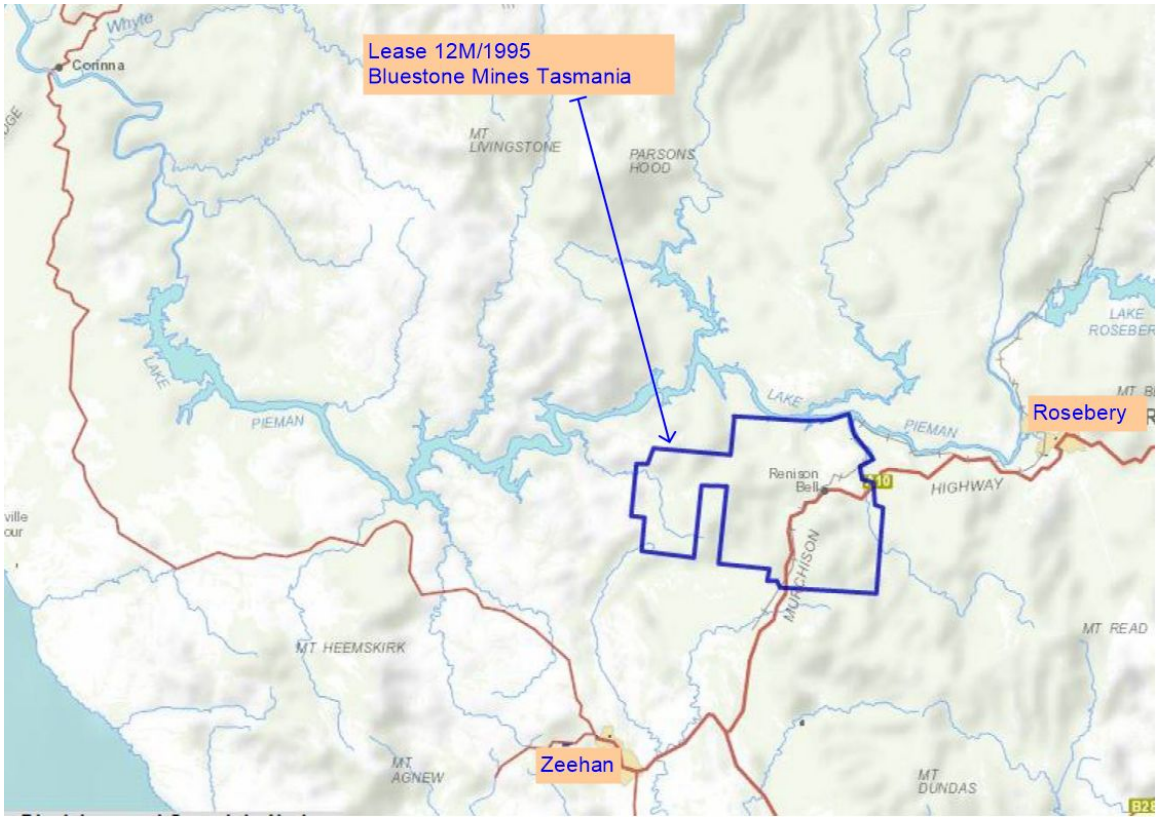
Bushfire Report

Bluestone Mines Tasmania Joint Venture (BMTJV) Pty Ltd

Paste Backfill Plant, Renison Bell, Tasmania.

January 2021



Report compiled by Anthea Fergusson B.Sc.
Bushfire Hazard Practitioner. Accreditation number: BFP-125

Table of Contents

EXECUTIVE SUMMARY 3
1.0 INTRODUCTION 3
2.0 SITE DESCRIPTION 4
Figure 1: Proposed Paste Backfill Plant development footprint and proximity to the existing Tin Process Plant (NOI 2020) 4
Figure 2: View of the semi-decommissioned core shed and machinery lay down area. 5
Figure 3: View of the semi-decommissioned core shed and machinery lay down area. 5
3.0 FIRE RISK IDENTIFICATION 6
4.0 REFERENCES 8

EXECUTIVE SUMMARY

Bluestone Mines Tasmania Joint Venture Pty. Ltd. plans to develop a Paste Backfill Plant (PBP) adjacent to the existing tin process plant at Renison Tin Mine near Rosebery, Tasmania. The new Paste Backfill Plant (PBP) will integrate with the mine process plant. The PBP will dewater tailings which are an existing waste stream of the mine, to make a product which can be used to backfill stope closures.

The development has been assessed as a Level 2 Activity by the Tasmanian Environmental Protection Authority (EPA) requiring a class 2B environmental approval process, with an Environmental Impact Statement.

The mining lease is number 12M/95 and the lease area is 4662 hectares. The bushfire prone vegetation within 100 metres of the Paste Backfill Plant is forest.

This report addresses the potential fire risk associated with the development of the PBP as required in the Environmental Impact Statement for Bluestone Mines Tasmania Joint Venture Pty. Ltd. The report finds that the addition of a PBP to the existing mine operation and infrastructure does not increase the risk of fire at the mine or escaping from the mine.

1.0 INTRODUCTION

Proponent: Bluestone Mines Tasmania Joint Venture Pty. Ltd.

Type of Development: Build a Paste Backfill Plant

Location: Renison Bell, Tasmania

Inspection conducted by: Anthea Fergusson, Bushfire Risk Assessment consultant
Accreditation Number: BFP-125

This report addresses the Environmental Impact Statement requirements for a Paste Backfill Plant (PBP) to be developed by Bluestone Mines Tasmania Joint Venture Pty. Ltd. (BMTJV), at Renison Bell, Tasmania, specifically 6.12 Fire Risk:

Discuss the potential fire risk associated with the proposal. Including:

• *Consideration of fire within the site, fire escaping from the site and the impact of wildfire originating outside the development and the environmental impacts that could result from such an event.*

• *The objectives and management principles to be adopted to prevent and respond to potential fire events.*

• *Where a fire response plan is appropriate, it should be fully integrated with other relevant documents, such as a Tasmania Fire Service Local Area Fire Management Plan, a Forestry Tasmania Fire Management Plan and a Parks and Wildlife Service Fire Action Plan for relevant districts.*

2.0 SITE DESCRIPTION

Mining Lease: 12M/95
Lease Area: 4662 hectares

The existing Renison mine and processing plant has been operational for approximately 50 years. The lease is zoned under the *West Coast Interim Planning Scheme (2013)* as predominantly 26.0 Rural Resource, but also 29.0 Environmental Management. In addition the Renison Bell Regional Reserve administered by the Tasmanian Parks and Wildlife Service covers a large portion of the Renison Mining Lease.

The proponent plans to develop a Paste Backfill Plant (PBP) to enhance the existing Renison Tin Mine process plant. The PBP will allow further treatment of an existing deslimed Cassiterite Flotation Tailings waste stream which is a by-product of the Tin Process Plant. The PBP will provide:

- Greater flexibility of tailings waste stream management on the surface, and
- Generate cement paste suitable for backfilling operations undergrounds.

The proposed PBP will be constructed in close proximity to the existing Renison Tin Mine process plant (Figure 1). The site is currently occupied by a semi-decommissioned core shed surrounded by open areas used for temporary laydown of mine materials.

Figure 1: Proposed Paste Backfill Plant development footprint and proximity to the existing Tin Process Plant (NOI 2020)

In order to prepare the semi-decommissioned core shed site the existing infrastructure will be removed and regrowth vegetation on the northern and western edges of the site will be removed. The vegetation is listed on TasVeg 3.0 as NAR; *Acacia melanoxylon* (Blackwood) forest on rises (NOI 2020).

Figure 2: View of the semi-decommissioned core shed and machinery lay down area.
Source: BMTJV Notice of Intent(2020).

Figure 3: View of the semi-decommissioned core shed and machinery lay down area.
Source: BMTJV Notice of Intent(2020).

The PBP will require a maximum of three people to operate the plant. The proposed plant layout will include:

· An external flocculant preparation area (with a paste plant thickener, flocculant storage, filter feed tank, and a binder storage silo);
· Multi-storey building for filtering, paste mixing and delivery (with conveyors, binder storage silo and a dosing system);
· Cake storage building (which will house conveyors, filter cake stockpile, allow vehicular movement and reclaim;
· External tanks and pumps; and
· Access road.

3.0 FIRE RISK IDENTIFICATION

The mine is located on the high rainfall West Coast of Tasmania between the Argent and Ring Rivers with Lake Pieman approximately one kilometre to the north. The average annual rainfall at the site is approximately 2213 mm.

The classification of bushfire prone vegetation is listed in Table 2.3 of the Australian Standard AS 3959 (2018). The bushfire prone vegetation within 100 metres of the PBP location is forest.

Although the mine receives a high annual rainfall there is still a risk of bushfire at the Renison Bell Mine. The mine is located in a forest landscape and wildfires can occur in the area. Across the mining lease and in the general location the vegetation ranges from rainforest and Eucalypt forest to button grass plains.

The objectives and management principles to be adopted in order to prevent and respond to potential fire events are addressed in the *Draft Bushfire Management Plan (Renison Operation)* which was developed by BMTJV in 2018. This plan can also cover the operation of the PBP. The Bushfire Management Plan addresses:

- Potential sources of bushfires on the mining lease
- Key Assets requiring protection from bushfires
- Controls needed to protect both personnel and hey assets
- Onsite resources and key contacts (external agencies)
- Emergency Response Protocols

The *Draft Bushfire Management Plan (Renison Operation) (2018)* identifies the following as potential sources of fire on the mining lease:

- Hot work (grinding and welding);
- Spontaneous combustion;
- Lightning strike;
- Vehicles;
- Buildings and structural;
- Flammable and combustible hydrocarbon storage;

- Chemical reagents and Dangerous Goods;
- Electrical malfunctions;
- Inappropriate smoking practices; and
- Arson or deliberate acts.

The potential offsite fire risks include:

- Lightning strike;
- Wildfire or control burn entering the mining lease area

Key stakeholders in the *Draft Bushfire Management Plan (Renison Operation)* include Tasmania Fire Service (TFS) and Parks and Wildlife Service (PWS). The Draft Bushfire Management Plan (Renison Operation)(2018) states that "*Under the Mining Lease conditions, BMTJV is responsible for the immediate suppression of any fires which may occur due to mining operations on the lease area. The lease also specifies that no fires are to be lit without the written approval of the District Forester, Murchison and then only in accordance with the provisions of the Fire Service Act 1979".*

Also *"The Renison Bell Regional Reserve overlies a significant portion of the Renison Mining Lease hence the aim of this management plan must also align with the fire management aims contained within the Renison Bell Regional Reserve Management Plan, (Parks and Wildlife, 2012)". These aims are summarised as follows:*

- *to minimise loss of life and property;*
- *to protect the natural values of the areas; and*
- *to develop a coordinated response to fire control in the event of an outbreak.*

If a wildfire originated outside the mine's Process Plant Domain there is a network of roads, tracks, fire breaks and defendable spaces to assist with access and control of bushfire.

The addition of a PBP to the existing Renison Tin Mine operation does not increase the risk of fire originating from the mine or increase the hazard if a wildfire originating outside the mine came onto the lease. It is important that the Bushfire Management Plan is implemented and updated on a yearly basis.

4.0 REFERENCES

BMTJV (2018): Draft Bushfire Management Plan

BMTJV (2020): Proposed Paste Backfill Plant Notice of Intent. Final Revision 1

Standards Australia (2018): *AS 3959-2009 Construction of buildings in bushfire prone areas (incorporating Amendments Nos 1,2, and 3)*.Sydney: SAI Global Limited.