

**6 Monthly LRMP report  
January 24 - July 24  
Prepared by Leigh Elliott**

This report summarizes all the Landscape & Rehabilitation Management Plan (LRMP) works for the period of January 24 - July 24. Naturelinks at the conclusion of 2024 will provide the annual report for all works undertaken by them in conjunction with local contractors.

Works were undertaken in the following areas depicted in Figure 1: Net Gain (Yellow), Extraction (Orange), Phase C (White), South-East Extraction (Pink), South-East Extraction Back slope (Cream), Southern Extraction (Red), 0.8 Hectare (Dark Maroon), 1.2 Ha (Blue), 2023 Planting Area (Green), Phase A&B (Teal), Landslip (Bright Pink), Paddock Replacement (Ash), Chilean Needle Grass Monitoring & Control (Dark Green) and Southern Hillside (Purple).



Figure 1 - Identification of individual sites at Holcim Mt Shamrock Quarry

## **Southern Extraction/ SE Extraction/0.8Ha/1.2 Ha/ 2023 Reveg area**

Summary of works completed January 23 - July 23 in Southern Extraction/ SE Extraction/ 0.8Ha/ 1.2 Ha / 2023 Reveg area;

- Brush Cutting weedy grass for biomass and fire risk control, in preparation for future spray works;
- Stake and guard removal those in good condition to be re-used in for this year's plantings;
- Pack and tanker spray broadleaf weeds and pampas grass with selective herbicide;
- Hand weed fleabane, aster weed and stinkwort to avoid species seeding.
- Pack spray grassy weeds with non selective herbicide;

### **Planting works;**

#### South-East Extraction Area

- Planting of the below species has been completed (661 Trees/Grasses/Lillies);
  - *Acacia melanoxylon*, Blackwood (20)
  - *Acacia myrtifolia*, Myrtle Wattle (10)
  - *Acacia stricta*, Hop Wattle, Straight Wattle (20)
  - *Acacia pycnantha*, Golden Wattle (10)
  - *Acacia verticillata* ssp. *Verticillata*, Prickly Moses (20)
  - *Allocasuarina littoralis*, Black Sheoak (40)
  - *Amperea xiphoclada* var. *xiphoclada*, Broom Spurge (10)
  - *Daviesia leptophylla*, Narrow-leaf Bitter-pea (25)
  - *Eucalyptus baxteri*, Brown Stringybark (16)
  - *Eucalyptus goniocalyx*, Long Leafed Box, Bundy (25)
  - *Eucalyptus Radiata* ssp. *radiata*, Narrow-leafed Peppermint (15)
  - *Goodia lotifolia* var. *lotifolia*, Common Golden-tip (10)
  - *Hakea decurrens* ssp. *Physocarpa*, Bushy Needlewood (45)
  - *Hakea nodosa*, Yellow Hakea (10)
  - *Hakea Ulcina*, Furze Hakea (45)
  - *Melicytus dentatus*, Tree Violet (25)
  - *Pultenaea scabra*, Rough Bush-Pea (15)
  - *Dianella laevis* var. *laevis*, Pale Flax-lilly (50)
  - *Lomandra longifolia* var. *exilis*, Cluster-headed Mat-rush (100)
  - *Poa labillardierei* var. *labillardierei*, Common Tussock-grass (50)
  - *Poa sieberiana* var. *sieberiana* Grey Tussock-grass (100)
- To be planted August 24 - December 24 (120 Trees/Grasses/Lillies);
  - *Acacia oxycedrus*, Spike Wattle (40)
  - *Dillwynia sericea*, Showy Parrot-pea (25)
  - *Hakea teretifolia* ssp. *hirsuta*, Dagger Hakea (25)
  - *Pimelea axiflora* subsp. *axiflora*, Bootlace Bush (10)
  - *Spyridium parvifolium*, Dusty Miller (10)
  - *Tetratheca ciliate*, Pink-bells (10)

#### South-East Extraction Back Slope

- Planting of the below species has been completed (490 Trees/Grasses/Lillies);
  - *Acacia dealbata* ssp. *dealbata*, Silver Wattle (35)
  - *Acacia melanoxylon*, Blackwood (20)

- *Acacia stricta*, Hop Wattle, Straight Wattle (20)
- *Acacia verticillata* ssp. *Verticillata*, Prickly Moses (60)
- *Banksia spinulosa* var. *cunninghamii*, Hairpin Banksia (25)
- *Bursaria spinosa* ssp. *spinosa*, Sweet Bursaria (45)
- *Cassinia aculeata*, Dogwood (75)
- *Eucalyptus cypellocarpa*, Mountain Grey Gum (25)
- *Eucalyptus fulgens*, Green Scentbark (75)
- *Eucalyptus oblique*, Messmate (20)
- *Eucalyptus Radiata* ssp. *radiata*, Narrow-leafed Peppermint (20)
- *Eucalyptus viminalis* ssp. *viminalis*, Manna Gum (20)
- *Hakea nodosa*, Yellow Hakea (10)
- *Hakea decurrens* ssp. *Physocarpa*, Bushy Needlewood (10)
- *Pomaderris aspera*, Hazel Pomaderris (30)
- To be planted August 24 - December 24 (180 Trees/Grasses/Lillies);
  - *Acacia oxycedrus*, Spike Wattle (40)
  - *Gynatrix pulchella*, Hemp Bush (35)
  - *Lomatia fraseri*, Tree Lomatia (30)
  - *Melicytus dentatus*, Tree Violet (15)
  - *Oleria argophylla*, Musk Daisy-bush (60)

#### Southern Extraction Area

- Planting of the below species has been completed (110)
  - *Acacia genistifolia*, Spreading Wattle (5)
  - *Acacia myrtifolia*, Myrtle Wattle (5)
  - *Amperea xiphoclada* var. *xiphoclada*, Broom Spurge (40)
  - *Eucalyptus oblique*, Messmate (5)
  - *Eucalyptus viminalis* ssp. *viminalis*, Manna Gum (5)
  - *Goodia lotifolia* var. *lotifolia*, Common Golden-tip (30)
  - *Goodenia ovate*, Hop Goodenia (5)
  - *Hakea nodosa*, Yellow Hakea (5)
  - *Pultenaea scabra*, Rough Bush-Pea (10)
- To be planted August 24 - December 24 (130 Trees/Grasses/Lillies);
  - *Acacia oxycedrus*, Spike Wattle (25)
  - *Pimelea axiflora* subsp. *axiflora*, Bootlace Bush (40)
  - *Spyridium parvifolium*, Dusty Miller (40)
  - *Tetradlea ciliate*, Pink-bells (25)

#### 0.8 Hectare (2021) Revegetation Site

- Planting of the below species has been completed (205 Trees/Grasses/Lillies);
  - *Acacia dealbata* ssp. *dealbata*, Silver Wattle (20)
  - *Acacia genistifolia*, Spreading Wattle (20)
  - *Acacia melanoxylon*, Blackwood (20)
  - *Acacia pycnantha*, Golden Wattle (20)
  - *Eucalyptus baxteri*, Brown Stringybark (10)
  - *Eucalyptus dives*, Broad-leafed Peppermint (10)
  - *Eucalyptus goniocalyx*, Long Leafed Box, Bundy (10)
  - *Eucalyptus Radiata* ssp. *radiata*, Narrow-leafed Peppermint (20)
  - *Eucalyptus oblique*, Messmate (10)

- *Eucalyptus viminalis ssp. viminalis*, Manna Gum (10)
- *Epacris impressa*, Common Heath (35)
- *Goodenia ovate*, Hop Goodenia (10)
- *Pultenaea scabra*, Rough Bush-Pea (10)
- To be planted August 24 - December 24 (55 Trees/Grasses/Lillies);
  - *Acacia oxycedrus*, Spike Wattle (25)
  - *Dillwynia sericea*, Showy Parrot-pea (20)
  - *Melicytus dentatus*, Tree Violet (10)

### 1.2 Hectare (2022) Revegetation Site

- Planting of the below species has been completed (656 Trees/Grasses/Lillies);
  - *Acacia dealbata ssp. dealbata*, Silver Wattle (38)
  - *Acacia paradoxa*, Hedge Wattle (33)
  - *Acacia pycnantha*, Golden Wattle (45)
  - *Acacia verticillata ssp. Verticillata*, Prickly Moses (15)
  - *Allocasuarina littoralis*, Black Sheoak (50)
  - *Corea reflexa var. reflexa*, Common Corea (25)
  - *Daviesia latifolia*, Hop Bitter-pea (15)
  - *Eucalyptus baxteri*, Brown Stringybark (50)
  - *Eucalyptus dives*, Broad-leafed Peppermint (45)
  - *Eucalyptus goniocalyx*, Long Leafed Box, Bundy (50)
  - *Eucalyptus Radiata ssp. radiata*, Narrow-leafed Peppermint (50)
  - *Indigofera australis*, Austral Indigo (40)
  - *Dianella admixta*, Spreading Flax-lily (100)
  - *Poa labillardierei var. labillardierei*, Common Tussock-grass (50)
  - *Poa sieberiana var. sieberiana*, Grey Tussock-grass (50)
- To be planted August 24 - December 24 (65 Trees/Grasses/Lillies);
  - \**Acacia oxycedrus*, Spike Wattle (50)
  - \**Melicytus dentatus*, Tree Violet (15)

### 1.1 Hectare (2023) Revegetation Site

- Planting of the below species has been completed (425 Trees/Grasses/Lillies);
  - *Acacia dealbata ssp. dealbata*, Silver Wattle (50)
  - *Acacia genistifolia*, Spreading Wattle (15)
  - *Acacia melanoxylon*, Blackwood (25)
  - *Acacia myrtifolia*, Myrtle Wattle (30)
  - *Acacia stricta*, Hop Wattle, Straight Wattle (50)
  - *Bursaria spinosa ssp. spinosa*, Sweet Bursaria (25)
  - *Daviesia latifolia*, Hop Bitter-pea (30)
  - *Eucalyptus oblique*, Messmate (50)
  - *Eucalyptus viminalis ssp. viminalis*, Manna Gum (50)
  - *Goodenia ovate*, Hop Goodenia (25)
  - *Hakea nodosa*, Yellow Hakea (25)
  - *Leptospermum continentale*, Prickly Tea-tree (25)
  - *Leptospermum lanigerum*, Woolly Tea-tree (25)
- To be planted August 24 - December 24 (75 Trees/Grasses/Lillies);
  - *Acacia oxycedrus*, Spike Wattle (50)
  - *Melicytus dentatus*, Tree Violet (25)



### Phase C and Extraction Site

Summary of works completed January 24 - July 24 in Phase C and Extraction Site;

- Cut and paint blackberry;
- Pack spray broadleaf weeds and Pampus Grass with selective herbicide.

Planting works;

- Planting of the below species has been completed (30 Trees/Grasses/Lillies);
  - *Corea reflexa var. lobatus*, Poweltown Corea (10)
  - *Goodia lotifolia var. lotifolia*, Common Golden-tip (10)
  - *Polyscias sambucifolia ssp.1*, Elderberry Panax (10)
- To be planted August 24 - December 24 (80 Trees/Grasses/Lillies)
  - *Lomatia fraseri*, Tree Lomatia (15)
  - *Myrsine howittiana*, Muttonwood (25)
  - *Sambucus gaudichaudiana*, White Elderberry (15)
  - *Tetratheca ciliate*, Pink-bells (15)
  - *Sambucus gaudichaudiana*, White Elderberry (10)

### Phase A & B Site

Summary of works completed January 23 - July 23 in Phase A & B Site;

- Stake and guard removal those in good condition to be re-used in for this year's plantings;
- Tanker and pack spray high threat broadleaf weeds, blackberry and woody weeds;
- Small patch of Chilean Needle grass discovered in an area outside known infestation to be sprayed at a later date.

Works to be completed August 24 - December 24

- Planting of the below (850 Trees/Grasses/Lillies);
  - *Acacia mearnsii*, Black Wattle (150)
  - *Acacia pycnantha*, Golden Wattle (25)
  - *Allocasuarina littoralis*, Black Sheoak (15)
  - *Eucalyptus baxteri*, Brown Stringybark (170)
  - *Eucalyptus dives*, Broad-leafed Peppermint (175)
  - *Eucalyptus goniocalyx*, Long Leafed Box, Bundy (165)
  - *Eucalyptus Radiata ssp. radiata*, Narrow-leafed Peppermint (150)

### Netgain Offset

Naturelinks continued to monitor and undertake the weed program throughout the first half of 2024.

Below is a monthly detailed summary of the activities undertaken by Naturelinks for the reporting period including quantity and ratio of chemicals used. For clarity, the area is broken down into 2 areas, the Northern and the Southern Area.

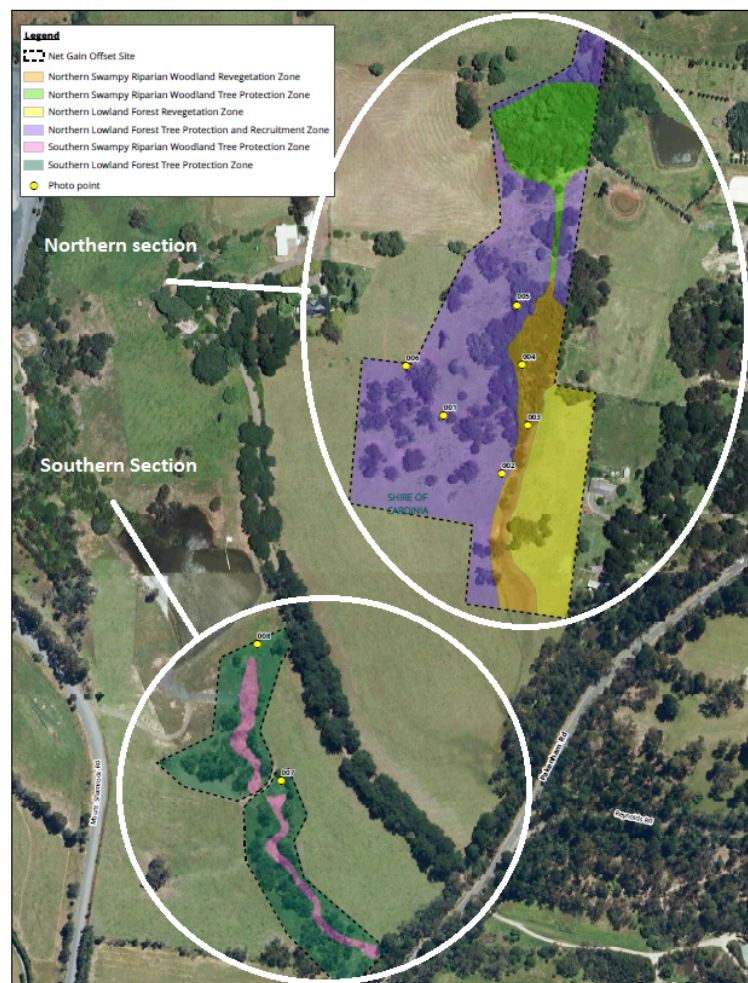


Figure 2 - Northern and Southern Sections of Netgain area

Month	Description
March 2024	01/03/2024 Seed collection of microlean for future direct seeding efforts (Northern Section). Spray and handweed north south broadleaf weeds with selective herbicide. Herbicide spray of grassy weeds top half of southern section with non selective herbicide. WEEDS: <i>Cirsium vulgare</i> <i>Dactylis glomerata</i> <i>Ehrharta erecta</i> <i>Microlaena stipoides</i> var. <i>stipoides</i> <i>Phalaris aquatica</i> <i>Rubus fruticosus</i> spp. agg. <i>Sonchus oleraceus</i> CHEMICALS: Kamba M 6ml/L Associate 0.1gm/L Weedmaster Duo 10ml/L mixed BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre
April 2024	12/04/2024 Cut and paint Typha Southern section creekline Pakenham road end. Cut and pain woody weeds Southern section. Handweed sensitive areas of Southern Section of Net Gain. Handweed Ivy across site. Pack spray blackberry and woody weeds with high rate selective herbicide Southern section of Net Gain and adjacent areas. Broadleaf weed run Southern section of net gain with selective herbicide. Stake and guard collection southern section of Net Gain. 19/04/2024 Pack spray black berry and woody weeds Northern section of Net gain. Run complete except for swamp areas to be targeted in drier months. Deer damage worse than ever, many trees/shrubs killed by deer. WEEDS: <i>Anthoxanthum odoratum</i> <i>Carduus tenuiflorus</i> <i>Cirsium vulgare</i> <i>Crataegus monogyna</i> <i>Dactylis glomerata</i> <i>Ehrharta erecta</i> <i>Hedera helix</i> <i>Helminthotheca echinoides</i> <i>Prunus</i> sp <i>Rubus fruticosus</i> spp. agg. <i>Senecio jacobaea</i> <i>Solanum nigrum</i> s.l. <i>Typha latifolia</i> CHEMICALS: Maca 600 High rate 3.4ml/L BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre Kamba M

	6ml/L Weedmaster Duo 1000ml/L Maca 600 High rate 3.4ml/L BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre
May 2024	03/05/2024 Chainsaw branch fallen on fence Top of Northern section Net Gain. Handweed agapanthus spreading from adjacent property Northern section NE boundary fenceline. Pack spray grassy weeds with non selective herbicide Northern section amongst established poa area to encourage recruitment over winter period. WEEDS: Agapanthus praecox subsp. orientalis Anthoxanthum odoratum Dactylis glomerata Ehrharta erecta Holcus lanatus CHEMICALS: Weedmaster Duo 10ml/L mixed BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre
June 2024	07/06/2024 Spray and handweed northern section of net gain. Stake and guard collection northern section of NG. Stakes and guards to be re-used for future plantings. Deer damage observed extensive. WEEDS: Dactylis glomerata Ehrharta erecta Hedera helix Holcus lanatus CHEMICALS: Weedmaster Duo 10ml/L mixed BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre
July 2023	12/07/2024 Chainsaw fallen branches impeding access throughout site NG Southern Section. Chainsaw woody weeds NG Southern section and adjacent areas. Hand weeding Southern Section around sensitive native remnant vegetation. Planting NG Southern section bottom half using recycled stakes and guards (no charge). WEEDS: Dactylis glomerata Ehrharta erecta Hypochaeris radicata Pittosporum undulatum CHEMICALS: Weedmaster Duo 1000ml/L

## **Paddock Replacements, Landslip Plantings, Northern Fence Line, Car Parks, and Southern Hillside**

### Southern Hillside

Summary of works completed January 23 - July 23 in Southern Hill Side;

- Brush cutting large perennial grass species for biomass control and in preparation for future spray works;
- Pack spray blackberry regrowth and woody weeds throughout site;
- Pack spray grassy weeds Southern Hillside with non selective herbicide bottom section adjacent to path and entrance gate.
- Planting of the below species has been completed (120 Trees/Grasses/Lillies);
  - *Banksia spinulosa* var. *cunninghamii*, Hairpin Banksia (25)
  - *Corea reflexa* var. *lobatus*, Poweltown Corea (15)
  - *Epacris impressa*, Common Heath (25)
  - *Pimelea flava* ssp. *flava*, Yellow Rice-flower (20)
  - *Polyscias sambucifolia* ssp. 1, Elderberry Panax (15)
  - *Pomaderris aspera*, Hazel Pomaderris (20)

### **Planting works;**

#### Northern Fence Line

- Planting of the below species has been completed (235 Trees/Grasses/Lillies);
  - *Acacia genistifolia*, Spreading Wattle (30)
  - *Acacia stricta*, Hop Wattle, Straight Wattle (30)
  - *Acacia verticillata* ssp. *Verticillata*, Prickly Moses (30)
  - *Acacia myrtifolia*, Myrtle Wattle (30)
  - *Acacia paradoxa*, Hedge Wattle (30)

- *Hakea nodosa*, Yellow Hakea (25)
- *Indigofera australis*, Austral Indigo (10)
- *Leptospermum lanigerum*, Woolly Tea-tree (25)
- *Goodenia ovate*, Hop Goodenia (25)
- To be planted August 24 - December 24 (55 Trees/Grasses/Lillies);
  - *Acacia oxycedrus*, Spike Wattle (30)
  - *Melicytus dentatus*, Tree Violet (25)

#### Lower Car Park

- Planting of the below species has been completed (87 Trees/Grasses/Lillies);
  - *Acacia dealbata* ssp. *dealbata*, Silver Wattle (36)
  - *Eucalyptus oblique*, Messmate (26)
  - *Eucalyptus viminalis* ssp. *viminalis*, Manna Gum (25)

#### Land Slip Areas and Mass 5

- Planting of the below species has been completed (435 Trees/Grasses/Lillies);
  - *Acacia dealbata* ssp. *dealbata*, Silver Wattle (15)
  - *Acacia genistifolia*, Spreading Wattle (15)
  - *Acacia melanoxylon*, Blackwood (15)
  - *Acacia verticillata* ssp. *verticillata*, Prickly Moses (15)
  - *Bursaria spinosa* ssp. *spinosa*, Sweet Bursaria (15)
  - *Eucalyptus oblique*, Messmate (15)
  - *Eucalyptus Radiata* ssp. *radiata*, Narrow-leafed Peppermint (15)
  - *Eucalyptus viminalis* ssp. *viminalis*, Manna Gum (15)
  - *Leptospermum lanigerum*, Woolly Tea-tree (15)
  - *Lomandra longifolia* var. *longifolia*, Spiny-headed Mat-rush (100)
  - *Poa ensiformis*, Purplesheath Tussock-grass (100)
  - *Poa labillardierei* var. *labillardierei*, Common Tussock-grass (50)
  - *Poa sieberiana* var. *sieberiana* Grey Tussock-grass (50)
- To be planted August 24 - December 24 (15 Trees/Grasses/Lillies);
  - *Melicytus dentatus*, Tree Violet (15)

#### Paddock Replacement Plantings

- Planting of the below species has been completed (16 Trees/Grasses/Lillies);
  - *Eucalyptus baxteri*, Brown Stringybark (4)
  - *Eucalyptus oblique*, Messmate (7)
  - *Eucalyptus viminalis* ssp. *viminalis*, Manna Gum (5)

### **Rehabilitation Update**

Final shaping of the 2023 reclamation areas took place in early 2024 (see Figure 3). These areas will be progressively top soiled from early 2025 onwards once site conditions are favorable for these works.

Topsoil will be required to be imported for these areas.





Figure 3 - 2023 Reclamation area (red outline)

### General Property weed control

Other areas that were managed for weeds during the first half of the year using suitably qualified local contractors were as follows:

- Settling dam area
- Quarry bund walls
- Quarry road ways
- Car park areas
- Amenity areas
- Toomuc valley properties (commonly known as Whitelys)
- Landslip plantings at the Toomuc Valley properties
- Southern Boundary and fence line
- Western Boundary and fence line
- Pony club Fence line / open areas
- Donnazons property and specifically around Donnazons Dam

Typical weed control methods were tanker spraying, boom spraying, slashing and brush cutting. Target weeds for the period were Thistle, Blackberry, Pampas Grass and Broome.

The preferred chemicals used by the local contractor are;

- EVIC Bio 360 (general weeds)
- Garlon / Trike 600 for Blackberries (used interchangeably depending on availability)

### **Pest Management**

A feral deer management program has been introduced in 2024 with ground-based shooting taking place in the Netgain Offset and Phase C during the reporting period.

### **Erosion & Slope Stability**

There has been no observed erosion or movement of rehabilitated faces, the surfaces are holding up well, monthly inspections and post heavy rain events and post each blast event show the batters are stable and drainage is working effectively.

### **Water quality**

The site has been discharging water from both the Southern and Northern water holes.

Two breeches of the EPA discharge licence (OL000000544, condition OL\_DW2) occurred during Q1; both exceedances related to the same discharge event. 12th January and 15th January - Testing conducted at the licensed discharge point returned a turbidity result of 95.4NTU and 43.1NTU respectively, the compliance limit is 30NTU. All other results were below the compliance limit. Elevated turbidity was from heavy rain during the week commencing the 8th January.

A third breach occurred on the 25th July where testing conducted 25/07/2024 at the licensed discharge point returned a turbidity result of 38.2NTU. All other results were below the compliance limit; PH8.70, Electrical Conductivity 795. Heavy rainfall again resulting in the elevated turbidity at the licenced discharge point.

### **Non Conformances/Complaints**

There have been no observed outbreaks of new weed species and there have been no complaints related to the LRMP.

### **LRMP Review**

The LRMP was last revised in July 2021 as part of the Environmental Management Plan (EMP) update. A review of the EMP is currently underway to enable a more streamlined review/change process for the annual LRMP review.

### **Plans for the remainder of 2024**

The following actions are planned for the remainder of 2024;

- Actions as listed throughout this report;
- Continue monthly weed maintenance at Netgain and Quarry areas;
- Bushfire prevention in Q4;
- A further 230 Trees/Grasses/Lillies are to be distributed amongst the various landslip sites on several farming properties to the South, SW and West bordering the quarry;
- Complete annual reporting requirements.