

21 November 2022

Adem Abdioglu
Project Engineer
Taylor
Level 13, 157 Walker Street
North Sydney NSW 2060

Dear Adem

Ecological certification of juvenile plant salvage, habitat salvage and seed collection for the First Building, Bradfield City Centre

Project no. 37576

Biosis Pty Ltd was commissioned by Taylor to provide ecological certification of juvenile plant salvage, habitat salvage and seed collection works, undertaken to support the First Building Bradfield City Centre project. These works were required to satisfy development consent condition B21 detailed within Instrument of Consent SSD- 25452459. Specifically, this condition requires the following to be undertaken:

Prior to the commencement of construction of the development, the Applicant must, in consultation with a qualified ecologist:

- (a) identify and salvage existing juvenile native plants on the site that are capable of being re-used in landscaping of the site;*
- (b) collect local native seeds from the site that are capable of being used in landscaping of the site;*
- (c) identify and salvage any native trees to be removed from the site (including tree hollows, tree trunks and root balls) that can be used on site for habitat enhancement (including those identified for retention or relocation in the Tree Retention Plan at condition B16); and*
- (d) provide evidence to the Planning Secretary, detailing how the plant material described in (a) to (c) will be protected and maintained to maximise its reuse in landscaping at the site (see condition B22).*

This certification details the works undertaken by Biosis to ensure works undertaken in support of the above consent condition were undertaken in a suitable manner, such as to maximise the potential salvageable plant material from the subject site, as well its reuse potential within future landscaping.

Plant salvage, habitat salvage and seed collection

Salvage plan

Biosis completed an initial site inspection of the subject site on the 20 October 2022 in order to identify juvenile native plants for salvage as well as areas where native seed collection activities should be

undertaken. Email advice detailing a program of works was subsequently provided to Taylor to guide their selected bush regeneration company (Toolijooa) in undertaking the required works.

In addition to the juvenile plants and seed collection areas, Biosis also identified 11 areas of potential habitat for salvage during clearing works. These areas include hollow stumps, existing ground habitat (i.e. seasoned logs already present within the landscape), root balls, as well as five native trees which should be retained once felled so branches and trunks can be used for landscaping purposes.

A map and supporting salvage reference table identifying the juvenile plants requiring salvage, areas where seed collection was to occur, and areas of habitat requiring salvage was provided as part of the salvage plan. This map and supporting reference table have been included in Appendix A.

Plant salvage and seed collection

It is understood that the plant salvage and seed collection works were undertaken by Toolijooa on the 3 November 2022 (seed collection), and the 8 and 9 of November 2022 (plant salvage). A progress report summarising the works was provided by Toolijooa which has been included in Appendix B.

Nursey inspection

Following the plant salvage and seed collection works by Toolijooa, Biosis undertook an inspection of the Toolijooa nursery on 16 November 2022 in order to ensure appropriate storage of the collected plant and seed material. During this inspection Biosis confirmed the material which had been salvaged was appropriately stored in order to ensure its chance of survival and reuse potential. It is understood that all salvaged plant material will be kept under irrigation, kept free from weeds and monitored for signs of struggle such that it can be subsequently reused in landscaping.

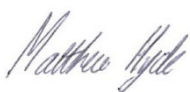
Ecological certification

Biosis is satisfied that adequate salvage of juvenile plant and seed collection has been undertaken from the subject site in accordance with the provided salvage plan included in Appendix A. If maintained appropriately at the Toolijooa nursery, in accordance with the provided progress report (included in Appendix B), this salvaged material will be able to be subsequently reused in the landscaping for the project. Biosis has also identified areas of potential habitat (tree trunks, seasoned logs, and root balls) for salvage once clearing works commence. It is noted that salvage of these habitat items cannot occur until clearance works are able to proceed (which requires construction certification approval).

Assuming that the habitat items identified by Biosis in Figure 1 and Table 1 (included in Appendix A) are appropriately salvaged and stored for reuse once clearing is able to commence, and the trees identified for retention within the projects Tree Protection Plan are appropriately protected during construction works, Biosis is able to provide ecological certification that the conditions outlined in B21 have been satisfied.

I trust that this advice is of assistance to you however please contact me if you would like to discuss any elements of this ecological advice further.

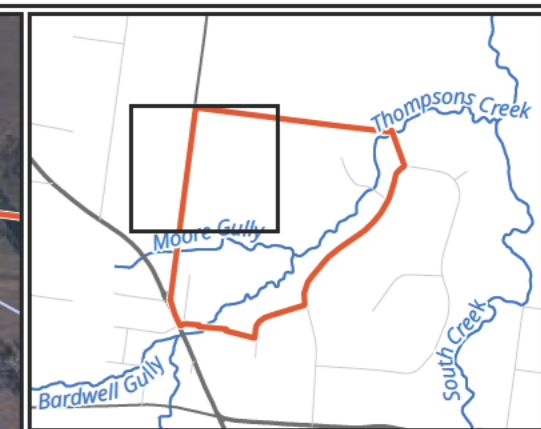
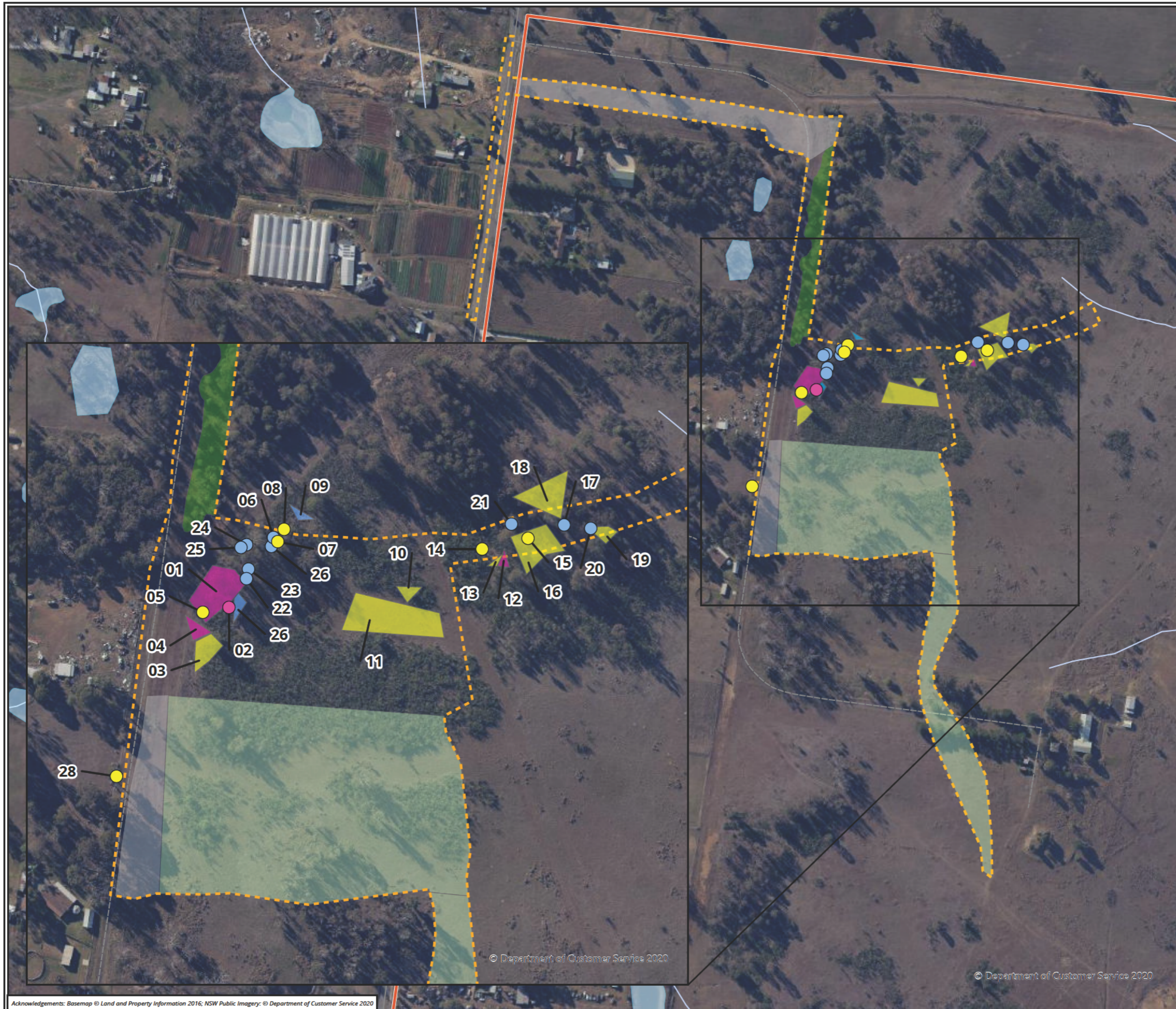
Yours sincerely,



Matthew Hyde
Team Leader - Zoology

Appendices

Appendix A. Plant salvage and seed collection plan



Legend

- Study area
- Impact area
- Salvage point**
- Habitat
- Plants
- Seed
- Salvage area**
- Habitat
- Plants
- Seed
- Excluded or secondary salvage**
- Moderate condition/potential
- Low quality/optional
- Cleared - no salvage

Figure 1 Salvage within the study area

0 25 50 75 100 125
Metres
Scale: 1:3,500 @ A3
Coordinate System: GDA 1994 MGA Zone 56



Matter: 37576, Date: 21 October 2022,
Prepared for: MH, Prepared by: JB, Last edited by: jbeckius
Layout: 37576_F1_Salvage
Project: P:\37500s\37576\Mapping\37576_Project.aprx

Table 1 Advanced Manufacturing Research Facility (AMRF) plant and habitat salvage support table (Figure 1)

Salvage	Type	Notes
S01	Seed	<i>Bursaria spinosa</i> , small amount of potential seed, seedlings present under mature plants.
S02	Seed	<i>Themeda triandra</i> (and other) grasses. Seed still green but well formed. Numerous.
S03	Plants	<i>Bursaria spinosa</i> and a range of forbs. Abundant, good condition.
S04	Seed	<i>Themeda triandra</i> , <i>Juncus usitatus</i> , <i>Euchiton involucreatus</i> , <i>Dillwynia sieberi</i> (plants salvageable, also contain small amount of seed).
S05	Plants	<i>Bursaria spinosa</i> and <i>Dillwynia sieberi</i> seedlings (approx. 15).
S06	Habitat	Hollow stump.
S07	Plants	<i>Brunoniella australis</i> and numerous <i>Lomandra filiformis</i> of varying sizes.
S08	Plants	Large clump <i>Lomandra filiformis</i> with a number of smaller plants nearby as well as and several <i>Goodenia hederacea</i> .
S09	Habitat	Group of stumps for retention.
S10	Plants	<i>Kunzea</i> spp. Possibly small amounts of seed. Seedlings likely to be present nearby.
S11	Plants	Large area of <i>Juncus usitatus</i> , <i>Laxmannia gracilis</i> and other damp area species. Bulk salvage for water retention basins etc.
S12	Seed	<i>Themeda triandra</i>
S13	Plants	Various seedlings.
S14	Plants	<i>Melaleuca decora</i> . Potential small amounts of seed or seedlings in vicinity.
S15	Plants	<i>Opercularia diphylla</i> , numerous plants in area with seed.
S16	Plants	Range of desirable grasses and forbs.
S17	Habitat	Ground habitat. Hollow stump.
S18	Plants	Mass of <i>Plectranthus parviflorus</i> .
S19	Plants	<i>Plectranthus parviflorus</i> and <i>Microlaena stipoides</i> .
S20	Habitat	Tree 1852
S21	Habitat	Tree 1846
S22	Habitat	Ground habitat.
S23	Habitat	Tree 1837
S24	Habitat	Tree 1841
S25	Habitat	Tree 1838
S26	Habitat	Ground habitat. Group of root balls.

Salvage	Type	Notes
S27	Habitat	Ground habitat. Group of logs, stumps and root ball.
S28	Plants	<i>Marsdenia viridiflora</i> subsp. <i>viridiflora</i> growing on fence. Retrieve tuber (if accessible).

Appendix B. AMRF plant salvage and seed collection progress report



AMRF Plant Salvage and Seed Collection

Progress Report

November 2022



Toolijooa Nursery

- Contract propagation
- Provenance specialists
- Seed collection services

Toolijooa Nursery

Lot 7 Twenty Fifth Ave, West Hoxton 2171

P: 02 9986 1858 M: [REDACTED]

Toolijooa nursery was engaged to both collect seed from and to salvage native plants from 215 Badgerys creek road in November 2022.

Below are lists of the seed collected along with the plant species salvaged, and currently being maintained at the Toolijooa Nursery West Hoxton.

All plant material salvaged and potted will be kept under irrigation, kept free from weeds and monitored for signs of struggle. Updates on the condition and any changes to plant numbers will be available.

Seed collected from 215 Badgery's creek rd			
Genus species	date	GPS eastings	northings
Carex appressa	3.11.22	-33.9268949	150.7350582
Dichelachne micantha	3.11.22	-33.9203039	150.733874
Eucalyptus fibrosa	3.11.22	-33.9203039	150.733874
Eucalyptus moluccana	3.11.22	-33.9247461	150.7335119
Melaleuca nodosa	3.11.22	-33.9203039	150.733874

- The above seed is drying and awaiting processing.

There are currently 17 lots of soil from site that came to Toolijooa nursery surrounding native plants. This soil has been placed in 17 individual seed flats for the purpose of waiting for the seed bank in the site soil to germinate. Photo below.



Plant salvage from Badgery's creek rd					
Genus species	date	GPS eastings	northings	Current pot size	Current number
<i>Aristida vagans</i>	9.11.22	-33.9203036	150.7334076	50mm tube	24
<i>Arthropodium milleflorum</i>	8.11.22	-33.9209126	150.7336426	50mm tube	25
<i>Arthropodium milleflorum</i>	9.11.22	-33.9203036	150.7334076	6 inch	13
<i>Austrostipa ramossissima</i>	9.11.22	-33.9203036	150.7334076	6 inch	10
<i>Brunoniella australis</i>	8.11.22	-33.9209126	150.7336426	50mm tube	180
<i>Brunoniella australis</i> , <i>plantago</i> , <i>solanum</i> <i>prinophyllum</i> , <i>Dillwynia</i> , <i>lomandra</i> mix.	9.11.22	-33.9203036	150.7334076	6 inch mixed	40
<i>Centella asiatica</i>	9.11.22	-33.9203036	150.7334076	6 inch	46
<i>Davesia ulicifolia</i>	8.11.22	-33.9209126	150.7336426	8 inch	6
<i>Davesia ulicifolia</i>	8.11.22	-33.9209126	150.7336426	6 inch	25
<i>Davesia ulicifolia</i>	8.11.22	-33.9209126	150.7336426	50mm tube	15
<i>Dianella longifolia</i>	8.11.22	-33.9209126	150.7336426	8 inch	12
<i>Dianella longifolia</i>	9.11.22	-33.9203036	150.7334076	6 inch	12
<i>Dianella</i> sp.	9.11.22	-33.9203036	150.7334076	50mm tube	1
<i>Dichondra repens</i>	9.11.22	-33.9203036	150.7334076	6 inch	45
<i>Dillwynia sieberi</i>	8.11.22	-33.9209126	150.7336426	8 inch	21
<i>Dillwynia sieberi</i>	8.11.22	-33.9209126	150.7336426	6 inch	23

<i>Dillwynia sieberi</i>	8.11.22	-33.9209126	150.7336426	50mm tube	12
<i>Entolasia marginata</i>	8.11.22	-33.9209126	150.7336426	50mm tube	25
<i>Goodenia hederacea</i>	9.11.22	-33.9203036	150.7334076	50mm tube	90
<i>Goodenia hederacea</i>	9.11.22	-33.9203036	150.7334076	6 inch	24
<i>Juncus usitatus</i>	9.11.22	-33.9203036	150.7334076	50mm tube	50
<i>Juncus usitatus</i>	9.11.22	-33.9203036	150.7334076	6 inch	29
<i>Lomandra filiformis</i>	8.11.22	-33.9209126	150.7336426	6 inch	61
<i>Lomandra filiformis</i>	9.11.22	-33.9203036	150.7334076	50mm tube	162
<i>Lomandra filiformis</i>	9.11.22	-33.9203036	150.7334076	8 inch	1
<i>Microlaena stipoides</i>	9.11.22	-33.9203036	150.7334076	50mm tubes	15
<i>Paspalidium distans</i>	9.11.22	-33.9203036	150.7334076	6 inch	4
<i>Plectranthus parviflorus</i>	9.11.22	-33.9203036	150.7334076	50mm tubes	20
<i>Plectranthus parviflorus</i>	9.11.22	-33.9203036	150.7334076	6 inch	12
<i>Poa labillardierei</i>	9.11.22	-33.9203036	150.7334076	6 inch	10
<i>Rydiodesperma</i> sp.	9.11.22	-33.9203036	150.7334076	6 inch	12
<i>Themeda triandra</i>	9.11.22	-33.9203036	150.7334076	6 inch	66
<i>Themeda triandra</i>	9.11.22	-33.9203036	150.7334076	8 inch	37
<i>Themeda triandra</i>	9.11.22	-33.9203036	150.7334076	50mm tube	150
<i>Veronica plebeia</i>	8.11.22	-33.9209126	150.7336426	50mm tube	100

Some of the salvaged plants in 50mm tube size below:





Above: Some of the *Goodenia hederacea* and *Iomandra filiformis* and *Centella asiatica* in 6-inch pots.



Above: salvaged natives in 6-inch pots in outside nursery bay.



Above: more salvaged natives in 6 and 8-inch pots.

Map

