

EPBC Act referral



Australian Government
Department of Agriculture, Water and the Environment

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| Title of proposal | 2021/8909 - South Marionoak Tailings Storage Facility, Rosebery, Tasmania |
| Section 1 | |
| Summary of your proposed action | |
| 1.1 Project industry type | Mining |
| 1.2 Provide a detailed description of the proposed action, including all proposed activities | <p>The proposed action is the construction and operation of a new Tailings Storage Facility (TSF) at South Marionoak (SMO) in proximity to Rosebery, Tasmania within the West Coast municipality (South Marionoak TSF). The South Marionoak TSF will form part of the MMG Rosebery mine operations and will allow for piping and disposal of tailings resulting from the processing plant.</p> <p>The proposed South Marionoak TSF will provide long term essential tailings storage for the Rosebery Mine. Rosebery Mine has operated continuously since 1936 as an underground polymetallic base metal mine with a capacity to produce up to 1,100,000 tonnes of ore per year. Rosebery produces zinc, copper and lead concentrates, as well as gold ore. The mine has used the Bobadil TSF, situated approximately 2.5 km north of the mine, and 2/5 Dam TSF situated approximately 1 km south of the mine. The TSFs are expected to reach capacity within the next few years, and a new TSF will be required to support the mine's ongoing operation.</p> <p>The South Marionoak TSF has been designed as an off-stream facility with storage volume of approximately 25 Mm³ and an anticipated lifespan of around 42 years (based on current tailings production rates).</p> <p>The overall project footprint of the South Marionoak TSF proposed development (the Site) is approximately 140 ha, comprising (refer to Appendix A, Fig2 and Fig3):</p> <ul style="list-style-type: none">• The South Marionoak TSF: around 75 ha;• The Polishing Pond: around 25 ha;• Borrow pits 1 and 3 located within the South Marionoak TSF footprint;• Borrow pit 2 (situated south of the TSF): around 40 ha; and• Other infrastructure such as pipelines, tracks, and outfall. <p>The South Marionoak TSF proposed development (the Proposed Development) is proposed to be located approximately 3.5 km west of the Rosebery mine site (Appendix A, Fig1). This location has been selected based on the findings of an extensive prefeasibility options study undertaken by KCB Consultants and pitt&sherry, which focused on a range of environmental and engineering investigations, for several potential TSF locations (refer to Appendix A, Fig5 and Section 8). The Proposed Development will include the following main components:</p> <ul style="list-style-type: none">• The TSF dam: This will commence with a 'starter dam' with capacity to store tailings for four years, and includes embankments, spillway, a decant structure and foundational arrangements. Thereafter, the embankment crest will be raised in stages each up to 2 m in height;• Borrow pits: To yield sufficient volumes of material for embankment construction for the life of the facility, a number of potential borrow pits will be investigated, with the preferred area(s) being chosen based on their location, material volumes, material quality, and potential to minimise environmental impacts. Appendix A, Fig3 indicates three potential borrow pit areas, with priority given to Areas 1 and 3 to minimise ground disturbance;• Pipeline network: A network of pressurised tailings delivery pipelines will be required to deliver the tailings from the processing operations to the crest of the TSF embankment. Tailings will be distributed along the TSF embankment for deposition. Appendix A, Fig2 indicates the most likely alignment for the tailings delivery pipeline, which may be modified following the results of topographical survey, potential ecological values and potential co-alignment with access tracks to minimise ground disturbance. Appendix A, Fig4 indicates the potential coalignment of pipeline and access tacks, which will be confirmed following further investigations;• Pipeline bridge: A bridge will be constructed to span the east-west width of Lake Pieman, from an abutment adjacent to the existing Pieman Pump Station. The bridge will support the following:<ol style="list-style-type: none">i. Tailings pipeline;ii. Pedestrian access;iii. Light Vehicles (to be confirmed); andiv. Power (to be confirmed). |



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- Polishing pond: This structure will be constructed downstream of the dam embankment; its function will be to capture precipitated material from the decant water prior to its discharge to the environment. The polishing pond will significantly improve the quality of the decant water prior to its eventual outfall to Lake Pieman;
- Access tracks: Predominantly for the construction phases of the proposed activity, the existing access track off Helilog Road will be used wherever possible, with minor modifications undertaken to improve road safety and plant manoeuvrability. However, additional tracks will be required for both construction and operational phase requirements. Indicative pipeline and access tracks are shown in Appendix A, Fig4, with final alignments to be confirmed following the results of topographical survey, potential ecological values and potential co-alignment with the tailings delivery pipeline to minimise ground disturbance. If the function of the pipeline bridge is extended to permit light vehicle (LV) access, the track network from the dam to the Pieman Road will be minimal during the operational phase;
- Pump station (location to be confirmed); and
- Outfall: new environmental outfall location, from which all operational water will report to the environment (Lake Pieman).

The current conceptual design and locations of proposed infrastructure are shown in Appendix A, Fig2 and Fig3.

TSF CONSTRUCTION MATERIAL

The TSF embankments will be constructed primarily of rock fill and glacial material. Rock fill will be sourced from one or more of the borrow options indicated in Appendix A, Fig3. Subsurface geotechnical investigations will determine the quantity, quality and availability of construction material from the proposed borrow pits. Construction material will be subjected to an initial screening process, and a bulk geotechnical and geochemical sampling procedure. This will assess its suitability for its placement in and around the various structures of the proposed facility.

Potentially Acid Forming (PAF) material will not be placed where it will be exposed to oxidation, which has the potential to result in further environmental impacts. Any material not deemed suitable for construction will likely be retained within the footprint of the TSF embankments where it will be consumed by tailings material, thereby minimising oxidation.

TAILINGS MATERIAL

The tailings material, that will be strategically discharged within the footprint of the dam embankments, has the potential to cause environmental harm if managed and stored inappropriately. Extensive geochemical investigations have and will be undertaken on tailings material to ensure the design of the facility and management of the tailings materials is undertaken appropriately and in accordance with ANCOLD and other relevant Guidelines. The design of the TSF and tailings management processes will include stability and self-sustaining requirements of the TSF's eventual closure and rehabilitation.

1.3 What is the extent and location of your proposed action?

See Appendix B

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

The project area is located 1km west of the town of Rosebery, approximately 25km north east of Zeehan and 109km south of Burnie, in the West Coast municipality.

The property consists of previously undeveloped land. The overall land is managed by Sustainable Timber Tasmania (STT, formerly Forestry Tasmania). The land is within Property Identifier (PID) 3388186. The property address is defined as Pieman Road, West Coast Tasmania 7469. The proposed project will be located wholly within Mining Lease 6M/2008. The mining lease incorporates part of Lake Pieman (Appendix A, Fig1). However, the proposed bridge would cross land owned by Hydro Tasmania and DPIPW.

The proposed TSF footprint is located on a riverine flat between two hills, to the west of Lake Pieman. The area is associated with McKimmie Creek, which flows westerly and discharges to Lake Pieman. The wider landscape is characterised by hills and steep slopes, dominated by Karlsons Knob and Mount Black to the east of the site.

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

The overall Proposed Development footprint comprises a total area of approximately 285 ha. The overall project



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investigation footprint, including all areas of disturbance (i.e. TSF, polishing pond, access road upgrade or development options, and potential borrow pit locations) consists of approximately 285 ha as shown in Appendix A, Fig1 to Fig4. The footprint of the actual tailings dam embankments, inundation area and polishing pond only consist of approximately 140 ha.

Additional natural values mapping and surveys will be undertaken to better define potential occurrences, vegetation communities and habitat as well as nests and dens. These will help inform the proposed overall disturbance and avoidance footprints and their relative proportions. Survey reports will be provided and summarised in the EIS to be submitted for the proposal

1.7 Proposed action location

Address - Pieman Road, West Coast, TAS, 7321, Australia

1.8 Primary jurisdiction

Tasmania

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

Yes No

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

Yes No

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

Yes No

1.10.1.0 Council contact officer details

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|---|-------------------------------|
| 1.10.1.1 Name of relevant council contact officer | Alison Shea |
| 1.10.1.2 E-mail | planning@westcoast.tas.gov.au |
| 1.10.1.3 Telephone Number | 03 6471 4700 |

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

| | |
|------------|------------|
| Start Date | 01/02/2023 |
| End Date | 01/12/2066 |

1.12 Provide details of the context, planning framework and state and/or local Government requirements

The proposed South Marionoak TSF Proposed Development triggers a range of environmental, planning and heritage assessment and approval requirements. The Proposed Development will require planning and environmental approval under the Tasmanian Land Use Planning and Approvals Act 1993 (LUPA Act).

The Proposed Development is being referred under the EMPC Act as a non-controlled action particular manner (refer to Sections 2.4 and 4).

PRINCIPAL APPROVALS

Under the Planning Scheme, a planning permit will be required for the development of the Project. The land is zoned Rural Resource under the West Coast Interim Planning Scheme 2013 (Planning Scheme). Mining (includes ancillary structures such as tailings dams), as an extractive industry, is a permitted land use under the planning scheme provided the land is not prime agricultural land. The land capability of the area is considered unlikely to be classed as prime agricultural land. Level 2 activities are not discretionary use and development.

Tasmania is transitioning to a new state-wide planning scheme and the local provisions proposed for West Coast Council area have been publicly exhibited. The new plan is expected to commence some time in 2021 and the relevant planning provisions may be those under the Tasmanian Planning Scheme. These provisions are fairly similar to the current scheme and there are no significant implications anticipated.

The EMPC Act classifies development activity depending on the environmental risk presented by the activity. A TSF is an activity associated with mining which is likely to be classified as a Level 2 activity under the EMPC Act. It is expected that the activity will be classified as either an extractive mining activity and/or waste depot for reception and disposal of mine waste



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material under the EMPC Act. Level 2 activities require referral to the Environment Protection Authority of Tasmania (the EPA) and assessment by the Board of the EPA. It is expected that a separate permit would be issued for the Proposed Development, instead of an amendment to existing permits. Any planning permit issued by the West Coast Council must include any conditions provided by the EPA. A Notice of Intent has been prepared and lodged with the EPA pursuant to section 27B of the EMPC Act. It is anticipated that an Environmental Impact Statement (EIS) will be required and that it will be prepared in accordance with general and project-specific guidelines issued by the EPA.

Indigenous heritage matters are to be assessed under the Aboriginal Heritage Act 1975 (Tas) (AH Act). A desktop Aboriginal and Historic Heritage Assessment was undertaken in September 2020 by Cultural Heritage Management Australia (CHMA) as part of the new TSF options analysis. The assessment indicated that the South Marion oak TSF Proposed Development Site area had a moderate potential for Aboriginal heritage sites to be present, with the most likely site types being open artefact scatters and isolated artefacts. Aboriginal Heritage Tasmania (AHT) completed a search of the Aboriginal Heritage Register (AHR) for the site and advised on March 5, 2021 that there are no recorded sites recorded within or close to the property. Accordingly, AHT have no objection to the project proceeding provided that it is guided by an Unanticipated Discovery Plan. However, MMG will still likely engage CHMA to undertake a field survey of the proposed site prior as part of the statutory approval process.

SECONDARY APPROVALS

The Tasmanian Nature Conservation Act 2004 (NC Act) lists threatened native vegetation communities in Tasmania. Generally, these communities do not directly translate to threatened ecological communities (TECs) listed under the EPBC Act, however, for the purposes of this referral, communities consistent with the species composition and habitat requirements of the TECs have been considered. Offsets may be required if areas of these communities are unavoidably impacted by a development. The NC Act also contains provisions for the conservation, taking and management of fauna and flora.

The Tasmanian Threatened Species Protection Act 1995 (TSP Act) identifies those species of flora and fauna considered to be threatened within the state. A Permit to Take is required to disturb these species or their habitats. Many of these species are also listed under the EPBC Act.

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

MMG understands the importance of best practice stakeholder and community engagement, and as such, maintains regular communications with many members of the local community and other key stakeholders.

To date, MMG has held meetings with:

- The Tasmanian Minister for Resources, Guy Barnett
- The Tasmanian Environment Protection Authority (EPA)
- The West Coast Council (WCC)

Further consultation will be undertaken with:

- Regulatory stakeholders including the EPA, Mineral Resources Tasmania (MRT) and WCC
- A wide range of community representative groups and local residents
- Potentially impacted landowners such as Hydro Tasmania (HT), Sustainable Timber Tasmania (STT) and Property Services (DPIPWE); and
- Environmental protection organisations such as the Bob Brown Foundation (BBF) and the Tarkine National Coalition (TNC).

A Stakeholder and Community Engagement Plan (SCEP) is currently being prepared and will document all potential stakeholders, the engagement strategy, and the way in which feedback is disseminated and responded to.

A desktop Aboriginal and Historic Heritage Assessment was undertaken in September 2020 by Cultural Heritage Management Australia (CHMA) as part of the new TSF options analysis. The assessment indicated that the South Marion oak TSF Proposed Development Site area had a moderate potential for Aboriginal heritage sites to be present, with the most likely site types being open artefact scatters and isolated artefacts. Aboriginal Heritage Tasmania (AHT) completed a search of the Aboriginal Heritage Register (AHR) for the site and advised on March 5, 2021 that there are no recorded sites recorded within or close to the property. Accordingly, AHT have no objection to the project proceeding provided that it is guided by an Unanticipated Discovery Plan. However, MMG will still likely engage CHMA to undertake a field survey of the proposed site prior as part of the statutory approval process.

If undertaken, the field survey will be undertaken with a team comprising an Aboriginal Heritage Officer (AHO) and an archaeologist. As required under the Tasmanian Aboriginal Heritage Act 1975, the resulting heritage assessment process will include Aboriginal community consultation. The consultation will be undertaken by the AHO and the outcomes will be



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documented within the Heritage Assessment report. On behalf of the proponent (MMG Ltd), the project archaeologist will meet with representatives from both Heritage Tasmania (HT) and AHT.

All community and stakeholder consultation will be summarised and documented within the EIS for the proposal. The EIA process under the EMPC Act will provide opportunity to the community and stakeholders to review and provide formal comment on the EIS.

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

No environmental impact statement (EIS) has been prepared. An EIS will be required to be submitted for assessment by the EPA (refer to Section 1.12 above) and the guidelines for the preparation of this will be issued by EPA in response to the Notice of Intent being lodged in parallel with this referral. A copy is provided in Appendix A as attachment Att1.

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

Yes No

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

Yes No



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Section 2

Matters of national environmental significance

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

Yes No

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

Yes No

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

Yes No

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

Yes No

Species or threatened ecological community

Threatened Fauna: There is potential for impact on threatened fauna species (refer to NBES, 2021 report, Appendix A of Att3), however none of the impacts are assessed as significant (refer to Impact section under 2.4.1). The threatened species include:

- Wedge-tailed eagle
- Masked owl
- Tasmanian devil
- Spotted tail quoll

Other threatened species, which are unlikely to be impacted are also discussed in the natural values report (Appendix A, Att3) which has been updated since the submission of the Notice of Intent (Appendix A, Att1). The most recent version includes commentary on the likelihood of the Curley Sandpiper being impacted by the proposed development (Appendix A, Att3, Table 3, p28).

The proponent, is electing for the proposal to be assessed as a non-controlled action, particular manner. Detailed mapping information, avoidance areas, etc. will be provided as part of the submission of the Environmental Impact Statement (EIS) to be issued for the proposal.

Impact

An EPBC Act Protected Matters Report (Att2) for the proposed development area identified the following Matters of National Environmental Significance (MNES) and other protected matters for further assessment of potential impact:

- One Listed Threatened Ecological Community;
- Ten Listed Threatened Species;
- Eight Listed Migratory Species; and
- Twelve Listed Marine Species.

Based on a desktop review, a Spring 2020 survey and a February 2021 helicopter survey of the area, North Barker Ecosystem Services (NBES, 2021) (refer to Appendix A, Att3) concluded that there is no evidence of threatened flora or threatened vegetation communities, and the likelihood of occurrence is considered low in the survey area within the Proposed Development footprint. The extent of vegetation communities or mapping units (TASVEG v 4.0) present on site is shown in Appendix A, Att3 (NVA Report), Figure 3, p19.



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Furthermore, NBES (2021) (Appendix A, Att3) have assessed that none of the impacts on threatened fauna species are considered to be significant. The summary is as follows:

- **Wedge-tailed-eagle:** a recorded Wedge-tailed eagle nest, and potentially suitable habitat have been mapped within 1 km line of sight of works; the nest may be within 500m of construction disturbance. A helicopter survey in February 2021 has not identified any other eagle nests in likely habitat within approximately 1km of the Proposed Development. The impacts on the nest location are currently considered to be indirect and not significant, as accepted management measures will be put in place to mitigate potential impacts.
- **Masked owl:** suitable but suboptimal nesting habitat has been identified. Impacts on masked owl are unlikely, as the species has not been observed in the vicinity of the Proposed Development.
- **Tasmanian devil:** the likely scale of impact to the habitat of the Tasmanian devil will not cause a significant impact given the sub optimal denning habitat currently known to exist within the Proposed Development Site. While it remains possible that one or more natal dens may be present in the disturbance footprint, no obvious preferred structure was identified during targeted surveys. Preclearance surveys will be required. Moderate constraint. An increase in roadkill caused by an increase in traffic on Pieman Road may cause a small loss of animals but will not affect dens.
- **Spotted tail quoll:** as the area does not support an 'important population' as defined under the EPBC Act, the Proposed Development is not expected to have a significant impact on the 'vulnerable' spotted-tailed quoll under the 'significant impact criteria'.
Additional Surveys

ADDITIONAL SURVEY WORK

NBES recognised that the ground survey of Spring 2020 and helicopter survey of February 2021 were limited in extent and recommended additional surveys to address seasonal and geographical gaps in the site investigation coverage. Recommendations are listed in Section 3.5 and Section 4, noting that further survey results will be documented in the EIS, which will also present proposed mitigation measures.

OTHER LISTED SPECIES

Birds listed as threatened under the protected matters report (Appendix A, Att2) include the following, none of which have been sighted or the site is not considered suitable habitat for the species:

- Grey Goshawk (*Accipiter novaehollandiae*)
- Azure kingfisher (*Ceyx azureus diemenensis*)
- Curlew sandpiper (*Calidris ferruginea*)
- White-throated needletail (*Hirundapus caudacutus*)
- Swift parrot (*Lathamus discolor*)
- Gould's petrel (*Pterodroma leucoptera leucoptera*)

White-bellied sea-eagle (*Haliaeetus leucogaster*), listed as vulnerable: terrestrial habitat on site would be suitable for very occasional foraging only, and no suitable nest habitat is present. The eagles nest recorded near the site could be used from time to time by this species.

Fish – The Australian grayling (*Prototroctes maraena*) is listed in the protected matters report (Appendix A, Att2), however NBES note that no suitable habitat occurs within the proposed footprint [or in Lake Pieman as it is dammed and the fish only occur in streams where there are no barriers to the sea].

2.4.2 Do you consider this impact to be significant?

Yes No

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

Yes No



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| 2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2.7 Is the proposed action likely to be taken on or near Commonwealth land? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2.9 Is the proposed action likely to have any direct or indirect impact on a water resource from coal seam gas or large coal mining development? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2.10 Is the proposed action a nuclear action? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2.11 Is the proposed action to be taken by a Commonwealth agency? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2.12 Is the proposed action to be undertaken in a Commonwealth Heritage place overseas? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2.13 Is the proposed action likely to have any direct or indirect impact on any part of the environment in the Commonwealth marine area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |



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Section 3

Description of the project area

3.1 Describe the flora and fauna relevant to the project area

The NBES report (Appendix A, Att3) describes the site to be comprised of typical western Tasmanian lowland vegetation and habitats on similar geologies, with vegetation communities or mapping units (TASVEG v 4.0) as follows:

- Tall rainforest (RMT)
- Short rainforest (RMS)
- Eucalyptus nitida forest over rainforest (WNR)
- Eucalyptus nitida forest over Leptospermum (WNL)
- Eucalyptus obliqua over rainforest (WOR)
- Buttongrass moorland with emergent shrubs (MBS)
- Western lowland sedgland (MSW)
- Leptospermum – Melaleuca swamp forest (NLM)

A summary of EPBC Act listed flora and fauna species recorded to be present within a 5 km radius of the site, or having potential to occur based on the EPBC habitat mapping and map showing the location of records for these species are provided in the NBES report (Appendix A, Att3).

The NBES report (Appendix A, Att3) described the habitats of native and threatened fauna, stating that they are typical of west coast wet forest and scrubs. The low abundance of prey and a few large predators is reported to be a reflection of the landscape not being very productive and of low nutrient status.

Refer to Section 2.4 and 2.5 for details of the significant birds and mammals that are known to be, or likely to be present and mammal habitat for significant faunal species but noted the habitat within the footprints to be suboptimal.

Further detailed assessment of threatened fauna and potential habitat of conservation significance and commitment to the implementation of mitigation measures will be provided as part of the submission of the Environmental Impact Statement (EIS) to be submitted.

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

Lake Pieman is a large hydroelectric impoundment, which is dammed over 40 kilometres downstream of the site and is part of Hydro Tasmania's extensive hydroelectric impoundments on the West Coast, including the upstream Lake Rosebery. Surface water streams around the site flow to these man-made lakes, which exploit large surface water catchment areas. The proposed project footprint is located on the western side of a large bend in Lake Pieman (refer to Appendix A, Fig1). The footprint is separated by McKimmie Creek which flows south-westerly towards Lake Pieman. The lake is subject to fluctuating water levels as a result of Hydro Tasmania activities. Therefore all design components of the infrastructure will be designed accordingly.

3.3 Describe the soil and vegetation characteristics relevant to the project area

GEOLOGY

The geological maps available for the South Marion oak site are from Mineral Resources Tasmania (MRT) 1:25,000. The site is defined by two large north to south oriented knolls that are separated by a north-south running fault, referred to as the Marion oak Fault.

The knolls comprise Owen Group marine sandstone-siltstone-conglomerate sequences. The site area also has a large continuous deposit of glacial and glaciogenic overburden, as well as localised alluvium. The glacial deposits represent geomorphology features of significance, which are discussed in Section 3.4.

ATC Williams undertook a field investigation in this area in 2009 as part of a feasibility study. This included 11 boreholes drilled to depths between 4.5 m and 21 m below ground level (mgb) and 31 test pits excavated to depths between 1.0 and 6.5 mgb. The investigations showed that the area underneath the embankment alignment, generally comprises layered alluvial and glacial deposits (clays, and silts with some cobbles and boulders) which are interpreted to be associated with periods of glacial expansion and retreat. The deepest sediments occur in the valley floor and are up to about 18.5 m thick. Shallow groundwater was encountered between 0.1 and 2.85 mgb. These results are consistent with geological mapping for the area.

SOIL



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No detailed soil mapping is available for the site area. Based on the ATC Williams field investigation (2009, summarised in Geology section above) the soil profile is expected to be fairly shallow and to overlie deep sedimentary sequences. The occurrence of acid sulphate soils (ASS) has been mapped via desktop probability assessment (The Land Information System of Tasmania (The LIST)) and no ASS soils are suggested for the site area.

Detailed geotechnical and geochemical investigations are being undertaken to characterise the potential for acid formation of each of the profile materials.

These results will assist with required management provisions around topsoil stripping, possible stockpiling and reuse for rehabilitation works.

VEGETATION CHARACTERISTICS

The site is characterised by thick rainforest in the northern half, and a mosaic of wet Eucalyptus forest and woodland communities, interspersed with sections of scrub and moorland in the southern half.

The flooding of Lake Pieman resulted in the immersion of stands of vegetation situated along the valley embankments.

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

The project area is located on the west coast of Tasmania on elevated land which is flanked by Lake Pieman on the northern, eastern and southern sides. Lake Pieman is a man-made feature, created when the Pieman River was dammed by Hydro Tasmania to create a water storage for power generation for the State.

A desktop assessment of geomorphology of the site, recorded the presence of a sequence of twelve moraine ridges and palaeochannels of the Pieman River which have highly significant values relating to its glacial and fluvioglacial history. Three of the moraine ridges are however noted to have been modified, with an existing access road cut through it (FPA, 2020). A similar glacial setting is reported to exist near Tullah (to the north east). Further consideration of the geomorphology of the site and mitigation measures for protection of the lateral moraine and terrace of Pieman River are to be included in the EIS.

3.5 Describe the status of native vegetation relevant to the project area

The NVA report (Appendix A, Att3) identified no threatened flora to be present within a 5km radius of the proposed development, and the likelihood of any occurring within the proposed development footprint is considered low.

The following additional investigations will be undertaken:

- Survey of existing and proposed access road and pipeline routes (including the bridge across the Pieman River) and any other proposed disturbance areas which have yet to be surveyed; and
- Investigation for late summer orchids (2021).

All survey findings will be presented within the EIS and any additional mitigation measures will be included as needed.

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

The site is located on the western side of Lake Pieman, within a riverine flat between two knolls. The western knoll reaches an elevation of over 280m above mean sea level, and the eastern knoll reaches to over 240m. McKimmie Creek drains through the site. Its headwaters are situated at around 160m elevation and it discharges to the south-west in Lake Pieman at an elevation of around 90m. The shores of Lake Pieman around the eastern and southern perimeter of the site are typically very steep-sided.

3.7 Describe the current condition of the environment relevant to the project area

The Site area comprises predominantly unaltered native vegetation, bisected by unsealed access roads and localised small areas associated historically with mining exploration and more recently utilised for site development investigations.

A survey of the site (NBES, 2021) (Appendix A, Att3):

- Observed no symptoms of disease caused by *Phytophthora cinnamomi*, despite the site occurring within viable ecological range and supporting susceptible vegetation communities and species. The pathogen is known to occur within 5 km of the site.
- Recorded no declared weeds within the surveyed area. The proximity to declared weeds near Rosebery however,



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makes the site susceptible to invasion once site disturbance occurs. Similarly, the risk of the introduction and myrtle wilt is exacerbated by disturbance with machinery.

A weed and hygiene management plan, based on DPIPWE Guidelines, will be developed for implementation during construction and operation (including long term monitoring and control).

3.8 Describe any Commonwealth Heritage places or other places recognised as having heritage values relevant to the project

There are no known Commonwealth heritage places on site.

A desktop historic heritage assessment, undertaken in September 2020 by Cultural Heritage Management Australia (CHMA, 2020), indicated that due to lack of historic development on the west side of the Pieman River there was a low likelihood of historic features being present on site. However, MMG will still likely engage CHMA to undertake a field survey of the proposed site prior as part of the statutory approval process.

3.9 Describe any Indigenous heritage values relevant to the project area

A desktop Indigenous heritage assessment, undertaken in September 2020 by CHMA indicated that the site had a moderate potential for Aboriginal heritage sites to be present, with the most likely site types being open artefact scatters and isolated artefacts.

Aboriginal Heritage Tasmania (AHT) completed a search of the Aboriginal Heritage Register (AHR) for the site and advised on March 5, 2021 that there are no recorded sites recorded within or close the property. Accordingly, AHT have no objection to the project proceeding provided that it is guided by an Unanticipated Discovery Plan. However, MMG will still likely engage CHMA to undertake a field survey of the proposed site prior as part of the statutory approval process, the findings of which will be presented in the EIS.

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

The Site area has a public land classification and tenure listing as Permanent Timber Production Zone Land, Hydro Electric Corporation and Crown Land.

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

The land is currently only being used for mineral exploration purposes and background studies for the proposed development.

Known proposed uses relate only to this proposal as outlined in Section 1.2, potential future mining activities underground and forestry activities during vegetation clearance for the proposed project.



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 4

Measures to avoid or reduce impacts

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

As noted in Section 2.4, desktop and site surveys undertaken by NBES (2020) in Spring 2020 and February 2021 have noted potential for impact on the following fauna species, though as noted in Section 2.4, the impact is not considered significant:

- Wedge-tailed eagle
- Spotted tail quoll
- Tasmanian devil
- Masked owl

SURVEYS

The NBES report (Appendix A, Att3) also noted that a number of additional surveys will be required as part of the detailed assessment to be undertaken for the EIS. These include:

- The pipeline route and bridge across the Pieman River and any other outstanding elements require assessment for flora and fauna values.
- A late summer survey is required for flowering orchids. This will be undertaken in late February 2021. If present they are most likely to be a species listed as rare and disturbance will require a Permit to take under the TSPA. NBES (2021) noted it is unlikely that EPBC-listed orchids would be discovered in this habitat.
- Modelled eagle nest habitat to the northwest of the TSF will need to be searched for nests (as a preclearance/pre-disturbance survey). This will be done using a helicopter. It is noted that the recorded nest could be used by either Wedge-tailed eagles or White-bellied sea eagles.
- Preclearance survey(s) for Tasmanian devil dens will be required.
- Development of a weed and pathogen management strategy and implementation plan for the construction and operation of the Proposed Development will be required.

POTENTIAL MITIGATION MEASURES

A preliminary list of measures which are likely to be required for the proposal include the following. These will be further identified and detailed within the EIS:

- An eagle nest management plan may need to be developed to allow for disturbance works to be undertaken outside of the July to February breeding season, and to provide procedures for activity monitoring of known eagle nests, within 1 km radius from any disturbance which may occur during the breeding season.
- An assessment of the risk of TSF and polishing pond waters on potential migratory and wader birds.
- Preclearance survey(s) for Tasmanian devil and spotted tail quoll dens will be required.
- Preclearance survey(s) for possible masked-owl nesting trees may be required.
- A weed and pathogen management strategy and implementation plan will be developed for the construction and operation of the proposed development.
- Traffic hours, and speed management may be required if mammals could be impacted on roads.
- Construction Environmental Management Plan.
- Operational Environmental Management Plan.

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

None of the likely assessed impacts on threatened species or communities protected by the EPBC Act are considered to be significant (refer to Section 2.4). However, as noted in Section 4.1, pre-clearance surveys and management plans will be put



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

in place to mitigate potential impacts. Objectives and proposed environmental outcomes will be outlined in the two overarching management plans, listed below. These do not preclude the requirements for specific management plans to be prepared. Such plans include monitoring, reporting and review requirements which assess performance against objectives and provide mechanisms for measures to be revised and improved where required.

- Construction Environmental Management Plan.
- Operational Environmental Management Plan.



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 5

Conclusion on the likelihood of significant impacts

5.1 You indicated the below ticked items to be of significant impact and therefore you consider the action to be a controlled action

- World Heritage properties
- National Heritage places
- Wetlands of international importance (declared Ramsar wetlands)
- Listed threatened species or any threatened ecological community
- Listed migratory species
- Marine environment outside Commonwealth marine areas
- Protection of the environment from actions involving Commonwealth land
- Great Barrier Reef Marine Park
- A water resource, in relation to coal seam gas development and large coal mining development
- Protection of the environment from nuclear actions
- Protection of the environment from Commonwealth actions
- Commonwealth Heritage places overseas
- Commonwealth marine areas

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

Based on a desktop review, a Spring 2020 survey and a February 2021 helicopter survey of the area, North Barker Ecosystem Services (NBES, 2021) (refer to Appendix A, Att3) concluded that there is no evidence of threatened flora or threatened vegetation communities, and the likelihood of occurrence is considered low in the survey area within Proposed Development footprint. The extent of vegetation communities or mapping units (TASVEG v 4.0) present on site is shown in Appendix A, Att3 (NVA Report), Figure 3, p19.

Furthermore, NBES (2021) (refer to Appendix A, Att3) have assessed that none of the impacts on threatened fauna species are considered to be significant. The summary is as follows:

- **Wedge-tailed-eagle:** a recorded Wedge-tailed eagle nest, and potentially suitable habitat have been mapped within 1 km line of sight of works; the nest may be within 500m of construction disturbance. A helicopter survey in February 2021 has not identified any other eagle nests in likely habitat within approximately 1km of the Proposed Development. The impacts on the nest location are currently considered to be indirect and not significant, as accepted management measures will be put in place to mitigate potential impacts.
- **Masked owl:** suitable but suboptimal nesting habitat has been identified. Impacts on masked owl are unlikely, as the species has not been observed in the vicinity of the Proposed Development.
- **Tasmanian devil:** the likely scale of impact to the habitat of the Tasmanian devil will not cause a significant impact given the sub optimal denning habitat currently known to exist within the Proposed Development Site. While it remains possible that one or more natal dens may be present in the disturbance footprint, no obvious preferred structure was identified during targeted surveys. Preclearance surveys will be required. Moderate constraint. An increase in roadkill caused by an increase in traffic on Pieman Road may cause a small loss of animals but will not affect dens.
- **Spotted tail quoll:** as the area does not support an 'important population' as defined under the EPBC Act, the Proposed Development is not expected to have a significant impact on the 'vulnerable' spotted-tailed quoll under the 'significant impact criteria'.

None of the likely assessed impacts on threatened species or communities protected by the EPBC Act are considered to be significant (refer to Section 2.4). However, as noted in Section 4.1, pre-clearance surveys and management plans will be put in place to prevent and mitigate potential impacts. Objectives and proposed environmental outcomes will be outlined in the two overarching management plans, listed below. Such plans include monitoring, reporting and review requirements which assess performance against objectives and provide mechanisms for measures to be revised and improved where required. The plans are expected to be included as conditions under the EPA permit.

- Construction Environmental Management Plan.
- Operational Environmental Management Plan.



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 6

Environmental record of the person proposing to take the action

6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Explain in further detail

MMG has a proven record of responsible environmental management through its environmental policy and procedures. MMG is committed to responsible environmental and social performance and effective governance of its operations. It and its staff operate under its Safety, Security, Health, Environment and Community (SSHEC) Policy (Appendix A, Att4). MMG submitted a NOI to the Tasmanian EPA (appendix A, Att1). An EIS will be prepared and submitted which will address the requirements outlined in the Project Specific Guidelines to be issued for proposal by the Tasmanian EPA. MMG will carry out its TSF operations in accordance with the permits and conditions issued for the activity under:

- The Tasmanian LUPA Act, and
- The Tasmanian EMPC Act.

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

No.
Since the transfer of MMG Australia Limited from the Oz Minerals Group to the MMG Group in 2009, MMG Australia is not aware of any court or tribunal proceedings having been undertaken under Commonwealth, State or Territory law against MMG Australia Limited that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

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

Yes No

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

MMG is committed to responsible environmental and social performance and effective governance of its operations. It and its staff operate under its Safety, Security, Health, Environment and Community (SSHEC) Policy (MMG, June 2019). A copy of the policy is attached in Appendix A, Att4. MMG has a proven record of responsible environmental management through its environmental policy and procedures.

As outlined in Section 1.4 of this referral, MMG has lodged an NOI with the Tasmanian EPA. An EIS will be issued which will address the requirements outlined in the Project Specific Guidelines to be issued for proposal by the Tasmanian EPA.

MMG will carry out its TSF operations in accordance with the permits and conditions issued for the activity under:

- The Tasmanian LUPA Act, and
- The Tasmanian EMPC Act.

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

Yes No



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 7

Information sources

Reference source

EPBC Act Protected Matters Report [PMST_K76W6A] for the proposed project area issued 12/01/21 at 14:59:05

Reliability

Good

Uncertainties

Any uncertainties that may exist would relate to the EPBC Act protected matters database

Reference source

MMG Rosebery Proposed Tailings Storage Facility Flora and Fauna Habitat Assessment, by North Barker Ecosystem Services, for MMG, May 2021

Reliability

Good

Uncertainties

Uncertainties relate to:

- Occurrences of summer flowering orchids, unlikely to be EPBC listed;
- Natural values in several additional disturbance footprints (e.g. new tracks, pipeline corridor and borrow pit to the southeast of the proposed development area) which will be assessed in a subsequent survey;
- Occupation of one known eagle nest at time of proposed works – will be addressed by pre-disturbance survey;
- Presence of and occupation of Tasmanian devil dens – will be addressed by pre-clearance / pre-disturbance survey.

Reference source

Notice of Intent, South Marionoak Tailings Storage Facility, issued by pitt&sherry for MMG Ltd, 18 February 2021

Reliability

Good

Uncertainties

Uncertainties relate to the NOI being a high level preliminary information document only. Studies to be undertaken to support the case for assessment via an EIS will provide a much higher level of certainty

Reference source

Natural Values Report (20210430)

Reliability

Good

Uncertainties

Survey limited to footprint of tailings dam and polishing pond only. Field survey excluded the area proposed for one borrow pit option to south east of proposed development site. However, the report described likelihood of MNES occurring in the remainder of the proposed development site.



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 8

Proposed alternatives

Do you have any feasible alternatives to taking the proposed action?

Yes No

8.0 Provide a description of the feasible alternative

OPTION: NO NEW TSF

Rosebery mine tailings production trends indicate both the Bobadil and 2/5 Dams' capacities will be exhausted around 2024. An alternative TSF is required to be commissioned prior to 2024 to ensure operation continuity.

Placement of tailings material in redundant underground voids has been considered by the operator but has been deemed unfeasible.

Without a TSF, Rosebery mine would need to close.

NEW TSF OPTIONS

An extensive prefeasibility options study (PFS-A) was undertaken by KCB Consultants and pitt&sherry. Four (4) potential future TSF options were assessed, with the preferred option being the South Marionoak site (the subject of this referral) and second potentially feasible option being Natone Creek (discussed in section 8).

The four locations investigated included those shown in Appendix A, Fig 5.

8.1 Select the relevant alternatives related to your proposed action

- Timeframes
 Locations
 Activities

8.4 Provide a brief physical description of the property on which the alternative proposed action will take place and the project location (e.g. Proximity to major towns, or for off-shore projects, shortest distance to mainland)

Natone Creek alternative TSF location is situated mid catchment within the north-draining Natone Creek valley. The valley is bounded by three hills, including Westcott Hill to the west. The valley narrows towards the north-east.

The site would be accessed by Williamsford Road which runs along the eastern boundary of the site. The location is approximately 3kms southwest of the township of Rosebery and approximately 3.7kms southwest of the Rosebery mining operation.

The location is characterised by historically-prospected and mined land, situated between hills, dissected by drainage lines which feed to Natone Creek. The land is densely vegetated by rainforest.

Williamsford Road runs to the east of the proposed footprint. The Murchison Highway and the Tasmanian Railways (TasRail) Melba Line are situated 1.6kms north of the proposed TSF site, where they cross Natone Creek before it discharges to Lake Pieman.

There is a cemetery to the north of the proposed TSF footprint.

8.5 What is the size of the development footprint or work area of the alternative?

Approx. 50 ha (29-year life) plus 25 ha for extra infrastructure

8.6 Describe the location

Lot - The address is referred to as Murchison Highway, West Coast, Tasmania 7467, within PID 3388012

8.7 Is there a different local government area and council contact for the alternative?

Yes No



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

8.8 Provide details of the context, planning framework and State/Local Government requirements

The planning framework for Natone Creek is broadly similar to that of South Marionoak, described in Section 1.12, other than that fact that Natone Creek is not expected to require referral under the EPBC Act.

8.9 Describe any public consultation that has been, is being or will be undertaken (including with Indigenous stakeholders)

Discussions have been held with both of the exploration lease (EL) holders. MMG will maintain communication with both parties. The Natone Creek site was discussed during meeting with regulators as part of the discussions pertaining to the South Marionoak site.

8.10 Describe any environmental impact assessments that have been, is being or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project for the alternative

As noted in Section 1.12, the South Marionoak TSF proposal will be assessed under the LUPA Act and the EMPC Act. A NOI has been issued for the proposed TSF development at South Marionoak (Appendix A, Att1). The South Marionoak TSF proposal is expected to be classified as a Level 2 development, which will require the assessment to be supported by an EIS. Natone Creek TSF development alternative will be detailed within the South Marionoak TSF EIS.

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

Yes No

8.12 Nominate any matters of National Environmental Significance that are likely to be impacted by this alternative proposal by ticking the relevant checkboxes

Listed threatened species or any threatened ecological community

8.12.1 Provide further information on potential impacts of matters of environmental significance that you have nominated above

Refer to Section 8.13 and Section 8.17.

8.13 Describe any impacts on the flora and fauna relevant to the alternative proposal

ADE Consulting's findings (February 2021) from their ecological survey within the proposed TSF footprint at Natone Creek included the following:

- Provided the recommended mitigation measures are implemented, the proposed development will not result in any significant impacts to any flora or fauna species listed the Commonwealth EPBC Act or the Tasmanian TSP Act or any threatened ecological community (TEC) identified under the EPBC Act or the NC Act.
- No other TEC's identified under either the Commonwealth EPBC Act or the Tasmanian NC Act were identified within the Study Area.
- Despite targeted surveys, no threatened flora species were observed within the Study Area.
- Seven threatened fauna species were identified as being likely to occur within the Study Area from this assessment, including:

BIRDS

- o *Aquila audax fleayi*: Wedge-tailed eagle
- o *Hirundapus caudacutus*: White-throated Needletail
- o *Accipiter novaehollandiae*: Grey Goshawk
- o *Tyto novaehollandiae*: Masked owl

MAMMALS

- o *Dasyurus maculatus*: Spotted-tailed quoll
- o *Dasyurus viverrinus*: Eastern quoll
- o *Sarcophilus harrisi*: Tasmanian devil

• No threatened fauna was recorded within the Study Area, during the field surveys. Several important fauna habitat features were however observed during the field survey consisting of:

- o a number of hollow bearing trees,
- o hollow logs, and



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- o the riparian habitats associated with a number of small drainage features.
- Three 'Declared' weeds listed under the Tasmanian Weed Management Act 1999 were identified within the Study Area.
- Four weeds of National significance (WoNS) were identified within the Study Area.

ADE (2021) concluded that provided the recommended mitigation measures are implemented, the proposed development will NOT result in any significant impacts to any flora or fauna species listed under the Commonwealth EPBC Act or the Tasmanian TSP Act or any threatened ecological community identified under the EPBC Act or the NC Act.

8.14 Describe the hydrology relevant to the alternative proposal (including water flows)

The TSF site would be located within the wider portion of the Natone Creek valley. The valley is fed by a large number of short drainage lines which dissect the surrounding hills. The overall catchment of Natone Creek is approximately 4km long by 2km wide in the southern half, and approximately 500 m wide in the northern half of the catchment.

Natone Creek is understood to have a reasonably low flow (refer to Section 8.22) (PFS-A, November 2020), which is likely to be ephemeral and dominated by rainfall recharge.

Although the creek and valley supports a rainforest eco-system, the water quality is expected to be impacted by historic mining activity and disturbance.

8.15 Describe the soil and vegetation characteristics relevant to the alternative proposal

The PFS-A assessment identified that the valley floor consists of undifferentiated glacial and glaciogenic deposits, formed on conglomerate and dolomitic sedimentary bedrock. Despite the presence of the dolomitic mudstone, there is no documented karst development nor any associated landforms from the LiDAR survey. Hence any karst development is considered unlikely.

The soil development and characteristics are not well documented.

The site is densely vegetated with a mix of rainforest and related scrub species.

8.16 Describe any outstanding natural features and/or unique values relevant to the alternative proposal

The PFS-A notes that there appear to be minor eskers on the western side of the valley which would warrant scientific study but would not prevent construction. An esker is a long ridge of gravel and other sediment, deposited by meltwater from a retreating glacier or ice sheet.

The Natone Creek site is part of the West Coast rainforest vegetated areas situated on the south side of Lake Pieman.

8.17 Describe the remnant native vegetation relevant to the alternative proposal

VEGETATION COMMUNITIES

The Study Area was found to be surrounded by predominantly vegetated lands. A number of vegetated communities were verified as occurring on and adjacent to the Study Area including:

- (RMT) Nothofagus-Atherosperma rainforest
- (RMS) Nothofagus-Phyllocladus short rainforest
- (RML) Nothofagus-Leptospermum short rainforest; and
- (WNR) Eucalyptus nitida forest over rainforest.

Two Commonwealth-listed Threatened Ecological Communities (TECs) were reported as 'likely to occur within area', in the Protected Matters Search tool report within the Natone Creek area. Neither of the communities, listed below, were noted within the Study Area during the January 2021 survey:

- Lowland native Grasslands of Tasmania; and
- Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (Eucalyptus ovata / E. brookeriana).

No Commonwealth Threatened Ecological Communities (TECs) as identified within the EPBC Act were found to occur within the Study Area.

The Threatened Ecological Community Athrotaxis selaginoides subalpine scrub (a component of the broader Leptospermum forest community) is mapped as occurring less than 1km from the Study Area. This vegetation type is listed as a Threatened Ecological Communities under the NC Act 2002. This community was not found within the Study Area.



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

No Threatened Native Vegetation Communities identified under the Tasmanian Nature Conservation Act 2002 were identified during the field survey of the Study Area.

FLORA SPECIES

No threatened flora species were recorded during the field survey.

One species of fungus was identified within the foliage of trees on the edge of Study Area. Due to the poor quality of the specimen collected, it could not be formally identified. There is an endangered fungus *Roccellinastrum neglectum* that has been recorded to the north of the Study Area. Further collections should be made to confirm the identity of the specimen collected.

8.18 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the alternative proposal

The base of the TSF would be located at around 250m AHD, and the top would reach to around 280m AHD for the 29-year life.

8.19 Describe the current state of the environment relevant to the alternative proposal

The land within the proposed TSF footprint at Natone Creek consists predominantly of *Nothofagus* rainforest which has previously been disturbed by historical prospecting and small-scale mining.

Williamsford Road provides access to the eastern boundary of the site. The road has a sealed width of approximately 5 metres.

Natone Creek and its tributaries drain northwards and discharge to Lake Pieman approximately 2 km north of the proposed TSF.

Several mineral occurrences are reported within the northern extent of the TSF footprint and to the north of the footprint. Mineral Resources Tasmania (MRT) database refers to them as Natone P.A., South Glenfine and Glenfine Mine. Natone P.A. produced gold in the late 1800s and the Glenfine Mine was a source of pyrite. Both were abandoned a long time ago and their locations are uncertain.

The ecological survey undertaken in January 2021 by ADE Consulting Group (ADE, February 2021) noted the presence of several declared weeds listed under the Tasmanian Weed Management Act 1999, which suggests prior disturbance of the site area. All four weed species are listed as Weeds of National Significance (WoNS). These included:

- *Cotoneaster* sp.
- *Erica lusitanica*: Spanish heath
- *Rubus fruticosus*: blackberry
- *Ulex europaeus*; gorse

8.20 Describe any Commonwealth Heritage places or other places recognised as having heritage values relevant to the alternative proposal

A desktop review of known and likely heritage values and places within the Natone Creek TSF footprint was undertaken by CHMA (2020).

The findings of the desktop study noted: 'One historic feature has been recorded within the east portion of the Natone Creek TSF footprint, this being the Williamsford-Rosebery cemetery, and it is assessed that there is a moderate potential for additional historic heritage features to be present within the Natone Creek TSF option.'

8.21 Describe any Indigenous heritage values relevant to the alternative proposal

A desktop review of known and likely Aboriginal heritage values and places within the Natone Creek TSF footprint was undertaken by CHMA (2020).

The findings of the desktop study noted: 'It is assessed that there is a low-moderate to moderate potential for Aboriginal heritage sites to be present across the majority of the Natone Creek TSF footprint, with the most likely site types being open artefact scatters and isolated artefacts.'

8.22 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the alternative proposal

The Natone Creek site is situated within a land parcel identified as Property ID 3388012 and is owned by the then Forestry Tasmania, now referred to as Sustainable Timber Tasmania. The land is situated within a Permanent Timber Production



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Zone.

The proposed footprint is straddled by two different exploration licenses, EL2/2020 (Gillies Resources Pty Ltd) and EL12/2017 (Argent Minerals Limited). Both ELs are for Category 1 commodities, i.e. metals. The footprint is in close proximity to the MMG Mining Lease 28M/1993.

8.23 Describe any existing or any proposed uses relevant to the alternative proposal

The Natone Creek proposed TSF footprint is not currently being used for any formal purposes. It is classified as forestry land and was previously subject to mineral prospecting and small-scale mining. It is currently located within two mineral exploration leases.

The Rosebery-Williamsford cemetery is located along the northern edge of the proposed footprint. Williamsford road runs along the eastern side of the proposed TSF footprint.

8.25 Do you have another alternative?

Yes No



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 9

Person proposing the action

9.1.1 Is the person proposing the action an organisation or business?
 Yes No

Organisation

| | |
|--|--|
| Organisation name (as registered for ABN/ACN) | MMG AUSTRALIA LIMITED |
| Business name | |
| ABN | 23004074962 |
| ACN | |
| Business address | 28 Freshwater Place, Level 23, Southbank, 3006, VIC, Australia |
| Postal address | |
| Main Phone number | 03 9288 0888 |
| Fax | |
| Primary email address | info@mmg.com |
| Secondary email address | |

9.1.2 I qualify for exemption from fees under Regulation 5.23(1)(ii) of the EPBC Regulations because I am:
 Small business
 Not applicable

9.1.2.2 I would like to apply for a waiver of full or partial fees under Regulation 5.21A of the EPBC Regulations
 Yes No

9.1.3 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation)

| | |
|------------------------|---|
| First name | Robert |
| Last name | Walker |
| Job title | General Manager – Rosebery Mine |
| Phone | 03 6473 2722 |
| Mobile | 0438 525 022 |
| Fax | |
| Email | Robert.Walker@mmg.com |
| Primary address | 7 Hospital Road, Rosebery, 7470, TAS, Australia |
| Address | |

Declaration: Person proposing the action (To be signed by the person at 9.1.3)

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

Signature: Date: 10/05/2021

I, Robert Walker, the person proposing the action, consent to the designation of Robert Walker as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature: Date: 10/05/2021



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Proposed designated proponent

9.2.1 Is the proposed designated proponent an organisation or business?
 Yes No

Organisation

Organisation name (as registered for ABN/ACN) MMG AUSTRALIA LIMITED

Business name

ABN 23004074962

ACN

Business address 28 Freshwater Place, Level 23, Southbank, 3006, Victoria, Australia

Postal address

Main Phone number 03 9288 0888

Fax

Primary email address info@mmg.com

Secondary email address

9.2.2 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation)

First name Robert

Last name Walker

Job title General Manager - Rosebery Mine

Phone 03 6473 2722

Mobile 0438 525 022

Fax


Email Robert.Walker@mmg.com

Primary address 7 Hospital Rd, Rosebery, 7470, TAS, Australia

Address


Declaration: Proposed Designated Proponent

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

Signature:  **Date:** 10/05/2021



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

| Referring party (person preparing the information) | |
|--|---|
| 9.3.1 Is the referring party an organisation or a business? | |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| Organisation | |
| Organisation name (as registered for ABN/ACN) | PITT & SHERRY (OPERATIONS) PTY. LTD. |
| Business name | pitt&sherry |
| ABN | 67140184309 |
| ACN | |
| Business address | 113 Cimitiere Street, Level 1, Launceston, 7250, TAS, Australia |
| Postal address | |
| Main Phone number | 03 6210 1400 |
| Fax | |
| Primary email address | info@pittsh.com.au |
| Secondary email address | |
| 9.3.2 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation) | |
| First name | David |
| Last name | Lenel |
| Job title | Principal Environmental Scientist |
| Phone | 0419 249748 |
| Mobile | |
| Fax | |
| Email | dlenel@pittsh.com.au |
| Primary address | 199 Macquarie St, Level 1, Hobart, 7000, TAS, Australia |
| Address | |
| Declaration: Referring party (person preparing the information) | |
| I, <u>David Lenel</u> , declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. | |
| Signature:  | Date: 10.05.2021 |



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

| Appendix A | |
|-----------------------------|--|
| Attachment | |
| Document Type | File Name |
| action_area_images | Fig 2-Dam and Polishing Pond Location.pdf |
| action_area_images | Fig 3-Proposed Borrow Pits Options.pdf |
| action_area_images | Fig 4-Proposed New Access Roads.pdf |
| action_area_images | Fig 1-Mining Leases and Location.pdf |
| action_area_images | Fig 5-TSF Alternative Locations Assessed.pdf |
| govt_approval_conditions | Att1-SMO-NOI-18Feb2021.pdf |
| public_consultation_reports | NOT PUBLISHED Att3-CHMA Desktop Heritage Assessment-SMO_16Sep2020.pdf |
| supporting_tech_reports | Att2-PM Search Report SMO-PMST_K76W6A.pdf |
| flora_fauna_investigation | Att3 - NVA Report20210430.pdf |
| corp_env_policy_docs | Att4-SSHEC Policy.pdf |

| Appendix B |
|----------------------------------|
| Coordinates |
| Area 1 |
| -41.756908421615,145.50367459617 |
| -41.75639619776,145.5086527761 |
| -41.76497540809,145.51062688193 |
| -41.769072536647,145.51277264915 |
| -41.770288821318,145.51431760154 |
| -41.770864948114,145.51878079734 |
| -41.770672906424,145.52152737937 |
| -41.771441069735,145.52144154868 |
| -41.771505082929,145.51963910422 |
| -41.774257589842,145.52023991904 |
| -41.778930179941,145.51938161216 |
| -41.781746371184,145.51775082908 |
| -41.781298349032,145.51363095603 |
| -41.780274286644,145.50848111472 |
| -41.780210282202,145.50358876548 |
| -41.779890259032,145.50247296653 |
| -41.774961700545,145.50049886069 |
| -41.765103447318,145.50144299827 |
| -41.756908421615,145.50367459617 |