Figure 3: Vegetation, Daly Reserve, Gisborne.

biosis

UL Daly Reserve, Gisborne: Environmental Management Plan

Draft report

Report to Macedon Ranges Shire Council

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- Sally Mitchell, mapping
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Contents

Summary

Biosis Pty Ltd was commissioned by Macedon Ranges Shire Council (MRSC) to prepare an environmental management plan (EMP) for UL Daly Reserve in Gisborne, and to identify a suitable footprint of about 4000 square metres for a proposed child and family centre and associated parking.

A cultural heritage assessmentof UL Daly Reserve has also been prepared separately by Biosis.

Site values

Site analysis indicates that the reserve has a range of natural and cultural heritage, recreational/social and landscape/aesthetic values. The reserve includes important remnant bushland and provides for informal recreation in a pleasant setting, with panoramic views over Gisborne towards Mount Macedon. The community hall provides for a range of community activities.

Ecological values

Key ecological values identified within the reserve are as follows:

- 77 indigenous flora species, 16indigenous fauna species
- 25 'large old trees'
- 2.20 hectares of remnant native vegetation patches, in four habitat zones
- 7 scattered canopy trees outside the remnant native vegetation patches
- example of Grassy Forest, 'vulnerable' in the Central Victorian Uplands bioregion
- presence of Bacchus Marsh Wattle *Acacia rostriformis*, 'vulnerable' in Victoria.

Issues and opportunities

Management issues and opportunities are identified for consideration by Council and the community.

Issues include the need for protection of reserve values, ongoing provision for informal recreation, and identification of a site for the proposed child and family centre, compatible with the values of the reserve.

Opportunities include improved environmental management, enhancement of informal recreation, and a substantial upgrade of the north-west part of the reserve.

Child and family centre

The proposed indicative footprint for the centre is based on the largely disturbed area adjacent to the existing community hall. This requires removal of the over-mature pines and cypresses adjoining Howey Street which are approaching the end of their useful life and will become an increasing maintenance and safety issue. The low lying area which is currently cleared will be filled in order to create a level site.

For visual amenity, landscaping compatible with the reserve's natural values is desirable but will need to consider CFA advice not to have flammable vegetation within 10 metres of the building. The building will require suitable landscaping along Howey Street.

Regardless of the footprint shape, retaining and regularising the 'in and out' access arrangement is preferred. In addition, Council may need to consider some traffic management measures in the vicinity of the site.

Intrusion of the footprint into the forest has been minimised by elongating its shape to facilitate joint parking space with the community hall and extending the footprint onto the road reserve where there will be parking and a landscape buffer. Locating parking in the road reserve doesn't require rezoning. Thus minimised, this footprint intrudes slightly into the forest by 164 m^2, which is 1.0% of the large forest remnant (habitat zones 1 and 2) and 0.7% of native vegetation patches within the reserve.

CFA advises that fuel reduction involving further clearing is appropriate for the forest adjacent to the above footprint. Most building loss in fire occurs through embers and accordingly the design includes at least 10 m of cleared area around the building (this can also double as a security area too – prevent graffiti etc.). The location of the building within the envelope is not determined. CFA also recommends that an additional 20 m be maintained by regular mowing around the trees. i.e. don't remove the trees but maintain the grasses within 30 m of the building. For the purposes of this plan, the area required for the proposed centre (4000 square metres) as above is termed the site footprint while the area subject to fuel reduction is the fuel management buffer.

The fuel management buffer intrudes into the forest by a further 20m, making the entire footprint plus fuel management buffer approximately 10% of the large forest remnant (habitat zones 1 and 2) and approximately 7% of native vegetation patches within the reserve.

The extent of the fuel management buffer may be less than what is shown and is dependent on detailed design to determine the exact layout and position of the centre building.

Government legislation and policy

Construction of the child and family centre requiresremoval of native vegetation.The implications of key biodiversity legislation and policy are as follows.Guidance in this report does not constitute legal advice.

Legislation / Policy	Relevant ecological feature within footprint	Permit / Approval required	Notes
EPBC Act	None	None	
FFG Act	Protected flora may be present	Protected flora permit	Reserve is public land
Planning & Environment Act	Native vegetation	Planning permit requiredto remove, destroy or lop native vegetation	Application for removal of native vegetation must meet the requirements of, and will be assessed in, the *low risk-based pathway* as per the *Permitted clearing of native vegetation – Biodiversity assessment guidelines* (DEPI 2013). Will require provision of an offset.

Management guidelines

In the event that the building footprint for the early years centre requires the removal of native vegetation, an offset management plan (OMP) would be prepared and implemented over 10 years to compensate for loss of native vegetation.

The OMP would include the following guidelines:

- prepare and maintain inventory of flora and fauna
- protect and enhance habitat for flora and fauna
- protect indigenous heritage values
- monitor canopy tree health in relation to possums
- control pest plants, including noxious weeds listed under the CaLP Act
- control biomass and reduce fuel loads, including application of control burns
- promote suitable indigenous ground layer vegetation in the fuel reduction zone south of the facility
- rationalise and treat eroded informal tracks and regulate access in bushland areas
- enhance buffer areas around remnant forest through natural regeneration
- avoid the use of unnecessary fencing, which is generally not appropriate in this reserve
- avoid any planting and rely on natural regeneration to protect site ecological integrity
- import only gravel of the same geological material as the site (bedrock) to protect site geological integrity
- develop demonstration native grass lawn area
- integrate mowing regime with environmental management, particularly the native grass lawn.

Other management guidelines for the reserve are as follows:

- provide improved informal recreation facilities including a perimeter walking track, seats and signs
- improve the amenity value of the area around the community hall
- protect and enhance landscape values of the remainder of the reserveincluding selective tree planting for shade and shelter (and improved habitat)
- retain vehicle access via Howey Street to minimise impacts on the reserve
- investigate improved traffic management at entry/exit to Howey Street
- coordinate with the community in protecting and managing the reserve.
- Management and access arrangements for the old orchard/garden associated with the Eblana property need to be clarified.
- Provide information and interpretive signs to raise awareness about the site's natural and cultural heritage values.

1 Introduction

1.1 Background

Biosis Pty Ltd was commissioned by Macedon Ranges Shire Council (MRSC) to prepare an Environmental Management Plan (EMP) for UL Daly Reserve in Gisborne.

The following background information is from the Brief(Quotation Request):

> *Macedon Ranges Shire Council has an established program of the creation of environmental management plans for our public bush and grassland reserves. The purpose of the management plans is to protect the significant natural habitats and biodiversity of the natural areas and provide for other existing and complementary uses of the reserves to serve the needs of the community.*
>
> *Whilst recognising the environmental and amenity values of the UL Daly Reserve, Council has committed to establishing a footprint suitable for an integrated child and family centre within the reserve. Council resolved on June 12, 2013:*
>
> *"That Council allocate $25,000 from the Public Open Space – South financial reserve to complete a master plan for the UL Daly reserve, Gisborne in accordance with our reserve management planning process including a footprint for an Early Years Hub and recognition of the environmental significance of the UL Daly Reserve".*
>
> *This takes account of the growing population of Gisborne and the proportion of young families living in the area. A feasibility study for the establishment of an integrated child and family centre has been completed. This study details the requirements for the centre including a service plan and functional brief.*
>
> *The centre will provide early childhood education and health services and UL Daly Reserve will continue to provide passive recreational opportunities with enhanced facilities. The key natural values of the reserve will be protected and enhanced by the completion and implementation of the Environmental Management Plan for the reserve.*

1.2 Objectives

The objectives of thisEMP are to:

- provide an inventory of reserve assets and existing uses
- provide a footprint for the construction of an Early Years Hub based on the recommendations of the Macedon Ranges Shire Council Gisborne Early Years Feasibility Study 2012
- maximise the protection and enhancement of the existing characteristics of the reserve by careful location of the centre
- provide sound integrated management directions for the long term management of the natural and recreational assets of the reserve
- provide a methodology for monitoring reserve assets and management
- align with Council's existing bushland reserve management planning processes
- provide for community and stakeholder consultation.

1.3 Management area

UL Daly Reserve, referred to here as Daly Reserve, is located within the township of Gisborne (Figure 1). It encompasses 3.98 ha of freehold land owned by MRSC and is zoned Public Use Zone – Local Government (PUZ6).The Reserve is outside the Bushfire Management Overlay.

The reserve is within the:

- Central Victorian Uplands bioregion
- Port Phillip and Westernport Catchment Management Authority
- Macedon Ranges Shire.

The geology of the reserve is Victorian bedrock: Castlemaine Group (Oc) consisting of Ordovician sandstone, siltstone and black shale (Vandenberg 2005).

The adjoining Eblana property has a 6 lot subdivision approved which is currently under construction.

2 Site Analysis

Analysis of UL Daly Reserve – based on on-site inspections, discussions with Council officers and review of existing documentation – identifies a range of values and facilities, and management issues and opportunities.Figure 2 shows the key elements of the reserve.

2.1 Values

2.1.1 Natural values

The reserve has important natural values, particularly the area of Grassy Forest on the western side. Details are in section 3. Many community members place a high value on the reserve's flora and fauna.

2.1.2 Heritage values

Aboriginal heritage

Details of Aboriginal heritage are provided in a separate Cultural Heritage Assessmentreport (Biosis 2013). The study area is located in the territory of the *Woi wurrung,* who lived a hunter/gatherer lifestyle, utilising the accessible local and regional resources to ensure a subsistence level of existence. The indigenous population decreaseddramatically following European settlement.

A field survey in the reserve found 11 Aboriginal stone artefacts at two locations, one site on a track to the south of the community hall and just inside the remnant vegetation area, and the other near the southern edge of the reserve under trees. Both were in areas with little grass cover, so it can be assumed that there is potential for further artefacts in the vegetated areas adjacent.

The two locations where artefacts were found were both areas of eroded ground, one along a gully, and the other on a rise. Such locations are typically landscapes where Aboriginal sites may be found. The potential for a spring or waterhole to have formerly existed in the low area between the ridge lines, might explain the presence of the artefacts in these locations.

Site inspection and discussions with Council staff indicate that some areas of the reserve have been subject to previous ground disturbance. These are the areas associated with construction of the surrounding roads, the existing community hall, car park and excavations in the vicinity.

Historic heritage

Daly Reserve was once part of a larger property comprising an eleven acre site granted to James Cavanagh who erected a small cottage. Cavanagh sold the property in 1895 to the Gisborne Doctor Ulick A Daly. Daly had a large timber Federation Bungalow style villa built in 1896, which he called 'Eblana'. The property passed to his wife Laura May in the 1930s and later to a son Ulick Lord Daly. Ulick's son, Jack Daly, is thought to have lived there for a long period and improved the garden, growing some plants for sale (TBA Planners 1994, quoted in Biosis 2013).

The association with the previous owner, UL Daly, is locally significant, and the orchard/garden previously associated with the Eblana house is of interest. The orchard/garden is now part of UL Daly Reserve.

Pines and other exotic trees planted at various times in the reserve are not known to have particular significance, although as part of the larger exotic plantings which give Gisborne its distinctive character, they contribute to the overall cultural landscape of the reserve and local area. A recent arborist's report to Council identified most of these trees as being in fair or poor health, with implications for future management.

2.1.3 Recreation and social values

The reserve is popular, particular with local residents, for informal recreation including walking, socialising and enjoying nature. Scout and Guide groups also regularly use outdoor areas in the reserve. The community hall is frequently used by scouts, guides, a community dance group and other community groups.

2.1.4 Landscape and aesthetic values

Community members have expressed appreciation of the visual and natural values of the reserve and the contribution it makes to the appeal of the area.

The reserve has moderate landscape values of local significance, particularly the elevated area near the southern boundary, which provides panoramic views over the town to the north. There are also attractive views into the reserve from surrounding areas and from Melton Road. The area around the hall has low landscape values due to the unsympathetic design of the building and parking area, and lack of complementary landscape treatment.

2.2 Facilities

The community hall is the only significant structure in the reserve. Water, gas, electricity and sewerage services are provided. Vehicle access is provided by an unsealed track off Howey Street with informal parking for about 20 vehicles.

Other facilities in the reserve include a sealed shared pathway through the reserve, rough bush tracks (unconstructed), a seat and several signs.

2.3 Management issues and opportunities

A series of preliminary management issues and opportunities has been identified as a result of the site analysis.

2.3.1 Issues

- The remnant vegetation in the reserve is an important asset requiring more intensive management to protect and enhance natural values. Weeds, encroachments and eroding tracks are a priority for attention.

- Landscape values in the elevated parts of the reserve are likely to be adversely affected by any built development near the southern boundary.

- Opened in 1987, the Hall is a basic utilitarian structure.

- The mature cypresses and pines along the northern and northwest boundaries will become an increasing maintenance and perhaps safety issue. Consideration could be given to removing these trees in association with proposed building development and reinstatement of the surrounding area with indigenous vegetation to strengthen natural values and provide an attractive setting for the proposed centre.

2.3.2 Opportunities

- The flat, largely cleared, area around the hall is suitable for additional built development without adverse impact on natural or landscape values.

- Informal recreation is an important use of the reserveand improved facilities such as constructed tracks, seats, viewing points and signs, together with planting for shade and shelter, would enhance this use. A perimeter walking track (located to minimise impacts on natural values) would substantially enhance visitor experience and use of the reserve.
- About half the reservehas been largely cleared of native vegetation. Revegetationor facilitated natural regeneration of selected areas, e.g. a buffer around the western bushland, and in gaps along Melton Road, would enhance ecological values and the visual amenity of the reserve.

- Management and access arrangements for the old orchard/garden associated with the former Eblana house need to be clarified, with opportunities to increase community use and involvement. Trees and other plants with a direct association with the house could be retained and the area landscaped sympathetically, possibly with areas involving use by children and other community groups or individuals.

3 Flora and Fauna

Ecological features of UL Daly Reserve are described below and mapped in Figure 3.

3.1 Species

A total of 77 indigenous vascular plant species is recorded from the reserve. This comprises66 records from the present study and 11additional records on the NatureShare website. A total of 21 introduced flora species is also recorded from the reserve, all from this study(Appendix 1).

Sixteen indigenous and no introduced vertebrate faunaspecies arerecorded from the reserve, comprising 11 records from the present study and 5 additional records on the NatureShare website (Appendix 2).

3.2 Vegetation

Native vegetation is defined as 'plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses' in the Victoria Planning Provisions contained in the Macedon Ranges Planning Scheme.

According to the Department of Environment and Primary Industries (DEPI) *Biodiversity assessment guidelines* (DEPI 2013), native vegetation is classified into two categories, as outlined below.

A *remnant patch* of native vegetation (measured in hectares) is either:

- an area of native vegetation, with or without trees, where at least 25 per cent of the total perennial understory plant cover is native plants
- an area with three or more indigenous canopy trees where the tree canopy cover is at least 20 per cent.

Scattered tree (measured in number of trees):

- an indigenous canopy tree that does not form part of a remnant patch of native vegetation.

Patch vegetation

Native vegetation in Victoria is further classified into *ecological vegetation classes* (EVCs) by the Department of Environment and Primary Industries (DEPI).

DEPI's modelled 1750 and 2005 EVC mapping(online Biodiversity Interactive Map) shows the reserve supporting Grassy Forest EVC 128. This is supported by site observations.

The DEPI map of 2005 vegetation overestimates the amount of Grassy Forest on the site, as follows.

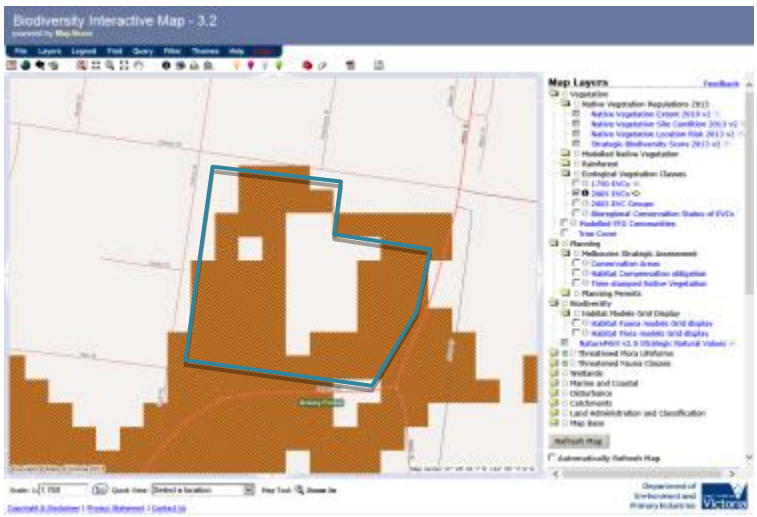

Figure 4. Daly Reserve – Biodiversity Interactive Map (extract)

The reserve has uniform geology (Victorian bedrock) and gentle topography, which would have originally supported fairly uniform native vegetation. The present distribution of native vegetation is determined by site disturbance history. In particular, past clearing has eliminated native vegetation from approximately one half of the reserve. Historical aerial photography indicates the clearing had already taken place by 1946:

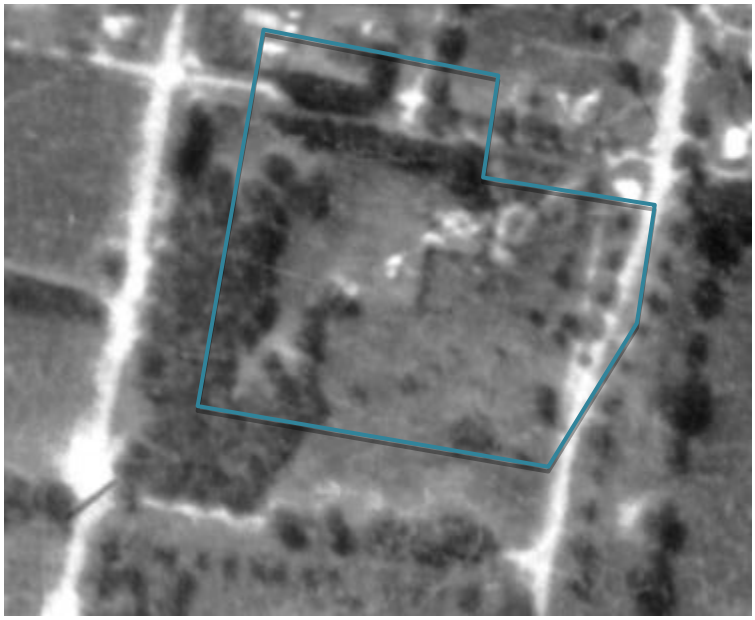

Figure 5. Daly Reserve in 1946(courtesy Macedon Ranges Shire).

Subsequently there has been planting of Australian native trees and shrubs that are not indigenous to the reserve. Numerous non-indigenous shrubs occur in the forest, including at least four *Acacia* and one *Hakea* species,which are either planted or escapes from plantings.

Habitat zones within the native vegetation are mapped in Figure 3 and described in the following section.

Grassy Forest (relatively intact) – habitat zone 1

Figure 6. Grassy Forest on west side of the reserve.

Floristics indigenous:	Forest dominated by Messmate Stringybark*Eucalyptus obliqua* andNarrow-leaf Peppermint *Eucalyptus radiata*.Two Large Old Trees (diameter ≥70 cm) are present. Scattered small tree layer includes Blackwood*Acacia melanoxylon* andCherry Ballart*Exocarpos cupressiformis.* Scattered shrub layer includes Vanish Wattle *Acacia verniciflua* and Drooping Cassinia *Cassinia arcuata*. Groundlayer composed of grasses such as Veined Spear-grass *Austrostipa rudis*,Grey Tussock-grass *Poa sieberiana*and Common Wallaby-grass *Rytidosperma caespitosum*,and other herbs such as Chocolate Lily *Arthropodium strictum*, Bulbine Lily *Bulbine bulbosa*, Button Everlasting *Coronidium scorpioides*and Black-anther Flax-lily *Dianella revoluta*.
Floristics introduced:	Introduced species are common andincludeSweet Vernal-grass *Anthoxanthum odoratum*and Large Quaking-grass *Briza maxima*.
Structure:	Forest to 20 metres
Area:	0.13 ha
Distribution:	Western side of reserve
Condition:	Relatively intact. Although somewhat weedy, this habitat zone has the highest quality and has impressive wildflower displays in spring. This is the core area of the reserve in terms of vegetation quality and management priority.
Habitat score:	0.66

Grassy Forest (partially modified) – habitat zone 2

Figure 7. Grassy Forest on west side of the reserve.

Floristics indigenous:	Forest dominated by Narrow-leaf Peppermint *Eucalyptus radiata*andMessmate Stringybark*Eucalyptus obliqua.* Candlebark *Eucalyptus rubida*is also present. A total of 16 Large Old Trees (diameter ≥70 cm) were observed. Scattered small tree layer includes Blackwood*Acacia melanoxylon* andCherry Ballart*Exocarpos cupressiformis.* Scattered shrub layer includes various *Acacia* species including Bacchus Marsh Wattle *Acacia rostriformis*, Grey Parrot-pea *Dillwynia cinerascens* and Austral Indigo *Indigofera australis.* Groundlayer composed of grasses such as Veined Spear-grass *Austrostipa rudis*,Weeping Grass *Microlaena stipoides*, Grey Tussock-grass *Poa sieberiana*and Kangaroo Grass *Themeda triandra*,and other herbs such as Chocolate Lily *Arthropodium strictum*, Button Everlasting *Coronidium scorpioides*, Black-anther Flax-lily *Dianella revoluta* and Stinking Pennywort *Hydrocotyle laxiflora*. Colonies of the orchid Nodding Greenhood *Pterostylis nutans* are present.
Floristics introduced:	Introduced species are common and include shrubs Sallow Wattle *Acacia longifolia* and English Broom*Cytisus scoparius*, grasses Brown-top Bent *Agrostis capillaris*, Sweet Vernal-grass *Anthoxanthum odoratum*,Large Quaking-grass *Briza maxima* and Panic Veldt-grass *Ehrharta erecta*,and other herbs such as Flatweed *Hypochaeris radicata*. Numerous non-indigenous shrubs are present, including at least four *Acacia* and one *Hakea* species, either planted or escapes from plantings.
Structure:	Forest to 20 metres
Area:	1.48 ha
Distribution:	Western side of reserve
Condition:	Partially modified. Canopy trees only just coping with possum browsing. Weeds generally have high cover, numerous non-indigenous shrubs are present.
Habitat score:	0.56

Grassy Forest (modified) – habitat zone 3

Figure 8. Grassy Forest beside Melton Road.

Floristics indigenous:	Forest dominated by Narrow-leaf Peppermint *Eucalyptus radiata*,Messmate Stringybark*Eucalyptus obliqua*and Red Ironbark *Eucalyptus tricarpa*. Five Large Old Trees are present (diameter ≥70 cm). Scattered small tree layer comprises Cherry Ballart*Exocarpos cupressiformis*. Shrubs are limited to one regenerating stand of Golden Wattle *Acacia pycnantha*. Groundlayer composed of grasses such as Veined Spear-grass *Austrostipa rudis*,Weeping Grass *Microlaena stipoides*, and other herbs such as Chocolate Lily *Arthropodium strictum*, Nodding Saltbush*Einadia nutans* and Black-anther Flax-lily *Dianella revoluta*. A large individual of Peach Heath *Lissanthe strigosa*may be isolated as the nearest record is from 12 km away (Flora Information System 2013).
Floristics introduced:	Introduced species are common and include Radiata Pine *Pinus radiata*, the grasses Brown-top Bent *Agrostis capillaris*, Sweet Vernal-grass *Anthoxanthum odoratum*,Large Quaking-grass *Briza maxima* and Panic Veldt-grass *Ehrharta erecta*,and other herbs such as Flatweed *Hypochaeris radicata* andOnion Grass *Romulea rosea*.
Structure:	Forest to 20 metres
Area:	0.17 ha
Distribution:	South end of reserve, beside Melton Road
Condition:	Modified. Weeds generally have high cover, understorey has low diversity.
Habitat score:	0.44

Grassy Forest (highly modified, no canopy) – habitat zone 4

Figure 9. Mown grassland on south side of the reserve.

Floristics indigenous:	Grassland resulting from past clearing of trees and regular mowing over many years. Composed of a low number of indigenous species, mostly native grasses, which thrive or survive in open mown conditions. Prominent species are Kneed Wallaby-grass *Rytidosperma geniculatum*, Common Wallaby-grass *Rytidosperma caespitosum*and Weeping Grass *Microlaena stipoides*. Other herbs present include Spreading Crassula *Crassula decumbens* and Grassland Wood-sorrel *Oxalis perennans*.
Floristics introduced:	Introduced species are common, particularly Brown-top Bent *Agrostis capillaris*.
Structure:	Grassland
Area:	0.42 ha
Distribution:	Large area in south-east of reserve, also small area near community hall.
Condition:	Highly modified. Lacks tree canopy and species diversity.
Habitat score:	0.23

Scattered trees

Scattered indigenous canopy trees occur outside identified patches and are shown on Figure3.
There are 7 scattered canopy trees comprising:

- 1 Very Large Old Tree (diameter ≥105 cm)
- 1 Large Old Tree (diameter at ≥70–104 cm)
- 1 Medium Old Tree (diameter ≥52.5–69 cm)
- 4 small trees(diameter ‹52.5 cm).

Introduced vegetation

Introduced vegetation is either:

- non-indigenous trees, largely comprising Radiata Pine *Pinus radiata* and planted Australian native trees, or
- introduced mown grassland.

3.3 Landscape context

Located within the township of Gisborne, UL Daly Reserve is partially isolated from extensive forest areas in the nearby Western Highlands. It is approximately 2.5 km from the Rosslynne Reservoir forest area to the north-west and approximately 2.5 km from the Pyrete forest area to the south-west.

The intervening semi-cleared cleared farmland and township land is likely to be a semi-permeable barrier to manylarger ground-dwelling fauna. The reserve is not part of a wildlife corridor connecting larger areas of native vegetation. However, it is likely to be a stopover point for more mobile fauna, particularly native birds and bats passing through the landscape.

3.4 Significant species and ecological communities

3.4.1 Significant species

Species listed under the EPBC Act or FFG Act, listed on the DEPI Advisory Listor that are otherwise significant recorded or predicted to occur within 5 km of the reserve are given in Appendix 1.
Significant species recorded from the reserve are as follows:

Table 1: Significant species within the reserve.

Species name	Location within reserve
EPBC Act listed species	
None recorded	
FFG Act listed species	
None recorded	
DEPI Advisory List species (DSE 2005)	
Bacchus Marsh Wattle*Acacia rostriformis*, listed as *Acacia verniciflua* (Bacchus Marsh variant), Vulnerable in Victoria	Forest remnant, four plants

Note: as the DEPI listing is advisory and not a listing under legislationthere are no regulatory requirements.

3.4.2 Significant ecological communities

The following significant ecological community occurs within the reserve:

Grassy Forest EVC 128 is listed as Vulnerable in the Central Victorian Uplands bioregion (DEPI website).

Note: as this listing is advisory and not a listing under legislation there are no regulatory requirements.

3.5 Vegetation quality

For the purpose of calculating native vegetation quality, each *remnant patch* of native vegetation was divided into one or more *habitat zones*. Each habitat zone contains a single EVC of more or less uniform quality.

Native vegetation quality was assessed foreach habitat zone using the method in the DSE Vegetation Quality Assessment Manual(DSE 2004) and pre-determined EVC benchmarks: http://www.dse.vic.gov.au/conservation-and-environment/ecological-vegetation-class-evc-benchmarks-by-bioregion.

Each habitat zone was assigned a *habitat score* which is multiplied by its area to giveits value in*habitat hectares*. The conservation significance of each habitat zone was also determined.

Four habitat zones are identified (Figure 3). The reserve contains 2.20 land hectares of native vegetation supporting 1.09 habitat hectares (Table 2).

Table 2: Quantification and significance of native vegetation patches.

Habitat zone			1	2	3	4	TOTAL
Bioregion			CVU	CVU	CVU	CVU	
EVC name			GF	GF	GF	GF	
EVC Bioregional Conservation Status			V	V	V	V	
		Score	**Score**	**Score**	**Score**	**Score**	
Site Condition	Large Old Trees	10	10	6	10	0	
	Canopy Cover	5	5	5	5	0	
	Lack of Weeds	15	7	7	4	9	
	Understorey	25	20	20	15	5	
	Recruitment	10	10	6	3	0	
	Organic Matter	5	5	3	3	5	
	Logs	5	5	5	0	0	
	Total Site Score		62	52	40	19	
	EVC standardiser		na	na	na	na	
	Adjusted Site Score		62	52	40	19	
Landscape Value	Patch Size	10	2	2	2	2	
	Neighbourhood	10	1	1	1	1	
	Distance to Core	5	1	1	1	1	
	Total Landscape Score		4	4	4	4	
Habitat points = #/100		100	66	56	44	23	
HABITAT SCORE		1	0.66	0.56	0.44	0.23	
Habitat Zone area (ha)			0.13	1.48	0.17	0.42	2.20
Habitat Hectares (Hha)			0.09	0.83	0.07	0.10	1.09
Number of Large Old Trees present			2	16	5	0	23

CVU =Central Victorian Uplands bioregion,GF = Grassy Forest,V = Vulnerable

3.6 Selected notable features

The following environmental features are noted:

- The highest quality vegetation is in a small area in the centre of the forest (habitat zone 1). This area has impressive wildflower displays in spring.
- The large individual of Peach Heath *Lissanthe strigosa*may be an isolated occurrence as from the nearest record is from 12 km away (Flora Information System 2013).
- The mown grassland (habitat zone 4) is essentially a demonstration native grass lawn requiring minimal mowing and no water or nutrient inputs, while being readily fuel reducible.

4 Child and Family Centre

The proposed indicative footprint for the centre is based on the largely disturbed area adjacent to the existing community hall (Figures 2, 3). This requires removal of the over-mature pines and cypresses adjoining Howey Street which are approaching the end of their useful life and will become an increasing maintenance and safety issue. The low lying area which is currently cleared will be filled in order to create a level site.

Well designed landscaping compatible with the reserve's natural values is desirable, preferably using indigenous species such as the 'vulnerable'Bacchus Marsh Wattle which could help interpret the reserve's significance. However, landscaping will need to consider CFA advice not to have flammable vegetation within 10 metres of the building. The building will require suitable landscaping along Howey Street.

Regardless of the footprint shape, retaining and regularising the 'in and out' access arrangement is preferred. .In addition, Council may need to consider some traffic management measures in the vicinity of the site.

Intrusion of the footprint into the forest has been minimised by elongating its shape to facilitate joint parking space with the community hall and extending the footprint onto the road reserve where there will be parking and a landscape buffer. Locating parking in the road reserve doesn't require rezoning. Thus minimised, this footprint intrudes slightly into the forest by 164 m^2, which is 1.0% of the large forest remnant (habitat zones 1 and 2) and 0.7% of native vegetation patches within the reserve.

CFA advises that fuel reduction involving further clearing is appropriate for the forest adjacent to the above footprint. Most building loss in fire occurs through embers and accordingly the design includes at least 10 m of cleared area around the building (this can also double as a security area too – prevent graffiti etc.). The location of the building within the envelope is not determined. CFA also recommends that an additional 20 m be maintained by regular mowing around the trees. i.e. don't remove the trees but maintain the grasses within 30 m of the building. For the purposes of this plan, the area required for the proposed centre (4000 square metres) as above is termed the site footprint while the area subject to fuel reduction is the fuel management buffer.

The fuel management buffer intrudes into the forest by a further 20m, making the entire footprint plus fuel management buffer approximately 10% of the large forest remnant (habitat zones 1 and 2) and approximately 7% of native vegetation patches within the reserve.

The extent of the fuel management buffer may be less than what is shown and is dependent on detailed design to determine the exact layout and position of the centre building.

The site footprint of approximately 4000 square metres for the Child and Family Centre is based on the recommendations of the MRSC Early Years Feasibility Study, 2012 and comprises:

- Building floor area: 1047 m^2
- Carpark, play area etc.: 2043 m^2
- Setbacks etc.: 927 m^2

Preliminary investigations by the consultant team found that there were few viable options for the location of the proposed centre.

Factors considered in assessing potential sites included:

- Potential impacts on reserve values including natural, heritage and landscape values
- Suitability of the site for construction (access, slope, proximity to services etc.)

- Access including vehicle access
- Opportunities to integrate the proposed centre with existing buildings, i.e. the community hall.

The assessment of site values indicated that areas of high natural value and potential cultural heritage value, particularly the bushland area to the west, would be adversely affected by any building works. Landscape values would be adversely affected by any significant structures on the open elevated areas to the south.

The former orchard/garden area associated with the former Daly Homestead does not have high heritage values, but is not suitable for a large-scale development due to small size, slope, lack of suitable access and close proximity to the homestead. Development on this site would have a major physical impact on the reserve.

The area adjacent to the community hall is largely flat, has low natural, heritage, and landscape values, and is close to an access road and services. It also provides the opportunity to integrate some functions of the community hall and proposed centre including vehicle access and parking.

The footprint takes in much of the disturbed ground near the community hall. Adjacent areas have significant values.

Should Council wish to pursue the development of an early years centre on this site, the layout and building design should seek to avoid or minimise intrusion into the native vegetation and undisturbed areas.

4.1 Government legislation and policy

Construction of the child and family centre requires removal of native vegetation. The implications of key biodiversity legislation and policy are as follows.Guidance in this report does not constitute legal advice.

Legislation / Policy	Relevant ecological feature within footprint	Permit / Approval required	Notes
EPBC Act	None	None	
FFG Act	Protected flora may be present	Protected flora permit	Reserve is public land
Planning & Environment Act	Native vegetation	Planning permit required to remove, destroy or lop native vegetation	Application for removal of native vegetation must meet the requirements of, and will be assessed in, the *low risk-based pathway* as per the *Permitted clearing of native vegetation – Biodiversity assessment guidelines* (DEPI 2013). Will require provision of an offset.

5 Management Guidelines

In the event that the building footprint for an early years centre requires the removal of native vegetation, an offset management plan (OMP) would be prepared and implemented over 10 years to compensate for loss of native vegetation.

The OMP would include the following guidelines:

- prepare and maintain inventory of flora and fauna
- protect and enhance habitat for flora and fauna
- protect indigenous heritage values
- monitor canopy tree health in relation to possums (see Yugovic 2013)
- control pest plants, including noxious weeds listed under the CaLP Act
- control biomass and reduce fuel loads, including application of control burns
- promote suitable indigenous ground layer vegetation in the fuel reduction zone south of the facility
- rationalise and treat eroded informal tracks and regulate access in bushland areas
- enhance buffer areas around remnant forest through natural regeneration
- avoid any planting and rely on natural regeneration to protect site ecological integrity (see Yugovic 2011)
- avoid the use of unnecessary fencing, which is generally not appropriate in this reserve
- import only gravel of the same geological material as the site (bedrock) to protect site geological integrity
- develop demonstration native grass lawn area
- integrate mowing regime with environmental management, particularly the native grass lawn.

Other management guidelines for the reserve are as follows:

- provide improved informal recreation facilities including a perimeter walking track, seats and signs
- improve the amenity value of the area around the community hall
- protect and enhance landscape values of the remainder of the reserveincluding selective tree planting for shade and shelter (and improved habitat)
- retain vehicle access via Howey Street to minimise impacts on the reserve
- investigate improved traffic management at entry/exit to Howey Street
- coordinate with the community in protecting and managing the reserve.
- Management and access arrangements for the old orchard/garden associated with the Eblana property need to be clarified.
- Provide information and interpretive signs to raise awareness about the site's natural and cultural heritage values.

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Appendices

Appendix 1: Flora

Notes to table:

EPBC Act: CR - Critically Endangered EN - Endangered VU - Vulnerable	**DSE 2005:** e - endangered v - vulnerable r - rare
	FFG Act: L - listed as threatened under FFG Act P - protected under FFG Act (public land only)
# - Victorian native species outside natural range	**Noxious weed status:** SP - State prohibited species RP - Regionally prohibited species RC - Regionally controlled species RR - Regionally restricted species
2 – Record from NatureSharehttp://natureshare.org.au/collection/262/species/	

Table A1.1:Vascular flora recorded from Daly Reserve, Gisborne.

Status	Scientific name	Common name
Indigenous species		
	Acacia dealbata	Silver Wattle
P	*Acacia mearnsii*	Black Wattle
	Acacia melanoxylon	Blackwood
	Acacia paradoxa	Hedge Wattle
P	*Acacia provincialis*	Wirilda
P	*Acacia pycnantha*	Golden Wattle
P	*Acacia rostriformis*	Bacchus Marsh Wattle
P	*Acacia verniciflua*	Varnish Wattle
	Acaenaechinata	Sheep's Burr
	Acaena novae-zelandiae	Bidgee-widgee
P	*Acrotriche serrulata*[2]	Honey-pots
	Aphanesaustraliana	Australian Piert
	Arthropodiumstrictum	Chocolate Lily
	Austrostipamollis	Supple Spear-grass
	Austrostiparudis	Veined Spear-grass
	Brunoniaaustralis	Blue Pincushion
	Bulbinebulbosa	Bulbine Lily
	Burchardiaumbellata	Milkmaids
	Bursaria spinosa[2]	Sweet Bursaria

Status	Scientific name	Common name
P	*Cassiniaarcuata*	Drooping Cassinia
P	*Cassinialongifolia*	Shiny Cassinia
	*Clematis microphylla*s.l.	Small-leaved Clematis
P	*Coronidiumscorpioides*	Button Everlasting
	Crassuladecumbens	Spreading Crassula
	Dianella revolutas.l.	Black-anther Flax-lily
	Dianella tasmanica[2]	Tasman Flax-lily
	Dillwynia cinerascens	Grey Parrot-pea
P	*Diuris sulphurea*	Tiger Orchid
	Droseraauriculata	Tall Sundew
	Einadianutans	Nodding Saltbush
	Eucalyptus dives[2]	Broad-leaf Peppermint
	Eucalyptus obliqua	Messmate Stringybark
	Eucalyptus radiata	Narrow-leaf Peppermint
	Eucalyptus rubida	Candlebark
	Eucalyptus tricarpa	Red Ironbark
P	*Euchitonjaponicus*	Creeping Cudweed
	Exocarposcupressiformis	Cherry Ballart
	Geranium sp. 2	Variable Crane's-bill
	Gonocarpustetragynus	Common Raspwort
	Hardenbergiaviolacea	Purple Coral-pea
P	*Helichrysum luteoalbum*[2]	Jersey Cudweed
	Hovea heterophylla[2]	Common Hovea
	Hydrocotylelaxiflora	Stinking Pennywort
	Indigoferaaustralis	Austral Indigo
	Juncussubsecundus	Finger Rush
	Kunzea ericoides[2]	Burgan
P	*Lissanthestrigosa*	Peach Heath
	*Lomandrafiliformis*subsp.*coriacea*	Wattle Mat-rush
	*Lomandrafiliformis*subsp.*filiformis*	Wattle Mat-rush
	Luzulameridionalis	Common Woodrush
	Melicytusdentatus	Tree Violet
	Microlaenastipoides	Weeping Grass
P	*Microtisparviflora*	Slender Onion-orchid
	Oxalis perennans	Grassland Wood-sorrel

Status	Scientific name	Common name
	Pimeleahumilis	Common Rice-flower
	Pimelealinifolia	Slender Rice-flower
	Plantago varia	Variable Plantain
	Poamorrisii	Soft Tussock-grass
	Poasieberiana	Grey Tussock-grass
P	*Pterostylisnutans*	Nodding Greenhood
	Rytidospermacaespitosum	Common Wallaby-grass
	Rytidospermageniculatum	Kneed Wallaby-grass
	Rytidospermapallidum	Silvertop Wallaby-grass
	Rytidospermasetaceum	Bristly Wallaby-grass
P	*Senecioglomeratus*	Annual Fireweed
P	*Senecio phelleus*[2]	Stony Fireweed
P	*Senecioquadridentatus*	Cotton Fireweed
	Solanum laciniatum[2]	Large Kangaroo Apple
P	*Solenogynedominii*	Smooth Solenogyne
P	*Thelymitra arenaria*[2]	Forest Sun-orchid
P	*Thelymitra*sp.	Sun-orchid
	Themedatriandra	Kangaroo Grass
P	*Thysanotuspatersonii*	Twining Fringe-lily
	Tricoryneelatior	Yellow Rush-lily
	Veronica gracilis	Slender Speedwell
	Wahlenbergia multicaulis[2]	Branching Bluebell
	Wurmbeadioica	Common Early Nancy
Introduced species		
	Acacia baileyana	Cootamundra Wattle
#	*Acacia floribunda*	White Sallow-wattle
#	*Acacia howittii*	Sticky Wattle
#	*Acacia longifolia*subsp.*longifolia*	Sallow Wattle
	Acetosella vulgaris	Sheep Sorrel
	Agapanthus praecox	Agapanthus
	Agrostiscapillaris	Brown-top Bent
	Anthoxanthumodoratum	Sweet Vernal-grass
	Bellisperennis	English Daisy
	Briza maxima	Large Quaking-grass
RC	*Conium maculatum*	Hemlock

Status	Scientific name	Common name
	Crataegusmonogyna	Hawthorn
RC	*Cytisusscoparius*	English Broom
	Ehrhartaerecta	Panic Veldt-grass
	Hakea salicifolia	Willow-leaf Hakea
	Hedera helix	English Ivy
	Hypochaerisradicata	Flatweed
RR	*Oxalis pes-caprae*	Soursob
	Romulearosea	Onion Grass
RC	*Ulexeuropaeus*	Gorse
	Vulpiamyuros	Rat's-tail Fescue

Appendix 2: Fauna

Notes to table:

EPBC Act: X - Extinct CR - Critically Endangered EN - Endangered VU - Vulnerable CD - Conservation dependent	**DSE 2013:** ex - extinct cr - critically endangered en - endangered vu - vulnerable nt - near threatened dd - data deficient rx - regionally extinct
* - introduced species ** - pest species listed under the CaLP Act	**FFG Act:** L - listed as threatened under FFG Act N - nominated for listing as threatened I - determined ineligible for listing
2– Record from NatureSharehttp://natureshare.org.au/collection/262/species/	

Table A2.1:Vertebrate fauna recorded from Daly Reserve, Gisborne.

Status	Scientific name	Common name
	Mammals	
	Macropusgiganteus	Eastern Grey Kangaroo[2]
	Trichosurusvulpecula	Common Brushtail Possum
	Birds	
	Anthochaeracarunculata	Red Wattlebird
	Aquila audax	Wedge-tailed Eagle
	Cacatuagalerita	Sulphur-crested Cockatoo
	Cacomantisflabelliformis	Fan-tailed Cuckoo
	Calyptorhynchusfunereus	Yellow-tailed Black-Cockatoo[2]
	Colluricincla harmonica	Grey Shrike-thrush[2]
	Coracinanovaehollandiae	Black-faced Cuckoo-shrike
	Corvusmellori	Little Raven
	Gymnorhinatibicen	Australian Magpie
	Pardalotuspunctatus	Spotted Pardalote
	Platycercuseleganselegans	Crimson Rosella
	Rhipiduraalbiscarpa	Grey Fantail[2]
	Streperaversicolor	Grey Currawong[2]
	Reptiles	
	Lampropholisguichenoti	Garden Skink

Figures

Figure1: Location of Daly Reserve, Gisborne.

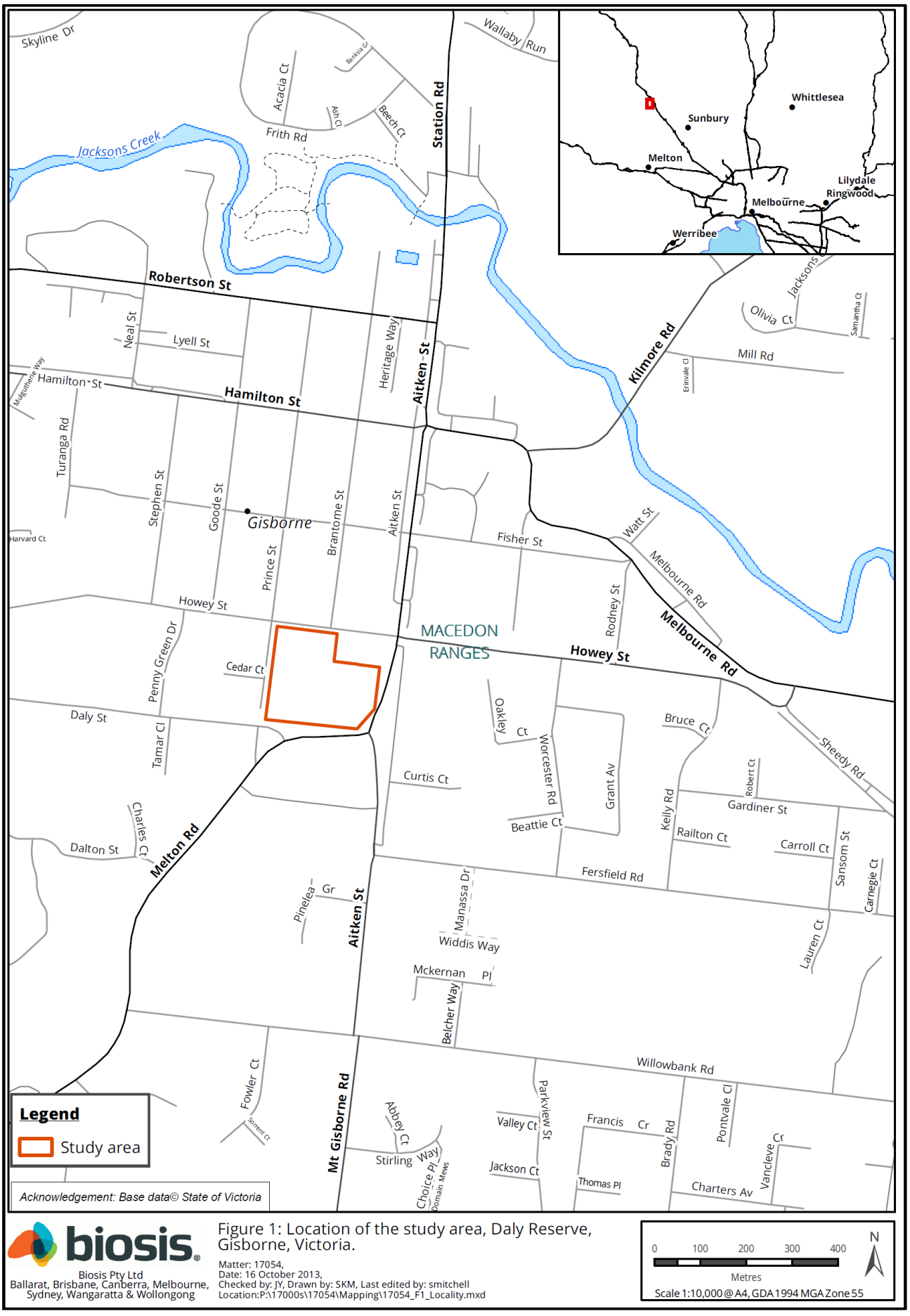

Figure 1: Location of the study area, Daly Reserve, Gisborne, Victoria.

Matter: 17054,
Date: 16 October 2013,
Checked by: JY, Drawn by: SKM, Last edited by: smitchell
Location:P:\17000s\17054\Mapping\17054_F1_Locality.mxd

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Figure 2: Features, Daly Reserve, Gisborne

Figure 2: Features of Daly Reserve, Gisborne.

Figure 3: Vegetation, Daly Reserve, Gisborne

Figure 3: Vegetation, Daly Reserve, Gisborne.