

6 Monthly LRMP report
January 22 - June 22
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This report summarizes all the Landscape & Rehabilitation Management Plan (LRMP) works for the period of January 22 - June 22. Naturelinks at the conclusion of 2022 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: Phase A & B (Teal), 0.8 Hectare (Green), Southern Extraction (Red), South-East Extraction (Blue), Extraction (Orange), Phase C (White), Landslip (Pink) and Net Gain (Yellow).



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

South-East Extraction Area

Summary of works completed January 22 - June 22 in South-East Extraction Area;

- Pack spray broadleaf weeds with selective herbicide;
- Tanker spray grassy weeds with non selective herbicide;
- Planting of the below species has been completed;
 - *Ampera xiphoclada* var. *xiphoclada*, Broom Spurge (25)
 - *Corea reflexa* var. *lobatus*, Poweltown Corea (25)
 - *Epacris impressa*, Common Heath (25)
 - *Grevillea alpina* (Southern Hills Form), Mountain Grevillea (50)
 - *Indigofera australis*, Austral Indigo (25)
 - *Lomatia ilicifolia*, Holly-leaf Lomatia (25)
 - *Pimelea humilis*, Common Rice-flower (50)
 - *Ozothamnus rosmarinifolius*, Rosemary Everlasting (25)
 - *Lomandra filiformis* ssp. *filiformis*, Wattle Mat-rush (25)
 - *Lomandra filiformis* ssp. *coriacea*, Wattle Mat-rush (25)

Works to be completed July 22 - December 22

- Planting of the below which are still currently too small for planting;
 - *Daviesia leptophylla*, Narrow-leaf Bitter-pea (25)
 - *Pimelea flava* ssp. *flava*, Yellow Rice-flower(25)

At least two female Gang-gang cockatoos (*Callocephalon fimbriatum*), an endangered species, were observed on some Eucalyptus on the SE corner of SE Extraction.



Figure 2 - Photo of Gang-gang cockatoo (*Callocephalon fimbriatum*) on some Eucalyptus

Southern Extraction Area

Summary of works completed January 22 - June 22 in Southern Extraction Area;

- Pack spray broadleaf weeds with selective herbicide;
- Tanker spray grassy weeds with non selective herbicide;
- Removal of stakes and guards
- Planting of the below species has been completed;
 - *Banksia marginata*, Silver Banksia (25)
 - *Indigofera australis*, Austral Indigo (25)
 - *Kunzea leptospermoides*, Yarra Burgan (25)
 - *Leptospermum myrsinoides*, Heath Tea-tree, Silky Tea-tree (25)
 - *Lomatia ilicifolia*, Holly-leaf Lomatia (25)
 - *Poa ensiformis*, Purple-sheath ussock-grass (100)
 - *Poa labillardierei* var, *labillardierei* (200)
 - *Dianella laevis* var. *laevis*, Pale Flax-lily (Synonym *Dianella longifolia* var. *longifolia*) (100)

Works to be completed July 22 - December 22

- Planting of the below which are still currently too small for planting;
 - *Daviesia leptophylla*, Narrow-leaf Bitter-pea (25)
 - *Pimelea humilis*, Common Rice-flower (25)

Phase C and Extraction Site

Summary of works completed January 22 - June 22 in Phase C and Extraction Site;

- Pack spray broadleaf weeds with selective herbicide;
- Tanker spray grassy weeds with non selective herbicide;
- Woody weed works;
- Stake and guard removal, usable stakes and guards to be re-used in this years plantings.
- Planting of the below species has been completed;
 - *Amperea xiphoclada* var. *xiphoclada*, Broom Spurge (25)
 - *Corea reflexa* var. *lobatus*, Poweltown Corea (25)
 - *Epacris impressa*, Common Heath (25)
 - *Ozothamnus rosmarinifolius*, Rosemary Everlasting (50)
 - *Polyscias sambucifolia* ssp. 3, Elderberry Panax (50)
 - *Poa ensiformis*, Purple-sheath ussock-grass (200)
 - *Anthropodium strictum*, Chocolate Lily (50)
 - *Cyperus lucidus*, Leafy Flat-sedge (100)
 - *Bursaria spinosa* ssp. *Spinosa*, Sweet Bursaria (25)
 - *Eucalyptus cephalocarpa*, Silver-leafed Stringbark. Mealy Stringybark (50)
 - *Eucalyptus ovata* var. *ovata*, Swamp Gum (75)
 - *Poa ensiformis*, Purple-sheath tussock-grass (50)
 - *Dianella tasmanica*, Tasman Flax-lily (25)

Works to be completed July 22 - December 22

- Planting of the below which are still currently too small for planting;
 - *Pimelea flava ssp. flava*, Yellow Rice-flower(25)

Phase A & B Site

Summary of works completed January 22 - June 22 in Phase A & B Site;

- Loose guard collection complete, large amount of guards removed from site.

Works to be com

pleted July 22 - December 22

- Infill planting is planned for Q3 2022, below is a list of plants to be planted for the remainder of the year;
 - *Acacia mearnsii*, Black Wattle (50)
 - *Acacia melanoxylon*, Blackwood (50)
 - *Eucalyptus radiata ssp radiata*, Narrow-leafed Peppermint (100)



Figure 3 - Approximate location of Q3 infill planting

0.8 Hectare Revegetation Site

Summary of works completed January 22 - June 22 in 0.8 Hectare Revegetation Site;

- Pack spray pampus grass areas adjacent to SE/Southern and .8 Hectare with non selective herbicide.

- Tanker spray broadleaf weeds with selective herbicide.
- Removal of tree guards and collection of loose guards.
- Planting of the below species has been completed;
 - *Acacia implexa*, Lightwood (50)
 - *Acacia melanoxylon*, Blackwood (50)
 - *Acacia pycnantha*, Golden Wattle (25)
 - *Acacia stricta*, Hop Wattle, Straight Wattle (50)
 - *Banksia marginata*, Silver Banksia (25)
 - *Eucalyptus Radiata ssp. radiata*, Narrow-leafed Peppermint (50)
 - *Eucalyptus dives*, Broad-leafed Peppermint (25)
 - *Eucalyptus oblique*, Messmate (25)
 - *Eucalyptus viminalis ssp. viminalis*, Manna Gum (25)
 - *Kunzea leptospermoides*, Yarra Burgan (25)
 - *Lomandra longifolia* var. *exilis* (200)

Netgain Offset:

Naturelinks continued to monitor and undertake the weed program throughout the first half of 2022.

Activities included;

- spot spraying, broadleaf and perennial grass control in both the northern and southern zones.
- Hand weeding around plantings
- Seed collection
- Woody weed removal
- Site security - monitor and repair fences as required and spraying of weeds by the local contractor in the paddocks surrounding the Netgain offset area.
- Planting of the below species has been completed;
 - *Eucalyptus cephalocarpa*, Silver-leafed Stringbark. Mealy Stringybark (25)
 - *Eucalyptus ovata* var. *ovata*, Swamp Gum (50)
 - *Acacia melanoxylon*, Blackwood (25)
 - *Dianella tasmanica*, Tasman Flax-lily (25)
 - *Eucalyptus cephalocarpa*, Silver-leafed Stringbark. Mealy Stringybark (25)
 - *Eucalyptus ovata* var. *ovata* Swamp Gum, (25)
 - *Cyperus lucidus*, Leafy Flat-sedge (50)

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.

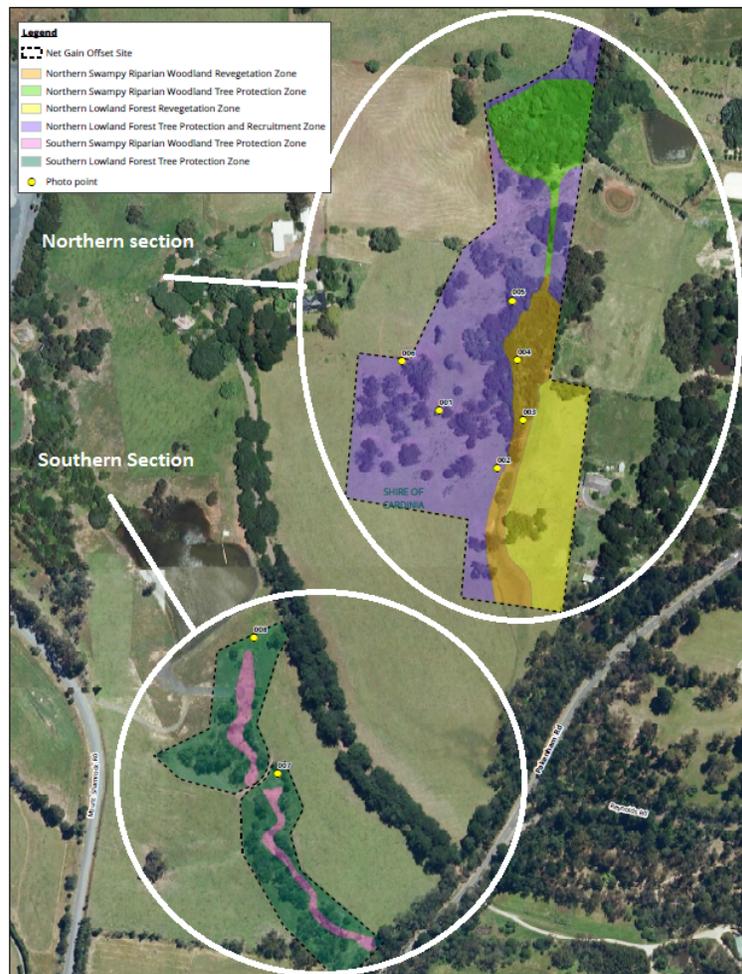


Figure 4 - Northern and Southern Sections of Netgain area

Month	Description
January 2022	24/01/2022 Pack spray weedy perannial grass species in brushcut and slashed areas northern section. 24/01/2022 Seed collection for following year North section. WEEDS: Anthoxanthum odoratum Austrostipa rudis subsp. rudis Dactylis glomerata Ehrharta erecta Holcus lanatus Ozothamnus rosmarinifolius CHEMICALS: BS1000 Surfactant Mixed 1ml/L Weedmaster Duo 10ml/L mixed Spot On Blue Dye Mixed 4ml per litre Kamba M 6ml/L
February 2022	21/02/2022 Northern Section: Pack spray perennial grassy weeds with non selective herbicide. Pack spray Ivy and broadleaf weeds with selective herbicide. Hand weed Japanese honeysuckle in top swamp area. Southern Section: Pack spray grassy weeds and Ammi visnaga below Donsons dam and beside spillway. WEEDS: Anthoxanthum odoratum Cirsium vulgare Dactylis glomerata Ehrharta erecta Festuca arundinacea Hedera helix Holcus lanatus Hypericum perforatum subsp. veronense Hypochaeris radicata Lonicera japonica Myosotis spp. Paspalum dilatatum CHEMICALS: Weedmaster Duo 10ml/L mixed Kamba M 6ml/L Lontrel Mixed 3ml/L Associate 0.1gm/L Brushwet Surfactant Mixed 1 ml//L BS1000 Surfactant Mixed 1ml/L Spot On Blue Dye Mixed 4ml per litre
March 2022	04/03/2022 Chainsaw woody weeds northern section top, middle and lower swamp. Targeting areas that are only accessible during drier months. As odd as it sounds Pampus grass can and was also chainsawed painting base with glyphosate. 04/03/2022 Cut and paint woody weeds in wet areas unaccessible in wetter months. Top, middle and lower swamp. 04/03/2022 Pack spray high threat weeds with high rate non selective herbicide

	<p>mix NE corner of Northern section. 04/03/2022 Tanker spray Buffalo grass NE corner of site. WEEDS: Agapanthus praecox subsp. orientalis Cortaderia selloana Crataegus monogyna Erica lusitanica Prunus sp Rubus fruticosus spp. agg. Salix fragilis Senecio jacobaea Stenotaphrum secundatum CHEMICALS: Weedmaster Duo 1000ml/L Weedmaster Duo 1000ml/L Weedmaster Duo 20ml/L mixed BS1000 Surfactant Mixed 1ml/L Spot On Blue Dye QSMix 2.5ml per litre Weedmaster Duo 15ml/L mixed Associate 0.1gm/L BS1000 Surfactant Mixed 1ml/L Spot On Blue Dye QSMix 2.5ml per litre</p>
April 2022	<p>01/04/2022 All works conducted in Top half of Southern zone. Handweed around plantings near water trough and driveway, handweed around cynoglossum (astral hounds tongue) and honey pots (small native remnant broadleaf species). Pack spray weedy grass species driveway side of creekline, pack spray of blackberry - complete. 13/04/2022 Pack spray northern section blackberry with selective herbicide. Much of the work was focused in the two main wetland areas, some parts in the top swamp were inaccessible. Run complete. WEEDS: Anthoxanthum odoratum Bromus spp Cirsium vulgare Dactylis glomerata Ehrharta erecta Holcus lanatus Rubus fruticosus spp. agg. CHEMICALS: Weedmaster Duo 10ml/L mixed Maca 600 Low rate 1.7 ml/L BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre Maca 600 Low rate 1.7 ml/L BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre</p>
May 2022	<p>26/05/2022 Direct seed Stipa species Southern section top half below Donsons dam in sprayed out areas. 26/05/2022 Planting tree and lilly species Lower section of northern section, wet section bordering fenline across top gate entrance of Northern section, creekline either side of divide southern section. WEEDS: Acacia melanoxylon Austrostipa rudis subsp. rudis Dianella tasmanica Eucalyptus cephalocarpa s.l. Eucalyptus ovata</p>
June 2022	<p>16/06/2022 Handweed around sensitive remnant species southern section top half. Pack spray weedy grasses with non selective herbicide Southern section bottom half naturestrip end. 16/06/2022 Planting one tray of sedges Southern section bottom half along creekline and embankment edge. WEEDS: Bromus spp Cenchrus clandestinus Cyperus lucidus Dactylis glomerata Ehrharta erecta Hypochaeris radicata Paspalum dilatatum Phalaris aquatica Plantago lanceolata CHEMICALS: Weedmaster Duo 10ml/L mixed BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre</p>

Rehabilitation update:

No reclamation has taken place yet during 2022 with no placement location currently available. Note a lot of reclamation work was done in 2021. It is expected some new placement areas will be available in the second half of 2022, allowing overburden removal and placement.

1.25 Hectare Revegetation Site

The 1.25 Ha site is a new Revegetation area adjacent to the 0.8 Hectare Revegetation Site. Works on this area began in 2022.

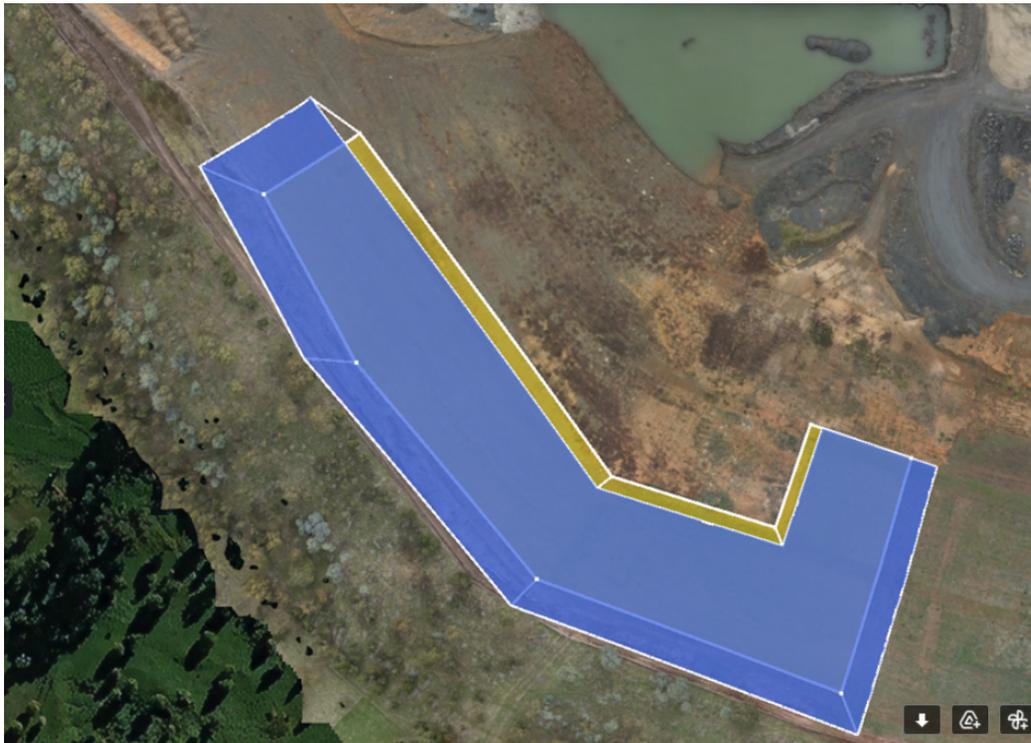


Figure 5 - Identification of the 1.25 Hectare Revegetation Site

Works completed

- Spraying of the area in preparation for Hydroseeding;
- Completion of top soiling in preparation for Hydroseeding;

Works to be completed July 22 - December 22

- Hydro Seeding to 1.25 Hectares of Native Grass Mix - Mix of *Rytidospema* sp and *Microleana stipoides*. (Completed July 2022)
- Approximately 2200 plants are planned for planting in Q3 2022, below is a list of plants to be planted for the remainder of the year;
 - *Acacia implexa*, Lightwood (50)
 - *Acacia mearnsii*, Black Wattle (200)
 - *Acacia melanoxylon*, Blackwood (250)
 - *Acacia paradoxa*, Hedge Wattle (100)
 - *Acacia pycnantha*, Golden Wattle (100)
 - *Acacia stricta*, Hop Wattle, Straight Wattle (125)
 - *Allocasuarina littoralis*, Black Sheoak (100)
 - *Eucalyptus baxteri*, Brown Stringybark (250)
 - *Eucalyptus dives*, Broad-leafed Peppermint (250)
 - *Eucalyptus gonicalyx*, Long Leafed Box, Bundy (15)
 - *Eucalyptus oblique*, Messmate (100)
 - *Eucalyptus radiata ssp. radiata*, Narrow-leafed Peppermint (300)
 - *Eucalyptus viminalis ssp. viminalis*, Manna Gum (100)
 - *Hakea decurrens ssp. Physocarpa*, Bushy Needlewood (100)
 - *Hakea ulcina*, Furze Hakea (100)
 - *Oleria myrsinoides*, Silky Daisy-bush (75)

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)

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.

There has been 1 exceedance of water quality limits where after heavy rainfall a turbidity result of 33.4NTU was obtained at the V-Notch. The compliance limit is 30 NTU. pH and electrical conductivity were both within compliance limits. Donazzan's Dam was tested at 20NTU. Reported to EPA and ICARE event # INC-0211612.

Annual turbidity Median July 2021 - June 2022 was 17.2NTU against a compliance limit of 15NTU.

Non Conformances/complaints

There have been no observed outbreak of new weed species

There has been no complaints related to the LRMP

LRMP Review

The LRMP was last revised in July 2021 as part of the EMP update.

Plans for the remainder of 2022

The following actions are planned for the remainder of 2022;

- Actions as listed throughout this report;
- Minor landslip planting resulting from recommendations from Annual Slope Stability report;
- Continue monthly weed maintenance at Netgain and Quarry areas;
- Bushfire prevention in Q4;
- Complete annual reporting requirements.