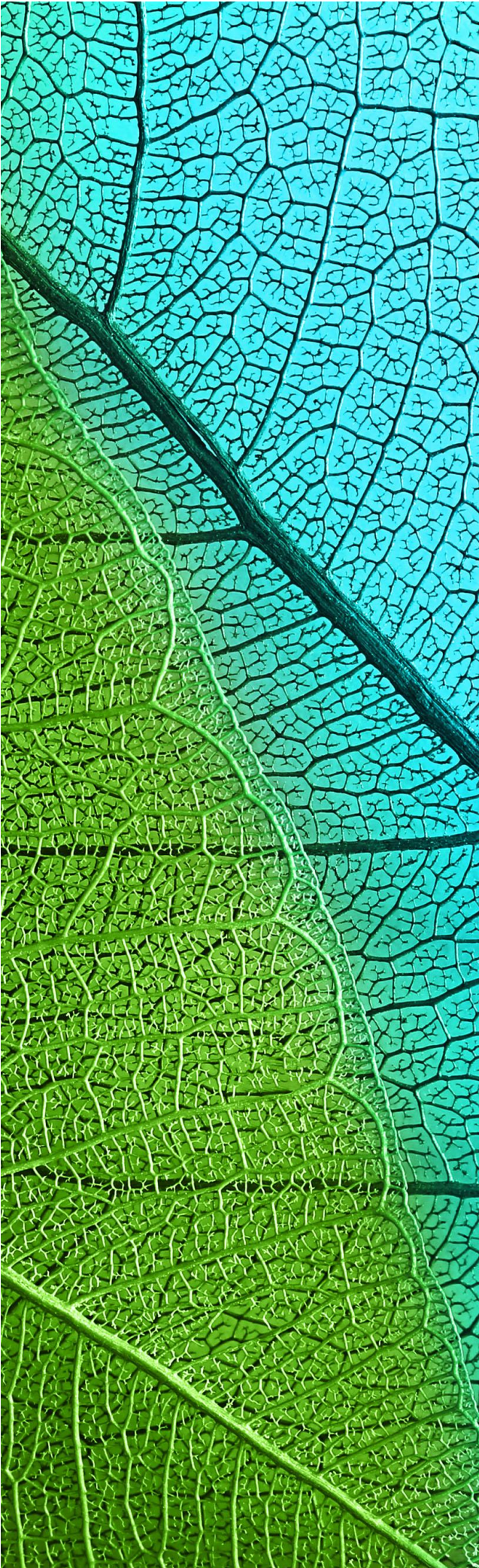




**276 Rex Road,
Campbellfield**

Salvage & Translocation
Plan for Matted Flax-lily
Dianella amoena

**Prepared for
Bamford Management Pty Ltd**

January 2026
Report No. 20045.07 (1.2)



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Nature Advisory acknowledges the traditional owners and sovereign custodians of the land on which we work from – the Wurundjeri people of the Woi Wurrung language group. We extend our respect to their Ancestors and all First Peoples and Elders past, present, and future.

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1. Introduction

Bamford Management Pty Ltd engaged Nature Advisory Pty Ltd to design a salvage and translocation plan for Matted Flax-lily (*Dianella amoena*). This plan is a condition of a Hume City Council-issued permit (P23308.01) to take protected and threatened flora from private land and relocate it to a conservation reserve. The proponent, Bamford Management Pty Ltd, is responsible for implementing this plan. The aim of the plan is to provide a comprehensive guide for the salvage and translocation of 40 individuals of Matted Flax-lily (MFL) that currently occur within the property at 276 Rex Road, Campbelltown (herein referred to as the 'salvage site'). Details are also provided on the translocation of the 40 MFL to the recipient site, Lot S PS523266, Cunningham Chase, Burnside Heights. The EPBC approval from the Commonwealth for the salvage and translocation is yet to be obtained and this plan forms part of the required documentation to be submitted for approval.

This report includes the following sections:

- **Section 2** provides background biological information on Matted Flax-lily.
- **Section 3** provides the legislative context for this salvage and relocation plan.
- **Section 4** provides procedural guidelines for salvage of the Matted Flax-lilies.
- **Section 5** details the selection process for choosing a recipient site.
- **Section 6** provides guidelines for management of the recipient site.
- **Section 7** provides guidelines for ongoing monitoring.

This report was compiled by a team from Nature Advisory, comprising Kate Thurkle (Botanist) and Alan Brennan (Director).

1.1. Translocation definition

In the *Guidelines for the Translocation of Threatened Plants in Australia* (Commander et al. 2018), translocation is defined as the deliberate transfer of plant material from a natural population to a new location. In this case it will involve the salvage of MFL and introduction into a recipient site. The methods of translocation are diverse and may include seed collection and propagation, propagation via cuttings or tissue culture, planting of containerised plants, direct seeding, transplantation of whole plants from one site to another, and the transfer of soil, leaf litter, brush, or pollen (Commander et al. 2018).

1.2. Purpose of translocation

1.2.1. Matted Flax-lily individuals to be translocated

On 16 December 2020, Nature Advisory undertook a targeted survey to determine the presence of MFL and other threatened species within the salvage site. During the survey, 40 individuals of MFL were recorded within the salvage site on private land (see Figure 1).

1.2.2. Vegetation condition at the current location of Matted Flax-lilies

The 40 individuals of MFL, which are the subject of this investigation, occurred within a site located between Campbellfield and Somerton in Melbourne's northern suburbs. This constituted approximately 3 ha of private and public land east of Rex Road. MFL occurred within private land only. The site was assessed, and native vegetation mapped by Nature Advisory on 26 March 2020.

The site supported heavy soils of volcanic origin on a flat to gently undulating landscape with a moderate level of outcropping basalt rock. It was readily apparent that there had been very recent soil disturbance

(scraping) and stockpiling of soil and gravel in the west of the salvage site, and older soil stockpiling in the east.

The salvage site is situated within a well-established industrial precinct, in which native vegetation has long been cleared. An exception to this is the Cooper Street Grassland Nature Conservation Reserve, which is a moderate-sized area of remnant native vegetation, located some 400 m to the east of the salvage site and managed for biodiversity conservation purposes.

Vegetation in the salvage site consisted of a relatively degraded example of River Red-gum dominated Plains Grassy Woodland (Ecological Vegetation Class (EVC) 55_61), which occupied approximately half of the salvage site. This vegetation was dominated by a grassy ground cover of native Kangaroo Grass *Themeda triandra* and Weeping Grass *Microlaena stipoides* var. *stipoides*, with a large proportion of introduced high-threat Chilean Needle-grass *Nassella neesiana*. Interspersed throughout this vegetation were a mixture of indigenous and introduced shrubs and River red-gum *Eucalyptus camaldulensis* saplings and recent recruits, which were quite dense in places (Photo 1). There was a moderately high biodiversity of indigenous grasses and forbs present, although the percentage cover of forbs was very low. Introduced shrubs, grasses, and forbs (typical of the region) were also present and were most dominant around the periphery of the salvage site. Mostly, the salvage site was disturbed (Photo 2).

The salvage site lies within the Victorian Volcanic Plain bioregion, within the Southern Volcanic Plain Interim Biogeographical Regionalisation for Australia (IBRA) bioregion, and within the Melbourne catchment management area. The salvage site is located on Wurundjeri Country.



Photo 1: River Red-gum recruits and vegetation characteristics of the salvage site



Photo 2: Disturbance and piled fill in the salvage site

1.2.3. Project summary

The site is proposed to be subdivided into three lots and a road reserve to construct six warehouses (two per lot). The 40 MFL recorded in the east of the salvage site are in the footprint of the proposed development.

This is a major development and the layout cannot be modified to retain the MFL. Therefore, impacts to MFL cannot be avoided by the development. Furthermore, there is no suitable area of the proposed subdivision to relocate the plants within the site. As such, they must be translocated to a new location. From here, the new location will be referred to as the 'recipient site', while the current location of the MFL will be referred to as the 'salvage site'.

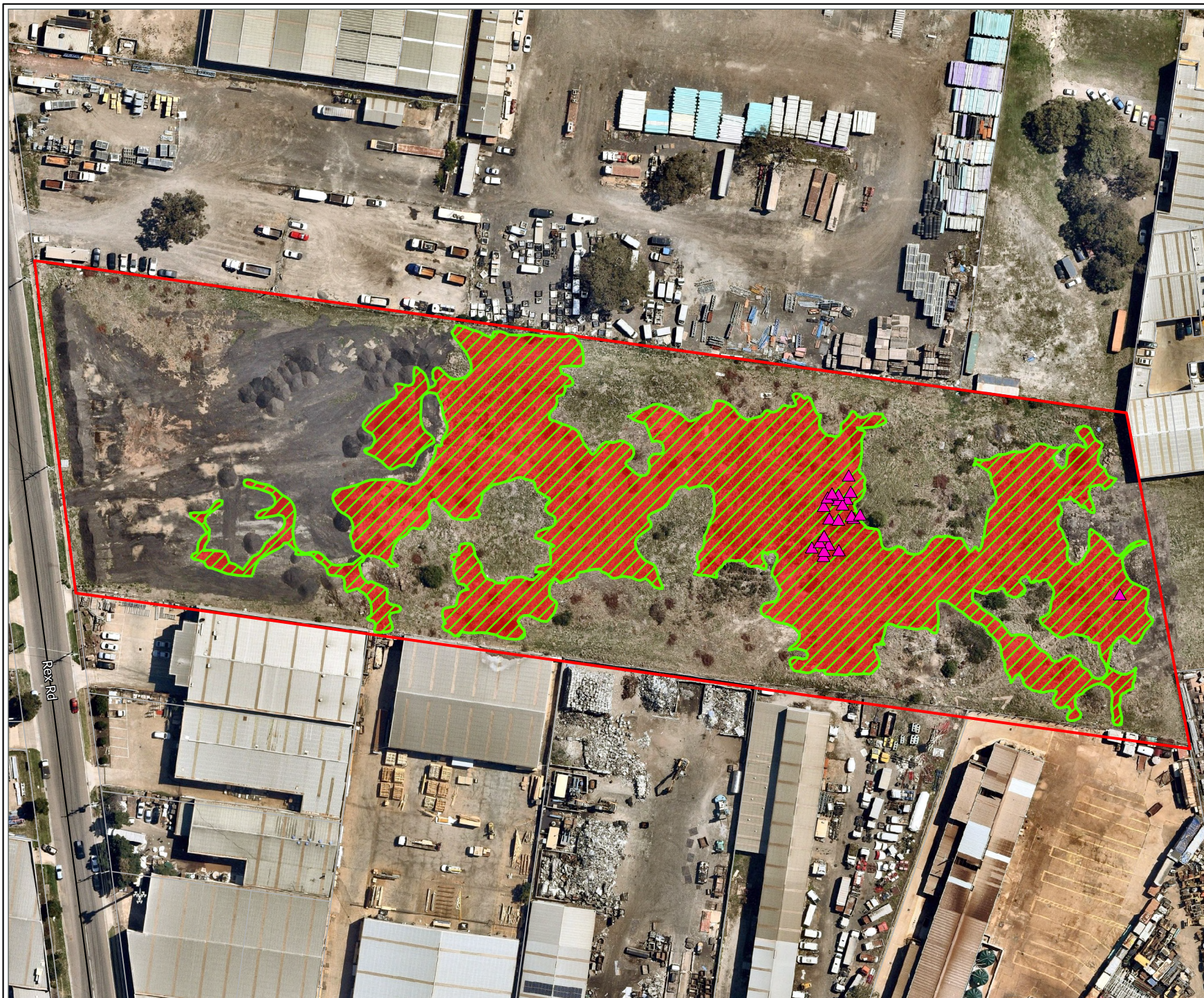


Figure 1: Location of Matted Flax-Lilies within impacted vegetation

Project No: EMKC

Project: 276 Rex Road,
Campbellfield

Date: 1/05/2025

-  Study area
-  Matted Flax-lily
-  Plains Grassy Woodland (EVC 55)
-  Native vegetation to be removed



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2. Matted Flax-lily biology

2.1. Description

Matted Flax-lily (*Dianella amoena*) is a tufted perennial that typically grows in distinctive rhizomatous mats. Its grey-green leaves are softer, shorter, narrower and generally paler than those of most other species of *Dianella*. Additionally, the leaves are V-shaped in cross-section, with small serrations irregularly spaced along the margins and midrib, usually for the full length of the leaf including the sheath. Leaves grow to 45 cm long and 12 mm wide, and may die back during periods of significant water stress (summer dormancy; Carter 2010; RBGV 2023).

The inflorescence of Matted Flax-lily is upright and reaches 20–90 cm tall. Its nodding, star-shaped flowers are pale blue to blue-violet with yellow stamens (Photo 3), and produce a sweet, nutmeg-like fragrance. Flowering occurs from late spring to mid-summer (October–April), followed by fleshy, bluish-purple, globular fruits (Carter 2010; RBGV 2023).

Due to the matting habit, individual plants can occupy an area of up to 25 m², making population numbers difficult to estimate (Carter 2010).



Photo 3: Photograph of Matted Flax-lily flowers (Neville Walsh, CC BY-NC-SA 4.0 © Royal Botanic Gardens Board).

2.1.1. Habitat

The Matted Flax-lily typically grows within lowland grassland, herb-rich woodland, valley grassy forest and grassy woodland habitats. The soil is fertile, well-drained and seasonally wet. Soil types range from sandy loams to heavy cracking clays. The understory component of its habitat is typically dominated by native grass cover, with companion species including Kangaroo Grass (*Themeda triandra*), Weeping Grass (*Microlaena stipoides* var. *stipoides*), Common Tussock-grass (*Poa labillardierei*), Common Wheat Grass (*Anthosacne scabra*), Slender Wallaby-grass (*Rytidosperma racemosum* var. *racemosum*) and Grey Tussock-grass (*Poa sieberiana*). While not present across all Matted Flax-lily habitat, common companion trees comprise Blackwood (*Acacia melanoxylon*) and a range of eucalypt species, including River Red-gum (*Eucalyptus camaldulensis*), Swamp Gum (*Eucalyptus ovata*), Yellow Box (*Eucalyptus melliodora*), Red Box (*Eucalyptus polyanthemus*), Snow Gum (*Eucalyptus pauciflora*), Bundy (*Eucalyptus goniocalyx*) and Red Stringybark (*Eucalyptus macrorhyncha*). Introduced pasture species are also commonplace in much of the remaining Matted Flax-lily habitat (Carter 2010; RBGV 2023).

2.1.2. Distribution

The Matted Flax-lily occurs within Victoria, Tasmania and New South Wales. Within Victoria, it exhibits a patchy distribution ranging from the state's east to its south-west (Figure 2). The species most often occurs in patches of remnant vegetation on roadsides and beside railways, as well as within nature reserves. The surrounds are typically highly disturbed by agriculture and urban development (Carter 2010; RBGV 2023).

2.1.3. Threats

The habitat and distribution of Matted Flax-lily were drastically reduced following European settlement. Urbanisation and agriculture have led to the clearing and disturbance of vast tracts of habitat, resulting in populations becoming fragmented and introduced species further displacing remnants. At present, much of the remaining habitat of the Matted Flax-lily is restricted to roadsides, railway lines and reserves surrounded by urban development. Populations in these locations are particularly susceptible to herbicide use, slashing, weed invasion and damage via machinery and grazing (Carter 2010; RBGV 2023).

Major threats to the Matted Flax-lily include:

- Weed invasion
- Habitat destruction
- Population fragmentation
- Loss of pollinators

2.1.4. Legislative protection

Matted Flax-lily is currently listed as:

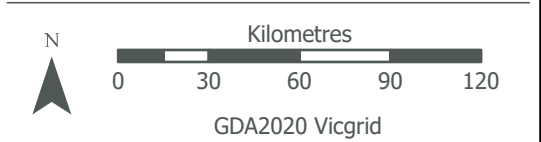
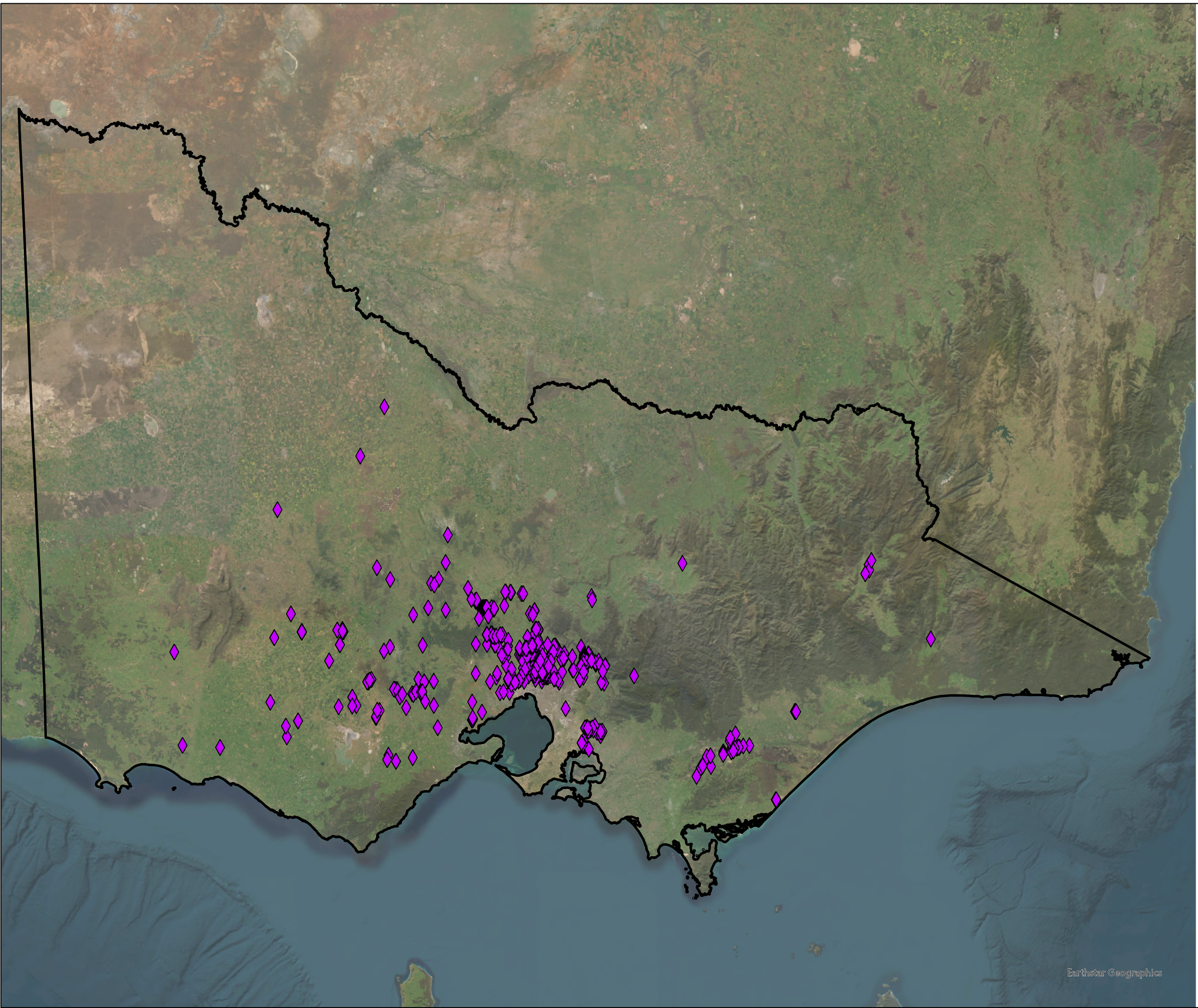
- Endangered under the EPBC Act
- Critically Endangered under the FFG Act

A national recovery plan for the species has been developed based solely on the Victorian population (Carter 2010).

Figure 2: Records of Matted Flax-lily in Victoria

Project No: 20045_07
Project location: 276 Rex Road, Campbellfield, VIC
Date: 5/05/2025

-  Victoria boundary
-  VBA records, Matted Flax-Lilies





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3. Legislative context

3.1. EPBC Act Legislation

The EPBC Act is legislation designed to protect threatened species, habitats, listed migratory species and ecological communities of national conservation significance. Any significant impacts to these species require the approval of the Australian Minister for the Environment.

If there is a possibility of a significant impact on nationally threatened species, communities or listed migratory species, a Referral under the EPBC Act should be considered. The Minister will decide whether the project will be a 'controlled action' under the EPBC Act after 20 business days, in which case the project can only be undertaken with the approval of the Minister. This approval depends on a further assessment and approval process (lasting between three and nine months, depending on the level of assessment).

3.1.1. Permit conditions

On 02 May 2023, the proponent received a permit from Hume City council detailing the requirement to translocate 40 MFL, listed as **Critically Endangered** under the EPBC Act from private land to a conservation reserve. As part of the permit conditions, the following was required:

- Before commencement of works, a Translocation Plan for all Matted Flax-lily (*Dianella amoena*) on the Subject Land (being the salvage site) must be submitted to and approved by the Responsible Authority. This plan must be in accordance with any requirements, conditions and permissions required and obtained under the *Environment Protection (Biodiversity Conservation) Act 1999* (Cth) and be prepared by a suitably qualified and experienced ecologist/ person. When approved, the Translocation Plan will then form part of this Permit.
- Prior to the commencement of works, the translocation process for all Matted Flax-lily (*Dianella amoena*) on the Subject Land (being the salvage site) must be complete by a suitably qualified person in accordance with the Translocation Plan approved under Condition 5, the satisfaction of the responsible authority.

These conditions are addressed within the following sections of this report.

Please note that approval from the Commonwealth for the salvage and translocation is yet to be obtained and this plan forms part of the required documentation to be submitted for approval.

4. Salvage

4.1. Salvage process

The salvage process must be undertaken before the commencement of construction works, which can be undertaken upon the approval of this Translocation Plan by the Responsible Authority and the Commonwealth.

Flowering of MFL occurs predominantly from November to January but the species can flower as early as October and as late as April (Carter 2010). As such, it is recommended that salvage takes place between late autumn to early spring (May- September) during stages of vegetative growth, as the species is more resilient to disturbance at this time (RGBV 2024; Bull 2014). Furthermore, undertaking salvage at this time ensures a greater rate of success as it allows for an extended period of favourable growing conditions before the drier months of summer arrive (GHD 2022).

During the process, all 40 MFL must be salvaged from their current location at Campbellfield. The entire plants are to be salvaged, including roots and associated soil. A qualified botanist or ecologist is required to supervise and complete salvage activities with the salvage being undertaken by an experienced bushland contractor approved by Melton City Council. The salvage must be undertaken appropriately to ensure that:

- The plants are handled, transferred into pots, and appropriately labelled.
- Where required, the trimming of leaf mass, flowers and fruit is undertaken to reduce transpiration and reduce stress of translocation to nursery.
- That plants are watered with a fertiliser suitable to the species (fish or seaweed emulsion) to assist recovery.
- That the risk of pests, pathogens, and diseases being transferred with the plants or associated soil is minimised i.e. tools and machinery hygiene protocols are implemented and weed material is removed as far as practicable.

The procedure will be as follows:

- The 40 MFL must be located prior to salvage and physically marked with readily visible stakes.
- If there is an absence of natural rainfall (>10 mm) in the 1-2 days leading up to the salvage event, the MFL must be watered 1-2 days prior to salvage to allow time for the water to soak in. As such, the plant must be saturated to root depth.
- During salvage, plants must be dug from the ground using clean and sanitised manual equipment. The whole plant and associated soil must be salvaged, and it is critical that the root system of the plant is not damaged during this process.
- Each plant must be labelled, for future reference.
- The root system of all salvaged plants must be kept moist during the salvage process, using either a wet hessian cloth or similar method.
- Upon completion of salvage, the 40 MFL must be potted in transportable containers and immediately transported to a suitably qualified indigenous plant nursery.
- Upon completion of salvage, the Department of Climate Change, Energy, and the Environment (DCCEE), Melton City Council, and Hume City Council must be notified that it has occurred.

4.2. Salvaged plants

The MFL, post salvage, will need to be divided, propagated, and managed to reproduce vegetatively (cloned) to establish a security population of a sufficient/ viable number of individuals. This nursery population will not only be a source for supplementary planting, if plant mortality were to occur at the recipient site, but will also provide ample time for the recipient site to be prepared (i.e. weed control, fencing etc.) before receiving the salvaged individuals.

4.2.1. Nursery selection and capability

Upon the salvage of the 40 MFL, they must be transferred to a suitably qualified indigenous plant nursery for propagation, cloning and labelling of the 40 MFL. The plant nursery to undertake the work must be capable and experienced in propagating MFL and should have experience working with threatened flora species, preferably MFL. The nursery must also have knowledge and experience in propagation techniques to clone MFL, and space to maintain a healthy security population in the nursery throughout the 5-year duration of this plan.

4.2.2. Nursery obligations

An indigenous nursery approved by Melton City Council, such as Victorian Indigenous Nurseries Co-operative (VINC), must be used to undertake the following responsibilities:

- For each individual of MFL:
 - Propagation to produce at least three clones (four including the parent plant).
 - Labelling to ensure the clone of each is traceable back to its parent plant.
 - Growth of the salvaged and propagated clones to a stage when they have recovered from salvage and are ready for translocation (determined by the amount of new growth they have produced). 120 clones will be planted into the recipient site.

4.3. Propagation at the nursery

Upon arrival at the nursery, MFL plants must be potted in soil medium that is designed for propagation of native plants. When the nursery deems it appropriate, each of the 40 MFL must be propagated and cloned (this may be immediately).

Once each clone is potted, the nursery must undertake a care regime. This will involve watering, weeding, fertilisation where necessary, repotting, and monitoring of pathogens and diseases. This will continue perpetually over the 5-year duration of this plan.

To prepare plants for planting into the recipient site, they will need to be acclimatised to outdoor conditions. This will involve the slow introduction and exposure to ambient conditions, commonly referred to as 'hardening off'. This will ensure that extra stress is not imposed on the plants when they are translocated to the recipient site. This process must only occur once an appropriate recipient site has been determined and a translocation date has been confirmed.

4.4 Indicative timeframe for salvage, propagation and translocation

The salvage of the MFL will occur in late October following acceptance of this translocation plan and when the MFL plants have started to grow. The salvage will take one day, and the plants will be transported directly to VINC nursery the same day. If required, watering will occur 1-2 days prior to the translocation.

Propagation will take place in an indigenous nursery approved by Melton City Council. Following salvage the plants will be divided where possible and planted into suitable medium and watered. The propagation

will be ongoing until the 40 plants have been created and each plant has had a chance to establish a good root network to be successfully translocated into the recipient site.

Translocation will ideally be in April-May 2027 approximately two years after the plants are salvaged. This is to ensure that the recipient site is well prepared for their translocation and to ensure adequate time for propagation of the individual MFL's.

5. Recipient site selection

5.1. Selection criteria

The following criteria were referred to in order to guide selection of potential sites:

- The recipient site must be in the same or similar EVC to the salvage site. In this case Plains Grassy Woodland (EVC 55_61) or Plains Grassland (132_61).
- The recipient site must be actively managed, meaning that the translocated plants can be monitored, threats to them can be identified, and regular weed control is conducted.
- The recipient site should have records of MFL, whether or not a population currently occurs at the site. Past records indicate that a site is potentially suitable to support MFL.
- The recipient site should be in close proximity to the salvage site.

5.2. Recipient site

The chosen recipient site is located within Lot S PS523266, Cunningham Chase in Burnside Heights (-37.73621049509984, 144.76231128609112) and is in the Melton Council local government area.

A site assessment was undertaken on 1st April 2025 to ascertain the quality and extent of native vegetation present, as well as other characteristics, to determine the suitability of the site for MFL translocation.

5.2.1. Recipient site condition

The recipient site (Photo 4) supported heavy red and brown basaltic soils on a relatively flat landscape. Where the site extends further south, towards Kororoit Creek, the topography gently dips downwards. The recipient site receives approximately 500mm of rain annually.

The recipient site has been historically managed as a grassland reserve by Melton City Council, and surrounding land supports residential developments.

Vegetation in the recipient site consisted of a variety of native grasses and herbs as well as broad-leaf herbaceous weeds. The dominant species present were native Spear Grasses *Austrostipa* spp., Kangaroo Grass *Themeda triandra*, Wallaby Grasses *Rytidosperma* spp. and Tussock Grass *Poa* spp. Shrub species Black Cotton-bush *Maireana decalvans* and Berry Saltbush *Atriplex semibaccata* were also scattered throughout.

Many of the weeds present within the recipient consisted of broadleaf herbaceous species with a handful of grass species. The dominant weeds present included Ribwort *Plantago lanceolata* and Ox-tongue *Helminthotheca echioides*, and particularly Toowoomba Canary-grass *Phalaris aquatica* in the southern half of the site (as it slopes towards the Creekline). Oat *Avena* spp. was also scattered throughout the site, as well as very small infestations of Cane Needle-grass *Nassella hyaline* and Chilean Needle-grass *Nassella neesiana*.



Photo 4: Representative photo of the recipient site, facing southeast.

[Weed cover](#)

Weed cover was low to moderate throughout and mostly comprised the aforementioned species. Table 1 below shows the prominent weed species recorded and the approximate percent covers for each.

Table 1: Prominent weed species and present covers

Common name	Scientific name	Cover (%)
Oat	<i>Avena spp.</i>	1
Twiggy Turnip	<i>Brassica fruticulosa</i>	1
Great Brome	<i>Bromus diandrus</i>	+
Spear Thistle (C)	<i>Cirsium vulgare</i>	+
Ox-tongue	<i>Helminthotheca echioides</i>	10
Cane Needle-grass	<i>Nassella hyaline</i>	+
Chilean Needle-grass	<i>Nassella neesiana</i>	+
Toowoomba Canary-grass	<i>Phalaris aquatica</i>	15

Common name	Scientific name	Cover (%)
Ribwort	<i>Plantago lanceolata</i>	7
Black Nightshade	<i>Solanum nigrum</i> s.s.	+

Pest animals

Presence of pest animals within the recipient site was minimal. Evidence of grazing from Kangaroos was observed, however management who look after the recipient site (Melton City Council) are continually aiming to push the Kangaroos further west towards the Kororoit Creek corridor.

Rubbish

Rubbish within the recipient site was moderate and mostly comprised litter, dumped household goods, and some construction materials (Photo 5). GreenLife Group, who are engaged by Melton City Council, is responsible party for collecting rubbish throughout the reserve, which they service on a 3-week basis.



Photo 5: Example of litter and general rubbish within the recipient site.

6. Translocation and recipient site management

6.1. Translocation

Translocation can take place once the MFL in the nursery have reached a stage when they are ready for translocation. This is subject to the judgment of the nursery, based on health of the plants and the amount of new growth that they have produced following propagation.

A total of 120 MFL will be translocated into the new recipient site (three clones from each parent plant). Remaining plant material will be used to create the security population at the nursery. Individuals from this population will be translocated into the recipient site to replace any of the 120 translocated plants, should they perish.

Translocation should occur in accordance with the Guidelines for the translocation of threatened plants in Australia (Commander et al.2018). Translocation also includes salvage which is detailed in the Guidelines. Translocation and ongoing maintenance must be undertaken by experienced bushland contractors approved by Melton City Council.

Prior to planting, the holes must be dug for the MFL and filled with water. The clones are to be mixed throughout the recipient holes (that is, three clones from the same parent plant should not be planted next to each other) and shouldn't be planted in the same recipient hole. Each plant should be planted at a minimum of 2 m apart and at least 5 m from any remnant MFL plant in the site. Therefore, there should be 120 separate holes for each plant propagated with the genetics mixed. Usually more than the minimum number of plants are planted on site to allow for natural attrition. However, replacement of perished plants is appropriate too.

All translocated plant must be identified with a unique metal ID tag. This tag will be securely pegged into the ground, adjacent to the relevant plant. Due to the dense matting habit of MFL and the potential for groundcovers to establish and obscure tags over time, the locations of each plant must also be recorded using a differential GPS.

6.2. Recipient site preparation

To ensure the best survival chance for translocated plants, some threats that are present at the translocation site must be managed before translocation can occur.

6.2.1. Weed control

Before translocation of MFL, weed control must occur at and adjacent to the location where they will be planted. Any high threat weeds must be controlled with appropriate methods by the land manager. It is understood that all proposed recipient sites are already managed for such species.

Before translocation, competition for MFL must be reduced by reducing cover of competitive grasses. This should primarily involve weeds, but may also include native grasses. Competition to MFL will be reduced by cutting down biomass and cover of grasses at the planting location. Control methods are to be determined by the responsible land manager, and may include small burns, slashing, hand weeding, or spraying of weeds.

6.2.2. Pest animal control

If rabbits are considered a threat at the site, then they must be managed prior to translocation. This may include warren fumigation and destruction. It may also include baiting, should the land manager determine that this is a necessary measure.

Additionally, contractors are required to incidentally monitor kangaroo activity throughout the life of this plan, to assess any herbivory pressures associated with this threat.

Fencing

To best protect MFL from herbivory pressures associated with rabbits and kangaroos, fencing must be established around the translocated plants and maintained for the first five years following their translocation. This will allow the plants to sufficiently establish and mature to a point in which they can better resist herbivory pressures.

Fencing must be constructed to the following standards to exclude these herbivory threats:

- Use chain-link (cyclone) fencing, ringlock fencing or deer mesh (also known as K wire).
- Be high-tensile, heavy galvanised wire.
- Be at least 1.8 m high.

To prevent rabbit entry via gaps at the base of the fencing, the following design must also be implemented:

- Fencing must have a secured mesh apron.
- Fencing (including the mesh apron) must be embedded into the ground.

6.3. Enhancement planting

Upon discussion with Melton City Council, herb enrichment planting will take place within the recipient site, with an aim to restore the site area to an herb-rich native grassland. This will be done in a way that will ensure no impacts to MFL occur, whilst boosting the biodiversity outcomes within the site.

6.4. Ongoing management

Management of the translocated MFL must continue for five years, to ensure successful establishment. Management will be most intense during the first six months after translocation. One year following translocation, management will occur monthly, unless more frequent management is deemed necessary by the land manager.

6.4.1. Matted Flax-lily management

A watering regime for the MFL must be adhered to throughout the 5-year monitoring period. Watering will be most intense in the months following translocation, as the plants establish their root systems. By the end of the monitoring period, watering should only be necessary if plants appear stressed or if drought occurs. Below is an indicative schedule. However, this may be modified as necessary by the responsible land manager.

- For the first six months after translocation, watering should occur on a weekly basis. However, this will only be necessary in the absence of significant rainfall.
- For 6 – 12 months after translocation, water should occur fortnightly in the absence of significant rainfall.
- For 1 – 2 years after translocation, watering should occur monthly in the absence of significant rainfall.
- For 2 – 5 years after translocation, watering should only occur when plants show signs of stress, or in drought events.

Significant rainfall is defined as >10mm within a period of 7 days.

If MFL mortality occurs at the recipient site, it must be replaced from the security population from the same parent plant. Whenever this occurs, the same watering regime as above will be implemented for that one individual.

Each time the MFL are monitored, the fencing is to be inspected, be that tree guards or permanent fencing. They must be checked for structural integrity and for any signs of breaches by herbivores.

6.4.2. Site management

Throughout the 5-year management period, all threats to the MFL must be managed. This includes weed invasion, herbivory threats, disease and any other threats that occur.

The MFL should be monitored for any signs of herbivory. If it appears that herbivory has occurred, preventative measures must be put in place to ensure it does not continue. This may include upgrades to existing tree guards, additional fencing other forms of physical protection. If herbivory is occurring due to a pest animal such as rabbits, population control should also be considered.

Weed management must occur throughout the 5-year period. Within a 5 m radius of any MFL, high threat weeds must be kept to less than 1% cover. Weeding nearby the MFL must be completed manually, to ensure they are not damaged by any chemical or mechanical weed control. In the broader recipient site, weed infestations should be monitored to ascertain any threats they pose to MFL, and controlled accordingly. It is understood that the recipient site will be managed for such threats as part of the broader ongoing management of the reserves.

7. Monitoring and reporting obligations

7.1. Schedule

Throughout the 5-year management period, monitoring must be completed by a suitably qualified person who is familiar with the biology and ecology of MFL. The proponent must contract a suitably qualified botanist to complete this work. Health, size, offspring and reproduction, and survival must be monitored. Monitoring will be most intense following translocation and gradually become less intensive. Planted material is considered established if it has survived for a period of five years (GHD 2022).

A recommended timeline for monitoring is outlined below:

- During the first month after translocation, monitoring should occur weekly.
- For months 2 – 6 after translocation, monitoring should occur monthly.
- For 6 – 24 months after translocation, monitoring should occur quarterly.
- For 2 – 5 years after translocation, monitoring should occur bi-annually.

7.2. Objectives

The objective is to have 85% of clones survive following translocation. This means that at a minimum 102 of the 120 MFL must survive. If, at the end of five years, this is the case, then MFL will be considered established at its recipient site (Commander *et al.* 2018). Another aim is that the plants are able to flower and fruit, in order to reproduce. Monitoring should also establish plant growth and levels of reproduction, as well as condition of the recipient site.

Proposed indicators for assessing the successful establishment of translocated individuals are as follows;

- Plant growth and survival
- Recruitment availability
- Competition from weeds
- Pest management
- Population growth
- Genetic diversity

7.3. Monitoring obligations

Each time monitoring is completed, the following must be recorded:

- The condition and health of each MFL, based on the following criteria:
 - Plant health (ranging from poor, moderate and good)
 - Number of inflorescences (<5, 5-10, 10-15, etc.)
 - Number of leaf tufts (<5, 5-10, 10-15, etc.)
 - Width of plant (cm) at its widest point
 - Other management notes (e.g. signs of herbivory, need for weeding, water stress, presence of fruit, etc.)
- Survival rate of the translocated MFL. If any of the translocated MFL have experienced mortality, a replacement must be made available by the nursery.

- A photo should be taken at a set photo point.
- Record any MFL recruits in the area and take their location.
- Monitor the site for any threats to the MFL such as pest animals/ plants.

Furthermore, the following points should be considered during MFL monitoring to inform environmental and management objectives:

- If there are sufficient numbers to avoid both demographic and environmental stochasticity.
- If there is evidence of reproduction and natural recruitment; and,
- If there is sufficient genetic diversity to retain its evolutionary potential to adapt to long-term environmental change.

Monitoring must occur in November or December when MFL is known to flower so that species identification can be confirmed.

7.4. Reporting

The proponent will be responsible for annual reporting to DCCEEW, Melton City Council, and Hume City Council on the population of MFL. The reporting is to be provided by the 31st of December each year, following the salvage. Monitoring must be undertaken by a suitably qualified independent botanist.

Reports must contain information on the health, reproduction, survival rates, size and growth rates of the population of MFL. It must also report on the condition of the recipient site and detail any threats present. Annual reports must include the locations of any translocated plants or clones, which should be uploaded to the Victorian Biodiversity Atlas (VBA).

8. References

Bull M 2014, *Flora of Melbourne: a guide to the indigenous plants of the greater Melbourne Area (fourth edition)*, Hyland House Publishing Pty Ltd.

Carter O 2010, *National Recovery Plan for the Matted Flax-lily *Dianella amoena**, Arthur Rylah Institute for Environmental Research, Department of Sustainability and Environment, Heidelberg, Victoria.

Commander LE, Coates D, Broadhurst L., Offord CA, Makinson RO and Matthes M 2018. *Guidelines for the translocation of threatened plants in Australia*. Third Edition. Australian Network for Plant Conservation, Canberra, Australian capital Territory.

Department of Environment, Land, Water and Planning (DELWP) 2021, *Threatened Species Assessment for *Dianella longifolia* var. *grandis* Flax-lily*, Department of Energy, Environment and Climate Action
Department of Environment, Land, Water and Planning, Melbourne, Victoria.

GHD 2022. *Matted Flax-lily: Salvage and Translocation Plan: Revision 5*. Consultant report prepared for North-east Link project. GHD, Melbourne, Victoria.

Royal Botanic Gardens Victoria (RBGV) 2023, *VicFlora*, viewed 7 January 2025, <https://vicflora.rbg.vic.gov.au/>.

Appendix 1: Table of responsibilities

Task	Responsibility
Pre-salvage identification of Matted Flax-lily locations at the salvage site.	Nature Advisory on behalf of the proponent.
Salvage procedure.	Nature Advisory on behalf of the proponent.
Propagation and cloning of salvaged Matted Flax-lily.	An indigenous nursery such as VINC on behalf of the proponent.
Establishment of a security population of Matted Flax-lily in the nursery.	An indigenous nursery such as VINC on behalf of the proponent.
Translocation of Matted Flax-lily.	Experienced bushland contractors approved by Melton City Council.
Management of recipient site.	Experienced bushland contractors approved by Melton City Council.
Management of Matted Flax-lily in recipient site.	Experienced bushland contractors approved by Melton City Council.
Monitoring of Matted Flax-lily in recipient site.	Experienced bushland contractors approved by Melton City Council.
Incidental monitoring of kangaroo activity.	Experienced bushland contractors approved by Melton City Council.
Reporting on condition of Matted Flax-lily in recipient site.	DEECA accredited botanist on behalf of the proponent.