Exhibited

# This planning application is open for public comment until
## 20 October 2025

| | |
|---|---|
| Reference no | **PLN-21-0104** |
| Site | **204 FOREST HALL ROAD CLEVELAND** |
| Proposed Development | **Forest Hall Road Extractive Pit (Sand) Expansion** |
| Zone | **RURAL RESOURCE ZONE** |
| Use class | **Extractive Industry** |

Written representations may be made during this time to the General Manager;
mailed to PO Box 156, Longford, Tasmania 7301,
delivered to Council offices or
a pdf letter emailed to planning@nmc.tas.gov.au

(no special form required)

Exhibited

# PLANNING APPLICATION

## Proposal

**Description of proposal:** EXTENSION OF EXISTING MINING LEASE 1711 P/M BY 2.4 HA AS PER ATTACHED SURVEY PLAN UNDERTAKEN BY VERIS – HOBART

*(attach additional sheets if necessary)*

If applying for a subdivision which creates a new road, please supply three proposed names for the road, in order of preference:

1..... 2..... 3.....

***Site address:*** N/A

Note from Council planning department: Site address is 204 Forest Hall Road, Cleveland per the application documents

*CT no:* Note from Council planning department: CT 243828/1

*Estimated cost of project* $ 4,500 – SURVEYOR'S COST *(include cost of landscaping, car parks etc for commercial/industrial uses)*

*Are there any existing buildings on this property?* *Yes* / (NO)

*If yes – main building is used as .....*

If variation to Planning Scheme provisions requested, justification to be provided:

N/A

*(attach additional sheets if necessary)*

Is any signage required? N/A

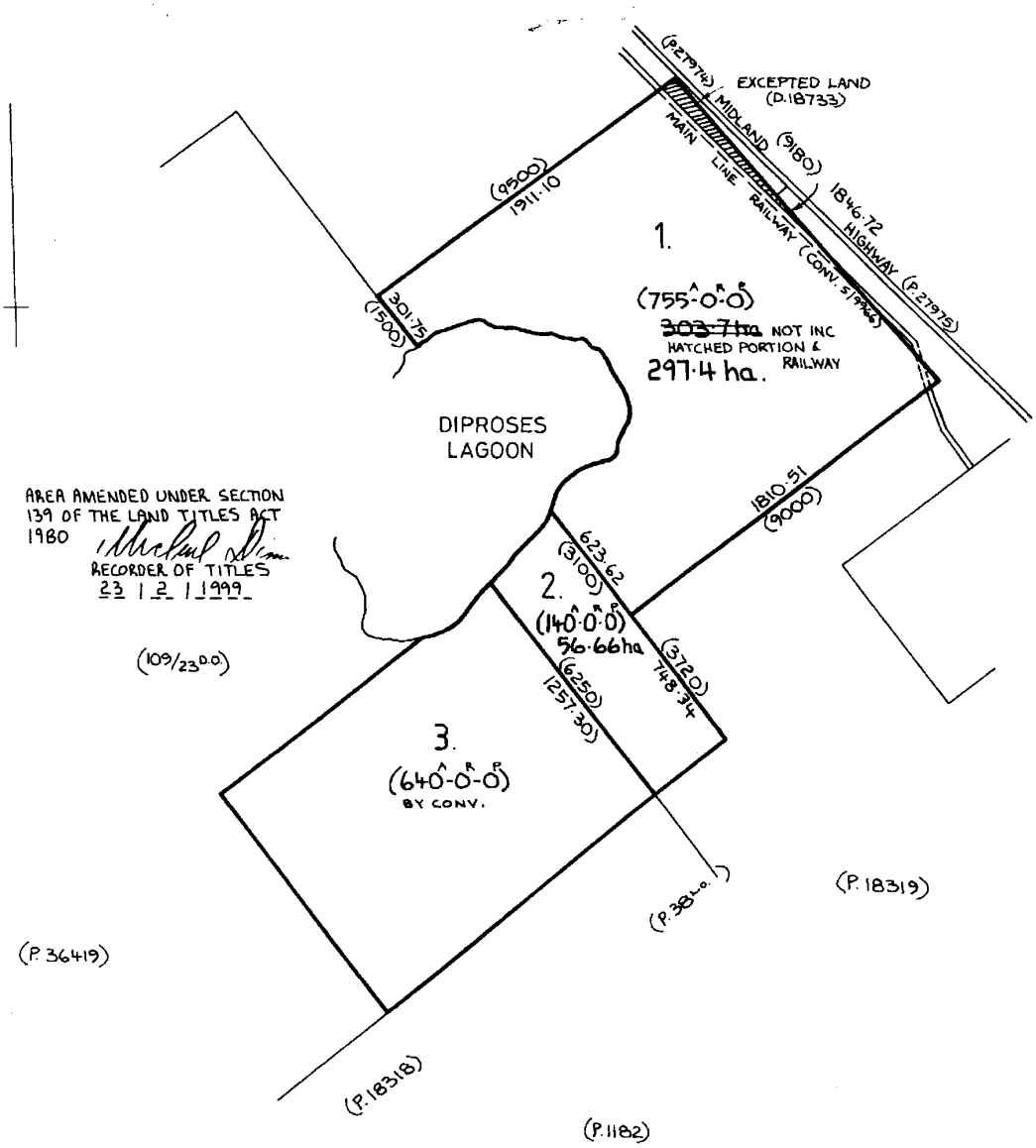
*(if yes, provide details)*

| APPROVED<br>RECORDER OF TITLES | CONVERSION PLAN<br>CONVERTED FROM CONV. 64/4138 | REGISTERED NUMBER<br>D.36634 |
|---|---|---|
| FILE NUMBER Y 10116 | GRANTEE PART OF 755ac & WHOLE OF 140ac GTD TO THOMAS DIPROSE & PART OF 640ac LOC. TO WILLIAM BONNILLY | DRAWN<br>P PAGE<br>2-8-1988 |

SKETCH BY WAY OF ILLUSTRATION ONLY

~~CITY/TOWN OF~~
LAND DISTRICT OF SOMERSET
PARISH OF CLEVELAND
LENGTHS ARE IN METRES NOT TO SCALE.
LENGTHS IN BRACKETS IN LINKS/~~FEET & INCHES.~~

(P. 109929)



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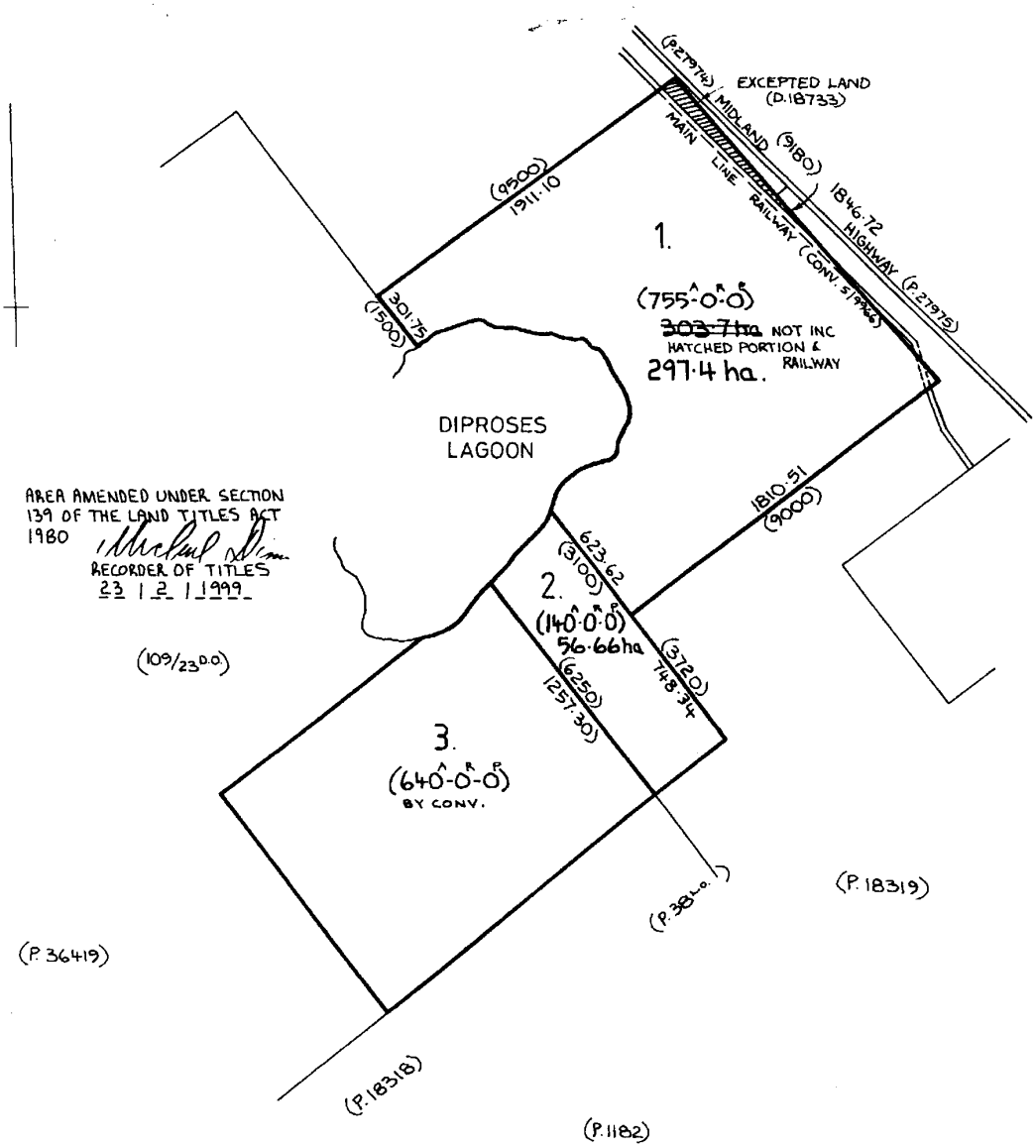


ANNEXURE TO CERTIFICATE OF TITLE / FOLIO OF REGISTER

VOL. 4025 FOL. 51

REGISTERED NUMBER

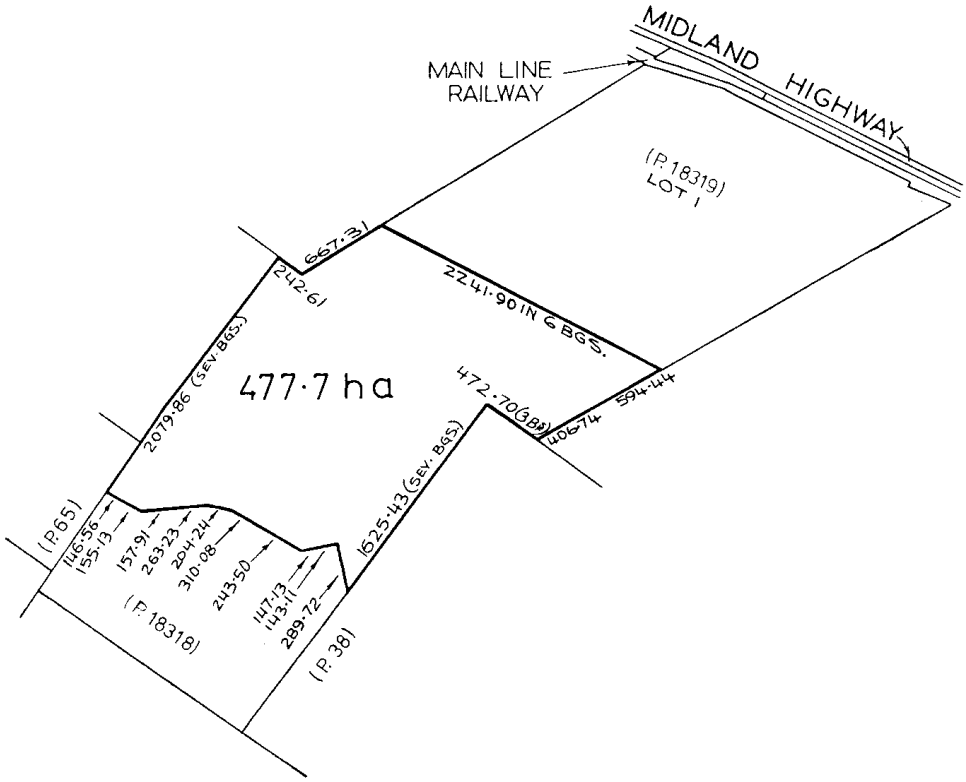
243828

Acting Recorder of Titles

**Lot 1 of this plan consists of all the land comprised in the above-mentioned cancelled folio of the Register.**

PH. & PH. MEAS. BATHURST CLEVELAND IN METRES

P.1182



# ENVIRONMENT EFFECTS REPORT


# EXTRACTIVE PIT (SAND)
# "FOREST HALL"
# FOREST HALL ROAD
# CLEVELAND

**Prepared by Mick Hernyk, Prospect Timber & Landscape Supplies Pty Ltd (Updated July 2025)**

**Prospect Timber & Landscape Supplies Pty Ltd** ABN: 43 113 746 633
65 Meander Valley Highway, Prospect, Tas, 7250
p. 03 6340 1518 e. mick@ptls.com.au w. ptls.com.au

Received
03/10/2025

Exhibited

# INDEX (TABLE OF CONTENTS):



## LIST OF APPENDICES:



**References:** Flora and Fauna Report (prepared by RMCG)
Traffic Impact Assessment (prepared by Risdon Knightley, RJK Consulting Engineers)
Mining Lease Application MLA 2130P/M Aboriginal Heritage Assessment Report (Prepared by CHMA) (available on request).

# Part A - Information on the proponent:

Prospect Timber and Landscape Supplies Pty Ltd have been operating a retail/wholesale landscape and timber yard, located at 65 Meander Valley Highway, Prospect, since May 2005.

In March 2008 the Company purchased and took over the sand mining operations at “Forest Hall”, Cleveland (Mining Lease 1711P/M).

Late in 2012 the Company commenced exploratory works to begin the process of extending our lease area and to upgrade our mining license from level 3 (5,000m3 P/A) to level 2 (20,000m3 P/A). We enlisted the services of Tritech Professional Services, AK consultants, RK Consulting Engineers and Forestry Tasmania who all provided documentation in support of our application. On the 1st of July 2014 we were granted a new lease area of 10.5HA (Mining Lease 1953 P/M).

During this time, we have proven ourselves to be transparent and competent operators, conducting operations in accordance with the Environmental Management and Pollution Control Act and the Quarry Code of Practice May 2017.

# Part B - Information on the project:

## 1. Description of project

The land is zoned Agriculture under the Tasmanian Planning Scheme – Northern Midlands (the Planning Scheme). The sand mine operation is considered an Extractive Industry Use Class and is a Discretionary use within the Agricultural zone requiring a permit under the Land Use Planning and Approvals Act 1993 (LUPAA).

Additionally, the sand mine operation is a Level 2 activity under the Environmental Management and Pollution Control Act 1994 requiring assessment by EPA and Mineral Resources Tasmania (MRT).

Under the conditions applicable to our current permit- Planning Permit P13-008, We are seeking to increase the footprint of our previous lease area 1953P/M by 2.4 Ha. This expansion was granted by MRT on 27th November 2024 and is now part of lease 2130P/M (See MRT Lease Area in Appendix D).

With minimal increase of material extraction (not exceeding our 20,000m3 P/A), we are seeking an extension of the land area for the existing Level 2 activity. Furthermore, it should be noted that part of the extended lease area will contain the settling pond and stockpile of white sand to prevent cross-contamination of product (Site Plan, Section 3, Figure 3).

An Application and Marking out of the proposed lease extension area was submitted to MRT on 06.12.23 with appropriate application fees paid. MRT entered the application to the Register on 19.12.22, with a reference number MLA 2130P/M. This new lease was granted by MRT on the 27.11.24. Site inspection has been carried out and assessment awaiting approvals from EPA and Northern Midlands Council.

MLA 2130P/M covers the same area as mining lease 1953P/M with the addition of the 2.4ha expansion areas and replaces mining lease 1953P/M.

In addition, we have submitted an application to surrender Mining Lease 1711P/M which is adjacent to our current Lease as the current area has reached it's capacity and has been fully rehabilitated (approval pending).

This will bring our total lease area to 12.9 Ha (see Site Survey in Section 3, Figure 2).

The site is surrounded by adjoining Agricultural land with the closest sensitive use zoning being 'Village' zoned titles associated with the township of Conara over 4.5km to the east.

The over-burden is to be stripped, sand extracted and screened on-site, then rehabilitated with stockpiled over-burden to match existing contours of the surrounding area.
A wheel loader and excavator will be used to extract the sand and rehabilitate. The sand, (some of which is required to be screened) will be processed utilizing a mobile trommel.
The screen will be moved to each working area (not used in the one spot) to further minimize any impact on the one area and to keep the total working area to a minimum. As part of the re-classification and increased lease size we will not be increasing the amount of plant and equipment on site.

The first area (Stage 1) to be worked and excavation to commence will be directly to the west of the existing workings. Stage 2 is located to the east of existing workings. Stage 3 is located within the previously approved lease area (1953P/M).

Staged excavation is followed by progressive re-habilitation with the extractive area generally not exceeding 0.5ha. Clearing will be staged and limited areas cleared preceding mining. Normally small working areas approximately 200m x 100m, and only 2 working areas open at any one time prior to re-habilitation (see Part C:Section 17). Successive working areas will be selected according to the characteristics, i.e. colour, quantity and quality, of the sand required, whilst maintaining our commitment to leave remnant islands of vegetation (see Part C: Section 1). Depth of excavation is generally dictated by the natural contours of the sand deposit which can be up to 5m.

Explosive blasting will not occur as part of the activity. The sand is easily accessed without any need for explosive blasting. The detailed process for extracting the sand is contained in Part C, section 17, of this "Environmental Effects Report".

The mining lease is proposed for a 10-year period and it is expected that there is sufficient material for an operational period of at least 20 plus years. The annual production quantity would not increase from our current 20,000m3 P/A limit.

We currently do not anticipate any seasonal variations.

Prospect Timber and Landscape Supplies Pty Ltd are not seeking any changes to our hours of operation, therefore we will still be governed by the Quarry Code of Practice May 2017, that is between 7.00 am to 7.00 pm weekdays and between 8.00 am and 4.00 pm Saturdays with no activities on Sundays or Public Holidays, which is in line with our approved DA P13-008, 22.08.2013

## 2. Project area

The current use of the site is under approved mining lease operations conducted by Prospect Timber and Landscape Supplies Pty Ltd.

The project area requested is for an additional 2.4HA of land situated on land title number CT 243828/1 and access road will pass through title numbers CT 36634/3 and CT36634/2. MRT have granted the new lease area with a reference number ML 2130P/M. ML 2130P/M covers the same area as previous mining lease 1953P/M with the addition of the 2.4ha expansion area.

The land situated to the north-west, and north-east, of the mine site, between the mine site and the owner's residence, is predominantly used for the cultivation of crops, mainly barley, potatoes and poppies. This current parcel of land is unsuitable for farming use and not able to be cultivated for cropping or used extensively for grazing livestock.

The subject area is relatively flat, at approximately 210m above sea level, with a slight north easterly aspect. Soils at the site are mapped as Panshanger with Bloomfield soils on dolerite bedrock (Ps-Bo) which are soils on loose, windblown sand on gently undulating to rolling (3-32%) dunes and flanks and outcrops of dolerite hill slopes. Underlying geology is mapped as Cenozoic cover sequences (Qh), which are described as sand gravel and mud of alluvial, lacustrine, and littoral origin (Mineral Resources Tasmania 2010).

Average annual rainfall for Ross (Site No. 093053) is 489mm (BOM 2022). There is no recorded fire history on the title (DNRET 2022).

A total of 6.6ha of vegetation (including 5.5ha under the original lease 1953P/M) will be impacted by mining operations within lease area 2130P/M. Staged clearing and rehabilitation of the 5.5ha of threatened vegetation community Eucalyptus amygdalina inland forest and woodland on Cainozoic deposits (DAZ) within Stage 3 has been previously approved as part of lease 1953P/M and an offset area was proposed and has been managed by the proponent since 2012.

While a large proportion of the 2.4ha extension area (Stages 1 and 2) are already disturbed from previous activities, approximately 0.6ha Eucalyptus amygdalina inland forest and woodland on Cainozoic deposits (DAZ) and an additional 0.5ha of Midlands woodland complex (DMW) will be impacted by mining operations.

It is important to note that the majority of the lease area has been extensively logged and cleared in the past.

There is no water course or natural water body on the activity site itself. A small pond is located at approximately 8m and a larger dam approximately 40m from the lease extension area. An unnamed watercourse is located approximately 50m from the mining area.

According to the Management of Acid and Metalliferous Drainage in Tasmania Good Practice Guidance 2020-2025 (MRT), the location of the mine is not within a mapped area of geology predisposed to acid mine drainage (AMD) and the likelihood of Potentially Acid Forming (PAF) material is low risk.

Additionally, according to LIST Map Acid Sulfate Soil risk mapping, there are no acid sulfate soils found within the lease area. Therefore, no disturbance of potential acid sulfate soils as a result of the sand mine operation is expected. Additionally, this area has an extensive mining history and no acid sulfate soils have been recorded in the past.

There are no permanent structures located on the current lease area or on the proposed

extension to the lease. A temporary site office is located on the northern end of the existing lease area (see Site Plan in Figure 3, Section 3).

Access to the site is via Forest Hall Road. The property containing the lease is located at the end of Forest Hall Road, where onsite signage directs traffic flow to a single lane inbound access track to the west. Traffic leaves the site via the outbound access road to the east. See Figure 6, Section 3.

The location of the nearest residence, being the land owner's residence, is located 1.2km from the nearest boundary of the project area. There are no known sensitive uses located on the surrounding land. See Figure 6, Section 3.

Received
03/10/2025



## 3. Maps and Site Plans

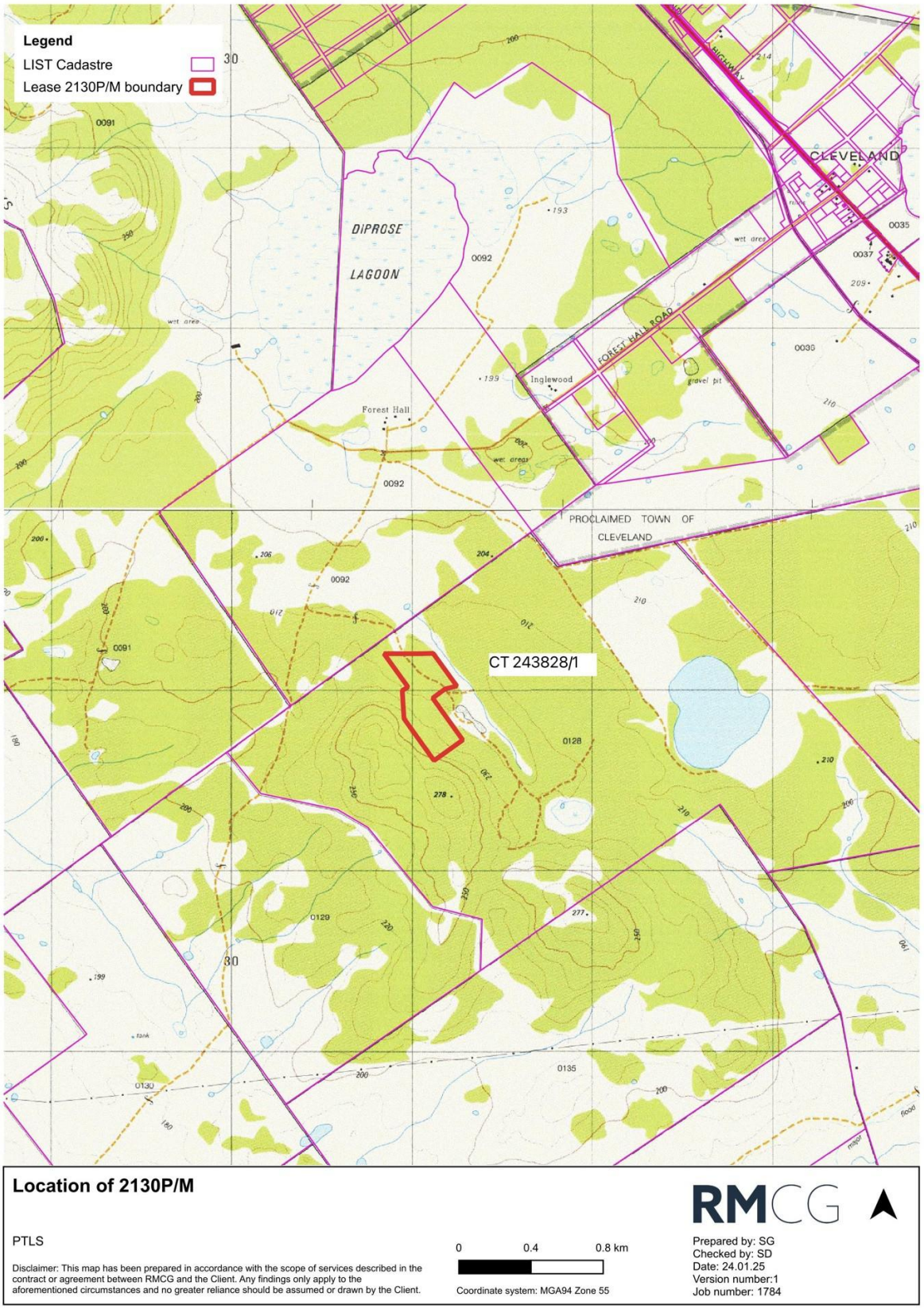



Figure 1. Location map provided by RMCG (Appendix A, Figure A2-1) shows position of current mining lease (2130 P/M) which incorporates previous lease 1953 P/M and extension area of 2.4 ha on property “Forest Hall” - Forest Hall Road, Cleveland, situated on land title number F.R. 243828/1, as operated by Prospect Timber & Landscape Supplies Pty Ltd.

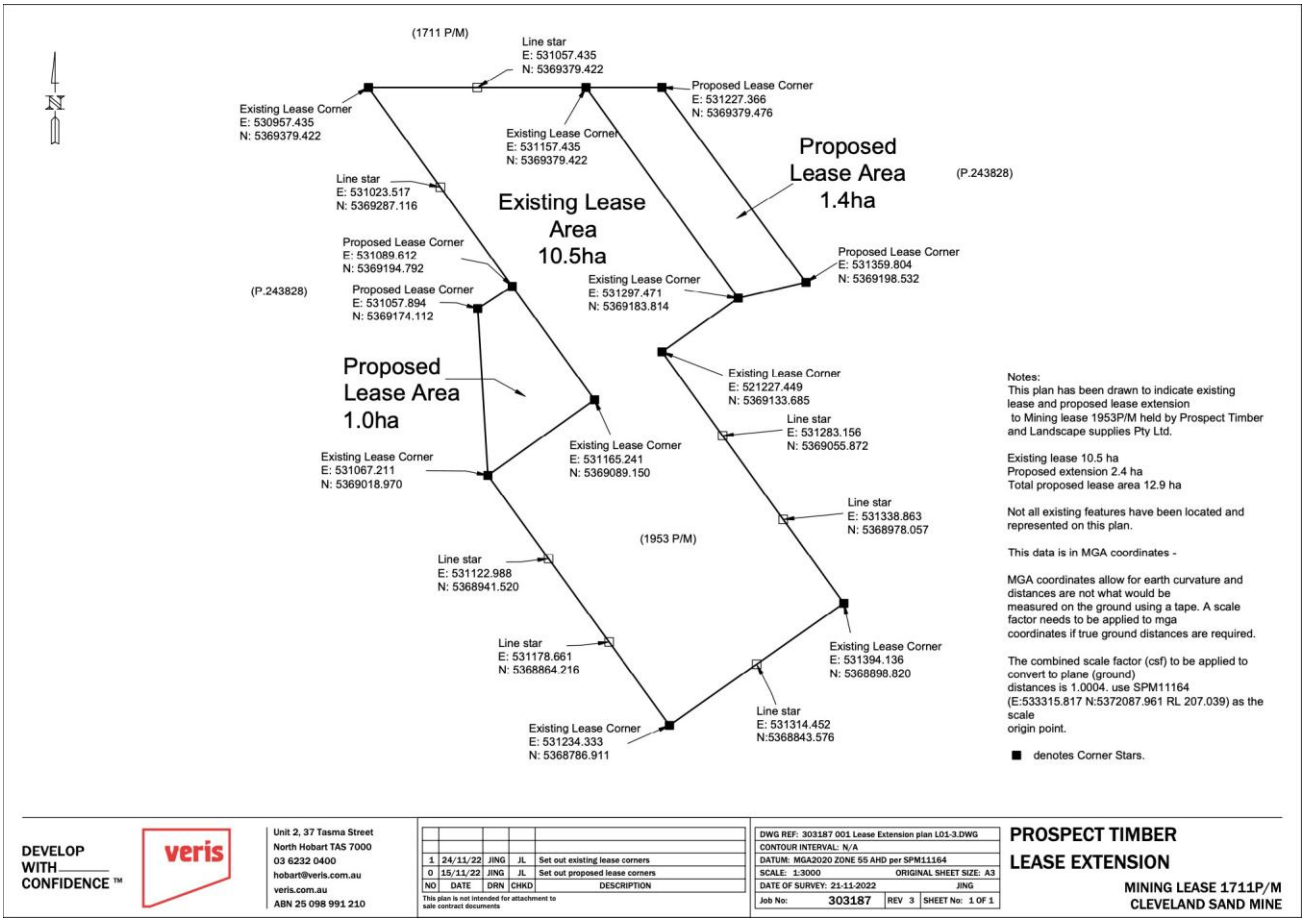



Figure 2. Proposed mining lease extension has been prepared by Veris Tasmania. MRT have granted the application with a reference number MLA 2130P/M. MLA 2130P/M covers the same area as mining lease 1953P/M with the addition of the 2.4ha expansion area.

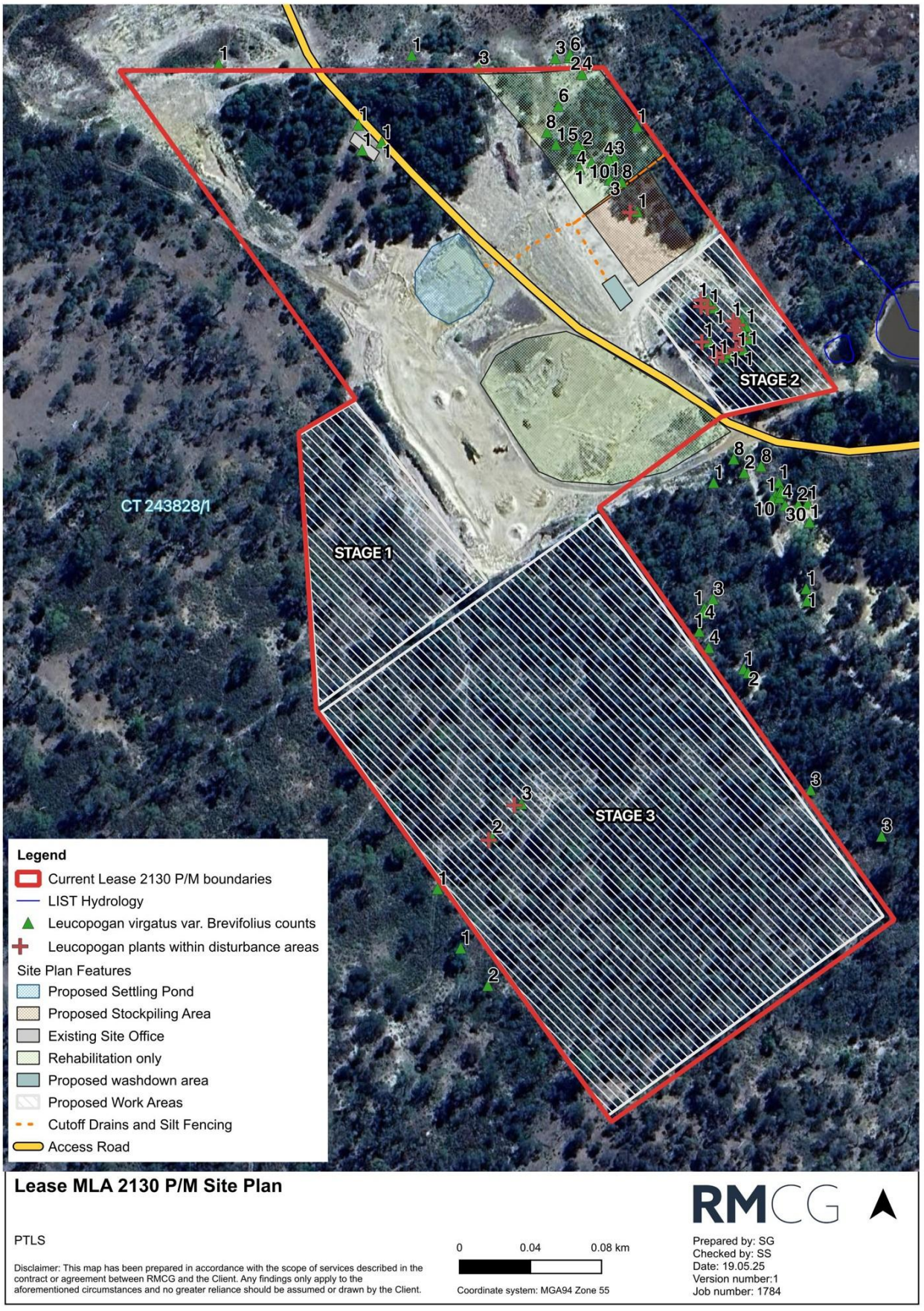



Figure 3. Lease 2130P/M Site Plan defines the area on which the activity will take place. It also shows the location of existing workings, proposed working areas, existing roads, areas currently under re-habilitation, locations of threatened species, water management (including settling pond) and watercourse.

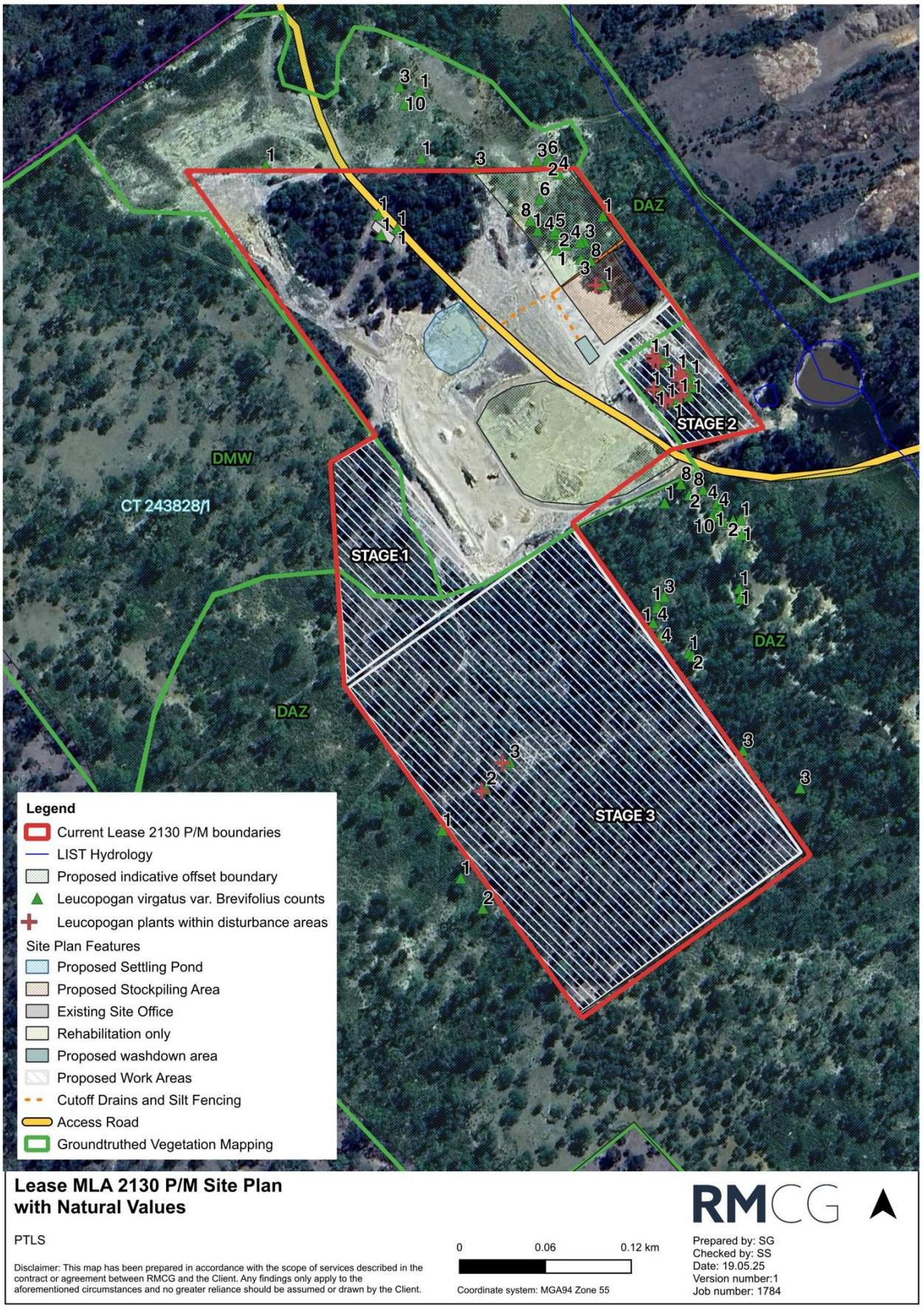



Figure 4. Site Plan with Natural Values (Appendix A, Figure A2-4). Note records of *Leucopogan virgatus var. brevifolius* to be marked on site and avoided.

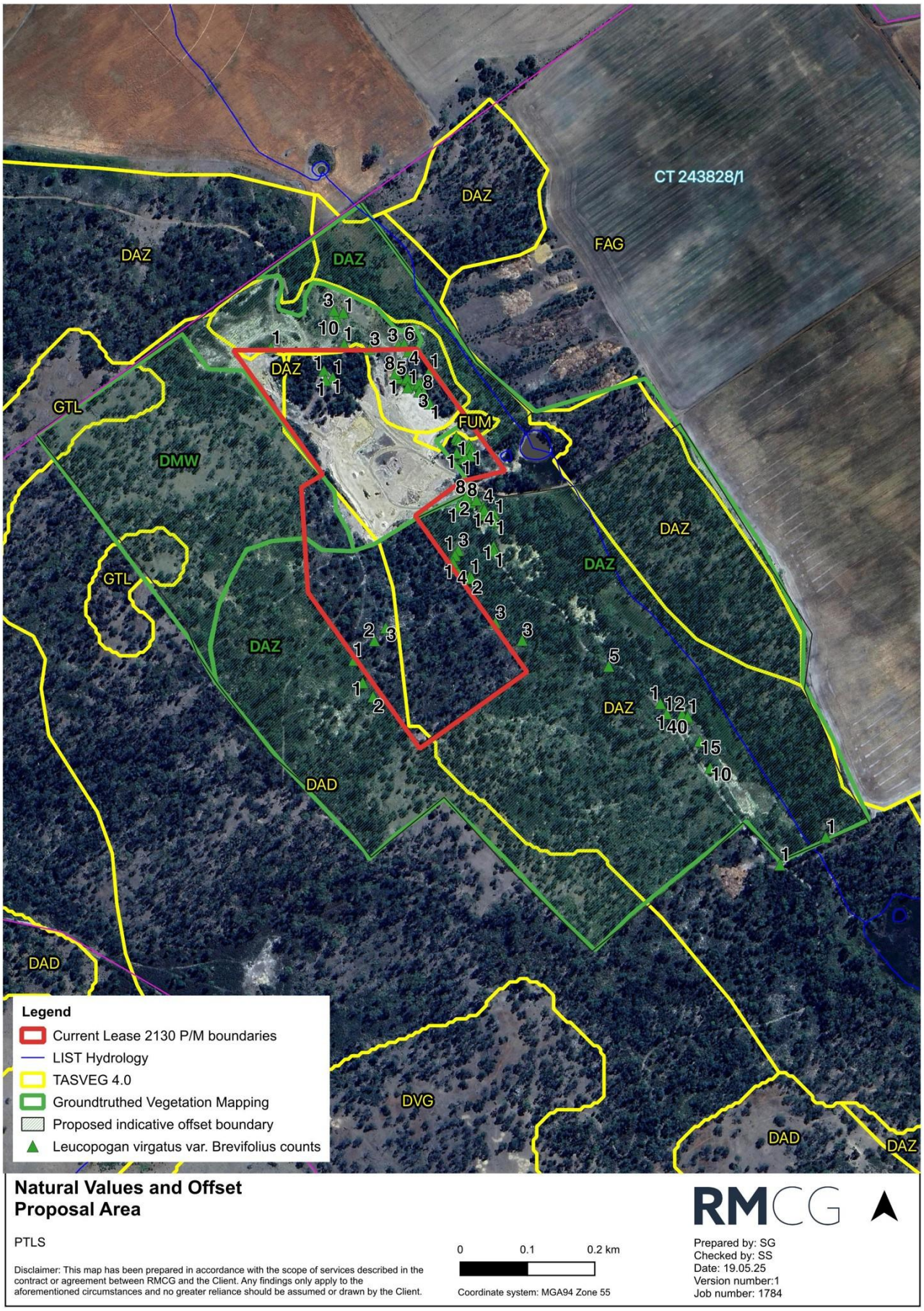



Figure 5. Natural Values and Offset Proposal Map (Appendix A, Figure A2-5) prepared by RMCG, showing extent of proposed area for offsetting and surrounding vegetation.

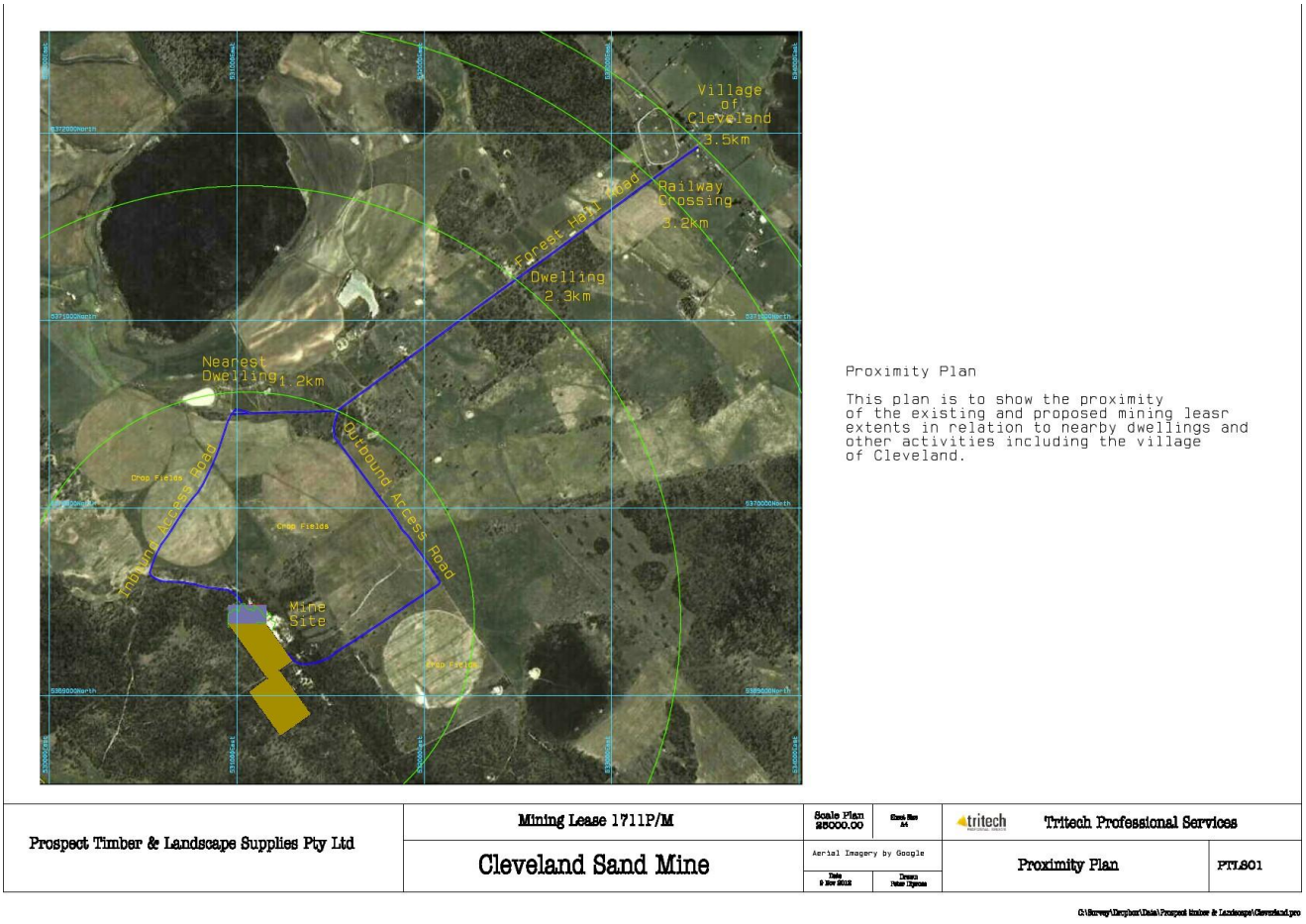



Figure 6. Proximity Plan showing proximity to sensitive uses (Tritech PTLS01, Appendix B).

## 4. Rationale and Alternatives

We have considered the proposed site to have the least environmental impact on the surrounding area as Prospect Timber & Landscape Supplies have been operating a sand mine in this location for the past 13 years. We have identified the areas containing sand deposits by digging test holes on the proposed project site and all adjacent areas. The proposed project area was chosen to limit impact on threatened vegetation communities/species and it is attached to our current lease area which minimizes the need for added roading to access the site.

The 2.4HA proposed project site is an extension of our previous 10.5HA mining lease (1953 P/M). As the site adjoins current operational areas, we anticipate minimal impact on the area because we will be utilising our existing infrastructure (road access into the site etc.)

The previous mining lease sites (Mining Lease 1711 P/M and 1953 P/M) were chosen due to their deep sand deposits and the land was unsuitable for cropping/grazing.

Only small working areas will be cleared at a time, approx. 100m x 200m, due to the depth of sand deposits. These areas will then be rehabilitated before other areas are opened for sand extraction. This will then minimize the amount of immediate disturbance and amount of dust from the exposed site.

The vast majority of the project area to be cleared has already been extensively logged in the past, and the current vegetation is not suitable for cultivating crops, or for grazing livestock.

# PART C – Potential environmental effects

## 1. Flora, Fauna and geomorphology

Flora and Fauna

Clearing will occur in small working areas of approximately 100m x 200m, scattered over the entire 12.9 HA mining lease site, over the expected 20 plus year life of the activity. Each working area will remain in use until the sand has been extracted prior to a new working area being established, and each used working area will be rehabilitated to meet the approval of Mineral Resources Tasmania and the Environmental Protection Authority, as soon as practicable after being completed.

All rehabilitation will be carried out under strict adherence to the rehabilitation conditions detailed in the permit environmental conditions.

As per our current operating procedures, topsoil over-burden from new workings in the proposed lease area will be used (wherever possible) where it will provide propagules for rehabilitated sites.

In addition to the planned retention of remnant “islands” within the sand mining area to provide a seed source for native species, the revegetation planning for the site will incorporate a program that aims to establish a similar suite of species to that currently existing.

Native vegetation or potential habitat for native fauna will be cleared or disturbed as part of this proposal. An on site assessment, along with a detailed flora and fauna report which addresses threatened species that have been recorded in the area, has been prepared by RMCG, and extracts have been included in this Environmental Report (refer Appendix A for full report).

A total of 6.6ha of vegetation (including 5.5ha under the original lease 1953P/M) will be impacted by mining operations within lease area 2130P/M. Staged clearing and rehabilitation of the 5.5ha of threatened vegetation community Eucalyptus amygdalina inland forest and woodland on Cainozoic deposits (DAZ) within Stage 3 has been previously approved and an offset area was proposed and has been managed by the proponent since 2012.

While a large proportion of the 2.4ha extension area (Stages 1 and 2) are already disturbed from previous activities, approximately 0.6ha of threatened vegetation community Eucalyptus amygdalina inland forest and woodland on Cainozoic deposits (DAZ) and an additional 0.5ha of Midlands woodland complex (DMW) will be impacted by mining operations.

The clearing of threatened vegetation communities is constrained under the Nature Conservation Act 2002 and Forest Practices Act 1985. Where approval for clearing or conversion of a threatened community is sought, it is usual that offsets are required as a mitigation of unavoidable impacts. An area of surrounding vegetation mapped and previously assessed as DAZ (AK Consultants 2012) has been historically managed by the proponent as an offset area for the original mining lease area. This arrangement is currently in the process of being formalised and will incorporate the offsetting of the additional 0.6ha of DAZ proposed in this lease extension. There is considered to be adequate area of equal or better condition DAZ immediately adjacent the sand mine operations which meet the recommended 5:1 offset ratio of minimum 10ha. Additionally, rehabilitation areas from past mining areas are regenerating to communities with DAZ characteristics, which will be taken into consideration when formalising offset arrangements.

While the 0.5ha area attributed to Midlands woodland complex DMW does not meet the thresholds for the threatened vegetation community of ‘Eucalyptus Ovata forest and woodland’ there is adequate (more than 5 times) area of similar vegetation composition and condition included in the potential offset area also.

The threatened flora species Leucopogon virgatus var. brevifolius was identified within the lease area. Operations within the lease area will disturb approximately 18 individual plants and a separate management plan (see Appendix C) has been prepared to ensure that the impact to the overall viability, integrity and geographical extent of the population at the site is mitigated, monitored and actively managed through follow up surveys for Leucopogon virgatus var. brevifolius after the rehabilitation phase to ensure the species and associated habitat requirements are indeed recolonising across the disturbed areas.

Marginal habitat was identified for an additional 11 threatened flora species within the lease area. The Flora and Fauna report concludes that due to the site history, current level of disturbance, visibility and survey effort during multiple seasons of this site and surrounding area (including peak flowering times in mid November), it is considered unlikely that the species are present at the site and therefore there is a low risk that they will be disturbed.

No threatened fauna or fauna nests and dens were identified within the lease area, however, potential foraging habitat was identified for Dasyurus maculatus spotted-tail quolls, Dasyurus viverrinus eastern quolls, Sarcophilus harrisii Tasmanian devils and Aquila audax subsp. fleayi wedge-tailed eagles and marginal habitat was identified for Perameles gunnii eastern barred bandicoot. Due to the staged nature of the mining operation and rehabilitation requirements, the works within the lease area is expected to present a low risk of impacting these species.

Potential impact on sensitive avifauna during breeding seasons is highly unlikely due to no known raptor nests within 2km of the mining lease area.

Roadkill impacts from vehicles, specifically in relation to the Tasmanian Devil (Sarcophilus harrisii) is unlikely/considered low risk due to:
Majority of cartage occurring outside of the ‘night time period’ (ie after 1 hour after sunrise and before 1 hour before sunset).
condition of access roads (including railway line with no warning lights on Forest Hall Road) requiring slow driving speeds of vehicles.
Slow traffic due to presence of lifestock on access road to mine (cattle grids are used on gateways).
Zero past history of threatened species roadkill during cartage/access to mine site during several years of operation by PTLS.

It is noted that the Natural Values Report in Appendix A that the natural values assessment is largely focused on the expansion areas to the original lease (ie Stages 1 and 2). This is due to the area that is now Stage 3 being previously surveyed (as part of the original lease 1953P/M) with a condition to undertake a Spring survey prior to works occurring in this area. The timing of works before Stage 3 is entered may exceed 2 years, therefore a Spring survey is best undertaken at a later date (ie during the Spring immediately before works are anticipated to extend into this area, as per condition on the original permit for lease 1953P/M). This is included in our Management Commitments in Part D.

Offsets and mitigation

The Flora and Fauna Report (Appendix A) discusses potential offset measures and previously assessed as DAZ (AK Consultants 2012) and have been historically managed by Prospect Timber and Landscape Supplies as offset areas for the original mining lease area. This arrangement is currently in the process of being formalized with NRE and will incorporate the offsetting of the additional 0.6ha of DAZ in this proposed lease extension.

Proposed offsets are made in consideration of the Forest Practices Authority Offset policy, which requires a ratio of 5:1, and the metric allows for a reduction of this ratio for areas of

vegetation in good condition. As such an area of approximately 40ha will be required for offsetting (see Figure 5, Section C

*Weed and Disease Management*

One declared weed species slender thistle (*Carduus pycnocephalus)* has been recorded onsite and there are a number of declared weed species present on adjacent titles including gorse (*Ulex europaeus*). PTLS is committed to managing any weed species which may emerge at the site and we have developed a weed management plan which describes methods for the monitoring and control of existing and any emerging declared weeds within the site (refer Appendix E).

The management and control measures and operational protocols in the weed management plan is provided to all employees and contractors involved in site works and the transport of machinery and materials into and off site. The quarry manager monitors and enforces adherence to the measures and operational protocols detailed in the plan.

*No Phytophthora cinnamomi*, has been identified within 1km of the subject titles. Additionally, we undertakes regular assessment for *Phytophthora cinnamomi* and the mine has a *Phytophthora cinnamomi* free status. The operation is also subject to washdown protocols are per the Tasmanian Quarry Code of Practice (EPA 2017) and EPA Permit Conditions.

Quarry hygiene will be stringent with wash down procedures for visiting machinery being performed in strict adherence to the DPIPWE (2015) *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania* and no materials from other locations will be stored or dumped within the quarry area.

A designated washdown area is located within the existing lease area for washdown of vehicles upon entry/exit where required. This site is located approximately 100m from a small pond to the south east and 120m from the watercourse to north east. Additionally, a vegetative buffer will be maintained and monitored for weed incursion (see Site Plan, Figure 4, Section 3).

*Geo-conservation Sites*

The existing lease is situated on previously listed Geoconservation site ‘Macquarie River Valley Sandsheets’. This listing no longer exists and no further consideration is required (Flora and Fauna Report (refer Appendix A)).

**2. Rivers, creeks, wetlands and estuaries**

There is no water course or natural water body on the activity site itself and the proposal will not result in the filling or excavating, or the impoundment, of a river, creek, wetland or estuary.

A small pond is located at approximately 8m from the lease extension area and a larger dam approximately 40m from the lease extension area. A unnamed watercourse is located approximately 50m from the mining area. Lease boundaries will be clearly marked to ensure machinery does not enter these areas beyond the lease boundaries.

The proposed site is relatively flat with no surface drainage apparent due to the porosity of the sands. Drainage of water within the quarried areas will be through sandy soils along the lower (eastern) portion of the lease and directed into a settling pond (as shown on Figure 3 in Section C).

The mining operation is located within a very small catchment area of approximately 5.65km2. The proposed settling pond over an area of approximately 1000m2 at a maximum 1m depth, has a maximum holding capacity of approximately 1ML.

Any emergency discharge is diverted to vegetated areas to the east prior to reaching the existing drainage line approximately 70m to the east.

Given the nature of the sand material onsite and its natural drainage properties, the catchment area and past operational experience onsite, the proposed site and sizing is considered appropriate.

All roading within the lease will ensure that runoff is directed into vegetative buffers or previously mined areas and not directly to water courses. Some pooling may occur in low lying quarry and rehabilitation areas, but this should be short term and filtered by sands before entering the watercourse.

**3. Significant areas**

The proposed lease extension is not located within or adjacent to an existing National Park, State Reserve, Regional Reserve or Nature Reserve.

There is an existing conservation covenant on the neighboring property to the west of the project area which will not be impacted by operations.

**4. Coastal zone –** not applicable to this EER

**5. Marine areas –** not applicable to this EER

**6. Air emissions**

Sources of dust from the operation are predominately from vehicles on the access road, there is also dust generated from the worked out areas, stockpiles and screening. The proposal will not increase existing dust emissions as it is an extension to the existing extractive area, not an increase in the extraction or processing limits.

The prevailing winds are generally north westerly during the drier periods. The closest dwelling to the north west is 2.3km from the lease area.

There is no current indication of a dust nuisance to the residences from current operations, the closest of which is located 1.2km north from the closest proposed mining lease boundary. See Proximity Plan (Figure 6, Section 3).

In the event of dust from trucks carting sand causing a dust nuisance, a water cart will be provided for dust suppression, if necessary. Water is obtained from a bore on the property and is readily available.

Dust emissions are currently managed by only clearing small working areas at a time (refer Part C: Section 1) and the site will continue to be operated in this manner, thus minimizing sand blow. Stockpiles will be located on the quarry floor which will give some protection from the prevailing north westerly winds thereby reducing dust transmission and to further minimize dust generated during the loading process, the bucket drop distance will be kept low.

The rehabilitation of each working area after use will also ensure that dust emissions will not spread to neighboring areas.

## 7. Liquid effluent

There are no liquid effluents other than stormwater runoff, as no water is used in the sand mining process.

Stormwater has been addressed under Part C: Section 2.

## 8. Solid wastes

There will be minimal solid wastes. Drums will be located on site for the storage of any general wastes (e.g. food scraps, packaging, grease cartridges, rags, Envirosorb matting etc.)prior to removal to an authorized disposal site.

A chemical toilet is located on site in the site transportable site office located within our lease area on the property. Waste from the chemical toilet will be removed from the site and disposed of at an authorized dump point.

The waste generated from screening on site, i.e. tailings from the screening process (usually 1-2% of total sand pushed, and consisting of small lumps of clay, stones and deep roots) is an important part of our rehabilitation process, the details of which is covered in Part C: Section 17 rehabilitation.

## 9. Noise emissions

Noise levels will be limited to the plant and machinery operating on site, being a wheel loader, excavator and mobile trommel. Due to the remote location of the site (which is screened by vegetation and situated in a depression), and the distance to main roads, houses, and existing infrastructure, the operation would not result in nuisance noise emissions beyond the site boundary. The closest residence is located 1.2km from the closest mining lease boundary.

Due to the nature of the material, being sand, many of the usual noise emissions relating to quarrying, such as material handling and truck loading, will be at a considerably reduced level.

Size of power of the main pieces of equipment comprise of the following:
Hyandai 23 tonne excavator (170 hp)
Trommel screen 8tonne (44 hp)
Hyandai 780 loader 12.5tonne (345 hp)
Case W20C 9tonne (120 hp)

Quarry Code of Practice operating hours will be followed (refer Part B: Section 1)

## 10. Transport impacts

There will be no increased vehicle flow on Forest Hall Road or The Midland Highway as part of this EER. This due to the request to increase our lease area not increase production. As stated in the existing Traffic Impact Assessment (Appendix G), based on the loading of trucks individually at a single load site with a four minute load time and with a 2 truck fleet, indications are that potential cartage of up to 5 trips per day is likely.

All traffic movements are limited to within the operating hours of 0700 to 1900 on weekdays and 0800 to 1600 on Saturdays as per current permit conditions.

Access to the site is via Forest Hall Road. The property containing the lease is located at the end of Forest Hall Road, where onsite signage directs traffic flow to a single lane inbound access track to the west. Traffic leaves the site via the outbound access road to the east. See Figure 6, Part A, Section 3.

We will utilize existing infrastructure within the “Forest Hall” property and no new roading will need to be constructed.

## 11. Other off-site impacts

The proposal has the potential to generate noise and dust issues created by trucks travelling along the unsealed access road to the Midlands Highway and these issues are addressed in Part B: Section 6 Air Emissions, Part B: Section 9 Noise Emissions & Part B: Section 10 Transport Impacts.

There is no current indication of a dust nuisance to the residences, the closest of which is located 1.2km from the closest proposed mining lease boundary. In the event of dust from trucks carting sand causing a dust nuisance, a water cart will be provided for dust suppression, if necessary.

The main access road to the property is already used by vehicles including agricultural vehicles.

The proposal does not have the potential to generate any other off-site impacts. There are no other sensitive uses.

## 12. Dangerous substances and chemicals

The proposal will involve the use of fuels and oils to operate the plant and machinery on site, but it will be contained in fuel drums located on the back of a motor utility and only brought onto the site as required, not stored on site.

Fuel quantities brought onto the project site on a required basis therefore would not exceed 200litres. Refueling is always undertaken on the roaded areas, not within the sand pit.

To prevent spillage from over filling machinery, our refueling tank is fitted with an automatic shut off nozzle. “Envirosorb” matting is placed under machinery at the time of refueling as an added precaution from spillage. Envirosorb matting absorbs oil, fuel, diesel, petrol, and other hydrocarbons, and is effective on land and water. A sufficient quantity of “Envirosorb” matting will be kept on site to absorb a substantial spill of up to 200litres. There are also spill kits located onsite in case of oil/fuel spill.

All machinery is transported back to our Prospect yard for steam cleaning prior to any servicing and maintenance. Only occasional top up of oil is done on site, and once again “Envirosorb” matting is employed as a precaution against spillage.

Plant will be maintained so that the risk of leaks is minimised.

## 13. Site contamination

There are no contaminations on site as a result of previous activities.

## 14. Sustainability and climate change

The nature of this mining operation does not require the use of any water.

Impacts of climate change for the Midlands – The region is predicted to experience reduced rainfall and a mean temperature change of 2.9 degrees over the 21st century (Climate Futures, Tasmania).

We do not expect that this will have any impact on our proposed operation, apart from the potential to increased fire risk. Fire threat is covered in the company’s Occupation Health & Safety policy for the pit site.

Machines and vehicles are equipped with fire extinguishers. Prospect Timber and Landscape Supplies have invested in a mobile 400LT Fire-fighting tanker to retain on site and the property owner also has a water tanker available for use should it be required. We have full access to dam water for re-filling tankers.

Sources of greenhouse gas emissions are limited to combustion of hydrocarbons in the machinery used in the extraction and screening of the sand.

Prospect Timber & Landscape Supplies Pty Ltd are committed to reducing the footprint of the operation and we are constantly improving our plant, equipment and processes to regularly maintain and service equipment to ensure efficient fuel use.

## 15. Cultural heritage

An Aboriginal Heritage Assessment Report including field survey was undertaken at the site in accordance with the requirements of the *Aboriginal Heritage Act 1975* and Aboriginal Heritage Tasmanian (AHT) standards and procedures. The proposed activity will be carried out in accordance with the avoidance and mitigation advice recommended in the Aboriginal Heritage Assessment report and the processes outlined in the Unanticipated Discovery Plan.

The site is not included on the Tasmanian Heritage Register or Tasmanian Historic Places Inventory and no other historic heritage (buildings, places or landscapes) are relevant to the

site.

## 16. Sites of high public interest

The project site is not located within or adjacent to a site of high public interest and is accessible through locked gate on private property.

As stated in correspondence received from EPA Tasmania dated 17th August 2021, “the activity will be assessed as class 2 because the extension to the existing activity is a small scale proposal with impacts local and likely to be minor in extent which may readily be mitigated with appropriate management, and there is unlikely to be significant public interest”.

## 17. Rehabilitation

*Figure 2*

The sand sheets at the site lay on a hardpan clay base, which generally follows the original land contours. To access the sand, we firstly remove bracken fern, stumps and old logs from the surface area, then topsoil is windrowed to reveal the underlying sand. This sand is then pushed into a pile leaving the flat hardpan surface (see Figure 2 left).

Note: Stumps and old logs previously removed, as above, will be scattered about the area to aid re- colonization of fauna.

Once the sand is screened and removed, tailings from the screening process, (usually 1-2% of total sand pushed, and consisting of small lumps of clay, stones and deep roots) are used to fill any uneven ground, or against steep edges. This helps to eliminate erosion banks. Soil from windrow is then dozed back evenly over the area.

*Figure 3*

Grasses quickly colonise and stabilise the freshly spread soil (see Figure 3 left)

*Figure 4*

After one season this long grass lays down (see Figure 4 left)

*Figure 5*

As the soil, which contains the seeds of original flora is put back where it came from, this then begins to re-establish itself (see Figure 5 left)

Stumps and old logs previously removed will be scattered about the area to aid re-colonization of fauna.

*Figure 6*

Figure 6 above shows a photo of previous working areas rehabilitated recently. The front section rehabilitated 3 years ago,and the darker green area behind rehabilitated 2 year ago.

The proposed clearing will occur in small working areas of approximately 100m x 200m, scattered over the entire 12.9 HA mining lease site, over the expected 20 plus year life of the activity. Each working area will remain in use until the sand has been extracted prior to a new working area being established, and each used working area will be rehabilitated to meet the approval of Mineral Resources Tasmania and the Environmental Protection Authority, as soon as practicable after being completed.

All rehabilitation will be carried out under strict adherence to the rehabilitation conditions detailed in the permit environmental conditions.

The quarry manager will monitor the site for weed emergence during the re-habilitation process and any weed treatment will follow control guidelines as contained in the NRE Invasive Species information for non-declared agricultural weeds in Tasmania or in the case of declared weeds listed under the Biosecurity Act 2019 and associated Regulations, they will be dealt with in accordance with the relevant Statutory Weed Management Plans for those species, as outlined in our Weed Management Plan (Appendix E).

## PART D – Management commitments

| No. | Commitment | Completion date | By Whom |
|---|---|---|---|
| 1 | **Operations will comply with the Quarry Code of Practice 1999** | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| 2 | **Staged clearing of only small working areas at a time (approx. 200m x 100m)** (refer Part C:Section 1 Flora & Fauna & Part C:Section 17 Rehabilitation) | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| 3 | **Continue to formalise offset arrangements of existing areas of DAZ historically managed as offsets** (refer Appendix A Flora & Fauna Report) | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| 4 | **Clearly mark on site/fence lease boundary to prevent disturbance to adjacent threatened DAZ vegetation communities** (refer Appendix A Flora & Fauna Report) | **Prior to working new areas** | **Prospect Timber & Landscape Supplies P/L** |
| 5 | **Undertake Spring survey within Stage 3 area as per original permit conditions for lease 1953P/M** (refer Appendix A Flora & Fauna Report) | **Prior to working Stage 3** | **Prospect Timber & Landscape Supplies P/L** |
| 6 | **Clearly mark on site *Leucopogon virgatus var. brevifolius* to be retained within the lease area to ensure they are not damaged by machinery** (refer Appendix A Flora & Fauna Report) | **Prior to working new areas** | **Prospect Timber & Landscape Supplies P/L** |
| 7 | **Where possible retention of remnant "islands" within the quarry area to be left to provide a seed source for native species** (refer Part C:Section 1 Flora & Fauna) | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| 8 | **Continue to undertake regular *Phytophthora* monitoring.** (refer Appendix A Flora & Fauna Report) | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| 9 | **Rehabilitate working areas as soon as practicable after mining the sand** (refer as per Commitment 2 above) | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| 10 | **Undertake survey for *Leucopogon virgatus var. brevifolius* after rehabilitation has occurred to ensure the species is successfully recolonising in areas it was previously recorded and if required undertake active rehabilitation (refer EER Appendix E Leucopogon management plan).** (refer Appendix A Flora & Fauna Report) | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| 11 | **Maintain strict quarry hygiene procedures including washdown procedures and no materials from other locations to be stored or dumped within the quarry area.** (refer Part C:Section 1 Weed & Disease Management) | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| 12 | **All solid waste to be removed from quarry site** (refer Part C:Section 8 Solid Wastes) | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| 13 | **Implement Weed Management Plan to control and monitor weed species (Appendix E)** | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| 14 | **Sufficient quantity of "Envirosorb" matting to be kept onsite to absorb a substantial spill of up to 200litres** (refer Part C:Section 12 Dangerous Substances and chemicals) | **On-going** | **Prospect Timber & Landscape Supplies P/L** |

| | | | |
|---|---|---|---|
| **15** | **Maintain & service equipment** (refer Part C:Section 14 Sustainability & Climate Change) | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| **16** | **The provisions of the Aboriginal Heritage Act 1975 will be complied with** (refer Part C:Section 15 Cultural Heritage) | **On-going** | **Prospect Timber & Landscape Supplies P/L** |
| **17** | **Any new observations of threatened flora and fauna species should be documented for monitoring purposes and records uploaded to the Natural Values Atlas** (refer Appendix A Flora & Fauna Report) | **On-going** | **RMCG and Prospect Timber & Landscape Supplies P/L** |

## PART E – Public consultation

Consultation has taken place with the landowner. MRT, Northern Midlands Council and EPA.

Aboriginal Community Consultation was undertaken in April 2024 via CHMA with no responses received.

RMCG

JULY 2025

# Flora and Fauna Report: Mining Lease Extension

Version 4 (Additional onsite survey, lease and mapping update)

Report for: Prospect Timber and Landscaping Supplies Pty Ltd

Property Location: ‘Forest Hall’, Cleveland (CT 243828/1)

Prepared by: Samantha Gadsby

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Victoria — Tasmania — NSW

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**ACKNOWLEDGEMENT OF COUNTRY**

Tasmania is Aboriginal land. We acknowledge the palawa and pakana, the Tasmanian Aboriginal peoples, as the Traditional Owners and continuing custodians of the lands, seas, and waterways of lutruwita, Tasmania, on which this project will be conducted. We recognise their ongoing connection to the land, waters, and culture, and pay our respects to their Elders, both past and present, acknowledging emerging leaders. Additionally, we express our gratitude for the knowledge and insights that Traditional Owners and other Aboriginal and Torres Strait Islander peoples contribute to our shared work in Australia.

We pay our respects to all Aboriginal and Torres Strait Islander communities. We acknowledge that Australia was founded on the genocide and dispossession of First Nations peoples and affirm that sovereignty was never ceded in this country. We embrace the spirit of reconciliation, striving toward self-determination, equitable outcomes, and an equal voice for Australia's First Peoples.

# Executive summary

RMCG (formally AK Consultants) have been engaged to undertake a flora and fauna assessment for mining lease 2130P/M held by Prospect Timber and Landscaping Supplies Pty Ltd on CT 243828/1, Forest Hall Road, Cleveland.

Mining lease 2130P/M incorporates the previous lease area held by the proponent (1953P/M) and an additional 2.4ha extension. This updated lease area covers approximately 12.9ha, 6ha of which has been mined/disturbed under previous mining permits. The remaining 6.9ha will be worked in 3 stages (see site plan in Figure A2-4).

As per existing operational procedures and approved mining permits, operations are staged, with the topsoil stockpiled and later used to aid rehabilitation of worked-out areas as mining progresses. On site observations of rehabilitated areas, including colonisation of threatened flora species, suggest that the current approach is appropriate for the site.

Most recent field inspections were undertaken on the 6th of May 2025, 3rd of May 2024, the 10th of November 2023 and the 28th September 2022. This report summarises the findings of the desktop and four field assessments and provides considerations regarding the mining operations of lease area 2130P/M.

A total of 6.6ha of vegetation (including 5.5ha under the original lease 1953P/M) will be impacted by mining operations within lease area 2130P/M. Staged clearing and rehabilitation of the 5.5ha of threatened vegetation community E*ucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ) within Stage 3 has been previously approved and an offset area was proposed and has been managed by the proponent since 2012.

While a large proportion of the 2.4ha extension area (Stages 1 and 2) are already disturbed from previous activities, approximately 0.6ha of threatened vegetation community *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ) and an additional 0.5ha of Midlands woodland complex (DMW) will be impacted by mining operations.

The clearing of threatened vegetation communities is constrained under the *Nature Conservation Act 2002 and Forest Practices Act 1985.* Where approval for clearing or conversion of a threatened community is sought, it is usual that offsets are required as a mitigation of unavoidable impacts. An area of surrounding vegetation mapped and previously assessed as DAZ (AK Consultants 2012) has been historically managed by the proponent as an offset area for the original mining lease area. This arrangement is currently in the process of being formalised and will incorporate the offsetting of the additional 0.6ha of DAZ proposed in this lease extension. There is considered to be adequate area of equal or better condition DAZ immediately adjacent the sand mine operations which meet the recommended 5:1 offset ratio of minimum 10ha. Additionally, rehabilitation areas from past mining areas are regenerating to communities with DAZ characteristics, which will be taken into consideration when formalising offset arrangements.

While the 0.5ha area attributed to Midlands woodland complex DMW does not meet the thresholds for the threatened vegetation community of '*Eucalyptus Ovata* forest and woodland' there is adequate (more than 5 times) area of similar vegetation composition and condition included in the potential offset area also.

The threatened flora species *Leucopogon virgatus var. brevifolius* was identified within the lease area. Operations within the lease area will disturb approximately 18 individual plants and a separate management plan has been prepared to ensure that the impact to the overall viability, integrity and geographical extent of

the population at the site is mitigated, monitored and actively managed through follow up surveys for *Leucopogon virgatus var. brevifolius* after the rehabilitation phase to ensure the species and associated habitat requirements are indeed recolonising across the disturbed areas.

The site meets habitat requirements for an additional 11 threatened flora species, however, due to the site history, current level of disturbance, visibility, and survey effort during multiple seasons for this site and surrounding area, it is considered unlikely that these species are present at the site and at risk of disturbance. Additionally, the nature of the mining operation and proven rehabilitation efforts demonstrate that species habitat and diversity is able to be successfully retained across the site.

No threatened fauna or fauna nests and dens were identified within the lease area, however, potential foraging habitat was identified for *Dasyurus maculatus* spotted-tail quolls, *Dasyurus viverrinus* eastern quolls, *Sarcophilus harrisii* Tasmanian devils and *Aquila audax subsp. fleayi* wedge-tailed eagles and marginal habitat was identified for *Perameles* gunnii eastern barred bandicoot. Due to the staged nature of the mining operation and rehabilitation requirements, the works within the lease area is expected to present a low risk of impacting these species.

The proposed mining activity within these areas, consisting of staged operations with revegetation of worked-out areas, is considered to be of low risk to the overall existing integrity of the vegetation communities and associated threatened species. Providing the recommendations as outlined in this report are followed, the proposed clearing for the sand mine expansion is considered unlikely to have an adverse effect on vegetation communities or the value of the habitat for species managed under the *Threatened Species Protection Act 1995* or the *Natural Conservation Act 2002.* 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 Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC).

**Recommendations**

- Undertake a Spring survey within the Stage 3 area before works commence within this area (as per Condition for previous lease area 1953P/M).
- Continue to formalise offset arrangements of existing areas of DAZ historically managed as offsets.
- Clearly mark on site/fence lease boundary to prevent disturbance into adjacent threatened DAZ vegetation communities.
- Clearly mark on site *Leucopogon virgatus var. brevifolius* to be retained within the lease area to ensure they are not damaged by machinery.
- Continue to prevent biosecurity incursions and weed incursions by implementing strict washdown guidelines for all machinery and equipment entering the titles (as per the Weed and Disease Planning and Hygiene Guidelines (Invasive Species Branch, 2015)).
- Continue to implement staged mining operations to ensure rehabilitation of worked-out areas and minimise area of exposed soils.
- Implement post works survey and rehabilitation requirements as outlined in RMCG (2025) Management Plan for impact on shortleaf beardheath (*Leucopogon virgatus var. brevifolius).*
- Continue weed monitoring and control to prevent new weed incursions establishing.
- Continue to undertake regular *Phytophthora* monitoring.
- Any new observations of threatened flora and fauna species to be documented for monitoring purposes and records uploaded to the Natural Values Atlas.

# 1 Introduction

RMCG have been engaged to undertake a flora and fauna assessment for mining lease 2130P/M held by Prospect Timber and Landscaping Supplies Pty Ltd on CT 243828/1, Forest Hall Road, Cleveland.

Mining lease 2130P/M incorporates the previous lease area held by the proponent (1953P/M) and an additional 2.4ha extension (see Figure A2-2). This updated lease area covers approximately 12.9ha, 5ha of which has been mined/disturbed under previous mining permits. The remaining 7.9ha will be worked in three stages (see site plan in Figure A2-4).

It is proposed that mining operations will be staged, with worked-out sections rehabilitated as mining progresses, with the topsoil stockpiled and later used to aid rehabilitation of worked-out areas.

The land is zoned Agriculture under the *Tasmanian Planning Scheme – Northern Midlands* (the Planning Scheme). Because of this zoning, any clearance of native vegetation will not need to be considered under the Planning Scheme. However, potential impacts on threatened species and communities, as a result of use or development on the land, must still be considered under other legislation (*Nature Conservation Act 2002, Threatened Species Protection Act 1995*, and *Environment Protection and Biodiversity Conservation Act 1999*). Additionally, the sand mine operation is a Level 2 activity under the *Environmental Management and Pollution Control Act 1994* requiring assessment of natural values for consideration by EPA and Mineral Resources Tasmania (MRT).

This assessment is largely focused on the expansion areas to the original lease (i.e. Stages 1 and 2). This is due to the area that is now Stage 3 being previously surveyed (as part of the original lease 1953P/M) with a condition to undertake a Spring survey prior to works occurring in this area. The timing of works before Stage 3 is entered may exceed 2 years, therefore a Spring survey is best undertaken at a later date (i.e. during the Spring immediately before works are anticipated to extend into this area, as per condition on the original permit for lease 1953P/M). This is made as a primary recommendation in this report.

An initial field inspection of the 2.4ha extension area (Stages 1 and 2) was undertaken on 28th September 2022 to confirm or otherwise the findings of an initial desktop study and to determine the natural values of the site. Additional site visits were undertaken in November 2023, May 2024 and May 2025 to maximise survey effort during peak flowering times for species identified as having potential habitat suitability and to enable counts to be taken of threatened species *Leucopogan virgatus var. brevifolius* to determine impacts on the overall population. This report summarises the findings of the desktop and four field assessments and provides considerations regarding the mining operations of lease area 2130P/M.

# 2 Methods

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

- Natural Values Atlas (NVA)
- Forest Practices Authority Biodiversity Values Database (BVD)
- LIST map
- Google imagery
- Previous assessment documents pertaining to the original lease application (1953P/M).

The NVA and BVD cover known flora and fauna sightings within 5km of the site and fauna species whose predicted range boundaries overlay the site. The FPA Habitat Context Assessment Tool and the Forest Practices Authority wedge-tailed eagle nesting habitat model were not utilised for this survey due to the limited amount of vegetation clearing proposed on the margins of existing works and ability to survey at ground level.

The desktop assessment was followed by an initial site visit on the 28th September 2022. While this report primarily focuses on the 2.4ha lease extension area (Stages 1 and 2), this visit included all areas under lease by the proponent and the surrounding areas managed as informal offsets in an effort to determine the extent of threatened species *Leucopogan virgatus var. brevifolius* within areas managed (both formally and informally) by the proponent (see Figure A2-3).

An additional site visit was undertaken on 10th November 2023 to maximise survey effort during peak flowering times for species identified as having potential habitat suitability. This late Spring visit was only undertaken for the 2.4ha 1953P/M lease extension subject area (Stages 1 and 2).

The most recent site visits were undertaken on 3rd May 2024 and 6th May 2025, after revisions to the site plan were finalised, with a focus on revisiting all sites of *Leucopogan virgatus var. brevifolius* recorded during previous visits to undertake species counts and determine how many plants will be disturbed during proposed mining works and the impacts on the overall population. Further vegetation assessment and mapping across the site was also undertaken during the May 2025 visit.

Stages 1 and 2 of were thoroughly inspected on all four occasions with a narrowly spaced wandering meander technique.

Stage 3 was subject to a number of previous surveys prior to the approval of the previous lease area 1953P/M with a condition for a Spring survey in the Spring immediately before works are anticipated to extend into this area. This is made as a primary recommendation in this report.

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 and site visit timing was planned to coincide with the flowering of known threatened flora species previously recorded on site; 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, for the purposes of this assessment, and visits to the site during differing seasons, additional surveys are not considered necessary to enable mining works to occur within the 2.4ha extension area (Stages 1 and 2).

Mining operations within Stage 3 will require an additional Spring survey prior to works occurring in this area as per the original lease (1953P/M) permit.

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 area is relatively flat, at approximately 210m above sea level, with a slight north easterly aspect. Soils at the site are mapped as Panshanger with Bloomfield soils on dolerite bedrock (Ps-Bo) which are soils on loose, windblown sand on gently undulating to rolling (3-32%) dunes and flanks and outcrops of dolerite hill slopes. Underlying geology is mapped as Cenozoic cover sequences (Qh), which are described as sand gravel and mud of alluvial, lacustrine, and littoral origin (Mineral Resources Tasmania 2010).

Average annual rainfall for Ross (Site No. 093053) is 489mm (BOM 2022). There is no recorded fire history on the title (DNRET 2022).

A Forest Practices Plan was undertaken on the title in 1999, and the entire lease area and surrounding vegetation to the title boundaries to the west and south was mapped as "inland *E. amgdalina* forest with *E. viminalis* and *E. pauciflora."* The area to the east of the mining site was clear felled to pasture (as it remains today), while the area to the west was selectively harvested.

The majority of the title (including the lease area and areas to the west and south) is dominated by *Eucalyptus pauciflora* with the occasional *Eucalyptus viminalis*. The area to the east of the lease area is dominated by *Eucalyptus amygdalina.*

Where *Eucalyptus pauciflora* occurs on deep windblown sands, it is mapped as *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ) in the Northern Midlands [1]. DAZ is listed as a threatened vegetation community under the *Nature Conservation Act 2002*.

Where *Eucalyptus pauciflora* occurs on dolerite at altitudes of less than 300m, it is typically mapped as *Eucalyptus pauciflora* forest and woodland on dolerite (DPD), except where it occurs on Jurassic dolerite below 300m in the Midlands, where it is coded Midlands woodland complex (DMW). While the TASVEG Code DMW is included in the mapping of the threatened vegetation community '*Eucalyptus Ovata* forest and woodland', there was no *Eucalyptus Ovata* located across the site (or noted in the original Forest Practices Plan) and the area attributed to DMW does not meet the thresholds for the threatened vegetation community of '*Eucalyptus Ovata* forest and woodland'[2]. However, there is adequate (more than 5 times) area of similar vegetation composition and condition included in the potential offset area regardless.

## STAGE 1

The western extension area (Stage 1) is a 1ha area all mapped as *Eucalyptus amygdalina* forest and woodland on dolerite (DAD). DAD is not listed as a threatened vegetation community under the *Nature Conservation Act 2002*.

The site visit determined that approximately 0.2ha of this area is previously disturbed land, while the remaining 0.8ha is vegetated.

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1 Harris & Kitchener, (2005) *From Forest to Fjaeldmark, Descriptions of Tasmania's Vegetation* (Edition 2).

2 'DNRET (2022) *Eucalyptus ovata forest and woodland*, Tasmanian Threatened Native Vegetation Communities (Version 3).

While no Eucalypt species were recorded within this small 1ha assessment area during the site visit, the surrounding area was noted to be predominately *Eucalyptus pauciflora* with occasional *Eucalyptus viminalis.* The understorey of Stage 1 was comprised of silver wattle *Acacia dealbata,* silver banksia*, Banksia marginata,* bracken fern *Pteridium esculentum,* sagg *Lomandra longifolia,* kidneyweed *Dichondra repens,* and creeping bossia *Bossiaea prostrata.*

On site, a gradient could be determined between the underlying geology of dolerite and sands with surface rock present for approximately 0.5ha of the Stage 1 area. The vegetation within the 0.5ha area aligns with TASVEG Code DMW as described above and does not meet the thresholds for the threatened vegetation community of '*Eucalyptus Ovata* forest and woodland'.

The remaining approximately 0.3ha of vegetation on sand deposits, aligns with the TASVEG Code DAZ as described above. DAZ is listed as a threatened vegetation community under the *Nature Conservation Act 2002*.

## STAGE 2

TASVEG 4.0 maps the majority of the 1.4ha extension area (Stage 2) to the east as modified land category FUM (extra-urban miscellaneous) with an approximate 0.3ha patch of *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ) within the southern portion of this area.

The onsite assessment found that this area is comprised predominately of previously disturbed land with some regeneration since past mining operations in this area. Species recolonising this area include silver wattle *Acacia dealbata,* silver banksia *Banksia marginata,* bracken fern *Pteridium esculentum,* golden pea *Aotus ericoides,* shortleaf beardheath *Leucopogon virgatus var. brevifolius,* creeping bossia *Bossiaea prostrata,* and guineaflower *Hibbertia spp*.

The 0.3ha section mapped as DAZ under TASVEG 4.0 has a previously disturbed understory with four individual *E. pauciflora* and two juvenile *Eucalyptus viminialis* trees, silver wattle *Acacia dealbata,* silver banksia *Banksia marginata,* bracken fern *Pteridium esculentum,* sagg *Lomandra longifolia,* golden pea *Aotus ericoides,* shortleaf beardheath *Leucopogon virgatus var. brevifolius, native cranberry Astroloma humifusum,* and creeping bossia *Bossiaea prostrata.* While the vegetation observed does not closely adhere to TASVEG community descriptions and typical benchmark condition, likely due to the disturbed nature of the surrounding area, this vegetated 0.3ha section is still best be described as *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ), due to the presence of *Eucalyptus pauciflora* on deep sands as described above, however, it is in poor condition. DAZ is listed as a threatened vegetation community under the *Nature Conservation Act 2002*.

## STAGE 3

While the TASVEG 4.0 mapping depicts approximately 3.6ha of the Stage 3 area as *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ) and the remaining approximately 1.9ha as *Eucalyptus amygdalina* forest and woodland on dolerite (DAD), previous assessments undertaken for the original lease (1953P/M) mapped the entire Stage 3 area as DAZ and this was incorporated into the approval for mining operations and offsetting arrangements at the time.

Recent site visits concur with the AK Consultants reporting, that while this area has had a high level of past disturbance due to previous selective harvesting operations, the vegetation in Stage 3 best aligns with *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ). DAZ is listed as a threatened vegetation community under the *Nature Conservation Act 2002*.

## SUMMARY

A total of 6.6ha of vegetation (including 5.5ha under the original lease 1953P/M) will be impacted by mining operations within lease area 2153P/M. Staged clearing and rehabilitation of the 5.5ha of threatened vegetation community E*ucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ) within Stage 3 has been previously approved and an offset area was proposed and has been managed by the proponent since 2012.

While a large proportion of Stages 1 and 2 are already disturbed from previous activities, approximately 0.6ha of threatened vegetation community *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ) and an additional 0.5ha of Midlands woodland complex (DMW) will be impacted by mining operations.

The offset area for the original mining lease (1953P/M) is currently in the process of being formalised and will incorporate the offsetting of the additional 0.6ha of DAZ in the lease extension area (Stages 1 and 2). There is considered to be adequate area of equal or better condition DAZ immediately adjacent the sand mine operations which meet the recommended 5:1 offset ratio of minimum 10ha. Additionally, rehabilitation areas from past mining areas are regenerating to communities with DAZ characteristics, which will be taken into consideration when formalising offset arrangements.

While the area attributed to Midlands woodland complex DMW does not meet the thresholds for the threatened vegetation community of '*Eucalyptus Ovata* forest and woodland' there is adequate (more than 5 times) area of similar vegetation composition and condition included in the potential offset area also.

# 4 Threatened flora risk assessment

According to the Natural Values Atlas, one threatened flora species, *Leucopogon virgatus var. brevifolius* has been recorded within 500m of the lease area. An additional 46 threatened flora species have been recorded within a 5km radius, the majority of which are species associated with Smith's Lagoon to the north east. Based on the availability of suitable habitat and the location of existing records, the *Leucopogon virgatus var. brevifolius* is considered to be at high risk of occurring within the lease area and an additional 11 species are considered to be at moderate risk of potentially occurring, as discussed below. The remaining 35 species are considered to be at low risk of occurring. See Table 4-1 for risk assessment and Appendix 1 for habitat preferences. All 12 species were looked for, with only the *Leucopogon virgatus var. brevifolius* found within the lease area. This is in addition to multiple site visits undertaken previously during different seasons for the original mining lease 1953P/M application.

*Leucopogon virgatus var. brevifolius* is known to be present across the site with a previous site inspection on the 22/5/12 including the collection of samples that were forwarded to the Tasmanian Herbarium for positive identification. At that time, the lease boundaries for lease 1953P/M were revised to exclude the threatened species, however, a number of new populations have begun to colonise the disturbed and rehabilitated areas within the existing lease (see Figure A2-3).

This assessment identified approximately 79 individual plants within the lease boundary. Approximately 61 plants will not be disturbed and are located within an area mapped as 'rehabilitation area only'. Approximately 18 individual plants will likely be disturbed by the mining operation (See site plan in Figure A2-4). This disturbance involves pushing the topsoil (including vegetation) into the stockpiling area with a loader and excavator which is then later spread back over the worked area during the rehabilitation stage.

This method has been utilised across previously mined areas and approximately 90 individual *Leucopogon virgatus var. brevifolius* plants have successfully colonised across previously disturbed areas.

Additionally, due to its association with disturbance, there are extensive records along roads and clearings to the south of the existing lease area. These records are located within a proposed offset area and plant counts undertaken found approximately 107 plants within 130m of the mining lease and an additional approximately 92 plants within 800m.

This totals an approximate 299 plants (excluding the 18 plants to be impacted by mining operations) on land managed either formally (current and prior lease areas) or informally (proposed offset area) by the proponent. The mining operations within the lease area will disturb approximately 6% of these local individuals however will not impact on the geographical extent of the population.

A management plan has been prepared (RMCG,2025) to ensure that the impact to the overall viability, integrity and geographical extent of the population at the site is mitigated, monitored and actively managed through follow up surveys for *Leucopogon virgatus var. brevifolius* after the rehabilitation phase to ensure the species and associated habitat requirements are indeed recolonising across the disturbed areas.

New observations of the species have been mapped (see Appendix 2) and entered into the Natural Values Atlas (10th April 2025).

Locations of *Leucopogon virgatus var. brevifolius* to be retained within the entire lease area 2130P/M are to be clearly marked onsite to ensure they are not damaged by machinery.

The lease area also meets the habitat requirements for *Brunonia australis, Caesia calliantha, Caladenia anthracina, Caladenia filamentosa, Caladenia lindleyana, Calocephalus lacteus, Hyalosperma demissu, Pterostylis squamata, Schenkia australis, Senecio squarrosus* and *Stenanthemum pimeleoides.* Due to the site history, current level of disturbance, visibility and survey effort during multiple seasons of this site and surrounding area (including peak flowering times in mid November), it is considered unlikely that the species are present within Stages 1 and 2 and therefore there is a low risk that they will be disturbed. Additionally, the nature of the mining operation and proven rehabilitation efforts demonstrate that species habitat and diversity is able to be successfully retained and restored across the site.

Stage 3 will require an additional Spring survey before works can commence in this area as outlined in the introduction and methods above.

**Table 4-1: Risk assessment for threatened flora listed in NVA as being recorded within 5km of the lease area.**

| THREATENED FLORA SPECIES | | | | PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE | FINAL RISK ASSESSMENT OF POTENTIAL IMPACT[3] NVA RECORD |
|---|---|---|---|---|---|
| SPECIES NAME | | NVA RECORD | STATUS S*/N+ | | |
| LATIN | COMMON | | | | |
| *Amphibromus macrorhinus* | longnose swampgrass | Within 5km | e | Inhabits waterholes and low lying wet areas in the midlands. No suitable habitat. Low risk. | Low risk |
| *Aphelia gracilis* | slender fanwort | Within 5km | r | Requires damp sandy ground and wet places in the midlands. Site well drained, no suitable habitat. Low risk. | Low risk |
| *Aphelia pumilio* | dwarf fanwort | Within 5km | r | Found on damp flats with impeded drainage. No suitable habitat. Low risk. | Low risk |
| *Bolboschoenus caldwellii* | sea clubsedge | Within 5km | r | Aquatic species, no suitable habitat. Low risk. | Low risk |
| *Brunonia australis* | blue pincushion | Within 5km | r | Marginal suitable habitat, medium risk. | Low risk |
| *Caesia calliantha* | blue grasslily | Within 5km | r | Marginal habitat, medium risk. | Low risk |
| *Caladenia anthracina* | blacktip spider-orchid | Within 5km | e/CR | Marginal habitat, medium risk. | Low risk |
| *Caladenia filamentosa* | daddy longlegs | Within 5km | r | Marginal habitat, medium risk. | Low risk |
| *Caladenia lindleyana* | lindleys spider-orchid | Within 5km | e/CR | Marginal habitat, medium risk. | Low risk |
| *Calocephalus lacteus* | milky beautyheads | Within 5km | r | Marginal habitat, medium risk. | Low risk |
| *Colobanthus curtisiae* | grassland cupflower | Within 5km | r/VU | Found in grassy woodlands, unlikely suitable habitat. Low risk. | Low risk |
| *Coronidium gunnianum* | swamp everlasting | Within 5km | ?e | Found in swampy areas. No suitable habitat. Low risk. | Low risk |
| *Craspedia paludicola* | swamp billybuttons | Within 5km | ?r | Found in swampy areas. No suitable habitat. Low risk. | Low risk |

[3] See text for explanatory information

| THREATENED FLORA SPECIES | | | | PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE | FINAL RISK ASSESSMENT OF POTENTIAL IMPACT[3] NVA RECORD |
|---|---|---|---|---|---|
| SPECIES NAME | | NVA RECORD | STATUS S*/N+ | | |
| LATIN | COMMON | | | | |
| *Dianella amoena* | grassland flaxlily | Within 5km | r/EN | Found in grassy woodlands, unlikely suitable habitat. Low risk. | Low risk |
| *Diuris lanceolata* | large golden moths | Within 5km | e/EN | Coastal scrub species. Unlikely habitat. Low risk. | Low risk |
| *Glycine latrobeana* | clover glycine | Within 5km | v/VU | Unlikely habitat. Low risk | Low risk |
| *Gratiola pubescens* | hairy brooklime | Within 5km | r | Requires permanently or seasonally damp ground. No suitable habitat. Low risk. | Low risk |
| *Haloragis heterophylla* | variable raspwort | Within 5km | r | Poorly drained sites. Low risk. | Low risk |
| *Hyalosperma demissum* | moss sunray | Within 5km | e | Potential habitat, moderate risk. | Low risk |
| *Isoetes drummondii subsp. drummondii* | plain quillwort | Within 5km | r | Damp, waterlogged soils. No habitat. Low risk. | Low risk |
| *Isolepis stellata* | star clubsedge | Within 5km | r | Wetland species. No habitat. Low risk. | Low risk |
| *Leucochrysum albicans subsp. tricolor* | grassland paperdaisy | Within 5km | e/EN | Unlikely suitable habitat. Low risk. | Low risk |
| *Leucopogon virgatus var. brevifolius* | shortleaf beardheath | Within 500m | r | Yes, known records on site. High risk. | Low risk |
| *Lobelia pratioides* | poison lobelia | Within 5km | v | Waterlogged soils. No suitable habitat. Low risk. | Low risk |
| *Lobelia rhombifolia* | tufted lobelia | Within 5km | r | Unlikely suitable habitat. Low risk | Low risk |
| *Myriophyllum integrifolium* | tiny watermilfoil | Within 5km | v | Prefers margins of wetlands, no suitable habitat. Low risk. | Low risk |
| *Phyllangium divergens* | wiry mitrewort | Within 5km | v | Coastal species. Unlikely suitable habitat. Low risk. | Low risk |
| *Pterostylis squamata* | ruddy greenhood | Within 5km | v | Marginal habitat, medium risk. | Low risk |

| THREATENED FLORA SPECIES | | | | PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE | FINAL RISK ASSESSMENT OF POTENTIAL IMPACT[3] NVA RECORD |
|---|---|---|---|---|---|
| SPECIES NAME | | NVA RECORD | STATUS S*/N+ | | |
| LATIN | COMMON | | | | |
| *Pterostylis ziegeleri* | grassland greenhood | Within 5km | v/VU | Grassy woodland species. No suitable habitat. Low risk. | Low risk |
| *Puccinellia perlaxa* | spreading saltmarshgrass | Within 5km | r | Only known from localised population in saline creek bed. No suitable habitat. Low risk. | Low risk |
| *Pultenaea humilis* | dwarf bushpea | Within 5km | v | Grassy woodland species. No suitable habitat. Low risk. | Low risk |
| *Pultenaea prostrata* | silky bushpea | Within 5km | v | Grassy woodland species. No suitable habitat. Low risk. | Low risk |
| *Ranunculus pumilio var. pumilio* | ferny buttercup | Within 5km | r | Found on margins of brackish wetlands, No suitable habitat. Low risk. | Low risk |
| *Schenkia australis* | spike centaury | Within 5km | r | Marginal habitat, medium risk. | Low risk |
| *Schoenus latelaminatus* | medusa bogsedge | Within 5km | e | Found on margins of wetlands, No suitable habitat. Low risk. | Low risk |
| *Scleranthus diander* | tufted knawel | Within 5km | v | Grassy woodland species. No suitable habitat. Low risk | Low risk |
| *Scleranthus fasciculatus* | spreading knawel | Within 5km | v | Grassy woodland species. No suitable habitat. Low risk | Low risk |
| *Senecio squarrosus* | leafy fireweed | Within 5km | r | Marginal habitat, medium risk. | Low risk |
| *Siloxerus multiflorus* | small wrinklewort | Within 5km | r | Grassy woodland species. No suitable habitat. Low risk | Low risk |
| *Stackhousia subterranea* | grassland candles | Within 5km | e | Grassy woodland species. No suitable habitat. Low risk | Low risk |
| *Stenanthemum pimeleoides* | propeller plant | Within 5km | v | Marginal habitat, medium risk. | Low risk |
| *Stylidium despectum* | small triggerplant | Within 5km | r | Prefers wet sandy heaths and depressions. No suitable habitat. Low risk. | Low risk |

| THREATENED FLORA SPECIES | | | | PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE | FINAL RISK ASSESSMENT OF POTENTIAL IMPACT[3] NVA RECORD |
|---|---|---|---|---|---|
| SPECIES NAME | | NVA RECORD | STATUS S*/N+ | | |
| LATIN | COMMON | | | | |
| *Tricoryne elatior* | yellow rushlily | Within 5km | v | Grassy woodland species. No suitable habitat. Low risk | Low risk |
| *Triptilodiscus pygmaeus* | dwarf sunray | Within 5km | v | Grassy woodland species. No suitable habitat. Low risk | Low risk |
| *Trithuria submersa* | submerged watertuft | Within 5km | r | Prefers habitat subject to flooding. No suitable habitat. Low risk. | Low risk |
| *Wilsonia rotundifolia* | roundleaf wilsonia | Within 5km | r | Coastal saltmarsh species. No suitable habitat. Low risk. | Low risk |
| *Xerochrysum palustre* | swamp paperdaisy | Within 5km | v | Prefers sites subject to seasonal inundation. No suitable habitat. Low risk. | Low risk |

* refers to listing status under the Tasmanian Threatened Species Act 1995: r = rare, v = vulnerable e = endangered

+ 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

# 5 Threatened fauna risk assessment

The Forest Practices Biodiversity Values Database and the Tasmanian Natural Values Atlas identified 16 threatened fauna species with potential to occur onsite. No threatened fauna species were identified during multiple site visits; however, of the 16 species identified in the Natural Values Atlas and Biodiversity Values Database, five species are considered to be at medium risk of occurring based on potentially suitable habitat and location of previous records, as discussed below. All other 11 species were considered to be at low risk of occurring and therefore at low risk of being impacted by the mining operations. See Table 5-1 for risk assessment and Appendix 1 for habitat preferences.

Spotted-tail quolls, eastern quolls, and Tasmanian devils are known to occur in a range of habitats, however, they require shelter, such as dense vegetation, hollow logs, and burrows, for denning. The lease area is considered to provide potential foraging habitat for both quoll species and Tasmanian devils, though no signs of quolls or devils, such as scats, were observed across the lease area. Due to the limited area to be cleared at one time, the nature of the works and staged rehabilitation, the mining operations are expected to present a low risk of impacting on these species.

Eastern barred bandicoot ‘significant habitat’ is described as ‘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’. ‘Significant habitat’ is considered marginal within the western (Stage 1) lease extension area and in the southern (Stage 3) area with none identified in the eastern area (Stage 2). According to the *Perameles* gunnii (Eastern Barred Bandicoot) Species Management Profile (2020), blanket clearing of all ground cover (including weeds) is to be avoided in areas of habitat. The nature of the staged clearing and rehabilitation of the lease area is not considered to be determinantal to any local potential population of the species and therefore no further mitigation is deemed necessary.

There are several wedge-tailed eagle nest records within 5km of the mine and the area may provide suitable foraging habitat for the wedge-tailed eagle and be in the foraging range boundaries of any eagles in the greater area. The closest wedge-tailed eagle nest previously recorded is approximately 3km to the north east and is considered to be at low risk of being impacted by the mining operations. As the lease area is only likely to contribute a small area to the foraging range boundaries of the wedge-tailed eagle, any clearing associated with the mining operation is considered to present a low risk of impacting on this species.

**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 (Forest Practices Biodiversity Values Database) that overlay the lease area.**

| THREATENED FAUNA SPECIES | | | | | PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE | FINAL RISK ASSESSMENT OF POTENTIAL FUTURE IMPACT[4] |
|---|---|---|---|---|---|---|
| SPECIES NAME | | NVA RECORD | STATUS S*/N+ | FPA[x] RANGE CLASS | | |
| LATIN | COMMON | | | | | |
| *Accipiter novaehollandiae* | Grey goshawk | Record within 5km.<br>Within 500m based on RB. | e | PR | Prefer mature wet forest adjacent to a fresh waterbody. No suitable habitat.Low risk. | Low risk |
| *Aquila audax subsp. fleayi* | Tasmanian wedge-tailed eagle | Record within 5km.<br>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. Potential foraging habitat only. Medium risk. | Low risk |
| *Botauras poiciloptilus* | Australasian bittern | Record within 5km | -/EN | - | Wetland species. No suitable habitat. Low risk. | Low risk |
| *Catadromus lacordairei* | Green-lined ground beetle | Record within 5km.<br>Within 500m based on RB. | v/- | PR | Associated with grassy wetlands. No suitable habitat. Low risk. | Low risk. |
| *Dasyurus maculatus* | Spotted-tail quoll | Record within 5km.<br>Within 500m based on RB. | r/VU | PR | Potential foraging habitat is a wide variety of habitats. Require structurally complex areas for denning. Vegetation to be cleared in lease area may provide limited foraging habitat only. Medium risk. | Low risk |
| *Dasyurus viverrinus* | Eastern quoll | Record within 5km.<br>Within 500m based on RB. | EN | CR | Occur in a range of habitats but prefer dry forest and native grassland mosaics bound by agricultural land. Vegetation to be cleared in lease area may provide limited foraging habitat only. Medium risk. | Low risk |

[4] See text for explanatory information

| THREATENED FAUNA SPECIES | | | | | PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE | FINAL RISK ASSESSMENT OF POTENTIAL FUTURE IMPACT[4] |
|---|---|---|---|---|---|---|
| SPECIES NAME | | NVA RECORD | STATUS S*/N+ | FPA[X] RANGE CLASS | | |
| LATIN | COMMON | | | | | |
| *Galaxiella fontanus* | Swan galaxias | Within 5km based on RB.<br>Within 500m based on RB. | v/VU | PR | Inhabit slow flowing waterbodies. No suitable habitat. Low risk. | Low risk |
| *Haliaeetus leucogaster* | White-bellied sea-eagle | Within 5km based on RB.<br>Within 500m based on RB. | v | 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 |
| *Hirundapus caudacutus* | White-throated needletail | Record within 5km. | VU | - | Aerial species. No specific habitat requirements documented. Low risk. | Low risk |
| *Litoria raniformis* | Green and gold frog | Record within 5km. Within 500m based on RB. | v/VU | PR | Associated with waterbodies with vegetation in or around them. No suitable habitat. Low risk. | Low risk |
| *Perameles gunnii* | Eastern barred bandicoot | Record within 5km. Within 500m based on RB. | VU | CR | Occurs within open forest with a grassy understory or in areas with dense, low vegetation. Marginally suitable habitat. Medium risk. | Low risk |
| *Prototroctes maraena* | Australian grayling | Within 5km based on RB.<br>Within 500m based on RB. | v/VU | PR | Occurs in streams. No suitable habitat. Low risk. | Low risk |
| *Pseudemoia pagenstecheri* | Tussock skink | Record within 5km.<br>Within 500m based on RB. | v | PR | Prefers grasslands and grassy woodlands with >20% native grass cover. No suitable habitat Low risk. | Low risk |
| *Pseudemoia rawlinson* | Glossy grass skink | - | | PR | Potential habitat for the Glossy Grass Skink is wetlands and swampy sites (including grassy wetlands, teatree swamps and grassy sedgelands), and margins of such habitats. No suitable habitat Low risk. | |
| *Sarcophilus harrisii* | Tasmanian devil | Record within 5km.<br>Within 500m based on RB. | e/EN | PR | Broad range of potential habitat, though shelter is required for denning. Marginally suitable foraging habitat. Medium risk. | Low risk |

| THREATENED FAUNA SPECIES | | | | | PRELIMINARY RISK ASSESSMENT OF LIKELY PRESENCE | FINAL RISK ASSESSMENT OF POTENTIAL FUTURE IMPACT[4] |
|---|---|---|---|---|---|---|
| SPECIES NAME | | NVA RECORD | STATUS S*/N+ | FPA[x] RANGE CLASS | | |
| LATIN | COMMON | | | | | |
| *Tyto novaehollandiae* | Masked owl | Record within 5km.<br>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, x = extinct

+ refers to listing status at the federal level under the Environment Protection and Biodiversity Conservation Act 1999: VU = Vulnerable, EN = Endangered, CR = Critically Endangered, EX = Extinct

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

# 6 Disturbance

The Natural Values Atlas records a number of weeds of significance as being present within 5km (Table 6-1).

The mine operation has existing weed management procedures (AK Consultants 2014) and weed control efforts within the lease area were evident during the site visit with recently sprayed *Carduus pycnocephalus* observed. No weed incursions were observed within the previously undisturbed vegetated areas of the extension areas or within the adjacent vegetation. As such, current weed management efforts are considered adequate and are recommended to continue.

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

| SPECIES | COMMON NAME |
|---|---|
| *Carduus pycnocephalus* | Slender thistle |
| *Cirsium arvense var. arvense* | Creeping thistle |
| *Cytisus scoparius* | English broom |
| *Echium plantagineum* | Patersons curse |
| *Eragrostis curvula* | African lovegrass |
| *Erica lusitanica* | Spanish heath |
| *Foeniculum vulgare* | Fennel |
| *Hypericum perforatum* | Perforated St Johns-wort |
| *Lycium ferocissimum* | African boxthorn |
| *Marrubium vulgare* | White horehound |
| *Onopordum acanthium* | Scotch thistle |
| *Rubus spp.* | Blackberry |
| *Senecio jacobaea* | Ragwort |
| *Ulex europaeus* | Gorse |

# 7 Biosecurity risks

According to the Natural Values Atlas, no biosecurity risks, including *Phytophthora cinnamomi*, have been identified within 1km of the subject titles. Additionally, the sand mine operator undertakes regular assessment for *Phytophthora cinnamomi* and the mine has a *Phytophthora cinnamomi* free status. The operation is also subject to washdown protocols are per the Tasmanian Quarry Code of Practice (EPA 2017) and EPA Permit Conditions.

# 8 Geo-conservation sites

According to LIST Map Geoconservation Sites mapping, there are no listed Geoconservation sites within the mine lease area. The nearest listed site is approximately 3.5km to the north east.

# 9 Acid sulfate soils

According to LIST Map Acid Sulfate Soil risk mapping, there are no acid sulfate soils found within the lease area. Therefore, no disturbance of potential acid sulfate soils as a result of the sand mine operation is expected. Additionally, this area has an extensive mining history and no acid sulfate soils have been recorded in the past.

# 10 Conclusion and considerations

RMCG have been engaged to undertake a flora and fauna assessment for mining lease 2130P/M held by Prospect Timber and Landscaping Supplies Pty Ltd on CT 243828/1, Forest Hall Road, Cleveland.

As per existing operational procedures and approved mining permits, operations are staged, with the topsoil stockpiled and later used to aid rehabilitation of worked-out areas as mining progresses. On site observations of rehabilitated areas, including colonisation of threatened flora species suggest that the current approach is appropriate for the site and should be continued.

A total of 6.6ha of vegetation (including 5.5ha under the original lease 1953P/M) will be impacted by mining operations within lease area 2130P/M. Staged clearing and rehabilitation of the 5.5ha of threatened vegetation community E*ucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ) within Stage 3 has been previously approved and an offset area was proposed and has been managed by the proponent since 2012.

While a large proportion of Stages 1 and 2 are already disturbed from previous activities, approximately 0.6ha of threatened vegetation community *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ) and an additional 0.5ha of Midlands woodland complex (DMW) will be impacted by mining operations.

The clearing of threatened vegetation communities is constrained under the *Nature Conservation Act 2002 and Forest Practices Act 1985.* Where approval for clearing or conversion of a threatened community is sought, it is usual that offsets are required as a mitigation of unavoidable impacts. An area of surrounding vegetation mapped and previously assessed as DAZ (AK Consultants 2012) has been historically managed by the proponent as an offset area for the original mining lease area. This arrangement is currently in the process of being formalised and will incorporate the offsetting of the additional 0.6ha of DAZ proposed in this lease extension. There is considered to be adequate area of equal or better condition DAZ immediately adjacent the sand mine operations which meet the recommended 5:1 offset ratio of minimum 10ha. Additionally, rehabilitation areas from past mining areas are regenerating to communities with DAZ characteristics, which will be taken into consideration when formalising offset arrangements.

While the area attributed to Midlands woodland complex DMW does not meet the thresholds for the threatened vegetation community of '*Eucalyptus Ovata* forest and woodland' there is adequate (more than 5 times) area of similar vegetation composition and condition included in the potential offset area also.

The threatened flora species *Leucopogon virgatus var. brevifolius* was identified within the lease area. Operations within the lease area will disturb approximately 18 individual plants and a separate management plan has been prepared to ensure that the impact to the overall viability, integrity and geographical extent of the population at the site is mitigated, monitored and actively managed through follow up surveys for *Leucopogon virgatus var. brevifolius* after the rehabilitation phase to ensure the species and associated habitat requirements are indeed recolonising across the disturbed areas.

The site meets habitat requirements for an additional 11 threatened flora species, however due to the site history, current level of disturbance, visibility, and survey effort during multiple seasons for this site and surrounding area, it is considered unlikely that the species are present at the site and therefore there is a low risk that they will be disturbed. Additionally, the nature of the mining operation and proven rehabilitation efforts demonstrate that species habitat and diversity is able to be successfully retained and restored across the site.

No threatened fauna or fauna nests and dens were identified within the lease area, however, potential foraging habitat was identified for *Dasyurus maculatus* spotted-tail quolls, *Dasyurus viverrinus* eastern quolls, *Sarcophilus harrisii* Tasmanian devils, and *Aquila audax subsp. fleayi* wedge-tailed eagles and marginal habitat was identified for *Perameles* gunnii eastern barred bandicoots. Due to the staged nature of the mining operation and rehabilitation requirements, the works within the lease area is expected to present a low risk of impacting these species.

The proposed mining activity across the lease area, consisting of staged operations with revegetation of worked-out areas, is considered to be of low risk to the overall existing integrity of the vegetation communities and associated threatened species. Providing the recommendations, as outlined in this report, are followed, the proposed clearing for the sand mine expansion is considered “unlikely to have an adverse effect on the value of the habitat for species managed under the *Threatened Species Protection Act 1995* or the *Natural Conservation Act 2002.* 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 commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC).

**Recommendations**

- Undertake a Spring survey within the Stage 3 area before works commence within this area (as per Condition for previous lease area 1953P/M).
- Continue to formalise offset arrangements of existing areas of DAZ historically managed as offsets.
- Clearly mark on site/fence lease boundary to prevent disturbance into adjacent threatened DAZ vegetation communities.
- Clearly mark on site *Leucopogon virgatus var. brevifolius* to be retained within the lease area to ensure they are not damaged by machinery.
- Continue to prevent biosecurity incursions and weed incursions by implementing strict washdown guidelines for all machinery and equipment entering the titles (as per the Weed and Disease Planning and Hygiene Guidelines (Invasive Species Branch, 2015)).
- Continue to implement staged mining operations to ensure rehabilitation of worked-out areas and minimise area of exposed soils.
- Implement post works survey and rehabilitation requirements as outlined in RMCG (2025) Management Plan for impact on shortleaf beardheath (*Leucopogon virgatus var. brevifolius).*
- Continue weed monitoring and control to prevent new weed incursions establishing.
- Continue to undertake regular *Phytophthora* monitoring.
- Any new observations of threatened flora and fauna species to be documented for monitoring purposes and records uploaded to the Natural Values Atlas.

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# Appendix 1: Threatened species habitat

**Table A1-1: Preferred habitat for threatened flora previously recorded within 5km of the mining lease from NVA accessed 20/09/2022**

| SPECIES NAME | COMMON NAME | PREFERRED HABITAT |
|---|---|---|
| Amphibromus macrorhinus | longnose swampgrass | *Amphibromus macrorhinus* inhabits waterholes and low-lying wet areas in the Midlands. |
| *Aphelia gracilis* | Slender fanwort | Inhabits damp sandy ground and wet places in the Midlands and north-east of the State. It may readily colonise sites after fire or other disturbance. |
| Aphelia pumilio | dwarf fanwort | *Aphelia pumilio* is found growing on damp flats, often with impeded drainage. The main vegetation types are lowland grassland (*Themeda triandra)* and dry sclerophyll forest and woodland dominated by *Eucalyptus viminalis*, *E. amygdalina* or *E. ovata*. |
| *Bolboschoenus caldwellii* | Sea clubsedge | Widespread in shallow, standing, sometimes brackish water, rooted in heavy black mud. |
| *Brunonia australis* | Blue pincushion | Typically occurs in grassy woodlands and dry sclerophyll forests dominated by *Eucalyptus amygdalina* or less commonly *E. viminalis* or *E. obliqua*. Some smaller populations are found in heathy and shrubby dry forests. The species occurs on well-drained flats and gentle slopes between 10-350 metres above sea level. It is most commonly found on sandy and gravelly alluvial soils, with a particular preference for ironstone gravels. Populations found on dolerite are usually small. |
| Caesia calliantha | blue grasslily | *Caesia calliantha* is found predominantly in the Midlands in grassland or grassy woodland including wattle and prickly box "scrub" (occasionally extending into forest, then usually dominated by *Eucalyptus viminalis* or *E. amygdalina*). It has also been recorded from grassy roadsides. |
| Caladenia anthracina | blacktip spider-orchid | *Caladenia anthracina* has a restricted distribution in the Powranna/Campbelltown/Ross area, occurring in grassy woodland with *Acacia dealbata* (silver wattle) and bracken on well-drained sandy soil. Two historical sites from the Derwent Valley are presumed extinct. |
| Caladenia filamentosa | daddy longlegs | *Caladenia filamentosa* occurs in lowland heathy and sedgy eucalypt forest and woodland on sandy soils. |

| SPECIES NAME | COMMON NAME | PREFERRED HABITAT |
|---|---|---|
| *Caladenia lindleyana* | Lindleys spider-orchid | Occurs in lowland heathy/grassy eucalypt forest and woodland in the Midlands and open shrubby forest in the north-east. There have been very few recent records. |
| Calocephalus lacteus | milky beautyheads | *Calocephalus lacteus* occurs in open, dry sites in lowland areas of eastern and northern Tasmania and on lower altitudes of the Central Plateau. It requires bare ground for recruitment, and may benefit from disturbance. It is often found on roadsides and beside tracks. |
| Colobanthus curtisiae | grassland cupflower | *Colobanthus curtisiae* occurs in lowland grasslands and grassy woodlands but is also prevalent on rocky outcrops and margins of forest on dolerite on the Central Highlands (including disturbed sites such as log landings and snig tracks). |
| Coronidium gunnianum | swamp everlasting | In Tasmania, it occurs in eastern and central parts of the State from the Cambridge to Hadspen in grasslands on heavy soils and riverine woodlands in areas often inundated. |
| Craspedia paludicola | swamp billybuttons | robust herb in the daisy family that grows in open wet swampy areas or at the edges of water bodies or courses. In Tasmania, the species is known from 12 locations scattered in mostly lowland areas in the eastern half of the State, and in montane areas in the Central Highlands. While rarely encountered, the species can be abundant, but most occurrences are small. |
| Dianella amoena | grassland flaxlily | *Dianella amoena* occurs mainly in the northern and southern Midlands, where it grows in native grasslands and grassy woodlands. |
| Diuris lanceolata | large golden moths | *Diuris lanceolata* occurs in the north-west of Tasmania in coastal scrub and windswept coastal grassland and heathland among dwarfed shrubs and sedges on moist to well-drained sandy and clay loam, sometimes on rocky outcrops. |
| Glycine latrobeana | clover glycine | *Glycine latrobeana* occurs in a range of habitats, geologies and vegetation types. Soils are usually fertile but can be sandy when adjacent to or overlaying fertile soils. The species mainly occurs on flats and undulating terrain over a wide geographical range, including near-coastal environments, the Midlands, and the Central Plateau. It mainly occurs in grassy/heathy forests and woodlands and native grasslands. |
| *Gratiola pubescens* | Hairy brooklime | Most commonly located in permanently or seasonally damp or swampy ground, including the margins of farm dams. |
| Haloragis heterophylla | variable raspwort | *Haloragis heterophylla* occurs in poorly-drained sites (sometimes only marginally so), which are often associated with grasslands and grassy woodlands with a high component of *Themeda triandra* (kangaroo grass). It also occurs in grassy/sedgy *Eucalyptus ovata* forest and woodland, shrubby creek lines, and broad sedgy/grassy flats, wet pasture and margins of farm dams. |

| SPECIES NAME | COMMON NAME | PREFERRED HABITAT |
|---|---|---|
| Hyalosperma demissum | moss sunray | *Hyalosperma demissum* grows on rock pavements or shallow sandy soils in some of Tasmania's driest regions, and also in scalded patches in *Eucalyptus amygdalina* heathy/grassy woodland. The underlying substrate is mostly Jurassic dolerite, with occasional occurrences on Triassic sandstone and also Cainozoic sediments with a laterite lag. The elevation range of recorded sites in Tasmania is 30-470 m above sea level, with an annual rainfall range of less than 600 mm. |
| Isoetes drummondii subsp. drummondii | plain quillwort | *Isoetes drummondii* subsp. *drummondii* is usually found in damp soils amongst dense grasses, such as the waterlogged pastures and waterways of the Midlands (with some outliers on the Forestier Peninsula and elsewhere). Habitats include woodland and forest dominated by *Eucalyptus rodwayi* and *E. amygdalina*, man-made ditches, muddy tracks and grassy "runs" through open forest. It also occurs on the seasonally inundated shores of man-made or natural waterbodies such as Camerons Lagoon, Wihareja Lagoon and Lake Leake. |
| Isolepis stellata | star clubsedge | *Isolepis stellata* has been recorded from near-coastal areas in the State's north and east, and also in the Northern Midlands near Conara. Habitat includes the margins of sedgy wetlands, wet soaks and seasonally inundated heathy sedgelands: the altitude of recorded sites in Tasmania ranges from close to sea level to elevations of 240 m above sea level. |
| Leucochrysum albicans subsp. tricolor | grassland paperdaisy | *Leucochrysum albicans* var. *tricolor* occurs in the west and on the Central Plateau and the Midlands, mostly on basalt soils in open grassland. This species would have originally occupied *Eucalyptus pauciflora* woodland and tussock grassland, though most of this habitat is now converted to improved pasture or cropland. |
| Leucopogon virgatus var. brevifolius | shortleaf beardheath | *Leucopogon virgatus* var. *brevifolius* occurs mainly on low undulating terrain in the drier parts of the State (e.g. Northern Midlands) in heathy forest and woodland extending to open grassland and grassy woodland in disturbed habitats, often associated with rock outcrops (e.g. sandstone patches). |
| Lobelia pratioides | poison lobelia | *Lobelia pratioides* occurs in seasonally inundated to waterlogged soils at the margins of swamps, wetlands and drainage lines, and also in damp depressions within grassland and grassy woodland. |
| Lobelia rhombifolia | tufted lobelia | *Lobelia rhombifolia* occurs in dry sclerophyll forests dominated by *Eucalyptus amygdalina*, mainly on granite-derived sands in north-east Tasmania. Clarification between records of *Lobelia dentata* (only recently recognised as occurring in Tasmania) and *Lobelia rhombifolia* is needed |
| Myriophyllum integrifolium | tiny watermilfoil | *Myriophyllum integrifolium* occurs mostly in the Northern Midlands, with isolated populations in the State's north, north-east and south. It grows at the margins of wetlands and in seasonally wet places, including depressions associated with small ephemeral lakes. It can occur in coastal heathland and in forest in the Midlands, where it is often associated with old muddy tracks. |
| *Phyllangium divergens* | Wiry mitrewort | Occurs in a wide variety of near-coastal habitats on a range of substrates, a common feature usually being bare ground (e.g. tracks) and rock exposures (e.g. outcrops, coastal cliffs, etc.). |

| SPECIES NAME | COMMON NAME | PREFERRED HABITAT |
|---|---|---|
| Pterostylis squamata | ruddy greenhood | *Pterostylis squamata* occurs in heathy and grassy open eucalypt forest, woodland and heathland on well-drained sandy and clay loams. |
| Pterostylis ziegeleri | grassland greenhood | In coastal areas, the species occurs on the slopes of low stabilised sand dunes and in grassy dune swales, while in the Midlands it grows in native grassland or grassy woodland on well-drained clay loams derived from basalt. |
| Puccinellia perlaxa | spreading saltmarshgrass | *Puccinellia perlaxa* is only known from a creek bed in a saline area of a paddock on Valleyfield Road, Midlands. |
| Pultenaea humilis | dwarf bushpea | *Pultenaea humilis* occurs in grassy forests and woodlands, on gently undulating terrain, with an association with lateritic soils. |
| Pultenaea prostrata | silky bushpea | *Pultenaea prostrata* occurs in grassy woodlands or grasslands, mostly on<br>Tertiary basalt or Quaternary alluvium. |
| Ranunculus pumilio var. pumilio | ferny buttercup | *Ranunculus pumilio* var. *pumilio* occurs mostly in wet places (e.g. broad floodplains of permanent creeks, "wet pastures") from sea level to altitudes of 800-900 m above sea level. |
| Schenkia australis | spike centaury | *Schenkia australis* has been recorded from rainforest, wet sclerophyll forest, dry sclerophyll forest and heathland in the east and north of the State. It has also been recorded from forest sites which were cleared for pasture. Several recent sites are from windswept coastal heathland/scrub. |
| Schoenus latelaminatus | medusa bogsedge | *Schoenus latelaminatus* is known from the Northern Midlands between Campbell Town and Powranna, where it grows at the margins of wetlands and in seasonally wet places, including depressions associated with ephemeral lake features. The altitude of recorded sites in Tasmania ranges from 180-210 m above sea level and the underlying geology is mostly Tertiary sediment but also includes Tertiary basalt and Quaternary alluvium. |
| Scleranthus diander | tufted knawel | *Scleranthus diander* is found from the Central Midlands area to Hobart with most of the records from the Ross and Tunbridge areas. This species inhabits grassy woodland and is associated with dolerite and basalt substrates. |
| Scleranthus fasciculatus | spreading knawel | *Scleranthus fasciculatus* is only recorded from a few locations in the Midlands and south-east. The vegetation at most of the sites is *Poa* grassland/grassy woodland. *Scleranthus fasciculatus* appears to need gaps between the tussock spaces for its survival and both fire and stock grazing maintain the openness it requires. Often found in areas protected from grazing such as fallen trees and branches. |
| Senecio squarrosus | leafy fireweed | *Senecio squarrosus* occurs in a wide variety of habitats. One form occurs predominantly in lowland damp tussock grasslands. The more widespread and common form occurs mainly in dry forests (often grassy) but extends to wet forests and other vegetation types. |

| SPECIES NAME | COMMON NAME | PREFERRED HABITAT |
|---|---|---|
| Siloxerus multiflorus | small wrinklewort | Occurs in a range of somewhat exposed lowland habitats, including bare soil and rocks amongst dense windswept coastal shrubbery to rock outcrops and bare ground associated with native grassland, grassy woodland and forest. |
| Stackhousia subterranea | grassland candles | *Stackhousia subterranea* occurs in native grasslands and grassy woodlands/forests, often associated with fertile soils derived from basalt. *Themeda triandra* (kangaroo grass) is often one of the more prominent grasses. |
| Stenanthemum pimeleoides | propeller plant | *Stenanthemum pimeleoides* is restricted to Tasmania's central East Coast and the Northern Midlands, where it occurs in dry sclerophyll forest or woodland with an open heathy or shrubby understorey. The topography tends to be flat to gently sloping. The species occurs in the drier parts of the State with rainfall between 500-800 mm per year, and usually at elevations below 100 m. |
| Stylidium despectum | small triggerplant | Mainly been recorded from wet sandy heaths, moist depressions, soaks and hollows in near-coastal areas. It extends to similar habitat amongst forest and woodland in the Midlands. |
| Tricoryne elatior | yellow rushlily | *Tricoryne elatior* occurs in native grassland, grassy woodland and forest. |
| Triptilodiscus pygmaeus | dwarf sunray | *Triptilodiscus pygmaeus* grows within grasslands, grassy woodlands or rockplates, with the underlying substrate being mostly Tertiary basalt or Jurassic dolerite. The elevation range of recorded sites in Tasmania is 30- 470 m above sea level, with an annual rainfall of about 450-600 mm. The species occurs within native grassland dominated by *Themeda triandra* (kangaroo grass). |
| Trithuria submersa | submerged watertuft | *Trithuria submersa* occurs in the Northern Midlands, near-coastal areas in the east and north-east, King Island, Flinders Island and Cape Barren Island, with an isolated record from the Central Highlands. Habitat includes areas subject to flooding, such as the margins of wetlands, small watercourses, shallow temporary depressions and wet heathlands. |
| Wilsonia rotundifolia | roundleaf wilsonia | *Wilsonia rotundifolia* is found in coastal and inland saltmarshes in the eastern part of the State. |
| Xerochrysum palustre | swamp paperdaisy | *Xerochrysum palustre* has a scattered distribution with populations in the north-east, east coast, Central Highlands and Midlands, all below about 700 m elevation. It occurs in wetlands, grassy to sedgy wet heathlands and extends to associated heathy *Eucalyptus ovata* woodlands. Sites are usually inundated for part of the year. |

**Table A1-2: Preferred habitat for threatened fauna previously recorded within 5km or with range boundaries within 5km of the lease area from NVA and BVD accessed 20/09/2022.**

| 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, 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. |
| *Aquila audax subsp. fleayi* | Tasmanian wedge-tailed eagle | Potential habitat 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. Significant habitat is all native forest and native non-forest vegetation within 500 m or 1 km line of sight of known nest sites (where the nest tree is still present). |
| *Botaurus poiciloptilus* | Australasian bittern | Lives in wetlands with reeds and rushes. |
| *Catadromus lacordairei* | Green-lined ground beetle | Potential habitat for the green-lined ground beetle is open, grassy/sedgy, low altitude grasslands and woodlands associated with temporary and permanent wetlands and low-lying plains, flats and ephemeral drainages adjacent to rivers and streams. Key habitat elements that need to be present include sheltering sites such as patches of stones, coarse woody debris and/or cracking soils. |
| *Dasyurus maculatus* | Spotted-tailed quoll | Potential habitat 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 is all potential denning habitat within the core range of the species. Potential denning habitat 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. |

| SPECIES NAME | COMMON NAME | PREFERRED HABITAT |
|---|---|---|
| *Galaxiella fontanus* | Swan galaxias | Potential habitat for the Swan galaxias is slow to moderately fast flowing streams containing permanent water (even when not flowing), which have good in-stream cover from overhanging banks and/or logs, and shade from overhanging vegetation. A population can only be maintained where barriers have prevented establishment of trout and redfin perch. The nature of these barriers is variable and can include permanent natural structures such as waterfalls and chutes and also low flow- dependent features such as marshes, ephemeral water-losing and remnant channels, and braided channel floodplain features. |
| *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). |
| *Hirundapus caudacutus* | White-throated needletail | Almost exclusively aerial, occurring over most types of habitat. No specific habitat requirements documented for perching. |
| *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. |
| *Perameles gunnii* | Eastern barred bandicoot | Potential habitat 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 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 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. |
| *Pseudemoia rawlinson* | Glossy grass skink | Potential habitat for the glossy grass skink is wetlands and swampy sites (including grassy wetlands, teatree swamps and grassy sedgelands), and margins of such habitats. |

| SPECIES NAME | COMMON NAME | PREFERRED HABITAT |
|---|---|---|
| *Sacophilus harrisii* | Tasmanian Devil | Potential habitat 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 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 approx. 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 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. Significant habitat 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. 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 potential habitat or significant habitat. |

# Appendix 2: Maps

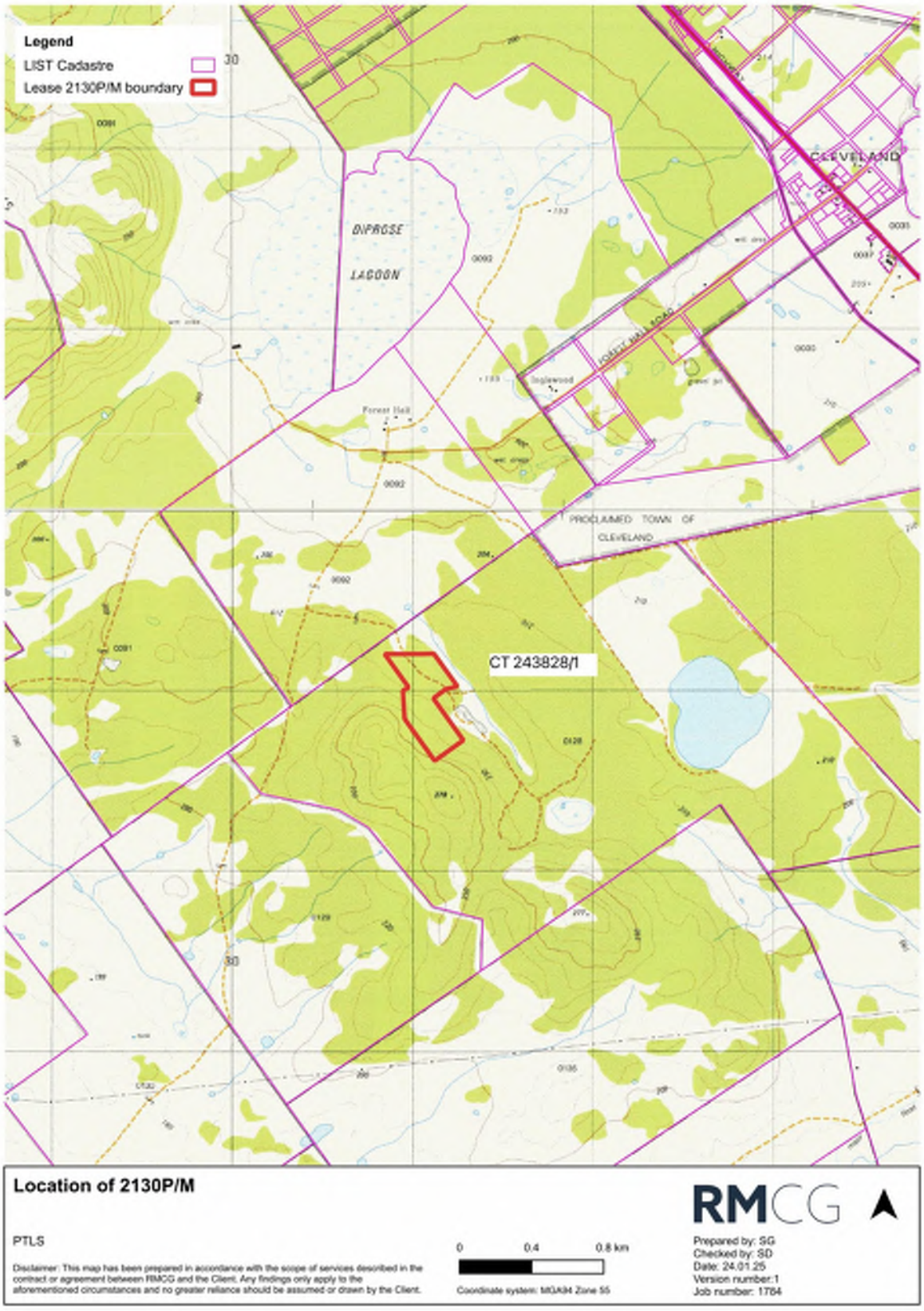


**Figure A2-1: Location map of lease area 2130P/M.**

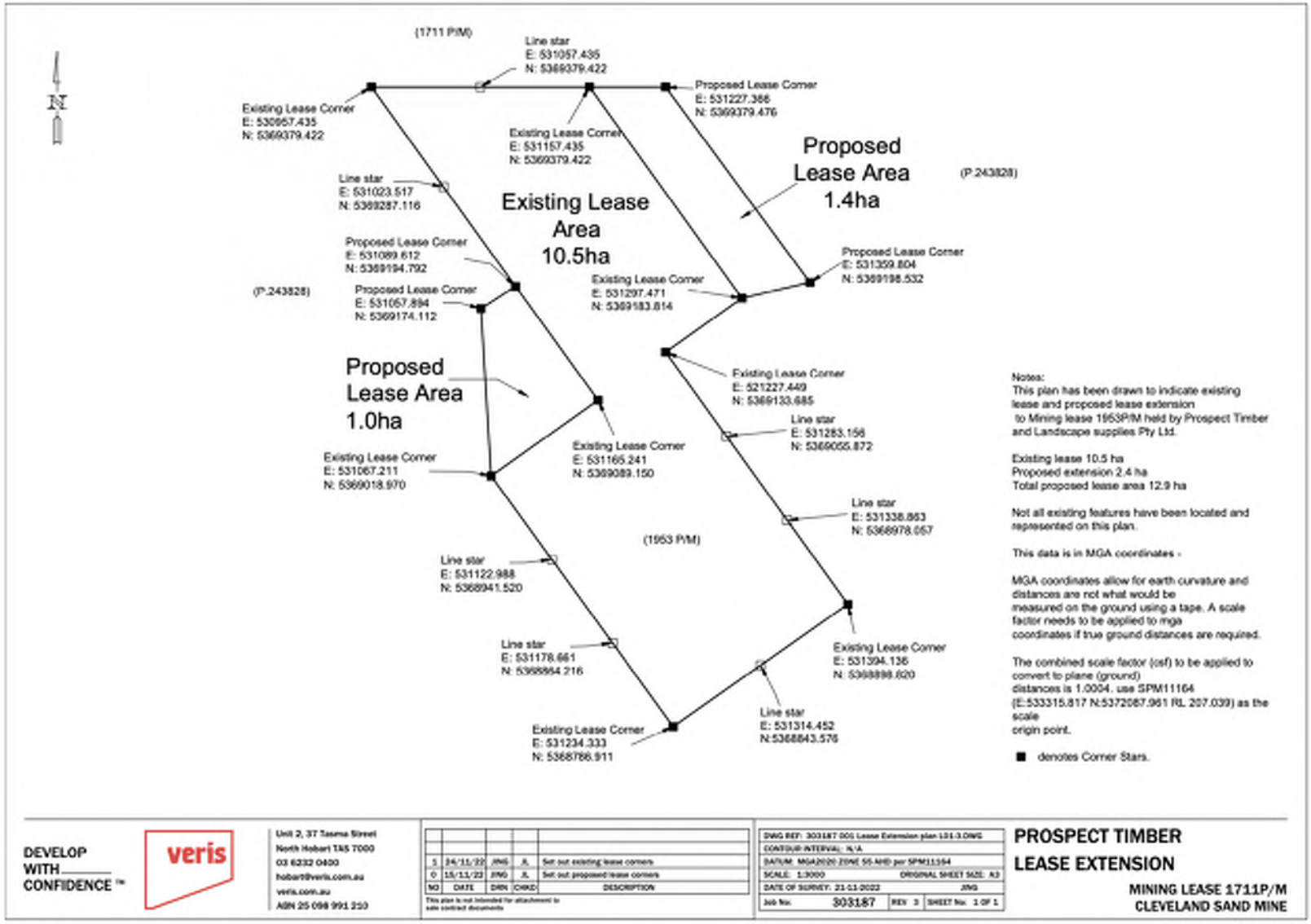


**Figure A2-2: Proposed lease extension survey (Veris 2022). Proposed and Existing areas shown here are now part of lease 2130P/M.**

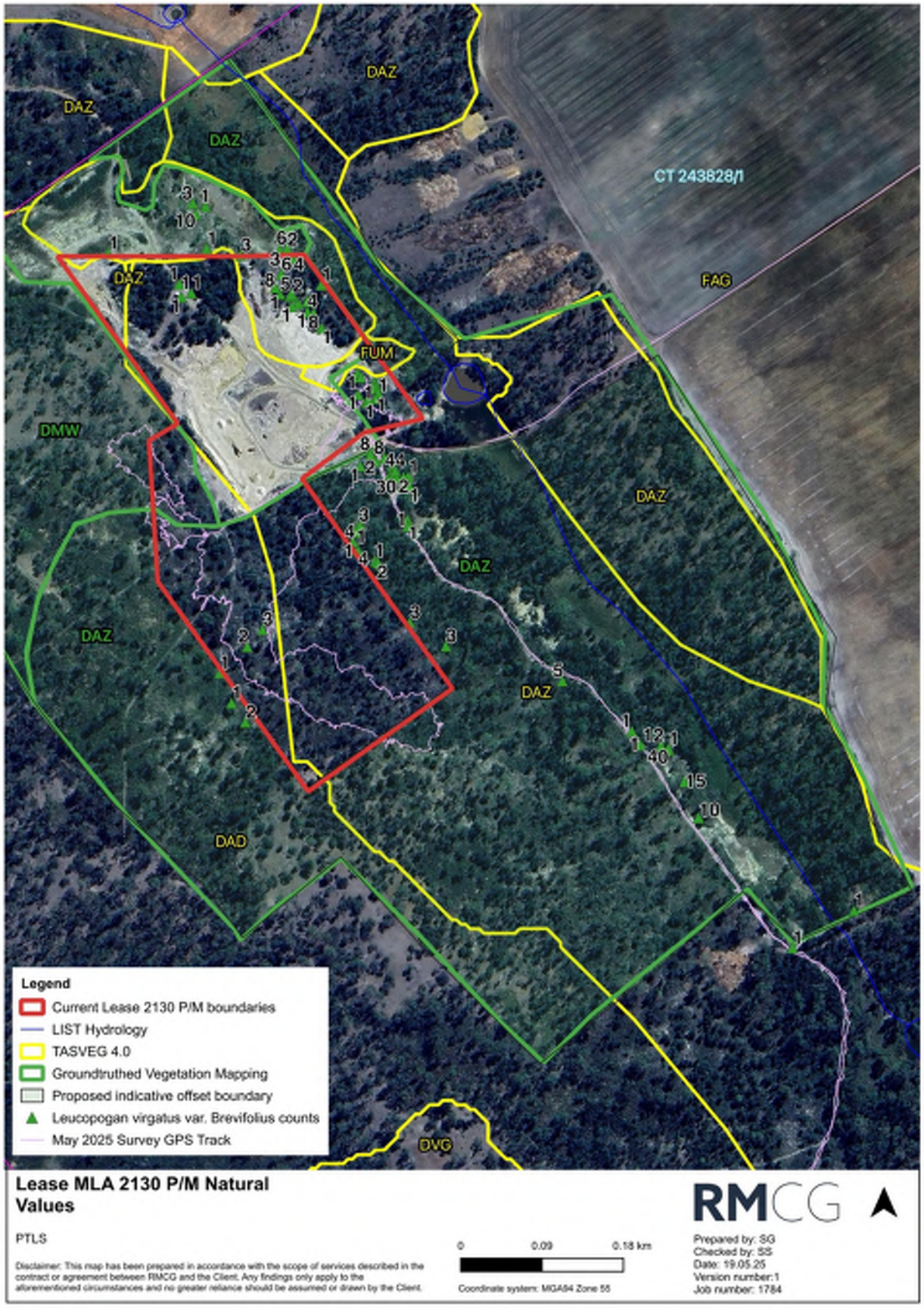


**Figure A2-3: Aerial image with mapped and observed natural values (including counts of *Leucopogan virgatus varbrevifolius*).**

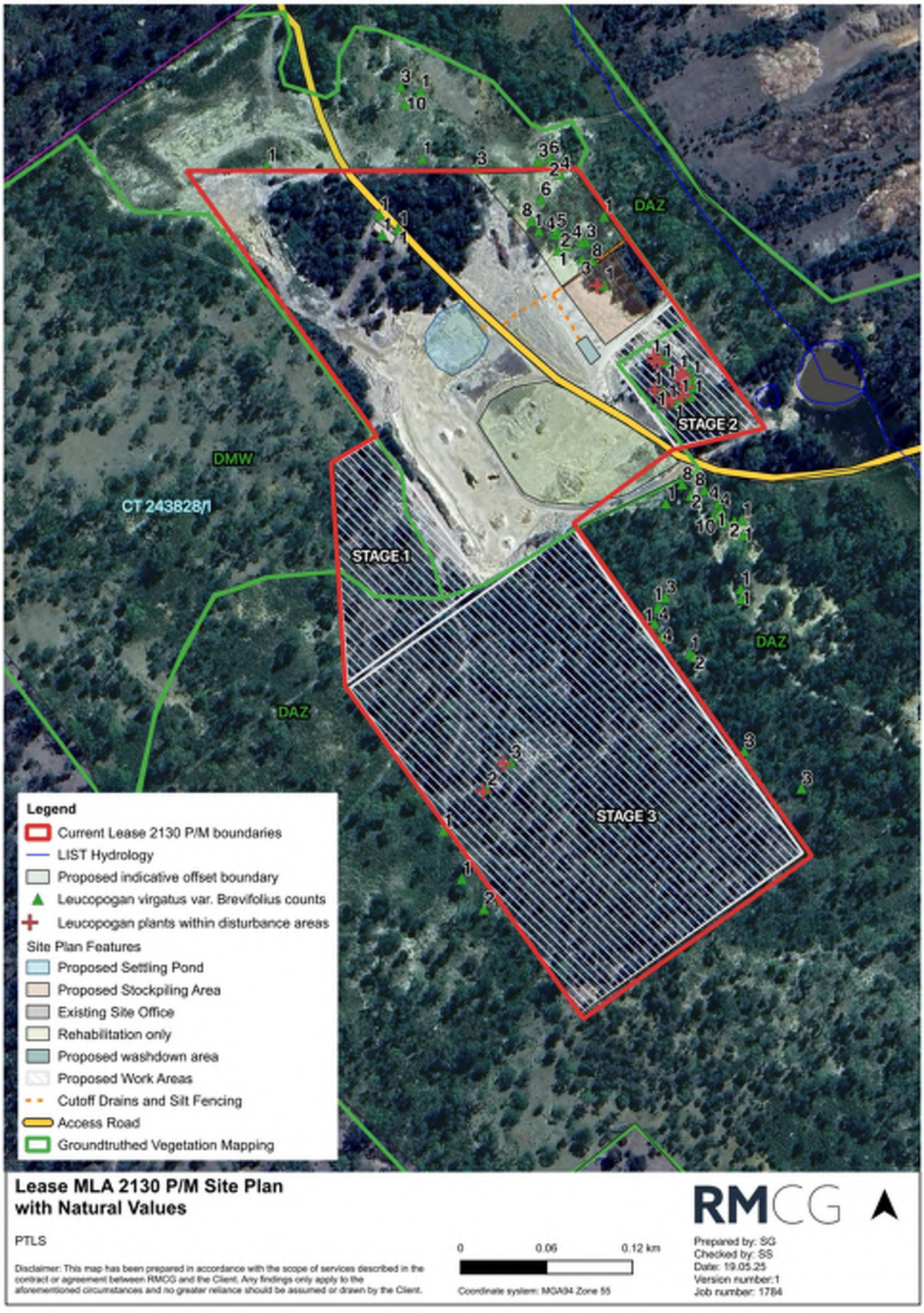


**Figure A2-4: Site plan depicting ground truthed vegetation mapping and locations of *Leucopogan virgatus var Brevifolius* subject to disturbance within operational areas.**

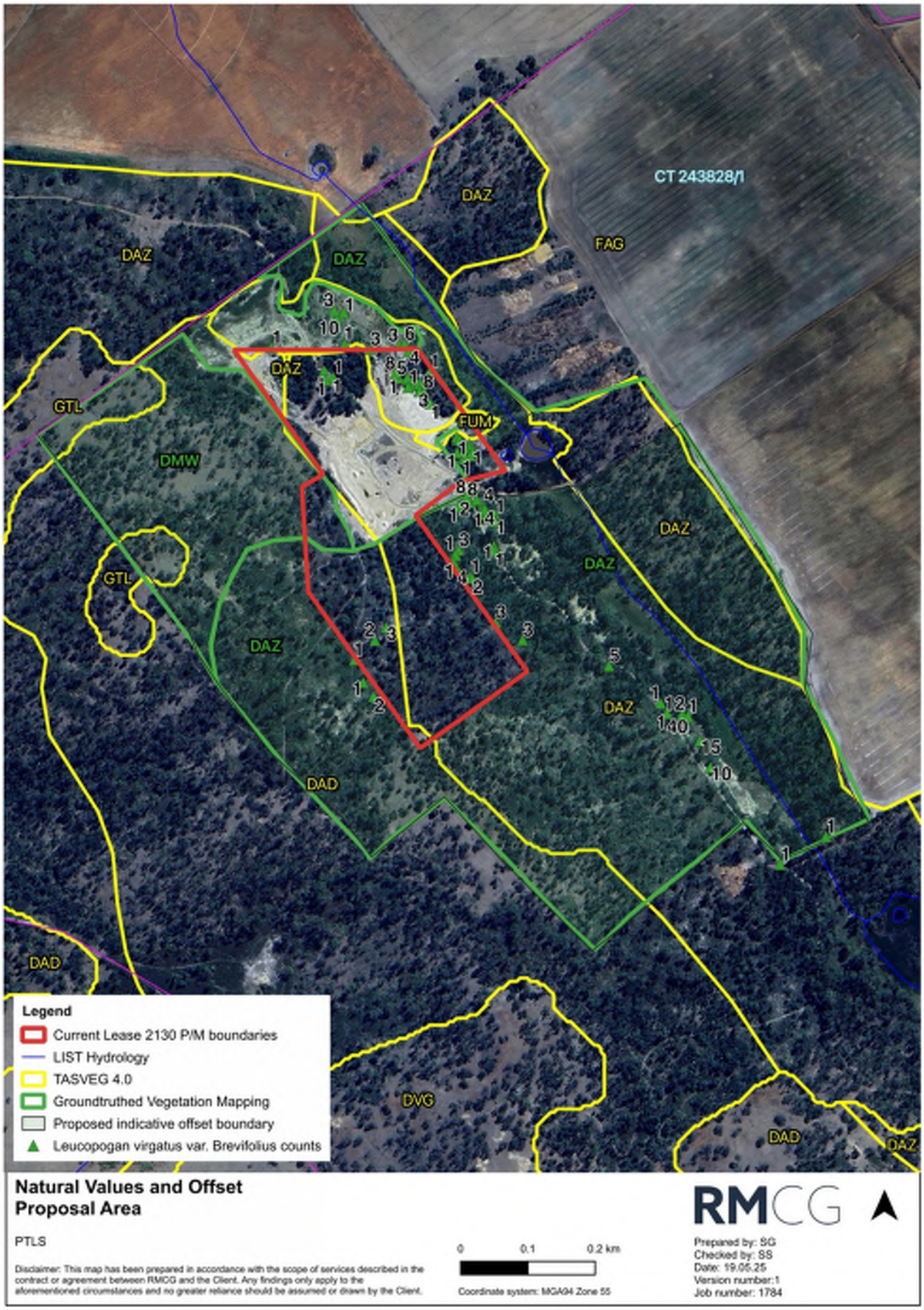


**Figure A2-5: Aerial image overview with indicative proposed offset areas.**

# Appendix 3: Photographs

All photographs taken by Samantha Gadsby November 2022 and May 2025.

**Figure A3-1: Overview of Stage 2 (1.4ha). Photo taken from existing north eastern lease corner facing south east. Vegetation to be cleared in previously rehabilitated area on the LHS of image and 0.3ha patch of vegetation with previously cleared understory in the background (November 2022).**

**Figure A3-2. Vegetation to be cleared in Stage 2 (0.3ha). While the understorey has been previously disturbed, the presence of Eucalyptus pauciflora and Eucalyptus viminalis on deep sands has characteristics of threatened vegetation community DAZ. The community is in poor condition due to disturbance and edge effects (November 2022).**

**Figure A3-3. Overview of vegetation to be cleared in Stage 1 (0.8ha). While no Eucalypt species were recorded within this small assessment area, the surrounding area was noted to be predominately Eucalyptus pauciflora with occasional Eucalyptus viminalis. On site, a gradient could be determined between the underlying geology of dolerite and sands with surface rock present for approximately 0.5ha of the Stage 1 area. The vegetation within the 0.5ha area aligns with TASVEG Code DMW, the remainder aligns with DAZ (May 2025).**

**Figure A3-4. Typical vegetation profile of area to be cleared in Stage 3 under previous approvals. The presence of Eucalyptus pauciflora and Eucalyptus viminalis on deep sands has characteristics of threatened vegetation community DAZ (November 2022).**

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**Document review and authorisation**

**Project Number: #1784**

| Doc Version | Final/Draft | Date | Author | Project Director review | BST QA review | Release approved by | Issued to |
|---|---|---|---|---|---|---|---|
| 1.0 | Final | 22/12/2022 | S. Gadsby | A. Ketelaar | J. Longford | A. Ketelaar | M. Hernyk<br>S. Graham |
| 2.0 | Final_V2 | 22/05/2024 | S. Gadsby | A. Ketelaar | L. McKenzie | A. Ketelaar | M. Hernyk<br>S. Graham |
| 3.0 | Final_V3 | 27/01/2025 | S. Gadsby | S. Drum | L. McKenzie | S. Drum | M. Hernyk<br>S. Graham |
| 4.0 | Final_V4 | 16/07/2025 | S. Gadsby | S. Drum | L. McKenzie | S. Drum | M. Hernyk<br>S. Graham |

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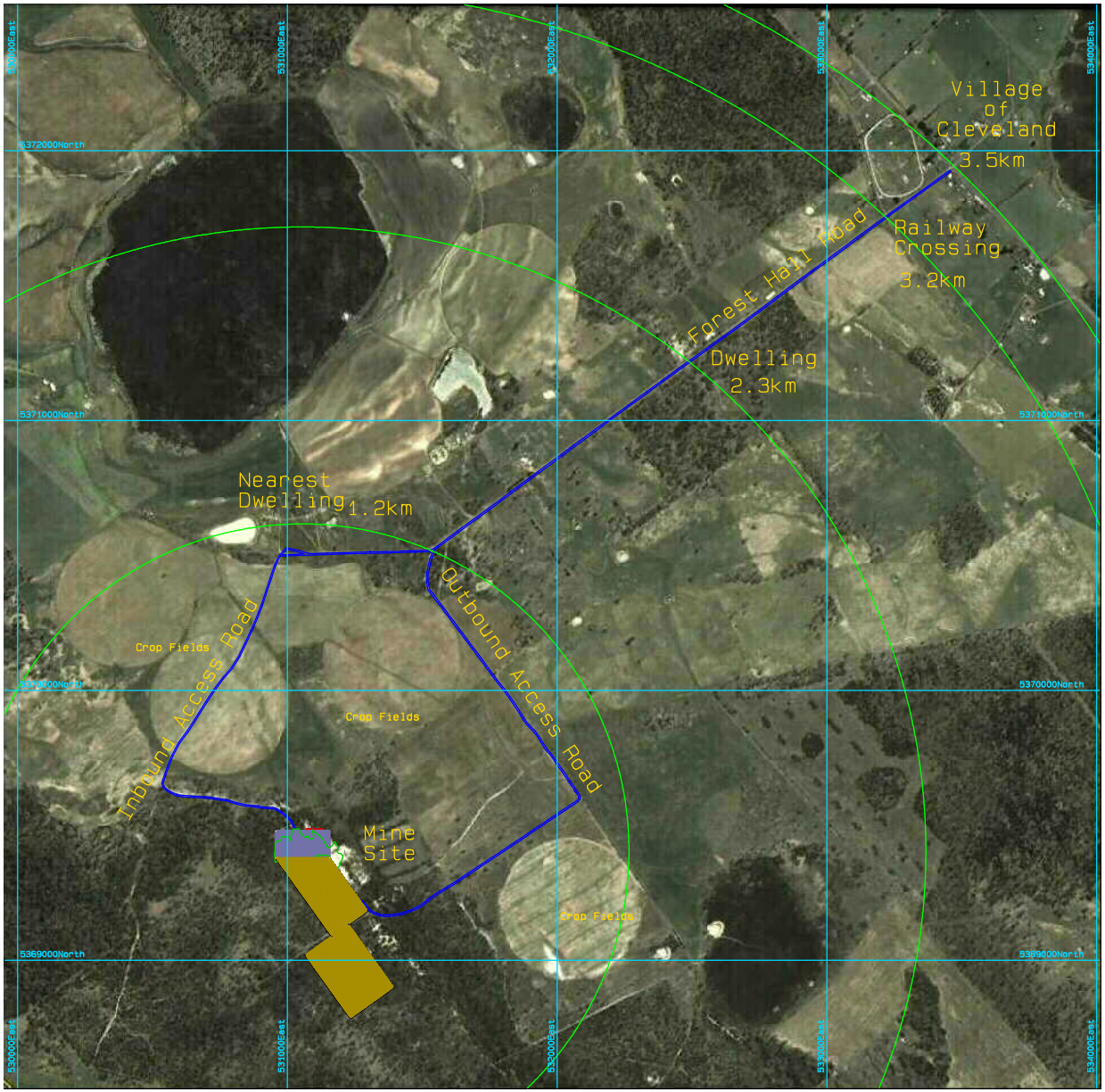


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Proximity Plan

This plan is to show the proximity of the existing and proposed mining leasr extents in relation to nearby dwellings and other activities including the village of Cleveland.

| | | | | |
|---|---|---|---|---|
| Prospect Timber & Landscape Supplies Pty Ltd | Mining Lease 1711P/M | Scale Plan 25000.00 | Sheet Size A4 | Tritech Professional Services |
| | Cleveland Sand Mine | Aerial Imagery by Google | | Proximity Plan PTLS01 |
| | | Date 9 Nov 2018 | Drawn Peter Tipene | |

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RMCG

# Management Plan for impact on shortleaf beardheath (*Leucopogon virgatus var. brevifolius*)

For proposed sand mining operations at Forest Hall (CT 243828/1)
8th May 2025

## Introduction

RMCG have been engaged to provide a Management Plan for the impacts on shortleaf beardheath (*Leucopogon virgatus var. brevifolius*) associated with proposed mining operations under lease (2130P/M) at Forest Hall, Cleveland (243828/1).

*Leucopogon virgatus var. brevifolius* is listed as rare under the *Threatened Species Protection Act 1995* and is not listed under the Commonwealth *EPBC Act 1999.*

The lease area covers approximately 12.9ha, 6ha of which has been mined/disturbed under previous mining permits. The remaining 6.9ha will be worked in 3 stages (see site plan in Figure A1-1).

As per existing operational procedures and approved mining permits, operations are staged, with the topsoil stockpiled and later used to aid rehabilitation of worked-out areas as mining progresses. On site observations of rehabilitated areas, including colonisation by *Leucopogon virgatus var. brevifolius,* suggest that the current approach is appropriate for the site and should be continued.

An initial field inspection of Stages 1 and 2 was undertaken on 28th September 2022 to confirm or otherwise the findings of an initial desktop study and to determine the natural values of these areas. Additional site visits were undertaken in November 2023, May 2024 and May 2025 to ensure surveys were conducted during peak flowering times for species identified as having potential to occur. During the May 2024 visit, counts were undertaken of individual threatened species *Leucopogan virgatus var. brevifolius* across Stages 1-3 and within the areas of suitable habitat to the south of the lease area, to determine impacts on the overall population. This report summarises the findings of the three field assessments and provides management considerations to ensure the viability of the species at the site.

This Management Plan has been prepared with reference to, and should be read in conjunction with:

- RMCG (2025) *Flora and Fauna Report: Mining Lease Extension*
- PTLS (2025) *EER Cleveland Updated May 2025.*

Certified B Corporation

# Background

## SITE DESCRIPTION

The mining site is located on private property 'Forest Hall' approximately 3km south west of Cleveland. The area surrounding the mining lease is private land primarily utilised for agriculture. Neighbouring titles are also privately owned agricultural land, with the exception of an area to the north west, which is under conservation covenant.

The mining site is relatively flat, at approximately 210m above sea level, with a slight north easterly aspect. Soils at the site are mapped as Panshanger with Bloomfield soils on dolerite bedrock (Ps-Bo) which are soils on loose, windblown sand on gently undulating to rolling (3-32%) dunes and flanks and outcrops of dolerite hill slopes. Underlying geology is mapped as Cenozoic cover sequences (Qh), which are described as sand gravel and mud of alluvial, lacustrine, and littoral origin (Mineral Resources Tasmania 2010).

Average annual rainfall for Ross (Site No. 093053) is 489mm (BOM 2022). There is no recorded fire history within the lease area or elsewhere on the subject title (DNRET 2022).

A total of 6.6ha of vegetation (including 5.5ha under the original lease 1953P/M) will be impacted by mining operations within lease area 2130P/M. Staged clearing and rehabilitation of the 5.5ha of threatened vegetation community E*ucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ) within Stage 3 has been previously approved and an offset area was proposed and has been managed by the proponent since 2012.

While a large proportion of the 2.4ha extension area (Stages 1 and 2) are already disturbed from previous activities, approximately 0.6ha *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ) and an additional 0.5ha of Midlands woodland complex (DMW) will be impacted by mining operations.

A comprehensive list of species identified at the works site and TASVEG vegetation community assessment is available in the 2025 RMCG report, *Flora and Fauna Report: Mining Lease Extension Version 3.*

## LEUCOPOGON VIRGATUS VAR BREVIFOLIUS

*Leucopogon virgatus var. brevifolius* is known to have an association with *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits and is present across the site with a previous site inspection on the 22/5/12 including the collection of samples that were forwarded to the Tasmanian Herbarium for positive identification. At that time, the lease boundaries for previous lease 1953P/M were revised to exclude the threatened species, however, a number of new populations have begun to colonise the disturbed and rehabilitated areas within the existing lease area where new mining works are proposed.

This assessment identified approximately 79 individual plants within the lease boundaries. Approximately 61 plants will not be disturbed and are located within an area mapped as 'rehabilitation only'. Approximately 18 individual plants will likely be disturbed by the mining operation (See site plan in Figure A1-1). This disturbance involves pushing the topsoil (including vegetation) into the stockpiling area with a loader and excavator which is then later spread back over the worked area during the rehabilitation stage.

This method has been utilised across previously mined areas and approximately 90 individual *Leucopogon virgatus var. brevifolius* plants have successfully colonised across previously mined areas.

Additionally, due to its association with disturbance, there are extensive records along roads and clearings to the south of the existing lease area. These records are located within a proposed offset area and plant counts undertaken found approximately 107 plants within 130m of the mining lease and an additional approximately 92 plants within 800m.

This totals an approximate 299 plants (excluding the 18 plants to be impacted by mining operations) on land managed either formally (current and prior lease areas) or informally (proposed offset area) by the proponent. The mining operations within the lease area will disturb approximately 6% of these local individuals however will not impact on the geographical extent of the population.

# Avoidance and mitigation measures

A range of actions that can be undertaken to reduce the level of impacts of the development which have been considered include altering the mine location, altering the mining operations and translocating the threatened flora species.

## ALTERING THE LOCATION

The location of the sand mine is based on three factors:

1. *Efficiency of the site*. This is determined as the quality and quantity of the material compared to the volume and difficulty/time of earthworks required. The better the material that can be accessed most easily, the more efficient the site is considered to be. The amount and density of mature vegetation is also considered in this equation with sites selected to avoid dense stands of mature vegetation. The lease boundaries have been carefully considered to be the most efficient site to achieve the required material with the least impact on mature vegetation.
2. *Impact on vegetation and waterways*. The current ming lease is located on a site which has been previously harvested for forestry. According to the Forest Practices Plan (FPP) (RML157) the location of the lease is on land that has been subject to selective harvesting and some clear felling within Stage 3. While there are also extensive sand deposits in the area to the south of the lease, this area was not within the FPP and has a much greater density of mature woodland and potential habitat for threatened species. The current lease area also allows for a minimum 30m buffer from the watercourse and waterbody to the north east.
3. *Proximity to existing mining operation*. Ideally to minimise costs of moving machinery, new lease areas should be located as close as possible to existing operations. This also assists in weed and pathogen control at the site.

Altering the location is not practicable due to the 3 points listed above.

## ALTERING THE WORKS METHOD

Currently the over-burden is stripped, sand extracted and screened on-site, the site is rehabilitated with stockpiled over-burden to match existing contours of the surrounding area.

A wheel loader and excavator are used to extract the sand and rehabilitate the mine area. The sand, (some of which is required to be screened) is processed utilizing a mobile trommel.

The screen is moved to each working area (not used in the one spot) to further minimize any impact on the one area and to keep the total working area to a minimum.

The first area (Stage 1) to be worked will be directly to the west of the existing workings. Staged excavation is followed by progressive rehabilitation with the extractive area generally not exceeding 0.5ha. Clearing will be staged and limited areas cleared preceding mining. This normally sees a maximum of 2 working areas, each of approximately 200m x 100m, and only 2 working areas open at any one time. Successive working areas will be selected according to the characteristics, i.e. colour, quantity and quality, of the sand required, whilst maintaining the commitment of the current permit to leave remnant islands of vegetation. Depth of excavation is generally dictated by the natural contours of the sand deposit and can be up to 5m.

This method has been utilised in previously mined areas, including the recently surrendered lease area 1711 P/M. Additionally, approximately 90 individual *Leucopogon virgatus var. brevifolius* plants have successfully colonised across previously mined areas across the site.

It is therefore considered that this method demonstrated successful rehabilitation at the site and there is no need to consider alternative works methods.

### TRANSLOCATING THE THREATENED LEUCOPOGON SPECIES

Translocating the 27 plants identified as being impacted by the mining operation would involve removal of the plant entirely. The method of works at the site does not guarantee the destruction of the entire plant and some plants are likely to recover from the disturbance. It is also likely that some plants will grow from the seed that is returned as overburden to the site after rehabilitation. This has already occurred in previously mined areas and is considered the best method for potential natural rehabilitation of the species to occur.

Additionally, there are a number of healthy populations of *Leucopogon virgatus var. brevifolius* in high densities and recruitment within both the previously mined areas and area to the south. It is considered that there is little value in translocating species into these areas, when they are already present.

# Offsets

An area of surrounding vegetation mapped and previously assessed as DAZ (AK Consultants 2012) has been historically managed by the proponent as an offset area for the original mining lease area. This arrangement is currently in the process of being formalised and will incorporate the offsetting of the additional 0.6ha of DAZ proposed in this lease extension. There is considered to be adequate area of equal or better condition DAZ immediately adjacent the sand mine operations which meet the recommended 5:1 offset ratio of minimum 10ha. Additionally, rehabilitation areas from past mining areas are regenerating to communities with DAZ characteristics, which will be taken into consideration when formalising offset arrangements.

The offset area will also be advantageous to *Leucopogon virgatus var. brevifolius* with approximately 107 plants within 130m of the mining lease and an additional approximately 92 plants within 800m and all within the proposed offset area to the south of the lease.

# Rehabilitation plan

Rehabilitation of the lease area in general is guided by existing Mineral Resources Tasmania (MRT) and EPA Level 2 Activity Permits and Conditions for lease 2130P/M.

As discussed above, the existing methods of works has demonstrated successful recolonisation of *Leucopogon virgatus var. brevifolius* at the site. However, to ensure this continues and to ensure the ongoing

viability of the species at this location, listed below are the pre, during, and post works rehabilitation recommendations specific to the *Leucopogon virgatus var. brevifolius.*

## PRE WORKS

- Ensure 'permit to take' has been approved by NRE prior to removal of any *Leucopogon virgatus var. brevifolius.* plants.
- Ensure 'no go' zones are clearly marked on site around plants that are to be retained within the lease area and that contractors are aware of these zones.
- Educate mining operator on identification of *Leucopogon virgatus var. brevifolius.*
- Install erosion controls, such as silt fencing, to contain the area of disturbance.

## DURING WORKS

- Topsoil will be removed and stockpiled for use in site rehabilitation. Stockpiles will be placed within designated stockpiling areas in a weed free site where they will not be at risk of compaction from machinery and are outside of drainage pathways.
- Continue to implement washdown and disinfection protocols (as per DPIWE, 2004) for any vehicles and machinery on site throughout each phase to prevent the spread of plant pathogens and additional weeds to the area.
- Continue weed monitoring and control to prevent new weed incursions establishing.
- Continue to undertake regular *Phytophthora* monitoring.
- Stop works and implement new 'no go' zones in the event of any new observations of *Leucopogon virgatus var. brevifolius.* Advise RMCG so further field assessment can be undertaken.
- RMCG to upload any new locations to the Natural Values Atlas and site plan maps.

## POST WORKS

Successful recovery of *Leucopogon virgatus var. brevifolius* at the site will depend on a number of factors including the reestablishment of suitable habitat. Table 1 below outlines the requirements for post works surveys and active rehabilitation to maximise success of *Leucopogon virgatus var. brevifolius* remaining viable at the site beyond the life of the mining operation.

Success of rehabilitation for *Leucopogon virgatus var. brevifolius* is based on a ratio of 5:1, therefore a total of 90 plants will need to reestablish within the lease area to offset the loss of 18.

Note that the survey and follow up management requirements are only applicable to the areas associated with *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits (DAZ). This includes the 6ha current works area, the 0.3ha area of DAZ within Stage 1, Stages 2 and 3 of the new proposed works areas.

Once 90 additional plants have established across the lease area (including within the current works area), no further areas will require surveying. For example if the 5:1 ratio is met across the lease area prior to Stage 3 reaching the rehabilitation phase, Stage 3 will not require ongoing post rehabilitation surveying for *Leucopogon virgatus var. brevifolius*.

However, post rehabilitation survey will still be required to ensure DAZ community is regenerating as per the recommendations in the RMCG (2025) *Flora and Fauna Report: Mining Lease Extension.*

**Table 1. Post works survey and rehabilitation requirements.**

| TIMELINE | SURVEY | RESULT | ACTION |
|---|---|---|---|
| 2 years after rehabilitation | A post rehabilitation survey of each stage of works is required 2 years after mining rehabilitation has occurred. Note that this includes staged areas within the current works area as they enter the rehabilitation phase.<br><br>This survey will focus on areas previously identified as having suitable habitat requirements for *Leucopogon virgatus var. brevifolius* which is *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits.<br><br>This survey is to include:<br>▪ Species list and assessment of recruitment of DAZ community.<br>▪ Vegetation Condition Assessment (VCA) and assessment of habitat requirements for *Leucopogon virgatus var. brevifolius* | **Habitat requirement met** | Follow up survey for *Leucopogon virgatus var. brevifolius* in 2 years time (4 years after rehabilitation). |
| | | **Habitat requirement NOT met** | Development and implementation of rehabilitation plan for DAZ community including active rehabilitation where necessary. For example:<br>– Laying brush<br>– Planting of dominant species (seeds or tubestock).<br><br>(Note: Rehabilitation plan for DAZ may recommend additional survey and active management pending condition assessment).<br><br>Follow up survey for *Leucopogon virgatus var. brevifolius* in 2 years time (4 years after rehabilitation). |
| 4 years after rehabilitation | Additional post rehabilitation survey of each stage of works is required 4 years after mining rehabilitation has occurred.<br><br>This survey will focus on counts of individual *Leucopogon virgatus var. brevifolius* to ensure population is returning and increasing in numbers. | **Species counts exceed 90 new plants.** | No further rehabilitation stages require counting of individual plants, however, follow up survey for *Leucopogon virgatus var. brevifolius* in 2 years time to ensure viability of new plant occurrences (6 years after rehabilitation). |
| | | **Species counts are equal to or above pre disturbance levels.** | Follow up survey for *Leucopogon virgatus var. brevifolius* in 2 years time (6 years after rehabilitation). |
| | | **Species counts are below pre disturbance levels.** | Active rehabilitation in the form of transplanting from local populations (with permit from DNRET).<br><br>(Note: Active rehabilitation will require frequent |

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| | | | monitoring of transplanted populations by proponent and consultant to ensure viability of plants). |
| 6 years after rehabilitation | A post rehabilitation survey of each stage of works is required 6 years after mining rehabilitation has occurred.<br>This survey will focus on counts of individual *Leucopogon virgatus var. brevifolius* to ensure post rehabilitation populations are maintained. | **Species counts exceed 90 new plants.** | No further rehabilitation stages require counting of individual plants. |
| | | **Species counts are equal to or above pre disturbance levels.** | Follow up survey for *Leucopogon virgatus var. brevifolius* in 2 years time. |
| Ongoing surveys | Continue surveying every 12 months until species counts exceed 90 new plants across lease area. | | |

# Management commitments

The management commitments below incorporate the recommendations made in this management plan and additional commitments made in the associated EER for the mining lease which are considered to be of benefit to the success of rehabilitation and overall viability of the *Leucopogon virgatus var. brevifolius* population.

**Table 2. Management commitments for the operation of lease 2130P/M.**

| NO. | COMMITMENT | COMPLETION DATE | BY WHOM |
|---|---|---|---|
| 1 | Operations will comply with the Quarry Code of Practice 1999 | On-going | Prospect Timber & Landscape Supplies P/L |
| 2 | Staged clearing of only small working areas at a time (approx. 200m x 100m) (refer EER Part C Section 17 Rehabilitation). | On-going | Prospect Timber & Landscape Supplies P/L |
| 3 | Continue to formalise offset arrangements of existing areas of DAZ historically managed as offsets (refer EER Appendix A Flora & Fauna Report). | On-going | Prospect Timber & Landscape Supplies P/L |
| 4 | Clearly mark on site/fence lease boundary to prevent disturbance to adjacent threatened DAZ vegetation communities (refer EER Appendix A Flora & Fauna Report). | Prior to working new areas | Prospect Timber & Landscape Supplies P/L |
| 5 | Clearly mark on site *Leucopogon virgatus var. brevifolius* to be retained within the lease area to ensure they are not damaged by machinery (refer EER Appendix A Flora & Fauna Report). | Prior to working new areas | Prospect Timber & Landscape Supplies P/L |
| 6 | Where possible retention of remnant “islands” within the quarry area to be left to provide a seed source for native species (refer EER Part C Section 1 Flora & Fauna). | On-going | Prospect Timber & Landscape Supplies P/L |
| 7 | Continue to undertake regular Phytophthora monitoring (refer EER Appendix A Flora & Fauna Report). | On-going | Prospect Timber & Landscape Supplies P/L |
| 8 | Rehabilitate working areas as soon as practicable after mining the sand (refer as per Commitment 2 above). | On-going | Prospect Timber & Landscape Supplies P/L |
| 9 | Undertake survey for *Leucopogon virgatus var. brevifolius* after rehabilitation has occurred to ensure the species is successfully recolonising in areas it was previously recorded and if required undertake active rehabilitation (refer EER Appendix C Leucopogon management plan). | On-going | Prospect Timber & Landscape Supplies P/L |

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|---|---|---|---|
| 10 | Maintain strict quarry hygiene procedures including washdown procedures and no materials from other locations to be stored or dumped within the quarry area (refer EER Part C Section 1 Weed & Disease Management). | On-going | Prospect Timber & Landscape Supplies P/L |
| 11 | All solid waste to be removed from quarry site (refer EER Part C Section 8 Solid Wastes). | On-going | Prospect Timber & Landscape Supplies P/L |
| 12 | Implement Weed Management Plan to control and monitor weed species (refer EER Appendix E). | On-going | Prospect Timber & Landscape Supplies P/L |
| 13 | Sufficient quantity of “Envirosorb” matting to be kept onsite to absorb a substantial spill of up to 200litres (refer EER Part C Section 12 Dangerous Substances and chemicals) | On-going | Prospect Timber & Landscape Supplies P/L |
| 14 | Maintain & service equipment (refer EER Part C Section 14 Sustainability & Climate Change) | On-going | Prospect Timber & Landscape Supplies P/L |
| 15 | The provisions of the Aboriginal Heritage Act 1975 will be complied with (refer EER Part C Section 15 Cultural Heritage). | On-going | Prospect Timber & Landscape Supplies P/L |
| 16 | Any new observations of threatened flora and fauna species should be documented for monitoring purposes and records uploaded to the Natural Values Atlas (refer EER Appendix A Flora & Fauna Report). | On-going | Prospect Timber & Landscape Supplies P/L |

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# Appendix 1: Maps

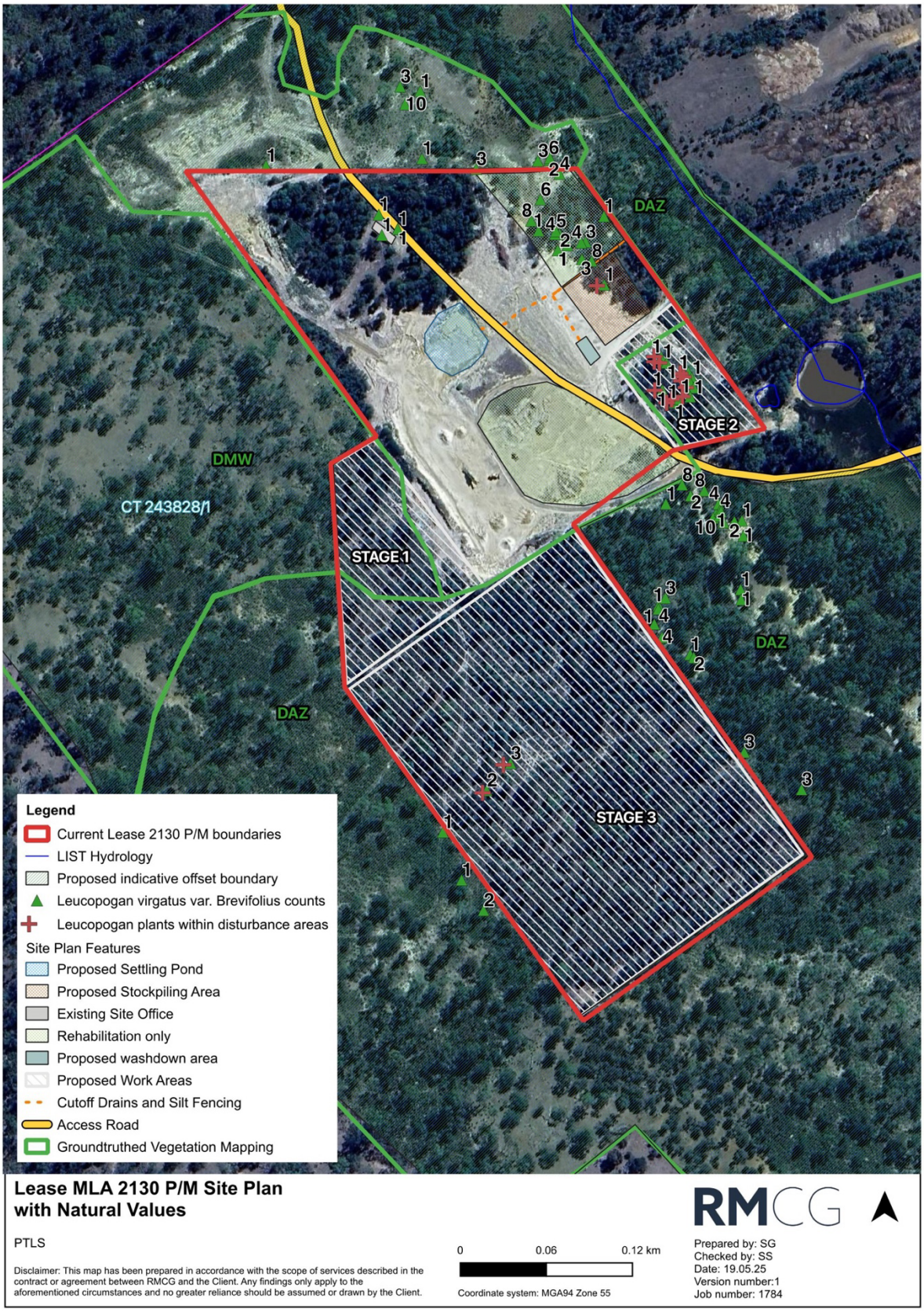


**Figure A1-1: Site plan depicting locations and counts of *Leucopogan virgatus var Brevifolius* subject to disturbance within operational areas.**

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**Document review and authorisation**

**Project Number: #1784**

| Doc Version | Final/Draft | Date | Author | Project Director review | BST QA review | Release approved by | Issued to |
|---|---|---|---|---|---|---|---|
| 1.0 | Final | 09/05/2025 | S. Gadsby | S. Annette | L. McKenzie | S. Annette | M. Hernyk<br>S. Graham |

Exhibited

Received
01/10/2025

# Department of State Growth
MINERAL RESOURCES TASMANIA

GDA

Tasmanian Government

## PLAN SUBJECT TO SURVEY


Coordinate Datum - GDA94 MGA Zone 55

| | | | |
|---|---|---|---|
| MUNICIPALITY: | NORTHERN MIDLANDS | SCALE: | 1:5,000 |
| VICINITY: | FOREST HALL ROAD (3.5KM SW OF CLEVELAND) | AREA: | 13 ha |
| MAP: | CONARA 1:25 000 | DATE: | 13/05/2024 |
| APPLICANT: | PROSPECT TIMBER AND LANDSCAPE SUPPLIES PTY LTD | | **2130P/M** |
| COMPILED FROM: | N/A | LAND DEMISED | |

## APPENDIX E

Prospect Timber and Landscaping Supplies (PTLS) – "Forest Hall" Cleveland Operations

Weed Management Plan

### Overview

Prospect Timber and Landscape Supplies Pty Ltd (PTLS) have been operating a retail/wholesale landscape and timber yard, located at 65 Meander Valley Highway, Prospect, since May 2005, and took over the mining operations at "Forest Hall" in March 2008 (Mining Lease 1711P/M), to enable us to cart sand to stock our retail yard at Prospect, and to supply wholesale bulk deliveries to other landscape yards and direct to customers.

One declared weed species slender thistle (*Carduus pycnocephalus)* has been recorded onsite and there are a number of declared weed species present in adjacent areas, including gorse (*Ulex europaeus*). PTLS is committed to managing any weed species which may emerge at the site in accordance with the site weed management plan. This weed management plan aims to specify the measures to prevent the establishment and spread of weeds at the Forest Hall operations site.

### Objective

The objectives of the weed management plan are to;

- Control any existing weeds and prevent further colonisation by weeds at the site.
- Prevent potential weed infestation from the site to surrounding native vegetation.
- Facilitate establishment and revegetation of the site by native species.

### Management plan

- PTLS will ensure site staff are educated on weed identification, particularly those weeds common to the region.
- PTLS will ensure site staff record any weeds identified within and immediately adjacent to the site.
- PTLS will isolate any identified areas where weed infestation has occurred until treatment is undertaken.
- PTLS will conduct ongoing site inspections to locate and identify any emerging weeds.
- In the case of identification of weeds listed under the *Tasmanian Biosecurity Act 2019* and associated Regulations (eg. gorse, *Ulex Europeaus* and slender thistle *Carduus pycnocephalus.*), they will be dealt with in accordance with the relevant Statutory Weed Management Plans for those species.
- In the case of identification of non declared weeds (eg. spear or scotch thistle, *Cirsium Vulgare*), PTLS will follow control guidelines as contained in the NRE Tas Invasive Species information for non declared agricultural weeds in Tasmania.
- PTLS will maintain records of vehicles travelling to and from the site and follow wash down procedures following the guidelines set by the DPIPWE (2015) *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania*.
- PTLS will monitor the site for weed emergence during the re-habilitation process and any weed treatment will follow control guidelines as contained in the NRE Tas Invasive Species

information for non declared agricultural weeds in Tasmania or in the case of declared weeds listed under the *Tasmanian Biosecurity Act 2019* and associated Regulations, they will be dealt with in accordance with the relevant Statutory Weed Management Plans for those species.

- PTLS will maintain the weed management plan as addressed in Commitment 7 of the Environmental Effects Report.

# TRAFFIC IMPACT ASSESSMENT

## MIDLAND HWY/FOREST HALL ROAD JUNCTION

## CLEVELAND

**March, 2012**

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Prospect Timber & Landscaping Supplies has applied for a licence amendment for a level 2 quarry operation, to increase production from an existing sand quarry located at Forest Hall Road, Cleveland, from 5000m3 to 20000m3. The proposal is to extract the sand at the pit and then transport it south via the Midlands Highway to the Milford Dam.

This report, prepared by Risden Knightley, an experienced traffic engineer, is provided as an assessment of the intersection of Forest Hall Road to Midlands Highway for inclusion with the Environmental Effect Assessment for the proposed operation.

## The Site

The site is an existing sand mine located along Forest Hall Road, Cleveland. At present it operates under a level 2 activity licence, with a limit on productivity not exceeding 5,000 m3. All access to the site is via the Midlands Highway.

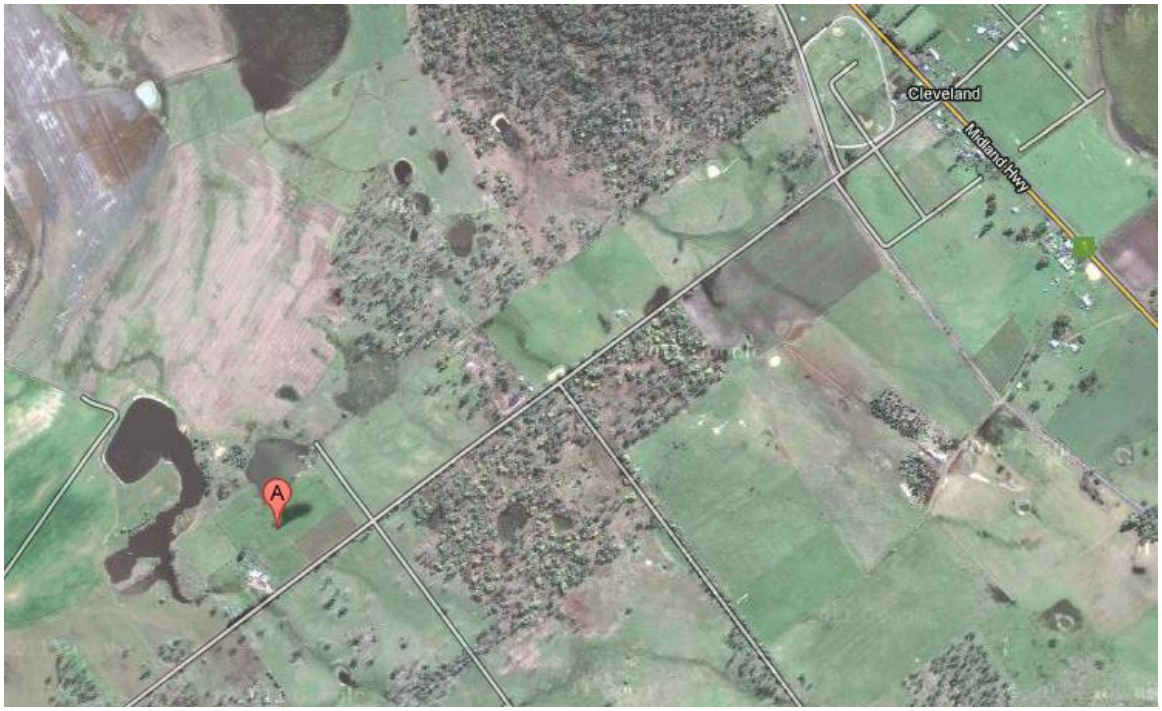



*Figure 1 – Aerial Photograph of Site*

## The Proposal

The proposal is to upgrade the quarry to a level 2 facility to specifically allow for the provision of some 20,000 cubic metres of material for the upgrading of the Milford Dam.

The cartage operation is proposed for the next twelve month period, with the cartage round time at two hours. The proposal is to provide for the loading of trucks individually at a single load site with a four minute load time. On the basis of a 2 truck fleet, indications are that potential cartage of up to 5 trips per day is likely.

## Midlands Highway

The section of Midlands Highway to which Forest Hall Road connects is categorised in the State Road Hierarchy as a Class 1 "Trunk Road". This section of Midlands Highway provides a link between Launceston and Hobart.

The Midlands Highway in the vicinity of the intersection is constructed with a sealed width of 7.5 metres with edge lines to provide 3.5 metre lanes, and a sealed shoulder on both sides of some 1.0 metre. Gravel verges and side drains are provided outside the carriageway with a large side drain north of the intersection of Midlands Highway and Forest Hall Road.

The intersection is located on a straight section of the Midlands Highway with profile as a downgrade of some 4% from north to south. The intersection is within the 80 km/hr rural speed zone. Signage and line marking of Forest Hall Road intersecting with Midlands Highway is controlled by give-way signs, and hold lines which are set back 2 metres from the edge of pavement line markings.

Accident data indicates no accidents over the last five years in the vicinity of the intersection.

Traffic count information indicates an ADT value of some 5647 vehicles, with traffic growth expected at 1.5% annually. Of this count 17.2% are commercial vehicles.

## Assessment

The location of the access to the level 2 quarry off Forest Hall Road suggests the travel route to/from Hobart to be north via Forest Hall Road to the Midlands Highway interchange, requiring right turn exits and left turn entry into Forest Hall Road.

The present access layout is satisfactory for right turn exit by rigid truck and trailer, but with left turn entry from Midlands Highway minor encroachment into the approach traffic lane on Forest Hall Road may occur.

The available sight time of some 10 seconds (average measured on site) from Midlands Highway suggests adequate clearance time for right turn exiting vehicles and for any left turn entry vehicles to assess approaching traffic conditions.

The sight time to the south provides a gap time to that direction in excess of 10 seconds and as such is satisfactory for heavy vehicles to exit the site to Midlands Highway.

The volume on Midlands Highway, estimated 2030 peak hourly volume up to some 230 vehicles with some 2 vehicles per hour for the sand quarry and peak hour 1 trip for the rest of the site, indicates no traffic service issues are likely.

The average headway for the truck movements exceeds the expected site occupancy time of 6 minutes suggests a minimal likelihood of trucks arriving / leaving the site access simultaneously *provided the commencement time at the sand quarry is scheduled to separate individual arrival times.*

The available approach sight distance to Forest Hall Road is considered satisfactory for the speed environment which is posted at 80km/hr speed limit.

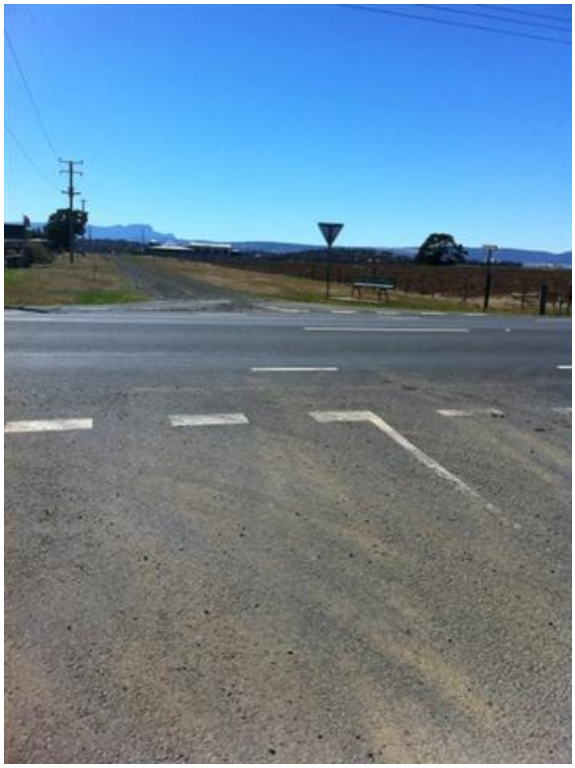
## Conclusion

The overall conclusion is that use of the existing access road of Forest Hall Road for the cartage of sand should have minimal impact on other users of Midlands Highway provided the start up times at the sand pit are scheduled to avoid queuing at the loading area. Due to the traffic volumes on Forest Hall Road being very low, and sight distance in excess of 250 metres, the minor encroachment is not scene as a concern.

March, 2012

## LOG OF PHOTOGRAPHS

*Forest Hall Road - looking north (Midlands Highway)*



*Forest Hall Road - looking across Midlands Highway*

*Looking down Forest Hall Road to site*

*Forest Hall Road - looking back to intersection*

*Open Drain – northern side of intersection*

*Forest Hall Road - looking south (Midlands Highway)*