



**Title of Proposal - Bacchus Marsh Development Project**

**Section 1 - Summary of your proposed action**

Provide a summary of your proposed action, including any consultations undertaken.

**1.1 Project Industry Type**

Residential Development

**1.2 Provide a detailed description of the proposed action, including all proposed activities.**

Sixteen properties located in Bacchus Marsh are included in the proposed action, with 15 properties being proposed for residential development and one (property 16) proposed for use as an offset site.

Bacchus Marsh Developments Pty Ltd has acquired interests in the properties, which are currently used for agriculture. The properties are within an area identified for potential future urban development as part of the expansion of Bacchus Marsh, and Moorabool Council and the Victorian Planning Authority (VPA) have jointly prepared the draft Bacchus Marsh Urban Growth Framework (UGF).

It is expected that the Urban Growth Framework Plan will be incorporated into the planning scheme in 2018 (Amendment C81), and that a Precinct Structure Plan will thereafter be prepared in relation to the land.

**1.3 What is the extent and location of your proposed action? Use the polygon tool on the map below to mark the location of your proposed action.**

Area	Point	Latitude	Longitude
Approx. Study Area	1	-37.63287246747	144.46495160422
Approx. Study Area	2	-37.633280302601	144.47018727622
Approx. Study Area	3	-37.648708420767	144.48168858848
Approx. Study Area	4	-37.652513983627	144.48117360435
Approx. Study Area	5	-37.653125573754	144.48666676841
Approx. Study Area	6	-37.659988628626	144.48546513877
Approx. Study Area	7	-37.659512991818	144.47997197471
Approx. Study Area	8	-37.66875338998	144.47834119163
Approx. Study Area	9	-37.667734284858	144.46855649314
Approx. Study Area	10	-37.663997446355	144.47001561484
Approx. Study Area	11	-37.661619360263	144.46967229209
Approx. Study Area	12	-37.660600157188	144.46984395347
Approx. Study Area	13	-37.661075787031	144.47430714927



Area	Point	Latitude	Longitude
Approx. Study Area	14	-37.659377095027	144.47447881064
Approx. Study Area	15	-37.659309146538	144.47362050376
Approx. Study Area	16	-37.657270662962	144.47379216514
Approx. Study Area	17	-37.656591155999	144.46829900107
Approx. Study Area	18	-37.65129078826	144.46907147727
Approx. Study Area	19	-37.650611226573	144.46299895606
Approx. Study Area	20	-37.646822556198	144.46364268622
Approx. Study Area	21	-37.646584696005	144.46171149573
Approx. Study Area	22	-37.647128375327	144.45924386344
Approx. Study Area	23	-37.645344412657	144.45986613593
Approx. Study Area	24	-37.644511882081	144.46033820472
Approx. Study Area	25	-37.643475453427	144.4615827497
Approx. Study Area	26	-37.64274484749	144.46214064918
Approx. Study Area	27	-37.641266622802	144.46244105659
Approx. Study Area	28	-37.640875822854	144.46241959891
Approx. Study Area	29	-37.637001694777	144.462741464
Approx. Study Area	30	-37.636712826258	144.46276292167
Approx. Study Area	31	-37.6354553855	144.46334227881
Approx. Study Area	32	-37.632872467469	144.46495160422
Approx. Study Area	33	-37.63287246747	144.46495160422

**1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland).**

The study area covers approximately 435 hectares, and comprises 16 properties bound by Gisborne Road to the west, and Bences Road to the east approximately 50 kilometres north-west of Melbourne’s CBD . It should be noted that Property 16 is ultimately proposed to be secured and managed as an offset site, and will not be subject to any proposed development.

The land within and surrounding the study area predominantly supports agricultural activities in the form of grazing, cropping, market gardens, orchards, and vineyards. Two operating quarries are located immediately opposite the study area on the west of Gisborne Road, while the Long Forest Flora and Fauna Reserve is located to the east of Bences road in close proximity to the study area.

The study area is generally flat, with several escarpments located to the west and south of the study area. The headwaters of several designated waterways commence within the study area, and follow the escarpments into lower lying areas to the east and west.

Erosion is evident throughout all observed escarpments, and has resulted in a shallow soil



profile at both the top and mid-slope of these the escarpments.

**1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?**

435 hectares (including impact area and areas of retained remnant vegetation)

**1.7 Is the proposed action a street address or lot?**

Lot

**1.7.2 Describe the lot number and title.** Refer to Table 1 in the Ecological Assessment (2018a)

**1.8 Primary Jurisdiction.**

Victoria

**1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?**

No

**1.10 Is the proposed action subject to local government planning approval?**

Yes

**1.10.1 Is there a local government area and council contact for the proposal?**

Yes

**1.10.1.0 Council contact officer details**

**1.10.1.1 Name of relevant council contact officer.**

Satwinder Sandu

**1.10.1.2 E-mail**

ssandhu@moorabool.vic.gov.au

**1.10.1.3 Telephone Number**

03 5366 7100

**1.11 Provide an estimated start and estimated end date for the proposed action.**



Start date 01/2019

End date 12/2028

## **1.12 Provide details of the context, planning framework and State and/or Local government requirements.**

### ***Flora and Fauna Guarantee Act 1988***

The FFG Act is the primary legislation dealing with biodiversity conservation and sustainable use of native flora and fauna in Victoria. Proponents are required to apply for an FFG Act Permit to 'take' listed and/or protected flora species, listed vegetation communities and listed fish species in areas of public land (i.e. within road reserves, drainage lines and public reserves). An FFG Act permit is generally not required for removal of species or communities on private land, or for the removal of habitat for a listed terrestrial fauna species.

There is suitable habitat within the study area for several 'listed' and 'protected' flora and fauna species under the FFG Act. Further, two FFG Act communities are present within the study area. However the study area is privately owned, as such a permit under the FFG Act is not required.

### ***Planning and Environment Act 1987***

The *Planning and Environment Act 1987* outlines the legislative framework for planning in Victoria and for the development and administration of planning schemes. All planning schemes contain native vegetation provisions at Clause 52.17 which require a planning permit from the relevant local Council to remove, destroy or lop native vegetation on a site of more than 0.4 hectares. Any proposed development must address the relevant decision guidelines and standards described where appropriate.

### **The Guidelines**

The State Planning Policy Framework and the decision guidelines at Clause 52.17 (Native Vegetation) and Clause 12.01 require Planning and Responsible Authorities to have regard for The Guidelines (DELWP 2017a). Where the clearing of native vegetation is permitted, the quantity and type of vegetation to be offset is determined using methodology specified in the Guidelines.

A Planning Permit from Moorabool Shire Council is required to remove, destroy or lop any native vegetation. In this instance, the application will be referred to DELWP as the application will be assessed under the Detailed Assessment Pathway (i.e. greater than 0.5 hectares of native vegetation removed).

### ***Catchment and Land Protection Act 1994***

The *Catchment and Land Protection Act 1994* (CaLP Act) contains provisions relating to catchment planning, land management, noxious weeds and pest animals. Landowners are responsible for the control of any infestation of noxious weeds and pest fauna species to



minimise their spread and impact on ecological values.

Weeds listed as noxious under the CaLP Act were recorded during the assessment. Similarly, there is evidence that the study area is currently occupied by several pest fauna species listed under the CaLP Act (European Rabbit, Red Fox). A Weed Management Plan and a pest fauna eradication plan may be required as part of the future development of the study area.

**1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders.**

No public consultation has been undertaken to date. However, as part of the preparation of a Cultural Heritage Management Plan (CHMP), Ecology and Heritage Partners have consulted with the Wurundjeri Land and Compensation Cultural Heritage Council Aboriginal Corporation.

**1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project.**

The project is not subject to any Commonwealth or State Environmental Impact Assessments.

**1.15 Is this action part of a staged development (or a component of a larger project)?**

No

**1.16 Is the proposed action related to other actions or proposals in the region?**

No



## Section 2 - Matters of National Environmental Significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The [interactive map tool](#) can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest. Consideration of likely impacts should include both direct and indirect impacts.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The following resources can assist you in your assessment of likely impacts:

- [Profiles of relevant species/communities](#) (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;
- [Significant Impact Guidelines 1.1 – Matters of National Environmental Significance](#);
- [Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies](#).

**2.1 Is the proposed action likely to have ANY direct or indirect impact on the values of any World Heritage properties?**

No

**2.2 Is the proposed action likely to have ANY direct or indirect impact on the values of any National Heritage places?**

No

**2.3 Is the proposed action likely to have ANY direct or indirect impact on the ecological character of a Ramsar wetland?**

No

**2.4 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?**

Yes

### 2.4.1 Impact table

Species	Impact
Spiny Rice-flower <i>Pimelea spinescens</i> subsp.	Targeted surveys were undertaken in areas that



<b>Species</b>	<b>Impact</b>
spinescens	contained suitable habitat to support the species. Although the targeted surveys identified 201 Spiny Rice-flower specimens within Property 11, none of the recorded individuals will be impacted by the proposed action.
Small Golden Moths <i>Diuris basaltica</i>	There are five records of Small Golden Moths recorded in the VBA within the local area, with all located south of Werribee River and Bacchus Marsh township. An additional record is located further east near Melton, with another record north-west in Toolern Vale. Small Golden Moth orchids typically grow in herb-rich native grasslands, dominated by Kangaroo Grass <i>Themeda triandra</i> on heavy basaltic soils, often embedded with basalt boulders, with the known distribution of the species highly restricted. Given the absence of Kangaroo Grass-dominated grassland within the study area, general poor condition of habitat (outside of Property 16), high levels of weed invasion, absence of other orchids within the locality, and history of agricultural activities, there is considered to be a low likelihood of occurrence in Properties 1-15, and surveys are not required.
Basalt Peppercross <i>Lipidium hyssopifolium</i>	Although there are no records within the VBA within 10 kilometres, there is an informal record recorded in the Atlas of Living Australia (ALA 2018) within Property 6 south of Buckleys Road. This property has been cropped, and the specimen would no longer be present. It is understood that almost all remaining populations of Basalt Peppercross occur in heavily modified, non-natural environments, usually amongst exotic pasture grasses and weed species, sometimes with an overstorey of introduced tree species (DSE 2010). However, the species appears to rely heavily on favourable microsite conditions, with Basalt Peppercross appearing to only establish in relatively open bare ground where there is limited competition from other plants (both native and introduced species), rather than in areas with thick ground cover. As the majority of grassland vegetation (native and non-native)



Species	Impact
Large-headed Fireweed <i>Scencio macrocarpus</i>	<p>within Properties 1-15 supports high levels of biomass, with few patches of bare ground present, as well as the lack of other records in close proximity to the study area, there is considered a low likelihood of occurrence within the study area, and targeted surveys are not required due to the absence of suitable habitat.</p> <p>There are no known records of Large-headed Fireweed within 10 kilometres of the study area, with the closest known record located approximately 17 kilometres to the east. Previous surveys for the species in nearby properties did not record the species (Ecology and Heritage Partners 2013), and no individuals or areas of suitable habitat were detected during the ecological survey. There is considered to be a low likelihood of occurrence that the species occurs in the locality due to the absence of suitable habitat.</p>
Golden Sun Moth <i>Synemon plana</i>	<p>Targeted surveys for Golden Sun Moth were undertaken in areas of suitable habitat (i.e. not cropped areas). Numerous Golden Sun Moths were observed during the targeted surveys. A total 22.197 hectares of confirmed habitat will be impacted by the proposed action.</p>
Swift Parrot <i>Lathamus discolor</i>	<p>Swift Parrot may forage on eucalypts within the study area on occasion. However the species breeds only in Tasmania and migrates to mainland Australia in autumn and is usually recorded between Stawell in the central west and Wodonga in the north-east. Although small numbers may occasionally fly over the study area, they would not rely on habitat within the study area for breeding or foraging purposes, and the study area is unlikely to provide important or limiting habitat for this species.</p>
Striped Legless Lizard <i>Delma impar</i>	<p>There are no records of Striped Legless Lizard within 10 kilometres of the study area registered in the VBA (DELWP 2018), although there is an unverified record located immediately south of the Werribee River approximately three kilometres south (ALA 2018). However, due to the similarity in habitat within the study area, and known populations of the species located further to the east of Melton, there is considered to be a moderate possibility of the species</p>





Species	Impact
Natural Temperate Grasslands of the Victorian Volcanic Plain	occurring. Targeted surveys were undertaken in areas of suitable habitat at an appropriate time of the year. Despite this, no Striped Legless Lizards were detected within the study area. A total of 1.78 hectares will be impacted by the proposed action, and the remaining areas will be retained, either through the proposed offset site, or in remnant patches retained within the development footprint.
Grey Box ( <i>Eucalyptus microcarpa</i> ) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Despite Grey Box being present and dominating some of the habitat zones, no areas met the minimum requirements for the community due to a lack of native ground cover species.

**2.4.2 Do you consider this impact to be significant?**

Yes

**2.5 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed migratory species, or their habitat?**

No

**2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?**

No

**2.7 Is the proposed action to be taken on or near Commonwealth land?**

No

**2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?**

No

**2.9 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?**

No

**2.10 Is the proposed action a nuclear action?**



No

**2.11 Is the proposed action to be taken by the Commonwealth agency?**

No

**2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place Overseas?**

No

**2.13 Is the proposed action likely to have ANY direct or indirect impact on any part of the environment in the Commonwealth marine area?**

No



## Section 3 - Description of the project area

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed in Section 2).

### 3.1 Describe the flora and fauna relevant to the project area.

#### Flora

A total of 119 flora species (62 indigenous and 57 non-indigenous or introduced) were recorded within the study area during the field assessment. Remnant native vegetation in the study area is representative of four EVCs: *Low Rainfall Plains Grassland* (EVC 132\_63), *Grassy Woodland* (EVC 175), *Rocky Chenopod Woodland* (EVC 64) and *Plains Grassy Wetland* (EVC 125).

The remainder of the study area comprises introduced and planted vegetation, present as crop, pasture, windrows and ornamental plantings.

#### *Plains Grassland EVC*

Plains Grassland was recorded along the north-west boundary, and in scattered patches to the south and east of the study area. Dominant native grasses recorded throughout most patches included Spurred Spear-grass *Austrostipa gibbosa*, Rough Spear-grass *Austrostipa scabra* subsp. *falcata*, Common Wallaby-grass *Rytidosperma caespitosa*, Bristly Wallaby-grass *Rytidosperma setaceum*, and Knead Wallaby-grass *Rytidosperma geniculatum*. Commonly observed shrubs and herbs within this vegetation type comprised Berry Saltbush *Atriplex semibaccata*, Sheep's Burr *Acaena echinata*, Wingless Bluebush *Maireana enchylaenoides*, Nodding Saltbush *Einadia nutans*, Ruby Saltbush *Enchylaena tomentosa* var. *tomentosa*, Native Flax *Linum marginale* and occasional specimens of Lemon Beauty-heads *Calocephalus citreus*, Fuzzy New Holland Daisy *Vittadinia cuneata*, and Golden Billy-buttons *Pycnosorus chrysanthes*.

Exotic flora was dominant throughout most areas within and adjacent to Plains Grassland vegetation. The most commonly observed weeds were the declared noxious weeds African Box-thorn *Lycium ferocissimum*, Artichoke Thistle *Cynara cardunculus*, Horehound *Marrubium vulgare* and Serrated Tussock *Nassella trichotoma*. Other common environmental weeds present throughout included Galenia *Galenia pubescens*, Cape Weed *Arctotheca calendula*, Wild Turnip *Brassica* spp., Perennial Rye-grass *Lolium perenne*, Barley *Hordeum* spp., Rat's-tail Fescue *Vulpia myuros*, Ribwort *Plantago lanceolata* and Soft Brome *Bromus hordeaceus*.

#### *Grassy Woodland EVC*

Within the study area, Grassy Woodland was recorded in several small, scattered remnants adjacent to Gisborne Road, along with one large remnant immediately north of O'Connell



Road.

The overstorey was predominantly comprised of Grey Box *Eucalyptus microcarpa*, with occasional specimens of Yellow Box *Eucalyptus melliodora* and Yellow Gum *Eucalyptus leucoxylon* subsp. *pruinosa* also present. The understory was in poor condition in all habitat zones, with only occasional occurrences of native grasses and shrubs present. The State significant Fragrant Saltbush *Rhagodia parabolica* was relatively common within and adjacent to several patches of Grassy Woodland. However, the dominant understory species comprised African Box-thorn, Serrated Tussock and Galenia.

#### *Rocky Chenopod Woodland*

Rocky Chenopod Woodland was recorded in small patches near north-west boundary adjacent to Gisborne Road, as well as in a large remnant to the east of the study area in Property 16. The overstorey of this EVC was co-dominated by Grey Box and Bull Mallee *Eucalyptus behriana*, with the occasional Yellow Gum specimen also present. The understory was generally sparse, and comprised Fragrant Saltbush, Ruby Saltbush, Moonah *Melaleuca lanceolata*, Gold-dust Wattle *Acacia acinacea*, Variable Groundsel *Senecio pinnatifolius* and Saloop *Einadia hastata*.

#### *Plains Grassy Wetland*

One patch of Plains Grassy Wetland (PGWe1) was recorded around an artificial water body along a designated waterway within Property 5, and was comprised of Cumbungi *Typha* spp., Common Spike-sedge *Eleocharis acuta*, Joint-leaf Rush *Juncus holoschoenus* and Pale Rush *Juncus pallidus*.

The exotic species Drain Flat-sedge *Cyperus eragrostis*, Lesser Quaking-grass *Briza minor* and Yorkshire Fog *Holcus lanatus* were common in this habitat zone.

### **Fauna**

The majority of the study area consists of paddocks which contain improved exotic pastures, likely to be used as a foraging resource by common generalist bird species which are tolerant of modified open areas. Fauna observed using this habitat included; Australian Magpie *Cracticus tibicen*, Common Blackbird *Turdus merula*, Little Raven *Corvus mellori*, Magpie-lark *Grallina cyanoleuca*, House Sparrow *Passer domesticus*, Willie Wagtail *Rhipidura leucophrys* Red Fox *Vulpes vulpes* and European Rabbit *Oryctolagus cuniculus*.

Areas of native grassland, particularly those with a high cover of Wallaby-grasses *Rytidosperma* spp. may provide habitat for the nationally significant Golden Sun Moth *Synemon plana*. Some of these areas have cracking soils which may provide sheltering habitat for reptiles and small mammals including Striped Legless Lizard and Fat-tailed Dunnart.

### **Communities**



Some remnants of habitat zone PG4 and all of PG7, PG8 and PG9 met the thresholds that define the nationally significant *Natural Temperate Grasslands of the Victorian Volcanic Plain* (NTGVVP) ecological community. Patches PG8 and PG9 were of the highest quality, were contiguous with each other and other larger remnants of vegetation in Property 16, and supported high native species diversity.

Two FFG Act-listed ecological communities are present in the study area - Western (Basalt) Plains Grassland Community and Rocky Chenopod Open Scrub Community.

### **3.2 Describe the hydrology relevant to the project area (including water flows).**

The headwaters of several designated waterways commence within the study area, and follow the escarpments into lower lying areas to the east and west. The escarpments are located within the study area are not being developed, and are unlikely to be affected by the proposed development.

### **3.3 Describe the soil and vegetation characteristics relevant to the project area.**

The study area is within the Victorian Volcanic Plain bioregion. The soils of the Victorian Volcanic Plain are variable and range from red friable earths to scoriaceous material that supports Plains Grassland ecosystems. Detailed soil analysis has not been undertaken to date. Vegetation is described in the attached Biodiversity assessments.

### **3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area.**

There are no outstanding natural features in the project area.

### **3.5 Describe the status of native vegetation relevant to the project area.**

Remnant native vegetation in the study area is representative of four EVCs: Low Rainfall Plains Grassland (EVC\_132\_63), Grassy Woodland (EVC\_175), Rocky Chenopod Woodland (EVC\_64) and Plains Grassy Wetland (EVC\_125). Historical clearing and grazing pressures has led to large sections of the study area being containing primarily introduced vegetation, such as crop and pasture grasses.

Some remnants of Plains Grassland EVC met the thresholds that define the nationally significant *Natural Temperate Grasslands of the Victorian Volcanic Plain* (NTGVVP) ecological community and the FFG Act listed community Western (Basalt) Plains Grassland. Patches of Rocky Chenopod Woodland met the description and characteristics of the FFG Act listed community Rocky Chenopod Open Scrub.



### **3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.**

Not applicable.

### **3.7 Describe the current condition of the environment relevant to the project area.**

The study area is bound by a sand quarry to the north west and agricultural land to the north, east and south. Long Forest Nature Conservation Reserve is within close proximity to the eastern boundary.

Within the study area, native vegetation cover has been greatly reduced from the original pre-European settlement extent. Currently, the study area contains large areas that are used for cereal cropping purposes, and have been direct seeded with exotic cropping species. Many of the patches of remnant vegetation and native scattered trees occur within escarpments unviable for agricultural use. The majority of remnant vegetation patches are situated along the north-western boundary, eastern corner (property 16) and the southern end of the study area.

Noxious weeds are present throughout the study area, with common occurrences of Artichoke Thistle, Horehound and Spear Thistle *Cirsium vulgare* along with the Weeds of National Significance (WONS), African Boxthorn, Serrated Tussock, Prickly Pear *Opuntia* spp., Bridal Creeper *Asparagus asparagoides* and Blackberry *Rubus fruticosus* sp. agg.

### **3.8 Describe any Commonwealth Heritage Places or other places recognised as having heritage values relevant to the project area.**

No Commonwealth Heritage Places or other places with heritage values are present within the activity area.

### **3.9 Describe any Indigenous heritage values relevant to the project area.**

Ecology and Heritage Partners are currently preparing an Aboriginal and Historical Heritage Assessment in consultation with the Wurundjeri Land and Compensation Cultural Heritage Council Aboriginal Corporation. The assessment included a review of known Aboriginal places within the study area, the results of which indicated that there are a number of registered Aboriginal places predominantly located on the ridgelines, escarpments and along waterways; with a lower presence on the plains. The main Aboriginal places comprise stone tool artefact scatters, but scarred trees are also present particularly in areas where remnant native vegetation remains.

As part of this cultural heritage assessment a formal survey of sixteen properties within the study area was undertaken during which several new Aboriginal places were identified. These places were found in similar environmental contexts as previously identified Aboriginal places,



on the escarpments, ridgelines and along waterways such as Pyrites Creek. A couple of these places were identified on the plains on the perimeter of the plough zone of a couple of agricultural fields. These Aboriginal places reflect a consistent occupation by the Wurundjeri people in the area.

**3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area.**

Freehold

**3.11 Describe any existing or any proposed uses relevant to the project area.**

A residential subdivision and masterplanned community development is proposed for properties 1 - 15 located within the study area. These 15 properties have undergone extensive removal of native vegetation to accommodate these agricultural practices, with small areas of remnant vegetation remaining.

Property 16 is proposed for use as an offset site and is predominately covered by remnant vegetation (primarily Rocky Chenopod Woodland EVC and Plains Grassland EVC), which also adjoins the Long Forest Nature Conservation Reserve.



## Section 4 - Measures to avoid or reduce impacts

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

### 4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action.

#### General Mitigation Measures

The current development plan proposes to impact upon a large proportion site, however many areas supporting native vegetation and fauna habitat will be retained throughout the study area, with the majority of vegetation being removed consisting of exotic cropping species that are present through previous land use and disturbance.

All remnant scattered trees and large old trees within patches that are located within the study area will be retained.

The proponent will prepare Construction Environmental Management Plans and Offset Management Plans (where appropriate) to ensure all retained ecological values are protected and managed accordingly prior to, during and after construction activities.

#### Specific Mitigation Measures

Specific mitigation measures have been identified to reduced potential impacts on each MNES identified within the study area.

##### *Spiny Rice-flower*

Targeted surveys within the study area identified a population of 201 Spiny Rice-flower individuals within a patch of remnant vegetation within Property 11. This population will be retained as part of the proposed action, and measures will be taken to ensure the protection of the patch and associated species during construction.

Therefore, there will not be any impacts to Spiny Rice-flower as part of the development, and existng populations will be protected during and after construction.

##### *Golden Sun Moth*





Over 50 hectares of confirmed Golden Sun Moth habitat was identified within the study area. Of this, a total of 22.197 hectares will be impacted, with the remainder being retained as part of the development. These retained areas will have measures implemented to ensure their protection during construction activities, such as fencing and signage.

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

A small portion (1.78 ha) of the NTGVVP present on site will be impacted by the development. All other areas of NTGVVP will be retained and protected as part of the proposed action.

#### **4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved.**

A total of 22.197 hectares of Golden Sun Moth habitat and 1.78 hectares of NTGVVP will be impacted as a result of the proposed action. No other MNES will be impacted by the proposed action.

If the action is assessed as a controlled action, a commensurate offset will be secured, likely onsite, with an Offset Management Plan prepared in accordance with Commonwealth offset policy.



## **Section 5 – Conclusion on the likelihood of significant impacts**

A checkbox tick identifies each of the matters of National Environmental Significance you identified in section 2 of this application as likely to be a significant impact.

Review the matters you have identified below. If a matter ticked below has been incorrectly identified you will need to return to Section 2 to edit.

### **5.1.1 World Heritage Properties**

No

### **5.1.2 National Heritage Places**

No

### **5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)**

No

### **5.1.4 Listed threatened species or any threatened ecological community**

Listed threatened species and communities - Yes

### **5.1.5 Listed migratory species**

No

### **5.1.6 Commonwealth marine environment**

No

### **5.1.7 Protection of the environment from actions involving Commonwealth land**

No

### **5.1.8 Great Barrier Reef Marine Park**

No

### **5.1.9 A water resource, in relation to coal/gas/mining**

No



### 5.1.10 Protection of the environment from nuclear actions

No

### 5.1.11 Protection of the environment from Commonwealth actions

No

### 5.1.12 Commonwealth Heritage places overseas

No

**5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action.**

#### **Striped Legless Lizard**

Despite the presence of suitable habitat, 17 grids placed in areas representative of the best quality habitat, and targeted surveys undertaken at an appropriate time of year, no Striped Legless Lizards were detected within the study area during the six tile grid checks undertaken.

Based on targeted survey results, and the lack of records within the project locality, a population of Striped Legless Lizards are considered unlikely to be present in the study area, or if present, in very low numbers. As such, the proposed action will not result in a significant impact to this species.

#### **Basalt Peppergrass**

Basalt Peppergrass appears to rely heavily on favourable microsite conditions, establishing in relatively open bare ground where there is limited competition from other plants (both native and introduced species), rather than in areas with thick ground cover (DSE 2010). As the majority of grassland vegetation (native and non-native) supports high levels of biomass, with few patches of bare ground present, as well as the lack of other records in close proximity to the study area, there is considered a low likelihood of occurrence within the study area. As such, the proposed action will not result in a significant impact to this species.

#### **Spiny Rice-flower**

Targeted surveys were undertaken for Spiny Rice-flower, with a total of 201 individuals being recorded in Property 11. The population present on property 11 is being retained, and will not be impacted by the proposed development. No other individuals were recorded within suitable habitat within the study area that are likely to be impacted by the proposed action. As such, the proposed action will not result in a significant impact to this species.

#### **Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia**



Habitat zones GW4 and is the largest and most intact patch of remnant vegetation that is most similar to the condition thresholds that describe the Grey Box community.

Although the habitat zone has an overstorey dominated by Grey Box, and contains scattered occurrences of native vegetation, include Fragrant Saltbush, Ruby Saltbush and Berry Saltbush, the ground layer is dominated by Serrated Tussock and Galenia, with several stands of African Box-thorn also present.

As the ground layer does not contain at least a 10% cover of perennial native grass species, or a 50% cover in the ground layer of perennial native species, GW4 does not meet the condition thresholds that describe the Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia ecological community.

Although RC3 also contains a high cover of Grey Box, the dominant canopy species is Bull Mallee, and therefore does not meet the minimum condition thresholds. Zone RCW4 does not contain a 10% cover or perennial grasses, and RCW5 is too weedy.

As such, the ecological community is not present, and the proposed action will not result in a significant impact to this community.

### **Large-headed Fireweed**

There are no known records of Large-headed Fireweed within 10 kilometres of the study area, with the closest known record located approximately 17 kilometres to the east (VBA 2018). Previous surveys for the species in nearby properties did not record the species (Ecology and Heritage Partners 2013b), and there is considered to be a low likelihood of occurrence that the species occurs in the locality. Due to the unlikely occurrence and absence of suitable habitat for the species, the proposed action is unlikely to result in a significant impact to this species.



## **Section 6 – Environmental record of the person proposing to take the action**

Provide details of any proceedings under Commonwealth, State or Territory law against the person proposing to take the action that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

### **6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Please explain in further detail.**

Bacchus Marsh Developments (BMD) will engage suitably qualified and experienced consultants/contractors to carry out the proposed actions. Contractors will be required to

achieve prequalification with BMD by completing and passing the 'BMD Potential Contractor WHSE Checklist' prior to being engaged to carry out the works.

Checkpoints include:

- Identification of similar works previously undertaken;
- Presentation of Environmental Management Plan and accreditation compliance;
- Describing process for identifying relevant environmental legislation, Codes of Practice and guidelines applicable to each project;

Site and project specific Environmental Management Plan will also be provided prior to commencement of proposed works including specific reference to actions considered under this EPBC referral.

### **6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application.**

There are no current or former proceedings against the person proposing to take the action, or the designated proponent.

### **6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?**

Yes

#### **6.3.1 If the person taking the action is a corporation, please provide details of the corporation's environmental policy and planning framework.**



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The action will be taken in accordance with planning approvals and EPBC Act referral conditions in consultation with Ecology and Heritage Partners.

BMD will abide by the Corporate Responsibility Policy which includes the group's environmental policies. These policies include the promotion of responsible environmental practices, minimization of risk to the environment and respect of indigenous and cultural heritage.

As detailed under Section 6.1 above, BMD will engage suitably qualified and experienced consultants/contractors to carry out the proposed actions. Contractors will be required to achieve prequalification with BMD by completing and passing the 'BMD Potential Contractor WHSE Checklist' prior to being engaged to carry out the works.

**6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?**

No



## Section 7 – Information sources

You are required to provide the references used in preparing the referral including the reliability of the source.

### 7.1 List references used in preparing the referral (please provide the reference source reliability and any uncertainties of source).

Reference Source	Reliability	Uncertainties
Ecology and Heritage Partners 2018a. Ecological Assessment: Bacchus Marsh Development Project, Victoria. Report prepared for Bacchus Marsh Developments.	High	N/A
Ecology and Heritage Partners 2018b. Targeted surveys for Golden Sun Moth <i>Synemon plana</i> and Striped Legless Lizard <i>Delma impar</i> : Bacchus Marsh Development Project, Bacchus Marsh, Victoria. Report prepared for Bacchus Marsh Developments.	High	N/A
Ecology and Heritage Partners 2013. Targeted Flora and Fauna Surveys at Long Forest Estate, Merrimu, Victoria. Report prepared for QOD Property Group. December 2013.	High	N/A
DELWP 2018. Victorian Biodiversity Atlas. Sourced from: "VBA_FLORA25", "VBA_FLORA100", "VBA_FAUNA25", "VBA_FAUNA100", December 2017. Victorian Department of Environment, Land, Water and Planning.	High	N/A
ALA 2018. Atlas of Living Australia. [www Document]. URL: <a href="http://www.ala.org.au/">http://www.ala.org.au/</a> . NCRIS – National Research	Moderate	Records can be uploaded by members of the public, so many records unverified.



Reference Source	Reliability	Uncertainties
Infrastructure for Australia. Commonwealth of Australia. DSE 2010. National Recovery Plan for the Basalt Peppercross Lepidium hyssopifolium. Published by the Victorian Government Department of Sustainability and Environment, Melbourne. July 2010.	High	N/A





## **Section 8 – Proposed alternatives**

You are required to complete this section if you have any feasible alternatives to taking the proposed action (including not taking the action) that were considered but not proposed.

### **8.0 Provide a description of the feasible alternative?**

Alternative locations are not available to the proponent and are therefore considered not applicable.

### **8.1 Select the relevant alternatives related to your proposed action.**

#### **8.27 Do you have another alternative?**

No



## Section 9 – Contacts, signatures and declarations

Where applicable, you must provide the contact details of each of the following entities: Person Proposing the Action; Proposed Designated Proponent and; Person Preparing the Referral. You will also be required to provide signed declarations from each of the identified entities.

### 9.0 Is the person proposing to take the action an Organisation or an Individual?

Organisation

#### 9.2 Organisation

##### 9.2.1 Job Title

Director

##### 9.2.2 First Name

Nick

##### 9.2.3 Last Name

Parthimos

##### 9.2.4 E-mail

nick@stamoulispropertygroup.com.au

##### 9.2.5 Postal Address

280 William Street  
Melbourne VIC 3000  
Australia

##### 9.2.6 ABN/ACN

ACN

167864764 - Bacchus Marsh Developments Pty Ltd

##### 9.2.7 Organisation Telephone

03 8615 9000



**9.2.8 Organisation E-mail**

yvonne@stamoulispropertygroup.com.au

**9.2.9 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:**

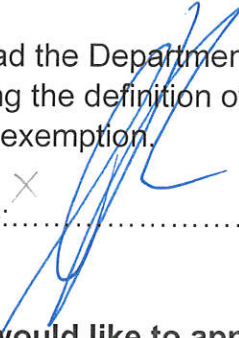
Small business

**9.2.9.1 You must provide the Date/Income Year that you became a small business entity:**

Thu, 01/01/2015

**Small Business Declaration**

I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small a business entity and confirm that I qualify for a small business exemption.

Signature:  ..... Date: 1/8/18 .....

**9.2.9.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations**

No

**9.2.9.3 Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made**

**Person proposing the action - Declaration**

I, Nick Parthimos, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature:  ..... Date: 1/2/18 .....

I, Nick Parthimos, the person proposing the action, consent to the designation of Nick Parthimos as the proponent of the purposes of the action describe in this EPBC Act Referral.



Signature:  Date: 

**9.3 Is the Proposed Designated Proponent an Organisation or Individual?**

Organisation

**9.5 Organisation**

**9.5.1 Job Title**

Director

**9.5.2 First Name**

Nick

**9.5.3 Last Name**

Parthimos

**9.5.4 E-mail**

nick@stamoulispropertygroup.com.au

**9.5.5 Postal Address**

280 William Street  
Melbourne VIC 3000  
Australia

**9.5.6 ABN/ACN**

ACN

167864764 - Bacchus Marsh Developments Pty Ltd

**9.5.7 Organisation Telephone**

03 8615 9000

**9.5.8 Organisation E-mail**

Yvonne@stamoulispropertygroup.com.au

**Proposed designated proponent - Declaration**



I, Nick Parthenimos, the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature: ..... Date: 1/08/17

**9.6 Is the Referring Party an Organisation or Individual?**

Organisation

**9.8 Organisation**

**9.8.1 Job Title**

Senior Ecologist

**9.8.2 First Name**

Shannon

**9.8.3 Last Name**

LeBel

**9.8.4 E-mail**

slebel@ehpartners.com.au

**9.8.5 Postal Address**

230 Latrobe Terrace  
Geelong West VIC 3218  
Australia

**9.8.6 ABN/ACN**

ABN

65685233760 - The trustee for The EP Unit Trust

**9.8.7 Organisation Telephone**

0407459263

**9.8.8 Organisation E-mail**



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admin@ehpartners.com.au

**Referring Party - Declaration**

I, Shannon Leber, I declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence.

Signature:.....Shannon Leber..... Date: 06.08.2018.....



## Appendix A - Attachments

The following attachments have been supplied with this EPBC Act Referral:

1. 9198\_ehp\_ea\_bacchusmarsh\_final\_10072018\_part1.pdf
2. 9198\_ehp\_ea\_bacchusmarsh\_final\_10072018\_part2.pdf
3. 9198\_ehp\_merrimu\_targetedsurveys\_final\_06062018.pdf
4. 10937\_fig02\_ecolfeat\_p\_mbv4\_red.pdf
5. ehp10937\_spatial\_data\_02-08-2018\_2.zip