



**Notification of**

**REFERRAL DECISION – not controlled action if undertaken in a particular manner**

**Design and Assessment Works - South Marionoak Tailings Storage Facility, Rosebery, Tasmania (EPBC 2021/9079)**

This decision is made under sections 75 and 77A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

**Proposed action**

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<b>person named in the referral</b>	MMG AUSTRALIA LIMITED ABN 23 004 074 962
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<b>proposed action</b>	To undertake geotechnical works, site investigations and facilitative works including construction of access tracks and vegetation clearance, approximately 1 km west of the town of Rosebery, in western Tasmania [See EPBC Act referral 2021/9079].
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**Referral decision: Not a controlled action if undertaken in a particular manner**

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<b>status of proposed action</b>	The proposed action is not a controlled action provided it is undertaken in the manner set out in this decision.
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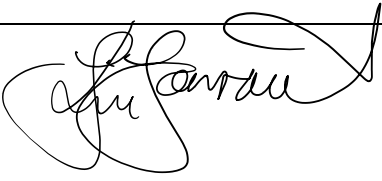
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**Person authorised to make decision**

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<b>Name and position</b>	Kim Farrant Assistant Secretary Environment Assessments (Vic, Tas) and Post Approvals Branch
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<b>signature</b>	
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<b>date of decision</b>	6 January 2022
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<b>manner in which proposed action must be taken</b>	The following measures must be taken to avoid significant impacts on listed threatened species and communities (sections 18 & 18A)
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## Measures to protect **EPBC Act listed threatened species and ecological communities**

1. Any new access track or part thereof must be located no more than 50 m from the location represented by an amber dashed line labelled “track” under the “proposed project elements” section of the legend in the maps at **Appendix 1**.
2. Any area **cleared** to enable a new access track must not be more than 6 metres wide when measured perpendicular to the orientation of the new access track at the same location.
3. Total **clearing** for any one **Investigation Bore, Cone Penetrometer Test, or Monitoring Bore** (excluding **clearing** for new access tracks to reach the location of the **Investigation Bore, Cone Penetrometer Test or Monitoring Bore**) must not exceed 625 square metres and must not be longer or wider than 25 m.
4. Total **clearing** for any **Test Pit**, excluding **clearing** for new access tracks to access the **Test Pit** site, must not exceed 100 square metres and must not be longer or wider than 10 metres.
5. No more than 67 **Investigation Bores**, 12 **Cone Penetrometer Tests**, 9 **Monitoring Bores**, and 77 **Test Pits** may be **cleared**.
6. The total area **cleared** for the action must not exceed 14.83 hectares.

## Measures to protect the Tasmanian Wedge-tailed Eagle (*Aquila audax fleayi*)

7. No **impact** may occur during the **breeding period** within 500 m of any **known** and **active** Tasmanian Wedge-tailed Eagle (*Aquila audax fleayi*) nest or within 1 km **line of sight** from any **known** and **active** eagle nest.

## Measures to protect Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (*Eucalyptus ovata* / *E. brookeriana*).

8. No **clearing** may occur within the **Black Gum and Brookers Gum woodland** area, except to **maintain** existing access tracks at their existing dimensions, where shown by the brown-coloured line labelled “Internal Road” in **Appendix 2**.
9. No more than 0.24 hectares of **clearing** may occur within the area represented in **Appendix 2** by the zone bounded externally by the green-coloured solid line labelled “*E. brookeriana* 30 m buffer” and excluding **Black Gum and Brookers Gum woodland** which it surrounds.
10. All machinery and equipment used to move earth, including hand tools, and machinery used to transport that machinery and equipment, must be cleaned in accordance with **DPIPWE Weed Management and Hygiene Guidelines** prior to entry to the **Weed and Pathogen Hygiene area**.

## Measures to protect the Tasmanian Devil (*Sarcophilus harrisii*).

11. The **Pre-Clearance Protocols Tasmanian Devil & Scrambling Groundfern** must be implemented prior to the commencement of any **clearing**.
12. No vehicle may travel faster than 20 km/hr within the **Speed restriction zone**.

## Measures to protect **Scrambling Ground-fern** (*Hypolepis distans*)

13. The **Pre-Clearance Protocols Tasmanian Devil & Scrambling Groundfern** must be implemented prior to the commencement of any **clearing**.

14. If any **Scrambling Ground-fern** is found, no **impact** or **clearing** may occur within 10 metres of any **Scrambling Ground-fern** individual.

**Definitions:**

**Active** eagle nests means those in which a Tasmanian Wedge-tailed Eagle breeding attempt is underway (i.e. presence of one or more incubating bird, warm egg or a chick). All eagle nests are considered **active** throughout each **breeding period** unless determined otherwise by an activity assessment completed at a time agreed to in advance and in writing by the Forest Practices Authority and conducted in accordance with Forest Practices Authority, 2015, *Fauna Technical Note No. 1: Eagle nest searching, activity checking and nest management*.

**Black Gum and Brookers Gum woodland** means the areas containing **EPBC Act** listed threatened Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (*Eucalyptus ovata* / *E. brookeriana*) ecological community, represented at **Appendix 2** by the zones enclosed by a light grey-coloured line and shaded with a light grey fill labelled "Forest containing *E. brookeriana*".

**Breeding period** refers to the breeding period of the Tasmanian Wedge-tailed Eagle which is from July 1 of any calendar year until January 31 in the following calendar year unless the Tasmanian Department of Primary Industries, Parks, Water and Environment advises in writing that a late breeding season is occurring, in which case it is from 1 July of that calendar year until 28 February in the following calendar year.

**Clear(ing)/(ed)** means to cut down, compact, fell, thin, log, remove, kill, destroy, poison, ringbark, uproot or burn vegetation.

**Cone Penetrometer Test** has the meaning given in section 1.2 of **EPBC Act** referral 2021/9079 published on 17 November 2021

**DPIPWE Weed Management and Hygiene Guidelines** refers to the document Department of Primary Industries, Parks, Water and Environment (2015). *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania*. (Eds.) Karen Stewart and Michael Askey-Doran. Department of Primary Industries, Parks, Water and Environment, Hobart, Tasmania.

**EPBC Act** means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

**EPBC Act listed threatened species and ecological communities** means the following species and ecological communities listed as threatened under the **EPBC Act**:

- Tasmanian Wedge-tailed Eagle (*Aquila audax*)
- Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (*Eucalyptus ovata* / *E. brookeriana*) ecological community
- Tasmanian Devil (*Sarcophilus harrisii*)
- Scrambling Ground-fern (*Hypolepis distans*)

**Impact(s)/(ed)** means any measurable direct or indirect disturbance or harmful change as a result of any activity associated with the action.

**Investigation Bore** has the meaning given to "borehole" in section 1.2 of **EPBC Act** referral 2021/9079 published on 17 November 2021

**Known** nests refers to any nests identified as potential Wedge-tailed Eagle nests during surveys conducted in accordance with the methodology prescribed in the Forest Practices Authority, 2015, *Fauna Technical Note No. 1: Eagle nest searching, activity checking and nest management*.

**Line of sight** refers to what is visible from an eagle's nest.

**Maintain** means to provide safe trafficability to the access road in its pre-commencement condition; works may include the removal of debris or any other obstruction.

**Monitoring Bore** has the meaning given in section 1.2 of **EPBC Act** referral 2021/9079 published on 17 November 2021.

**Pre-Clearance Protocols Tasmanian Devil & Scrambling Groundfern** refers to the protocol specified in the document '*MMG Rosebery South Marionoak Tailings Storage Facility Design and Assessment Works - Pre-Clearance Protocols Tasmanian Devil & Scrambling Groundfern* (2021). North Barker Ecosystem Services, 163 Campbell St, Hobart, TAS', attached to this decision notice as **Appendix 3**.

**Speed restriction zone** refers to the area within mining lease 6m/2008 that is on the same side of Lake Pieman as the proposed action.

**Scrambling Ground-fern** means the **EPBC Act** listed threatened species *Hypolepis distans*, also referred to as "Scrambling Groundfern".

**Test Pit** means geotechnical mechanically dug pits taken with an excavator to produce a hole, approximately 5 m long by 4-5 m deep and 1.2 m wide, in which the soil structure can be observed and provide material for laboratory testing of the geotechnical parameters.

**Weed and Pathogen Hygiene area** means all land, water and vegetation within 500 m of **Black Gum and Brookers Gum woodland**.





**Proposed Project Elements**

- Cone Penetrometer Test
- Investigation Bore
- Test Pit
- Monitoring Bore
- Track
- Drill Pad 25m x25m

**Existing Elements**

- Internal Road

**Environmental Elements**

- River/Creek
- Eagle Nest 500m Buffer
- Eagle Nest 1000m Buffer
- Forest Containing E.brookeriana
- E.brookeriana 30m Buffer

NOT FOR CONSTRUCTION

PROJECTION  
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 2. Grid Zone: Zone 55  
 3. Vertical Datum: Mean Sea Level  
 4. Scale: 1:5,000

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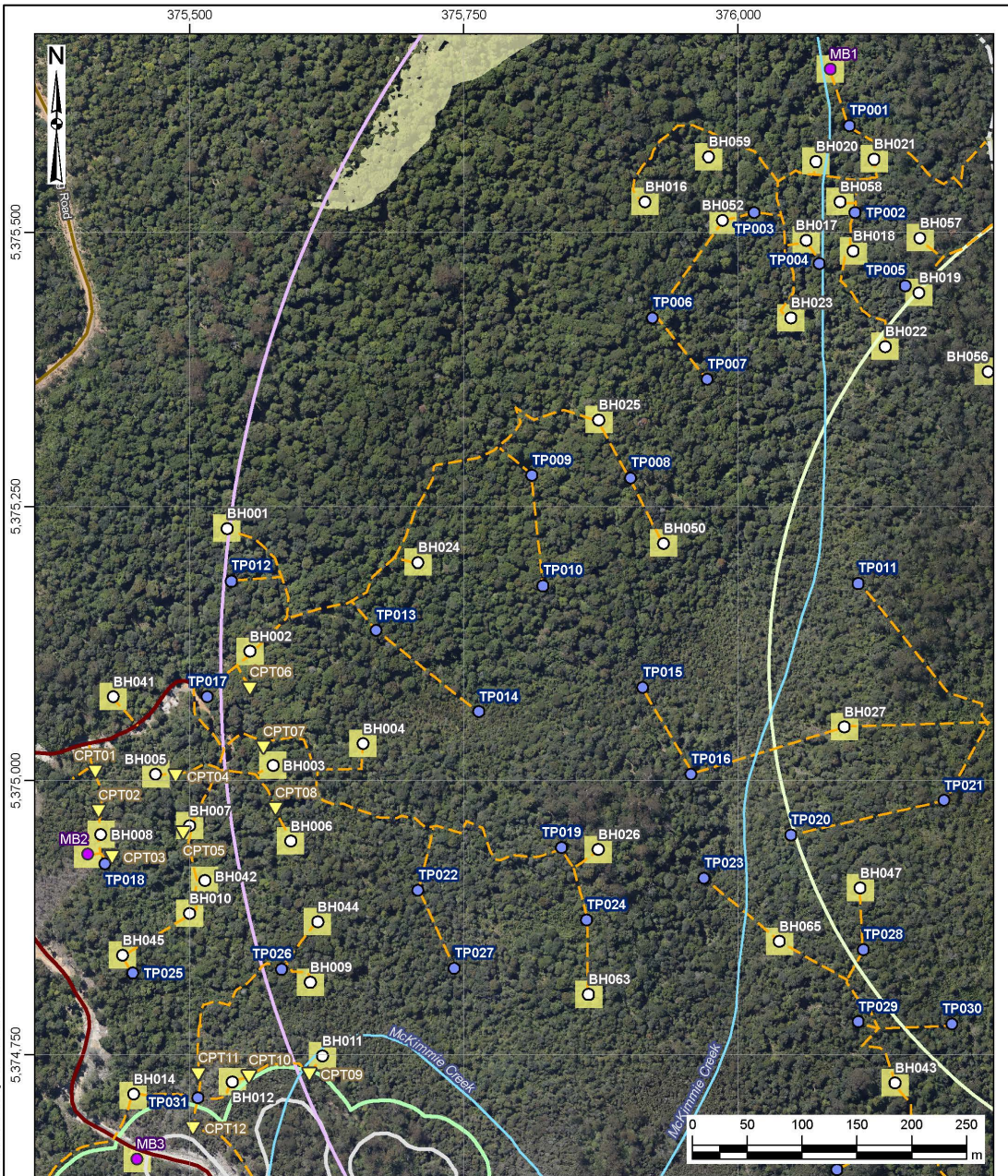
CLIENT




PROJECT: MMG  
 ROSEBERY TSF PRELIMINARY INVESTIGATIONS

TITLE: SOUTH MARIONOAK  
 PRE-CLEARANCE PROCEDURES  
 FIGURE 4 OF 5 **DRAFT**

PROJECT No:	D10307A06	FIG No:	FIGURE 4	REV:	A
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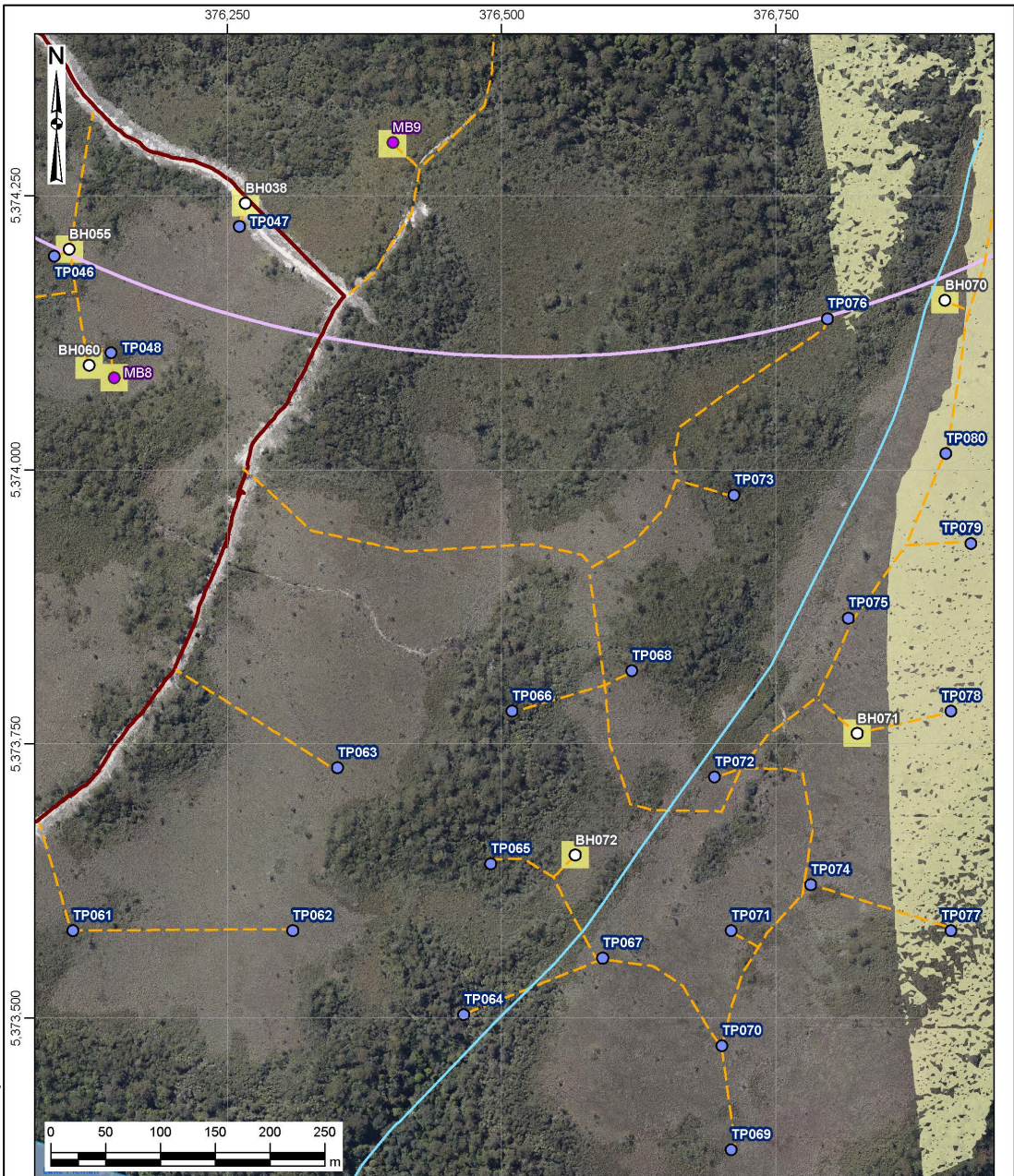
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|----------------------------------|------------------------------------|
| <b>Proposed Project Elements</b> | <b>Environmental Elements</b>      |
| ▽ Cone Penetrometer Test         | Drill Pad 25m x25m                 |
| ○ Investigation Bore             | — River/Creek                      |
| ● Test Pit                       | — Eagle Nest 500m Buffer           |
| ● Monitoring Bore                | — Eagle Nest 1000m Buffer          |
| — Track                          | — Eagle Nest Viewshed              |
| <b>Existing Elements</b>         | — Forest Containing E. brookeriana |
| — Road                           | — E. brookeriana 30m Buffer        |
| — Track                          |                                    |
| — Internal Road                  |                                    |

NOT FOR CONSTRUCTION

PROJECTION  
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 2. Grid Zone: Zone 55  
 3. Vertical Datum: Mean Sea Level  
 4. Scale: 1:5,000

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	PROJECT <b>MMG</b> ROSEBERY TSF PRELIMINARY INVESTIGATIONS	<b>DRAFT</b>
	TITLE <b>SOUTH MARIONOAK</b> <b>PRE-CLEARANCE PROCEDURES</b> <b>FIGURE 2 OF 5</b>	
	PROJECT No. D10307A06	FIG No. FIGURE 2
		REV A



**Proposed Project Elements**

- Investigation Bore
- Test Pit
- Monitoring Bore
- - - Track
- Drill Pad 25m x25m

**Existing Elements**

- Internal Road

**Environmental Elements**

- River/Creek
- Eagle Nest 1000m Buffer
- Eagle Nest Viewshed

NOT FOR CONSTRUCTION

PROJECTION  
 1. Horizontal Datum: GDA94  
 2. Grid Zone: Zone 55  
 3. Vertical Datum: Mean Sea Level  
 4. Scale: 1:5,000

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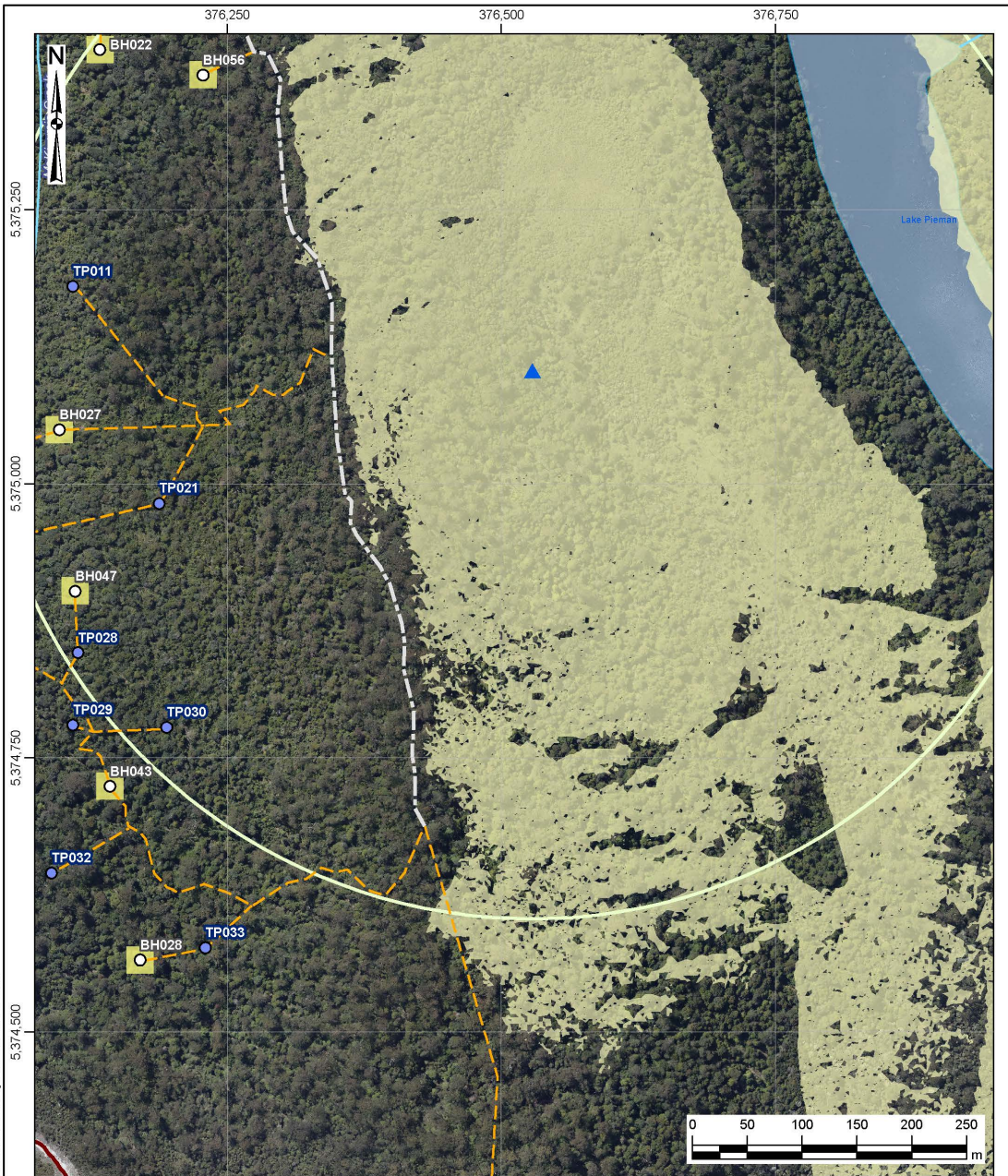



PROJECT: MMG  
 ROSEBERY TSF PRELIMINARY INVESTIGATIONS

TITLE: SOUTH MARIONOAK  
 PRE-CLEARANCE PROCEDURES  
 FIGURE 5 OF 5 **DRAFT**

PROJECT No:	D10307A06	FIG No:	FIGURE 5	REV:	A
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**Proposed Project Elements**

- Investigation Bore
- Test Pit
- - - Track
- Drill Pad 25m x25m

**Existing Elements**

- - - Track
- Internal Road

**Environmental Elements**

- ▲ Tasmanian Wedge-tailed Eagle Nest (en/EN)
- River/Creek
- Water Body
- Eagle Nest 500m Buffer
- Eagle Nest 1000m Buffer
- Eagle Nest Viewshed

NOT FOR CONSTRUCTION

PROJECTION  
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 2. Grid Zone: Zone 55  
 3. Vertical Datum: Mean Sea Level  
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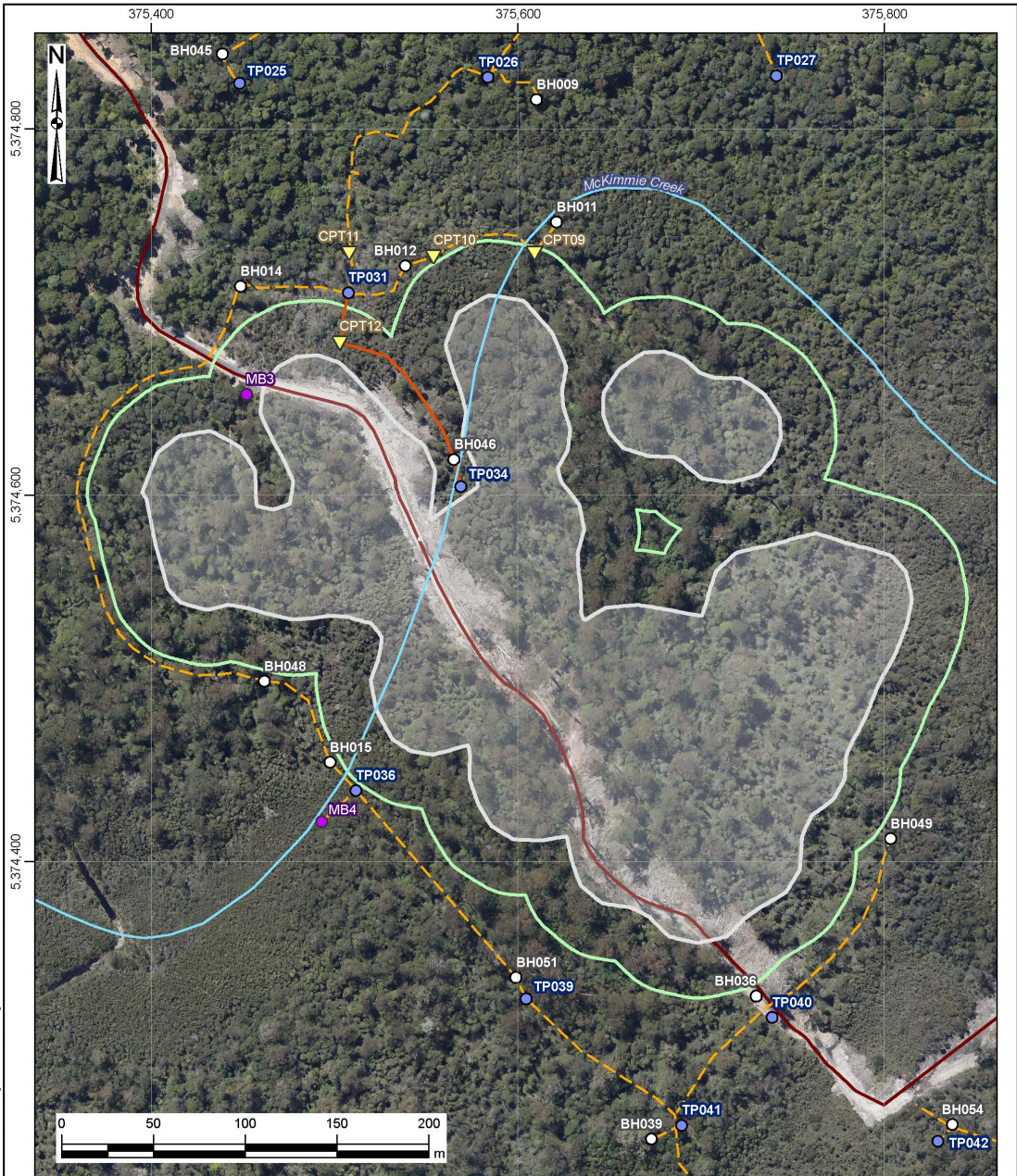
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PROJECT: MMG  
 ROSEBERY TSF PRELIMINARY INVESTIGATIONS

TITLE: SOUTH MARIONOAK  
 PRE-CLEARANCE PROCEDURES  
 FIGURE 3 OF 5 **DRAFT**

PROJECT No:	D10307A06	FIG No:	FIGURE 3	REV:	A
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**Proposed Project Elements**

- Cone Penetrometer Test
- Investigation Bore
- Test Pit
- Monitoring Bore
- Track
- Track Inside 30m Buffer

**Existing Elements**

- Internal Road

**Environmental Elements**

- River/Creek
- Forest Containing E. brookeriana
- E. brookeriana 30m Buffer

NOT FOR CONSTRUCTION	
PROJECTION	
1. Horizontal Datum:	GDA94
2. Grid Zone:	Zone 55
3. Vertical Datum:	Mean Sea Level
4. Scale:	1:3,000

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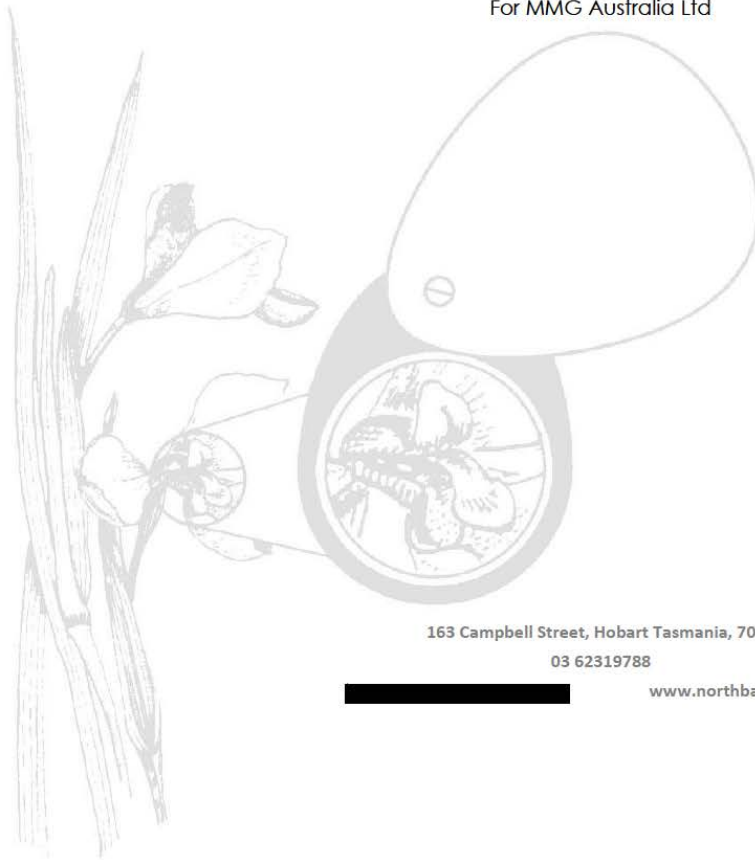
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			TITLE	SOUTH MARIONOAK FOREST CONTAINING E.BROOKERIANA	
			PROJECT No.	D10307A06	
			FIG No.	FIGURE 1	
			REV	A	<b>DRAFT</b>



MMG Rosebery  
South Marionoak Tailings Storage Facility  
Design and Assessment Works

**Pre-Clearance Protocols  
Tasmanian Devil & Scrambling Groundfern**

17 December 2021  
For MMG Australia Ltd



163 Campbell Street, Hobart Tasmania, 7000  
03 62319788

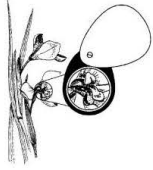
 [www.northbarker.com.au](http://www.northbarker.com.au)

**ACKNOWLEDGMENTS**

Pre-clearance Procedures: [REDACTED]

**File Control:**

Version	Date	Author / Comment
1.0	3/12/2021	[REDACTED]
1.1	9/12/2021	[REDACTED] – address review comments
1.2	17/12/21	[REDACTED] updates



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## 1 BACKGROUND

MMG Australia Limited are undertaking exploratory investigation activities at a site known as South Marionoak, west of the township of Rosebery. This will require localised vegetation clearing for the establishment of access tracks and investigation sites including geotechnical boreholes, monitoring boreholes, cone penetrometer test sites and test pits.

The following procedures outline a series of protocols which are designed to minimise the potential impacts of vegetation clearing on the Tasmanian Devil (*Sarcophilus harrisii*) and *Hypolepis distans* (scrambling groundfern). These protocols are to be applied as mandatory pre-clearance inspection and reporting requirements.

### 1.1 TASMANIAN DEVIL - *SARCOPHILUS HARRISII* (ENDANGERED / ENDANGERED)

Characteristics of natal dens for these species include a dry, structurally stable inner chamber, a chamber that is sufficient size for the mother and litter but is not so large as to be un-defendable (which includes an entrance that is a tight fit for the mother), and the presence of nooks and crannies for the young to hide in<sup>1</sup>. Preferable habitat characteristics are considered to include direct sun near the den entrance, shelter from predators around the den mouth, a dearth of predators in the area (excluding other devils), an adequate prey base, habitat heterogeneity, complex shelter elements (such as cliffs, caves, earth banks and log piles), and friable soil for the burrows<sup>2</sup>. Some of these traits are fine scale habitat attributes, whereas others are landscape scale (or have plausible proxies at the landscape scale).

### 1.2 *HYPOLEPIS DISTANS* – SCRAMBLING GROUND FERN (TSPA ENDANGERED/EPBCA ENDANGERED)

*Hypolepis distans* is known only from the north-west and King Island in Tasmania. It occurs in wet scrubland bordering *Melaleuca ericifolia* swamp forest, disturbance induced *Baloskion tetraphyllum* rushland, and from disturbed areas in wet eucalypt forest dominated by *Eucalyptus brookeriana* and *Acacia melanoxylon* (blackwood). Soils tend to be high in organic matter with moderate to poor drainage, while all sites are in areas of moderate rainfall below 40 m elevation<sup>3</sup>.

Previous NBES surveys<sup>4</sup> have identified that there may be suitable habitat for this species at the South Marionoak site, however, to date the species has not been recorded within the TSF footprint despite considerable searching. This does not rule out the potential for small, localised occurrences of the species to be present.

*Hypolepis distans* has a low, scrambling habit (up to 2-3 m) and visually distinct leaf venation and can be identified at any time of the year.

## 2 OBJECTIVES

The objectives of these protocols are as follows:

1. To apply procedures consistent with the relevant species survey guidelines<sup>5</sup>
2. To minimise potential for disturbance to an active Tasmanian Devil den, particularly one used for natal activities.
3. Avoid the potential for impacts to populations of the Scrambling Groundfern

<sup>1</sup> Mooney (unpublished data)

<sup>2</sup> Mooney (unpublished data); DPIPWE (2015a)

<sup>3</sup> Threatened Species Section (2021)

<sup>4</sup> North Barker Ecosystem Services (2021)

<sup>5</sup> DPIPWE (2015)

### **3 REGULATION AND MANAGEMENT OF PROTOCOLS**

Field investigations and reporting of survey results will be undertaken by a suitably qualified Environmental Officer (herein referred to as 'EO') or equivalent as determined by MMG Australia Ltd. Where a field survey has identified the presence of a potential MNES value, MMG will seek the advice of a suitably qualified ecological specialist for definitive identification and will apply avoidance methodology to confirmed sites as described in Section 5.

### **4 PRE-SURVEY HABITAT ASSESSMENT**

#### Tasmanian Devil Habitat Suitability

During the pre-development environmental assessment (NBES, 2021), the project area was assessed for devil denning potential through applying a GIS analysis of habitat quality. The analysis was informed by the results of field investigations and habitat traits, with overall habitat suitability classified through the following traits:

- Slope
- Aspect
- Likelihood of inundation
- Canopy density
- Vegetation type
- Soil structure

The resulting model classified denning potential across the project area as suboptimal and unsuitable. No optimal/high denning habitat was modelled (Appendix A).

The results of the habitat stratification will guide the intensity of field investigations during application of section 5 of the protocol (pre-clearance survey). Areas modelled as suboptimal will be subject to pre-clearance surveys with ground coverage more than the recommendations within the survey guidelines. Unsuitable areas will be subject to sufficient ground surveying to verify the unsuitability of the habitat and address any risks associated with micro topographic variations that could support dens.

#### Scrambling Groundfern Habitat Suitability

During the pre-development environmental assessment (NBES, 2021), searches and habitat assessments for this species were also undertaken. Given the preference of this species towards swampy, wet forest environments, much of the investigation area is considered to provide some level of habitat suitability for this species. As such no specific habitat classification for this species has been undertaken. Based however, on the survey effort undertaken to date, the species is considered to have a low to moderate potential of being present within the project area.

### **5 PRE-CLEARANCE SURVEY**

The pre-clearance surveys process will involve the following:

- (i) No more than 60 days prior to any vegetation clearance, the EO will conduct a pre-clearance survey within the project area (taken as to include all access tracks, boreholes, test pits, core penetrometer sites and monitoring sites) (Appendix A)<sup>6</sup>.

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<sup>6</sup> Note that depending on clearance schedules and survey timing, the entire project area might not be surveyed at once but instead might be divided into sections.



- (ii) The survey will include a systematic coverage of all areas of suboptimal potential denning habitat and potential scrambling groundfern habitat by applying a timed meander search technique<sup>7</sup> for a minimum of 50 m from the project area for devil dens and a minimum of 25 m for scrambling ground fern.
- (iii) All potential den sites<sup>8</sup> and potential occurrences of the scrambling groundfern will be recorded with GPS locations and photographed from multiple angles. The resulting documentation will be provided to a suitably qualified ecological specialist for identification.
- (iv) If a suspected devil den or suspected scrambling ground fern has been found a qualified ecologist will undertake a further detailed site survey. If either species is confirmed to be present, exclusion zones will be established where works will not proceed within 50 m of a devil den or within 10 m of any scrambling groundfern plants.
- (v) Identification of a den which shows signs of use by a devil will invoke the implementation of Section 6 of this protocol. Potential dens are mostly soil burrows/holes in the substrate with an appropriate entrance hole, but also include clusters of boulders with cavities, dense clumps of vegetation with visible animal use, rock outcrops, and dry hollow logs.
- (vi) To assess likelihood of use, the general quality of each potential den will be inspected in relation to factors such as soil warmth (sunlight), proneness to inundation, landscape position, etc. Factors including spider webs, delicate fungi, wear marks, hairs, scats and footprints at potential den entrances will be noted as potential indicators of activity (or non-activity). If the activity assessment concludes that the burrow is not being used (i.e., definitively inactive and vacant), the burrow will be decommissioned under a permit to destroy a product of wildlife under the *Nature Conservation Act 2002* (NCA).
- (vii) The 'den monitoring assessment' (section 6) will be applied to any potential den that has evidence of use by a devil, or evidence of use by a species that cannot be determined, and any den that is highly suitable for devil or occupation but does not have definitive evidence of being vacant at the time of assessment. An exclusion zone of a 50 m radius will be established around any potential den that warrants application of section 6. The exclusion zone will remain in place until the requirements of section 6 are completed.
- (viii) Following the completion of a survey, MMG will document all findings including the survey area, survey coverage and locations of any dens or scrambling groundferns and the application of their respective exclusion zones.

Notwithstanding the procedures outlined above, should a previously unidentified or unanticipated discovery of a den or scrambling groundfern be found by the contractor (or other parties) during works, an assessment of the site will be undertaken starting from protocol dot point 5 (iii).

If the project area is divided into sections and surveyed progressively, these procedures will be repeated until surveying of the entire project area is complete.

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<sup>7</sup> Goff et al (1982)

<sup>8</sup> As devils are known to opportunistically occupy burrows dug by other species (principally wombats), the protocol manages any burrow as potential habitat for a listed threatened species.

## 6 DEN MONITORING ASSESSMENT

The den monitoring assessment involves the following:

- (i) At least one infra-red motion sensor camera will be installed at each entrance of each burrow. Camera settings will be - sensitivity: high, capture method: video; capture length > 20 sec; capture delay interval: 0 seconds.
- (ii) Cameras will remain in place and be actively recording for at least 7 nights.
- (iii) After this time, footage will be inspected to identify captures<sup>9</sup>, with the following possible outcomes.
  - a. If a heavily pouch-laden devil, an imp (young devil) is recorded using a den, or if an individual devil is recorded using a den for two or more nights and displaying natal characteristics, then the den will be treated as a likely maternal den.

For a likely maternal den, cameras and the 50 m exclusion zone will remain in place until:

the den is no longer necessary for the rearing of young and it is confirmed that the mother and young have discontinued use of the den...

or continued monitoring definitively establishes that the den is in fact not a maternal den (e.g., pouch-laden females may visit multiple dens before dropping their young in one location, and some females may be observed showing natal characteristics [such as lactating and scent marking] around dens in which they have not dropped their young.

Following either of these scenarios the den will be decommissioned while vacant.

- b. If any devil is using a den regularly (i.e., almost every night) outcome then dot point 'a' will apply. If a den is found to be in regular use to this degree by a species other than a devil, a one-way gate will be installed, and monitoring will continue until a time when the den is definitively vacant and can be decommissioned.
- c. If a den is found to be in opportunistic use only by any species (i.e., not occupied for several consecutive nights; in which scenario there are usually several different animals and species frequenting the burrow), the footage from the night and morning immediately prior to the inspection will be used to determine occupancy at that time. If the burrow is conclusively vacant at the time of inspection, it will be decommissioned at that time. If an animal is within the burrow at that time, either a one-way gate will be installed to aid eviction, or the burrow will be revisited the following day and occupancy re-determined based on the footage from the previous night and morning. Monitoring of the burrow (with or without a gate) will continue until a time

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<sup>9</sup> If this is done in the field, outcomes a, b, c or d may apply immediately; if memory cards are collected for desktop analysis, cards (and batteries if necessary) will be replaced and camera(s) will remain in place for continued monitoring until action can be informed by the footage. In other words, monitoring will always continue up until the point of decommissioning, which will only be undertaken when an assessment of all footage up until that time has established the den is vacant at the time. A one-way gate may be used in any of the different outcomes to facilitate vacancy (as long as the 7 nights of footage has sufficiently informed the action). There may be times when it is more practical for staff from the proponent to change over memory cards and batteries or make cursory assessments of the footage.

when it is conclusively vacant at the time of inspection and can be decommissioned.

d. If a den is found to be inactive (no evidence of use), it will be decommissioned.

(iv) Once the monitoring requirements of section 6 are completed and dens have been decommissioned, the 50 m exclusion buffers can be lifted and vegetation clearing may commence.

## 7 REFERENCES

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**APPENDIX A: MODELLED DEVIL DENNING HABITAT SUITABILITY WITHIN 50 M OF PROPOSED ACTION**

