works. A fauna spotter catcher is to be engaged to conduct a pre-clearing fauna survey to identify fauna habitat and breeding places and remove fauna from vegetation to be cleared.
	Monitor the effectiveness of controls and establish triggers for corrective action where needed.
	Any structure to protect the retained vegetation within each lot be the responsibility of the applicant and will follow Council's guidelines and application processes.
Operational Phase	Following completion of construction, disturbed and exposed areas within the ground layer should be reseeded/revegetated with appropriate species. Compensatory planting of appropriate native tree species (i.e. same species as those removed) at a ratio of 3:1 (i.e. 3 trees to be planted for every 1 tree removed) will be provided to improve amenity and environmental values in the long-term. Compensatory planting will be provided in the adjacent park and as part of the landscape vegetation. It is noted that 203 trees will be planted as part of the landscape design.

III. LEGISLATIVE FRAMEWORK

1. Biodiversity Offsets Scheme Assessment

The *Biodiversity Conservation Act 2016* and associated Biodiversity Conservation Regulation 2017 establish the NSW regulatory framework for assessing and offsetting biodiversity impacts on proposed developments and clearing. This is a framework to avoid, minimise and offset impacts on biodiversity from development through the Biodiversity Offsets Scheme (BOS). The application of the BOS is required in circumstances where a proposal for development, vegetation clearing or other activity meets certain thresholds relating to whether the proposal is likely to significantly affect threatened entities or their habitat. Two following threshold levels are identified for when the BOS applies:

- the Biodiversity Values Map identifies land with high biodiversity value that is particularly sensitive to impacts from development and clearing.
- The area clearing threshold depends on the minimum lot size associated with the proposal. **Table 2** illustrates the minimum lot sizes and threshold areas set out in clause 7.2 of the BC Regulation.

Table 4: Area threshold

Minimum lot size associated with the property	Threshold for clearing, above which the BAM and offsets scheme apply
Less than 1 ha	0.25 ha or more
1 ha to less than 40 ha	0.5 ha or more
40 ha to less than 1000 ha	1 ha or more
1000 ha or more	2 ha or more

If clearing and other impacts (including impacts prescribed by clause 6.1 of the Biodiversity Regulation 2017) exceed either threshold, the BOS applies to the proposed development. The area threshold for clearing relates to the minimum lot size identified under the applicable LEP or where no minimum lot size is provided under the LEP, the actual lot size.

The Wagga Wagga LEP 2010 does not specify a minimum lot size for the site. Based on the size of Lots 1, 2 & 3 is 12.337ha, and Lot 4 is 7.337ha (which is the Saint Mary Mackillop school land) a clearing threshold of 0.5 ha or more is applicable.

Our desktop assessment illustrate that no part of the site is mapped under the BV map and the proposed clearing of native vegetation equates to 0.22 ha which is less than the 0.5ha threshold. Given that the proposed development does not trigger either of the two BOS thresholds, the BOS does not apply and a detailed BDAR is not required.

We note that despite this, the mitigation measures outlined in this letter will be implemented on site and a significantly amount of vegetation will be planted as a result of the development.

2. Applicability of the SEPP (Koala Habitat Protection) 2019

Part 2 of the SEPP (Koala Habitat Protection) 2019 outlines development controls applicable to land to which the policy applies. Given the location (City of Wagga Wagga LGA) and type of development (local development requiring consent subject to assessment under Part 4 of EP&A Act), the SPP is applicable to the development.

The land on which the development is proposed is identified on the Koala Development Application Map, has an area of > 1 ha and does not have an approved koala plan of management, therefore Clause 9 of the SEPP applies. The applicant must demonstrate that either the land does not include any trees belonging to the feed tree species listed in Schedule 2 for the relevant koala management area (i.e. Central and Southern Tablelands) or that the land is not core koala habitat before Council can grant consent.

The site supports the locally occurring species white box (*Eucalyptus albens*) and grey box (*E. microcarpa*) with a range of other Eucalypt species including sugar gum (*E. cladocalyx*), white ironbark (*E. leucoxylon*), red box (*E. polyanthemos*), River red gum (*E. camaldulensis*), green mallee (*E. viridis*) and swamp mallet (*E. spathulata*). Of these species, only *E. albens*, *E. microcarpa* and *E. polyanthemos* are listed as feed tree species for the Central and Southern Tablelands koala management area. No koalas were recorded within the site during the site assessment and based on BioNet Atlas records, no koalas have been previously recorded as being present within the site or the site locale within the previous 14 years. Given that the site does not support highly suitable koala habitat and it is surrounded by urban environment with limited connectivity to other bushland patches, the site does not constitute core koala habitat.

3. Applicability of SEPP (Vegetation in Non-rural areas) 2017

The land on which the development is proposed is zoned as SP2 Infrastructure under the Wagga Wagga Local Environmental Plan 2010. The SEPP (Vegetation in Non-rural areas) 2017 applies to land zoned as SP2. Clearing of any vegetation within a non-rural area that is declared by a development control plan to be vegetation to which the policy applies requires a permit issued by council. Clearing of vegetation that is dead or dying and is not required as habitat for native animals and/or presents a risk to human life and property does not require an authority under the policy.

Item 3: The assessment identified a total of 89 trees recommended for removal, with 56 of these native and identified there will be no significant impact removing these species. Removing 56 native trees will have a significant impact and a BDAR will provide clarification.

Response:

The development impact was revised to account for the vegetation clearing resulting from the construction of the road, intersections and infrastructure. Most of the vegetation along the Hely Avenue and Fernleigh Road can be retained through appropriate house design.

A total of 25 mature trees will require to be removed, including only 2 mature native trees and some regrowth vegetation (Figure 2). A significant amount planting will be provided as part of the landscaping work. The proposed landscape plan illustrates the planting of 203 trees. The tree species will be composed of native vegetation suitable to be planting within the streets and proposed parks and will provide both amenity and environmental values across the whole site.

As outlined in this letter, the removal of native trees equates to 0.22 ha which is lower than the clearing threshold (0.5ha) that would trigger an assessment against the BOS. Therefore, a BDAR was not prepared for the site.

We trust that the above and attached information meets your requirements. Please do not hesitate to contact me if you have any questions.

Yours sincerely

Kelly Matthews
Principal Ecologist

REFERENCES

ALA. 2016. *Atlas of Living Australia Database* [Online]. Available: Available online at: http://spatial.ala.org.au/ [Accessed].

BIRDLIFE AUSTRALIA. 2019. *Birdata* [Online]. Birdlife Australia. Available: https://birdata.birdlife.org.au/ [Accessed 2019].

DAWE 2021. EPBC Protected Matters Search Tool. *In:* DEPARTMENT OF AGRICULTURE, W. A. T. E. (ed.). Canberra: Commonwealth of Australia,.

DOTEE. 2019. *Australia's bioregions (IBRA)* [Online]. Canberra ACT: Department of the Environment and Energy. Available: https://www.environment.gov.au/land/nrs/science/ibra [Accessed].

DPI. 2019a. *Key Fish Habitat maps* [Online]. Department of Primary Industries (NSW). Available: https://www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/key-fish-habitat-maps [Accessed 2019].

DPI. 2019b. *Threatened Species Lists* [Online]. Department of Primary Industries (NSW). Available: https://www.dpi.nsw.gov.au/fishing/threatened-species/what-current [Accessed 2019].

EBIRD. 2019. *eBird: An online database of bird distribution and abundance* [Online]. Available: https://ebird.org [Accessed].

GOOGLE EARTH PROFESSIONAL. 2012. Available: https://earth.google.com/ [Accessed].

NSW GOVERNMENT. 2016. *State Environmental Planning Policy No 44 - Koala Habitat Protection* [Online]. Available: https://www.legislation.nsw.gov.au/#/view/EPI/1995/5 [Accessed].

NSW GOVERNMENT. 2019. *Sharing and Enabling Environmental Data (SEED) portal* [Online]. NSW Government. Available: https://www.seed.nsw.gov.au/ [Accessed 2019].

NSW NATIONAL PARKS AND WILDLIFE SERVICE 2003. The Bioregions of New South Wales – their biodiversity, conservation and history. *In:* NSW NATIONAL PARKS AND WILDLIFE SERVICE (ed.). Hurstville.

OEH. 2019a. *Biodiversity Values Map and Threshold Tool* [Online]. Office of Environment and Heritage. Available: https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BOSETMap [Accessed].

OEH. 2019b. *Native Vegetation Regulatory (NVR) Map* [Online]. Office of Environment and Heritage. Available: https://www.environment.nsw.gov.au/threatenedSpeciesApp/ [Accessed 2019].

OEH. 2019c. *NSW BioNet Atlas* [Online]. Office of Environment and Heritage (OEH). Available: http://www.bionet.nsw.gov.au/ [Accessed 2019].

OEH. 2019d. *Threatened Biodiversity online database* [Online]. Office of Environment and Heritage. Available: https://www.environment.nsw.gov.au/threatenedSpeciesApp/ [Accessed 2019].

APPENDIX 1

EPBC ACT PROTECTED MATTERS SEARCH TOOL

Australian Government

Department of Agriculture, Water and the Environment

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

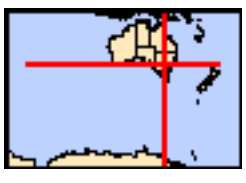
Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

Report created: 06/08/21 14:34:55

This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2015

Coordinates

Buffer: 5.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	4
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	26
Listed Migratory Species:	10

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	9
Commonwealth Heritage Places:	None
Listed Marine Species:	16
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	29
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar) [Resource Information]

Name	Proximity
Banrock station wetland complex	600 - 700km upstream
Hattah-kulkyne lakes	400 - 500km upstream
Riverland	500 - 600km upstream
The coorong, and lakes alexandrina and albert wetland	600 - 700km upstream

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered	Community likely to occur within area
Weeping Myall Woodlands	Endangered	Community may occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Anthochaera phrygia		
Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour may occur within area
Botaurus poiciloptilus		
Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Falco hypoleucos		
Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Grantiella picta		
Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area
Lathamus discolor		
Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Leipoa ocellata		
Malleefowl [934]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
[Numenius madagascariensis](#) Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
[Polytelis swainsonii](#) Superb Parrot [738]	Vulnerable	Species or species habitat known to occur within area
[Rostratula australis](#) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Fish		
[Galaxias rostratus](#) Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow [84745]	Critically Endangered	Species or species habitat may occur within area
[Maccullochella macquariensis](#) Trout Cod [26171]	Endangered	Species or species habitat known to occur within area
[Maccullochella peelii](#) Murray Cod [66633]	Vulnerable	Species or species habitat known to occur within area
[Macquaria australasica](#) Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area
Frogs		
[Crinia sloanei](#) Sloane's Froglet [59151]	Endangered	Species or species habitat may occur within area
[Litoria raniformis](#) Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat likely to occur within area
Mammals		
[Dasyurus maculatus maculatus (SE mainland population)](#) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area
[Nyctophilus corbeni](#) Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
[Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)](#) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat likely to occur within area
[Pteropus poliocephalus](#) Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area
Plants		
[Caladenia arenaria](#) Sand-hill Spider-orchid [9275]	Endangered	Species or species habitat may occur within area
[Lepidium monoplocoides](#) Winged Pepper-cress [9190]	Endangered	Species or species habitat may occur within area
[Prasophyllum petilum](#) Tarengo Leek Orchid [55144]	Endangered	Species or species habitat may occur within area
[Swainsona recta](#) Small Purple-pea, Mountain Swainson-pea, Small Purple Pea [7580]	Endangered	Species or species habitat may occur within area
Reptiles		

Name	Status	Type of Presence
Aprasia parapulchella		
Pink-tailed Worm-lizard, Pink-tailed Legless Lizard [1665]	Vulnerable	Species or species habitat likely to occur within area

Listed Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca		
Satin Flycatcher [612]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Commonwealth Land -
Commonwealth Land - Australian Broadcasting Corporation
Commonwealth Land - Australian Telecommunications Commission
Commonwealth Land - Commonwealth Bank of Australia
Commonwealth Land - Defence Housing Authority
Commonwealth Land - Defence Service Homes Corporation
Commonwealth Land - Director of War Service Homes
Defence - BLAMEY BARRACKS - KAPOOKA
Defence - WAGGA ARES DEPOT ; BLAMEY BKS -WAGGA WAGGA TRG DEP

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area

Extra Information

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Nassella neesiana Chilean Needle grass [67699]		Species or species habitat likely to occur within area
Nassella trichotoma Serrated Tussock, Yass River Tussock, Yass Tussock, Nassella Tussock (NZ) [18884]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Solanum elaeagnifolium Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-35.12883 147.34921

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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APPENDIX 2

BIONET SEARCH RESULT

Data from the BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°C; ^^ rounded to 0.01°C. Copyright the State of NSW through the Department of Planning, Industry and Environment. Search criteria : Public Report of all Valid Records of Threatened (listed on BC Act 2016) or Commonwealth listed Entities in selected area [North: -35.08 West: 147.30 East: 147.40 South: -35.18] recorded since 01 Jan 2000 until 06 Aug 2021 returned a total of 323 records of 23 species.

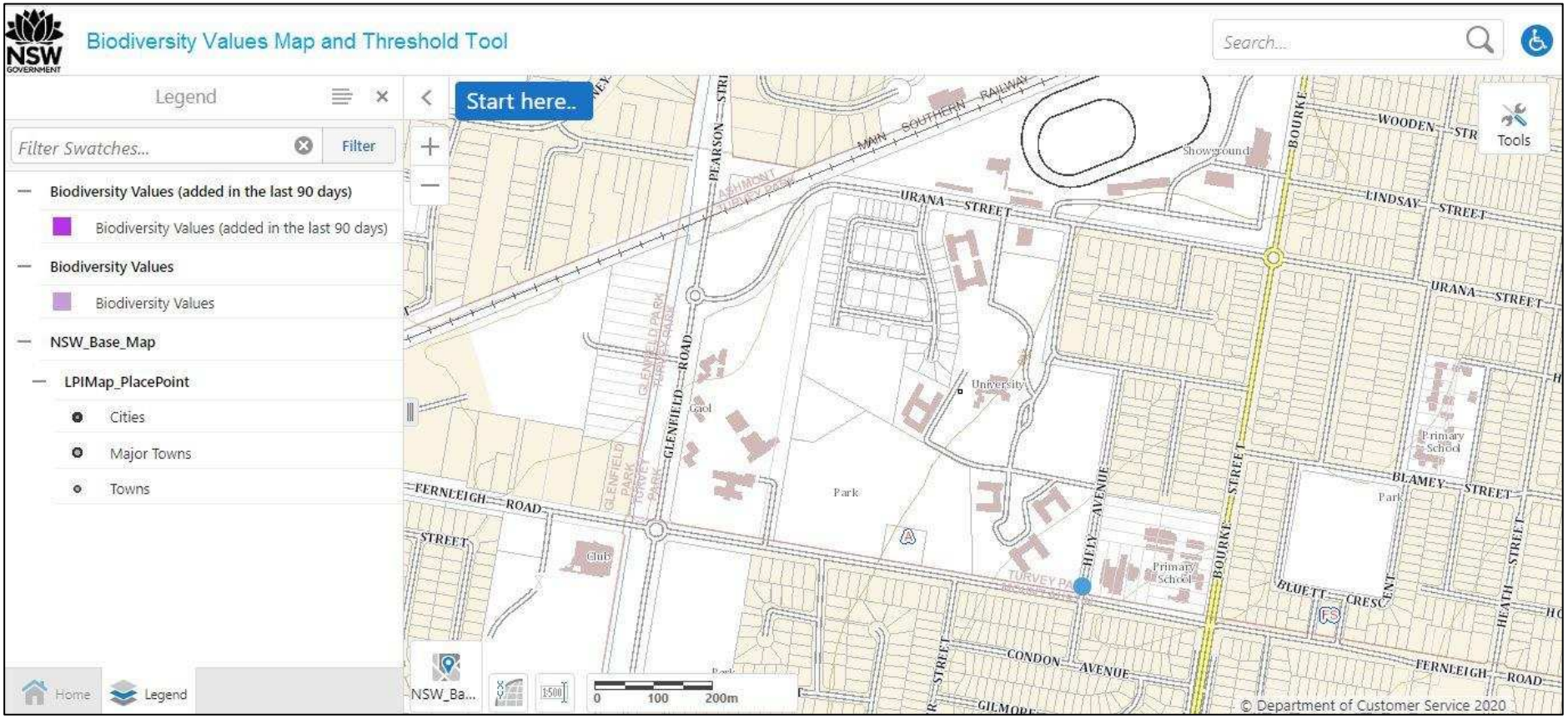
Report generated on 6/08/2021 1:37 PM

Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Animalia	Aves	Anatidae	0214	*Stictonetta naevosa*		Freckled Duck	V,P		1	
Animalia	Aves	Accipitridae	0218	*Circus assimilis*		Spotted Harrier	V,P		1	
Animalia	Aves	Accipitridae	0225	*Hieraaetus morphnoides*		Little Eagle	V,P		5	
Animalia	Aves	Burhinidae	0174	*Burhinus grallarius*		Bush Stone-curlew	E1,P		1	
Animalia	Aves	Cacatuidae	0265	*^Calyptorhynchus lathami*		Glossy Black-Cockatoo	V,P,2		4	
Animalia	Aves	Psittacidae	0309	*^^Lathamus discolor*		Swift Parrot	E1,P,3	CE	5	
Animalia	Aves	Psittacidae	0302	*^^Neophema pulchella*		Turquoise Parrot	V,P,3		1	
Animalia	Aves	Psittacidae	0277	*^^Polytelis swainsonii*		Superb Parrot	V,P,3	V	22	
Animalia	Aves	Strigidae	0246	*^^Ninox connivens*		Barking Owl	V,P,3		3	
Animalia	Aves	Climacteridae	8127	*Climacteris picumnus victoriae*		Brown Treecreeper (eastern subspecies)	V,P		10	
Animalia	Aves	Meliphagidae	8303	*Melithreptus gularis gularis*		Black-chinned Honeyeater (eastern subspecies)	V,P		2	
Animalia	Aves	Artamidae	8519	*Artamus cyanopterus cyanopterus*		Dusky Woodswallow	V,P		2	
Animalia	Aves	Petroicidae	0380	*Petroica boodang*		Scarlet Robin	V,P		3	
Animalia	Aves	Petroicidae	0382	*Petroica phoenicea*		Flame Robin	V,P		1	
Animalia	Mammalia	Dasyuridae	1008	*Dasyurus maculatus*		Spotted-tailed Quoll	V,P	E	1	
Animalia	Mammalia	Phascolarctidae	1162	*Phascolarctos cinereus*		Koala	V,P	V	2	
Animalia	Mammalia	Petauridae	1137	*Petaurus norfolcensis*		Squirrel Glider	V,P		111	

Animalia	Mammalia	Petauridae	1137	*Petaurus norfolcensis*	Squirrel Glider in the Wagga Wagga Local Government Area	E2,V,P		111
Animalia	Mammalia	Pteropodidae	1280	*Pteropus poliocephalus*	Grey-headed Flying-fox	V,P	V	32
Animalia	Mammalia	Emballonuridae	1321	*Saccolaimus flaviventris*	Yellow-bellied Sheathtail-bat	V,P		1
Animalia	Mammalia	Vespertilionidae	1357	*Myotis macropus*	Southern Myotis	V,P		2
Animalia	Mammalia	Vespertilionidae	1382	*Vespadelus baverstocki*	Inland Forest Bat	V,P		1
Plantae	Flora	Asteraceae	7097	*Senecio garlandii*	Woolly Ragwort	V		1

APPENDIX 3

BIODIVERSITY VALUES MAP AND THRESHOLD TOOL


Biodiversity Values Map and Threshold Tool
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URANA STREET
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FERNLEIGH ROAD
BLAMEY STREET
BLUETT CRESCENT
CONDON AVENUE
HEATH STREET
HELY AVENUE
Showground
University
Gaol
Park
Primary School
Club

APPENDIX 4

SEED MAPPING

SEED | Sharing and Enabling Environmental Data

PCT

0.9 0 0.43 0.9 Kilometers

Scale 1: 17,298.63

WGS_1984_Web_Mercator_Auxiliary_Sphere

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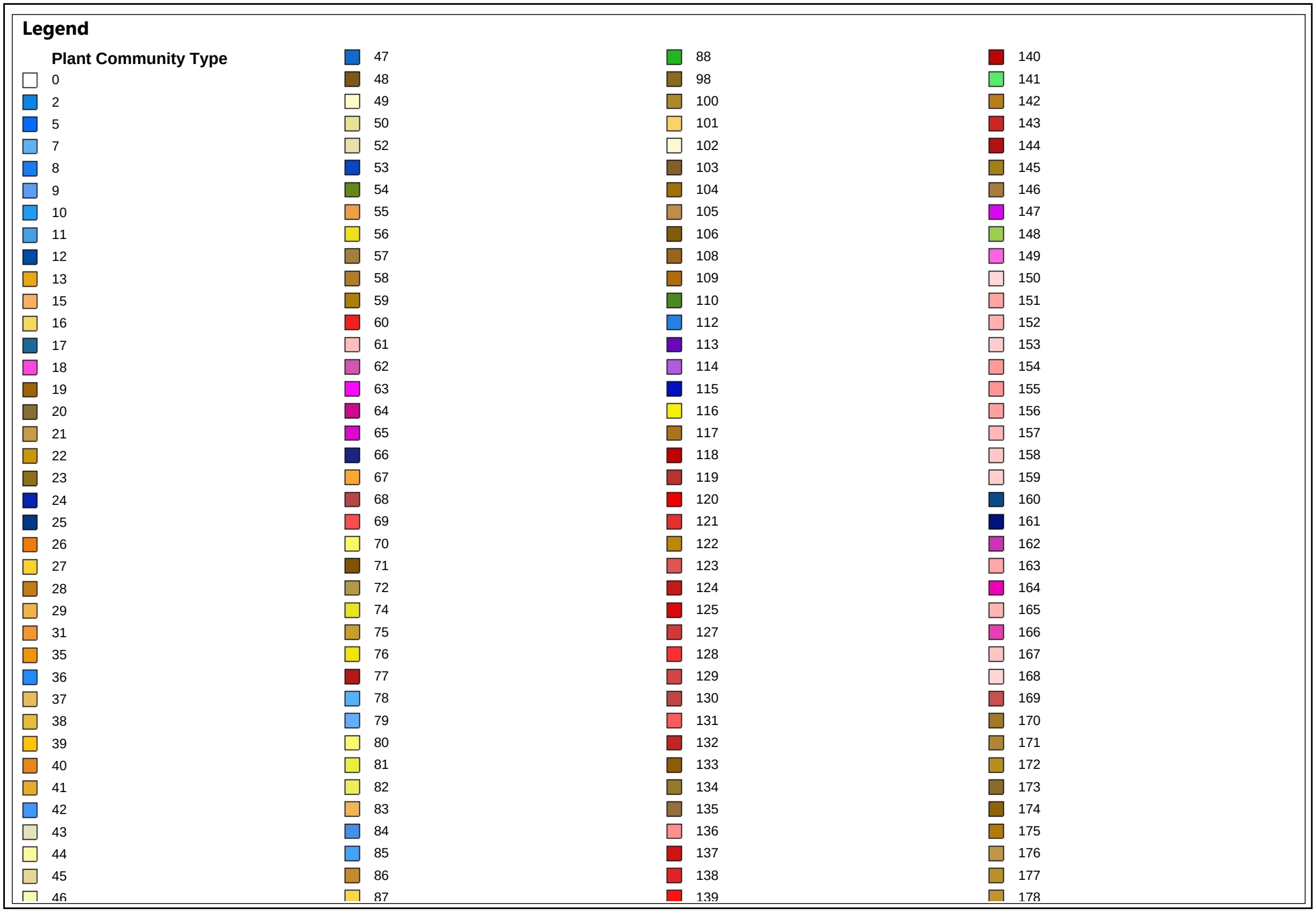
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APPENDIX 5

ATLAS OF LIVING AUSTRALIA RESULTS

Dataset Name	Scientific Name	Common Name	NSW Status	Comm Sta	DateLast	Longitude_GI	Zone	Easting	Northing	Accuracy
DPIE Default Sightings	Stictonetta naevosa	Freckled Duck	V,P		18/06/2003	147.36199	55	532988	6114660	100
Wildlife Rehab Database	Circus assimilis	Spotted Harrier	V,P		17/05/2013	147.35983	55	532792	6114902	1678
DPIE Data from Scientifi	Hieraaetus morphnoides	Little Eagle	V,P		8/01/2009	147.337172	55	530704	6108012	1000
Wildlife Rehab Database	Hieraaetus morphnoides	Little Eagle	V,P		14/07/2012	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Hieraaetus morphnoides	Little Eagle	V,P		16/09/2012	147.33171	55	530223	6113077	879
Wildlife Rehab Database	Hieraaetus morphnoides	Little Eagle	V,P		13/03/2018	147.329918	55	530045	6108502	30
Wildlife Rehab Database	Hieraaetus morphnoides	Little Eagle	V,P		27/11/2018	147.35983	55	532792	6114902	1678
DPIE Default Sightings	Burhinus grallarius	Bush Stone-curlew	E1,P		31/12/2010	147.36388	55	533139	6108835	150
DPIE Data from Scientifi	Calyptorhynchus lathami	Glossy Black-Cockatoo	V,P,2		13/08/2005	147.3	55	527342	6115826	100
DPIE Data from Scientifi	Calyptorhynchus lathami	Glossy Black-Cockatoo	V,P,2		31/07/2007	147.3	55	527342	6115826	10
DPIE Default Sightings	Calyptorhynchus lathami	Glossy Black-Cockatoo	V,P,2		4/05/2006	147.3	55	527342	6115826	10
DPIE Default Sightings	Calyptorhynchus lathami	Glossy Black-Cockatoo	V,P,2		25/05/2007	147.3	55	527342	6115826	50
DPIE Data from Scientifi	Lathamus discolor	Swift Parrot	E1,P,3	CE	20/05/2007	147.39	55	535519	6109144	50
DPIE Data from Scientifi	Lathamus discolor	Swift Parrot	E1,P,3	CE	6/09/2002	147.31	55	528240	6111387	100
DPIE Data from Scientifi	Lathamus discolor	Swift Parrot	E1,P,3	CE	25/05/2002	147.31	55	528240	6111387	1000
DPIE Data from Scientifi	Lathamus discolor	Swift Parrot	E1,P,3	CE	29/08/2002	147.31	55	528240	6111387	1000
DPIE Data from Scientifi	Lathamus discolor	Swift Parrot	E1,P,3	CE	31/12/2002	147.31	55	528236	6110278	1000
Wildlife Rehab Database	Neophema pulchella	Turquoise Parrot	V,P,3		23/11/2014	147.37	55	533714	6113587	30
DPIE Data from Scientifi	Polytelis swainsonii	Superb Parrot	V,P,3	V	18/12/2008	147.36	55	532791	6110263	100
DPIE Data from Scientifi	Polytelis swainsonii	Superb Parrot	V,P,3	V	###############	147.35	55	531888	6112484	20
DPIE Data from Scientifi	Polytelis swainsonii	Superb Parrot	V,P,3	V	26/09/2012	147.37	55	533722	6115805	5
DPIE Data from Scientifi	Polytelis swainsonii	Superb Parrot	V,P,3	V	18/12/2016	147.3	55	527339	6114717	1000
DPIE Data from Scientifi	Polytelis swainsonii	Superb Parrot	V,P,3	V	13/12/2017	147.31	55	528240	6111387	100
DPIE Data from Scientifi	Polytelis swainsonii	Superb Parrot	V,P,3	V	6/09/2002	147.32	55	529154	6112493	100
DPIE Data from Scientifi	Polytelis swainsonii	Superb Parrot	V,P,3	V	6/09/2002	147.31	55	528240	6111387	100
DPIE Default Sightings	Polytelis swainsonii	Superb Parrot	V,P,3	V	1/10/2010	147.34	55	530976	6112487	15
DPIE Default Sightings	Polytelis swainsonii	Superb Parrot	V,P,3	V	22/12/2010	147.31	55	528240	6111387	15
DPIE Default Sightings	Polytelis swainsonii	Superb Parrot	V,P,3	V	28/11/2007	147.31	55	528243	6112496	10
DPIE Default Sightings	Polytelis swainsonii	Superb Parrot	V,P,3	V	20/10/2000	147.31	55	528250	6114714	1000
DPIE Default Sightings	Polytelis swainsonii	Superb Parrot	V,P,3	V	15/09/2011	147.31	55	528243	6112496	100
DPIE Default Sightings	Polytelis swainsonii	Superb Parrot	V,P,3	V	27/01/2004	147.32	55	529154	6112493	100
Wildlife Rehab Database	Polytelis swainsonii	Superb Parrot	V,P,3	V	20/12/2015	147.32	55	529154	6112493	30
Wildlife Rehab Database	Polytelis swainsonii	Superb Parrot	V,P,3	V	30/11/2012	147.36	55	532807	6114699	1678
Wildlife Rehab Database	Polytelis swainsonii	Superb Parrot	V,P,3	V	15/10/2013	147.36	55	532807	6114699	1678
Wildlife Rehab Database	Polytelis swainsonii	Superb Parrot	V,P,3	V	5/09/2013	147.36	55	532807	6114699	1678
Wildlife Rehab Database	Polytelis swainsonii	Superb Parrot	V,P,3	V	27/11/2014	147.36	55	532807	6114699	1678
Wildlife Rehab Database	Polytelis swainsonii	Superb Parrot	V,P,3	V	4/10/2016	147.36	55	532807	6114699	1678
Wildlife Rehab Database	Polytelis swainsonii	Superb Parrot	V,P,3	V	7/12/2012	147.38	55	534617	6111365	1244
Wildlife Rehab Database	Polytelis swainsonii	Superb Parrot	V,P,3	V	4/01/2018	147.36	55	532807	6114699	1678
Wildlife Rehab Database	Polytelis swainsonii	Superb Parrot	V,P,3	V	13/02/2018	147.36	55	532807	6114699	30
DPIE Default Sightings	Ninox connivens	Barking Owl	V,P,3		1/09/2000	147.35	55	531895	6114702	100
DPIE Default Sightings	Ninox connivens	Barking Owl	V,P,3		8/09/2000	147.35	55	531895	6114702	10

DPIE Default Sightings	Ninox connivens	Barking Owl	V,P,3		6/02/2004	147.31	55	528254	6115823	10
DPIE Data from Scientifi	Climacteris picumnus victoria	Brown Treecreeper	V,P		31/07/2007	147.302579	55	527574	6114873	10
DPIE Data from Scientifi	Climacteris picumnus victoria	Brown Treecreeper	V,P		28/05/2007	147.304975	55	527799	6117001	100
DPIE Data from Scientifi	Climacteris picumnus victoria	Brown Treecreeper	V,P		28/08/2012	147.353253	55	532200	6117021	10
DPIE Data from Scientifi	Climacteris picumnus victoria	Brown Treecreeper	V,P		26/09/2012	147.367056	55	533454	6115870	5
DPIE Data from Scientifi	Climacteris picumnus victoria	Brown Treecreeper	V,P		26/09/2012	147.380799	55	534700	6114150	5
DPIE Data from Scientifi	Climacteris picumnus victoria	Brown Treecreeper	V,P		26/09/2012	147.371728	55	533880	6115930	5
DPIE Data from Scientifi	Climacteris picumnus victoria	Brown Treecreeper	V,P		14/02/2017	147.308161	55	528079	6113496	500
DPIE Data from Scientifi	Climacteris picumnus victoria	Brown Treecreeper	V,P		28/02/2019	147.374447	55	534125	6115275	100
DPIE Data from Scientifi	Climacteris picumnus victoria	Brown Treecreeper	V,P		25/05/2002	147.310812	55	528313	6111085	1000
DPIE Default Sightings	Climacteris picumnus victoria	Brown Treecreeper	V,P		31/07/2007	147.302579	55	527574	6114873	10
DPIE Data from Scientifi	Melithreptus gularis gularis	Black-chinned Honeyeate	V,P		31/07/2007	147.302579	55	527574	6114873	10
DPIE Default Sightings	Melithreptus gularis gularis	Black-chinned Honeyeate	V,P		31/07/2007	147.302579	55	527574	6114873	10
DPIE Data from Scientifi	Artamus cyanopterus cyanop	Dusky Woodswallow	V,P		14/02/2017	147.308161	55	528079	6113496	500
DPIE Data from Scientifi	Artamus cyanopterus cyanop	Dusky Woodswallow	V,P		25/05/2002	147.310812	55	528313	6111085	1000
DPIE Data from Scientifi	Petroica boodang	Scarlet Robin	V,P		31/07/2007	147.302579	55	527574	6114873	10
DPIE Data from Scientifi	Petroica boodang	Scarlet Robin	V,P		10/04/2017	147.372686	55	533954	6112321	50
DPIE Default Sightings	Petroica boodang	Scarlet Robin	V,P		31/07/2007	147.302579	55	527574	6114873	10
DPIE Data from Scientifi	Petroica phoenicea	Flame Robin	V,P		21/08/2019	147.389723	55	535511	6113667	490
Dan Lunney's Communi	Dasyurus maculatus	Spotted-tailed Quoll	V,P	E	30/06/2006	147.397242	55	536171	6107409	10000
Dan Lunney's Communi	Phascolarctos cinereus	Koala	V,P	V	30/06/2006	147.306822	55	527952	6111950	10000
Dan Lunney's Communi	Phascolarctos cinereus	Koala	V,P	V	30/06/2006	147.354888	55	532324	6109904	10000
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		23/11/2016	147.312575	55	528473	6111054	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		23/11/2016	147.312575	55	528473	6111054	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		23/11/2016	147.314722	55	528668	6110671	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		23/11/2016	147.314722	55	528668	6110671	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		23/05/2016	147.312575	55	528473	6111054	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		23/05/2016	147.312575	55	528473	6111054	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		23/05/2016	147.312674	55	528483	6111168	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		23/05/2016	147.312674	55	528483	6111168	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		23/05/2016	147.314722	55	528668	6110671	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		23/05/2016	147.314722	55	528668	6110671	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		23/05/2016	147.31478	55	528670	6109797	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		23/05/2016	147.31478	55	528670	6109797	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		23/05/2016	147.31355	55	528560	6110434	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		23/05/2016	147.31355	55	528560	6110434	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		13/04/2016	147.308862	55	528149	6115536	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		13/04/2016	147.308862	55	528149	6115536	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		13/04/2016	147.313445	55	528551	6110558	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		13/04/2016	147.313445	55	528551	6110558	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		13/04/2016	147.316105	55	528802	6113294	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		13/04/2016	147.316105	55	528802	6113294	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/04/2016	147.311913	55	528428	6115839	5

DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/04/2016	147.311913	55	528428	6115839	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/04/2016	147.315729	55	528759	6110535	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/04/2016	147.315729	55	528759	6110535	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/04/2016	147.318198	55	528992	6113078	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/04/2016	147.318198	55	528992	6113078	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/04/2016	147.316105	55	528802	6113294	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/04/2016	147.316105	55	528802	6113294	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		15/04/2016	147.311913	55	528428	6115839	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		15/04/2016	147.311913	55	528428	6115839	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		15/04/2016	147.308862	55	528149	6115536	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		15/04/2016	147.308862	55	528149	6115536	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		15/04/2016	147.313034	55	528512	6110046	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		15/04/2016	147.313034	55	528512	6110046	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		15/04/2016	147.318215	55	528994	6113204	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		15/04/2016	147.318215	55	528994	6113204	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		16/04/2016	147.311978	55	528419	6111086	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		16/04/2016	147.311978	55	528419	6111086	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		17/04/2016	147.315729	55	528759	6110535	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		17/04/2016	147.315729	55	528759	6110535	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		17/04/2016	147.317273	55	528906	6112548	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		17/04/2016	147.317273	55	528906	6112548	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		17/04/2016	147.317656	55	528940	6112266	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		17/04/2016	147.317656	55	528940	6112266	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		18/04/2016	147.315729	55	528759	6110535	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		18/04/2016	147.315729	55	528759	6110535	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		18/04/2016	147.317388	55	528919	6113312	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		18/04/2016	147.317388	55	528919	6113312	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		19/04/2016	147.315393	55	528728	6110419	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		19/04/2016	147.315393	55	528728	6110419	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		19/04/2016	147.317656	55	528940	6112266	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		19/04/2016	147.317656	55	528940	6112266	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		10/05/2017	147.31557	55	528745	6110625	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		10/05/2017	147.31557	55	528745	6110625	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		10/05/2017	147.315391	55	528728	6110419	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		10/05/2017	147.315391	55	528728	6110419	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		10/05/2017	147.31247	55	528463	6110752	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		10/05/2017	147.31247	55	528463	6110752	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		10/05/2017	147.311199	55	528348	6111015	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		10/05/2017	147.311199	55	528348	6111015	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		11/05/2017	147.315727	55	528759	6110535	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		11/05/2017	147.315727	55	528759	6110535	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		11/05/2017	147.312898	55	528503	6111082	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		11/05/2017	147.312898	55	528503	6111082	10

DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		12/05/2017	147.30055	55	527375	6110019	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		12/05/2017	147.30055	55	527375	6110019	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		12/05/2017	147.318214	55	528994	6113204	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		12/05/2017	147.318214	55	528994	6113204	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		12/05/2017	147.3106	55	528294	6111185	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		12/05/2017	147.3106	55	528294	6111185	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		13/05/2017	147.311976	55	528419	6111086	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		13/05/2017	147.311976	55	528419	6111086	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		13/05/2017	147.30055	55	527375	6110019	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		13/05/2017	147.30055	55	527375	6110019	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/05/2017	147.315727	55	528759	6110535	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/05/2017	147.315727	55	528759	6110535	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/05/2017	147.312235	55	528443	6111209	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/05/2017	147.312235	55	528443	6111209	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/05/2017	147.30055	55	527375	6110019	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/05/2017	147.30055	55	527375	6110019	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		15/05/2017	147.312099	55	528432	6111654	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		15/05/2017	147.312099	55	528432	6111654	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		15/05/2017	147.313484	55	528555	6110631	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		15/05/2017	147.313484	55	528555	6110631	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		16/05/2017	147.313057	55	528517	6110927	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		16/05/2017	147.313057	55	528517	6110927	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		16/05/2017	147.30055	55	527375	6110019	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		16/05/2017	147.30055	55	527375	6110019	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		16/05/2017	147.3106	55	528294	6111185	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		16/05/2017	147.3106	55	528294	6111185	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		16/05/2017	147.318015	55	528974	6112601	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		16/05/2017	147.318015	55	528974	6112601	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		16/05/2017	147.315727	55	528759	6110535	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		16/05/2017	147.315727	55	528759	6110535	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		8/05/2019	147.31557	55	528745	6110625	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		8/05/2019	147.31557	55	528745	6110625	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		7/05/2019	147.312898	55	528503	6111082	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		7/05/2019	147.312898	55	528503	6111082	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		5/05/2019	147.313864	55	528590	6110758	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		5/05/2019	147.313864	55	528590	6110758	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		5/05/2019	147.30886	55	528149	6115536	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		5/05/2019	147.30886	55	528149	6115536	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		8/05/2019	147.30523	55	527801	6109958	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		8/05/2019	147.30523	55	527801	6109958	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		2/05/2019	147.309164	55	528160	6110166	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		2/05/2019	147.309164	55	528160	6110166	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		5/05/2019	147.309164	55	528160	6110166	5

DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		5/05/2019	147.309164	55	528160	6110166	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		7/05/2019	147.309164	55	528160	6110166	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		7/05/2019	147.309164	55	528160	6110166	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		8/05/2019	147.315777	55	528770	6112569	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		8/05/2019	147.315777	55	528770	6112569	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		5/05/2019	147.316475	55	528834	6112707	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		5/05/2019	147.316475	55	528834	6112707	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		3/05/2019	147.317387	55	528919	6113312	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		3/05/2019	147.317387	55	528919	6113312	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		7/05/2019	147.317387	55	528919	6113312	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		7/05/2019	147.317387	55	528919	6113312	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		6/05/2019	147.314185	55	528627	6113229	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		6/05/2019	147.314185	55	528627	6113229	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		4/05/2019	147.314359	55	528639	6112008	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		4/05/2019	147.314359	55	528639	6112008	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		5/05/2019	147.314359	55	528639	6112008	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		5/05/2019	147.314359	55	528639	6112008	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		8/05/2019	147.314359	55	528639	6112008	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		8/05/2019	147.314359	55	528639	6112008	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		6/05/2019	147.315856	55	528776	6112199	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		6/05/2019	147.315856	55	528776	6112199	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		2/05/2019	147.317472	55	528924	6112453	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		2/05/2019	147.317472	55	528924	6112453	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		3/05/2019	147.317472	55	528924	6112453	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		3/05/2019	147.317472	55	528924	6112453	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		5/05/2019	147.317271	55	528906	6112548	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		5/05/2019	147.317271	55	528906	6112548	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		6/05/2019	147.317271	55	528906	6112548	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		6/05/2019	147.317271	55	528906	6112548	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		7/05/2019	147.317271	55	528906	6112548	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		7/05/2019	147.317271	55	528906	6112548	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		2/05/2019	147.318221	55	528993	6112683	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		2/05/2019	147.318221	55	528993	6112683	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		3/05/2019	147.317654	55	528940	6112266	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		3/05/2019	147.317654	55	528940	6112266	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		2/05/2019	147.315001	55	528693	6110632	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		2/05/2019	147.315001	55	528693	6110632	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		2/05/2019	147.314597	55	528656	6110612	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		2/05/2019	147.314597	55	528656	6110612	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		4/05/2019	147.314468	55	528645	6110675	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		4/05/2019	147.314468	55	528645	6110675	5
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		10/05/2018	147.315391	55	528728	6110419	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		10/05/2018	147.315391	55	528728	6110419	10

DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		15/05/2018	147.315571	55	528744	6110302	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		15/05/2018	147.315571	55	528744	6110302	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/05/2018	147.313074	55	528517	6110446	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/05/2018	147.313074	55	528517	6110446	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		10/05/2018	147.314685	55	528662	6109887	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		10/05/2018	147.314685	55	528662	6109887	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		12/05/2018	147.314685	55	528662	6109887	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		12/05/2018	147.314685	55	528662	6109887	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		12/05/2018	147.323904	55	529501	6109679	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		12/05/2018	147.323904	55	529501	6109679	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/05/2018	147.323904	55	529501	6109679	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/05/2018	147.323904	55	529501	6109679	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		15/05/2018	147.311751	55	528398	6110918	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		15/05/2018	147.311751	55	528398	6110918	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		9/05/2018	147.311976	55	528419	6111086	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		9/05/2018	147.311976	55	528419	6111086	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/05/2018	147.311976	55	528419	6111086	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/05/2018	147.311976	55	528419	6111086	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		10/05/2018	147.312235	55	528443	6111209	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		10/05/2018	147.312235	55	528443	6111209	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/05/2018	147.312235	55	528443	6111209	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/05/2018	147.312235	55	528443	6111209	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		10/05/2018	147.312898	55	528503	6111082	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		10/05/2018	147.312898	55	528503	6111082	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		12/05/2018	147.312898	55	528503	6111082	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		12/05/2018	147.312898	55	528503	6111082	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		10/05/2018	147.313057	55	528517	6110927	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		10/05/2018	147.313057	55	528517	6110927	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		11/05/2018	147.313057	55	528517	6110927	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		11/05/2018	147.313057	55	528517	6110927	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		13/05/2018	147.313057	55	528517	6110927	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		13/05/2018	147.313057	55	528517	6110927	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		10/05/2018	147.30523	55	527801	6109958	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		10/05/2018	147.30523	55	527801	6109958	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		15/05/2018	147.30523	55	527801	6109958	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		15/05/2018	147.30523	55	527801	6109958	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		15/05/2018	147.309164	55	528160	6110166	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		15/05/2018	147.309164	55	528160	6110166	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		11/05/2018	147.318196	55	528992	6113078	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		11/05/2018	147.318196	55	528992	6113078	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		12/05/2018	147.318196	55	528992	6113078	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		12/05/2018	147.318196	55	528992	6113078	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		13/05/2018	147.311157	55	528345	6111279	10

DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		13/05/2018	147.311157	55	528345	6111279	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		9/05/2018	147.314359	55	528639	6112008	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		9/05/2018	147.314359	55	528639	6112008	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		12/05/2018	147.314704	55	528671	6112171	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		12/05/2018	147.314704	55	528671	6112171	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		15/05/2018	147.315856	55	528776	6112199	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		15/05/2018	147.315856	55	528776	6112199	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		9/05/2018	147.318221	55	528993	6112683	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		9/05/2018	147.318221	55	528993	6112683	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		11/05/2018	147.318221	55	528993	6112683	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		11/05/2018	147.318221	55	528993	6112683	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		13/05/2018	147.318221	55	528993	6112683	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		13/05/2018	147.318221	55	528993	6112683	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		13/05/2018	147.312575	55	528473	6111054	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		13/05/2018	147.312575	55	528473	6111054	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		14/05/2018	147.314722	55	528668	6110671	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		14/05/2018	147.314722	55	528668	6110671	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	E2,V,P		18/05/2018	147.31355	55	528560	6110434	10
DPIE Data from Scientifi	Petaurus norfolcensis	Squirrel Glider	V,P		18/05/2018	147.31355	55	528560	6110434	10
DPIE Default Sightings	Petaurus norfolcensis	Squirrel Glider	V,P		25/05/2000	147.306291	55	527913	6114935	100
DPIE Default Sightings	Petaurus norfolcensis	Squirrel Glider	E2,V,P		25/05/2000	147.306291	55	527913	6114935	100
DPIE Default Sightings	Petaurus norfolcensis	Squirrel Glider	E2,V,P		8/09/2006	147.370327	55	533754	6116283	10
DPIE Default Sightings	Petaurus norfolcensis	Squirrel Glider	V,P		8/09/2006	147.370327	55	533754	6116283	10
Wildlife Rehab Database	Petaurus norfolcensis	Squirrel Glider	V,P		22/03/2017	147.391705	55	535700	6115769	500
Wildlife Rehab Database	Petaurus norfolcensis	Squirrel Glider	E2,V,P		22/03/2017	147.391705	55	535700	6115769	500
Wildlife Rehab Database	Petaurus norfolcensis	Squirrel Glider	E2,V,P		13/06/2013	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Petaurus norfolcensis	Squirrel Glider	V,P		13/06/2013	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Petaurus norfolcensis	Squirrel Glider	V,P		6/12/2018	147.37683	55	534328	6111313	1244
Wildlife Rehab Database	Petaurus norfolcensis	Squirrel Glider	E2,V,P		6/12/2018	147.37683	55	534328	6111313	1244
DPIE Data from Scientifi	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	21/08/2019	147.389723	55	535511	6113667	490
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	31/03/2017	147.374745	55	534159	6116992	30
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	11/04/2017	147.348656	55	531760	6110987	30
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	19/10/2016	147.389836	55	535499	6107846	30
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	12/10/2015	147.360355	55	532827	6111455	30
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	18/04/2013	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	25/10/2013	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	27/08/2013	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	25/10/2013	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	15/11/2016	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	13/01/2017	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	10/11/2013	147.36193	55	532976	6112784	1092
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	19/06/2018	147.37683	55	534328	6111313	1244
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	27/11/2017	147.36193	55	532976	6112784	1092

Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	8/08/2017	147.35563	55	532398	6111722	904
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	9/02/2018	147.359318	55	532744	6114615	30
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	4/02/2018	147.39279	55	535769	6108191	2795
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	14/03/2018	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	5/03/2018	147.359832	55	532792	6114902	30
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	8/10/2018	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	27/10/2018	147.39279	55	535769	6108191	2795
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	10/02/2019	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	25/04/2019	147.37683	55	534328	6111313	1244
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	30/11/2018	147.37683	55	534328	6111313	1244
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	14/01/2019	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	13/05/2019	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	27/08/2018	147.38812	55	535375	6116286	2288
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	28/10/2018	147.37683	55	534328	6111313	1244
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	20/06/2019	147.37683	55	534328	6111313	1244
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	7/09/2018	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	26/11/2018	147.35983	55	532792	6114902	1678
Wildlife Rehab Database	Pteropus poliocephalus	Grey-headed Flying-fox	V,P	V	6/02/2019	147.36193	55	532976	6112784	1092
DPIE Data from Scientifi	Saccolaimus flaviventris	Yellow-bellied Sheathtail	V,P		11/04/2013 6:00	147.312722	55	528485	6110564	5
DPIE Data from Scientifi	Myotis macropus	Southern Myotis	V,P		9/04/2013 6:00	147.310278	55	528265	6111384	5
DPIE Default Sightings	Myotis macropus	Southern Myotis	V,P		31/03/2000	147.367899	55	533531	6115977	100
DPIE Data from Scientifi	Vespadelus baverstocki	Inland Forest Bat	V,P		28/05/2007	147.304975	55	527799	6117001	100
Royal Botanic Gardens H	Senecio garlandii	Woolly Ragwort	V		20/10/2001	147.367899	55	533524	6114129	10000

APPENDIX 6

ARBORICULTURAL IMPACT ASSESSMENT

ARBORICULTURE IMPACT ASSESSMENT
PROPOSED UNIVERSITY PARK AGED CARE AND RESIDENTIAL DEVELOPMENT – JANUARY 2021.
HELY AVENUE TURVEY PARK, WAGGA WAGGA, NSW 2650.

Prepared for Croft Developments Pty Ltd.
Clinton Witnish - Project Planning Manager
PH: (03) 9581 0109 | Mobile: 0400 345 944

Report Dated - 14 January 2021.

1. INTRODUCTION & BACKGROUND.

There is a development proposal for the site known as the old Charles Sturt University South Campus - 20 Hely Ave TURVEY PARK NSW 2650 - Lot 2 DP 1183166122850, by Croft Developments Pty Ltd.

The lot is some 13 hectares in size. The development includes the demolition of existing buildings and construction of aged care facilities and residential lots over two stages across the whole site.

Wagga Wagga City Council (WWCC) Development Application 19/0001 applies to stage 1. An arboricultural Impact Assessment report was prepared for stage 1 – and all maters in that report stand as reported. WWCC consent has been issued for that application.

WWCC Development Application CC 20/0445 was also lodged for Bulk Earth Works across the site. An arboricultural assessment and protection plan was developed for that portion of the overall development. All matters in that report and protection plan stand as accurate. WWCC consent has been issued for that application.

A further Development Application is intended for the remaining 98 lot Residential Section of the overall development. This report has been prepared for this application.

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2. SCOPE AND PURPOSE.

This report has been commissioned by Mr Clinton Witnish, Project Planning Manager with Croft Developments Pty Ltd. He can be contacted on 0400 345 944.

The site has numerous established trees of various species, condition and age. Identification and review of the tree population is required as part of the development process to provide recommendation for retention or removal of trees.

The report is designed to;

- identify current tree population – species and locations
- provide reporting on tree condition
- provide guidance on retention values or removal of trees relative to the proposed development
- provide details and guidance on any other issues identified in the assessment.
- Identify issues that are required to be managed across the development for the basis of a Tree Management Plan.

Following plan was provided by Croft Developments to assist with the development impacts on trees;

Annexure 1.

Master Plan – University Park Aged Care and Residential Development - 20 Hely Avenue Turvey Park, City of Wagga Wagga. Drawing number P-1901-01-D. Dated 24.11.20

A marked up version of this file is contained as Annexure 1. Note – not all trees are contained on the Master Plan.

Annexure 2.

A Tree Data File in Microsoft Excel format was developed to document tree locations, full tree details, findings and recommendations. That file has been included at the bottom of this report as Annexure 2. The tree Data file contains full details of terminology and grading systems applied. The Excel format file can be provided to any relevant party on request.

Annexure 3.

GPS Tree locations have also been determined with tree numbers and is provided in a printed overlay of Google Earth as Annexure 3. This may be of some assistance in determine location of some trees that do not appear on Annexure 1.

Tree population was initially inspected and details recorded through the month of February 2019. A further section of the development on the west side adjacent to the new Ambulance Station was added after 2019, and those trees were inspected June 2020.

Visual Trees Assessment (VTA) was utilised as the mode of inspection. VTI is the mainstay of tree hazard identification and management and is the most suitable method of evaluation of this type of situation (Lonsdale 1999). No underground inspections were conducted. This author conducted an evaluation of many of these trees in February 2015 on behalf of Charles Sturt University who was the owner of the property at the time. Information in this report contains some reliance on information and reporting supplied at that time. This report does not address any specific heritage values that may be associated with the tree population.

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Findings, calculations, and recommendations are the author's interpretation of *Australian Standard 4970-2009 – Protection of trees on development sites.*

Photographs are provided to demonstrate salient issues.

Table A – Provides details on Interpretation of Hazard Rating Applied to Stated Defects.

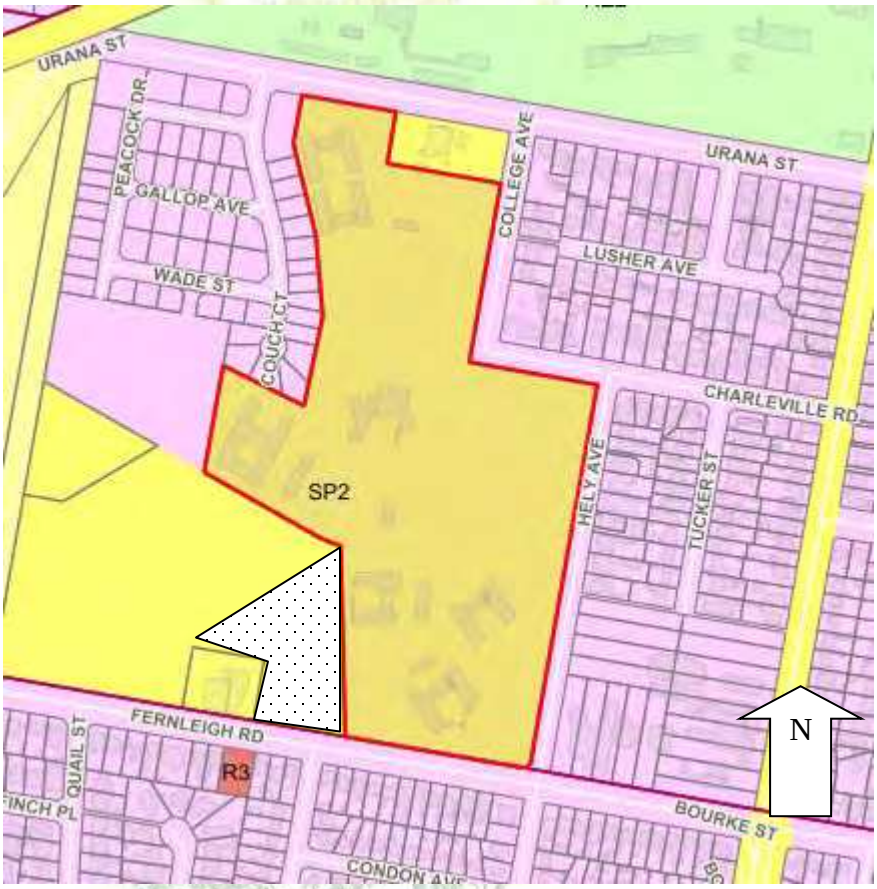

Diagram One *– Site Location identified as SP2. New west section is hatched in white – which now forms part of the development site.*
Source adapted from Wagga Wagga City Council Intramaps; Planning Map 2019.

3. SITE CONDITIONS AND BACKGROUND.

The site comprises some 13 or more hectares. Until recently the site formed the Wagga Wagga South Campus of Charles Sturt University. The facility has a number of buildings in various condition, some of which have now been demolished. Much of the facility was open space, dryland grass areas, irrigated lawn areas, and accordingly there were numerous tree plantings over many decades. There are 16 trees or groups of trees that are considered 'Remnant'; located in the south west section of the development adjacent to the new Ambulance Station.

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228 Tree points are identified in this assessment. Five of the data points contain multiple young trees – effectively there are some 400 young endemic and Australian Native species trees that make up these 5 data points. Many of the established trees are Australian Natives, age and the condition of the trees varies greatly.

Of some note is a line of 138 *Eucalyptus cladocalyx* (Sugar Gums) along the perimeter fence of Fernleigh Road, Hely Avenue and Charleville rd. These trees provide notable visual amenity values to residents in these streets that face the development site.

It needs to be acknowledged that the site is located in a **High Risk Urban Salinity area** (Madden and Slinger 2000), and whilst this report is not intended to directly address salinity issues, it needs to be acknowledged that tree vegetation is a very important in maintaining water table depths and preventing outbreaks of dryland salinity which can be highly degrading on the environment and infrastructure.

It should also be noted that from a landscape maintenance perspective the site was intensively maintained with gardens and irrigation into the early 2000's when a prolonged period of low rainfall (drought) prevailed from 2002 to 2009, which coincided with a down scaling of use by Charles Sturt University, and **a much reduced irrigation program.** This had detrimental impacts for some of trees which were reliant on supplementary irrigation and some were species that are not suited to the lower local rainfall. Subsequently this has resulted in many trees being removed over the last 10-15 years, and a number now that are in poor condition or decline.

It should also be noted that the development would potentially now **place trees in high use amenity areas**, opposed to current low use amenity areas. This has significant safety management implications, which is discussed further below.

4. SUMMARY OF INSPECTION RESULTS.

The following points provide a summary of the inspection findings. *Annexure 2 – Tree Date File* contains full details on descriptors and evaluation/rating methodology

Tree Species.

- 228 Data points or groups of trees were identified. 400 young saplings for 5 of the tree number or data points.
- 29 different tree species were identified.
- By far the most common species was *Eucalyptus cladocalyx* (Sugar Gum) 149 trees.
    - The next common was Arizona Cypress (*Cupressus arizonica*) with 23 trees and 2 lines of trees.
- 16 Endemic or indigenous species data points were identified *Eucalyptus albens* (White Box) and *Eucalyptus microcarpa* – (Grey Box).
    - This includes the 400 or so young saplings
    - 4 Very Significant Trees based on Environmental Values
        - Trees – 258, 260, 261 and 268.
    - 1 Significant tree based on environmental value.
        - Tree 263.
- 6 other trees were identified as significant
    - Trees 34, 51, 2225, 242, 243, 244,

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- 191 trees are Australian Native species or endemic to site.
- 37 Trees are exotic species.
- Noted that Australian Natives make up the majority of the tree population.

Tree Condition.

- 6 Tree were identified in Excellent Condition
- 34 Trees in Good Condition
- 90 Trees in Fair Condition
- 86 Trees in Poor Condition
- 12 Trees in Very Poor Condition.

Tree Condition normally has a direct impact on the Retention values and hazard rating of trees.

Noted that the majority of trees are classified in Fair to Poor condition.

Environmental Values.

- 4 Trees were identified with Very High Environmental Values – the development proposes to retain all 4 of these trees.
    - Trees 258, 260, 261, and 268.
- 5 Trees were identified with High Environmental Values – the development proposes to retain 4 of these trees.
    - Retained Trees 51, 242, 243, 244,
    - Tree 263 is indicated as removal by development.

Retention Values

- 5 Trees identified with excellent retention values.
- 17 Tree identified with Good retention values.
- 48 Trees with Fair retention values.
- 85 Trees with Poor retention values
- 73 Trees with Very Poor Retention values.

Noted that the majority of the tree population have poor or very poor retention value.

Joining Property Trees.

Trees 38, 39 and 40 are located on the joining school grounds. It should be noted that the development is likely to have direct impacts to trees 38 and 40 which will be required to be managed.

Background - Variation and suitability of Species at Site.

Most of the site was well irrigated until around 2003 when there was a prolonged period of low rainfall from 2002 and water restrictions were applied across the Wagga Wagga Area. This below average rainfall event lasted until 2009 and the site did not receive any appreciable

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irrigation again. The use of the facility also changed. Because of greatly reduced irrigation water over the summer months many of the trees have declined, died or have already been removed due to poor condition, death or safety concerns.

There is a wide variety of species noted. Australian Natives dominate the species list. Successful species selection, or trees that have coped well with little or no supplementary irrigation would be noted as

- *Eucalyptus albens* (White Box) – endemic to site.
- *Eucalyptus microcarpa* (Grey Box) – endemic to site.
- *Corymbia citriodora* (Lemon Scented Gum)
- *Eucalyptus cladocalyx (Sugar Gum)*
- *Cupressus arizonica* - Arizona cypress.

Less successful species that did not cope with the change include;

- *Eucalyptus viminalis* (Ribbon Gum),
- *Eucalyptus mannifera* (Brittle Gum)
- *Eucalyptus dalrympleana (*Mountain gum)
- Other *Fraxinus species,*
- *Quercus palustris, (*Pin Oak)
- *Platanus acerifolia* (London Plane Tree)

Photo 1 – Tree 225 *– Medium Corymbia citriodora (Lemon Scented Gum). Species that has coped with reduce irrigation and identified for retention as a mature tree in good condition – will be incorporated into the development.*

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Photo 2 – Tree 34 *– Medium to large Corymbia citriodora (Lemon Scented Gum) identified for retention as a mature tree in good condition – will be incorporated into the development*

Photo 3 – Tree 268 Eucalyptus albens (white Box). *Aged tree with very high environmental values – hollows present. Example of Tree to be retained.*

Note Tree data point 269 – some 75 young saplings (Eucalyptus albens) that have germinated around the aged tree since ground maintenance activities have ceased on the site some 15 or more years ago

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Photo 4 – Group of Eucalyptus albens (White Box).

Tree 257 – Large Sapling

Tree 259 – group of 18 smaller saplings

Tree 258 – Very Significant E. albens - aged tree is contained in the middle of the group of trees.

Tree 258 is to be retained – most of the saplings are marked for removal

Line of 138 *E. cladocalyx* (Sugar Gums) Fernleigh Road, Hely and Charleville boundary fence.

There are 138 Mature and Overmature *E. cladocalyx* (Sugar Gums) that line the boundary fence of Fernleigh Road, Hely Avenue and Charleville Road. The stem centres are a little over 4m from the boundary fence. Stem centres are about 4-5 meter centres. Several trees are large, most are medium trees about 16-20 meters.
The tree condition is described as follows.

- 14 Trees are graded as Good Condition.
- 64 Trees are graded as Fair Condition.
- 54 Trees are graded as in Poor Condition.
- 6 Trees are graded in Very Poor Condition.

Nearly all the trees have sustained some limb or stem failure. Many have sustained multiple failures, and many have some high risk or impending failure present.

Retention Value of these trees was determined as follows;

- 5 Trees with Good retention value
- 32 Trees with Fair retention value
- 59 Trees with Poor retention value
- 42 Trees with Very Poor retention value.

Noted that the majority of the trees as individual trees have poor or very poor retention values. The line of trees clearly provide strong amenity and visual values, and they directly contribute to control of salinity that is of issue in this area of Wagga Wagga. The trees are currently in an area that has very low occupation or use by people. Regular tree/limb failures do not currently present an unacceptable risk of harm to people. With development, the trees will be directly placed into a high use urban setting. The majority of the trees have elevated failure potential which needs to be considered.

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Photo 5 – Tree 112 *– E. cladocalyx (Sugar Gum) mid-section of Fernleigh Road – with failed stem hanging in canopy.*

Photo 6 *– Recent failed limb from one of the trees on Fernleigh Road boundary.*

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Photo 7 – Trees 181 on right and tree 183 on left. *Hely Avenue fence – both have sustained significant failures recently. Tree 181 on right has a further impending stem failure and cannot be retained.*

Photo 8 - Tree 181 *– close up of remaining stem structure – Extreme risk of further failure.*

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Photo 9 – Tree 193 *– tree has notable 15-20 degree lean to North West, soil heaving on opposite side of stem – tree has moved in the ground – high to extreme risk of failure.*

Photo 10 – Tree 222 *– E. cladocalyx (large Sugar Gum) – west tree Charleville Road boundary – example of Parrot habitat, unfortunately there is a significant defect as circled that hangs over the footpath. Tree cannot be pruned to Australian standard 4373 – it is recommended for removal.*

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Photo 11 – Tree 138 *–stem failure in tree Hely Avenue – north stem is leaning in joining tree – further failure highly likely. Tree will have to be removed.*

Tree 51 – Very Large *E. cladocalyx* (Sugar Gum). Tree 51 is located near the south western boundary. The tree is described as very large – with a stem diameter of 2m. The canopy is very extensive spreading some 35 meters in diameter. The tree has sustained at least 20 limb failures over time between 100 and 300mm diameter. There are 12 or more defects noted in the canopy some described as high risk.

The tree has significant visual impact and high environmental values based on some nesting hollows, the size of the tree, and the species is well accepted by native birds as a substitute for indigenous species.

The tree is identified as a significant tree, and will be retained in the development. The tree protection zone is 15m radially. The tree will also require significant management inputs to remedy the limb failure potential it currently has. Noted that it sustained 2 further limb failures in November 2020.

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Photo 12 – Tree 51 *– Very Large E. cladocalyx (Sugar Gum). Significant visual impact.*

Photo 13 – Tree 51 *– Example of nesting hollow.*

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Photo 14 – Tree 51 *– Example of High risk defect in canopy that will need to be managed when the tree is placed into a high use amenity situation.*

5. SUMMARY OF RECOMEMNDATIONS AND DEVELOPMENT PROPOSAL.

Table 1 provides a summary of the arboricultural assessment or grading of the tree population and the development proposal.

Table 1 – Summary of Arboricultural Assessment and Development Proposal.

Arboricultural Assessment	Number of Trees	Development Proposal – Jan 2021	Comments
Retain Priority	15	Retain 14 Remove - 1	Tree 263 to be removed
Retain	42	Retain 2 Remove 6 Not determined 34	100 *E. cladocalyx* to be further considered
Retain if Possible	48	Remove 14 Not determined 34	6 *E. cladocalyx* to be further considered
Remove	101	Remove 54 Not Determined 47	19 *E. cladocalyx* to be further considered
Remove Priority	22	Remove 7 Not Determined 15	8 *E. cladocalyx* to be further considered
Totals	**228**	**Retain – 16 Remove 82 Not Determined - 130**	

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- 1 Tree identified as Significant Tree is proposed for removal – Tree 263 – Remnant *Eucalyptus albens* (White box)
- 130 Trees are marked as not Determined. This relates to the line of 138 *Eucalyptus cladocalyx* on the boundary of Fernleigh Road, Hely Avenue and Charleville Road. See Discussion section below.
    - Trees 99, 100 and 101 are identified for removal for road access off Fernleigh Road.
- 26 of the 82 Trees marked for development removal are identified as exempt height or species under *WWCC Development Control Plan 2010 – Part B – Section 5 - Natural Resource and Landscape Management*.

6. DISCUSSION ON DEVELOPMENT AND CURRENT TREE POPULATION.

I would suggest that a development such as this, would be expected to be viable for potentially 40-50 years or more from construction. As such the decision to retain trees needs to evaluate the potential for the tree or group of trees to be a viable asset for the next 20 or more years, unless there is some overriding and compelling reason to retain the tree for cultural, heritage or immediate environmental reasons. Retention of individual trees is often a complex and expensive exercise in developments. Trees impacted by development are nearly always asked to cope with reduced and altered root zones which often results in some decline in tree health. The calculated Tree Protection Zone (AS 4970-2009) reflects only a portion of the existing root system that normally exists, and soil impacts up to the nominated TPZ remove significant portions of existing root systems.

I would suggest the key questions in evaluation of the tree population should be;

- Will the tree or group of trees still be a reasonable quality asset in 20 or more years' time?
- Will the tree pose an unacceptable risk within that period and require removal?
- Can safety concerns and existing tree hazards be suitable ameliorated with reasonable cost to development and some reasonable outcome for the tree.
- Can the overall losses or impacts of the tree or trees be acceptably compensated by replacement landscape and trees?
- Will a new landscape provide better aesthetic values or enhance the environmental and ecosystem outcomes over the current position?

Much of the overall consideration hinges around the current or present tree condition. If trees are in poorer condition, (Score 5, 4 or lower side of 3) they will have various issues that include;

- structurally unsound,
- higher levels of decay,
- serious or higher risk defects,
- obvious poor vigour – signs of tree decline.

Such trees are generally not worth persisting with unless they have some elevated values in cultural, heritage or environmental considerations. Notable resources will be required to preserve the tree on the construction site and likely into the future. It is nearly always the case that the tree is asked to cope with root removal and reduce root space.

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Setting aside the line of 138 *Eucalyptus cladocalyx* (Sugar Gums) that line the boundary of the development property, the development proposal retains;

- 14 of the 15 trees identified as Significant or very significant – evaluated as 'Retain Priority'.
- Trees that have further retention value as 'Retain; or 'retain if possible' total 21. Only 2 of which are to be retained.

Save for tree number 263 – all significant trees are retained.

Discussion – 138 *Eucalyptus cladocalyx* (Sugar Gums) on property boundary lines.

The arboricultural assessment and the Development has identified the strong aesthetic values of these trees, and their contribution to salinity control. At this point no definitive application is made relative to each individual tree. Given the design of the residential lots, it presents that many of the trees will require application for removal to accommodate development of driveways to access lots. Some of the trees are structurally unsound and definitely should not remain in a new amenity setting.

The following is a brief summary of the 138 Trees.

- Only 37 are graded as having good or fair retention values. None were graded excellent.
- Trees 242 and 243 were graded as retain as priority as significant trees – and are to be retained.
- 34 have been graded as 'retain' value
- 36 have been graded as 'retain if possible'
- 50 Have been graded for 'removal'
- 16 have been graded as 'priority for removal'

Effectively as individual trees 66 of the 138 trees have been accessed or graded as removal on safety and condition issues. These 66 trees are defiantly not suitable for retention in an urban amenity setting. It is also noted that there was application by Charles Sturt University to remove a number of the trees on safety concerns, and subsequently removal of 29 trees was granted by WWCC under DA 15/0637. This did not occur.

There is a direct conflict between the environmental and amenity values the line of trees provides relative to the condition and elevated failure potential the trees have moving into an urban amenity situation.

7. FINDINGS AND RECOMMENDATIONS.

A. For anyone who has observed the area over the last 15-20 years it is quite clear that the tree population has slowly diminished due to tree decline and tree removal due to tree death and safety issues. This is linked in part to cessation of irrigation and species selection which has led to a current tree population that is generally in poor condition. Lopping of trees for powerline clearance has exacerbated this issue. This needs to be considered by planning authorities.

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B. Excluding the 138 *E. cladocalyx* (Sugar Gums) on Fernleigh, Hely and Charleville the arboricultural impact assessment broadly supports the development proposal as per Master Plan – Annexure 1. Excluding the 138 *E. cladocalyx* (Sugar Gums) on Fernleigh, Hely and Charleville boundary I recommend that the trees identified in Annexure 1 for removal are removed as part of the Development application, and those that are for retention are protected prior to and as part of the Development.
    a. The following item is recommended for review;
        i. Tree 263 is a significant tree and it is recommended that retention of this tree is reviewed as feasible.

C. The line of 138 *E. cladocalyx* (Sugar Gums) on Fernleigh, Hely and Charleville boundaries require further detailed evaluation in the following context.
    a. Some of the trees will need to be removed due to safety and condition.
    b. Some of the trees will require removal to allow access to the new residential lots.
    c. Some of the trees in fair to good condition should be retained long term to sustain the current amenity values, screening and salinity control.
    d. There needs to be a detailed analysis of where and what new trees can be established as a visual screen to offset the loss of the trees that have to be removed.
        i. There is potential for offset or new plantings on the Council nature strips.
        ii. There will be opportunity for replacement trees on the development boundary where trees are removed.
    e. Pruning options will resolve some of the unacceptable risk in some of the trees.
    f. Council should be consulted regarding how these issues can be worked through and resolved – potentially some residents may also be consulted.
    g. Recommendation – that the issues regarding these trees is discussed in detail with council and that a further evaluation of the trees is undertaken relative to each individual lot and which trees are identified as long term assets and their relative tree protection zone, and those that need to be removed for safety issues and lot access; and where new trees can be established to offset the loss of about 50% of these trees.

D. A detailed landscape plan is developed and implemented that will provided increased environmental benefits and aesthetic values to the current position, including salinity control – areas where suitable tree vegetation is strategically placed to intercept ground water with the use of tree vegetation where possible.
    a. I would suggest that Wagga Wagga City Council and adjoining residents will be seeking assurances that building development and changes to the landscape enhance both amenity values and environmental values across the whole site and development planning needs to positively address this in the early stages

E. The detailed Project Tree Management Plan developed for Bulk Earth Works approval should be expanded and updated to meet the requirements of this portion of the overall development.
    a. The Tree Management Plan needs to address the following key requirements.
        i. Clearly identify on site the trees to be removed and those to be retained. The Project Arborist should clearly identify these PRIOR to any demolition or tree removal.

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ii. Clearly identify and specify tree protection zones for tree to be retained and restrictions and procedure for any entry and works within tree protection zones.
iii. Specify specific mitigation measures for trees where close contact to the construction processes will occur.
iv. Specify pruning requirements for all retained trees.
v. Provide time frames for these matters to occur.
vi. Specify further inspection resumes during the course of the demolition, earth works and construction phases and the immediate period beyond – hold points for involvement of the Project Arborist.
vii. Other amelioration measures that may be prudent or applicable, such as fencing, mulching, irrigation events, other inspections that might be required by arboriculture consultant – Project Arborist.
viii. Clearly identify and protect the three trees on the joining property.

Terms, Conditions and Limitations that apply.

Obviously, visual tree assessment from the ground has some limitation as every single portion of the tree cannot be observed or inspected. Most or the large majority of defects and tree issues can be observed from the ground. Where aerial inspection or other investigative means should be considered the report or email will recommend or provide those as an additional consideration.

Trees are a valuable asset and necessary part of both the urban and natural environment. They are the cornerstone of our environment and provide numerous benefits to our social wellbeing, biodiversity and ecology of any area. They provide water balance stability, salinity and erosion control, amenity, cultural, public health and aesthetic benefits; efforts should be made to preserve and plant new trees where possible. As an asset they require appropriate management and resource inputs.

It should be noted that trees cannot be guaranteed 'risk free'. All trees represent some degree of risk. Arboriculture is not an exacting science; rather it is an educated interpretation of the interaction of biotic and environmental circumstances, which change over time. It is not possible to determine or predict all limb or tree failures. This report is such an interpretation at the time of inspection.

Unless Quantified Tree Risk Assessment (QTRA) has been specifically applied and reported, then this report or email does not constitute a risk assessment. The Author does not seek to determine what level of risk any individual or organisation is prepared to accept but serves to provide tree managers with tree condition, hazards and other salient issues associated with the tree or trees; and provide or recommend management options.

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References.

Australian Standard 4970-2009 *Protection of Trees on development sites*.

Australian Standard 4373 -2007 *Pruning of Amenity Trees*.

Lonsdale, David (1999). *Principles of Tree Hazard Assessment and Management*. pp 146. Dept. for Transport, Local Government and the Regions. London.

Madden, E. and Slinger, D. (ed) (2000). *Urban Salinity in Wagga Wagga*. City of Wagga Wagga – NSW Land and Water Conservation

WWCC (2018). Wagga Wagga Development Control Plan 2010. Wagga Wagga City Council, accessed online 4/04/2018 at;
http://www.wagga.nsw.gov.au/city-of-wagga-wagga/planning-dev/plans,-policies-and-controls/wagga-wagga-planning-documents

Table A - Interpretation of Hazard Rating Applied to Stated Defects.		
Hazard Rating.	**Likelihood**	**Description.**
Very Low	Rare – exceptional circumstances apply	All trees represent some degree of risk – ***this is the base line*** for a healthy tree with no known or observed defects – large and unrestricted root space is available for root development relative to overall size of the tree. The tree and larger canopy branching structure is mechanically acclimatised to normal annual cycle of weather – the tree is expected to withstand higher level storm intensity in the Riverina of around 80-100kph winds, provided saturated soil is not encountered during such wind intensity. Small twigs and branches of 20mm diameter or less will be expected to fail in high intensity storm events.

Low	Unlikely – could occur	There is some small indicator or defect that removes the rating from the very low.
Moderate	Possible – Might occur	There is a noted or obvious defect that will normally develop further before failure. If failure was to occur at this point in time it could not be considered as completely unexpected. Such defects might fail in a high intensity storm event.
High	Likely - Probable	There is an obvious defect that is expected to fail at some time. High intensity storm events typically induce some of these defects to fail. Branches or stems that have high gravitational loads on the defect are expected to fail at some point.
Critical (Extreme)	Almost Certain	There is a serious defect that is impending.

Explanatory Notes. *(Version date 11/01/2017)*

1. Use of this interpretation of Hazard Rating does not constitute a risk assessment or quantify risk. It provides a guide as to the likelihood of a tree or tree part (branch, stem or whole tree) failing – relative to a baseline sound tree (Very low).
2. To conduct a risk assessment or quantify risk, the frequency of use of the area needs to be considered in the analysis. A target must be present at the time of failure; damage or injury needs to be estimated.
    a. Quantified Tree Risk Assessment (QTRA) can be applied. http://www.qtra.co.uk/cms/
3. Application of timeframes for failure are not possible to accurately predict and is therefore not stated. Even defects considered as Critical – impending – can sometimes remain intact for a number of years before failure actually occurs.
4. Equally, the time it takes for a defect to progress towards high or critical is not able to be accurately indicated for a range of reasons and not stated. It would be considered prudent to have 'Moderate' or higher ratings to be evaluated on an agreed time basis.

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LEGEND

- TREES TO BE PLANTED
- TREES TO BE RETAINED OR PROTECTED (T258)
- WAGGA WAGGA CITY COUNCIL DRAINS
- WAGGA WAGGA CITY COUNCIL SEWERS
- WAGGA WAGGA CITY COUNCIL DRAINS TO BE REMOVED
- WAGGA WAGGA CITY COUNCIL SEWERS TO BE REMOVED
- PROPOSED HIGH VOLTAGE ELECTRICITY SUPPLY CABLE
- PROPOSED EASEMENT
- STORMWATER BASINS AND CHANNELS
- PUBLIC ROADS
- RAISED FOOTPATH CROSSINGS
- SURFACE FALL
- CONTAMINATION CONTAINMENT CELL
- ESSENTIAL ENERGY TRANSFORMER SITE (Tx)
- APA GROUP GAS CONNECTION SITE (G)

PUBLIC ROAD SCHEDULE			
NAME	WIDTHS		
	RESERVATION	PAVEMENT	VERGES
CHARLES STURT DRIVE	11.00	7.50	3.50
COLLEGE CLOSE	14.50	7.50	3.50
CROFT BOULEVARD	21.00	2x 4.00	5.50
CROFT BOULEVARD	14.50	9.00	5.50
GILMORE CLOSE	20.00	9.00	5.50
MACKILLOP CIRCUIT	20.00	9.00	5.50
MACKILLOP CIRCUIT	16.00	9.00	3.50
MACKILLOP CIRCUIT	14.50	7.50	3.50
SUNDIAL COURT	14.50	7.50	3.50

NOTES

1. THIS PLAN IS BASED UPON THE SITE SURVEY PLAN PREPARED BY RIVLAND SURVEYORS ON THE 16th OF APRIL 2018. DRAWING NUMBER DT01.
2. THE EXISTING TREE RETENTION NUMBERING REFLECTS THE INFORMATION CONTAINED WITHIN THE SITE REPORT DATED 5th MARCH 2019 PREPARED BY ABORIST WADE RYAN.
3. THE ROAD LAYOUT AND INTERSECTIONS ARE IN ACCORDANCE WITH THE TRAFFIC REPORT PREPARED BY CARDNO CONSULTANTS.
4. THE SCOPE OF WORKS SHOWN IS CONCEPTUAL AND SUBJECT TO DETAILED CIVIL ENGINEERING DESIGN.
5. PROPOSED INFRASTRUCTURE TO BE DESIGNED AND CONSTRUCTED TO THE STANDARDS AND SPECIFICATIONS OF WAGGA WAGGA CITY COUNCIL (WWCC) AND RELEVANT SUPPLY AUTHORITIES

0 20 40 60 80 100m
20 10
SCALE 1:1000 (A1)
0 20 40 60 80 100m
20 10
SCALE 1:2000 (A3)

REVISIONS:

REV	DESCRIPTION	DATE	DRAWN
D	ISSUED FOR INFORMATION	24.11.20	DK
E	ISSUED FOR INFORMATION	10.12.20	DK
F	ISSUED FOR INFORMATION	06.01.21	IM
G	ISSUED FOR INFORMATION	06.01.21	IM

DRAWING AUTHORISATION:

DIVISION	CHECKED	APPROVED	DATE
PLANNING			
DESIGN			
CONSTRUCTION			
ARCHITECTURE			

PROJECT:
UNIVERSITY PARK
AGED CARE AND RESIDENTIAL DEVELOPMENT
20 HELY AVENUE, TURVEY PARK, WAGGA WAGGA. CITY OF WAGGA WAGGA

DRAWING ISSUE:
DEVELOPMENT APPROVAL

SHEET TITLE:
MASTER PLAN

CROFT DEVELOPMENTS PTY LTD
Croft Developments Pty Ltd as Trustee
for Croft Developments Unit Trust
ABN 51 326 340 371
59 Wangara Road, Cheltenham VIC 3192
Tel: (03) 9581 0100 | Fax: (03) 9585 6383

SCALE: 1:1000@A1 1:2000@A3
DATE: 02.08.2019 DRAWN BY: DK

DRAWING NUMBER:
P-1901-01-G
REVISION:

PRINTED: 06.1.21 15:06

Developed Wade Ryan Contracting *0408 300 989 waggatreeconsultancy.com.au* *waderyan1@bigpond.com*	**Annexure 2 - Tree Data Inventory - University Park Aged Care and Residential Development - 20 Heley Avenue Turvey Park Wagga Wagga - Dec 2020**																						
Tree No	**Species**	**General Location**	**Lat**	**Lon**	**Species Origin**	**General Size**	**Height M**	**DBH (m)**	**Age Class**	**General Condition**	**Tree Vigour**	**Defects/Hazards/Issues Present Commentary on tree**	**Environ Rating**	**Expected Remaining Life**	**Significant Tree Status**	**Suggested Retention Value**	**Initial Recommendation for Planning**	**Primary Reason for Recommendation**	**Secondary Reason for Recommendation**	**Replacement Time Frame**	**SRZ Radius in m from centre of stem**	**TPZ Radius in m from stem**	**Other Comments**	**Proposed Development Impact Jan 2021**
33	*Cercis siliquastrum* (Judas tree)	West of Charleville rd	-35.128201	147.349657	Exotic	Small	<8	0.45	Mature	3 - Fair	3- Fair	bifurcated stems - 7-8m height	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition	Exempt height	0-5	2.37	5.4		Remove
34	*Corymbia citriodora* Lemon Scented Gum	North of Music building	-35.128176	147.348969	Aus Native	Large	20+	0.94	Mature	1 - Excellent	2 - Good	Tree with good form and structure - a significant tree based on size and visual impact on area - no defects noted	3 - Medium	40 plus	Significant	1 - Excellent	Retain Priority	Significant Tree	Sound tree suited to sit	50+	3.22	11.28	Tree will require specific tree protection measures and some canopy lifting on north canopy section	Retain - Impacts to Manage
35	*Cupressus arizonica* Arizona cypress	North of Music building	-35.128303	147.349111	Exotic	Medium	8 to 12	0.85	Over Mature	4 - Poor	4 - Poor	Tree in early stages of decline - multiple limb failures visual impact very poor	4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Poor Condition		5 to 10	3.09	10.2		Remove
36	*Cupressus arizonica* Arizona cypress	West of music building	-35.128277	147.348613	Exotic	Medium	8 to 12	0.63	Mature	3 - Fair	3- Fair	12 failed laterals over time - potential for further limb failures - visual impact poor	4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Poor Condition		5 to 10	2.73	7.56		Remove
37	*Cupressus arizonica* Arizona cypress	West of music building	-35.128364	147.348568	Exotic	Medium	8 to 12	0.6	Mature	3 - Fair	3- Fair	2 recent failed laterals - stems badly bifurcated at ground level - poor long term tree	4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Poor Condition		5 to 10	2.67	7.2		Remove
38	*Platanus × acerifolia* London Plane	**Music building grounds - east side - not on development site**	-35.128932	147.349272	Exotic	Medium	12 to 20	0.71	Mature	3 - Fair	3- Fair	Tree lopped at 4m decades ago. Hollows and decay now in both leaders. Leaf coverage only fair - irrigation to tree has been turned off for several years now. Extensive trenching for services has occurred around immediate root zone. Tree located close to development needs to have impacts considered - proposed trenching close to stem	3 - Medium	15 plus	Not Significant	3- Fair	Retain Priority	Other		50+	2.87	8.52	Joining property tree - will require specific mitigation measures such as underbore	Retain - Impacts to Manage
39	*Corymbia citriodora* Lemon Scented Gum	**School grounds east side**	-35.129233	147.3491446	Aus Native	Small	8 to 12	0.29	Semi Mature	3 - Fair	3- Fair	Bifurcation in stem at 1.6m - stem high risk of failure - retention not advisable	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain Priority	Other		10 to 20	1.97	3.48	Joining property tree	Retain - Impacts unlikely
40	*Platanus × acerifolia* London Plane	**School grounds east side**	-35.12934	147.349097	Exotic	Medium	8 to 12	0.26	Over Mature	4 - Poor	3- Fair	Tree lopped at 3-4m decades ago - both leaders now with extensive decay and hollows - extensive services located around canopy and inside TPZ - retention not advisable. Moderate dead wood to 125mm	4 - Low	5 to 15	Not Significant	4 - Poor	Retain Priority	Other		10 to 20	1.88	3.12	Joining property tree	Retain - Impacts to Manage
41	*Cupressus arizonica* Arizona cypress	South entrance to school	-35.129892	147.3487665	Exotic	Medium	8 to 12	0.67	Over Mature	4 - Poor	3- Fair	Multiple failed laterals - 20% canopy dieback tree in decline - visual impact poor	4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Poor Condition		10 to 20	2.80	8.04		Remove
42	*Eucalyptus spathulata* Swamp Mallet		-35.130133	147.349194	Aus Native	Medium	<8	0.5	Over Mature	4 - Poor	4 - Poor	Central stem system badly decayed - bracket fungi present b basal decay estimated 70% of circumference - sound holding wood likely 15% - high risk of whole tree failure	4 - Low	0 to 5	Not Significant	5 - Very Poor	Remove	Poor Condition	Exempt height	10 to 20	2.47	6		Remove
43	*Unidentified Eucalyptus sp.*		-35.130365	147.349189	Aus Native	Medium	8 to 12	0.55	Mature	3 - Fair	2 - Good	Sound tree - light dead wood - no local species- no hollows or other high level environmental values - would be left as an isolated tree if retained in development	3 - Medium	15 plus	Not Significant	3- Fair	Retain if possible	Sound tree suited to site		20+	2.57	6.6		Remove
44	*Corymbia citriodora* Lemon Scented Gum		-35.130745	147.3493132	Aus Native	Medium	12 to 20	0.85	Mature	3 - Fair	2 - Good	Young mature tree - Stem sound - has quite old stem failure at 1-2m , no decay present - some dead wood but less than 75mm diameter. Retention value potentially good	3 - Medium	40 plus	Not Significant	2 - Good	Retain if possible	Sound tree suited to site		20+	3.09	10.2		Remove
45	*Quercus palustris* Pin Oak		-35.130709	147.349501	Exotic	Medium	8 to 12	0.46	Mature	3 - Fair	3- Fair	Large amount of dead wood in canopy Bifurcated stems at 3m - extruded bark - moderate risk of failure - tree heavily water stressed - poor leaf coverage. Irrigation not longer available to tree species requires some irrigation to thrive Pruning to reduce structural defect now late in tree life and not really feasible.	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		20+	2.39	5.52		Remove
46	*Corymbia citriodora* Lemon Scented Gum		-35.130231	147.349592	Aus Native	Small	8 to 12	0.23	Over Mature	4 - Poor	4 - Poor	Bifurcated stems at 300mm above ground - white ant activity present - canopy leaf coverage poor - only 25% of excepted - stem has noted infection of bacterial or viral galls -	4 - Low	0 to 5	Not Significant	5 - Very Poor	Remove	Poor Condition		10 to 20	1.79	2.76		Remove
47	*Sapium sebiferum* Chinese Tallow		-35.130093	147.349678	Exotic	Small	<8	0.45	Mature	2 - Good	3- Fair	Smaller mature tree - about 8m in height - has some retention value from condition perspective - although only small tree	4 - Low	15 plus	Not Significant	2 - Good	Remove	Retention not practicable	Exempt height	5 to 10	2.37	5.4		Remove
48	*Fraxinus species* Ash (White or Green??)		-35.130087	147.349882	Exotic	Small	<8	0.35	Mature	2 - Good	3- Fair	Tree about 8m - has some potential for retention - but could easily be replaced.	4 - Low	15 plus	Not Significant	1 - Excellent	Remove	Species not suited to Environment	Exempt height	5 to 10	2.13	4.2		Remove
49	*Liquidambar styraciflua* Liquidambar		-35.130072	147.350027	Exotic	Small	8 to 12	0.31	Over Mature	4 - Poor	4 - Poor	Small tree - 8-10m. Central leader dieback - basal cavity in stem	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		5 to 10	2.02	3.72		Remove
50	*Corymbia citriodora* Lemon Scented Gum		-35.130129	147.3494357	Aus Native	Medium	8 to 12	0.3	Young	2 - Good	1 - Excellent	Seedling have germinated in garden bed against building - it will not be feasible to demolish building and retain stems.	4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Retention not practicable	Other	0-5	2.00	3.6		Remove
51	*Eucalyptus cladocalyx* Sugar Gum	Open Space area about 60m north of Fernleigh road - opposite Hunter street.	-35.130922	147.3489339	Aus Native	Very Large	20+	2	Mature	3 - Fair	2 - Good	Large and aged tree. Massive stem - significant tree in location - visual impact, age and strong environmental values. Cavity in stem west side - likely low risk. Bifurcation in leaders at 4m - 800mm stems medium risk - some 20 failed branches across the canopy - 1 recent. 12 noted defects in canopy in laterals high risk of failure 100mm to 300mm diameter. Canopy diameter about 35m	2 - High	15 plus	Significant	3- Fair	Retain Priority	Significant Tree	Positive values	100+	4.43	15	Tree will require strict tree protection measures - as TPZ will only be 15m and canopy extends much further Tree will require aerial inspection and extended limb and hazard reduction pruning for retention - there will still be some risk attached to limb failure - suggest that the tree is not used for occupancy recreation area. Create garden or other use of area that discourages pedestrians and human occupancy.	Retain - Impacts to Manage
52	*Eucalyptus leucoxylon* White Iron Bark		-35.131179	147.349166	Aus Native	Small	<8	350	Senescent	4 - Poor	4 - Poor	Small tree in decline - 2 stems. Stems have sunken necrotic zones and canopy dieback about 30% 7-8 meters in height	4 - Low	0 to 5	Not Significant	5 - Very Poor	Remove	Poor Condition		5 to 10	38.75	15		Remove
53	*Eucalyptus leucoxylon* White Iron Bark		-35.131334	147.349169	Aus Native	Small	8 to 12	0.5	Mature	2 - Good	2 - Good	12 meter tree in good condition - some retention values based on condition - small tree and easily replaced in short term.	4 - Low	15 plus	Not Significant	2 - Good	Retain if possible	Sound tree suited to site		5 to 10	2.47	6		Remove
54	*Cupressus arizonica* Arizona cypress		-35.130787	147.349831	Exotic	Small	8 to 12	0.4	Over Mature	4 - Poor	4 - Poor	Central leader died back to 150mm diameter - tree in decline	4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Poor Condition		5 to 10	2.25	4.8		Remove
55	*Eucalyptus nicholii* Peppermint gum	south side entrance rd off Heley	-35.13021	147.350395	Aus Native	Small	8 to 12	0.6	Dead	5 - Very Poor	5 - Very Poor	Dead tree exempt under WWCC legislation	5 - Very Low	0 to 5	Not Significant	5 - Very Poor	Remove	Poor Condition	Exempt species	5 to 10	2.67	7.2		Remove
56	*Cupressus arizonica* Arizona cypress	south side entrance rd off Heley	-35.130121	147.350419	Exotic	Small	<8	0.35	Over Mature	4 - Poor	4 - Poor	Tree in decline - small tree 6-7 meters height - very poor visual impact	5 - Very Low	0 to 5	Not Significant	5 - Very Poor	Remove	Poor Condition	Exempt height	5 to 10	2.13	4.2		Remove
57	*Cupressus arizonica* Arizona cypress	south side entrance rd off Heley	-35.130136	147.3504493	Exotic	Small	<8	0.35	Over Mature	4 - Poor	4 - Poor	Tree in decline - small tree 6-7 meters height - very poor visual impact	5 - Very Low	0 to 5	Not Significant	5 - Very Poor	Remove	Poor Condition	Exempt height	5 to 10	2.13	4.2		Remove

Tree No	Species	General Location	Lat	Lon	Species Origin	General Size	Height M	DBH (m)	Age Class	General Condition	Tree Vigour	Defects/Hazards/Issues Present Commentary on tree	Environ Rating	Expected Remaining Life	Significant Tree Status	Suggested Retention Value	Initial Recommendation for Planning	Primary Reason for Recommendation	Secondary Reason for Recommendation	Replacement Time Frame	SRZ Radius in m from centre of stem	TPZ Radius in m from stem	Other Comments	Proposed Development Impact Jan 2021
58	*Cupressus arizonica* Arizona cypress	south side entrance rd off Heley	-35.130154	147.3505736	Exotic	Small	<8	0.35	Over Mature	4 - Poor	4 - Poor	Tree in decline - small tree 6-7 meters height - very poor visual impact	5 - Very Low	0 to 5	Not Significant	5 - Very Poor	Remove	Poor Condition	Exempt height	5 to 10	2.13	4.2		Remove
59	*Cupressus arizonica* Arizona cypress	south side entrance rd off Heley	-35.130155	147.3506662	Exotic	Small	<8	0.35	Over Mature	4 - Poor	4 - Poor	Tree in decline - small tree 6-7 meters height - very poor visual impact	5 - Very Low	0 to 5	Not Significant	5 - Very Poor	Remove	Poor Condition	Exempt height	5 to 10	2.13	4.2		Remove
60	*Cupressus arizonica* Arizona cypress	south side entrance rd off Heley	-35.130163	147.3507681	Exotic	Small	<8	0.35	Over Mature	4 - Poor	4 - Poor	Tree in decline - small tree 6-7 meters height - very poor visual impact	5 - Very Low	0 to 5	Not Significant	5 - Very Poor	Remove	Poor Condition	Exempt height	5 to 10	2.13	4.2		Remove
61	*Cupressus arizonica* Arizona cypress	south side entrance rd off Heley	-35.130163	147.3508042	Exotic	Small	<8	0.35	Over Mature	4 - Poor	4 - Poor	Tree in decline - small tree 6-7 meters height - very poor visual impact	5 - Very Low	0 to 5	Not Significant	5 - Very Poor	Remove	Poor Condition	Exempt height	5 to 10	2.13	4.2		Remove
62	*Eucalyptus albens* White Box	north side entrance rd off Heley	-35.130031	147.3506654	Endemic	Medium	12 to 20	0.74	Mature	3 - Fair	3- Fair	Young mature tree - considered amenity planting at site beside roadway. No hollows. Endemic species to site - condition only fair - leaf coverage and vigour only fair - was likely established with irrigation until recent 10 or so years.	3 - Medium	15 plus	Not Significant	3- Fair	Retain if possible	Sound tree suited to site		10 to 20	2.92	8.88		Remove
63	*Eucalyptus polyanthemos* Red Box	north side entrance rd off Heley	-35.13	147.350458	Aus Native	Small	8 to 12	0.74	Senescent	5 - Very Poor	5 - Very Poor	Tree in later stages of decline - canopy was lopped about 3 years ago as 70% of canopy had died - tree has 25mm epicormic shoots on some stems - tree in later stages of decline. Tree now only 9 m in height.	4 - Low	0 to 5	Not Significant	5 - Very Poor	Remove	Poor Condition		10 to 20	2.92	8.88		Remove
64	*Brachychiton populneus* (Kurrajong)	north side entrance rd off Heley	-35.129829	147.3507949	Aus Native	Small	8 to 12	0.53	Mature	2 - Good	2 - Good	Small tree about 9m height. Condition good - although somewhat supressed by larger trees nearby - some retention values based on condition - but can easily be replaced	3 - Medium	40 plus	Not Significant	2 - Good	Retain if possible	Sound tree suited to site		10 to 20	2.53	6.36		Remove
65	*Cupressus sempervirens 'stricta'*	north side entrance rd off Heley	-35.129763	147.3506911	Exotic	Medium	8 to 12	0.55	Mature	2 - Good	3- Fair	some branches commencing to 'fall out' - visual impact declining - could easily be replaced.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Retention not practicable		10 to 20	2.57	6.6		Remove
66	*Fraxinus oxycarpa* *Desert Ash*	north side entrance rd off Heley	-35.129706	147.350557	Exotic	Medium	8 to 12	0.35	Over Mature	4 - Poor	4 - Poor	tree in decline - height about 12m Exempt species	4 - Low	0 to 5	Not Significant	5 - Very Poor	Remove	Exempt species	Exempt species	5 to 10	2.13	4.2		Remove
67	*Eucalyptus cladocalyx* Sugar Gum	north side entrance rd off Heley	-35.129877	147.3503287	Aus Native	Medium	12 to 20	0.76	Over Mature	4 - Poor	3- Fair	Some basal decay north side - moderate risk - old bracket fungi present - central leader has failed at 8-9m bird chewing of union - several high risk defects in canopy - not suitable for close amenity situation.	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		50+	2.95	9.12		Remove
68	*Eucalyptus cladocalyx* Sugar Gum	north side entrance rd off Heley	-35.129805	147.3503581	Aus Native	Medium	12 to 20	0.69	Over Mature	4 - Poor	3- Fair	400mm stem failure at 7m - remaining canopy contains numerous defects high risk - recent limb failure 250mm. Not suitable for close amenity situation	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		50+	2.83	8.28		Remove
69	*Eucalyptus cladocalyx* Sugar Gum	north side entrance rd off Heley	-35.129722	147.3504077	Aus Native	Medium	12 to 20	0.76	Over Mature	4 - Poor	3- Fair	Stem hollow - 5 significant failures on stem greater than 300mm. Canopy contains numerous other high risk defects. Tree not suitable for retention	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		50+	2.95	9.12		Remove
70	*Brachychiton populneus* (Kurrajong)		-35.129407	147.3505129	Aus Native	Small	<8	0.38	Mature	2 - Good	3- Fair	Tree only 7m - height exempt by WWCC Tree condition has some retention values - however tree is highly isolated and would restrict development	3 - Medium	40 plus	Not Significant	2 - Good	Retain if possible	Sound tree suited to site	Exempt height	10 to 20	2.20	4.56		Remove
71	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.128275	147.350114	Exotic	Medium	8 to 12	0.85	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	3.09	10.2		Remove
72	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.12844	147.3501214	Exotic	Medium	8 to 12	0.9	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	3.17	10.8		Remove
73	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.128496	147.3501153	Exotic	Medium	8 to 12	0.8	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	3.01	9.6		Remove
74	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.128548	147.3501121	Exotic	Medium	8 to 12	0.55	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	2.57	6.6		Remove
75	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.128601	147.3500738	Exotic	Medium	8 to 12	0.9	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	3.17	10.8		Remove
76	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.128657	147.3500611	Exotic	Medium	8 to 12	0.8	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	3.01	9.6		Remove
77	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.128733	147.3500633	Exotic	Medium	8 to 12	0.75	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	2.93	9		Remove
78	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.128775	147.3500623	Exotic	Medium	8 to 12	0.75	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	2.93	9		Remove
79	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.128815	147.3500469	Exotic	Medium	8 to 12	0.8	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	3.01	9.6		Remove
80	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.12891	147.350027	Exotic	Medium	8 to 12	0.5	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	2.47	6		Remove
81	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.12894	147.3500321	Exotic	Medium	8 to 12	0.6	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	2.67	7.2		Remove
82	*Cupressus arizonica* Arizona cypress	Entrance rd off College ave east side	-35.128954	147.3500138	Exotic	Medium	8 to 12	0.4	Over Mature	4 - Poor	4 - Poor	Over mature tree - early stages of decline - limb failures and poor visual impacts.	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	2.25	4.8		Remove
83	*Corymbia citriodora* Lemon Scented Gum	Entrance rd off College ave east side	-35.128901	147.3499438	Aus Native	Medium	12 to 20	0.53	Mature	3 - Fair	3- Fair	Semi mature or smaller mature tree - heavy root zone impacts from parking - 14 branch failures over time to 180mm. Light dead wood to 150mm - recent large dead limb failure. Development has identified for retention Tree is only in fair condition - specific measures required to rejuvenate tree.	3 - Medium	15 plus	Not Significant	3- Fair	Retain	Sound tree suited to site		20+	2.53	6.36	Tree will require specific tree protection measure asap - including establishment of TPZ fence, mulching of root zone and application of at least one irrigation event of 4000 litres of water asap. Some canopy pruning to rectify branch failures would be beneficial - alleviation of soil compaction	Retain - Impacts to Manage
84	*Corymbia Maculata* Spotted Gum	Entrance rd off College ave east side	-35.129115	147.349923	Aus Native	Large	12 to 20	0.9	Mature	3 - Fair	3- Fair	Mature tree - development has identified tree for retention. Tree has sustained a very large necrotic zone on the stem system fro ground to 7m - cambium dieback and loss of bark - this was 4 years ago and tree has staged a notable recovery of callous tissue almost covering the old wound. This does not present as a structural defect. Tree has sustained 1 branch failure of 400mm - decay is present at this point. Dead wood in canopy - 4 defect noted to 150mm.	3 - Medium	15 plus	Not Significant	3- Fair	Retain	Sound tree suited to site		50+	3.17	10.8	Tree will require specific tree protection measure asap - including establishment of TPZ fence, mulching of root zone and application of at least one irrigation event of 6000 litres of water asap. Some canopy pruning to rectify branch failures would be beneficial	Retain - Impacts to Manage
85	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131435	147.348623	Aus Native	Medium	12 to 20	0.5	Mature	3 - Fair	3- Fair	Extensive earth works and trenching inside structural root zone - tree at risk of whole tree failure	3 - Medium	0	Not Significant	3- Fair	Remove	Condition & Safety		20+	2.47	6	Approved for removal under DA18/0175	Remove
86	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131438	147.348659	Aus Native	Medium	12 to 20	0.41	Mature	3 - Fair	3- Fair		3 - Medium	0	Not Significant	3- Fair	Retain if possible	Sound tree suited to site		20+	2.28	4.92	Approved for removal under DA18/0175	Remove
87	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131447	147.3487009	Aus Native	Medium	12 to 20	0.45	Mature	3 - Fair	3- Fair	Extensive earth works and trenching inside structural root zone - tree at risk of whole tree failure	3 - Medium	0	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.37	5.4	Approved for removal under DA18/0175	Remove

Tree No	Species	General Location	Lat	Lon	Species Origin	General Size	Height M	DBH (m)	Age Class	General Condition	Tree Vigour	Defects/Hazards/Issues Present Commentary on tree	Environ Rating	Expected Remaining Life	Significant Tree Status	Suggested Retention Value	Initial Recommendation for Planning	Primary Reason for Recommendation	Secondary Reason for Recommendation	Replacement Time Frame	SRZ Radius in m from centre of stem	TPZ Radius in m from stem	Other Comments	Proposed Development Impact Jan 2021
88	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131445	147.3487429	Aus Native	Medium	12 to 20	0.29	Mature	3 - Fair	3- Fair	Extensive earth works and trenching inside structural root zone both sides of tree - tree at risk of whole tree failure	3 - Medium	0	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	1.97	3.48	Approved for removal under DA18/0175	Remove
89	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131439	147.3487914	Aus Native	Medium	12 to 20	0.4	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment only fair.	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.25	4.8	Will require canopy reduction and dead wooding for retention	Not determined
90	*Eucalyptus albens* White Box	Fernleigh rd boundary	-35.131485	147.3488043	Endemic	Small	8 to 12	0.9	Dead	5 - Very Poor	3- Fair	Has been reduced to 8-9 meter stump - stump has numerous hollows but is commencing to break up - numerous failure points	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		0-5	3.17	10.8	TPZ of 3m would be sufficient due to reduced height and dead tree.	Not determined
91	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131454	147.3488657	Aus Native	Medium	12 to 20	0.54	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.55	6.48	Will require canopy reduction and dead wooding for retention	Not determined
92	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131457	147.3489087	Aus Native	Medium	12 to 20	0.59	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment only fair.	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.65	7.08	Will require canopy reduction and dead wooding for retention	Not determined
93	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131473	147.3489346	Aus Native	Medium	12 to 20	0.49	Mature	4 - Poor	3- Fair	lopped at 4m and 9m - canopy very unbalanced - epicormic attachment poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.45	5.88	Will require canopy reduction and dead wooding for retention	Not determined
94	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131476	147.3489705	Aus Native	Medium	12 to 20	0.29	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	1.97	3.48	Will require canopy reduction and dead wooding for retention	Not determined
95	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131475	147.3489999	Aus Native	Medium	12 to 20	0.39	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.23	4.68	Will require canopy reduction and dead wooding for retention	Not determined
96	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131478	147.3490399	Aus Native	Small	<8	0.15	Mature	4 - Poor	3- Fair	Sapling - supressed tree - not lopped	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Exempt height	Exempt height	5 to 10	1.50	1.8		Not determined
97	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131486	147.3490913	Aus Native	Medium	12 to 20	0.43	Mature	4 - Poor	3- Fair	Lopped for power line - epicormic attachment poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		10 to 20	2.32	5.16	Will require canopy reduction and dead wooding for retention	Not determined
98	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131486	147.3491352	Aus Native	Medium	12 to 20	0.67	Mature	4 - Poor	3- Fair	Lopped for power line - epicormic attachment poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.80	8.04	Will require canopy reduction and dead wooding for retention	Not determined
99	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131514	147.3491856	Aus Native	Medium	12 to 20	0.38	Mature	5 - Very Poor	3- Fair	Stem with significant decay at 1-2m - high risk of failure	3 - Medium	0 to 5	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		20+	2.20	4.56	Driveway off Fernleigh rd Tree would require removal on condition and safety	Remove
100	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131512	147.3492115	Aus Native	Medium	12 to 20	0.43	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment only fair.	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.32	5.16	Driveway off Fernleigh rd - retention not possible	Remove
101	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131521	147.3492899	Aus Native	Medium	12 to 20	0.47	Mature	5 - Very Poor	3- Fair	Stem with very significant decay at base - high risk of whole tree failure	3 - Medium	0 to 5	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.41	5.64	Driveway off Fernleigh rd Tree would require removal on condition and safety	Remove
102	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131545	147.3493273	Aus Native	Small	8 to 12	0.46	Dead	5 - Very Poor	5 - Very Poor	Tree dead for some time - appears stable in ground	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Retain if possible	Other		0-5	2.39	5.52	Moderate Environmental values	Not determined
103	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131545	147.3493673	Aus Native	Small	8 to 12	0.28	Mature	4 - Poor	5 - Very Poor	Small supressed tree	4 - Low	5 to 15	Not Significant	5 - Very Poor	Retain if possible	Positive values		10 to 20	1.94	3.36	Will require canopy reduction and dead wooding for retention	Not determined
104	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131543	147.3494052	Aus Native	Medium	12 to 20	0.66	Mature	3 - Fair	3- Fair	Tree lopped at 6m epicormic attachment poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.78	7.92	Will require canopy reduction and dead wooding for retention	Not determined
105	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131552	147.3494542	Aus Native	Medium	12 to 20	0.62	Mature	3 - Fair	3- Fair	Minor lopping only - epicormic attachment fair	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.71	7.44	Will require canopy reduction and dead wooding for retention	Not determined
106	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.13155	147.3495003	Aus Native	Medium	12 to 20	0.62	Over Mature	4 - Poor	3- Fair	Lopped at 8m for power line - recent large lateral failure 200mm decay present	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.71	7.44	Will require canopy reduction and dead wooding for retention	Not determined
107	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131552	147.3495513	Aus Native	Small	<8	0.15	Over Mature	4 - Poor	4 - Poor	Supressed sapling - some canopy dieback	4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Positive values	Exempt height	5 to 10	1.50	1.8		Not determined
108	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131568	147.349584	Aus Native	Medium	12 to 20	0.49	Over Mature	4 - Poor	3- Fair	Significant defect in stem at 2m - high risk failure point	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.45	5.88	Will require canopy reduction and dead wooding for retention	Not determined
109	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131583	147.3496304	Aus Native	Medium	12 to 20	0.63	Mature	4 - Poor	3- Fair	Lopped for power line - several 180mm diameter limb failures - one recent	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		20+	2.73	7.56	Will require canopy reduction and dead wooding for retention	Not determined
110	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131586	147.3496762	Aus Native	Medium	12 to 20	0.52	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.51	6.24	Will require canopy reduction and dead wooding for retention	Not determined
111	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.1316	147.3497127	Aus Native	Medium	12 to 20	0.54	Mature	4 - Poor	3- Fair	Lopped for power line - epicormic attachment poor recent limb failure 240mm - decay present	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		20+	2.55	6.48	Will require canopy reduction and dead wooding for retention	Not determined
112	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131622	147.3497381	Aus Native	Medium	12 to 20	0.48	Mature	4 - Poor	3- Fair	Lopped for power line - recent main stem failure at 4m - 260mm. Hanging in canopy	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.43	5.76	Will require canopy reduction and dead wooding for retention	Not determined
113	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131596	147.3497853	Aus Native	Medium	12 to 20	0.53	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.53	6.36	Will require canopy reduction and dead wooding for retention	Not determined
114	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131629	147.3498113	Aus Native	Small	<8	0.23	Mature	4 - Poor	4 - Poor		4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		5 to 10	1.79	2.76		Not determined
115	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131605	147.3498647	Aus Native	Medium	12 to 20	0.51	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.49	6.12	Will require canopy reduction and dead wooding for retention	Not determined
116	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131623	147.3498995	Aus Native	Medium	12 to 20	0.6	Mature	4 - Poor	3- Fair	Lopped for power line - epicormic attachment poor - decay into sub leader structure	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove Priority	Condition & Safety		20+	2.67	7.2	Will require canopy reduction and dead wooding for retention	Not determined
117	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131649	147.3499229	Aus Native	Medium	12 to 20	0.39	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment fair	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		10 to 20	2.23	4.68	Will require canopy reduction and dead wooding for retention	Not determined
118	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.13163	147.349957	Aus Native	Medium	12 to 20	0.39	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment fair	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		10 to 20	2.23	4.68	Will require canopy reduction and dead wooding for retention	Not determined
119	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131641	147.3499915	Aus Native	Medium	12 to 20	0.58	Mature	4 - Poor	3- Fair	Lopped for power line - basal decay significant - whole tree failure likely	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.63	6.96	Will require canopy reduction and dead wooding for retention	Not determined
120	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131635	147.350026	Aus Native	Medium	12 to 20	0.44	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment fair	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		10 to 20	2.34	5.28	Will require canopy reduction and dead wooding for retention	Not determined
121	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131661	147.3500481	Aus Native	Medium	12 to 20	0.36	Mature	3 - Fair	3- Fair	Lopped for power line - epicormic attachment fair	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		10 to 20	2.15	4.32	Will require canopy reduction and dead wooding for retention	Not determined
122	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131658	147.350092	Aus Native	Medium	12 to 20	0.38	Mature	4 - Poor	3- Fair	Lopped at 6m for power line - epicormic attachment very poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove Priority	Condition & Safety		10 to 20	2.20	4.56	Will require canopy reduction and dead wooding for retention	Not determined

Tree No	Species	General Location	Lat	Lon	Species Origin	General Size	Height M	DBH (m)	Age Class	General Condition	Tree Vigour	Defects/Hazards/Issues Present Commentary on tree	Environ Rating	Expected Remaining Life	Significant Tree Status	Suggested Retention Value	Initial Recommendation for Planning	Primary Reason for Recommendation	Secondary Reason for Recommendation	Replacement Time Frame	SRZ Radius in m from centre of stem	TPZ Radius in m from stem	Other Comments	Proposed Development Impact Jan 2021
123	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131662	147.350148	Aus Native	Medium	12 to 20	0.5	Mature	3 - Fair	3- Fair	Lopped at 9m for power line - epicormic attachment small	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.47	6	Will require canopy reduction and dead wooding for retention	Not determined
124	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131681	147.3501712	Aus Native	Medium	12 to 20	0.56	Mature	3 - Fair	3- Fair	Lopped at 9m for power line - epicormic attachment small	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.59	6.72	Will require canopy reduction and dead wooding for retention	Not determined
125	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131697	147.3502144	Aus Native	Small	<8	0.15	Mature	4 - Poor	4 - Poor	small supressed tree - light canopy dieback	4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Exempt height		5 to 10	1.50	1.8		Not determined
126	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131685	147.3502691	Aus Native	Medium	12 to 20	0.58	Over Mature	4 - Poor	4 - Poor	Stem badly decayed at 1.6m - decay extends up into bifurcated leader structure at 2.2m - bracket fungi - very high risk of failure	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.63	6.96	Will require canopy reduction and dead wooding for retention	Not determined
127	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131696	147.3503251	Aus Native	Medium	12 to 20	0.48	Mature	4 - Poor	3- Fair	Lopped at 8m for power line - decay in stem at 1.6m - moderate risk	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.43	5.76	Will require canopy reduction and dead wooding for retention	Not determined
128	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.131693	147.3503665	Aus Native	Medium	12 to 20	0.52	Mature	4 - Poor	3- Fair	Lopped at various heights over years - stem with significant decay at 1.7m - epicormic attachment very poor	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove Priority	Condition & Safety		20+	2.51	6.24		Not determined
129	*Eucalyptus cladocalyx* Sugar Gum	Cluster - corner of Fernleigh and Heley	-35.131599	147.3504152	Aus Native	Small	<8	0.17	Over Mature	4 - Poor	3- Fair	Tree adjacent to light. Stem has failed at 3m - remaining stem high risk	4 - Low	0	Not Significant	5 - Very Poor	Remove	Condition & Safety	Exempt height	5 to 10	1.57	2.04		Remove
130	*Eucalyptus cladocalyx* Sugar Gum	Cluster - corner of Fernleigh and Heley	-35.131563	147.3503528	Aus Native	Medium	12 to 20	0.2	Mature	3 - Fair	3- Fair	Minor dead wood	3 - Medium	5 to 15	Not Significant	3- Fair	Retain	Positive values		5 to 10	1.68	2.4		Remove
131	*Eucalyptus cladocalyx* Sugar Gum	Cluster - corner of Fernleigh and Heley	-35.131528	147.3502838	Aus Native	Medium	12 to 20	0.34	Mature	3 - Fair	3- Fair	Minor dead wood	3 - Medium	5 to 15	Not Significant	3- Fair	Retain	Positive values		5 to 10	2.10	4.08		Remove
132	*Eucalyptus cladocalyx* Sugar Gum	Cluster - corner of Fernleigh and Heley	-35.131519	147.3503572	Aus Native	Medium	12 to 20	0.52	Mature	5 - Very Poor	4 - Poor	Stem wit significant decay 2.1 to 3m. Open hollows and bracket fungi present - high risk of stem failure	3 - Medium	0 to 5	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		20+	2.51	6.24		Remove
133	*Eucalyptus cladocalyx* Sugar Gum	Cluster - corner of Fernleigh and Heley	-35.131452	147.350315	Aus Native	Medium	12 to 20	0.5	Mature	4 - Poor	3- Fair	stem sound - canopy sustained 10 failures from 75 to 160mm - further defects in canopy 180mm	3 - Medium	0 to 5	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.47	6		Remove
134	*Eucalyptus cladocalyx* Sugar Gum	Cluster - corner of Fernleigh and Heley	-35.131461	147.3503831	Aus Native	Medium	12 to 20	0.5	Mature	3 - Fair	3- Fair	minor dead wood only	3 - Medium	5 to 15	Not Significant	3- Fair	Retain if possible	Positive values		20+	2.47	6		Remove
135	*Eucalyptus cladocalyx* Sugar Gum	Cluster - corner of Fernleigh and Heley	-35.131483	147.3504415	Aus Native	Medium	12 to 20	0.26	Mature	3 - Fair	3- Fair	minor dead wood only	3 - Medium	5 to 15	Not Significant	3- Fair	Retain	Positive values		5 to 10	1.88	3.12		Remove
136	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley - south tree	-35.13168	147.3505479	Aus Native	Medium	12 to 20	0.42	Mature	3 - Fair	3- Fair		3 - Medium	5 to 15	Not Significant	3- Fair	Retain	Positive values		5 to 10	2.30	5.04	Will require canopy reduction and dead wooding for retention	Not determined
137	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.13164	147.35055	Aus Native	Medium	12 to 20	0.37	Mature	3 - Fair	3- Fair	stem with moderate decay at 1.6m - moderate risk of failure	3 - Medium	5 to 15	Not Significant	3- Fair	Retain if possible	Positive values		5 to 10	2.18	4.44	Will require canopy reduction and dead wooding for retention	Not determined
138	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131608	147.3505682	Aus Native	Medium	12 to 20	0.4	Over Mature	5 - Very Poor	4 - Poor	stems bifurcated at ground - north stem had failed and hanging in tree 139. Remaining stem also high risk	3 - Medium	0	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		10 to 20	2.25	4.8		Not determined
139	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131574	147.3505629	Aus Native	Medium	12 to 20	0.48	Over Mature	4 - Poor	3- Fair	Stem badly bifurcated with significant decay at 3m - bracket fungi present - high risk of failure	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		5 to 10	2.43	5.76	Will require canopy reduction and dead wooding for retention	Not determined
140	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131534	147.3505751	Aus Native	Medium	12 to 20	0.42	Mature	2 - Good	3- Fair		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		5 to 10	2.30	5.04	Will require canopy reduction and dead wooding for retention	Not determined
141	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131491	147.3505755	Aus Native	Medium	12 to 20	0.33	Over Mature	4 - Poor	5 - Very Poor	Stem with minor lean - low risk Tree in mid stages of decline	4 - Low	15 plus	Not Significant	3- Fair	Remove	Poor Condition		5 to 10	2.08	3.96	Will require canopy reduction and dead wooding for retention	Not determined
142	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131464	147.3505871	Aus Native	Large	12 to 20	0.45	Mature	4 - Poor	3- Fair	Tree with 2 stems - 50% of stem is decayed at ground - high risk of whole tree failure	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		5 to 10	2.37	5.4	Will require canopy reduction and dead wooding for retention	Not determined
143	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131427	147.3505925	Aus Native	Medium	12 to 20	0.33	Mature	2 - Good	3- Fair		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		5 to 10	2.08	3.96	Will require canopy reduction and dead wooding for retention	Not determined
144	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131371	147.3506101	Aus Native	Medium	12 to 20	0.45	Mature	3 - Fair	4 - Poor		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		5 to 10	2.37	5.4	Will require canopy reduction and dead wooding for retention	Not determined
145	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131334	147.3506262	Aus Native	Medium	12 to 20	0.49	Mature	2 - Good	3- Fair		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		10 to 20	2.45	5.88	Will require canopy reduction and dead wooding for retention	Not determined
146	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131294	147.3506381	Aus Native	Medium	12 to 20	0.68	Mature	3 - Fair	3- Fair	Small defect in stem at 1.3m - low risk - defect in canopy over footpath	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain	Positive values		20+	2.81	8.16	Will require canopy reduction and dead wooding for retention	Not determined
147	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131265	147.3506048	Aus Native	Medium	12 to 20	0.44	Mature	2 - Good	3- Fair		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		5 to 10	2.34	5.28	Will require canopy reduction and dead wooding for retention	Not determined
148	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.13122	147.3506217	Aus Native	Medium	12 to 20	0.36	Mature	3 - Fair	3- Fair	Bifurcation defect in stem at 3m. Remaining stem high risk of failure - central leader has failed at 5m	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		5 to 10	2.15	4.32	Will require canopy reduction and dead wooding for retention	Not determined
149	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131175	147.3506325	Aus Native	Medium	12 to 20	0.5	Mature	2 - Good	3- Fair		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		5 to 10	2.47	6	Will require canopy reduction and dead wooding for retention	Not determined
150	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131128	147.3506464	Aus Native	Medium	12 to 20	0.43	Mature	3 - Fair	3- Fair	defects in canopy moderate to high risk	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		5 to 10	2.32	5.16	Will require canopy reduction and dead wooding for retention	Not determined
151	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131074	147.3506636	Aus Native	Medium	12 to 20	0.58	Mature	2 - Good	3- Fair		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		20+	2.63	6.96	Will require canopy reduction and dead wooding for retention	Not determined
152	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131035	147.3506535	Aus Native	Medium	12 to 20	0.44	Over Mature	4 - Poor	3- Fair	Stem sustained large failure at 3-4m - stem with very extensive decay - epicormic growth on decayed stem over footpath - high risk.	3 - Medium	0	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		20+	2.34	5.28		Not determined
153	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.131006	147.3506746	Aus Native	Small	8 to 12	0.37	Mature	4 - Poor	3- Fair	Large failure in stem at 3-4m. Stem has significant basal decay - high risk of further failure	3 - Medium	0	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		20+	2.18	4.44		Not determined
154	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130964	147.3506851	Aus Native	Medium	12 to 20	0.44	Over Mature	4 - Poor	3- Fair	Lower stem sound. Canopy with 3 limb failures - dead wood to 150mm - dieback in epicormic shoots - tree with poor longer term expectancy.	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Poor Condition		5 to 10	2.34	5.28	Will require canopy reduction and dead wooding for retention	Not determined
155	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130943	147.3507011	Aus Native	Large	12 to 20	0.5	Mature	4 - Poor	3- Fair	Lower stem sound - canopy has sustained 5 limb failures to 180mm - moderate risk of further limb failures	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.47	6	Will require canopy reduction and dead wooding for retention	Not determined
156	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130914	147.3506789	Aus Native	Small	8 to 12	0.28	Over Mature	4 - Poor	4 - Poor	Stem failure at 2.5m some time ago - remaining stem has failed recently and is hanging in neighbouring tree - tree can not be pruned	4 - Low	0	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		20+	1.94	3.36		Not determined
157	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130892	147.350701	Aus Native	Medium	12 to 20	0.28	Mature	3 - Fair	3- Fair		3 - Medium	5 to 15	Not Significant	3- Fair	Retain	Positive values		5 to 10	1.94	3.36	Will require canopy reduction and dead wooding for retention	Not determined
158	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130855	147.3506989	Aus Native	Medium	12 to 20	0.51	Mature	3 - Fair	3- Fair		3 - Medium	5 to 15	Not Significant	3- Fair	Retain	Positive values		20+	2.49	6.12	Will require canopy reduction and dead wooding for retention	Not determined

Tree No	Species	General Location	Lat	Lon	Species Origin	General Size	Height M	DBH (m)	Age Class	General Condition	Tree Vigour	Defects/Hazards/Issues Present Commentary on tree	Environ Rating	Expected Remaining Life	Significant Tree Status	Suggested Retention Value	Initial Recommendation for Planning	Primary Reason for Recommendation	Secondary Reason for Recommendation	Replacement Time Frame	SRZ Radius in m from centre of stem	TPZ Radius in m from stem	Other Comments	Proposed Development Impact Jan 2021
159	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130806	147.350715	Aus Native	Large	12 to 20	0.76	Over Mature	4 - Poor	4 - Poor	failed limb on stem with cavity at 4m - moderate risk of further failure - bird chewing in branch unions present - moderate dead wood.	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.95	9.12	Will require canopy reduction and dead wooding for retention	Not determined
160	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130763	147.3507252	Aus Native	Large	12 to 20	0.58	Over Mature	4 - Poor	4 - Poor	Decay in stem and west lateral at 1.7m - further decay at 2 to 2.4m - bifurcation defect in stem at 6m - high risk defects.	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.63	6.96	Will require canopy reduction and dead wooding for retention	Not determined
161	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.13072	147.3507372	Aus Native	Large	12 to 20	0.48	Mature	3 - Fair	3- Fair	stem sound - 4 failed limbs to 180mm	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.43	5.76	Will require canopy reduction and dead wooding for retention	Not determined
162	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130666	147.3507468	Aus Native	Medium	12 to 20	0.46	Mature	3 - Fair	3- Fair	Stem sound - 2 branch failures to 150mm - other defects in canopy moderate risk	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.39	5.52	Will require canopy reduction and dead wooding for retention	Not determined
163	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130649	147.3507817	Aus Native	Medium	12 to 20	0.5	Mature	3 - Fair	3- Fair	Several limb failures noted - extended lateral to west - moderate risk of failure	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.47	6	Will require canopy reduction and dead wooding for retention	Not determined
164	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.13061	147.3507719	Aus Native	Medium	12 to 20	0.62	Mature	3 - Fair	3- Fair	Stem sound - 1 limb failure 180mm - further moderate to high-risk defects noted in canopy	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.71	7.44	Will require canopy reduction and dead wooding for retention	Not determined
165	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130581	147.3507884	Aus Native	Medium	12 to 20	0.63	Over Mature	4 - Poor	3- Fair	Stem with significant decay at 1.6m - stem union immediately above decay - lateral over roadway with decay - bracket fungi present - high risk of failure	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.73	7.56	Will require canopy reduction and dead wooding for retention	Not determined
166	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130556	147.3508103	Aus Native	Large	12 to 20	0.67	Mature	3 - Fair	3- Fair	one limb failure 180mm	3 - Medium	5 to 15	Not Significant	3- Fair	Retain	Positive values		20+	2.80	8.04	Will require canopy reduction and dead wooding for retention	Not determined
167	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130526	147.3507902	Aus Native	Large	12 to 20	0.52	Over Mature	4 - Poor	4 - Poor	Stem with very significant basal decay - 50% of stem circumference - bracket fungi present.	3 - Medium	0	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.51	6.24		Not determined
168	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130494	147.3508007	Aus Native	Large	12 to 20	0.45	Mature	4 - Poor	3- Fair	Stem failure at 1.5m - cavity present with some reaction wood around failure - moderate to high risk of stem failure again.	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.37	5.4	Will require canopy reduction and dead wooding for retention	Not determined
169	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130465	147.3508142	Aus Native	Large	12 to 20	0.5	Over Mature	4 - Poor	4 - Poor	Stem failure at 1.5m - significant decay in leader over footpath - sounding indicated at least 60% decay in circumference - likely 20% sound holding wood - high risk.	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.47	6	Will require canopy reduction and dead wooding for retention	Not determined
170	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130427	147.3508172	Aus Native	Medium	12 to 20	0.52	Over Mature	4 - Poor	3- Fair	Significant basal decay sound indicated less than 20% sound holding wood - tall upright tree - no lateral branching to prune back to - would have to be lopped.	3 - Medium	0	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.51	6.24		Not determined
171	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130381	147.3508251	Aus Native	Large	12 to 20	0.64	Mature	3 - Fair	3- Fair	Stem sound - dead wood to 150mm - 4 failed limbs to 150mm	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.74	7.68	Will require canopy reduction and dead wooding for retention	Not determined
172	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.13034	147.3508303	Aus Native	Large	12 to 20	0.57	Mature	3 - Fair	3- Fair		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		20+	2.61	6.84	Will require canopy reduction and dead wooding for retention	Not determined
173	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130305	147.3508315	Aus Native	Medium	12 to 20	0.56	Mature	3 - Fair	3- Fair		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		20+	2.59	6.72	Will require canopy reduction and dead wooding for retention	Not determined
174	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130275	147.3508389	Aus Native	Large	12 to 20	0.57	Mature	3 - Fair	3- Fair	Stem bifurcation defect at 1.5m - moderate risk. 6 failed limbs to 100mm. Bifurcated sub leader defect at 6m	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.61	6.84	Will require canopy reduction and dead wooding for retention	Not determined
175	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130242	147.3508409	Aus Native	Medium	12 to 20	0.41	Mature	3 - Fair	3- Fair	stem appears sound - slight lean to north - low risk. Bifurcation defect in leader at 2m over footpath moderate risk	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.28	4.92	Will require canopy reduction and dead wooding for retention	Not determined
176	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130212	147.3508679	Aus Native	Medium	12 to 20	0.46	Over Mature	4 - Poor	4 - Poor	Stem has failed leader and cavity at 2m - high risk of further failure - remaining 12m of canopy attached of decayed leader at failure point - high risk. Can not be pruned.	3 - Medium	0	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		20+	2.39	5.52		Not determined
177	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130193	147.3508791	Aus Native	Large	12 to 20	0.54	Over Mature	4 - Poor	4 - Poor	Stem failure at 4-5m - remaining structure 350mm high risk across entrance road.	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove Priority	Condition & Safety		20+	2.55	6.48	Will require canopy reduction and dead wooding for retention	Not determined
178	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Fernleigh to Entrance rd	-35.130161	147.3508698	Aus Native	Medium	12 to 20	0.45	Mature	3 - Fair	3- Fair	Tree had bifurcated leaders - north leader has been removed - tree now lower risk.	3 - Medium	5 to 15	Not Significant	3- Fair	Retain	Positive values		20+	2.37	5.4	Will require canopy reduction and dead wooding for retention	Not determined
179	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.130067	147.3508921	Aus Native	Small	8 to 12	0.35	Mature	4 - Poor	3- Fair	tree with noted lean over entrance road - moderate risk	4 - Low	5 to 15	Not Significant	4 - Poor	Retain	Positive values		5 to 10	2.13	4.2	Will require canopy reduction and dead wooding for retention	Not determined
180	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.13001	147.3509118	Aus Native	Medium	12 to 20	0.4	Mature	3 - Fair	3- Fair		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		20+	2.25	4.8		Not determined
181	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129969	147.3509231	Aus Native	Large	12 to 20	0.51	Over Mature	5 - Very Poor	4 - Poor	Stem had defect at 5m - recent stem failure at this point - very significant decay present - remaining stem extreme risk of further failure. Hollow formed	3 - Medium	0	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		20+	2.49	6.12		Not determined
182	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129928	147.3509253	Aus Native	Large	20+	0.56	Mature	3 - Fair	2 - Good	one limb failure 150mm	3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		20+	2.59	6.72	Will require canopy reduction and dead wooding for retention	Not determined
183	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129883	147.3509256	Aus Native	Large	20+	0.61	Mature	3 - Fair	3- Fair	3 limb failure 150mm	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain	Positive values		20+	2.69	7.32	Will require canopy reduction and dead wooding for retention	Not determined
184	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129836	147.3509471	Aus Native	Large	20+	0.66	Mature	3 - Fair	2 - Good	1 limb failure 200mm	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain	Positive values		20+	2.78	7.92	Will require canopy reduction and dead wooding for retention	Not determined
185	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129789	147.350951	Aus Native	Medium	12 to 20	0.72	Mature	3 - Fair	2 - Good		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		20+	2.88	8.64	Will require canopy reduction and dead wooding for retention	Not determined
186	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129756	147.3509447	Aus Native	Medium	12 to 20	0.43	Dead	5 - Very Poor	5 - Very Poor	leans to north and footpath - 20 degree - decay in base of stem	3 - Medium	0	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.32	5.16	Reduce limbs to 100mm diameter.	Not determined
187	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129721	147.3509668	Aus Native	Large	12 to 20	0.8	Mature	3 - Fair	3- Fair	dead wood and rubbing branches	3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		50+	3.01	9.6	Will require canopy reduction and dead wooding for retention	Not determined
188	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129678	147.3509428	Aus Native	Large	12 to 20	0.59	Over Mature	4 - Poor	3- Fair	Lopped at 5m - epicormic growth about 17m over footpath - dead wood present - 2 150mm limb failures	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.65	7.08	Will require canopy reduction and dead wooding for retention	Not determined
189	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129642	147.3509688	Aus Native	Small	<8	0.31	Mature	3 - Fair	4 - Poor	small tree - 1 failed limb 150mm	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Exempt height		5 to 10	2.02	3.72	Will require canopy reduction and dead wooding for retention	Not determined
190	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129592	147.3509861	Aus Native	Medium	12 to 20	0.5	Mature	3 - Fair	3- Fair	stem sound - dieback in canopy - low risk defect at 5m	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.47	6	Will require canopy reduction and dead wooding for retention	Not determined

Tree No	Species	General Location	Lat	Lon	Species Origin	General Size	Height M	DBH (m)	Age Class	General Condition	Tree Vigour	Defects/Hazards/Issues Present Commentary on tree	Environ Rating	Expected Remaining Life	Significant Tree Status	Suggested Retention Value	Initial Recommendation for Planning	Primary Reason for Recommendation	Secondary Reason for Recommendation	Replacement Time Frame	SRZ Radius in m from centre of stem	TPZ Radius in m from stem	Other Comments	Proposed Development Impact Jan 2021
191	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129528	147.3510087	Aus Native	Large	12 to 20	0.4	Mature	3 - Fair	4 - Poor		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		10 to 20	2.25	4.8	Will require canopy reduction and dead wooding for retention	Not determined
192	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.12949	147.3510165	Aus Native	Large	12 to 20	0.44	Over Mature	4 - Poor	4 - Poor	Stem failure at 3m - 200mm and again at 7m - central leader high risk of further failure- tree can not be pruned to retain	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		10 to 20	2.34	5.28	Will require canopy reduction and dead wooding for retention	Not determined
193	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129442	147.3510175	Aus Native	Large	12 to 20	0.7	Mature	4 - Poor	4 - Poor	Tree now with 15 degree lean to north - heaving of soil on south side - likely high risk of whole tree failure.	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		20+	2.85	8.4	Will require canopy reduction and dead wooding for retention	Not determined
194	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129406	147.3510333	Aus Native	Small	<8	0.28	Mature	4 - Poor	4 - Poor	small supressed tree - only 6m in height.	4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Exempt height	Exempt height	5 to 10	1.94	3.36		Not determined
195	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129328	147.351048	Aus Native	Medium	12 to 20	0.51	Mature	3 - Fair	2 - Good		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		20+	2.49	6.12	Will require canopy reduction and dead wooding for retention	Not determined
196	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129293	147.3510298	Aus Native	Medium	12 to 20	0.53	Mature	3 - Fair	3- Fair	small necrotic zone at stem base - low risk - 6 dead branches	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain	Positive values		20+	2.53	6.36	Will require canopy reduction and dead wooding for retention	Not determined
197	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129262	147.3510468	Aus Native	Medium	12 to 20	0.41	Mature	3 - Fair	3- Fair	4 small branch failures	3 - Medium	5 to 15	Not Significant	3- Fair	Retain	Positive values		10 to 20	2.28	4.92	Will require canopy reduction and dead wooding for retention	Not determined
198	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.12922	147.3510514	Aus Native	Large	12 to 20	0.68	Mature	3 - Fair	3- Fair	cavity in east leader at 6m - moderate risk	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.81	8.16	Will require canopy reduction and dead wooding for retention	Not determined
199	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129186	147.351029	Aus Native	Medium	12 to 20	0.65	Mature	2 - Good	2 - Good		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		20+	2.76	7.8	Will require canopy reduction and dead wooding for retention	Not determined
200	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129163	147.3510709	Aus Native	Small	<8	0.2	Senescent	4 - Poor	4 - Poor	small supressed tree - only 5m in height	4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Exempt height	Exempt height	5 to 10	1.68	2.4		Not determined
201	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129128	147.3510464	Aus Native	Small	8 to 12	0.32	Over Mature	4 - Poor	4 - Poor	tree 9m height. Die back in canopy - 4 dead branches	4 - Low	5 to 15	Not Significant	5 - Very Poor	Remove	Poor Condition		10 to 20	2.05	3.84		Not determined
202	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129099	147.3510865	Aus Native	Medium	12 to 20	0.62	Mature	3 - Fair	3- Fair	defect in lateral to west at 2m - moderate risk	3 - Medium	5 to 15	Not Significant	3- Fair	Retain	Positive values		20+	2.71	7.44	Will require canopy reduction and dead wooding for retention	Not determined
203	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.129024	147.3510941	Aus Native	Large	12 to 20	0.52	Mature	3 - Fair	3- Fair	light dead wood	3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		20+	2.51	6.24	Will require canopy reduction and dead wooding for retention	Not determined
204	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128946	147.3511068	Aus Native	Medium	12 to 20	0.43	Over Mature	4 - Poor	4 - Poor	Stem failures at 1.8m and 2.2m stem with significant cavity - 4 failures in canopy - 2 further defects noted. Cambium dieback in stem 20% of circumference.	3 - Medium	0 to 5	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.32	5.16		Not determined
205	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128873	147.3511227	Aus Native	Medium	12 to 20	0.41	Mature	2 - Good	2 - Good		3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		10 to 20	2.28	4.92	Will require canopy reduction and dead wooding for retention	Not determined
206	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128837	147.3511251	Aus Native	Medium	12 to 20	0.51	Mature	3 - Fair	3- Fair	minor decay in stem at 6m - low risk	3 - Medium	15 plus	Not Significant	3- Fair	Retain	Positive values		20+	2.49	6.12	Will require canopy reduction and dead wooding for retention	Not determined
207	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.1288	147.3511326	Aus Native	Medium	12 to 20	0.41	Mature	3 - Fair	3- Fair	defect in stem/lateral at 5m - 150mm. Noted dead wood. Lateral over fence with moderate risk defect.	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		10 to 20	2.28	4.92	Will require canopy reduction and dead wooding for retention	Not determined
208	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128761	147.3511454	Aus Native	Medium	12 to 20	0.65	Mature	3 - Fair	3- Fair	decayed lateral in sub leader on footpath side - noted dead wood - 1 limb failure 150mm	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.76	7.8	Will require canopy reduction and dead wooding for retention	Not determined
209	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128725	147.351157	Aus Native	Medium	12 to 20	0.5	Over Mature	4 - Poor	3- Fair	2 decayed laterals over footpath at 5m -	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		20+	2.47	6	Will require canopy reduction and dead wooding for retention	Not determined
210	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128693	147.3511711	Aus Native	Medium	12 to 20	0.47	Over Mature	4 - Poor	4 - Poor	decay in stem at ground - bracket fungi present - moderate risk of whole tree failure. Lateral at 1.5m hollow with decay - lopped lateral over footpath noted dead wood.	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		10 to 20	2.41	5.64	Will require canopy reduction and dead wooding for retention	Not determined
211	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128668	147.3512105	Aus Native	Large	12 to 20	0.65	Over Mature	4 - Poor	3- Fair	Bifurcated stems - low risk of failure east leader - 2 lopped laterals - epicormic growth 150mm - fair attachment. West Leader 200mm failure at 6m - remaining portion high risk - recent limb failure.	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Condition & Safety		20+	2.76	7.8	Will require canopy reduction and dead wooding for retention	Not determined
212	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128636	147.3511953	Aus Native	Medium	12 to 20	0.44	Mature	3 - Fair	3- Fair	stem has decay at 2m - moderate risk of failure - noted dead wood.	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		10 to 20	2.34	5.28	Will require canopy reduction and dead wooding for retention	Not determined
213	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128602	147.3512011	Aus Native	Medium	12 to 20	0.44	Mature	3 - Fair	3- Fair	defect in sub leader over footpath at 8m - sub leader at 6m defect over footpath	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive values		10 to 20	2.34	5.28	Will require canopy reduction and dead wooding for retention	Not determined
214	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.12851	147.3512135	Aus Native	Medium	12 to 20	0.43	Over Mature	4 - Poor	4 - Poor	stem significant decay at 6m to 10m. Moderate risk of failure - noted dead wood - upper canopy dying back	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove	Poor Condition		10 to 20	2.32	5.16	Will require canopy reduction and dead wooding for retention	Not determined
215	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128473	147.3512271	Aus Native	Medium	12 to 20	0.51	Mature	3 - Fair	3- Fair	Defect in lateral at 3.5m over footpath - defect in central leader at 10m	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Condition & Safety		20+	2.49	6.12	Will require canopy reduction and dead wooding for retention	Not determined
216	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128425	147.3512429	Aus Native	Medium	12 to 20	0.33	Over Mature	4 - Poor	4 - Poor	dieback in canopy - dead wood notable - small epicormic shoots on laterals - tree in early decline.	3 - Medium	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition		10 to 20	2.08	3.96	Will require canopy reduction and dead wooding for retention	Not determined
217	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Heley from Entrance rd to Charleville	-35.128389	147.3512431	Aus Native	Medium	12 to 20	0.66	Mature	3 - Fair	3- Fair	slight lean to north - 1 branch failure 200mm - dead wood	3 - Medium	5 to 15	Not Significant	4 - Poor	Retain if possible	Positive amenity values		20+	2.78	7.92	Will require canopy reduction and dead wooding for retention	Not determined
218	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Charleville	-35.128402	147.3511589	Aus Native	Large	20+	0.51	Mature	3 - Fair	3- Fair	Tall upright tree -27m. Failed lateral 150mm. No lower laterals to prune back to. Isolated tree - others around have been removed. Tree will have to be retained as is - or removed.	3 - Medium	0 to 5	Not Significant	4 - Poor	Retain if possible	Positive amenity values		20+	2.49	6.12	1. Initial recommendation is removal. 2. Tree would have to be lopped if canopy is to be reduced - suggest that removal is a better option.	Not determined
219	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Charleville	-35.12838	147.3510166	Aus Native	Large	20+	0.61	Over Mature	4 - Poor	4 - Poor	Tall upright tree to 24m. Internal cavity in lower stem - likely lower risk. 3 failed lateral branches to 150mm. Dead branches present. Mistletoe in canopy - canopy coverage poor - vitality only fair. Defect in stem unions at 12m -200mm defects - high risk.	3 - Medium	0 to 5	Not Significant	5 - Very Poor	Remove	Condition & Safety		50+	2.69	7.32	1. Initial recommendation is removal - based on poor condition and there are only 5 trees on Charleville side boundary. 2. If retained then canopy reduction required.	Not determined

Tree No	Species	General Location	Lat	Lon	Species Origin	General Size	Height M	DBH (m)	Age Class	General Condition	Tree Vigour	Defects/Hazards/Issues Present Commentary on tree	Environ Rating	Expected Remaining Life	Significant Tree Status	Suggested Retention Value	Initial Recommendation for Planning	Primary Reason for Recommendation	Secondary Reason for Recommendation	Replacement Time Frame	SRZ Radius in m from centre of stem	TPZ Radius in m from stem	Other Comments	Proposed Development Impact Jan 2021
220	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Charleville	-35.128365	147.3509413	Aus Native	Large	20+	0.59	Over Mature	4 - Poor	4 - Poor	Basal decay in stem - 25% of circumference. Bracket fungi present. Moderate risk of whole tree failure. Necrotic zone in stem form 8m - to 17m. High risk of whole stem failure.	3 - Medium	5 to 15	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety		20+	2.65	7.08	Will require canopy reduction and dead wooding for retention	Not determined
221	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Charleville	-35.128349	147.3508463	Aus Native	Large	20+	0.71	Mature	3 - Fair	3- Fair	Rubbing branches and dead wood noted - 2 defects noted in canopy - moderate risk.	3 - Medium	5 to 15	Not Significant	3- Fair	Retain if possible	Positive values		50+	2.87	8.52	Will require canopy reduction and dead wooding for retention	Not determined
222	*Eucalyptus cladocalyx* Sugar Gum	Boundary on Charleville	-35.12832	147.3507478	Aus Native	Large	20+	0.73	Mature	4 - Poor	3- Fair	Lower stem sound. Slight lean to footpath. Bird chewing in unions in 4 locations. Defect in stem union at 10m - high risk - pruning of canopy can not achieve acceptable reduction without lopping.	3 - Medium	0 to 5	Not Significant	5 - Very Poor	Remove	Condition & Safety		50+	2.90	8.76		Not determined
224	*Corymbia citriodora* Lemon Scented Gum		-35.129981	147.3495894	Aus Native	Medium	8 to 12	0.41	Semi Mature	3 - Fair	3- Fair	Tree with reasonable form - some suppression from tree 225 - larger tree. No specific defects - does have some retention value based on form and condition	3 - Medium	40 plus	Not Significant	2 - Good	Retain	Sound tree suited to site	Positive values	20+	2.28	4.92		Remove
225	*Corymbia citriodora* Lemon Scented Gum	Entrance road off Hely	-35.129948	147.3494448	Aus Native	Medium	12 to 20	0.75	Mature	2 - Good	1 - Excellent	Tree identified by development for retention Tree has strong visual impacts and in good condition and form. Likely a significant tree.	3 - Medium	40 plus	Significant	1 - Excellent	Retain Priority	Significant Tree	Sound tree suited to sit	50+	2.93	9	Tree will require notable TPZ requirements and some canopy lifting.	Retain - Impacts to Manage
235	*Cedrus deodara,* (Himalayan cedar)	On Joining Property - School	-35.129736	147.348889	Exotic	Medium	12 to 20	0.6	Mature	2 - Good	2 - Good	On School property - potential for development impacts.	4 - Low	40 plus	Not Significant	1 - Excellent	Retain Priority	Other		20+	2.67	7.2	Tree on school boundary - will require specific protection measures from development.	Retain - Impacts to Manage
236	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.13146	147.34859	Aus Native	Medium	12 to 20	0.58	Mature	2 - Good	2 - Good		3 - Medium	40 plus	Not Significant	2 - Good	Retain	Sound tree suited to site	Positive values	20+	2.63	6.96		Not determined
237	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.13144	147.34854	Aus Native	Medium	8 to 12	0.45	Mature	2 - Good	3- Fair		4 - Low	15 plus	Not Significant	3- Fair	Retain if possible	Sound tree suited to site		5 to 10	2.37	5.4		Not determined
238	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.13144	147.3485	Aus Native	Small	<8	0.22	Mature	4 - Poor	4 - Poor		4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition	Exempt height	5 to 10	1.75	2.64		Not determined
239	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.13142	147.34846	Aus Native	Medium	12 to 20	0.57	Mature	2 - Good	2 - Good		3 - Medium	15 plus	Not Significant	2 - Good	Retain	Sound tree suited to site		20+	2.61	6.84		Not determined
240	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.13142	147.34843	Aus Native	Small	<8	0.27	Over Mature	4 - Poor	4 - Poor		4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Poor Condition	Exempt height	0-5	1.91	3.24		Not determined
241	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.1314	147.34839	Aus Native	Medium	12 to 20	0.62	Mature	2 - Good	2 - Good		3 - Medium	15 plus	Not Significant	2 - Good	Retain	Sound tree suited to site	Positive values	20+	2.71	7.44		Not determined
242	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.13138	147.34834	Aus Native	Medium	12 to 20	1.07	Mature	2 - Good	2 - Good	Medium to large imposing tree in good condition	2 - High	40 plus	Significant	2 - Good	Retain Priority	Significant Tree	Sound tree suited to sit	50+	3.40	12.84		Retain - Impacts to Manage
243	*Eucalyptus cladocalyx* Sugar Gum	Fernleigh rd boundary	-35.13135	147.34808	Aus Native	Medium	8 to 12	1	Mature	2 - Good	2 - Good	Medium to large imposing tree in good condition	2 - High	40 plus	Significant	2 - Good	Retain Priority	Significant Tree	Sound tree suited to sit	50+	3.31	12		Retain - Impacts to Manage
244	*Eucalyptus camaldulensis* River Red Gum	Fernleigh rd boundary	-35.13133	147.34795	Aus Native	Medium	12 to 20	1.2	Mature	2 - Good	2 - Good	Medium to large imposing tree in good condition	2 - High	40 plus	Significant	2 - Good	Retain Priority	Significant Tree	Sound tree suited to sit	50+	3.57	14.4	Species endemic to region but not to site	Retain - Impacts to Manage
245	*Eucalyptus camaldulensis* River Red Gum 8 trees	Fernleigh rd boundary	-35.13133	147.34784	Aus Native	Small	<8	0.15	Young	2 - Good	3- Fair	8 young saplings from large adjacent tree	4 - Low	15 plus	Not Significant	4 - Poor	Remove	Unsuitable for location	Exempt height	0-5	1.50	1.8		Remove
246	*Eucalyptus viridis* Green Mallee	Line of 4 trees west end near Ambulance station	-35.13128	147.34784	Aus Native	Small	8 to 12	0.2	Mature	3 - Fair	3- Fair	Trees supressed by large adjacent trees	4 - Low	15 plus	Not Significant	3- Fair	Remove	Retention not practicable		5 to 10	1.68	2.4		Remove
247	*Eucalyptus viridis* Green Mallee	Line of 4 trees mid section	-35.13127	147.34813	Aus Native	Small	<8	0.15	Mature	3 - Fair	3- Fair	Trees supressed by large adjacent trees	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Retention not practicable	Exempt height	0-5	1.50	1.8		Remove
248	*Eucalyptus viridis* Green Mallee	Line of 5 trees	-35.13129	147.3483	Aus Native	Small	<9	0.15	Mature	3 - Fair	3- Fair	Trees supressed by large adjacent trees	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Retention not practicable	Exempt height	0-5	1.50	1.8		Remove
249	*Eucalyptus platypus*	Fernleigh rd	-35.13132	147.3485	Aus Native	Small	<3	0.15	Mature	3 - Fair	3- Fair	Trees supressed by large adjacent trees	4 - Low	5 to 15	Not Significant	4 - Poor	Remove	Retention not practicable	Exempt height	0-5	1.50	1.8		Remove
250	*Eucalyptus platypus*	Fernleigh rd	-35.13133	147.34854	Aus Native	Small	<8	0.15	Mature	1 - Excellent	1 - Excellent		4 - Low	15 plus	Not Significant	4 - Poor	Remove	Retention not practicable	Exempt height	0-5	1.50	1.8		Remove
251	*Cotoneaster species*	Fernleigh rd	-35.13118	147.34851	Exotic	Very Small	<3	0.15	Mature	2 - Good	2 - Good	Weed Species	5 - Very Low	15 plus	Not Significant	5 - Very Poor	Remove Priority	Exempt species	Exempt height	0-5	1.50	1.8	Weed Species	Remove
252	*Corymbia ficifolia* WA Red Flowering Gum	Fernleigh rd	-35.13105	147.34846	Aus Native	Medium	8 to 12	0.6	Dead	5 - Very Poor	5 - Very Poor		5 - Very Low	0	Not Significant	5 - Very Poor	Remove Priority	Condition & Safety	Other	0-5	2.67	7.2	Dead - tree exempt	Remove
253	*Eucalyptus camaldulensis* River Red Gum	4 saplings near ambulance fence	-35.13118	147.34805	Aus Native	Small	<8	0.15	Young	2 - Good	2 - Good		4 - Low	15 plus	Not Significant	4 - Poor	Remove	Retention not practicable	Exempt height	0-5	1.50	1.8		Remove
254	*Eucalyptus albens* White Box	near ambulance fence	-35.13118	147.34781	Endemic	Small	8 to 12	0.4	Dead	5 - Very Poor	5 - Very Poor		5 - Very Low	0	Not Significant	5 - Very Poor	Remove	Exempt species	Exempt species	0-5	2.25	4.8	Dead - tree exempt	Remove
255	*Eucalyptus microcarpa* Grey box - 21 saplings	cluster of 21 saplings near ambulance fence	-35.13104	147.34793	Endemic	Small	8 to 12	0.3	Young	1 - Excellent	2 - Good	1 stick nest observed - also includes 4 River Red Gum saplings. Dense cluster of trees.	4 - Low	40 plus	Not Significant	4 - Poor	Retain if possible	Positive values	Other	5 to 10	2.00	3.6	retaining one or a number of the trees will not really be feasible - allocation of appropriate TPZ or any individual trees will be very difficult.	Remove
256	*Celtis australis* (Hackberry)	near ambulance fence	-35.13093	147.34793	Aus Native	Small	<8	0.15	Young	2 - Good	2 - Good	species readily established by seed dispersal - trees are established as weeds	5 - Very Low	5 to 15	Not Significant	5 - Very Poor	Remove Priority	Retention not practicable	Exempt height	0-5	1.50	1.8	Weed Species in this location	Remove
257	*Eucalyptus albens* White Box	near ambulance fence	-35.13087	147.34818	Endemic	Small	<8	0.15	Young	1 - Excellent	1 - Excellent		4 - Low	40 plus	Not Significant	4 - Poor	Remove	Retention not practicable	Exempt height	5 to 10	1.50	1.8		Remove
258	*Eucalyptus albens* White Box	50m east of ambulance fence	-35.13081	147.34833	Endemic	Medium	12 to 20	1.2	Mature	3 - Fair	2 - Good	Tree of some age - considered old growth - bees nest present - hollows noted - possible scared tree - requires further investigation	1 -Very High	40 plus	Very significant	2 - Good	Retain Priority	Very Significant tree		100+	3.57	14.4	scare on east side requires investigation	Retain - Impacts to Manage
259	*Eucalyptus albens* White Box - 18 trees	18 Saplings around above tree	-35.130895	147.34839	Endemic	Small	8 to 12	0.2	Young	2 - Good	1 - Excellent	Trees have established as dense cluster of trees	4 - Low	40 plus	Not Significant	3- Fair	Retain if possible	Positive values		10 to 20	1.68	2.4	retention in a development will be difficult trees very dense - allocation of TPZ very difficult - some near above tree may be retained??	Remove
260	*Eucalyptus albens* White Box	75 m north west of ambulance fence	-35.13052	147.3485	Endemic	Medium	12 to 20	1.2	Mature	2 - Good	1 - Excellent	Tree of some age - considered old growth - hollows noted. Lopped at 5m many decades ago - epicormic attachment fair to good.	1 -Very High	40 plus	Very significant	2 - Good	Retain Priority	Very Significant tree		100+	3.57	14.4		Retain - Impacts to Manage
261	*Eucalyptus albens* White Box	90 m north west of ambulance fence	-35.130337	147.348516	Endemic	Medium	12 to 20	1.1	Mature	2 - Good	1 - Excellent	Tree of some age - hollow noted. Lopped at 5m many decades ago - epicormic attachment considered fair to good	1 -Very High	40 plus	Very significant	2 - Good	Retain Priority	Very Significant tree		100+	3.44	13.2		Retain - Impacts to Manage
262	*Eucalyptus albens* White Box - 160 trees	centre of cluster 70m north east of ambulance fence	-35.130484	147.348371	Endemic	Medium	8 to 12	0.3	Young	2 - Good	1 - Excellent	Trees have established on site since mowing/slashing of are has ceased 20 or more years ago	4 - Low	40 plus	Not Significant	3- Fair	Retain if possible	Positive values		10 to 20	2.00	3.6	retention in a development will be difficult trees very dense - allocation of TPZ very difficult - some near above tree may be retained??	Remove
263	*Eucalyptus albens* White Box	120 m north of ambulance fence corner - fence road to school	-35.12984	147.3484	Endemic	Medium	12 to 20	1.08	Mature	3 - Fair	2 - Good	Aged tree - no hollows	2 - High	40 plus	Significant	2 - Good	Retain Priority	Significant Tree	Sound tree suited to sit	100+	3.42	12.96		Remove
264	*Eucalyptus albens* White Box - 150 stems	120 m north of ambulance fence corner - fence road to school	-35.12998	147.348359	Endemic	Small	8 to 12	0.3	Young	2 - Good	2 - Good	150 stems 50mm stems to 400mm stems 8-12m height	4 - Low	40 plus	Not Significant	3- Fair	Retain if possible	Positive values		5 to 10	2.00	3.6	retention in a development will be difficult trees very dense - allocation of TPZ very difficult - some near above tree may be retained??	Remove
265	*Pistachio, & prunus species* Cluster of Shrubs	pile of soil 80m north of ambulance fence	-35.13013	147.34799	Exotic	Small	<8	0.15	Young	3 - Fair	3- Fair	trees have seeded in location - weed species for site	5 - Very Low	15 plus	Not Significant	5 - Very Poor	Remove Priority	Retention not practicable	Exempt height	0-5	1.50	1.8	Weed species to site	Remove

Tree No	Species	General Location	Lat	Lon	Species Origin	General Size	Height M	DBH (m)	Age Class	General Condition	Tree Vigour	Defects/Hazards/Issues Present Commentary on tree	Environ Rating	Expected Remaining Life	Significant Tree Status	Suggested Retention Value	Initial Recommendation for Planning	Primary Reason for Recommendation	Secondary Reason for Recommendation	Replacement Time Frame	SRZ Radius in m from centre of stem	TPZ Radius in m from stem	Other Comments	Proposed Development Impact Jan 2021
266	*Pistachio chinensis*	60m north of ambulance fence	-35.13037	147.34816	Exotic	Small	<8	0.15	Young	3 - Fair	3- Fair	trees have seeded in location - weed species for site	5 - Very Low	15 plus	Not Significant	5 - Very Poor	Remove Priority	Retention not practicable	Exempt height	0-5	1.50	1.8	Weed species to site	Remove
267	*Eucalyptus albens* White Box	55m north of ambulance fence	-35.13042	147.34805	Endemic	Medium	8 to 12	0.56	Semi Mature	1 - Excellent	1 - Excellent		3 - Medium	40 plus	Not Significant	1 - Excellent	Retain	Sound tree suited to site	Positive values	10 to 20	2.59	6.72		Remove
268	*Eucalyptus albens* White Box	20m north of ambulance fence	-35.13064	147.34779	Endemic	Medium	12 to 20	1.1	Over Mature	3 - Fair	2 - Good	hollows noted , bees present, lopped at 5m decades ago - limb failures noted	1 -Very High	40 plus	Very significant	3- Fair	Retain Priority	Very Significant tree	Sound tree suited to sit	100+	3.44	13.2		Retain - Impacts to Manage
269	*Eucalyptus albens* White Box - 75 saplings	20m north of ambulance fence	-35.13073	147.347816	Endemic	Small	8 to 12	0.25	Young	2 - Good	2 - Good	75 saplings ranging from 75mm to 350mm diameter stems - height 8 to 13 meters.	3 - Medium	40 plus	Not Significant	3- Fair	Retain if possible	Positive values		10 to 20	1.85	3	retention in a development will be difficult trees very dense - allocation of TPZ very difficult - some near above tree may be retained??	Remove
270	*Eucalyptus albens* White Box	17m north of ambulance fence	-35.13064	147.34766	Endemic	Medium	8 to 12	0.5	Semi Mature	1 - Excellent	1 - Excellent		3 - Medium	40 plus	Not Significant	2 - Good	Retain	Sound tree suited to site		20+	2.47	6		Remove

Annexure 2 - Assessment and Evaluation criteria - Definitions.

Origin		General Tree Size		Age Class		General Condition - summation of all considerations. Includes Stem/Canopy Structure Defects, Form, Canopy Vigour, Extent of any decay, Pest and Disease influences	ERL estimated remaining life in years under current Situation	Tree Vigour	Retention value	
Endemic	Species is native to this location	Very Large	> 25m	New	Recent Planting - last year or two	1 - Excellent	0	1 - Excellent	1 - Excellent	Interpretation Based on overall tree condition, species performance in local environment, expected remaining life and significance of tree in landscape
Aus Native	Species native to Australia but not this location	Large	18-25m	Young	Sapling, extended growth remaining	2 - Good	0 to 5	2 - Good	2 - Good	
Exotic	Species introduced to Australia	Medium	10-18m	Semi Mature	Some remaining growth to reach maturity for the site and species	3 - Fair	5 to 15	3- Fair	3- Fair	
		Small	< 10m	Mature	Considered mature size for site and species - typically no sign of decline	4 - Poor	15 plus	4 - Poor	4 - Poor	
		Very Small	< 3m	Over Mature	Tree has commenced to decline - obvious signs	5 - Very Poor	40 plus	5 - Very Poor	5 - Very Poor	
				Senescent	Extended signs of decline - recovery not expected					
				Dead	Little or no metabolic function remaining					

Environmental Rating	Evaluation Considerations/criteria
1 -Very High	Normally Old growth Remnant Tree, multiple hollows important to endangered fauna, replacement would be well in excess of 150 years
2 - High	Mature or semi mature Endemic Tree with or without hollows, plays an important part in local ecology, or Australian Native that has high substitute values as endemic tree replacement would take 50-100 years
3 - Medium	Young or semi mature Endemic tree or Australian native species that has some positive values for local fauna/ecosystems - replacement would take 20 or more years. Large Exotic tree with elevated general values.
4 - Low	Normally exotic species, or small, young endemic or native that could be replaced in the short term 5-10 years
5 - Very Low	Listed Weed or nuisance species; or very small value or insignificant to local ecology - could be replaced within 5 years or readily replaced with species of greater value

Significant Tree value considerations/criteria	
Very Significant	Defined as Significant Tree by regulatory or other authority or Environmental rating 1 or Heritage Listed or Very High Cultural or heritage Values
Significant	Environmental rating 2 or Medium or large tree in good/excellent condition, suited to local environment or imposing within the local landscape with long life expectancy and or strong amenity values or some cultural or heritage links

Recommended Action for DA	Primary Reasons
Retain Priority	Very Significant tree
Retain	Significant Tree
Retain if possible	Sound tree suited to site
Remove	Positive amenity values
Remove Priority	Poor Condition
	Unsuitable for location
	Species not suited to Environment
	Condition & Safety
	Replaced in short term
	Allow development
	Exempt species
	Exempt height
	Other

Picks		
Replacement times	1	Very significant
0-5	2	Significant
5-10	3	Not Significant
10-20	4	
20+	5	Yes
50+		No
100+		

Known Development Impact
Remove
Retain - Impacts to Manage
Retain - Impacts unlikely
Not determined

Tree Height and canopy spread is estimated unless otherwise specified.
Tree stem diameter is measured at approximately 1.4m above - or at a point indicative of the tree dimension where abnormal growth occurs at 1.4m above ground. Multi stemmed trees are calculated as per AS 4970
TPZ – Tree Protection Zone - specified area above and below ground and at a given distance from the trunk set aside for the protection of the tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development.
SRZ - Structural Root Zone – the area around the base of a tree required for the tree's stability in the ground - calculated in meters radially from stem centre.
From *Australian Standard 4970-2009 Protection of Trees on development sites*
TPZ and SRZ are calcualted from AS 4970


Legend
North Section
Lusher Ave
College Ave
Charleville Rd
Hely Ave
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South Section
Hely Ave
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