La Trobe University Sports Precinct Stage 3: EPBC Act Matted Flax-lily Salvage & Translocation Plan (EPBC 2018/8343)

Final Plan
Prepared for La Trobe University
25 September 2020

Biosis offices

NEW SOUTH WALES

Albury

Phone: (02) 6069 9200
Email: albury@biosis.com.au

Newcastle

Phone: (02) 4911 4040
Email: newcastle@biosis.com.au

Sydney

Phone: (02) 9101 8700
Email: sydney@biosis.com.au

Wollongong

Phone: (02) 4201 1090
Email: wollongong@biosis.com.au

VICTORIA

Ballarat

Phone: (03) 5304 4250
Email: ballarat@biosis.com.au

Melbourne (Head Office)

Phone: (03) 8686 4800
Email: melbourne@biosis.com.au

Wangaratta

Phone: (03) 5718 6900
Email: wangaratta@biosis.com.au

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- Julian Turner for mapping
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Declaration of accuracy

In making this declaration, I am aware that section 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) makes it an offence in certain circumstances to knowingly provide false or misleading information or documents to specified persons who are known to be performing a duty or carrying out a function under the EPBC Act or the Environment Protection and Biodiversity Conservation Regulations 2000 (Cth). The offence is punishable on conviction by imprisonment or a fine, or both. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed

Tony Inglis
Project Manager
La Trobe University

1. Introduction

1.1 Project background

Biosis Pty Ltd was commissioned by La Trobe University to prepare a Translocation Plan for 23 Matted Flax-lilies (MFL) *Dianella amoena* impacted by the planned development of Stage 3 Sporting Precinct at the La Trobe Bundoora campus in Victoria as outlined in the referral 2018/8343 issued under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This report will form part of the Preliminary Documentation to address Matters of National Environmental Significance (MNES) potentially impacted by the development of the precinct.

The location of the development site is shown in Figure 1.

The development footprint would result in clearing of 3.203 hectares of native vegetation. This impact would also result in the loss of 23 individuals of MFL within 1.26 hectares of suitable habitat (Figure 2). An offset area has been identified, which will also serve as the recipient site for the translocated MFL.

The development is under assessment by the Department of Agriculture, Water and Environment (DAWE) through the EPBC referral 2018/8343.

Both the Stage 3 Sports Precinct and offset/recipient site are within the Victorian Volcanic Plain (VVP) Bioregion (www.delwp.vic.gov.au). The offset/recipient site is situated immediately south of the Stage 3 development site (Figures 3 and 4).

1.1.1 On-site native grassland reserve

An offset site has been identified to compensate for losses associated with the development of the precinct, as detailed in La Trobe University Sports Precinct Stage 3: EPBC Act Offset Management Plan (EPBC 2018/8343) (Biosis 2020). Biosis (2020) identifies the condition and extent of native vegetation, including areas of the ecological vegetation class (EVC) Plains Grassy Woodland (EVC 55) and habitat for MFL to be both impacted and protected in association with the proposed development (Figures 2 and 4). Biosis (2019b) was used, in conjunction with the EPBC Act offsets policy, to identify the extent of MFL habitat to be protected outside the project area. This site has also been identified as the recipient site for the translocation of the 23 MFL to be impacted by the Stage 3 development.

The offset area (approximately 2.81 hectares) is located in the south western corner of the campus, just west of the western end of Sports Field Lake on a portion of land otherwise known as 906 Plenty Road Bundoora 3083 (Figure 3). The property is currently zoned as Public Use Zone 2 (PUZ2) and is partly covered by an environmental significance overlay (ESO2).

The offset area assessed (Figure 4) is immediately south of the Stage 3 impact area (Figure 1). This land parcel includes broader areas dominated by degraded Plains Grassy Woodland (EVC 55) in relatively uniform, poor condition. Other parts of this parcel of land have been cleared for the development of a variety of sporting fields and other infrastructure.

The offset area includes four habitat zones and other areas dominated by introduced species, all of which will be managed to provide the MFL offsets for development of the Stage 3 Sporting Precinct (Referral 2018/8343).

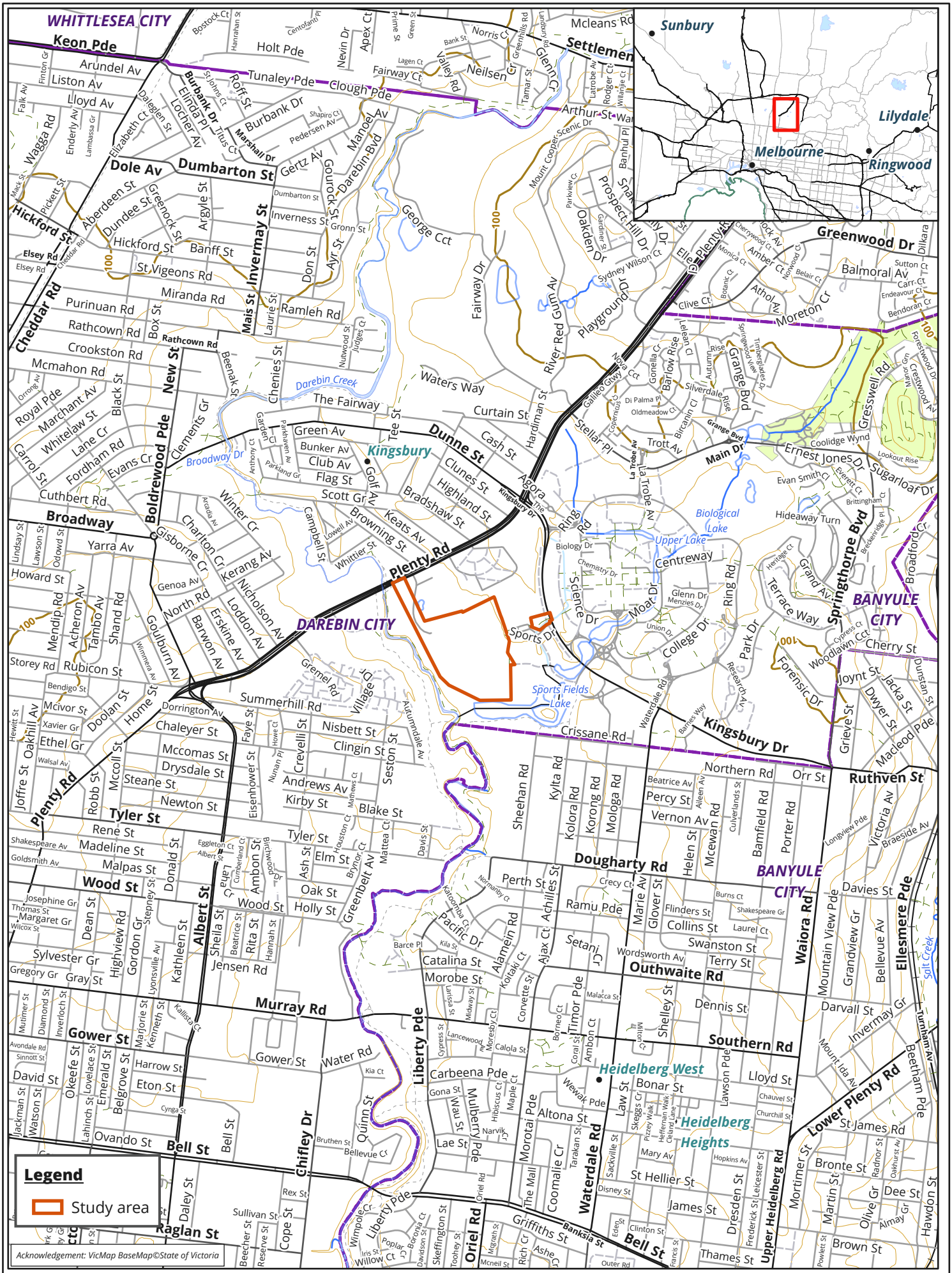

Figure 1 Location of the Study Area - La Trobe University, Bundoora, Victoria

Matter: 30363, Date: 08 January 2021,
Prepared for: IM, Prepared by: SKM, Last edited by: smitchell
Layout: 30363_F1_Locality
Location: P:\30300s\30363\Mapping\30363_CMP_SportsPrecinct_LaTrobeUni.aprx

0 250 500 750 1,000
Metres
Scale: 1:25,000 @ A4
Coordinate System GDA 1994 MGA Zone 55

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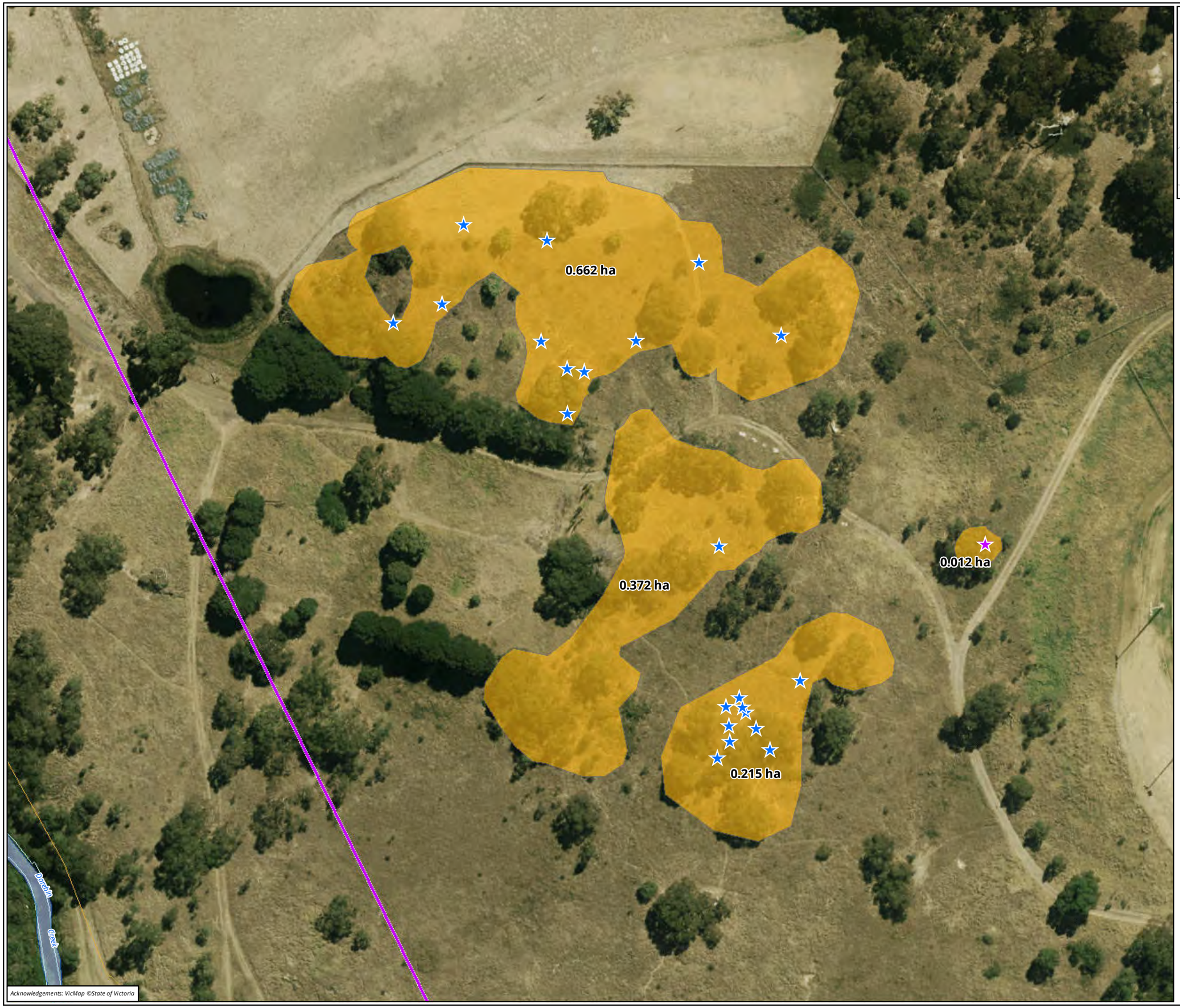

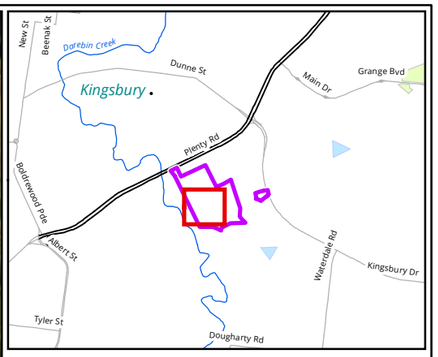

Legend

- Matted Flax-lily within survey area (Biosis 2020)
- Matted Flax-lily within survey area (Biosis 2018)
- Matted Flax-lily habitat
- La Trobe University Sports Precinct Stage 3

Figure 2 Location of MFL habitat within the La Trobe University Sports Precinct Stage 3, Bundoora, Victoria

0 8 16 24 32 40

Metres

N

Scale: 1:1,000 @ A3

Coordinate System: GDA 1994 MGA Zone 55

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Matter: 30808,
Date: 08 January 2021,
Checked by: SGM, Drawn by: JPT, Last edited by: smitchell
Location: P:\30300s\30363\Mapping\30808_F3_MFL.mxd

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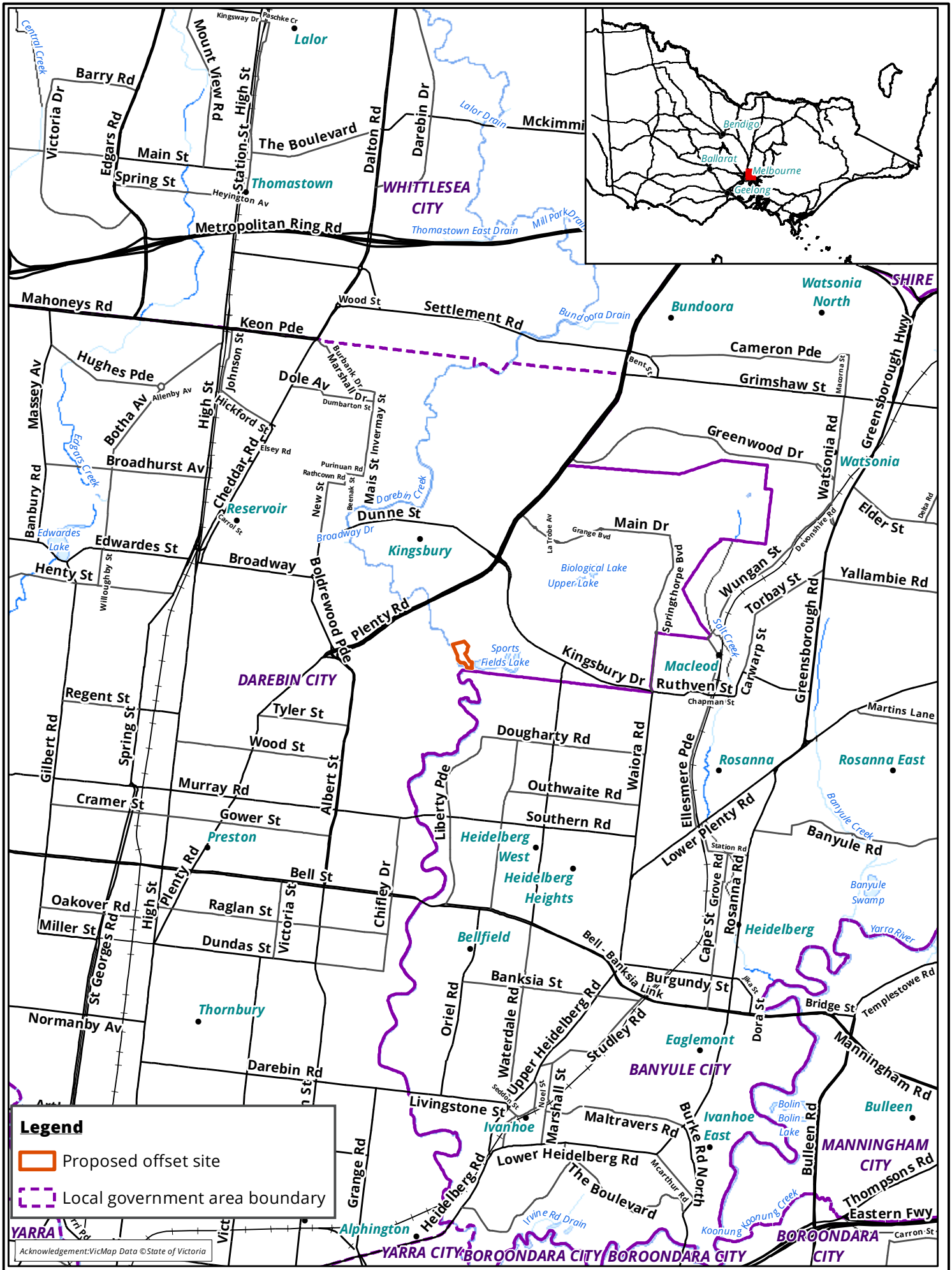

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Figure 3 Location of the La Trobe University MFL offset site, Bundoora, Victoria

Matter: 30808,
Date: 29 October 2019,
Checked by: SGM, Drawn by: JPT, Last edited by: jturner
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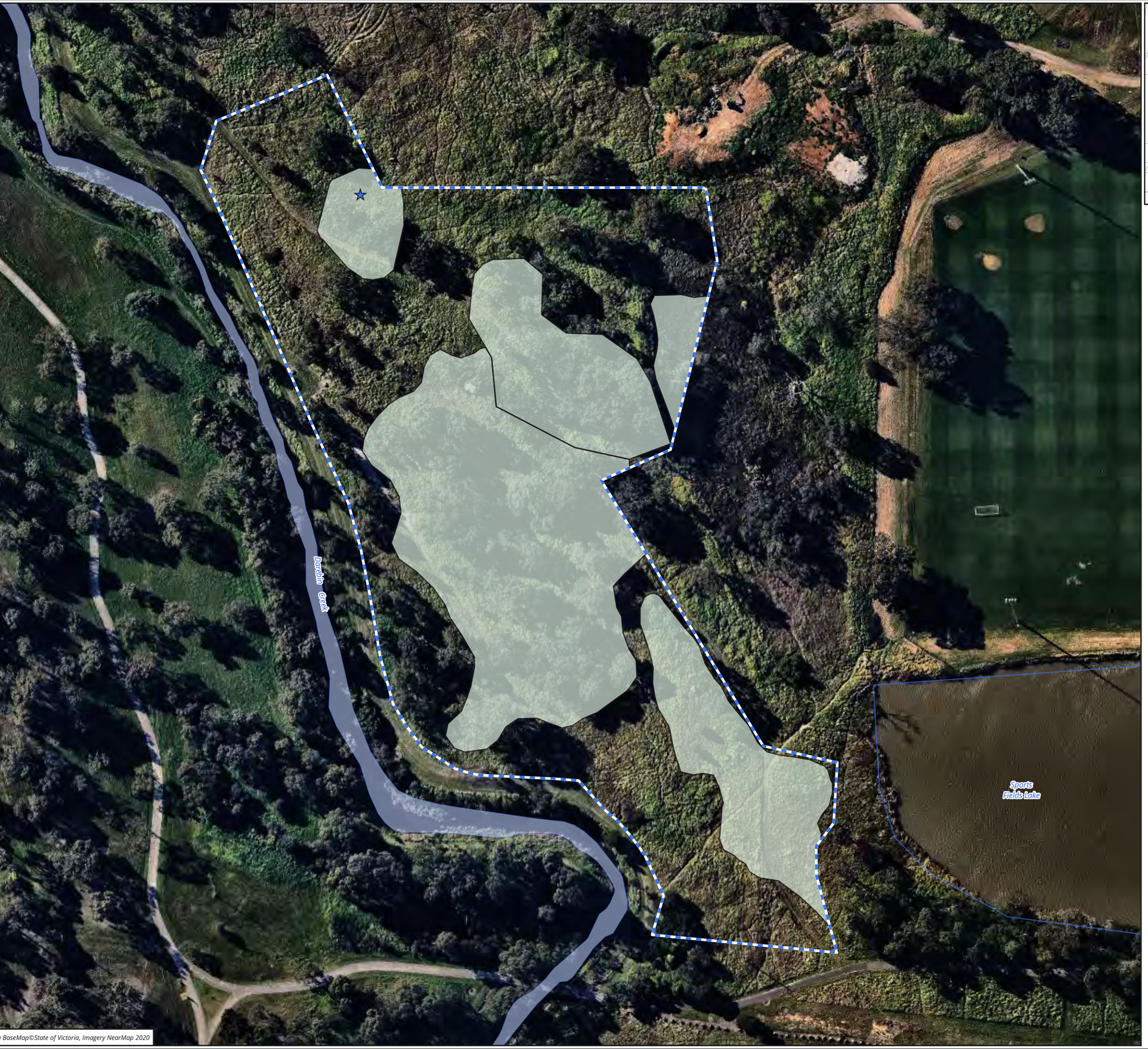

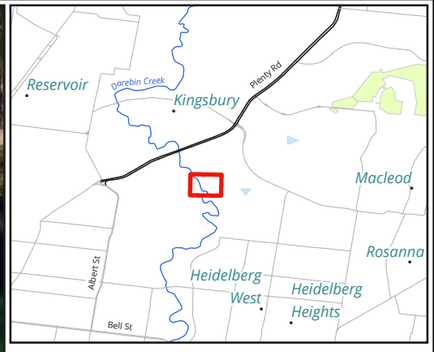

Legend

- Proposed offset site - 2.81ha
- Matted Flax-lily(MFL) record (Biosis 2018)
- Plains Grassy Woodland (EVC 55)

Figure 4 The distribution of MFL and its habitat at the La Trobe University offset site, Bundoora, Victoria

0 10 20 30 40 50

Metres

Scale: 1:1,200 @ A3

Coordinate System: GDA 1994 MGA Zone 55

N

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Matter: 30363,
Date: 11 January 2021 ,
Prepared for: IM, Prepared by: SKM, Last edited by: smitchell
Layout: 30363_F5_OffsetSite
Project: P:\30300s\30363\Mapping\
30363_CMP_SportsPrecinct_LaTrobeUni.aprx

The original vegetation (as at 1750) of the local area includes the EVCs Stream Bank Shrubland (EVC 851) along Darebin Creek, Creekline Grassy Woodland (EVC 68) along the floodplain of Darebin Creek and Plains Grassy Woodland (EVC 55) elsewhere.

The landscape is relatively flat with gently undulating rises. The offset site includes broader areas dominated by introduced species, interspersed with areas with more than 25% of the perennial ground cover provided by indigenous species such as Kangaroo Grass *Themeda triandra*, Spear-grasses *Austrostipa* spp., Weeping Grass *Microlaena stipoides*, Tussock-grasses *Poa* spp. and Wallaby-grasses *Rytidosperma* spp.

The vegetation of the proposed offset area is mapped by DELWP as Plains Grassy Woodland (EVC 55). This community is typically dominated by River Red-gum *Eucalyptus camaldulensis*. Mature and regenerating River Red-gums are common across the site as are planted non-indigenous trees such as Spotted Gum *Corymbia maculata* and Sugar Gum *Eucalyptus cladocaylx*.

Biosis (2019a) identified three habitat zones within the proposed offset area (Habitat Zones 4.2, 7 and 8). These habitat zones (HZ) are open eucalypt woodlands with an overstorey of River Red-gums, a largely absent shrub layer (apart from occasional wattles such as Blackwood *Acacia melanoxylon* and Black Wattle *Acacia mearnsii)*, and a ground layer dominated by weedy grasses with some native grasses. More open areas of these patches are defined by a ground layer of native grasses such as Kangaroo Grass and wallaby-grasses and scattered native herbs such as *Geranium* sp. and Grassland Wood-sorrel *Oxalis perennans*.

A single individual of MFL was recorded by Biosis (2019a) in HZ8. Additional individuals of MFL could occur within the southern section of the offset site which was not subject to the targeted survey conducted as part of Biosis (2019).

The rocky slope west of the ornamental lake is dominated by Kangaroo Grass and includes a variety of other species including Wattle Mat-rush *Lomandra filiformis*, Common Woodruff *Asperula conferta*, Common Cotula *Cotula australis*, and Variable Sword-sedge *Lepidosperma laterale*. This area was identified by Biosis (2019b) as HZA.

Once translocated, the salvaged MFL are required to be retained and managed as part of the native grassland reserve (Figure 2).

1.1.2 Suitability of the recipient site

The parameters for assigning MFL habitat within both the impact and offset sites were areas of grassland/woodland that comprised the original soil surface (i.e. not fill) with some native vegetation in the ground layer. Matted Flax-lily within the development footprint will be translocated to the offset site which will also function as the on-site native grassy woodland reserve. The entire reserve is currently considered to support suitable habitat for the translocation of the MFL, with some areas which correspond to Plains Grassy Woodland supporting higher condition habitat.

To improve the condition of MFL habitat within the recipient site, substantial management and maintenance will be undertaken by La Trobe in line with the Offset Management Plan (Biosis 2020). In order to create more manageable habitat for the translocated MFL, the following management actions will be implemented by La Trobe prior to planting and extend over 10 years of management:

- Retain and manage all native vegetation as directed by the offset management plan;
- Retain all fallen timber and branches;
- Exclude development and earthworks of any kind;
- Exclude the application of any infrastructure easement(s);
- Exclude all domestic stock;

- Eliminate any woody weeds and control the cover of other high threat weeds ensuring this cover does not exceed levels achieved upon attainment of Year 10 offset completion criteria;
- Ensure that pest animals are controlled and that level of control attained at the completion of Year 10 of management is maintained in perpetuity.
- Exclude pasture improvement and any type of cultivation and cropping;
- Exclude fertilizer application;
- Control the accumulation of ground cover biomass through the controlled application of fire as required;
- Revegetate areas not identified as patches of native vegetation with locally indigenous species;
- Monitoring for any new and emerging weeds and continuously treating those weeds to avoid further seed set, dispersal or infestation;
- Maintain a progressive annual works plan which caters to current conditions and prescribes ongoing management with the promotion of native perennial grasses, and attainment and maintenance of offset completion criteria, as its primary objective; and
- Monitor and report on the abundance of MFL within the offset site.

Given there is an existing MFL record within this reserve and it occupies the same land form from which plants will be salvaged, suitable management of the reserve as prescribed in the offset management plan is expected to create habitat which will allow MFL to establish and reproduce. The reserve is within the same Bioregion (Victorian Volcanic Plain) and supports similar terrain, soils and vegetation types as the impact area, but has not been subject to the same level of disturbance to the topsoil compared with the impact area.

Plants are proposed to be translocated from the existing area of habitat (1.26 hectares) into a slightly larger offset area (2.81 hectares) to the south of the impact area. The density of plating will be higher as each 'individual' will be planted as four clones. This is done to increase the chances of establishment for each separate plant and also acts to provide a short term (minimum five year) increase in the density of occurrence as plants find a natural balance within the offset site over time. Over time the artificially higher density of MFL will be able to balance out within the managed environment of the offset site.

The reserve area is the product of a decision under the EPBC Act and is subject to audit under this act. The reserve also functions as an offset site prescribed under the EPBC Act and will be protected and managed as a Conservation Reserve encumbered with a Trust for Nature covenant or equivalent and owned by La Trobe University in perpetuity.

1.2 Summary of the translocation proposal

Details of the translocation proposal are provided in this plan, however key points are summarised below:

- Material from all 23 plants salvaged from the proposed development footprint will be replanted within the on-site native grassy woodland reserve. Salvaged material will be used to establish six clones propagated from each plant (138 tube-stock plants). This material will be held in an approved nursery.
- From this material, four clones (tubes) sourced from each of the original 23 plants will be planted in pairs into selected areas of the reserve in an attempt to establish three clones from each plant. For each plant two clones will be retained in a nursery as a safety net to replace any translocated clones which die.

- Where a clone from the nursery safety net is used to replace plants within a reserve, the remaining nursery plant will be divided to maintain the safety net of two clones per plant.
- The establishment of three clones from each plant using the salvaged material will be taken as the successful translocation of that individual. An individual clone will be considered established if the planted material survives within the planting area for a period of five years.
- The translocation program will be considered completed when three clones have been established from 21 of the 23 salvaged plants (i.e. 90% of the salvaged population). Monitoring of these plants will be incorporated into an annual MFL monitoring program conducted within the native grassy woodland reserve after they have been established for two years.
- Once the translocation plan has been considered successful the nursery clones will be given to La Trobe University for use at their discretion (i.e. used as landscape plantings).

1.3 Timeframe

The translocation program will commence prior to any development works occurring, including any physical soil disturbance. The translocation program will follow the timeline outlined in Table 1. Preparation of the proposed recipient sites within the selected conservation reserve will also begin as soon as plants have been salvaged, with the selection of specific localities and initial weed control.

The required 138 plants (six clones of each of the 23 plants) will be held at the approved nursery until required for planting. Once the translocation plan reaches the defined success rate (survival of three clones for 90% of salvaged individuals for five years after planting) then the nursery plants will be provided to La Trobe University for use at their discretion. Excess plants that have been transferred to other projects will no longer be the responsibility of the project proponent.

Table 1 Summary of actions and timing

Step	Timing	Action
1	September of the year of salvage	Preparation of recipient site commences.
2	Autumn of the year after salvage	Initial preparation of Conservation Reserve recipient sites completed.
3	Autumn - Winter of the year after salvage (at or when soil moisture conditions are appropriate)	Planting of salvaged plants into Conservation Reserve identified within the offset management plan for La Trobe Stage 3 Sports Precinct (Figure 4). Suggest the installation of a watering system.
4	4 weeks following planting (i.e. 1st month)	Ongoing weed control, weekly monitoring and other management actions as specified to continue in Conservation Reserves. Water plants as required. Replace any clones that die.
5	From 2nd month to 12 months following planting (Year 1)	Monthly monitoring of translocated plants in Conservation Reserve. Water plants as required and increase the frequency of monitoring if considered necessary. Replace any clones that die.
6	Second year following planting (Year 2)	Monitoring every two months of translocated plants in Conservation Reserve. Monitoring of plants established for two years will be incorporated into an annual MFL monitoring program conducted within the Conservation Reserve. If at the end of April five years after planting three clones from 21 of the 23 original planted clones have survived, then the translocation program is considered successful and this translocation plan will be considered complete except for annual monitoring under the annual reserve monitoring program. If more than one clone from any individual has died then monitoring of replanted individuals needs to return to Step 5 until the survival requirement for three clones from each of 21 plants is achieved.

Step	Timing	Action
7	November / December each year from two years after a clone has been planted.	Include translocated plants into the annual monitoring program conducted within the on-site grassy woodland Conservation Reserve. Submit annual report to DAWE on the outcomes of the translocation plan.
8	**June Five years post planting***	**Submit final report to DAWE on the outcomes of the translocation plan with recommendations.**

* Another report may be required after this if it takes longer to establish 3 clones from 90% of the original 23 plants.

2. Translocation requirements

This Translocation Plan must be approved by the Australian Government Minister for the Environment prior to its implementation.

The translocation process must be consistent with the details outlined by this plan. These requirements include:

- The site needs to be managed on an ongoing basis to maintain the populations indefinitely.
- Long term management arrangements need to be identified.
- Grazing by domestic stock should be excluded.
- The reserve should be fenced for protection.
- Weed control is a requirement for site preparation and is also an ongoing management requirement.
- Plants must be monitored to ensure their establishment.

The translocation sites selected within the on-site Conservation Reserve, the associated management protocols defined within this plan and the on-site Offset Management Plan (Biosis 2020 and any approved revisions) satisfy all of these requirements.

3. Translocation proposal

The successful translocation of the plants salvaged from the development footprint at Stage 3 of the Sports Precinct at La Trobe University Bundoora will be achieved as follows:

3.1 Sound and detailed translocation planning

Details of the translocation plan are provided in Section 4.

3.2 Commitment and expertise

Biosis Pty. Ltd. (or an equivalent consultant) will provide ecological expertise to the translocation project from the initial planning stages through to ongoing monitoring and site management. All work will be undertaken by qualified ecologists, supervised by senior staff with previous experience in translocation and vegetation management.

Biosis has designed and supervised a number of projects for translocation and management of threatened flora besides Matted Flax-lily at La Trobe Bundoora. These projects include:

- Salvage of Matted Flax-lily, re-establishment of clones, and ongoing management and monitoring at Reserves 12 & 13 of the Places Victoria Aurora residential subdivision, Epping.
- Salvage of Matted Flax-lily, re-establishment of propagules, and ongoing management and monitoring at Larundel Grassland reserve, Bundoora (Mueck and Brown 2005).
- Salvage, direct translocation and ongoing management of Matted Flax-lily at South Morang Flora and Fauna Reserve, South Morang (Yugovic 2006).
- Machine salvage and direct translocation of Spiny Rice-flower at the former Laverton RAAF Base, Laverton (Mueck 2000).

The on-ground aspects of the project will be undertaken by indigenous vegetation management specialists and include ecological burning, weed control and the control of pest animals.

3.3 Funding

La Trobe University Bundoora will be committed to establishing the on-site grassy woodland Conservation Reserve (Figure 4). This reserve will be fenced to exclude stock and will be managed intensively according to the approved on-site offset management plan (Biosis 2020). The University will also be responsible for the provision of adequate funding to complete high quality management works within the schedule identified by this translocation plan and the on-site grassland offset management plan (Biosis 2020).

Funding arrangements for the management of the plants in accordance with this plan will be provided by the University. Management responsibility may be transferred to another party (i.e. a qualified bushland manager) subject to negotiation to provide for the provision of adequate funding to implement this plan. Once a funding agreement has been negotiated and agreed, the person/organisation accepting management responsibility will be responsible for the planting, management, survival and monitoring of the 138 Matted Flax-lily clones.

3.4 Removal and ongoing control of threatening processes

The most immediate threats to the viability of the recipient sites are as follows:

- Weed invasion, particularly by woody weeds such as Sugar Gums *Eucalyptus cladocalyx*, Spotted Gums *Corymbia maculate*, Blackberry *Rubus anglocandicans*, Sweet Briar *Rosa rubiginosa*, and Sifton Bush *Cassinia sifton.*
- Weed invasion by introduced herbs and graminoids such as Chilean Needle Grass *Nassella neesiana*, Spear Thistle *Cirsium vulgare*, Serrated Tussock *Nassella trichotoma* and Toowoomba Canary-grass *Phalaris aquatica*.
- Grazing by introduced pest herbivores such as rabbits and hares.

The requirements for management of the Conservation Reserve are detailed in Biosis (2020) and summarised in Section 4. This active ecological management will continue to be undertaken by experienced native vegetation management contractors and monitored by an experienced grassland ecologist.

Management actions include fencing of the reserve, installation of gates and weed control. No additional signs identifying the property as an offset site are proposed. Explicit signage may inadvertently attract undesirable impacts. However signs identifying the property as a protected area of native vegetation will be considered by the owner.

Management of the Conservation Reserve is an ongoing and permanent requirement.

3.5 Timing

This translocation plan will apply until three clones from each of 21 of the 23 salvaged plants have become established (i.e. 90% success). Establishment for each clone is defined as the survival of that clone for a period of five years. However management of the conservation reserve and the salvaged plants will continue in perpetuity, albeit at a lesser intensity. After plants are established, management will comprise periodic biomass reduction as required, pest plant and animal control and maintenance of fencing and gates. Once established the translocated plants will be incorporated into an annual MFL monitoring program conducted within the on-site Conservation Reserve.

4. Translocation process

4.1 Introduction

Matted Flax-lily is a tufted, mat-forming perennial lily, which spreads vegetatively by underground rhizomes. The species is fully described in Carr and Horsfall (1995). Each plant consists of sparse to dense tufts of leaves which are narrow, 4-12 mm wide (Carr and Horsfall 1995), blue-green in colour, and usually have small 'teeth' on the upper edges and mid-rib. The leaf tufts may be widely spaced along the rhizome (up to 30 cm), making it difficult to accurately determine the number of individual plants within an area. Matted Flax-lily flowers during late spring – summer. The flowering inflorescence is a spreading panicle, often 50 - 60 cm in height, with scented pale mauve to blue flowers. Blue fleshy berries containing the seeds are produced after flowering.

The species is known from grassland and grassy woodland in Victoria, and there are historic records from Tasmania where the species may still occur (Carr and Horsfall 1995). There are believed to be approximately 1,400 plants remaining in 120 separate populations (Carter unpublished). This is likely to underestimate the actual total population, as additional populations continue to be recorded as further survey is conducted in areas of suitable habitat on the urban fringe of Melbourne.

A national recovery plan for the species has been prepared (Carter 2010).

Carr and Horsfall (1995) note that recruitment for MFL is believed to be non-existent. Populations are clearly fragments of much larger populations that have persisted in highly degraded vegetation. Seedlings have not been seen in the wild (Carr pers. comm. in Carter unpublished). Buzz pollination by native bee species is required for seed production, hence the habitat requirements for these species is important. The species is self-compatible.

Matted Flax-lily is readily propagated by division and seed, although it may be difficult to collect large quantities of seed as the berries are often sparse and drop quickly once ripe. The plants proposed to be salvaged from the University will be divided to form many new plants after plants are established and grown in a nursery.

4.2 Recipient site

The offset site located directly south of the impact area has been identified as the recipient site.

Areas selected for planting within the reserve will be subject to intensive weed control works. These areas will be managed with an objective of removing all introduced plant species within one metre of each planted clone. Weed control works will commence as soon as possible prior to planting, with the objective of planting the MFL in April.

Recipient areas will be identified by a qualified botanist. Within these areas, particular planting sites will be identified and marked on-ground by that botanist. These will be located to avoid disturbance to any *in situ* MFL plants.

4.3 Translocation stages

The following stages and issues in translocation are discussed below:

- Preparation of nursery clones
- Site preparation
- Replanting
- Management

- Monitoring
- Performance targets
- Reporting

4.3.1 Preparation of nursery clones

Direct translocation into the reserve is not proposed, given the need to prepare the recipient sites and the potential for re-introduction of weeds in the salvaged material to those sites. Plants will be held in a suitable nursery for maintenance and growing on until planting conditions are suitable.

A minimum of six clones is required for each plant. Of these six, four will be planted out to contribute to the wild population and two will be held in the nursery as a security measure.

The nursery holding the plants required for this translocation will be responsible for maintaining the security of plants as long as required. The total length of time for holding plants will be determined by the time taken to identify and prepare all recipient sites and for the plants to become established. Once the plan is deemed successful the excess nursery plants will no longer be required. Any additional plants remaining after the translocation plan has been completed will be provided to La Trobe University for use at their discretion.

Detailed actions are as follows:

- Plants will be hardened off before planting into the Conservation Reserve.
- Four clones from each original salvaged plant will be planted into the offset reserve with the aim of incorporating these plants into the wild population.

4.3.2 Site preparation

Suitable recipient sites within the on-site reserve will be identified by a botanist. Preparation of these areas will begin no later than September in any year before the translocation occurs. Each site will be large enough to allow a group of plants to be replanted, for ease of monitoring and ongoing management and to provide for potential cross-pollination. Sites will be selected such that access for planting, management and monitoring is possible without trafficking more intact sections of the reserve. The sites will be marked with star pickets or similar to allow translocated plants to be easily monitored and protected during management works.

Weed control in the planting areas will be satisfactorily completed before plants are installed. The cover of perennial weeds within a minimum one metre radius of each planting site will have a cover of <1% or include less than 10 individuals of any weed species.

4.3.3 Replanting

1. Replanting of MFL will occur during the cooler months (autumn to winter). Planting sites will be accessed with minimal disturbance to the reserve from vehicles and equipment.
2. The minimum spacing between plants and the reserve boundary will be 5 metres, to allow for vegetative expansion.
3. At each recipient site, the planting hole will be dug by hand with minimal disturbance to the surrounding soil, and any excess excavated soil will be removed from the reserve. Watering of the planting hole is recommended before planting.
4. Each plant will be planted with the final soil level approximately equal or slightly lower than the natural surface and will be thoroughly watered.
5. Each plant will be labelled (with a durable metal label) and numbered for record keeping and monitoring purposes.
6. The location of the recipient site will be recorded using GPS and the data transferred onto the reserve map.

Additional relevant data will be recorded including the name of the person undertaking the work, date, time of day and prevailing climatic and other conditions (e.g. temperature, recent rainfall, frosts, fires, natural soil moisture and any other features that might affect the survival of the plant).

4.3.4 Management and monitoring

Reserve management actions and issues are described by this plan and Biosis (2020). Monitoring and specific management guidelines are as follows:

1. The planted MFL plants will be inspected weekly for at least the first month (as determined by the supervising botanist), then monthly for a total of one year and then every two months for two years post planting. This will allow for prompt management actions as necessary to maximise the chance of survival. Records of inspections will be kept and include descriptions of the condition of the plants, and will include inspections of the naturally occurring plants for comparison. Translocated plants will be photographed every six months for two years and then annually until plants are considered established.
2. Watering may be required periodically during the first summer, as determined by monitoring. If the plants are deemed to be declining in health due to moisture stress, hand watering will be organised promptly. Additional monitoring may be required if watering is required over a prolonged period. Records of watering events will be kept.
3. Vegetation competition (native or exotic) will be controlled for a minimum of one metre around each plant.
4. Weed control works will be conducted throughout the receptor site to facilitate the establishment of a native vegetation community.
5. Any competing vegetation will be regularly controlled using appropriate techniques. These may include hand weeding, brush-cutting or careful application of selective herbicide. Removal of weeds may require action each month during the spring growing season.
6. Any other threats, such as grazing by rabbits or kangaroos, will be monitored and managed as required. Any control activities undertaken will be recorded.
7. Any decline in the population will be reported to DAWE within two months with an explanation of the remedial management actions planned and taken.
8. In addition to the regular inspections to assess management requirements, the plant survival and growth will be assessed annually at the same time each year (between 1 October and 1 March) up until plants are considered established. The dimensions of each patch and number of leaf tufts will be recorded (photos are suitable for this task), and production of flowering stems noted. Observations of seed set, germination of MFL plants and the fate of seedlings will be recorded.
9. Any dead plants will be promptly replaced from the nursery with clones from the same parent plant. The nursery plant will also be replaced as back up.
10. Plants are considered established and independent after surviving for five years.
11. Once three clones from at least 21 of the original 23 plants are considered established then this translocation plan will no longer apply to any clones of that plant and the plant will be managed in line with the ongoing La Trobe University Sports Precinct Stage 3: EPBC Act Offset Management Plan (EPBC 2018/8343) and be incorporated into the annual MFL monitoring program conducted within the reserve.
12. Replaced plants will be monitored until three clones from that plant are considered established.

4.3.5 Performance targets

The over-riding objective of this translocation plan is the long term conservation of genetic material from the salvaged population and a long-term increase in the local population of the species. Based

on previous translocation exercises associated with this species, it is anticipated that the great majority of plants will be able to successfully establish within the recipient site within the nominated establishment period.

The translocation program will be deemed a success if it meets the following criteria:

1. Three out of four planted clones from 21 of the 23 salvaged plants become established. A clone is established when it has survived after planting out for a period of five years.
2. Weed cover within one metre of each planted clone is maintained at an acceptable level, such that competition from weeds does not reduce the potential expansion of each transplanted MFL and other native ground flora increase in cover.
3. The success of the translocation project has been regularly reviewed and management adjusted as required to maintain the health of plants.

In the unlikely event the criteria for success have not been met within 10 years from the date of approval of this plan then the University will provide the DAWE with an assessment of the translocation program that examines the reasons why the program was unable to meet its performance targets. This assessment will be provided to DAWE within 10 years and 6 months from the date of approval of this plan.

4.3.6 Reporting

The results of the translocation process and ongoing monitoring will be reported to the relevant authorities (DAWE and DELWP) by La Trobe University Bundoora (or subsequent authority on behalf of the University) on an annual basis. The final report will include an evaluation of the success of the program, methods used and recommendations for future programs. The report will also provide recommendations for the ongoing management of the MFL plants at each of the recipient sites. If plants are successfully established after two years, the final report for this project will be provided three years after this time.

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Appendix 6 Conservation Management Plan (Biosis 2020b)