MINERAL RESOURCES TASMANIA

Storys Creek and Rossarden

Revegetation Works Summary

May 2019

1.0 Introduction

Rehabilitation and revegetation works and maintenance are ongoing at the historic Storys Creek and Rossarden mine sites. Works in recent years have typically involved the application of ag-lime and fertiliser to previously rehabilitated sites. Further targeted ag-lime and fertiliser application occurred at both sites in late April and early May 2019 as well as completion of the works prescribed in the January 2018 report to Mineral Resources Tasmania, *Rossarden Tailings Deposit – Rehabilitation Recommendations* (LMRS 2018), relating to the problematic site at the northern end of the Rossarden Tailings.

2.0 Storys Creek – Old Precipitate Ponds and Tailings Repository

Lime and fertiliser application was last undertaken at these two sites in June 2017 (refer to LMRS 2017). pH testing conducted by LMRS in 2018 indicated that additional lime application was not yet warranted at the Tailings Repository. Testing of acid neutralising capacity of the treatment wetlands at the Old Precipitate Ponds indicated lime application at this site would be beneficial (Michael Ried, MRT pers. comm.).

Approximately twelve tonnes of ag-lime and 450 kg of 8:4:10 fertiliser was applied to the main ~1.6 hectare Old Precipitate Ponds area of the Storys Creek site (application rates of ~7.5 tonnes and 300 kg per hectare respectively).

No ag-lime or fertiliser application was conducted at the Tailings Repository in 2019.

Plates 1 and 2 compare the Old Precipitate Ponds site between 2013 and 2019. Note that both photos were taken immediately following lime application and the resulting pale lime coverage has resulted in an ‘over-exposed’ image masking the true extent of vegetation.

Plate 1. The Storys Creek Precipitate Ponds area immediately following lime application in 2013.

Plate 2. The Storys Creek Precipitate Ponds area immediately following lime application in 2019.

3.0 Rossarden

3.1 General Tailings Deposit Treatment

Lime and fertiliser application was last undertaken at the Rossarden sites in May 2015 (refer to LMRS [2015]). The success of previous lime and fertiliser applications has varied relative to the level of acid generating potential of the surface material. Poorer areas were selectively targeted again with lime in 2019 while the entire site was fertilised.

2019 ag-lime and fertiliser application location and rates varied based on specific site conditions. Figure 1 roughly maps the areas and types/rates of fertiliser application undertaken. The bulk of the site received 8:4:10 fertiliser at 300 kg/ha (4.95 tonnes in total). Selected areas received ag-lime at ~10 tonnes per hectare (total of ~57 tonnes). Application rates and quantities for the 'priority' capping area in the northern-most section of the site are described in Section 3.2.

3.2 'Area 1' Priority Capping Treatment

The ~4000 m^2 (closer to 5000 m^2) priority area received treatment largely in line with the specifications in LMRS (2018).

- The high point was excavated to form a gently sloping profile and the existing gravel track loosened to ~300 mm depth;
- The drain at the north of the site was redirected from draining east and directed south though the centre of 'Area 1' to the existing drainage line under the Tasnetworks feeder line;
- Ag-lime was applied at ~20 tonnes per hectare (~10 tonnes in total);
- Approximately 1450 m^3 of topsoil was collected from three locations (refer to Figure 1 for locations and respective volumes) and dumped on both the 'high' and 'low' priority components of 'Area 1' in LMRS (2018);
- All topsoil source locations were left loose and level;
- The dumped topsoil was spread roughly/loosely over the 'high' and 'low' priority zones to an average depth of 250-300 mm;
- Native seed was applied at ~5 kg/ha to all topsoiled areas (refer to Table 1 for species and quantities);
- Ryegrass was applied at ~30 kg/ha to the three topsoil source locations;
- NPK 14:16:11 fertiliser was applied at 300 kg/ha to 'Area 1' and the three topsoil source locations;
- The 'upper', larger pond only, of the two recommended in LMRS (2018) was constructed. Strategic log placements and small excavations were placed to deter unwanted 4WD access.

Plates 3-12 provide images of the treatment area, topsoil sources and wetland pond.

Figure 1. Rossarden tailings deposit 2019 rehabilitation treatment zones and topsoil sources.

Table 1. Native seed species and quantities

Species	Quantity (grams)
Acacia dealbata	400
Acaena novae-zelandiae	250
Cassinea aculeata	250
Daviesia latifolia	200
Goodenia ovata	300
Juncus spp.	150
Leptospermum lanigerum	500
L. scoparium	500
Poa labillardierei	500
Senecio linearifolius	150
S. minimus	150
TOTAL	**3100**

Plate 3. Topsoil resource 1 (Rossarden Rd) following topsoil recovery, loosening and seeding/fertilising.

Plate 4. Topsoil resource 2 (old Scheppien lease) following topsoil recovery, loosening and seeding/fertilising.

Plate 5. Topsoil resource 3 (Taswater dump) following topsoil recovery, loosening and seeding/fertilising.

Plate 6. Priority Capping area ('Area 1') prior to topsoil dumping and spreading.

Plate 7. Priority Capping area ('Area 1') following topsoil dumping and spreading.

Plate 8. Priority Capping area ('Area 1') prior to topsoil dumping and spreading.

Plate 9. Priority Capping area ('Area 1') following topsoil dumping and spreading.

Plate 10. Water treatment pond area prior to earthen berm construction.

Plate 11. Water treatment pond area following earthen berm construction.

Plate 12. Water treatment pond area earthen berm.

4.0 References

LMRS 2015 *Storys Creek and Rossarden – Rehabilitation Works Summary*. May 2015. A report to Mineral Resources Tasmania

LMRS 2017 *Storys Creek, Tailings Repository and Precipitate Ponds – Rehabilitation Summary 1*. August 2017. A report to Mineral Resources Tasmania

LMRS 2018 *Rossarden Tailings Deposit – Rehabilitation Recommendations*. January 2018. A report to Mineral Resources Tasmania