RMCG

DATE: 4 APRIL 2023

Flora and Fauna Report: Lot 14 Flakemores Road

Report for: Building Design Solutions

Property Location: Lot 14 Flakemores Road, Eggs and Bacon Bay

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Table of Contents

Executive Summary

RMCG have been engaged to undertake a natural values assessment of CT 8131/14, Lot 14 Flakemores Road, Eggs and Bacon Bay, where the construction of a dwelling is proposed.

The siting of the proposed development is within a disturbed area and the Bushfire Attack Level (BAL) 29 rating of the dwelling ensures minimal impacts to the site form bushfire hazard management measures, with the existing separation distances to classified vegetation greater than the minimum required separation distances (Bushfire Report, Building Design Solutions, 27/07/2022).

A field inspection was undertaken on 14 March 2023 which identified that the proposed construction of a dwelling on the title will not impact any threatened vegetation communities. A highly disturbed threatened vegetation community, *Eucalyptus ovata* forest and woodland (DOV), was identified in the north of the title, however, this community is outside of the proposed development area and will not be impacted by the proposed development. Likewise, the wetland within the *Melaleuca squarrosa* scrub (SMR) community in the west of the title is outside of the proposed development area.

While the vegetation to be removed is within a mapped biodiversity protection area, the title, in particular the proposed development area, is highly disturbed with minimal potential suitable habitat for any threatened flora or fauna species, with no denning or nesting habitat identified. The proposed development area may overlap some species' ranging boundaries; however, the proposal is considered to have minimal impact on these species.

With reference to Table E10.1 of the Planning Scheme, the only 'priority biodiversity value' identified within the proposed development area is native vegetation adjacent to a wetland. As this vegetation is highly disturbed and regenerating, the proposal is not considered to result in unnecessary or unacceptable loss of priority biodiversity values.

Providing the recommendations, as outlined in this report, and listed below, are followed, the proposal is not considered to have an unnecessary or unacceptable impact on natural values in respect to E11.7.1 P1 of the Waterway and Coastal Protection Code and is considered to satisfy E10.7.1 P1 of the Biodiversity Code.

Additionally, the recommendations are likely to result in an overall low level of disturbance associated with the proposal and is therefore unlikely to present a significant impact and require any additional assessment under the State *Threatened Species Protection Act 1995* or the *Nature Conservation Act 2002,* or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC).

Recommendations

- Ensure a minimum 5m distance between the proposed dwelling footprint and the wetland. This involves moving the dwelling 2.5m east and 1m south from the position shown on the architectural drawings by Building Design Solutions, July 2022.
- Erect a sediment barrier across the title to the west of the proposed dwelling prior to construction works commencing and maintain the barrier for the duration of works.
- Prevent biosecurity incursions and further weed incursions by implementing strict washdown guidelines for all machinery and equipment used during works.
- Control weeds on the title prior to and following works to prevent further establishment of weeds throughout the area, particularly within the threatened *Eucalyptus ovata* forest and woodland community in the north of the title.

1 Introduction

RMCG have been engaged to undertake a natural values assessment of CT 8131/14, Lot 14 Flakemores Road, Eggs and Bacon Bay, where the construction of a dwelling is proposed in the east of the title. The title is zoned Low Density Residential and is with a Biodiversity Protection Area under the *Huon Valley Interim Planning Scheme 2015* (the Planning Scheme). The majority of the title, including the proposed development area is also mapped as a Waterway and Coastal Protection Area under the Planning Scheme.

As the proposed development is for a single dwelling on an existing lot within the Low Density Residential Zone and the area of clearance and conversion is no more than 3,000m^2 and the area of disturbance is no more than 6,000m^2, the Acceptable Solution E10.7.1 A1 b) under the Biodiversity Code of the Planning Scheme is met. However, Huon Valley Council have requested a Natural Values Assessment be completed for the proposed development.

The 'Bushfire Hazard Report for S Bartels at 14 Flakemores Road, Eggs and Bacon Bay' (Bushfire Report) by Philip Cuthbertson Building Design Solutions, 27/07/2022, states that the proposed dwelling will be built to BAL 29 standards. The Bushfire Report also notes that the existing separation distance of the proposed development to classified vegetation is greater than the minimum required separation distance, indicating that minimal clearing of vegetation is required for bushfire protection measures.

Under the *Huon Valley Interim Planning Scheme 2015*, development within a Waterway and Coastal Protection Area needs to be assessed under E11 Waterway and Coastal Protection Code;

E11.7 Development Standards

E11.7.1 Buildings and Works

Objective: To ensure that buildings and works in proximity to a waterway, the coast, identified climate change refugia and potable water supply areas will not have an unnecessary or unacceptable impact on natural values.

Under this Code, natural values means biodiversity, environmental flows, natural streambank stability and stream bed condition, riparian vegetation, littoral vegetation, water quality, wetlands, river condition and waterway and/or coastal values (E11.3.1).

To meet acceptable solutions (A2); Clearance or disturbance of native vegetation is in accordance with a certified Forest Practices Plan.

Where acceptable solutions cannot be met, the following performance criterion (P1) applies;

Building and works within a Waterway and Coastal Protection Area must satisfy all of the following:

a) Avoid or mitigate impact on natural values;
b) Mitigate and manage adverse erosion, sedimentation and runoff impacts on natural values;
c) Avoid or mitigate impacts on riparian or littoral vegetation;
d) Maintain natural streambank and streambed condition, (where it exists);
e) Maintain in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;
f) Avoid significantly impeding natural flow and drainage;
g) Maintain fish passage (where applicable);

h) Avoid landfilling of wetlands;

i) Works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual" (DPIPWE, Page and Thorp, 2010), and the unnecessary use of machinery within watercourses or wetlands is avoided.

A field inspection was undertaken to confirm or otherwise the findings of an initial desktop study and to determine natural values of the site. This report summarises the findings of the desktop and field assessment and provides recommendations regarding the proposed development.

2 Methods

The desktop assessment was undertaken using a number of sources, including;

- Natural Values Atlas (NVA)
- Forest Practices Authority Biodiversity Values Database (BVD)
- Forest Practices Authority Habitat Context Assessment Tool
- Forest Practices Authority wedge-tailed eagle nesting habitat model
- LIST map (layers include TASVEG 4.0, geological polygons, contours, hydrology)
- Google imagery

The NVA and BVD cover recorded threatened flora and fauna sightings within 5km of the site and threatened fauna species whose predicted range boundaries overlay the site. The Forest Practices Authority (FPA) Habitat Context Assessment Tool maps areas as high, medium, low, or negligible mature habitat availability. This mapping is based on aerial photographs of mature crown density and senescence. Generally, the higher mapped categories have a greater likelihood of trees containing hollows. The FPA wedge-tailed eagle nesting habitat model is designed to determine the likelihood that an eagle nest will be found in a particular area to focus search efforts.

The desktop assessment was followed by a site visit on the 14 March 2023, conducted by Sally Scrivens of RMCG. The proposed development area and surrounds were closely inspected with a narrowly spaced wandering meander technique.

The field assessment focused on identification of vegetation communities and a threatened species risk assessment based on habitat suitability. Dominant flora species were recorded on site to assist in ground-truthing the TASVEG mapping and determining habitat suitability for threatened species.

All the impacted and surrounding area have been assessed; however, no survey can guarantee that all flora will be recorded in a single site visit due to limitations on seasonal and annual variation in abundance and the presence of material for identification. However, given the threatened flora recorded in the greater area and the marginal habitat availability within the area to be disturbed, additional surveys are not considered necessary.

All mapping and Grid References in this report use GDA 94, Zone 55, with eastings and northings expressed as 6 & 7 digits respectively.

Flora taxonomy nomenclature used is consistent with *Census of Vascular Plants of Tasmania*, Tasmanian Herbarium 2015, *From Forest to Fjaeldmark*, Descriptions of Tasmania's Vegetation (Edition 2) Harris & Kitchener, 2005, and *Little Book of Common Names for Tasmanian Plants*, Wapstra et al. 2007.

3 Vegetation Communities and General Habitat Description

The subject title is approximately 4700m^2 in area and is currently a bush block with frontage onto Eggs and Bacon Bay across an approx. 30m-40m informal reserve on public land. The title is almost flat with an elevation less than 5m above sea level (ASL). There is an unnamed tributary of Eggs and Bacon Bay mapped through the centre of the title and this passes through a mapped perennial swampy wetland over the southwestern portion of the title. The drainage line and wetland both extend over two additional titles to the south. The Conservation of Freshwater Ecosystem Values (CFEV) classes the wetland as having a 'low' 'integrated conservation value' and a 'medium' 'conservation management priority' (The List 2023).

The majority of the title is within a mapped 'high' 'coastal inundation hazard area' under the Planning Scheme. The eastern most portion is mapped as a 'medium' 'coastal inundation hazard area'. The western half of the title is also mapped as a 'coastal erosion hazard area' under the Planning Scheme. To the south of the title is a 3m wide 'footway' owned by Crown that extends form the end of Flakemores Road to the informal reserve.

There is no published soil mapping available for the subject title. Underlying geology is mapped as Cenozoic cover sequences (Q), described as undifferentiated Quaternary sediments (Mineral Resources Tasmania 2010). Eggs and Bacon Bay was the site of a gravel mine that was abandoned in the 1970's (Mineral Resources Tasmania 2010) and it is believed that the subject title was within this mined area (per comms. S. Bartels, 14/03/2023). Average annual rainfall for the region, based on Abels Bay (Sandreef Road, station number 94263) is 715.4mm (BOM 2023). There is no recorded fire history on the title (DNRET 2021). Surrounding titles are similarly sized and most contain some form of development with remnant vegetation.

TASVEG 4.0 maps 0.1ha in the north of the title as *Eucalyptus ovata* forest and woodland (DOV), 0.2ha in the south west, associated with the mapped swampy wetland, as *Melaleuca squarrosa* scrub (SMR), and 0.2ha in the east of the title as *Eucalyptus obliqua* dry forest (DOB). DOV is listed as a threatened vegetation community under the State *Nature Conservation Act 2002* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.* The entirety of the title is mapped as a 'Biodiversity Protection Area' under the Planning Scheme.

FPA Habitat Context Assessment Tool indicates there is 'negligible' and 'low' mature habitat availability on the title and the FPA wedge-tailed eagle nesting habitat model indicates there is a 'low likelihood' of eagle nesting within and around the subject title. The onsite vegetation assessment agrees with this mapping.

The site visit found that the vegetation on the subject title has been disturbed with the proposed development area primarily comprised of *Pteridium esculentum* bracken, *Melaleuca squarrosa* scented paperbark, and *Juncus spp.* rush. *Lomandra longifolia* sagg, *Acacia verticillata* prickly moses, *Poa spp.* tussock grasses, and *Leptospermum scoparium* common teatree were also within the area (refer to images in Appendix 3). There is a small stand of *Eucalyptus obliqua* with one *Eucalyptus ovata* on the north eastern boundary, outside of the proposed development area and, in addition to the above listed species, *Goodenia ovata* hop native-primrose was common in the east of the title. Given the disturbed nature of the vegetation in the east of the title, it could be described as 'regenerating cleared land', however, the presence of the *E. obliqua* indicates that the TASVEG mapping of *Eucalyptus obliqua* dry forest (DOB) is appropriate.

On site, the eastern extent of the wetland was found to occur further west than mapped (see Figures, Appendix 2). The wetland contained puddles of water and bare ground between clumps of rush, both dead and alive. Further west into the wetland are several dead stems of swamp paperbark with an occasional live swamp

paperbark in the area. This area is consistent with the mapped *Melaleuca squarrosa* scrub (SMR) vegetation community.

Eucalyptus ovata were assessed as the dominant canopy tree in the north of the title, with a heavily modified, open and low understory. This area was confirmed during the site visit as the threatened vegetation community *Eucalyptus ovata* forest and woodland (DOV). This community is outside of the proposed development area (17m from the dwelling and over 10m from the required BAL 29 separation distance) and is therefore not expected to be impacted by the proposed development.

On site, the drainage line was found to be further west than mapped and outside of the proposed development area (see Figures, Appendix 2). The drain is very shallow and contained an occasional puddle at the time of the site visit. As it is very shallow and only flows during rain events, collection of debris within the drain is common and ongoing clearing of debris within the drain is reported to be required by the proponent. This is also the case further downstream, with water backing up the drain onto the subject title when the drain is not blocked downstream (per comms. S. Bartels, 14/03/2023). Given the characteristics of the drain on the title, this clearing of debris is not considered to have any unnecessary or unacceptable impact on natural values.

A slightly raised track is present along approximately the eastern two thirds of the southern boundary. This is largely overgrown with bracken and does not appear to be used. It is assumed that this was intended for the designated 'footway' to the south.

The proposed development is proposed to occur in a highly modified area, described as *Eucalyptus obliqua* dry forest (DOB), with no trees or large shrubs required to be removed or disturbed.

4 Threatened Flora Risk Assessment

According to the Natural Values Atlas, no threatened flora species have previously been recorded within 500m of the subject title. Two threatened flora species have previously been recorded within a 5km radius of the subject title. The site visit identified no suitable habitat for these two species within the proposed works area. Due to the lack of suitable habitat and the lack of existing records in the immediate vicinity, neither of these species are considered to be at a greater than low risk of being impacted by the proposed works. See Table 4-1 for risk assessment and Appendix 1 for habitat preferences.

Table 4-1: Risk assessment for threatened flora listed in NVA as being recorded within 5km of the subject title. Risk assessment based on the proposed development area.

THREATENED FLORA SPECIES				PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE	FINAL RISK ASSESSMENT OF POTENTIAL IMPACT[1]
SPECIES NAME		NVA RECORD	STATUS S*/N+		
LATIN	COMMON				
Ozothamnus floribundus	Flowery everlastingbush	Within 5km	e/NA	Known from one location in *Eucalyptus obliqua* forest between 125m and 140m ASL. No suitable habitat. Low risk.	Low risk
Prasophyllum apoxychilum	Tapered leek-orchid	Within 5km	v/EN	Occurs in coastal heathland or grassy and scrubby open eucalypt forest, often among rocks. Associated with dolerite. No suitable habitat. Low risk.	Low risk

* refers to listing status under the Tasmanian Threatened Species Act 1995: r = rare, v = vulnerable e = endangered, p = pending, na = not applicable

+ refers to listing status at the federal level under the Environment Protection and Biodiversity Conservation Act 1999: VU = Vulnerable, EN = Endangered, CR = Critically Endangered, P = Pending, NA = Not Applicable

[1] See text for explanatory information

5 Threatened Fauna Risk Assessment

The Forest Practices Authority (FPA) Biodiversity Values Database (BVD) and the Tasmanian Natural Values Atlas (NVA) identified 16 threatened fauna species with potential to occur onsite. The closest eagle nest in the vicinity is approximately 2.8km away from the subject title to the south east, on Garden Island.

No threatened fauna species were identified during the site visit and the proposed development area was found to contain minimal habitat features for threatened fauna species. It is likely that the development area is included in some species' ranging boundaries, such as the quolls, wedge-tailed eagle, and Tasmanian devil, however, no nests, dens, or scats were observed on the title and the proposed works are considered to present a low risk to these species. The remaining 12 species are also considered to be at low risk of being impacted by the proposed works. See Table 5-1 for risk assessment and Appendix 1 for habitat preferences.

Table 5-1: Risk assessment for threatened fauna species (excluding marine and shore species) listed in NVA as being recorded within 5km and/or with range boundaries (RB) Forest Practices Biodiversity Values Database) that overlay the subject title. Risk assessment based on the proposed development area.

THREATENED FAUNA SPECIES					PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE	FINAL RISK ASSESSMENT OF POTENTIAL IMPACT[2]
SPECIES NAME		NVA RECORD	STATUS S*/N*	FPA^x RANGE CLASS		
LATIN	COMMON					
Accipiter novaehollandiae	Grey goshawk	Record within 5km. Within 500m based on RB.	e/NA	CR	Prefer wet forest adjacent to a fresh waterbody. No suitable habitat. Low risk.	Low risk
Alcedo azurea subsp. diemenensis	Azure kingfisher	Within 5km based on RB.	e/EN		Require large rivers/streams for foraging and steep banks for breeding. No suitable habitat and outside range boundaries. Low risk.	Low risk
Antipodia chaostola	Chaostola skipper	Within 500m based on RB.	e/EN	PR	Inhabits dry forest/woodland supporting particular *Gahnia sp.* No suitable habitat. Low risk.	Low risk

[2] See text for explanatory information

THREATENED FAUNA SPECIES					PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE	FINAL RISK ASSESSMENT OF POTENTIAL IMPACT[2]
SPECIES NAME		NVA RECORD	STATUS S*/N*	FPA[X] RANGE CLASS		
LATIN	COMMON					
Aquila audax subsp. fleayi	Tasmanian wedge-tailed eagle	Record within 5km. Within 500m based on RB.	e/EN	PR	Potential foraging habitat is a wide variety of forest and non-forest habitats. Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10ha) of eucalypt or mixed forest. Foraging habitat only. Low risk.	Low risk
Dasyurus maculatus	Spotted-tail quoll	Record within 5km. Within 500m based on RB.	r/VU	PR	Potential foraging habitat is a wide variety of habitats. Require structurally complex areas for denning. Foraging habitat only. Low risk.	Low risk
Dasyurus viverrinus	Eastern quoll	Record within 5km. Within 500m based on RB.	na/EN	CR	Occur in a range of habitats but prefer dry forest and native grassland mosaics bound by agricultural land. Marginally suitable habitat. Low risk.	Low risk
Haliaeetus leucogaster	White-bellied sea-eagle	Record within 5km. Within 500m based on RB.	v/NA	PR	Potential foraging habitat is any large waterbody. Prefers tall eucalypts in tracts of over 10ha for nesting. No suitable habitat. Low risk.	Low risk
Lathamus discolor	Swift parrot	Record within 5km. Within 500m based on RB.	e/CR	Core Breeding Range	Potential foraging habitat is flowering *Eucalyptus globulus* or *E. ovata*. Nest in hollows. No suitable habitat. Low risk.	Low risk
Lissotes menalcas	Mt. Mangana stag beetle	Record within 5km. Within 500m based on RB.	v/NA	KR	Require numerous large (>40cm diameter) rotting eucalypt logs, generally within wet forest. No suitable habitat. Low risk.	Low risk
Litoria raniformis	Green and gold frog	Within 500m based on RB.	v/VU	PR	Associated with fresh waterbodies. No suitable habitat. Low risk.	Low risk

THREATENED FAUNA SPECIES					PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE	FINAL RISK ASSESSMENT OF POTENTIAL IMPACT[2]
SPECIES NAME		NVA RECORD	STATUS S*/N+	FPA× RANGE CLASS		
LATIN	COMMON					
Pardalotus quadragintus	Forty-spotted pardalote	Within 500m based on RB.	e/EN	PR	Require *Eucalyptus viminalis*. No suitable habitat. Low risk.	Low risk
Perameles gunnii	Eastern barred bandicoot	Record within 5km. Within 500m based on RB.	na/VU	PR	Occurs within open forest with a grassy understory or in areas with dense, low vegetation. No suitable habitat. Low risk.	Low risk
Prototroctes maraena	Australian grayling	Within 500m based on RB.	v/VU	PR	Occurs in streams. No suitable habitat. Low risk.	Low risk
Pseudemoia pagenstecheri	Tussock skink	Within 500m based on RB.	v/NA		Prefers grasslands and grassy woodlands with >20% native grass cover. No suitable habitat and outside of range boundaries. Low risk.	Low risk
Sarcophilus harrisii	Tasmanian devil	Record within 5km. Within 500m based on RB.	e/EN	PR	Broad range of potential habitat, though shelter is required for denning. Suitable foraging habitat only. Low risk.	Low risk
Tyto novaehollandiae	Masked owl	Record within 5km. Within 500m based on RB.	e/VU	CR	Require trees with large (>15cm) hollows. No suitable habitat. Low risk.	Low risk

* refers to listing status under the Tasmanian Threatened Species Act 1995: r = rare, v = vulnerable e = endangered, p = pending, na = not applicable

+ refers to listing status at the federal level under the Environment Protection and Biodiversity Conservation Act 1999: VU = Vulnerable, EN = Endangered, CR = Critically Endangered, P = Pending, NA = Not Applicable

× refers to range boundaries as specified in the Forest Practices Biodiversity database: PR = Potential Range, CR = Core Range, KR = Known Range

6 Disturbance

The Natural Values Atlas records a number of weeds of significance and priority weeds as being present within 5km (Table 6-1 and Table 6-2. None of these weeds were observed onsite, however, other non-declared weeds, scotch thistle, spear thistle, and scarlet pimpernel (*Anagallis arvensis var. arvensis*), were present. There is a risk of increased weed incursion in the area during works. Weed control on the title prior to and following works is recommended to prevent further establishment of weeds throughout the area, particularly within the threatened *Eucalyptus ovata* forest and woodland community. Strict washdown and disinfection protocols (as per DPIWE 2004) must be adhered to for any vehicles and machinery accessing the site during works to prevent the further establishment of weeds in the area.

As there are no declared weeds identified within the survey area, there are no obligations to control weeds under the *Tasmanian Weed Management Act 1999*.

Table 6-1: Tasmanian Management Act Weeds within 5000m

SPECIES	COMMON NAME
Chrysanthemoides monilifera subsp. monilifera	Boneseed
Cortaderia sp.	Pampas grass
Cytisus scoparius	English broom
Erica lusitanica	Spanish heath
Genista monspessulana	Montpellier broom
Ilex aquifolium	Holly
Leycesteria formosa	Himalayan honeysuckle
Rubus spp.	Blackberry
Salix spp.	Willows
Senecio jacobaea	Ragwort
Ulex europaeus	Gorse

Table 6-2: Priority Weeds within 5000m

SPECIES	COMMON NAME
Acacia baileyana	Cootamundra wattle
Billardiera heterophylla	Bluebell creeper
Pittosporum undulatum	Sweet pittosporum
Verbascum thapsus	Great mullein
Watsonia meriana var. bulbillifera	Bulbil watsonia

7 Biosecurity Risks

According to the Natural Values Atlas, no biosecurity risks, including *Phytophthora cinnamomi*, have been identified within 1km of the subject title. Washdown and disinfection protocols (as per DPIWE, 2004) must be adhered to for any vehicles and machinery accessing the site during works to prevent the spread of *Phytophthora* to the area.

8 Geo-conservation Sites

According to the Natural Values Atlas, there is one geo-conservation site within 1000m of the subject title; Sandrock Point Liesegang Banding. This site is located over 800m to the north of the subject title and is therefore not considered at risk of being impacted by the proposal.

9 Acid Sulfate Soils

According to the Natural Values Atlas, the subject title and surrounding area are within an area of 'low' probability of occurrence of coastal acid sulfate soils (ASS). Consideration of potential ASS is not required under the Local Government Planning provisions and is therefore not considered further, however, it is considered unlikely that the proposal will result in the disturbance of ASS, based on the extent and depth of excavation required.

10 Waterway and Coastal Protection Code

Based on the architectural drawings of the proposed dwelling by Building Design Solutions, July 2022, the deck supports of the proposed dwelling are as close as 2.5m from the wetland. In order to minimise any potential impact on the wetland, it is recommended that this distance is increased to 5m (Figure A2-3). This involves moving the entire dwelling 2.5m east and 1m south. In this location the minimum required bushfire separation distances to classified vegetation will still be met (as per Bushfire Report, Building Design Solutions 27/07/2022).

It is also recommended that a sediment barrier is erected across the title to the west of the proposed dwelling prior to construction works commencing. This barrier should be maintained for the duration of works. This will minimise any potential risk of sediment runoff entering the wetland and drainage line during works. It is noted that this requirement is also noted on the architectural drawings (Building Design Solutions, July 2022).

The proposed development is not expected to have any impact on biodiversity, environmental flows, natural streambank stability and stream bed condition, riparian vegetation, littoral vegetation, river condition and waterway and/or coastal values and no machinery is expected within the watercourse or wetland. The above recommendations are expected to mitigate any risk of runoff and sedimentation as a result of the proposal impacting on water quality or wetlands.

11 Conclusion and Recommendations

The siting of the proposed development is within a disturbed area and the BAL 29 rating of the dwelling ensures minimal impacts to the site form bushfire hazard management measures, with the existing separation distances to classified vegetation greater than the minimum required separation distances (Bushfire Report, Building Design Solutions, 27/07/2022).

The proposed construction of a dwelling on the title will not impact any threatened vegetation communities. A highly disturbed threatened vegetation community, *Eucalyptus ovata* forest and woodland (DOV), was identified in the north of the title, however, this community is outside of the proposed development area and will not be impacted by the proposed development. Likewise, the wetland within the *Melaleuca squarrosa* scrub (SMR) community in the west of the title is outside of the proposed development area.

While the vegetation to be removed is within a mapped biodiversity protection area, the title, in particular the proposed development area, is highly disturbed with minimal potential suitable habitat for any threatened flora or fauna species, with no denning or nesting habitat identified. The proposed development area may overlap some species' ranging boundaries; however, the proposal is considered to have minimal impact on these species.

With reference to Table E10.1 of the Planning Scheme, the only 'priority biodiversity value' identified within the proposed development area is native vegetation adjacent to a wetland. As this vegetation is highly disturbed and regenerating, the proposal is not considered to result in unnecessary or unacceptable loss of priority biodiversity values.

Providing the recommendations, as outlined in this report, and listed below, are followed, the proposal is not considered to have an unnecessary or unacceptable impact on natural values in respect to E11.7.1 P1 of the Waterway and Coastal Protection Code and is considered to satisfy E10.7.1 P1 of the Biodiversity Code.

Additionally, the recommendations are likely to result in an overall low level of disturbance associated with the proposal and is therefore unlikely to present a significant impact and require any additional assessment under the State *Threatened Species Protection Act 1995* or the *Nature Conservation Act 2002,* or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC).

Recommendations

- Ensure a minimum 5m distance between the proposed dwelling footprint and the wetland. This involves moving the dwelling 2.5m east and 1m south from the position shown on the architectural drawings by Building Design Solutions, July 2022.
- Erect a sediment barrier across the title to the west of the proposed dwelling prior to construction works commencing and maintain the barrier for the duration of works.
- Prevent biosecurity incursions and further weed incursions by implementing strict washdown guidelines for all machinery and equipment used during works.
- Control weeds on the title prior to and following works to prevent further establishment of weeds throughout the area, particularly within the threatened *Eucalyptus ovata* forest and woodland community in the north of the title.

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Appendix 1: Threatened Species Habitat

Table A1-1: Preferred habitat for threatened flora previously recorded within 5km of the subject title from NVA accessed 09/02/2023

SPECIES NAME	COMMON NAME	PREFERRED HABITAT
Ozothamnus floribundus	Flowery everlastingbush	Known from one location where it occurs at an elevation of 125 to 140m ASL in shrubby/heathy *Eucalyptus obliqua* dry sclerophyll forest on substrate variously described as sandstone or mudstone with some dolerite influence.
Prasophyllum apoxychilum	Tapered leek-orchid	Restricted to eastern and north-eastern Tasmania where it occurs in coastal heathland or grassy and scrubby open eucalypt forest on sandy and clay loams, often among rocks. It occurs at a range of elevations and seems to be strongly associated with dolerite in the east and south-east of its range.

Table A1-2: Preferred habitat for threatened fauna previously recorded within 5km or with range boundaries within 5km of the subject title from NVA and BVD accessed 09/02/2023

SPECIES NAME	COMMON NAME	PREFERRED HABITAT
Accipiter novaehollandiae	Grey goshawk	Potential habitat is native forest with mature elements below 600 m altitude, particularly along watercourses. Significant habitat may be summarised as areas of wet forest, rainforest and damp forest patches in dry forest, with a relatively closed mature canopy, low stem density, and open understorey in close proximity to foraging habitat and a freshwater body (i.e. stream, river, lake, swamp, etc.). Forest types used; blackwood swamp forest, *Leptospermum* or *Melaleuca* swamp forest, riparian blackwood and tea-tree scrub communities, wet eucalypt forest with blackwood/myrtle understorey and rainforest.
Alcedo azurea subsp. diemenensis	Azure kingfisher	Potential habitat for the azure kingfisher comprises potential foraging habitat and potential breeding habitat. Potential foraging habitat is primarily freshwater (occasionally estuarine) waterbodies such as large rivers and streams with well-developed overhanging vegetation suitable for perching and water deep enough for dive-feeding. Potential breeding habitat is usually steep banks of large rivers (a breeding site is a hole (burrow) drilled in the bank).
Antipodia chaostola	Chaostola skipper	Potential habitat is dry forest and woodland supporting *Gahnia radula* (usually on sandstone and other sedimentary rock types) or *Gahnia microstachya* (usually on granite-based substrates).
Aquila audax subsp. fleayi	Tasmanian wedge-tailed eagle	Potential comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is a wide variety of forest (including areas subject to native forest silviculture) and non-forest habitats. Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10ha) of eucalypt or mixed forest. Nest trees are usually amongst the largest in a locality. They are generally in sheltered positions on leeward slopes, between the lower and mid sections of a slope and with the top of the tree usually lower than the ground level of the top of the ridge, although in some parts of the State topographic shelter is not always a significant factor (e.g. parts of the northwest and Central Highlands). Significant habitat is all native forest and native non-forest vegetation within 500m or 1km line of sight of known nest sites (where the nest tree is still present).

SPECIES NAME	COMMON NAME	PREFERRED HABITAT
Dasyurus maculatus	Spotted-tailed quoll	Potential habitat for the spotted-tailed quoll is coastal scrub, riparian areas, rainforest, wet forest, damp forest, dry forest and blackwood swamp forest (mature and regrowth), particularly where structurally complex areas are present, and includes remnant patches in cleared agricultural land or plantation areas. Significant habitat for the spotted-tailed quoll is all potential denning habitat within the core range of the species. Potential denning habitat for the spotted tailed quoll includes 1) any forest remnant (>0.5ha) in a cleared or plantation landscape that is structurally complex (high canopy, with dense understorey and ground vegetation cover), free from the risk of inundation, or 2) a rock outcrop, rock crevice, rock pile, burrow with a small entrance, hollow logs, large piles of coarse woody debris and caves.
Dasyurus viverrinus	Eastern quoll	Potential habitat for the eastern quoll includes rainforest, heathland, alpine areas and scrub. However, it seems to prefer dry forest and native grassland mosaics which are bounded by agricultural land. Potential range for the eastern quoll is the whole of mainland Tasmania and Bruny Island.
Heliaeetus leucogaster	White-bellied sea eagle	Potential habitat for the white-bellied sea eagle species comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is any large waterbody (including sea coasts, estuaries, wide rivers, lakes, impoundments and even large farm dams) supporting prey items (fish). Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest within 5 km of the coast (nearest coast including shores, bays, inlets and peninsulas), large rivers (Class 1), lakes or complexes of large farm dams. Scattered trees along river banks or pasture land may also be used. Significant habitat for the white-bellied sea eagle is all native forest and native non-forest vegetation within 500 m or 1 km line of sight of known nest sites (where nest tree still present).
Lathamus discolor	Swift parrot	Potential breeding habitat for the swift parrot comprises potential foraging habitat and potential nesting habitat and is based on definitions of foraging and nesting trees (see Table A in swift parrot habitat assessment Technical Note). Potential foraging habitat comprises *E. globulus* or *E. ovata* trees that are old enough to flower.
Lissotes menalcas	Mt. Mangana stag beetle	Potential habitat for the Mt Mangana stag beetle is any eucalypt forest that contains rotting logs (often numerous, and usually greater than about 40 cm diameter at mid-log length) below about 650m ASL (generally moist habitats that have not been subject to high intensity or frequent fires in about the last 20 years). The species has a patchy distribution within areas of potential habitat. Some rainforest will support the species, although in low densities as the species has an apparent preference for eucalypt logs. In terms of using mapping layers, potential habitat is all areas mapped as 'wet forest' under TASVEG or another forest type that is within 50m of a freshwater source (e.g. stream or wetland) and either high, medium or low mature habitat availability.
Litoria raniformis	Green and gold frog	Potential habitat for the green and gold frog is permanent and temporary waterbodies, usually with vegetation in or around them. Potential habitat includes features such as natural lagoons, permanently or seasonally inundated swamps and wetlands, farm dams, irrigation channels, artificial water holding sites such as old quarries, slow flowing stretches of streams and rivers and drainage features.
Pardalotus quadragintus	Forty-spotted pardalote	Potential habitat for the 40-spotted pardalote is any forest and woodland supporting *Eucalyptus viminalis* (white gum) where the canopy cover of *E. viminalis* is greater than or equal to 10% or where *E. viminalis* occurs as a localised canopy dominant or co-dominant in patches exceeding 0.25ha.

SPECIES NAME	COMMON NAME	PREFERRED HABITAT
Perameles gunnii	Eastern barred bandicoot	Potential habitat for the eastern barred bandicoot is open vegetation types including woodlands and open forests with a grassy understorey, native and exotic grasslands, particularly in landscapes with a mosaic of agricultural land and remnant bushland. Significant habitat for the eastern barred bandicoot is dense tussock grass sagg sedge swards, piles of coarse woody debris and denser patches of low shrubs (especially those that are densely branched close to the ground providing shelter) within the core range of the species.
Prototroctes maraena	Australian grayling	All streams and rivers in their lower to middle reaches. Areas above permanent barriers that prevent fish migration are not potential habitat.
Pseudemoia pagenstecheri	Tussock skink	Potential habitat for the tussock skink is grassland and grassy woodland (including rough pasture with paddock trees), generally with a greater than 20% cover of native grass species, especially where medium to tall tussocks are present.
Sacophilus harrisii	Tasmanian Devil	Potential habitat for the Tasmanian devil is all terrestrial native habitats, forestry plantations and pasture. Devils require shelter (e.g. dense vegetation, hollow logs, burrows or caves) and hunting habitat (open understorey mixed with patches of dense vegetation) within their home range (427km2). Significant habitat for the Tasmanian devil is a patch of potential denning habitat where three or more entrances (large enough for a devil to pass through) may be found within 100m of one another, and where no other potential denning habitat with three or more entrances may be found within a 1km radius, being the approximate area of the smallest recorded devil home range (Pemberton 1990). Potential denning habitat for the Tasmanian devil is areas of burrow-able, well-drained soil, log piles or sheltered overhangs such as cliffs, rocky outcrops, knolls, caves and earth banks, free from risk of inundation and with at least one entrance through which a devil could pass.
Tyto novaehollandiae	Masked owl	Potential habitat for the masked owl is all areas with trees with large hollows (>15cm entrance diameter). In terms of using mapping layers, potential habitat is considered to be all areas with at least 20% mature eucalypt crown cover (PI type mature density class `a', `b', or `c'). From on ground surveys this is areas with at least 8 trees per hectare over 100cm dbh. Remnants and paddock trees in agricultural areas may also constitute potential habitat. Significant habitat for the masked owl is any areas within the core range of native dry forest with trees over 100cm dbh with large hollows (>15cm entrance diameter). Such areas usually have no regrowth component or just a sparse regrowth component. In terms of using mapping layers for an initial desktop assessment prior to an on-ground survey. Significant habitat may occur in all areas within the core range classified as dry forest (TASVEG dry Eucalypt forest and woodland) with at least 20% mature eucalypt crown cover (PI type mature density class `a', `b', or `c') that is classified as mature (Growth Stage class `M'). From on ground surveys this is areas with at least 8 trees per hectare over 100cm dbh and more than half of the canopy cover is comprised of mature trees. Remnants and paddock trees in agricultural areas may also constitute significant habitat.

Appendix 2: Maps

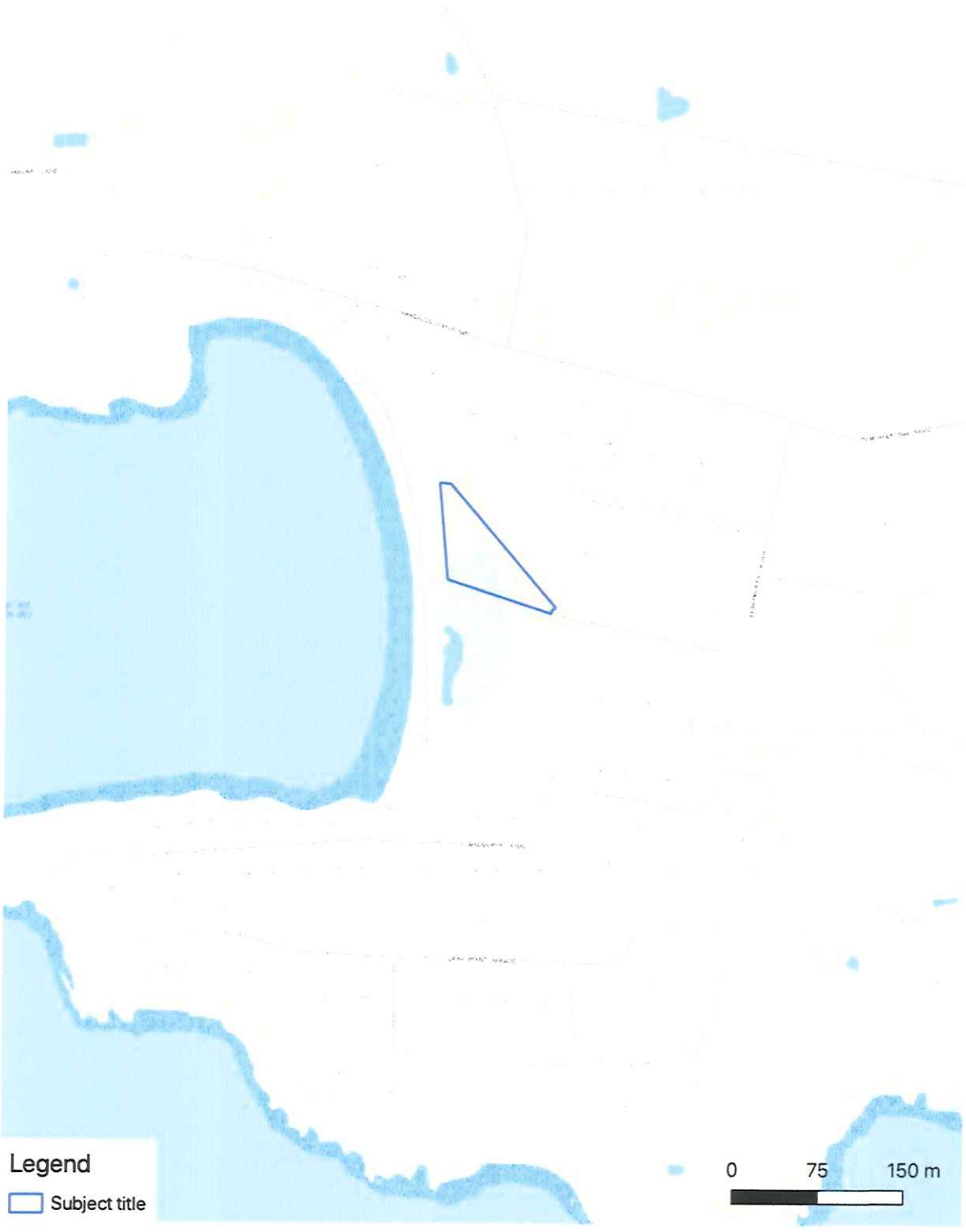

Figure A2-1: Location

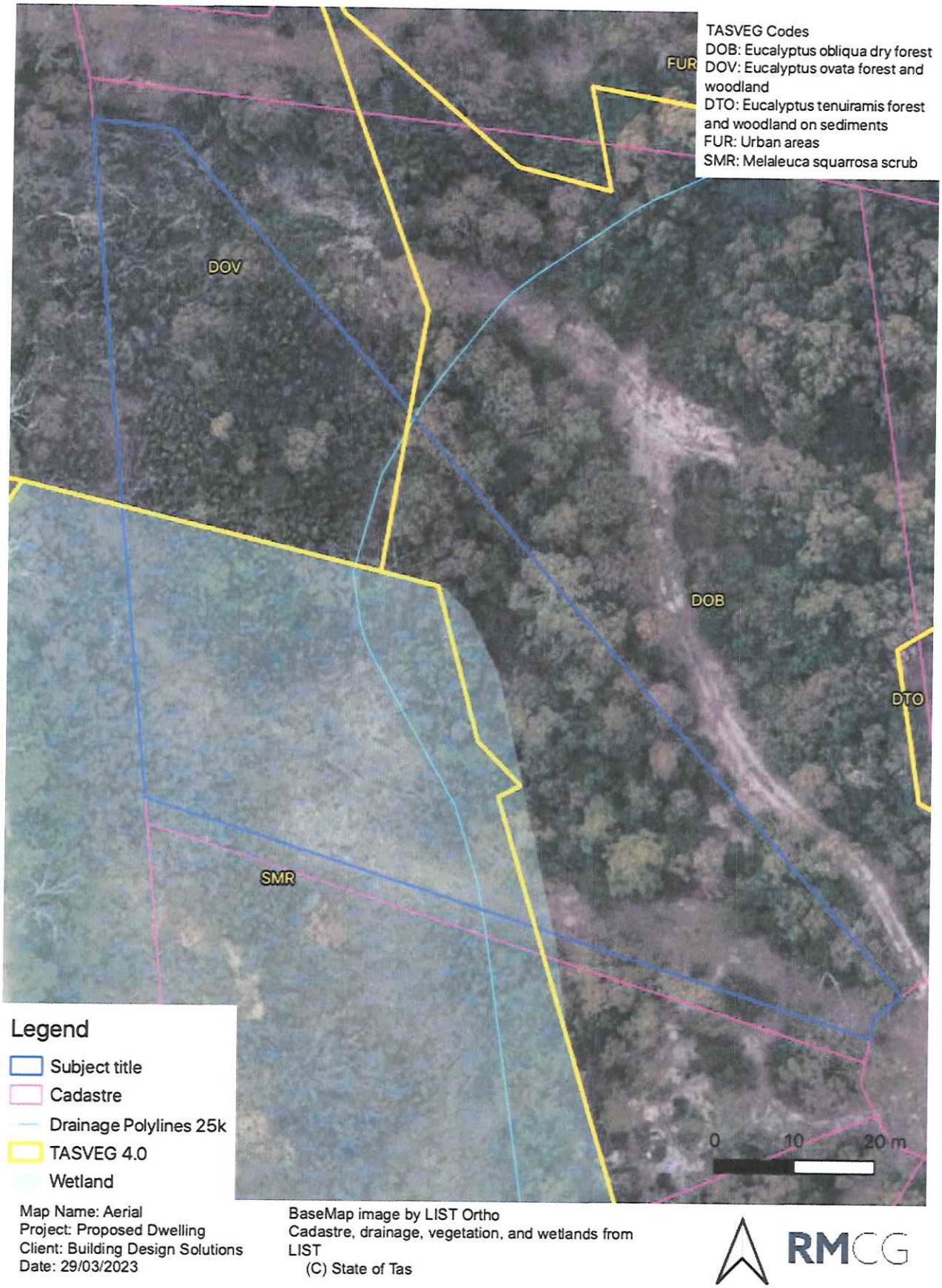

Figure A2-2: Aerial image

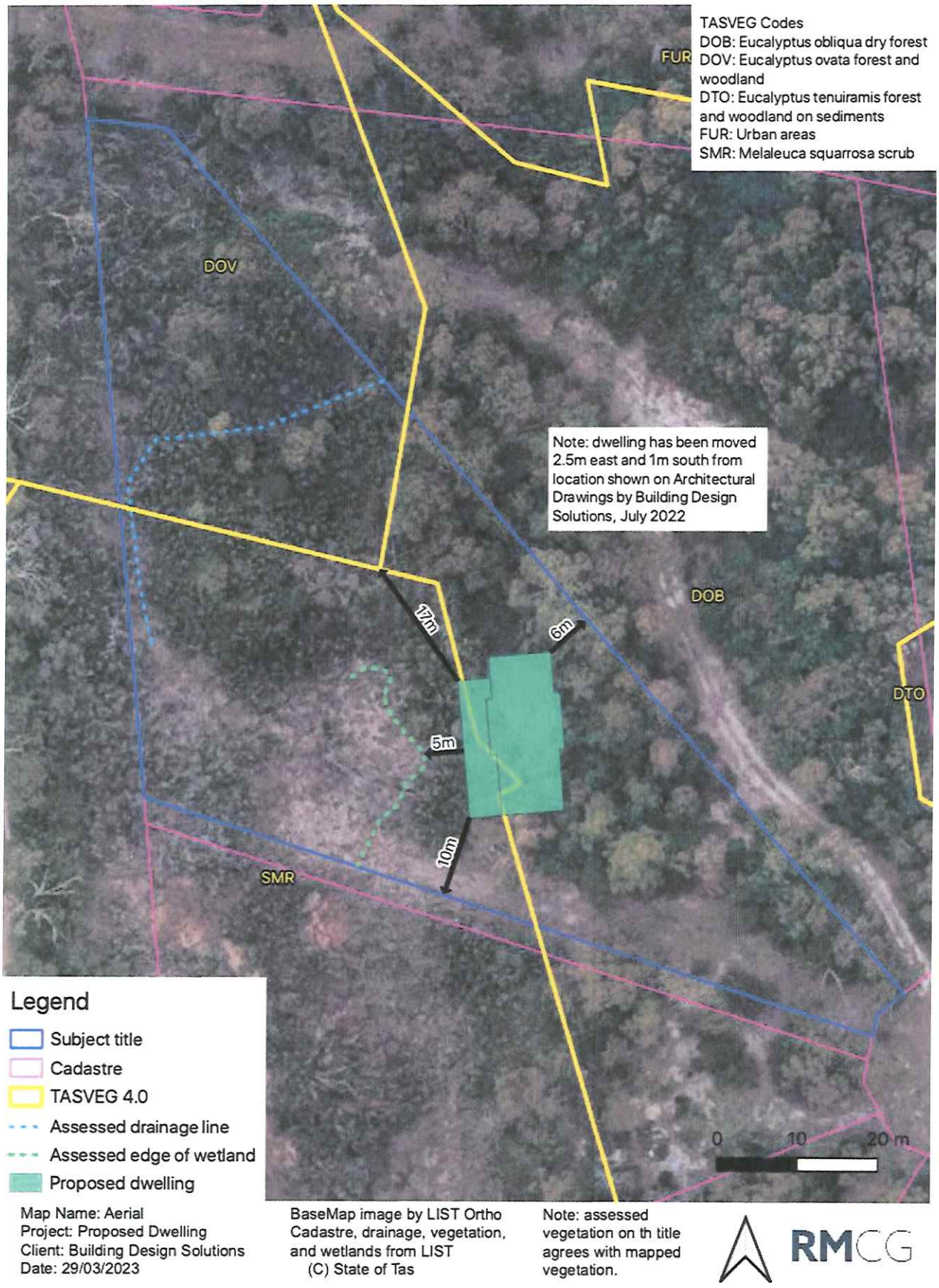

Figure A2-3: Site assessment

Appendix 3: Photos

All photos taken by Sally Scrivens 14 March 2023

Figure A3-1: View east of the proposed development area. Vegetation assessed as *Eucalyptus obliqua* dry forest (DOB).

Figure A3-2: View south into the wetland. Vegetation assessed as *Melaleuca squarrosa* scrub (SMR). Note *Melaleuca squarrosa* stems in top right of photo.

Figure A3-3: View north of the *Eucalyptus ovata* forest and woodland (DOV) community.

Figure A3-4: View west along drainage line within the north of the title. DOV community in background.

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