



# 485 Cooper Street, Epping: Construction of an Industrial Estate

## EPBC Act Preliminary Documentation (EPBC 2022/09440)

Prepared for The GPT Group

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# 1. Description of Action

The proposed action – 485 Cooper Street, Epping: Construction of an Industrial Estate – is subject to an assessment via Preliminary Documentation and approval by the Minister for the Environment under the EPBC Act.

This document is the required Preliminary Documentation, and it provides more information on the project (the ‘proposed action’) and assesses its impacts on MNES. Furthermore, information is provided on avoidance, mitigation and offset measures that will be implemented as part of the project to ameliorate impacts on MNES.

## 1.1. About The GPT Group

GPT is an Australian property group that owns, manages and develops a \$32.4 billion portfolio of high-quality office, logistics and retail assets across Australia. The General Property Trust was launched as Australia’s first ever property trust when it was listed on the Australian Securities Exchange (ASX) in 1971 and now has a substantial investor base of more than 33,000 securityholders.

## 1.2. Location and Zoning of the Project

The site is located at 485 Cooper Street in Epping, Victoria. The property is approximately 16 kilometres north of Melbourne’s CBD (Figure 1). It is adjacent to the east embankment of Merri Creek and to the west of the Hume Highway.

The study area lies within the Victorian Volcanic Plain bioregion and falls within Melbourne Water catchment management area and Whittlesea local government area. It is currently zoned Industrial 1 Zone (IN1Z) and Urban Floodway Zone (UFZ) in the Whittlesea Planning Scheme.

The land to the west is zoned as Public Use-Service and Utility – Schedule 1 (PUZ1) along Merri Creek and turning back to IN1Z further west. The land to the north is zoned IN1Z, the land on the east side of the Hume Highway is zoned General Residential Zone (GRZ), and the area to the south is zoned State Transportation Infrastructure – Schedule 1 (TRZ1) and PUZ1.

The proposal to develop this property for industrial purposes is consistent with the strategic planning direction for the Hume growth corridor, which provides for additional residential areas and nearby employment activities to accommodate Melbourne’s growing population.

## 1.3. The Proposed Action

It is proposed to develop the site for industrial purposes, consistent with its designation for future ‘employment’ and ‘urban’ uses under approved regional and local strategic plans (Growth Corridor Plan, Growth Areas Authority). The proposed use is consistent with the zoning of the land as Industrial 1 Zone (IN1Z) and Urban Floodway Zone (UFZ) in the Whittlesea Planning Scheme. The intention is to develop a commercial estate within a 35-hectare property. The development is envisaged to include:

- Internal roads
- Warehouses
- Parking lots
- Stormwater treatment facilities

These design elements, plus a 7.9-hectare conservation area, are shown in the Site Plan (Appendix 8).

#### 1.4. Construction Methods and Techniques

Construction activities would include standard onsite development activities like earthworks and other ground disturbance, vegetation clearing, installation of utilities, concrete and building works.

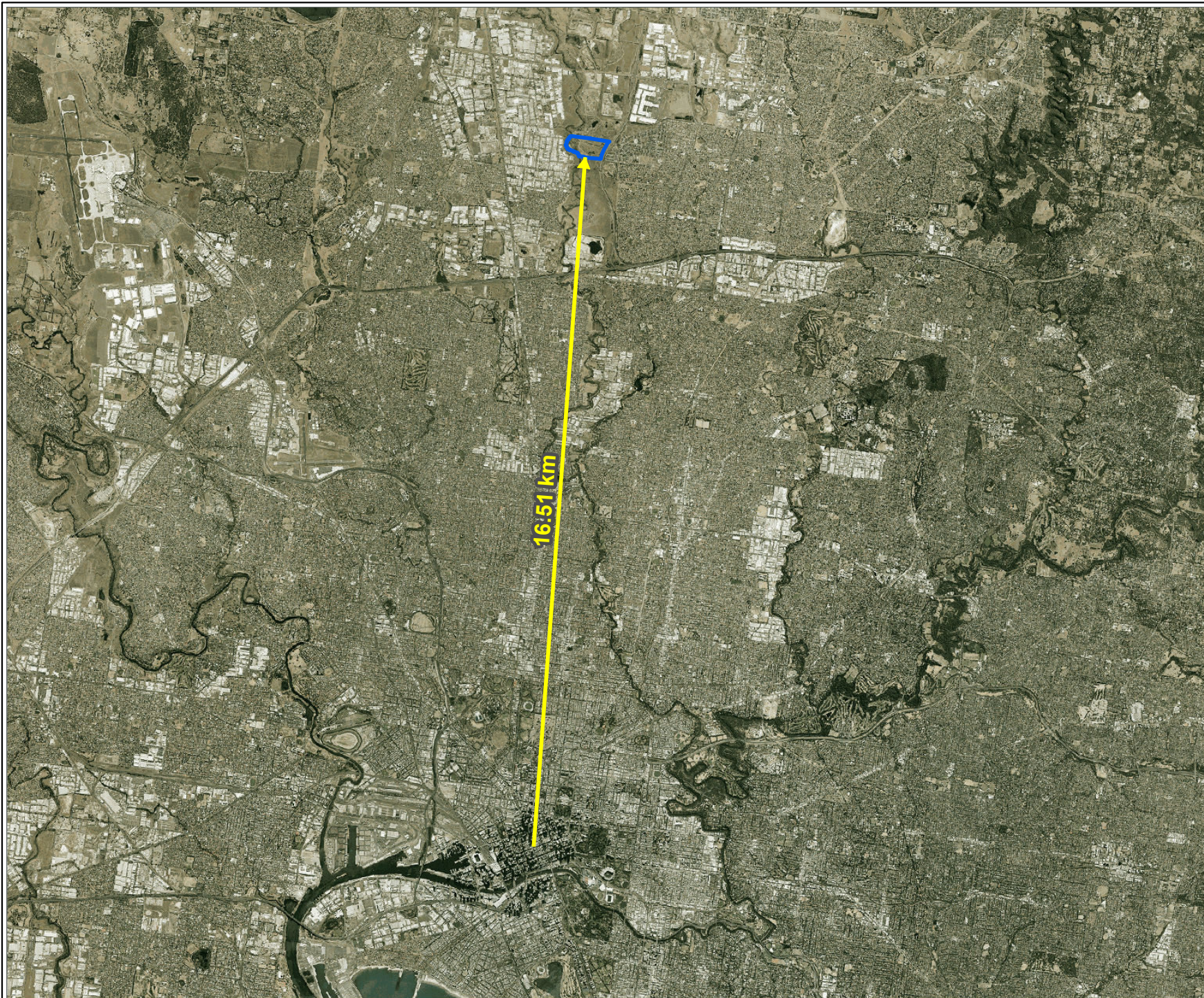
#### 1.5. Timing of the proposed action

The intended start date is June 2024 and the estimated end date is December 2026.

#### 1.6. Current status of the action

The GPT Group lodged a Referral (EPBC 2022/09440) under the EPBC Act in March 2023 for the construction of the proposed industrial estate. The presence of Matters of National Environmental Significance (MNES) on and adjacent to the site resulted in a Referral Decision making any development of the site a Controlled Action. The proposal requires further assessment via Preliminary Documentation (being this report).





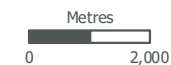
**Figure 1:** Study area location from Melbourne CBD

**Project:** 485 Cooper Street, Epping

**Client:** The GPT Group

**Date:** 14/10/2022

 Study area



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## 2. Description of the Environment and Matters of National Environmental Significance

### 2.1. Site description

The study area supported heavy basaltic soils on an undulating landscape and the western third of the site steadily slopes downward to Merri Creek which forms the western boundary of the property.

A large quarry void is situated in the north of the study area and another smaller one in the north-west.

Steep, rocky escarpments line the southern portion of the creek.

It is understood that the study area was formerly part of a golf course, although little evidence of this former use remains. It is also understood that the site has not been managed ever since, apart from regular wildfire mitigation slashing across most of the site.

Most of the vegetation in the study area is treeless open grassland, heavily dominated by introduced pasture grasses and broad-leaf weeds, particularly Toowoomba Canary-grass, Kikuyu, Cocksfoot and Chilean Needle-grass. Interspersed throughout the study area were various sized patches of native grassland vegetation dominated by indigenous Kangaroo Grass, spear and wallaby grasses and various indigenous forbs. The highest quality native grassland vegetation was in the south-east of the study area.

Other areas of native vegetation included scattered patches of degraded escarpment shrubland associated with the walls of the two quarry voids. These were generally dominated by indigenous Lightwood, Sweet Bursaria and Tree Violet, occasional emergent River Red-gum trees and introduced weeds in the ground layers.

Vegetation along Merri Creek comprised indigenous Common Reed, other native aquatics and the noxious weed Spiny Rush, with indigenous and introduced shrubs scattered along its banks (e.g. River Bottle-brush, Woolly Tea-tree and Gorse).

Escarpments along the creek supported mostly indigenous and introduced trees and shrubs (e.g. River Red-gum, Tree Violet, Sweet Bursaria, Lightwood and African Box-thorn).

Native wetland vegetation also occurred in a drainage trench and the bottoms of the two quarry voids, although it was generally small and of low quality and variously dominated by Bulrush, Common Reed, Common Spike-sedge and introduced weeds.

Planted indigenous and non-indigenous eucalypts (namely River Red-gum and Sugar Gum) were scattered throughout the study area, but were generally concentrated in the south-east.

The western quarter of the study area (sloping down to Merri Creek) was heavily dominated by a highly invasive introduced shrub – Gorse. Patches of native grassland vegetation were scattered throughout clearings in the Gorse.

Three patches of woodland dominated by River Red-gum occurred mostly in the north of the study area. The cover of native grasses varied across these areas but all had moderate diversity of native herbs.

Fauna habitat within the study area comprised vast areas of grassland along with some treed vegetation, rocky escarpments, and aquatic habitat.



## 2.2. Matters of National Environmental Significance

### 2.2.1. Listed flora species

The EPBC Protected Matters Search Tool (DAWE 2022) indicated that within the search region there were records of, or there occurred potential suitable habitat for 19 flora species listed under the Commonwealth EPBC Act. The likelihood of occurrence in the study area of species listed under the EPBC Act is addressed in Table 1.

Species considered ‘likely to occur’ are those that have a very high chance of being in the study area based on numerous records in the search region and suitable habitat in the study area. Species considered to have the ‘potential to occur’ are those for which suitable habitat exists, but recent records are scarce.

This analysis, in conjunction with the outcomes of field investigations, indicates that one flora species listed as Endangered under the EPBC Act – Matted Flax-lily – was initially considered to have the potential to occur or was likely to occur. As such, a targeted survey was undertaken for this species.

#### *Matted Flax-lily*

A targeted survey for Matted Flax-lily was conducted by a DEECA accredited botanist on 1<sup>st</sup> December 2022. The survey coincided with the flowering period for Matted Flax-lily (October to April), and timing was therefore considered to be optimal.

During the survey, areas identified to support suitable habitat for these species, namely all habitat zones containing Plains Grassy Woodland (EVC 55\_61), Heavier-soils Plains Grassland (EVC 132\_61) and Escarpment Shrubland (EVC 895), were inspected thoroughly along transects spaced five metres apart in areas to be impacted.

The survey area was traversed on foot using the following method:

- Parallel transects spaced five metres apart were traversed and visually inspected for Matted Flax-lily. This methodology is in accordance with the relevant federal guidelines for this species (DEWHA 2009a). Transects were tracked using a handheld GPS.
- Any Matted Flax-lily plants located during the survey would be marked with a handheld GPS (accuracy 1-3 m).

No individuals of Matted Flax-lily were recorded during targeted survey. Given this, along with the highly disturbed nature of the habitat present, it is now considered that Matted Flax-lily is unlikely to occur.

Further information on targeted surveys for Matted Flax-lily is provided in the flora and fauna assessment report provided at Appendix 1.

**Table 1: Flora likelihood of occurrence table in the study area**

| Common Name               | Scientific name              | EPBC       | Habitat  | Number of records | Date of last record | Likelihood of occurrence  |
|---------------------------|------------------------------|------------|--|-------------------|---------------------|---|
| River Swamp Wallaby-grass | <i>Amphibromus fluitans</i>  | Vulnerable | River Swamp Wallaby-grass grows mostly in permanent swamps but also in lagoons, billabongs, dams and roadside ditches. The species requires moderately fertile soils with some bare ground; conditions that are caused by seasonally-fluctuating water levels (DAWE 2022).                               | 4                 | 28/10/2020          | No suitable habitat in study area.<br><b>Unlikely to occur.</b>   |
| Charming Spider-orchid    | <i>Caladenia amoena</i>      | Endangered | Typically found in grassy dry forest; <i>Eucalyptus melliodora</i> (Box Ironbark) on sandy loams derived from sandstone and mudstone. Known from two localities, one at Plenty and the other at Wattle Glen (Todd 2000).   | 1                 | 22/08/1996          | No suitable habitat in study area.<br>No recent records nearby. <b>Unlikely to occur.</b>   |
| Matted Flax-lily          | <i>Dianella amoena</i>       | Endangered | Lowland grassland and grassy woodlands on well-drained to seasonally waterlogged fertile sandy loams to heavy cracking soils derived from sedimentary or volcanic Geology. It is widely distributed from eastern to south-western Victoria (DAWE 2022).  | 655               | 8/10/2020           | Although, suitable habitat was present in the study area and many recent records nearby, no individuals were recorded during targeted surveys undertaken for this investigation. The habitat present was highly disturbed.<br><b>Unlikely to occur.</b> |
| Small Golden Moths        | <i>Diuris basaltica</i>      | Endangered | Grows in herb-rich native grasslands, dominated by Kangaroo Grass ( <i>Themeda triandra</i> ) on heavy basaltic soils, often embedded with basalt boulders. All locations that the species is known to occur form part of the 'Natural Temperate Grassland of the Victorian Volcanic Plain' (DAWE 2022). | None              | N/A                 | Suitable habitat in study area but it is marginal and no recent records nearby. <b>Unlikely to occur.</b>   |
| Sunshine Diuris           | <i>Diuris fragrantissima</i> | Endangered | Native grasslands dominated by Kangaroo Grass, on heavy basalt soils, often with embedded basalt boulders. The sole remaining natural population at Sunshine occurs in a small (0.1 ha) remnant of Western (Basalt) Plains Grassland (DAWE 2022).  | None              | N/A                 | Suitable habitat in study area but it is marginal. Only known from one population near Sunshine. No recent records nearby. <b>Unlikely to occur.</b>  |

| Common Name           | Scientific name                                     | EPBC       | Habitat  | Number of records | Date of last record | Likelihood of occurrence   |
|-----------------------|---|------------|--|-------------------|---------------------|--|
| Trailing Hop-bush     | <i>Dodonaea procumbens</i>                          | Vulnerable | Grows in low lying, often winter wet areas in woodland, low open-forest heathland and grasslands on sands and clays. Largely confined to SW of Victoria (DAWE 2022).   | None              | N/A                 | Suitable habitat in study area but it is marginal and no recent records nearby. <b>Unlikely to occur.</b>  |
| Clover Glycine        | <i>Glycine latrobeana</i>                           | Vulnerable | Found across south-eastern Australia in native grasslands, dry sclerophyll forests, woodlands and low open woodlands with a grassy ground layer. In Victoria, populations occur in lowland grasslands, grassy woodlands and sometimes in grassy heath (DAWE 2022).   | 5                 | 2/10/2015           | Suitable habitat in study area but it is marginal and few recent records nearby. <b>Unlikely to occur.</b> |
| Adamson's Blown-grass | <i>Lachnagrostis adamsonii</i>                      | Endangered | Confined to slow moving creeks, swamps, flats, depressions or drainage lines that are seasonally inundated or waterlogged and usually moderately to highly saline. Appear to favour sites that have some shelter from the wind (DAWE 2022).  | 2                 | 1/01/1990           | No suitable habitat in study area. Lack of recent records. <b>Unlikely to occur.</b>                       |
| Spiny Peppercross     | <i>Lepidium aschersonii</i>                         | Vulnerable | The Spiny Peppercross occurs in periodically wet sites such as gilgai depressions and the margins of freshwater and saline marshes and shallow lakes, usually on heavy clay soil. Almost all sites receive some degree of soil waterlogging or seasonal flooding (Carter 2010).  | None              | N/A                 | Suitable habitat in study area but it is marginal. No recent records nearby. <b>Unlikely to occur.</b>     |
| Basalt Peppercross    | <i>Lepidium hyssopifolium</i> s.s.                  | Endangered | Known to establish on open, bare ground with limited competition from other plants. Previously recorded from Eucalypt woodland with a grassy ground cover, low open Casuarina woodland with a grassy ground cover and tussock grassland. Now generally found amongst exotic pasture grasses and beneath exotic trees (DAWE 2022).  | 3                 | 21/05/2018          | No suitable habitat in study area. Few recent records. <b>Unlikely to occur.</b>                           |
| White Sunray          | <i>Leucochrysum albicans</i> subsp. <i>tricolor</i> | Endangered | Occurs in a wide variety of grassland, woodland and forest habitats, generally on relatively heavy soils. Plants can be found in natural or semi-natural vegetation and grazed or ungrazed habitat. Bare ground is required for germination. The unpalatability of this species is likely to protect it in heavily grazed areas where patches of bare ground are likely to develop, favouring recruitment (DAWE 2022). | 1                 | 24/11/2016          | No suitable habitat in study area. Only one recent nearby record. <b>Unlikely to occur.</b>                |

| Common Name             | Scientific name                             | EPBC                  | Habitat  | Number of records | Date of last record | Likelihood of occurrence  |
|-------------------------|---|-----------------------|--|-------------------|---------------------|---|
| Spiny Rice-flower       | <i>Pimelea spinescens subsp. spinescens</i> | Critically Endangered | Occurs in grassland or open shrubland on basalt derived soils, usually comprising black or grey clays. Plants from more northerly populations occur on red clay complexes, while plants from southern populations occur on heavy grey-black clay loams. Topography is generally flat but populations may occur on slight rises or in slightly wettish depressions (Carter & Walsh 2006). | None              | N/A                 | Suitable habitat in study area but it is marginal and no recent records nearby. <b>Unlikely to occur.</b> |
| Round-leaf Pomaderris   | <i>Pomaderris vacciniifolia</i>             | Critically Endangered | Occurs in damp forest and herb-rich foothill forest north-east of Melbourne in the upper catchments of the Yarra, Plenty and Yea rivers (DAWE 2022).   | None              | N/A                 | No suitable habitat in study area. No recent records. <b>Unlikely to occur.</b>                           |
| Green-striped Greenhood | <i>Pterostylis chlorogramma</i>             | Vulnerable            | Occurs in mixed Box-Stringybark forest with a shrubby understorey, often with Pteridium esculentum as a major component on sandy or clay loam soils (Duncan et al. 2009).  | None              | N/A                 | No suitable habitat in study area. No recent records. <b>Unlikely to occur.</b>                           |
| Leafy Greenhood         | <i>Pterostylis cucullata</i>                | Vulnerable            | Tea-tree scrubs on tall sandy and calcareous dunes, in moist, open or even deep shaded locations (Jones 1994).   | None              | N/A                 | No suitable habitat in study area. No recent nearby records. <b>Unlikely to occur.</b>                    |
| Button Wrinklewort      | <i>Rutidosia leptorhynchoide s</i>          | Endangered            | In Victoria restricted to open stands of plains grassland and grassy woodlands, on fertile clays to clay loams, usually in areas where the grass cover is more open, either as a result of recurrent fires or grazing by native macropods or stock. It also occurs on low rises with shallow, stony soils at less than 100 m above sea level (NSW OEH 2012).                             | None              | N/A                 | Suitable habitat in study area but it is marginal and no recent records nearby. <b>Unlikely to occur.</b> |
| Large-headed Fireweed   | <i>Senecio macrocarpus</i>                  | Vulnerable            | In Victoria, Large-fruit Fireweed occurs most commonly in grasslands on red-brown earth soils. It may also occur in grassy woodlands and open woodlands predominantly in the Western (Basalt) Plains grassland on red brown earth soils found on recent Quaternary (basalt) deposits (DAWE 2022).  | None              | N/A                 | Suitable habitat in study area but it is marginal and no recent records nearby. <b>Unlikely to occur.</b> |



| Common Name       | Scientific name             | EPBC       | Habitat  | Number of records | Date of last record | Likelihood of occurrence   |
|-------------------|-----------------------------|------------|--|-------------------|---------------------|--|
| Swamp Fireweed    | <i>Senecio psilocarpus</i>  | Vulnerable | Herb-rich winter-wet swamps on volcanic clays or peaty soils (Walsh 1999). Known from approximately 10 sites between Wallan, about 45 km north of Melbourne, and Honans Scrub in south-eastern South Australia (TSSC 2008).  | None              | N/A                 | Suitable habitat in study area but it is highly degraded. No recent records nearby. <b>Unlikely to occur.</b>      |
| Swamp Everlasting | <i>Xerochrysum palustre</i> | Vulnerable | Grows in wetlands including sedge-swamps and shallow freshwater marshes, often on heavy black clay soils. Commonly associated genera include <i>Amphibromus</i> , <i>Baumea</i> , <i>Carex</i> , <i>Chorizandra</i> , <i>Craspedia</i> , <i>Eleocharis</i> , <i>Isolepis</i> , <i>Lachnagrostis</i> , <i>Lepidosperma</i> , <i>Myriophyllum</i> , <i>Phragmites australis</i> , <i>Themea triandra</i> and <i>Villarsia</i> (DAWE 2022). | 1                 | 29/11/2005          | Suitable habitat in study area but it is highly degraded. Only one recent record nearby. <b>Unlikely to occur.</b> |

### 2.2.2. Listed fauna species

The EPBC Protected Matters Search Tool (DAWE 2022) indicated that within the search region there were records of, or there occurred potential suitable habitat for 22 fauna species listed under the EPBC Act.

Nature Advisory undertook an assessment of the likelihood of occurrence of the listed fauna species as detailed in Table 2. Six fauna species were found to be likely to occur or have the potential to occur.

The following four listed fauna species have potential to occur on the site.

- Grey-headed Flying-fox (*Pteropus poliocephalus*) – **EPBC Act: Vulnerable**
- Latham's Snipe (*Gallinago hardwickii*) – **EPBC Act: Migratory**
- Swift Parrot (*Lathamus discolor*) – **EPBC Act: Critically endangered**
- White-throated Needletail (*Hirundapus caudacutus*) – **EPBC Act: Vulnerable and Migratory**

However, they are unlikely to rely on the site due to their highly mobile nature and the very limited extent and quality of suitable habitat on site compared to that present nearby. Given this, targeted surveys were not warranted for these species.

The following two listed fauna species were identified as having the potential to occur and warranted targeted surveys:

- Growling Grass Frog (*Litoria raniformis*) – **EPBC Act: Vulnerable**
- Golden Sun Moth (*Synemon plana*) **EPBC Act: Vulnerable**

Neither of these species were recorded during targeted survey. Given this, along with the highly disturbed nature of the habitat present, it is now considered that Golden Sun Moth is unlikely to occur and Growling Grass Frog is unlikely to be using the site for breeding. It is now considered that Growling Grass Frog may occasionally access the site given that this species is known to occur long Merri Creek which is located on the western boundary of the study area.

Further information on targeted surveys for Golden Sun Moth and Growling Grass Frog is provided in the flora and fauna assessment report provided at Appendix 1. A separate targeted surveys for Growling Grass Frog was undertaken by Ecolink and is provided at Appendix 2.

In addition, the following listed fauna species is included for further consideration at the request of DCCEEW despite being determined as being unlikely to occur by experienced field ecologists.

- Striped Legless Lizard (*Delma impar*) – **EPBC Act: Vulnerable**

A targeted survey for this species was undertaken between August and December 2023. Striped Legless Lizard was not detected during the targeted survey. Therefore, it is now considered unlikely to occur. Further information on the targeted survey for Striped Legless Lizard is provided in Section 4.2.3.

Table 2. Fauna likelihood of occurrence in the study area

| Common Name              | Scientific name                    | EPBC-T | EPBC-M                    | Habitat  | Number of records | Date of last record | Likelihood of occurrence  |
|--------------------------|------------------------------------|--------|---------------------------|--|-------------------|---------------------|---|
| Australasian Bittern     | <i>Botaurus poiciloptilus</i>      | EN     |                           | Terrestrial wetlands, including a range of wetland types but prefers permanent water bodies with tall dense vegetation, particularly those dominated by sedges, rush, reeds or cutting grass (Marchant & Higgins 1990).  | 3                 | 20/12/1986          | Marginal habitat in study area and no recent records – <b>unlikely to occur</b>   |
| Double-banded Plover     | <i>Charadrius bicinctus</i>        |        | M (Bonn A2H)              | Inhabits wide range of coastal or inland wetlands with varying levels of salinity; mainly muddy margins or rocky shores of wetlands (Marchant & Higgins 1993).   | 1                 | 10/04/2004          | No suitable habitat in study area – <b>unlikely to occur</b>  |
| Eastern Barred Bandicoot | <i>Perameles gunnii</i>            | VU     |                           | The habitat of the Eastern Barred Bandicoot (mainland) is perennial tussock grassland and eucalypt woodland with a grassy ground layer (Dufty 1994b; Seebeck 1995a, 2001). Drainage lines and areas of high vegetative cover have been identified as prime habitat. The key determining factor for persistence of this species appears to be high structural complexity and heterogeneity within the environment, reflected in its absence from agricultural areas but persistence in rubbish dumps and other variable habitats. | 2                 | 5/06/2003           | Long extinct in the Port Phillip region – <b>very unlikely to occur</b>   |
| Eastern Quoll            | <i>Dasyurus viverrinus</i>         | EN     |                           | Probably extinct in mainland Australia. Inhabits a range of open forest, scrubland and heath (Menkhorst 1995).   | 4                 | 1/01/1910           | Long extinct in the Port Phillip region – <b>very unlikely to occur</b>   |
| Eltham Copper Butterfly  | <i>Paralucia pyrodiscus lucida</i> | EN     |                           | Its occurrence is dependent upon a close association between a dwarfed form of the Sweet Bursaria and colonies of a Notoncus sp. of ant, with the species unable to survive without the presence of the Notoncus ant (SWIFFT 2019). In the Eltham area of its range, this Butterfly appears to require well-drained gentle slopes, with a north to west aspect. Its known habitat is sparse dry woodland (Webster 2003).   | 1                 | 1/01/1922           | No suitable habitat in study area – <b>unlikely to occur</b>  |
| Fork-tailed Swift        | <i>Apus pacificus</i>              |        | M (CAMBA, ROKAMBA, JAMBA) | The species can occur in wet sclerophyll forest but mainly prefers open forest or plains. It is almost exclusively aerial and feeds up to hundreds on metres above the ground, but can feed among open forest canopy. The species breeds internationally and seldom roosts in trees (Higgins 1999).  | 3                 | 22/12/2006          | No suitable habitat in study area – <b>unlikely to occur</b>  |
| Glossy Ibis              | <i>Plegadis falcinellus</i>        |        | M (Bonn A2S)              | Prefer freshwater inland wetlands, in particular, permanent or ephemeral water bodies and swamps with abundant vegetation (Marchant & Higgins 1990).   | 4                 | 28/12/2006          | Marginal habitat in study area – <b>unlikely to occur</b>   |
| Golden Sun Moth          | <i>Synemon plana</i>               | VU     |                           | Areas that are, or have been native grasslands or grassy woodlands. It is known to inhabit degraded grasslands with introduced grasses being dominant, with a preference for the native wallaby grass being present (DEWHA 2009). Also known to be closely associated with exotic grass species, with populations found in grassland almost entirely composed of Chilean needlegrass (Richter et al. 2013).  | 3968              | 20/12/2019          | Although, suitable grassland habitat exists in the study area and numerous recent records were found within the search region, no individuals were detected during targeted surveys. Study area is highly disturbed with lots of soil movement – <b>unlikely to occur</b> |
| Grassland Earless Dragon | <i>Tympanocryptis pinguicollis</i> | EN     |                           | The species is confined to native tussock grassland on basalt plains north and west of Melbourne, with no confirmed sightings in Victoria since the 1960's (Robertson & Cooper 2000).  | None              | N/A                 | No records – <b>unlikely to occur</b>   |
| Grey-headed Flying-fox   | <i>Pteropus poliocephalus</i>      | VU     |                           | Brisbane, Newcastle, Sydney and Melbourne are occupied continuously. Elsewhere, during spring, they are uncommon south of Nowra and widespread in other areas of their range. Roosts in aggregations of various sizes on exposed branches. Roost sites are typically located near water, such as lakes, rivers or the coast. Roost vegetation includes rainforest patches, stands of Melaleuca, mangroves and riparian vegetation, but colonies also use highly modified vegetation in urban and suburban areas (DAWE 2022).     | 18                | 18/02/2020          | May occasionally forage in eucalypts in study area – <b>potential to occur</b>  |

| Common Name            | Scientific name                     | EPBC-T | EPBC-M                              | Habitat  | Number of records | Date of last record | Likelihood of occurrence  |
|------------------------|-------------------------------------|--------|-------------------------------------|--|-------------------|---------------------|---|
| Growling Grass Frog    | <i>Litoria raniformis</i>           | VU     |                                     | Permanent, still or slow flowing water with fringing and emergent vegetation in streams, swamps, lagoons and artificial wetlands such as farm dams and abandoned quarries (Clemann & Gillespie 2004).  | 277               | 31/12/2019          | Although, suitable wetland habitat exists in the study area and numerous recent records were found within the search region, no individuals were detected during targeted surveys by two independent ecological consultancies. Unlikely to use the study area for breeding - <b>Potential to occur</b>  |
| Latham's Snipe         | <i>Gallinago hardwickii</i>         |        | M (Bonn A2H, ROKAMBA, JAMBA, CAMBA) | Occurs in wide variety of permanent and ephemeral wetlands; it prefers open freshwater wetlands with dense cover nearby, such as the edges of rivers and creeks, bogs, swamps, waterholes. The species is wide spread in southeast Australia and most of its population occurs in Victoria, except in the northwest of the state (Naarding 1983; Higgins & Davies 1996).   | 90                | 28/02/2019          | Suitable wetland habitat in study area and numerous recent records – <b>likely to occur</b>   |
| Painted Honeyeater     | <i>Grantiella picta</i>             | VU     |                                     | Inhabits box-ironbark forests and woodlands and mainly feeds on the fruits of mistletoe. Strongly associated with mistletoe around the margins of open forests and woodlands. Can also be found in farmland containing remnant treed vegetation. Occurs at few localities. Uncommon breeding migrant from further north, arriving in October and leaving in February (Higgins et al. 2001; Tzaros 2005).   | 1                 | 21/12/1990          | No suitable habitat in study area – <b>unlikely to occur</b>  |
| Plains-wanderer        | <i>Pedionomus torquatus</i>         | CR     |                                     | This species is highly sensitive to changes in grassland cover and density. Typically inhabits treeless native grasslands with sparse cover, with a preference for grasslands composed of wallaby grass and spear grass (Marchant & Higgins 1993). Habitat becomes unsuitable when grassland becomes dense (CA 2016). Evidence suggests it avoids areas of tree cover, with no records of the species within 300m of trees (>10m high) in their strongholds in New South Wales or Victoria (CA 2016).  | 8                 | 23/09/1991          | No suitable habitat in study area – <b>unlikely to occur</b>  |
| Regent Honeyeater      | <i>Anthochaera phrygia</i>          | CR     |                                     | Inhabits dry box-ironbark eucalypt forests near rivers and creeks on inland slopes of the Great Dividing Range. Can also occur in small remnant patches or in mature trees in farmland or partly cleared agricultural land (Higgins et al. 2001).  | 9                 | 16/01/2001          | No suitable habitat in study area – <b>unlikely to occur</b>  |
| Rufous Fantail         | <i>Rhipidura rufifrons</i>          |        | M (Bonn A2H)                        | In east and south-east Australia, mainly inhabits tall wet sclerophyll forests, often in gullies. When on passage in warmer months, they are sometimes recorded in drier sclerophyll forests and woodlands, as well as parks and gardens (Higgins et al. 2006). Virtually absent from south-eastern Australia during winter (Higgins et al. 2006).   | 5                 | 27/03/2008          | No suitable habitat in study area – <b>unlikely to occur</b>  |
| Satin Flycatcher       | <i>Myiagra cyanoleuca</i>           |        | M (Bonn A2H)                        | Mostly found in eucalypt forest, particularly tall wet forests and woodland within gullies (Higgins et al. 2006). Also inhabits eucalypt woodland comprising an open understorey and a grassy ground layer (Higgins et al. 2006). Generally absent from rainforest (Higgins et al. 2006).  | 3                 | 17/01/1989          | No suitable habitat in study area – <b>unlikely to occur</b>  |
| Spot-tailed Quoll      | <i>Dasyurus maculatus maculatus</i> | EN     |                                     | Rainforest, wet and dry forest, coastal heath and scrub and River Red-gum woodlands along inland rivers (Menkhorst 1995).  | 2                 | 1/01/1910           | No suitable habitat in study area – <b>unlikely to occur</b>  |
| Striped Legless Lizard | <i>Delma impar</i>                  | VU     |                                     | Grassland specialist. Known to occur in some areas dominated by introduced species such as Harding Grass <i>Phalaris aquatica</i> , Serated Tussock <i>Nasella trichotoma</i> and Flatweed <i>Hypochaeris radicata</i> and at sites with a history of grazing and pasture improvement. shelter in grass tussocks, thick ground cover, soil cracks, under rocks, spider burrows, and under ground debris such as timber. The majority of sites in Victoria and NSW occur on cracking clay soils with some surface rock which provide shelter for the species (DAWE 2022). | 3                 | 4/03/1990           | Suitable habitat for the species occurs on site. However, records in the search area are more than 30 years old and from the Craigieburn Grassland Reserve, which is not connected to this site. Site highly disturbed with a long history of being regularly slashed. Targeted surveys failed to detect this species. - <b>Unlikely to occur</b> |



| Common Name               | Scientific name              | EPBC-T | EPBC-M                    | Habitat  | Number of records | Date of last record | Likelihood of occurrence  |
|---------------------------|------------------------------|--------|---------------------------|--|-------------------|---------------------|---|
| Superb Parrot             | <i>Polytelis swainsonii</i>  | VU     |                           | Occurs in eucalypt dominated forests and woodlands, namely comprised of River Red-gum, Yellow Box and Grey Box, with seasonal occurrences in box-pine and Boree woodland (Baker-Gabb 2011). The species range extends along major riverine systems and the inland slopes of the Great Divide, stretching from central Victoria to north of Tamworth in NSW. Breeds in hollow branch or trunk of tall eucalypts within 9 km of feeding areas. Mostly feeds in box woodlands and wooded farmlands; less often in riparian forests (Higgins 1999).  | 1                 | 1/01/1930           | No suitable habitat in study area – <b>unlikely to occur</b>  |
| Swift Parrot              | <i>Lathamus discolor</i>     | CR     |                           | Prefers a select range of eucalypts in Victoria, including Yellow Gum, Grey Box, White Box, Red Ironbark and Yellow Box, as well as River Red-gum when this species supports abundant 'lerp' (Saunders & Tzaros 2011). The species is also known to forage within planted stands of Spotted Gum and Sugar Gum (Nature Advisory; unpublished data). Breeds in Tasmania and migrates to the mainland of Australia for the autumn, winter and early spring months. It lives mostly north of the Great Dividing Range, passing through two areas of Victoria on migration: the Port Phillip district and Gippsland (Emison et al. 1987; Higgins 1999; Kennedy & Tzaros 2005). Though it is also not uncommonly sighted in urban areas (Nature Advisory; unpublished data). Occurrence of this species on the mainland can substantially change from year to year depending on food availability, giving potential for this species to occur almost anywhere throughout its range (Emison et al. 1987). | 72                | 7/04/2019           | May occasionally forage in eucalypts in study area – <b>potential to occur</b>                          |
| White-throated Needletail | <i>Hirundapus caudacutus</i> | VU     | M (CAMBA, ROKAMBA, JAMBA) | Aerial, over all habitats, but probably more over wooded areas, including open forest and rainforest. Often over heathland and less often above treeless areas such as grassland and swamps or farmland (Higgins 1999).  | 11                | 25/01/2019          | Highly mobile aerial species that can occur over most habitats – <b>potential to occur as a flyover</b> |

**Notes:** EPBC-T = threatened species status under EPBC Act (EX = presumed extinct in the wild; CR = critically endangered; EN = endangered; VU = vulnerable); EPBC-M: migratory status under the EPBC Act (M = listed migratory taxa; Bonn Convention (A2H) - Convention on the Conservation of Migratory Species of Wild Animals – listed as a member of a family; Bonn Convention (A2S) - Convention on the Conservation of Migratory Species of Wild Animals - species listed explicitly; CAMBA - China- Australia Migratory Birds Agreement; JAMBA - Japan-Australia Migratory Birds Agreement; ROKAMBA - Republic of Korea Australia Migratory Birds Agreement).

### **2.2.3. Listed ecological communities**

The study area was assessed against published descriptions of relevant listed ecological communities modelled to potentially occur in the study area. Reviewed ecological community descriptions comprised identification criteria and condition thresholds from listing advice for EPBC Act communities.

Two ecological communities listed under the EPBC Act were initially considered to occur within the proposed development site and these were documented in the EPBC Act Referral – Natural Temperate Grassland of the Victorian Volcanic Plain and Grassy Eucalypt Woodland of the Victorian Volcanic Plain.

However, after a peer review by another ecological consultancy (EcoLink) it was agreed that only Natural Temperate Grassland of the Victorian Volcanic Plain was present.

#### *Natural Temperate Grassland of the Victorian Volcanic Plain*

Vegetation within Habitat Zones A, B, D, E, F & P of the study area were found to qualify as the EPBC Act listed community, Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP). A total of 2.164 hectares of this community in the form of Plains Grassland (EVC 132\_61) was recorded in the study area and found to have a condition score ranging from 27-39 (Appendix 1).

The study area and native vegetation (including listed ecological communities) is shown in Figure 2.



**Figure 2: Study area and native vegetation**

**Project:** 485 Cooper Street, Epping


**Client:** The GPT Group

**Date:** 4/12/2023


- ▭ Study area
- EPBC Act listed community**
- ▭ NTGVVP
- Native vegetation**
- ▨ Escarpment Shrubland (EVC 895)
- ▨ Plains Grassland - Heavier-soils (EVC 132\_61)
- ▨ Plains Grassy Wetland (EVC 125)
- ▨ Plains Grassy Woodland (EVC 55)
- ▨ Riparian Woodland (EVC 641)
- ▨ Tall Marsh (EVC 821)
- Large tree in patch
- Small scattered tree
- Small tree in patch




N



Metres



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## 3. Relevant Impacts

The impacts of the project on MNES are described below and shown in Figure 3.

### 3.1. Flora of National Environmental Significance

#### 3.1.1. *Matted Flax-lily*

The EPBC Protected Matters Search Tool (DAWE 2022) indicated that within the search region there were records of, or there occurred potential suitable habitat for 19 flora species listed under the Commonwealth EPBC Act. The likelihood of occurrence in the study area of species listed under the EPBC Act is addressed in Table 1. This analysis of the likelihood of occurrence, in conjunction with the outcomes of field investigations, indicated that one flora species listed as Endangered under the EPBC Act – Matted Flax-lily – was initially considered to have the potential to occur or was likely to occur. As such, a targeted survey was undertaken for this species.

No individuals of Matted Flax-lily were recorded during targeted survey. Given this, along with the highly disturbed nature of the habitat present, it is now considered that Matted Flax-lily is unlikely to occur.

Further information on targeted surveys for Matted Flax-lily is provided in the flora and fauna assessment report provided at Appendix 1.

As such, no flora species of national environmental significance is likely to be impacted or significantly impacted by the proposed action. Impacts to listed flora species are not considered further in this report.

### 3.2. Fauna of National Environmental Significance

#### 3.2.1. *Grey-headed Flying-fox*

Grey-headed Flying-foxes may fly into the study area as they forage for nectar-bearing flowers and fruit and may feed from the planted and non-planted eucalypts present when they flower. However, there are only a limited number of such eucalypts in the study area, so the species is unlikely to use the study area heavily and is therefore unlikely to be impacted or significantly impacted by future development of the site given an abundance of similar habitat nearby (Nature Advisory 2022).

#### 3.2.2. *Latham's Snipe*

Latham's Snipe forages on heavily vegetated fringes of wetlands and drainage lines, so this migratory species may seasonally use such aquatic habitat in the study area. However, such habitat is limited in occurrence within the study area and is of varying quality for this species. Therefore, development of the site is unlikely to impact or significantly impact this species given the presence of similar habitat nearby (Nature Advisory 2022).

#### 3.2.3. *Swift Parrot*

Swift Parrots may occasionally forage on planted Sugar Gums and River Red-gums in the study area during their winter migrations through southeast Australia. However, these are not preferred food tree species, and would only serve as short foraging stops along the way from their breeding grounds in Tasmania to the box-ironbark woodlands of central Victoria and the Spotted Gum forests of southeast NSW. Therefore, it is unlikely that development of the site would impact or significantly impact this species given the presence of similar habitat nearby (Nature Advisory 2022).















#### 3.2.1. *White-throated Needletail*

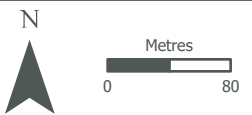
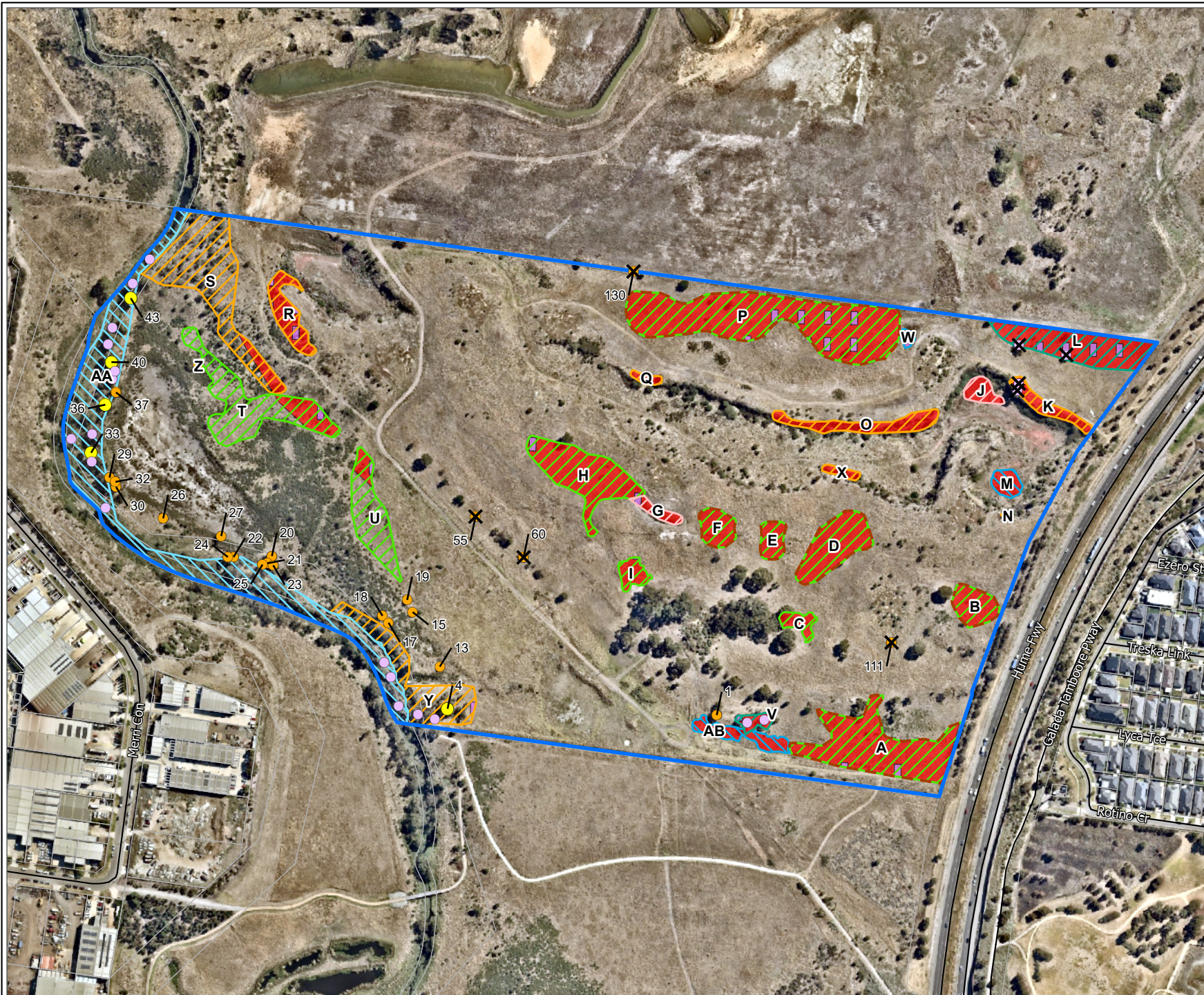
White-throated Needletails are aerial specialists who may forage above the study area occasionally but would not make direct use of the habitat there. They are therefore very unlikely to be impacted or significantly impacted by any future development of the study area (Nature Advisory 2022).



**Figure 3: Native vegetation to be removed**

**Project:** 485 Cooper Street, Epping  
**Client:** The GPT Group  
**Date:** 4/12/2023

-  Study area
- EPBC Act listed community**
-  NTGVVP
- Native vegetation**
-  Escarpment Shrubland (EVC 895)
-  Plains Grassland - Heavier-soils (EVC 132\_61)
-  Plains Grassy Wetland (EVC 125)
-  Plains Grassy Woodland (EVC 55)
-  Riparian Woodland (EVC 641)
-  Tall Marsh (EVC 821)
-  Large tree in patch
-  Small scattered tree
-  Small tree in patch (Arborist mapped)
-  Tree to be removed
-  Native vegetation proposed to be removed
-  Native vegetation approved to be removed



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### 3.2.2. Golden Sun Moth

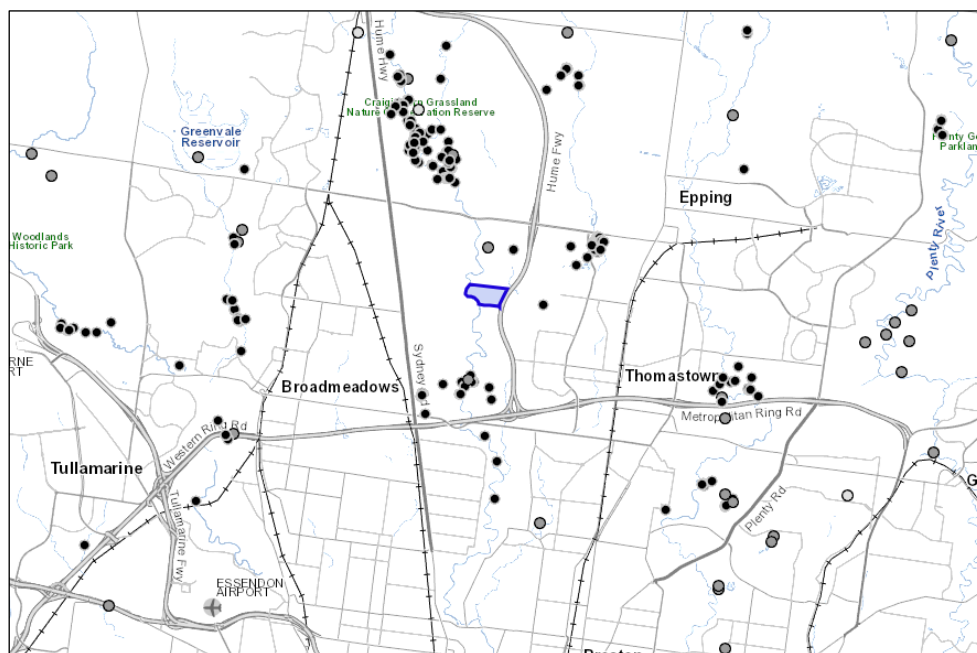
Golden Sun Moth was not detected during targeted surveys and is considered unlikely to occur due to the small size of the habitat present, the fragmentation of that habitat and a history of soil disturbance in the study area (Nature Advisory 2022). Additional information on targeted surveys undertaken for Golden Sun Moth is outlined in Appendix 1.

Therefore, it is unlikely that development of the site would impact or significantly impact this species (Nature Advisory 2022).

### 3.2.3. Growling Grass Frog

#### Landscape context

Records of Growling Grass Frog in the area were obtained from the Victorian Biodiversity Atlas (DEECA 2023). The Merri Creek is suitable habitat for GGF and shares connectivity with the study area. In the last 10 years, fifty-five records were found along Merri Creek within 5km of the study area. There are no records of GGF from the study area (Figure 4).



**Figure 4: VBA Records of Growling Grass Frog surrounding the study area (Source: NatureKit (DEECA 2023a))**

During the current investigation, two sites within the study area were identified as potential habitat for GGF and subject to targeted surveys in February 2023 (Nature Advisory) and November 2023 (Ecolink). No GGF were recorded in the study area during these two independent targeted surveys. Therefore, it is unlikely GGF regularly use the study area for breeding (Nature Advisory 2023, Ecolink 2023).

The site is not mapped as an Area of Strategic Importance under the Melbourne Strategic Assessment's Growling Grass Frog Masterplan for Melbourne's Growth Corridors (DELWP 2017c). However, the Sub-regional Species Strategy for the Growling Grass Frog does identify the Merri Creek adjoining the study area as "potentially important habitat outside urban expansion areas" (DEE 2013).

Notwithstanding the above, as a conservative approach the project has considered GGF may potentially occur occasionally on site in the future.

Further details about the targeted surveys for GGF and outcomes are provided in Appendix 1 and Appendix 2.



Clusters of observations of GGF show local populations may be inhabiting core habitat within Craigieburn Grassland Reserve, upstream of Merri Creek from the study area, as well as downstream south of Merri Creek Park. Given the site sits on the east embankment of Merri Creek, between the forementioned populations, it may act as part of an important corridor. The riparian habitat that constitutes this corridor will not be impacted by construction related impacts and will be retained and enhanced. Therefore, no long-term impacts are expected as a result of the proposed development activities.

#### *Direct impacts*

No direct impacts are likely in relation to Growling Grass Frog due to the species not being recorded on site, nearest record dating from 2005, and due to potential habitats along Merri Creek being retained. Suitable habitats proposed for removal are small ponds isolated from Merri Creek where the species was not recorded during targeted surveys.

#### *Indirect impacts*

The proposed conservation area will retain habitat for Growling Grass Frog and provide an adequate buffer from development to reduce the potential of indirect detrimental impacts. However, as the species may occur occasionally, some impacts may be possible.

Any risks to GGF arising from construction activities will be mitigated through management strategies as outlined in the Conservation Management Plan and Construction Environmental Management Plan. This is further discussed in Section 4.2.

With reference to the Victoria State Government's Growling Grass Frog Habitat Design Standards (2017) document, relevant 'threatening processes' due to development (downstream) affecting Growling Grass Frogs include the following:

- "Changed hydrological regimes including timing, frequency, volume and speed of flows;
- Poor water quality including nutrients, turbidity (cloudiness caused by suspended particles), pesticides, detergents and heavy metals. High levels of nutrients cause eutrophication (dense growth of algae and plants) which results in lowered dissolved oxygen levels that do not support tadpoles (Hamer et al. 2004);"

The impact of these threatening processes is mitigated by the proposed stormwater management plan (Appendix 11\_Stormwater Mgt Plan), summarised below.

A stormwater management strategy for the development has been developed which provides a best practice solution within the constraints of the existing landform and proposed development layout. Within this strategy a stormwater quantity- and quality management strategy has been developed to reduce pollutant loads in stormwater runoff (QUALITY) discharging from the development site into the downstream Merri Creek as well as limit the peak runoff flows (QUANTITY) from the site to Merri Creek to be the same or less than the pre-development peak flows. The stormwater management for the development has been designed in accordance with Whittlesea City Council and Melbourne Water WSUD requirements. This strategy would therefore appropriately reduce any impacts the development might have on the downstream receiving waters and potential Growling Grass Frog habitats.

#### *During Construction – Erosion and Sediment Control:*

- Without any mitigation measures and during typical construction activities, site runoff would be expected to convey a significant sediment load. A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP), or equivalent, will be implemented for the construction of the Proposal.
- The SWMP and ESCPs will be developed in accordance with the principles and requirements of EPA publication 1834 - Civil construction, building and demolition guide Management During Construction

(2020), Melbourne Water Land Development Manual – Site Management Plans, IECA Best Practice Erosion and Sediment Control Document (The White Book) and Whittlesea Council requirements with a staged approach.

- During the construction phase, measures will be designed to ensure the downstream drainage system and receiving waters are protected from sediment laden runoff.
- Erosion and Sediment Control Plans include the provision of Temporary Sediment Basins, Sediment Fences and Diversion Drains and Construction Entries at the access point into the site.

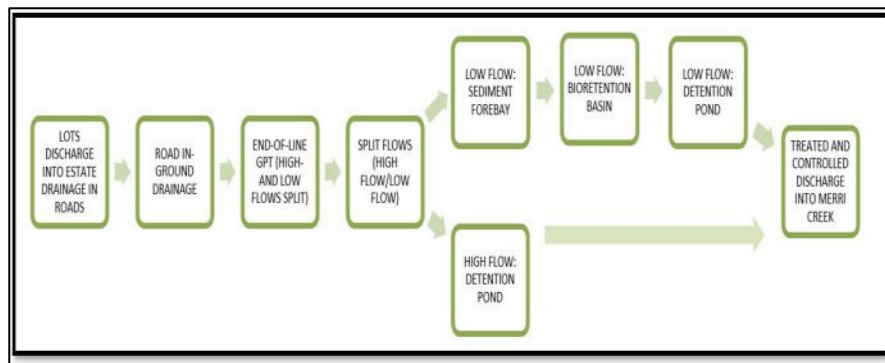
#### *Quantity & Velocity Impacts:*

- Whittlesea City Council adopts the principles of water quantity management, also known as “On-site Detention (OSD)”, to ensure the cumulative effect of development does not have a detrimental effect on the downstream watercourses located within their LGA downstream from the development site. A hydrological analysis was undertaken to estimate the impact of the development of the site on peak flows at the downstream extent of the site. Modelling of stormwater runoff quantity was considered for the pre-existing case and for the operational phase of the development. DRAINS modelling software has been used to assess the site detention discharge and storage relationship.
- The hydrological assessment (modelling by Costin Roe) proves local post development flows from the site will be limited to be equal to or less than pre-development flows and demonstrates that the site discharge will not adversely affect any land, drainage system or watercourse because of the development.
- Provision of an appropriately sized detention pond and a discharge control structure to limit the post-development flows to the pre-development flows discharging from the detention basin to Merri Creek.

#### *Quality Impacts:*

- The City of Whittlesea’s Water Sensitive Urban Design Guidelines requires that certain load-based pollution reduction targets on stormwater runoff (comparison between pre- and post-developed conditions) are met to minimise the adverse impact these pollutants could have on downstream receiving waters.
- During the operational phase of the development, a treatment train incorporating the use of a proprietary GPT’s, sediment forebays and bio-retention raingarden system is proposed to mitigate any increase in stormwater pollutant load generated by the development. MUSIC modelling results indicate that the proposed STM are effective in reducing pollutant loads in stormwater discharging from the site and meet the requirements of Council’s pollution reduction targets. Best management practices have been applied to the development to ensure that the quality of stormwater runoff is not detrimental to the receiving environment.
- Developed impervious areas including roof, hardstand, car parking, roads and other extensive impervious areas are required to be treated by the Stormwater Treatment Measures (STM’s). The STM’s shall be sized according to the whole catchment area of the development. The STM’s for the development shall be based on a treatment train approach to ensure that all the objectives above are met prior to discharge into the downstream receiving water body (Merri Creek).
- Components of the treatment train for the development are as follows:
- Primary treatment to each catchment is via an end-of-line vortech type GPT (Rocla CDS, OceanSave or similar approved) prior to discharging into a sediment forebay prior to the bioretention basins. Pre-treatment of the stormwater will assist in mitigating the potential for early onset sedimentation of the bio-retention systems;

- Sediment forebays will be provided prior to runoff from lots and roadway drainage into bio-retention systems.
- Tertiary treatment to the catchment will be provided by bio-retention system within the proposed estate detention system as shown in the schematic diagram below.



A detailed technical Stormwater Management Plan by Costin Roe is provided as an attachment (see Appendix 11\_Stormwater Mgt Plan).

Given the foregoing, significant impacts on Growling Grass Frog are unlikely.

### 3.2.4. Striped Legless Lizard

#### Landscape context

The closest historical records date back to the late 1980’s and early 1990’s and are located approximately 1 to 6 kilometres north. The next closest record lies approximately 10.8 kilometres southwest within the Tullamarine Linear Reserve and was recorded in 2011 (Figure 5).

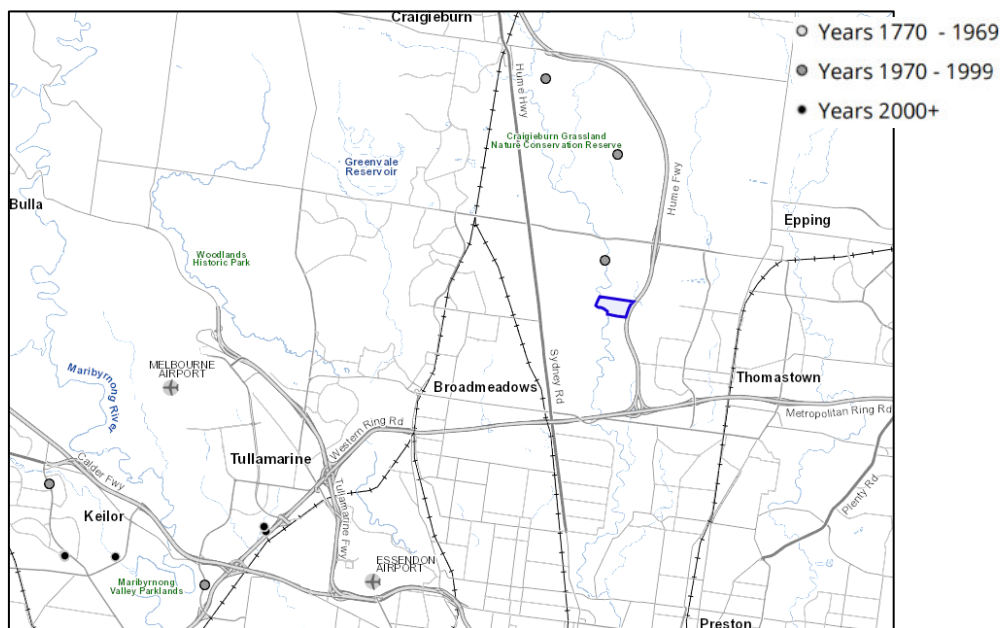
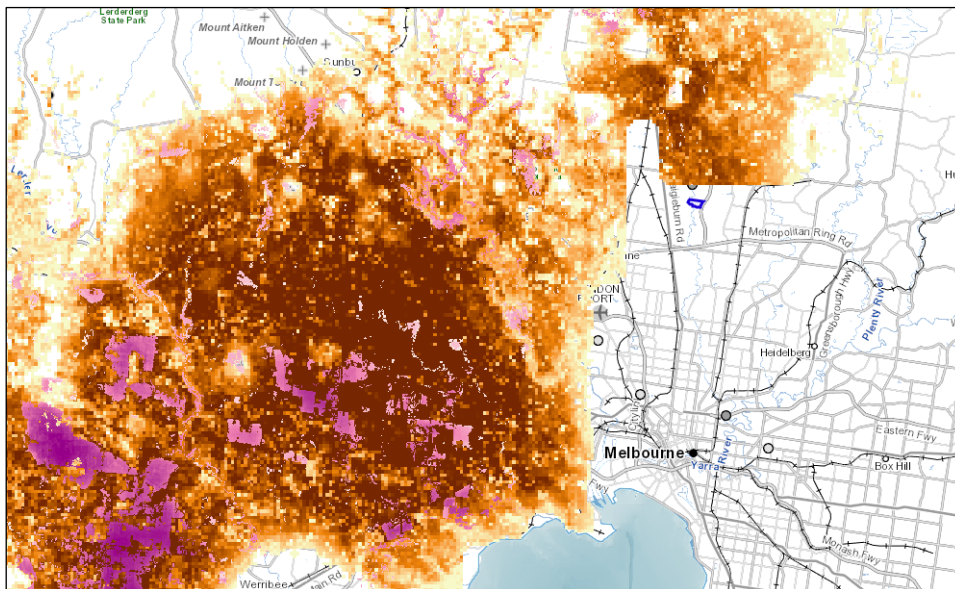


Figure 5: VBA Records of Striped Legless Lizard surrounding the study area (Source: NatureKit (DEECA 2023a))

Habitat Distribution and Habitat Importance Modelling, administered by DEECA, was consulted to gain an understanding of where Striped Legless Lizard may occur and which areas may provide significant areas of habitat. Both models indicated that the study area did not overlap with the current expected distribution nor any areas of key habitat for the species (Figure 6).





**Figure 6: Habitat Distribution Models and Habitat Importance Models for Striped Legless Lizard (Source: NatureKit (DEECA 2023a))**

Patches of suitable habitat, namely Plains Grassland and possibly Plains Grassy Woodland, were scattered throughout the study area. These areas were generally isolated from any potential core habitat outside the study area, namely within Merri Creek Park.

Areas of habitat where observations of the species were recorded are a significant distance from the study area and separated by dense urban and commercial development, as well as infrastructure.

In the initial flora and fauna assessment (Nature Advisory 2022), Striped Legless Lizard was determined as unlikely to occur on site due to lack of records, as well as lack suitable habitat on site or connectivity to areas of habitat surrounding the study area. Additionally, the site is known to have had a history of soil disturbance and was regularly mown for many years when used as a golf course. It remains regularly mown for fire management reasons. Striped Legless Lizard does not survive regular mowing (Dr. Megan O'Shea, Victoria University, Pers. Comm.).

Targeted surveys were undertaken between August and December 2023. This investigation was commissioned to provide information on the presence or otherwise of threatened Striped Legless Lizard in the study area and outline any implications under various national, state and local legislation and policy. The survey involved:

- A total of ten tile grids were set up in areas of suitable habitat within the study area on the 27th and 28th June 2023. In each grid, 50 grooved terracotta or concrete roof tiles were placed in a 20 x 45 metre grid configuration, with tiles spaced five metres apart. The north-west corner of the grid was recorded using a handheld GPS. The location of tile grids is shown in Appendix 6\_Location tile grids 231207.
- Surveys were undertaken when weather conditions were appropriate to detect Stiped Legless Lizard i.e. when the lizards are using the tiles to the thermoregulate. At the beginning of each tile grid check, the ambient temperature and humidity was recorded as well as the temperature and humidity under a sample tile. Tiles were not checked if temperatures under tiles reached 25°C. Under these conditions, Stiped Legless Lizard are more likely to be using the tiles to thermoregulate, any hotter and the lizards are more likely to be foraging in the grassland.
- The tile grid surveys were undertaken in spring to early summer (September to early December) as the Striped Legless Lizard is unlikely to continue to utilise the tiles outside of this time. Tiles were

checked once a week to once a fortnight for the presence of Striped Legless Lizard by an experienced zoologist. A total of seven replicate tile checks were undertaken.

- At each tile grid check, all 50 tiles were turned and searched for Striped Legless Lizard. All species of small mammals, reptiles and frogs were recorded. All threatened species locations were recorded.
- Tile-checks for Striped Legless Lizard using them as shelter, twice a month (8 checks total).

No Striped Legless Lizard were recorded in the study area during targeted surveying. A total of seven other species, comprising Spotted Marsh Frog, Striped Marsh Frog, Eastern Banjo Frog, Eastern Common Froglet, Eastern Brown Snake, Little Whip Snake and Garden Skink were recorded within the study area.

Additionally, previous records of Striped Legless Lizard within the broader search region are historical and isolated from the study area. Therefore, it is unlikely Striped Legless Lizard occupies the study area (Nature Advisory 2023).

#### *Direct & indirect impacts*

Due to significant historical disturbance and management involving regular intensive slashing, a lack of quality habitat and records, it is unlikely that Striped Legless Lizard is currently occurring on site or in the vicinity of the study area. Furthermore, no Striped Legless Lizard were recorded in the study area during targeted surveying. Therefore, no direct or indirect impacts are expected.

Areas of known historical disturbance within the study area are shown in Figure 7.

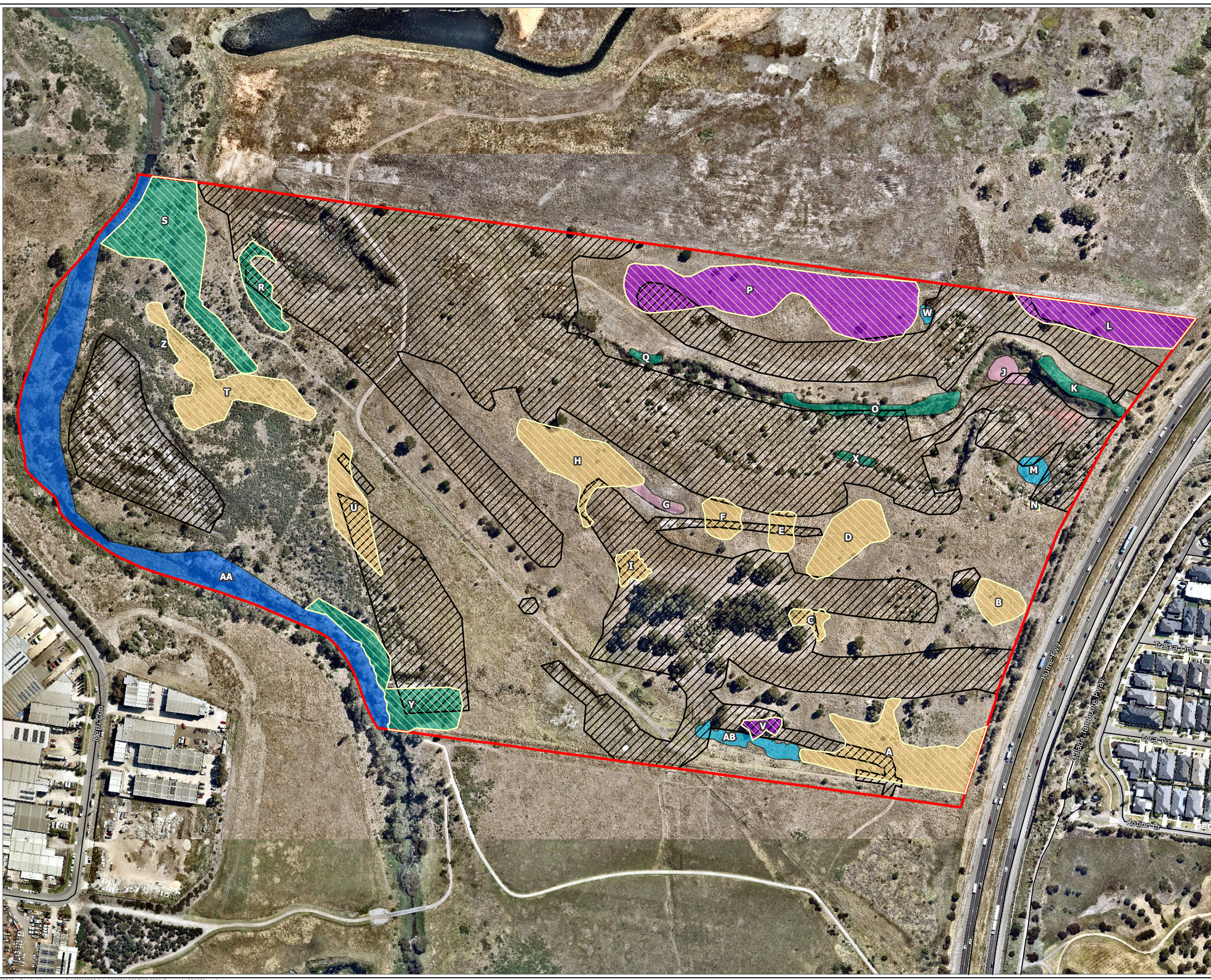
The project is proposing to remove areas of native grassland on site that would potentially support Striped Legless Lizard (if occurring). However, the habitat is low to moderate in quality and isolated from any larger patches of vegetation suitable for the species.



**Figure 7: Targeted flora survey areas and historical site disturbance**

**Project:** 485 Cooper Street, Epping  
**Client:** The GPT Group  
**Date:** 12/05/2023

- Site
  - Targeted survey areas
  - Disturbance areas
- Native vegetation**
- Escarpment Shrubland (EVC 895)
  - Higher Rainfall Plains Grassland (EVC 132\_61)
  - Plains Grassy Woodland (EVC 55)
  - Plains Grassy Wetland (EVC 125)
  - Riparian Woodland (EVC 641)
  - Tall Marsh (EVC 821)



N

Metres

0 40

**Nature Advisory**

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22076 - Created by: nm - E:\GIS\2022 Jobs\22076\2207603 FIG1 Transects 221202.mxd



### 3.3. Ecological Communities of National Environmental Significance

#### 3.3.1. Natural Temperate Grassland of the Victorian Volcanic Plain

##### Landscape context

Occurrence and extent of this community outside the study area is unknown and can only be estimated by the modelled extent of the relevant EVCs including Plains Grassland and Plains Grassy Woodland using desktop information sources such as NatureKit (DEECA 2023a). Modelled EVCs show a fragmented occurrence of Plains Grassland along the east embankment of Merri Creek, connecting with native vegetation in the proposed conservation reserve.

Vegetation within Habitat Zones A, B, D, E, F & P of the study area were found to qualify as the EPBC Act listed community, Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP). A total of 2.164 hectares of this community in the form of Plains Grassland (EVC 132\_61) was recorded in the study area and found to have a condition score ranging from 27-39 (Appendix 1).

Additional patches of Plains Grassland recorded on site did not qualify as NTGVVP due to a high cover of exotic species. Two of these patches are located within the proposed conservation area and will be subject to rehabilitation and protection management strategies.

##### Direct impacts

The proposed development will result in the removal of all 2.164 hectares of the listed ecological community NTGVVP present on site as shown in Figure 3. The quality of this vegetation ranged from high to moderate.

##### Indirect impacts

Indirect impacts are unlikely as the entire extent of the community on site is proposed for removal and no adjacent patches are present.

##### Assessment against the Significant Impact Criteria

The proposed impacts to NTGVVP are assessed against the EPBC Act significant impact criteria (DEWHA 2013) in Table 3.

**Table 3: Assessment of the impact on NTGVVP against the EPBC Act significant impact criteria (DEWHA 2013).**

| Significant impact criteria   | Response  |
|---|---|
| Reduce the extent of an ecological community  | NTGVVP occurs within the proposed project footprint, within many Plains Grassland Habitat Zones. A total of 2.164 hectares of NTGVVP will be removed from the project area, 100% of that recorded on site. It is therefore considered that the extent of the community will be significantly reduced. |
| Fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines | As the NTGVVP within the project area will be removed entirely, it cannot be considered to be fragmented. The loss of this NTGVVP may mean patches of NTGVVP in the broader landscape are further apart.  |
| Adversely affect habitat critical to the survival of an ecological community  | Impacts of the project will adversely affect habitat critical to the survival of NTGVVP, as the habitat for NTGVVP on site within the development footprint will be removed entirely.   |

| Significant impact criteria  | Response  |
|--|---|
| Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns   | Abiotic factors necessary for the community's survival (i.e. in areas away from the project area) will not be impacted by the project, as construction mitigation measures (such as sediment fencing, stormwater management and dust suppression) will be put in place to protect abiotic factors beyond the study area.  |
| Cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting   | There will be no loss of species from remaining areas of the community as a consequence of the proposed works, as there will be no such remaining areas of this community on site.  |
| Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: <ul style="list-style-type: none"> <li>▪ assisting invasive species, that are harmful to the listed ecological community, to become established; or</li> <li>▪ causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community</li> </ul> | Construction mitigation measures will be put in place to ensure project does not facilitate the spread of invasive species or pollutants, including undertaking weed monitoring and control and sediment fencing. Furthermore, there will be no remaining areas of NTGVVP on site under the current development proposal for a reduction in quality or integrity to occur in. |
| Interfere with the recovery of an ecological community   | The areas of NTGVVP where the works are proposed are likely to be important in the recovery of the community given they are the only areas of NTGVVP within the site. Therefore, the project is likely to interfere with the recovery of NTGVVP in the remaining Plains Grassland areas on site.  |

**Given the above, it is considered that the impacts upon NTGVVP are significant.**

## 4. Proposed Avoidance and Mitigation Measures

The proposed development will be undertaken in a manner that incorporates both avoidance and mitigation measures. These are described below.

### 4.1. Avoidance measures

#### 4.1.1. Design considerations

The project has undergone a series of design refinements while considering impacts to biodiversity values resulting in the preparation of three development schemes. Of the first two iterations, Scheme B was determined to result in a better environmental outcome than Scheme A. Scheme B aimed to retain approximately 80% of the River Red-gums on site and include the creation of a larger conservation reserve, providing additional GGF habitat and retention of native vegetation, in comparison with Scheme A. Subsequently, consultation with various stakeholders informed the development of Scheme C, the current plan. This built on Scheme B by including the retention of three additional River Red-gums and relocated the bioretention system out of the ESO as much as feasible.

A comprehensive avoid and minimise statement providing additional detail is provided in Appendix 3.

#### 4.1.2. Conservation reserve

The proposed project includes the creation of a 7.9-hectare conservation reserve, aligned with the Environmental Significance Overlay, that will aim to protect and enhance existing biodiversity values including the following:

- 1.4 hectares of Riparian Woodland (EVC 641)
- 1.03 hectares of Escarpment Shrubland (EVC 895)
- 0.726 hectares of Heavier Soils Plains Grassland (EVC 132\_61)
- Remnant River Red-gum trees
- Habitat for Growling Grass Frog along Merri Creek and adjacent terrestrial habitat

The conservation area will be subject to management and rehabilitation measures including, but not limited to, fencing, weed control, revegetation and habitat creation and enhancement.

A wetland suitable for breeding will be created for Growling Grass Frog. Considerations will be given to the Growling Grass Frog Habitat Design Standards (DELWP 2017b), including the habitat enhancement and water treatment measures (Appendix 4).

Native grassland patches will be enhanced via weed control, revegetation and the introduction of habitat elements. Substantial areas of native grassland will be created through intensive revegetation. Seed of native species existing within the study area will be collected, propagated and used in revegetation.

Management objectives and strategies, as well as, monitoring and reporting requirements are detailed in a Conservation Management Plan (CMP) provided in Appendix 4. In addition, any indirect impacts arising from construction activities will be mitigated through best-practice management measures as outlined in the Construction Environmental Management Plan (Appendix 5).

#### 4.1.3. Galada Tamboore Conservation Reserve

During consultation with Parks Victoria, managers of Galada Tamboore Conservation Reserve, concerns were raised about potential over shadowing of the reserve. Shadow diagrams were commissioned. These identified over shadowing as an issue. The layout of the proposed development was then altered to include a landscape strip along the boundary and the car parking was re-orientated to ensure there was no impacts on the reserve from over shadowing.



## 4.2. Matters of National Environmental Significance

### 4.2.1. *Natural Temperate Grassland of the Victorian Volcanic Plain*

The loss of 2.164 hectares of NTGVVP from within the development footprint is proposed to be offset by securing in perpetuity 8.0 hectares of NTGVVP at a third party offset site in Shelford, Victoria as detailed in Section 5 of this report.

Further mitigation, detailed in the CMP (Appendix 4), will involve enhancement of the existing patches of Heavier Soils Plains Grassland (totalling 0.726 hectares) being retained in the conservation reserve.

### 4.2.2. *Growling Grass Frog*

Although GGF was not recorded during targeted surveys, the species is considered to have the potential to occur occasionally in the future. Therefore, the proposed conservation reserve will retain and protect habitat for the species, namely Merri Creek and adjacent terrestrial habitat. An intensive revegetation strategy and various management measures have been prescribed for areas providing, or have the potential to provide, habitat for Growling Grass Frog (Appendix 4).

In the unlikely case that a Growling Grass Frog is found on site within the construction area, works must stop immediately until the individual(s) can be relocated to suitable habitat within the conservation area. Relocation of Growling Grass Frog, or any other native frogs, must be undertaken by a qualified person. A Salvage & Translocation Plan for Growling Grass Frog is provided at Appendix 12.

A stormwater management plan has been developed for the study area. This plan sets out how stormwater discharge will be reduced to pre-development flow levels. The plan details how the quality, quantity and velocity of water discharging into Merri Creek will be adequately controlled so as not to adversely impact Growling Grass Frog. The stormwater management plan has been approved by both Melbourne Water and Whittlesea City Council.

### 4.2.3. *Striped Legless Lizard*

The likelihood of occurrence of Striped Legless Lizard in the study area was assessed as unlikely to occur by experienced ecologists. However, using the precautionary approach, ten tile grids were set up on site covering all areas of potential habitat for the species, shown in Appendix 6. Targeted surveys were undertaken from August to December 2023, Striped Legless Lizard were not detected in the study area. All surveys were undertaken following the Commonwealth survey guidelines and deemed appropriate to determine presence/absence of the species.

In addition, the conservation reserve will protect and enhance habitat for Striped Legless Lizard through creation of 3 hectares of suitable grassland habitat, revegetation, and implementation of habitat features – such as placing logs and rocks and undertaking biomass management of grassland habitat. These measures are detailed in the CMP provided at Appendix 4.

## 5. Residual impacts and proposed offsets

The residual impacts of the proposed development at 485 Cooper Street, Epping will be the loss of 2.164 hectares of NTGVVP.

Nine registered offset brokers were consulted when seeking to secure the necessary offsets for the action. The consistent feedback was that offsets in these regions have not been available for some time, and are unlikely to be available into the future. In addition to contacting brokers GPT also reached out to Whittlesea City Council, local land owners, DEECA, and Wilderlands in an attempt to locate local offset sites currently not registered with brokers. No sites were identified through the process and feedback provided by these groups suggested that all potential local sites were accounted for under existing planning frameworks or overlays. After exhausting all local options offsets were secured withing the Victorian Volcanic Plains (VVP) bioregion in line with the EPBC Act 1999 Environmental Offsets Policy.

The proponent is subject to prescribed offset requirements under the EPBC Act to protect and manage alternative areas of the affected MNES, namely:

- A third party offset located at 185 Mt Gow Road, Shelford comprising 8.0 hectares of NTGVVP will be secured as an offset for the removal of 2.164 hectares of NTGVVP at 485 Cooper Street, Epping. An offset management plan (is provided at Appendix 9 and the NTGVVP Offset Calculation is provided at Appendix 10. The vegetation at the offset site is of higher quality than that being removed. The estimated distance between the impact site and the offset site is 101 Kilometres.

No offsets are required for impacts to Striped Legless Lizard or Growling Grass Frog under the EPBC Act Environmental Offsets Policy as these species are unlikely to be significantly impacted by the proposed development (as they are unlikely to occur based on the results of targeted surveys). Irrespective of this, additional habitat for these species will be created within the study area as part of the proposed development.

## 6. Other approvals and conditions

Approval for the proposed removal of native vegetation from the study area is required under Clause 52.17 of the Whittlesea Planning Scheme – a planning permit is required. The planning permit application would be referred to the Victorian Department of Energy, Environment & Climate Action (DEECA).

The CMP requires regular monitoring by the site manager and annual monitoring by a qualified ecologist to ensure management objectives for the conservation reserve are being achieved. A report that addresses progress against the commitments set out in the plan will be submitted to Whittlesea City Council annually until the land is transferred into the ownership of Whittlesea City Council.

Offset site monitoring, enforcement and review procedures will be required as documented in the Offset Management Plan (Appendix 9).



## 7. Social and Economic Impacts

The site is located at the southern end of an identified industrial and employment precinct (Cooper Street South-West Employment Area). The Cooper Street South West Precinct has been designated for employment uses due to its proximity to future growth areas, transport infrastructure and regionally significant employment precincts.

The site was rezoned in 2015 from Farming and Special Use Zones to Industrial 1 Zoning through amendment C174 to the Whittlesea Planning Scheme. The amendment sought to expand the boundaries of the existing Cooper Street Employment Precinct further south to facilitate employment opportunities in the northern growth corridor of Melbourne. The proposed development will contribute to the estimated 6,000 jobs that will be created through the redevelopment of the precinct.

## 8. Environmental Record of Persons Proposing to Take the Action

GPT is not aware of any significant breaches of any environmental regulations under the laws of the Commonwealth of Australia or of a State or Territory of Australia and has not incurred any significant liabilities under any such environmental legislation. GPT discloses penalties in their corporate reporting suite annually – see attached extract from GPT 2021 annual report (Appendix 7).



## 9. Conclusion

The Proposed Action will have a significant impact upon:

- Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP)

These impacts will be offset in accordance with the EPBC Act Offset Policy.

## 10. Information Sources Provided in the Preliminary Documentation

Sources of information on the MNES of the development site and its surrounds are provided below. This includes both existing information and on-site field surveys in the last five years. Reliability of the surveys is based on experienced, qualified botanists and zoologists finding the target species concerned. Surveys for MNES were undertaken in accordance with the relevant guidelines and standards (DEWHA 2009a; DEWHA 2009b; DEWHA 2010; DSEWPAC 2011b).

Victorian Biodiversity Atlas (VBA): This database is administered by Department of Energy, Environment and Climate Action (DEECA) and holds a vast collection of records of flora and fauna species within Victoria. Data for these have been gathered from ecological surveys undertaken by DEECA, museum specimens, professional zoologists and botanists, competent amateur field naturalists and zoological and botanical literature. Records from these databases provide an indication of which species are present in an area and not an estimate of population size. The date of the most recent record of each species considered and the number of records in the VBA are provided in Table 1 and Table 2.

The references used in this document are provided below.

EPBC Act Protected Matters Search Tool: The Department of the Environment administers this online database. Information originates from AVW, VBA and FIS and Bioclim modelling of potential species occurrence.

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DEWHA 2009a, *EPBC Act Policy Statement 3.14: Significant impact guidelines for the vulnerable growling grass frog (Litoria raniformis)*, Department of the Environment, Water, Heritage and the Arts (DEWHA), Canberra.



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**Appendix 1: 485 Cooper St, Epping: Flora and Fauna Assessment (Nature Advisory 2023)**



**Appendix 2: 485 Cooper St, Epping: Growling Grass Frog Targeted Surveys (Ecolink 2023)**

### Appendix 3: Avoid and minimise statement

## Appendix 4. Conservation Management Plan



## Appendix 5: Construction Environmental Management Plan

## Appendix 6: Location of tile grids for SLL

**Appendix 7: Extract from GPT 2021 Annual Report**



**Appendix 8: Site Plan**

## Appendix 9: Offset Management Plan

## Appendix 10: NTGVVP Offset Calculation



**Appendix 11: Stormwater Management Plan**

## Appendix 12: Salvage & Translocation Plan for Growling Grass Frog