

6 Monthly LRMP report
January 23 - July 23
Prepared by Leigh Elliott

This report summarizes all the Landscape & Rehabilitation Management Plan (LRMP) works for the period of January 23 - July 23. Naturelinks at the conclusion of 2023 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), 1.2 Hectare (Magenta), Paddock Replacement (Peach) and Net Gain (Yellow).



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

South-East Extraction Area

Summary of works completed January 23 - July 23 in South-East Extraction Area;

- Tanker spray grassy weeds with non selective herbicide;
- Stake and guard removal those in good condition to be re-used in for this years plantings
- Brush Cutting perennial weedy grasses in preparation for spray works

Works to be completed August 23 - December 23

- Planting of the below;(700)
 - Acacia dealbata ssp. dealbata, Silver Wattle (25)
 - Acacia pycnantha, Golden Wattle (25)
 - Banksia spinulosa var. cunninghamii, Hairpin Banksia (125)
 - Bursaria spinosa ssp. spinosa, Sweet Bursaria (25)
 - Daviesia leptophylla, Narrow-leaf Bitter-pea (75)
 - Eucalyptus dives, Broad-leafed Peppermint (25)
 - Eucalyptus radiata, Narrow-leafed Peppermint (25)
 - Leptospermum myrsinoides, Heath Tea-tree, Silky Tea-tree (25)
 - Pultanea hispudula (replaces Astroloma humifusum & Persoonia juniperina) 75
 - Poa labillardierei var. labillardierei, Common Tussock-grass (200)
 - Lomandra longifolia var. exilis, Cluster-headed Mat-rush (100)

Southern Extraction Area

Summary of works completed January 23 - July 23 in Southern Extraction Area;

- Pack spray Pampus Grass;
- Tanker spray grassy weeds with non selective herbicide;
- Stake and guard removal those in good condition to be re-used in for this years plantings.
- Brushcutting weedy grasses for biomass control and preparation for spray works.
- Planting of the below species has been completed; (200)
 - Banksia spinulosa var. cunninghamii, Hairpin Banksia (25)
 - Eucalyptus baxteri, Brown Stringybark (25)
 - Eucalyptus dives, Broad-leafed Peppermint (25)
 - Pimelea flava ssp. flava, Yellow Rice-flower(25)
 - Pultanea hispudula (substitution for Pultanea gunnii ssp. gunnii, Golden Bush-pea) (25)
 - Pultanea scabra, Rough Bush-Pea (25)
 - Leptospermum myrsinoides, Heath Tea-tree, Silky Tea-tree (25)
 - Acacia genistifolia, Spreading Wattle (25)

Works to be completed August 23 - December 23 (425)

- Planting of the below;
 - Banksia spinulosa var. cunninghamii, Hairpin Banksia (25)
 - Daviesia leptophylla, Narrow-leaf Bitter-pea (25)
 - Eucalyptus baxteri, Brown Stringybark (25)
 - Eucalyptus dives, Broad-leafed Peppermint (25)
 - Pultanea hispudula (replaces Astroloma humifusum) (25)
 - Poa labillardierei var. labillardierei, Common Tussock-grass (200)
 - Lomandra longifolia var. exilis, Cluster-headed Mat-rush (100)

Phase C and Extraction Site

Summary of works completed January 23 - July 23 in Phase C and Extraction Site;

- Pack spray broadleaf weeds with selective herbicide;
- Tanker spray blackberry;
- Woody weed works;
- Planting of the below species has been completed; (275)
 - *Corea reflexa* var. *lobatus*, Poweltown Coreia (25)
 - *Poa ensiformis*, Purple-sheath ussock-grass (250)

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 years plantings.
- Pack spray blackberry and woody weeds
- Pack spray high priority broadleaf weeds with selective herbicide mostly thistles in preparation for plantings.
- Planting of the below species has been completed; (500)
 - *Acacia mearnsii*, Black Wattle (100)
 - *Eucalyptus baxteri*, Brown Stringybark (100)
 - *Eucalyptus dives*, Broad-leafed Peppermint (100)
 - *Eucalyptus goniocalyx*, Long Leafed Box, Bundy (100)
 - *Eucalyptus Radiata* ssp. *radiata*, Narrow-leafed Peppermint (100)

0.8 Hectare (2021) Revegetation Site

Summary of works completed January 23 - July 23 in 0.8 Hectare Revegetation Site;

- Pack spray pampus grass;
- Pack spray weedy grasses with non selective herbicide.
- Tanker spray broadleaf weeds with selective herbicide.
- Tanker spray weedy perennial grasses with selective herbicide.
- Handweed of large fleabane while collecting guards to prevent seeding.
- Brush cutting focusing on weedy grass species for biomass control and spray works.
- Removal of tree guards and collection of loose guards.
- Planting of the below species has been completed; (325)
 - *Acacia Verticillata* ssp. *Verticillata*, Prickly Moses (25)
 - *Cassinia longifolia*, Long-leaf Cassinia (25)
 - *Eucalyptus radiata*, Narrow-leafed Peppermint (25)
 - *Grevillea alpina* (Southern Hills Form), Mountain Grevillea (25)
 - *Leptospermum myrsinoides*, Heath Tea-tree, Silky Tea-tree (25)
 - *Pimelea humilis*, Common Rice-flower (25)
 - *Pultanaea gunnii* ssp. *gunnii* Golden Bush-pea (25)
 - *Dianella admixta*, spreading Flax-lily (50)
 - *Lomandra longifolia* var. *exilis*, Cluster-headed Mat-rush (100)

1.2 Hectare (2022) Revegetation Site

Summary of works completed January 23 - July 23 in 1.2 Hectare Revegetation Site;

- Pack spray pampus grass;

- Tanker spray broadleaf weeds with selective herbicide.
- Brush cutting focusing on weedy grass species for biomass control and spray works.
- Stake and guard removal those in good condition to be re-used in for this years plantings.
- Planting of the below species has been completed; (1650)
 - *Acacia genistifolia*, Spreading Wattle (100)
 - *Acacia Verticillata* ssp. *Verticillata*, Prickly Moses (75)
 - *Banksia marginata*, Silver Banksia (100)
 - *Bursaria spinosa* ssp. *spinosa*, Sweet Bursaria (75)
 - *Cassinia aculeata*, Dogwood (100)
 - *Cassinia longifolia*, Long-leaf Cassinia (75)
 - *Corea reflexa* var. *reflexa*, Common Correa (100)
 - *Daviesia latifolia*, Hop Bitter-pea (100)
 - *Eucalyptus baxteri*, Brown Stringybark (25)
 - *Eucalyptus dives*, Broad-leafed Peppermint (50)
 - *Eucalyptus radiata* ssp. *radiata*, Narrow-leafed Peppermint (50)
 - *Eucalyptus goniocalyx*, Long Leafed Box, Bundy (250)
 - *Kunzea leptospermoides*, Yarra Burgan (50)
 - *Leptospermum myrsinoides*, Heath Tea-tree, Silky Tea-tree (100)
 - *Lomandra longifolia* var. *exilis*, Cluster-headed Mat-rush (400)

Netgain Offset:

Naturelinks continued to monitor and undertake the weed program throughout the first half of 2023.

Activities included;

- spot spraying, broadleaf and perennial grass control in both the northern and southern zones.
- Hand weeding around plantings
- Pack spray weedy grasses northern section with non selective herbicide in areas that have been slashed and brushcut
- 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; (25)
 - *Corea reflexa* var. *lobatus*, Poweltown Corea (25)

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.

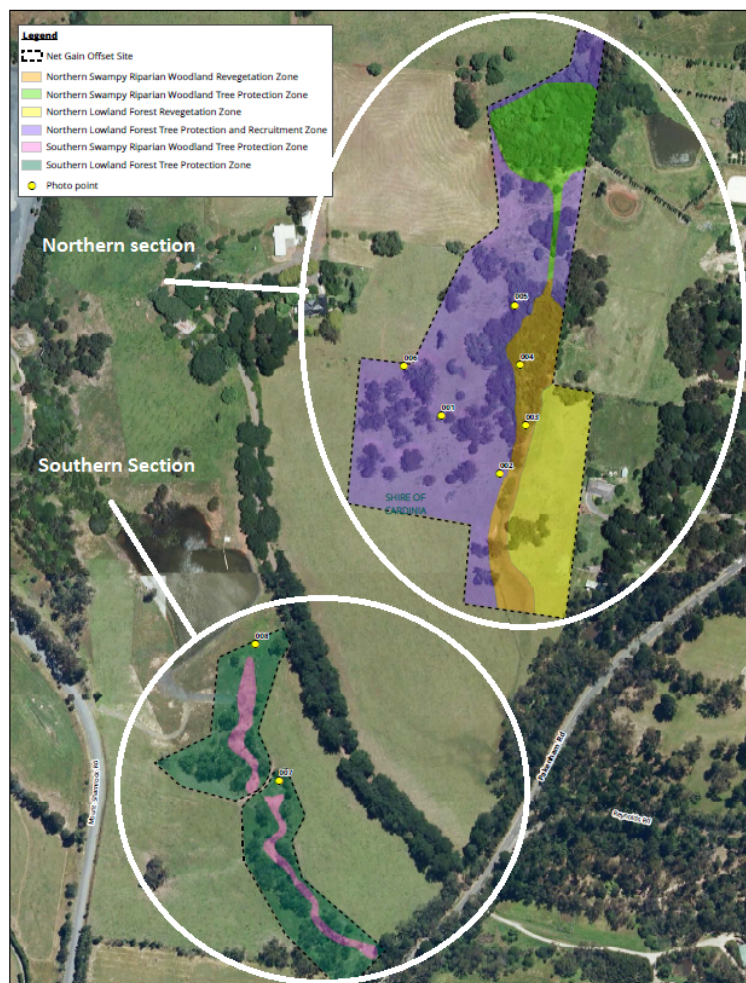


Figure 2 - Northern and Southern Sections of Netgain area

Month	Description
February 2023	<p>01/02/2023 Brushcutting Typha to gain access to blackberry and willow in top swamp northern section. Pack spray weedy grasses northern section with non selective herbicide in areas that have been slashed and brushcut. WEEDS: Anthoxanthum odoratum Dactylis glomerata Ehrharta erecta Erigeron spp. Holcus lanatus Paspalum dilatatum Phragmites australis Raphanus raphanistrum Sonchus asper s.l. Sonchus oleraceus Typha latifolia CHEMICALS: BS1000 Surfactant Mixed 1ml/L Weedmaster Duo 10ml/L mixed Spot On / Acid Blue Dye Mixed 4ml per litre BS1000 Surfactant Mixed 1ml/L Kamba M 6ml/L Spot On / Acid Blue Dye Mixed 4ml per litre</p> <p>02/02/2023 Cut and paint willow and blackberry top swamp northern section near sensitive native species primarily when among tree ferns. Pack spray weedy grasses with non selective herbicide in areas which have been brushcut and slashed northern section. Planting of left over grasses and sedges from spring planting at northern section along northern fence line where wet opposite main entrance gate.</p> <p>WEEDS: Anthoxanthum odoratum Carex fascicularis Dactylis glomerata Ehrharta erecta Erigeron spp. Holcus lanatus Paspalum dilatatum Phalaris aquatica Poa ensiformis Raphanus raphanistrum Rubus fruticosus spp. agg. Salix fragilis Sonchus asper s.l. Sonchus oleraceus CHEMICALS: Weedmaster Duo 1000ml/L Weedmaster Duo 10ml/L mixed BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre Kamba M 6ml/L BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre</p>
March 2023	<p>09/03/2023 Brushcutting access tracks through Phragmites and Typha in middle swamp</p>

	<p>northern section to access woody weeds and blackberry. Tree ferns appear to be recruiting in this area. Pack spray blackberry, Buffalo Grass and other priority weeds bottom North East corner of northern section Net Gain. Agapanthus observed spreading into site from adjacent property. 16/03/2023 Pack spray broadleaf weeds with selective herbicide Southern Section top and bottom half. Pack spray isolated Pampus Grass Southern Section top half. WEEDS: <i>Cirsium vulgare</i> <i>Cortaderia selloana</i> <i>Dittrichia graveolens</i> <i>Festuca arundinacea</i> <i>Helminthotheca echioides</i> <i>Hypochaeris radicata</i> <i>Phragmites australis</i> <i>Rubus fruticosus</i> spp. agg. <i>Senecio jacobaea</i> <i>Solanum nigrum</i> s.l. <i>Stenotaphrum secundatum</i> <i>Typha domingensis</i> CHEMICALS: Maca 600 High rate 3.4ml/L Weedmaster Duo 12ml/L mixed BS1000 Surfactant Mixed 1ml/L Brushwet Surfactant Mixed 1 ml//L Spot On / Acid Blue Dye Mixed 4ml per litre Kamba M 6ml/L Weedmaster Duo 20ml/L mixed BS1000 Surfactant Mixed 1ml/L Brushwet Surfactant Mixed 1 ml//L Spot On / Acid Blue Dye Mixed 4ml per litre</p>
April 2023	<p>04/04/2023 Pack spray blackberry and small woody weeds throughout site (northern section only). 13/04/2023 Pack spray blackberry, woody weeds and high threat broadleaf weeds (with selective herbicide Southern section top and bottom half. WEEDS: <i>Daucus</i> spp. <i>Lonicera japonica</i> <i>Pittosporum undulatum</i> <i>Prunus</i> sp <i>Rubus fruticosus</i> spp. agg. <i>Salix fragilis</i> CHEMICALS: Maca 600 zz High rate 3.4ml/L BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre Kamba M 6ml/L Maca 600 High rate 3.4ml/L BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre</p>
May 2023	<p>16/05/2023 Handweed agapanthus that had spread from neighbouring property on the NE boundary. Pack spray weedy grass species around Poa planting area. WEEDS: <i>Agapanthus praecox</i> subsp. <i>orientalis</i> <i>Anthoxanthum odoratum</i> <i>Dactylis glomerata</i> <i>Ehrharta erecta</i> CHEMICALS: Weedmaster Duo 10ml/L mixed BS1000 Surfactant Mixed 1ml/L Spot On / Acid Blue Dye Mixed 4ml per litre</p>
June 2023	<p>14/06/2023 All works conducted in Northern section. Handweed around cynoglossum, pack spray high priority weeds with non selective herbicide at various locations. WEEDS: <i>Anthoxanthum odoratum</i> <i>Dactylis glomerata</i> <i>Ehrharta erecta</i> <i>Holcus lanatus</i> CHEMICALS</p>
July 2023	<p>21/07/2023 Chopping up large fallen branch obscuring growth of remnant cynoglossum Southern Section of NG. Planting locally rare correa variety <i>Correa reflexa</i> var. <i>lobatus</i> Southern section of NG. Spray and handweed southern section of NG. Sprayed invasive broadleaf weeds west of spillway with selective herbicide. Sprayed broadleaf weeds top half of southern section with selective herbicide. Handweed around remnant cynoglossum and honey pots. WEEDS: <i>Cirsium vulgare</i> <i>Correa reflexa</i> <i>Fumaria</i> spp. <i>Galium aparine</i> <i>Hypochaeris radicata</i> <i>Plantago lanceolata</i> <i>Sonchus asper</i> s.l. <i>Sonchus oleraceus</i> CHEMICALS: Associate 0.1gm/L Kamba M 6ml/L Spot On / Acid Blue Dye Mixed 4ml per litre BS1000 Surfactant Mixed 1ml/L</p>

Rehabilitation update:

Overburden removal (stripping) has been conducted during the first half of 2023 (red outline) with emplacement of the rocky overburden and clay materials being placed in the western most corner (yellow outline) for reclamation works.

Topsoil was removed from the stripping area and directly placed on the new 1.1 Ha Revegetation area outlined below.



Figure 3 - 2023 Stripping area (red) and reclamation area (yellow)

1.1 Hectare (2023) Revegetation Site

The 1.1 Ha site is a new Revegetation area adjacent to the 0.8 and 1.25 Hectare Revegetation Sites. Works on this area began in 2023.

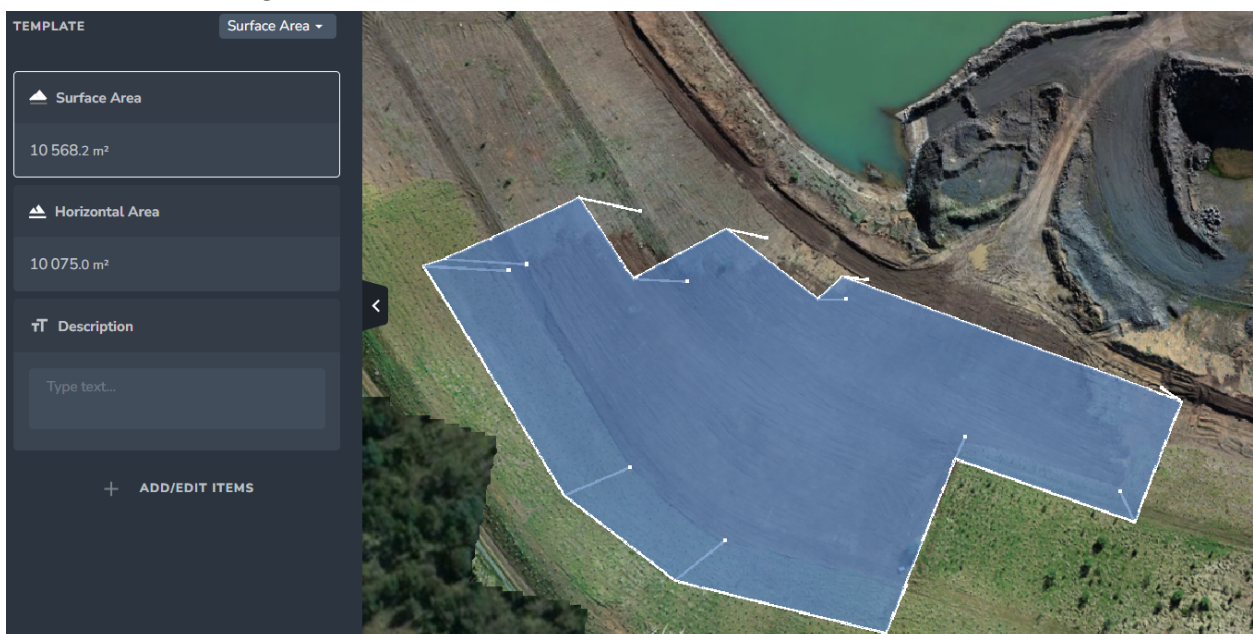


Figure 4 - Identification of the 1.1 Hectare Revegetation Site

Works completed

- Completion of top soiling in preparation for Hydroseeding;

Works to be completed July 23 - December 23

- Hydro Seeding to 1.1 Hectares of Native Grass Mix
- Approximately 2000 plants are planned for planting in Q3 2023, below is a list of plants to be planted for the remainder of the year; (2075)
 - Acacia Verticillata ssp. Verticillata, Prickly Moses (100)
 - Acacia genistifolia, Spreading Wattle (100)
 - Acacia implexa, Lightwood (100)
 - Acacia mearnsii, Black Wattle (150)
 - Acacia melanoxylon, Blackwood (150)
 - Acacia paradoxa, Hedge Wattle (100)
 - Acacia pycnantha, Golden Wattle (75)
 - Acacia stricta, Hop Wattle, Straight Wattle (100)
 - Allocasuarina littoralis, Black Sheoak (100)
 - Eucalyptus baxteri, Brown Stringybark (200)
 - Eucalyptus dives, Broad-leafed Peppermint (200)
 - Eucalyptus gonicalyx, Long Leafed Box, Bundy (200)
 - Eucalyptus oblique, Messmate (100)
 - Eucalyptus Radiata ssp. radiata, Narrow-leafed Peppermint (200)
 - Eucalyptus viminalis ssp. viminalis, Manna Gum (100)
 - Hakea decurrens ssp. Physocarpa, Bushy Needlewood (100)
 - Hakea Ulcina, Furze Hakea (100)

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 no exceedances of water quality limits during the first half of 2023.

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 2023

The following actions are planned for the remainder of 2023;

- Actions as listed throughout this report;
- Continue monthly weed maintenance at Netgain and Quarry areas;
- Bushfire prevention in Q4;
- Complete annual reporting requirements.