



Broken Head Quarry

Enforceable Undertaking Progress Report

Report #8 – March 2019

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## 1 Introduction

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This Report is the monthly report required to be given under clause 4.4(a) (“Reporting”) of the Enforceable Undertaking given by Leadshine Pty Limited on 20 August 2018 (“**Enforceable Undertaking**”). The Enforceable Undertaking commenced operation Tuesday 28 August 2018, the date of receipt of the withdrawal of the Order 15 issued by the Department of Planning and Environment.

This is the eighth progress report under clause 4.4(a) of the Enforceable Undertaking. It relates to the period from Friday 1 March 2019 until Sunday 31 March 2019.

The report describes works undertaken on the following aspects:

- Planning for the undertaking of rehabilitation works;
- Landforming Works and Stormwater Management Works carried out in March 2019;
- Vegetation Work carried out in March 2019;
- Other rehabilitation related activities carried out in March 2019; and
- Status of works having regard to timetable of the Enforceable Undertaking

The director of Leadshine Pty Limited (Stuart Dixon-Smith) attended at the Quarry on Monday 1 April 2019 to inspect for the purpose of this report and to provide instructions regarding activities to be carried out in April 2019. That visit also included an onsite meeting with James Foster and Rob Mitchell of ENV Solutions (who are responsible for management of waterbodies on BHQ) to inspect drainage works and discuss testing and treatment of waterbodies.

## 2 Executive Summary

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Works during the month involved primarily planting work on the Westside.

In particular the works included:

- planting in areas PZW8, PZW13, PZW14, PZW17, PZW18, PZW19, PZW20, PZW21, PZW23, PZW24, PZW25 and PZW26;
- finalisation of the stormwater check dams on PZW3, PZW6 and PZW9 (Area 7 in the Undertaking Annexure 1);
- upgrade of cross flow drain on PZW2 and PZW3 boundary (Area 6 in Undertaking Annexure 1);
- final bunding of the wetland area on PZW9;
- new drain constructed in PZW21 near PZW11;
- new drain on southern portion of PZW22 and rock-lined chute in PZW19 into Central Dam to manage stormwater runoff from PZW21, PZW22, PZW23, PZW24 and PZW25;
- commencement of work on wetland area in PZW16; and



- further filling and earthworks to areas PZW21, PZW22 and PZW23.

The Quarry experienced the first substantial rainfall for over 6 months during March, providing both good conditions for the survival of the new plantings in March 2019 as well as the first opportunity to observe the performance of stormwater drainage works undertaken over the last 6 months. Rainfall fell on 9 days and totalled 191mm, including 102mm on 18 March 2019. Rainfall did not cause the Central Dam to overflow, at least 1.5m of freeboard to the spillway crest existed at the end of the rainfall event. A copy of BHQ's manual rainfall chart taken on 1 April 2019 follows:

BROKEN HEAD QUARRY  
Form No. BSG 3602 Issue A: 1/99  
RAINFALL REGISTRATION Year 2019

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	DATE
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
1			6										1
2													2
3													3
4		5	9										4
5													5
6													6
7	16	7											7
8		10	6										8
9													9
10													10
11													11
12													12
13		8											13
14													14
15		22											15
16													16
17													17
18			102										18
19			8										19
20													20
21													21
22		12											22
23													23
24													24
25		15											25
26													26
27			21										27
28		11	34										28
29			2										29
30			3										30
31													31
TOTALS													Year
Raindays													Year
Cum Total													
Av All Yrs													Year
Cum Ave													

Figure 1 –BHQ Manual rainfall chart 2019

31 March 2019 is an important milestone BHQ under the Undertaking, being the date by which landforming works and stormwater works required by Annexures 1 and 2 of the Undertaking must be completed. A report on compliance with this undertaking is provided in section 7 below.

### **3 Rehabilitation Planning**

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March 2019 involved planning further plantings to be undertaken in April 2019 and forward ordering grass seeds to replenish stocks and new plant stock. 18,600 plants were ordered, which quantity is expected to largely cater for the revegetation requirements of the Undertaking. Blackbutt saplings were not able to be secured and BHQ's plant suppliers continue to try to source about 300 saplings for use at BHQ.

Location of plantings to be undertaken in April as a minimum 2019 are:

- Eastside: PZE3, PZE7, PZE8, PZE10, PZE12;
- Westside PZW4, PZW5, PZW7, PZW11, Macrophyte area PZW9,

These areas are required to be grassed and planted to ensure new areas of topsoil application are protected from erosion.

In addition, planning for topsoil spreading and grass seeding on cleared and landformed areas, to be undertaken in April 2019, has been progressed.

The following plans show areas planted in November 2018, March 2019 and areas expected to be planted in April 2019 (these plans are replicated at the end of Annexure A and Annexure B respectively in A3 page size to give better resolution).





**Figure 2 –Eastside November 2018 plantings and April 2019 planned plantings**





**Figure 3 – Westside March 2019 plantings and April 2019 planned plantings**

## **4 Landforming Works and Stormwater Management Works Progress**

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During March 2019 the Quarry's landforming and stormwater works activities were primarily focussed on:

- (a) completing landforming and drainage to ensure compliance with the Undertaking milestone of 31 March 2019 for works detailed in Annexures 1 and 2 of the Undertaking; and
- (b) supplemental stormwater drainage works not the subject of the Undertaking but which are desirable, including in connection with the landforming works.

Details of particular works follow:

### **4.2 Finalisation of the stormwater check dams on PZW3, PZW6 and PZW9 (Area 7 in the Undertaking Annexure 1)**

Although check dam replacement and upgrade works were undertaken during February 2019 in areas PZW3, PZW6 and PZW9 as reported in section 4.10 of Report #7, these were incomplete as at 28 February 2019. These works were completed with the installation of the final rock supplies and reinstatement/expansion of soil bunds to ensure water flows across and not around the check dams. Grassing of the soil bunds will be carried out in April 2019.





**Figures 4 and 5 – Area 7 Works viewed from above Central Dam looking north**





**Figure 6 – Area 7 Works viewed from PZW2 looking south**





**Figure 7 – Area 7 Works viewed from northern edge of PZW9 wetland looking north**



#### **4.3 Final bunding of the wetland area on PZW9**

A soil bund was constructed on the area north of the rock-lined spillway of the wetland on PZW9 to finalise the retention structures so as to ensure overflowing water escapes down the rock-lined spillway.



**Figure 8 – New soil bund shown to right of spillway mouth, viewed from Central Dam wall looking northwest**





**Figure 9 – New soil bund shown to right of spillway mouth, viewed from Central Dam wall looking northwest**



#### **4.4 Upgrade of cross flow drain on PZW2 and PZW3 boundary (Area 6 in Undertaking Annexure 1)**

The performance of the crossflow drain in Area 6 in Annexure 1 of the Undertaking was observed during the 18 March 2019 rainfall event and it was observed that waterflows from PZW2 were overspilling the downstream edge of the drain in the vicinity of Area 6. A much larger bund was constructed shortly afterwards to prevent overspill from the drain, which is to be grassed in April 2019.



**Figure 10 – New bund looking south east**





**Figure 11 – New bund looking south east**



#### 4.5 New drain constructed in PZW21 near PZW11

The final drain taking water from the upper access road on the Westside above PZW24 and waterflows from PWZ24 was constructed down PZW21 close to the boundary of PZW11 and PZW21. The upper portion is constructed in concrete canvas and the lower portion lined in geofabric and rock-lined.



Figure 12 – New PZW24 to PZW21 drain, viewed from PZW21 looking southeast





**Figure 13 – New PZW24 to PZW21 drain, viewed from foot of drain in PZW21 looking east**





**Figure 14 – New PZW24 to PZW21 drain, viewed from PZW24 looking south**



#### 4.6 New drain on southern portion of PZW22 and rock-lined chute in PZW19 into Central Dam

Following recommendations from Andrew Norris of Martens & Associates, drainage on the Blue Level (PZW22) and batters leading to the Blue Level (PZW21 and PZW23) was reorganised to prevent it spilling over the lower edge of PZW22 and instead ensuring it is redirected into the Central Dam. To achieve this, the drainage on the western edge of PZW22 near the Central Dam was reformed to push water flows from the existing drain away from the edge of PZW22 and collect it in an area that discharges to a new geofabric and rock-lined chute into the Central Dam.



**Figure 15 – Rock-lined chute to Central Dam viewed from Central Dam bypass road looking south**





**Figure 16 – Rock-lined chute to Central Dam viewed from Central Dam spillway looking east**





**Figure 17 – Rock-lined chute to Central Dam from Central Dam wall looking southeast**





**Figure 18 – Top of rock-lined chute to Central Dam taken looking east**





**Figure 19 – Former edge drain filled and diverted to terminate at new rock-lined chute head, viewed from head of rock-lined chute looking south**





**Figure 20 – Top section of rock-lined chute looking west. Collection and drainage point for runoff from PZW22**

See also the picture in **Figure 6** above.



The chute was constructed and was fully operational at the time when the 102mm rainfall event occurred on 18 March 2019, so its performance could be observed during this event. The chute performed well and drained its catchment effectively. Minor displacement of rock in the very lower portion of the chute occurred and this area was modified afterwards to widen out the chute at the bottom below the high-water mark for the Central Dam. These works are shown in **Figure 17** above, where different coloured rock was used in these repairs.

#### **4.7 Commencement of work on wetland area in PZW16**

Topsoil for emplacement on top of the new fill on PZW22 and PZW23 has been progressively removed from the stockpile on the site of proposed wetland area in PZW16. The works to construct the depression for this wetland and its integration into the Cutoff Drain have commenced. These works will progress in parallel with the emplacement of topsoil on PZW22 and PZW23. Note these works are not the subject of the 31 March 2019 milestone.



**Figure 21 – PZW16 wetland partially constructed, viewed from access road to PZW15 looking northwest**





**Figure 22 – PZW16 wetland partially constructed, viewed from access road to PZW15 looking north**



#### 4.8 Further filling and earthworks to areas PZW21, PZW22 and PZW23

Fill works to PZW21, PZW22 and PZW23 continued during March 2019. The base fill for these works was fully completed as at 31 March 2019 and topsoil over these recently completed fill areas had commenced, but was not complete as at 31 March 2019. Topsoil emplacement and grass seeding is expected to be completed by 30 April 2019. Note these fill works are not the subject of the 31 March 2019 milestone.



**Figure 23 – PZW21 area between PZW11 boundary and new drain, final landform and topsoil, looking southeast**





**Figure 24 – Fill emplacement area on PZW23 (centre picture) viewed from PZW2 looking south**



**Figure 25 – Fill emplacement area on PZW21 viewed from PZW2 looking south**





**Figure 26 – Fill emplacement area on PZW23 viewed from PZW24 looking north**





**Figure 27 – Panorama of PZW21 and PZW23 fill areas viewed from Central Dam wall looking east**

See also view of these areas in **Figure 11** to **Figure 14** and in **Figure 18**.

## **5 Vegetation Works Progress**

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Extensive planting work was undertaken on the Westside during March 2019 in the areas shown shaded in green in **Figure 3**, comprising areas PZW8, PZW13, PZW14, PZW17, PZW18, PZW19, PZW20, PZW21, PZW23, PZW24, PZW25 and PZW26. Planting comprised approximately 5,000 plants over a period of about 3 weeks.

It is intended to plant a significant number of blackbutt saplings, in the order of 300. These could not be sourced for this planting campaign, so suitable planting spots were left vacant for them to be back planted when available. Unformed wallaby protection cages and stakes have been left at the selected planting locations to mark where blackbutt will be used in the future, which are visible in some of the following photos.



## 5.1 PZW8 Plantings



**Figure 28 – Plantings on PZW8 viewed from Cutoff drain looking north**





**Figure 29 – Plantings on PZW8 viewed from east of Central Dam looking west**

See also the photo in **Figure 9** above.

## 5.2 PZW13 and PZW14 Plantings

Areas in PZW13 had moderate erosion from the period before erection of the bund at the western edge of PZW15.

This area was rehabilitated with fill and topsoil and, together with the remainder of PZW13 and clear areas with PZW14, was planted with *Lomandra* and similar species.



Figure 30 and Figure 31 – New topsoil and erosion repair plus plantings on PZW12 near boundary with PZW13/PZW14, looking north



### 5.3 PZW17 Plantings



**Figure 32 – PZW17 plantings viewed from PZW18 looking west**





**Figure 33 – PZW17, PZW18 and PZW8 plantings viewed from PZW2 looking southwest**





**Figure 34 – PZW17 plantings viewed from access road to PZW15 looking southeast**



#### 5.4 PZW18 Plantings

Area PZW18 was planted in the same density as the remaining plants except wallaby screens were not used, instead a wallaby exclusion fence was erected around the area. Accordingly it is more difficult to see the plantings than with respect to other areas.



**Figure 35 – PZW18 viewed from Central Dam access road looking east (montage of 2 photos)**





**Figure 36 – PZW18 (foreground) and PZW17 (rear) plantings viewed from Central Dam wall looking west**



## 5.5 PZW19 Plantings

Half of PZW19 (east of the new rock-lined chute) was planted in March 2019, but the area west of the new rock-lined chute has not been planted so as to allow access for the reforming of the Central Dam spillway as discussed in Report #7.



**Figure 37 – PZW19 planting viewed from top of new rock-lined chute to Central Dam, looking northeast**





**Figure 38 – PZW19 planting (foreground) and PZW20 planting (rear left) and PZW21 planting (rear central) and PZW23 planting (rear right) viewed from Central Dam wall looking east**



## 5.6 PZW20 Plantings



**Figure 39 – PZW20 planting (foreground left) and PZW19 planting (foreground right) and PZW21 planting (rear central left), PZW24 and PZW25 planting (rear left) PZW23 planting (rear right) viewed from PZW2 looking south**



## 5.7 PZW21 Plantings

The western part of PZW21 was planted during March 2019. The remainder of PZW21 was still being landformed during the month and was therefore not able to be planted.



**Figure 40 – PZW21 planting viewed from PZW22 looking east**





**Figure 41 – PZW21 plantings (rear) and PZW20 plantings (foreground) viewed from Central Dam bypass road next to PZW10**



## 5.8 PZW23 Plantings

The upper half of PZW23, where the January 2018 hydromulched grass struck and still stands, was planted in March 2019. (The area below in PZW223 and PZW22 was being landformed during the month and could not be planted).



**Figure 42 – PZW23 plantings viewed from upper access road looking northeast. PZW25 plantings at right of shot**





**Figure 43 – PZW23 plantings viewed from upper access road looking north**





**Figure 44 – PZW23 plantings viewed from upper access road looking southwest. PZW26 plantings in rear of shot**



## 5.9 PZW24 Plantings

All of Area PZW24 was planted during March 2019.



**Figure 45 – PZW24 (foreground) and PZW25 (rear) viewed from upper access road looking south. Note locations for future blackbutt planting**



## 5.10 PZW25 Plantings

All of Area PZW25 was planted during March 2019.



**Figure 46 – PZW25 plantings viewed from upper access road looking south**





**Figure 47 – PZW25 plantings viewed from near crest of Westside haul road looking north. Future blackbutt location marked**



## 5.11 PZW26 Plantings

All of Area PZW24 was planted during March 2019.



Figure 48 – PZW26 plantings looking north





**Figure 49 – PZW26 plantings looking south. Future blackbutt locations marked**



## 6 Other Works

BHQ acquired ownership of the chemical dosing plant adjacent to the Process Pond, which had previously been hired from the operators.

## 7 Status of works having regard to timetable of the Enforceable Undertaking

The following table notes the landforming and drainage works required to be undertaken by 31 March 2019 under clauses 4.1(a) and (b), 4.2(a) and (b) and Annexure 7 of the Undertaking, by reference to the 14 areas identified in Annexure 1 and Annexure 2:

Undertaking Area	Works description for works required by 31 March 2019	Status
1	Regrade road and eastern batter	Complete
2	Relocate fire access trails, regrade batter and scour and topsoil	Complete
3	If significant erosion occurs, fill rills	No significant erosion has occurred, no action required.
4	Regrade batter	Complete
5	Reprofile where access is possible	All areas accessible have been reprofiled. Topsoil being applied in April 2019 to areas where access for batter works not possible
6	Reshape drain	Complete
7	Reconstruct rock check dams and remove accumulated sediment	Complete
8	Reconstruct road and gutter drainage and connect to Area 10	Complete
9	Reprofile where vegetation not established	Complete
10	Construct rock-lined chute and connect to Area 11	Complete
11	Form drain and line	Complete
12	Reprofile southern batter of Central Dam	Complete



Undertaking Area	Works description for works required by 31 March 2019	Status
13	Construct spillway to cater for 1 in 100 year flows	Complete but defective due to inadequate spillway size. Spillway expansion being undertaken in April 2019 to design recommendations of Andrew Norris
14	Reprofile channel where required	Complete

## 8 Other Matters

### 8.1 Works status

The works undertaken during the month are detailed in the table attached to Annexure A and Annexure B, which Annexures are kept constantly up to date and each monthly change is shown in tracked text in the Annexure.

### 8.2 Department Feedback

The Department issued comments and feedback on Report #7 during March 2019. Leadshine responds to those comments as follows:

Section Reference	Department Comment	Response
Section 4.2 – PZE9 drain works	<p>The Department notes the advice that the drain identified as the PZE9 chute has been reconstructed as a rock lined chute lined with geofabric and a concrete base to manage large water flows and prevent further erosion.</p> <p>The Department has concerns around the safety and stability of the current arrangement; and highlights it must meet the requirements of section 4.2 of the Undertaking.</p>	<p>Leadshine acknowledges that the works undertaken on BHQ must meet the requirements of section 4.2 of the Undertaking. It should be noted that the chute is not work required to be undertaken under Annexure 2 of the Undertaking and accordingly the requirements of clause 4.2(g) are the only applicable provisions applying to these voluntary works.</p> <p>The chute performed well in the recent large rainfall event. It represents a significant improvement on the stormwater system in place at the time of execution of the Undertaking. If however the performance of the chute is found wanting, then additional works will be undertaken in accordance with recommendations from Andrew Norris or the independent auditor.</p> <p>Leadshine can discuss and suggested improvements at the foreshadowed inspection and based on the advice of the</p>



Section Reference	Department Comment	Response
		independent auditor required to be appointed under the Undertaking.
Section 6 – Other works	<p>Please include confirmation in the report for March 2019 (Report #8) that works required to be completed in accordance with 4.1 (a) and (b); and 4.2 (a) and (b) have been completed by 31 March 2019.</p> <p>If there is work required by the above listed sections in the Undertaking that has not been completed, please explain what work has not been completed and provide reasons why Leadshine has not complied with the requirements of the undertaking.</p>	See commentary above.
Section 7.3 – Department Feedback.	Section 4.1 Westside Land, parts (d), (e) and (g); and Section 4.2 Eastside land parts (d) and (e) of the Undertaking requires plants to be selected from the approved planting species lists identified in Annexure 4 and 5 of the Undertaking.	See email response to the Department in reply to these comments. Leadshine awaits report from East Coast Bush Regeneration as to exactly what species used, at which stage a comprehensive response will be provided.



## 9 Glossary, Definitions and Locations of Features

### 9.1 Features at Broken Head Quarry

The following plan identifies key areas at Broken Head Quarry and names used to define those areas in this and other Reports.



Figure 50 – Plan of major features of Broken Head Quarry



The following waterbodies are contained at Broken Head Quarry:

- Sediment Pond No. 2 – this is the lower dam on the East Pit which has formed part of the Quarry for most of its operation.
- Sediment Pond No. 1 – this is the upper dam on the East Pit, constructed in 2014 with dam wall alterations undertaken in 2017.
- North No 1 Sediment Pond – this is the small pond on the West Pit at the north eastern edge of the limit of extraction.
- Central Dam – this is the pond in the centre of the West Pit which collects stormwater runoff from most of the West Pit and feeds the cut off drain.
- Process Pond – this is the main working waterbody for the Quarry, located north of the Maintenance Sheds on the West Pit. It supplied water for the sand and gravel washing plant.
- Upper Lilypond – This is a dam on the edge of the West Pit which collects natural waterflows from west and north of the Quarry and overflows from the Process Pond.
- Lower Lilypond – This is a dam on the edge of the West Pit which is downstream of the Upper Lilypond and collects natural waterflows from the Upper Lilypond.

## 9.2 Other Defined Terms

**Broken Head Quarry** means the former sand and gravel quarry operated on the land comprised in the Eastside Land and the Westside Land and consists of the following parcels of land:

- Lot 2, Deposited Plan (“**DP**”) 700806;
- Lot 1, DP 123302;
- Lot 1, DP 184443;
- Lot 1, DP 245836;
- Lot 1, DP 245605; and
- Auto Consol 12993-34.

**Department** means the NSW Department of Planning and Environment.



**Eastside Land** means the land comprised in titles:

- Lot 1, DP 184443;
- Auto Consol 12993-34; and
- Lot 1, DP 245605.

**Enforceable Undertaking** means the enforceable undertaking given by Leadshine to the Department dated 20 August 2018 accepted by the Secretary of the Department on 27 August 2018.

**EPL 4860** means the Environmental Protection Licence (No 4860) issued to Leadshine by the Environmental Protection Authority relating to Broken Head Quarry.

**Leadshine** means Leadshine Pty Limited (ABN 21 102 229 943).

**Order** means the Order 15 order issued by the Department to Leadshine under section 121B of the *Environment Planning and Assessment Act 1979* on 11 August 2017.

**Rehabilitation Works Plans and Specifications** means the plans and notes in in Appendix 1 and Appendix 2 of the Enforceable Undertaking.

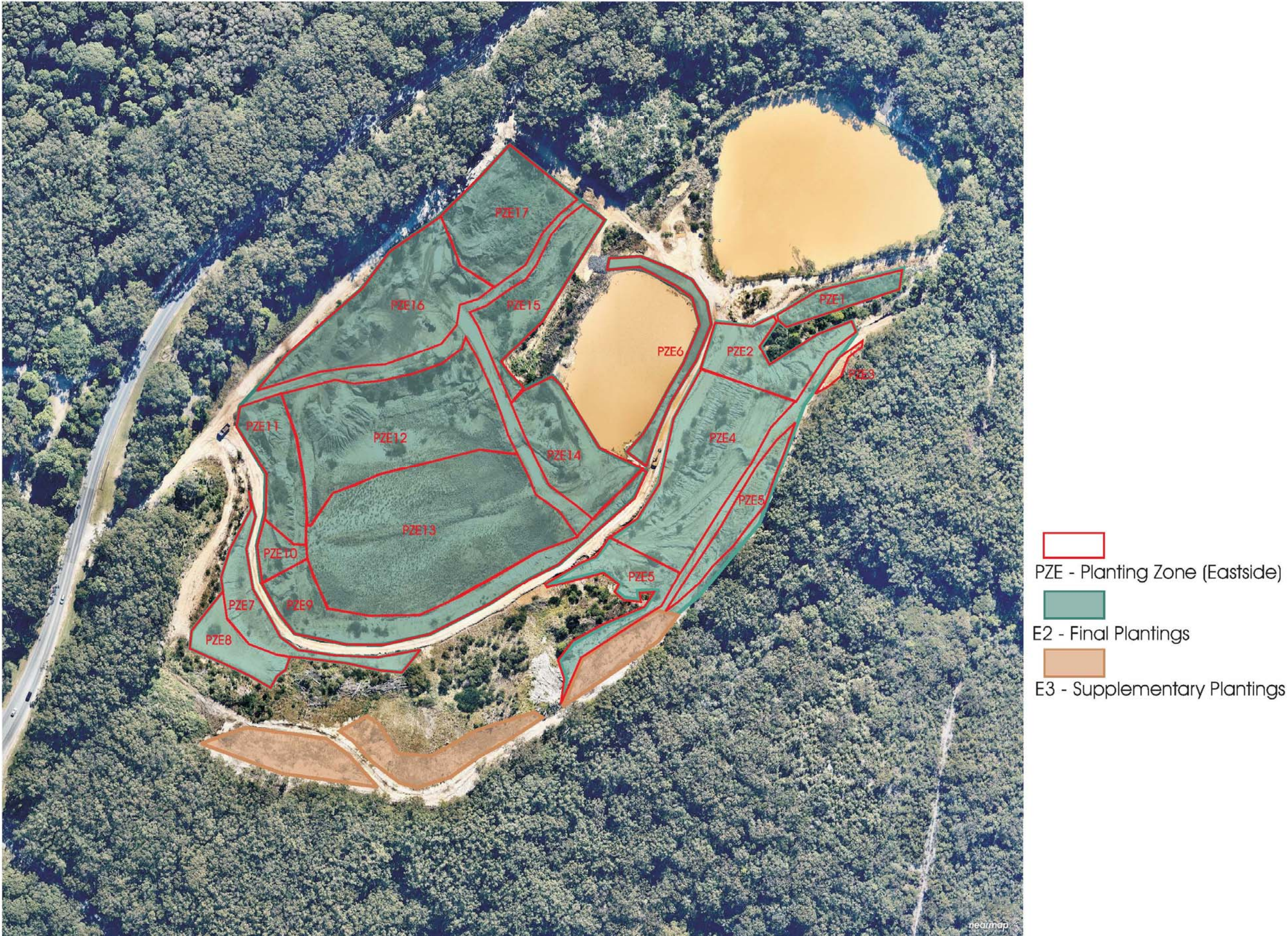
**Westside Land** means the land comprised in titles:

- Lot 1, DP 123302;
- Lot 1, DP 245836; and
- Lot 2, DP 700806.

Terms defined in the Enforceable Undertaking and not defined in this Report have the same meaning as defined in the Enforceable Undertaking.



Annexure A Eastside Sectors





## Eastside Rehabilitation Zones

Zone	Description	Status	Activity in <del>February</del> <u>March</u> 2019 and Future Plans
PZE1	North Facing Batter below future fire trail	Well vegetated with established semi mature vegetation. Unlikely any further vegetation will be required	Under observation to see if any damage from earthworks above requires remedial planting. Unlikely any further vegetation will be required. No damage sustained in earthworks activities.
PZE2	Batter below future fire trail. Comprises part of Area 1 in the Rehabilitation Works Plans and Specifications	<p>Future fire trail to be re-landformed to reduce slope of batter. Area was hydromulched in January 2018 and contains some areas with semi mature regenerated plants. However, large areas are bare soil due to landforming works.</p> <p>Once fire trail is re-landformed batter to be hydromulched and planted with shrubs selected by Mark Free.</p> <p>Rehabilitation Works Plans and Specifications requires the following action:  “REGRADE AREA TO LOWER TRACK ELEVATION TO MATCH GRADES TO SOUTH EAST. TRACK TO BE PROFILED WITH SINGLE CROSS FALL SOUTH EAST DISCHARGING TO EXISTING VEGETATED SLOPES. WHERE OUTFALL IS NOT POSSIBLE MITRE DRAINS TO BE PROVIDED AT 20 M INTERVALS.</p> <p>UNVEGETATED PORTIONS OF BATTER TO THE NORTH WEST OF TRACK TO BE REGRADE TO PROVIDE MAXIMUM 50% GRADE. BATTER TO BE TRACK ROLLED, TOPSOILED THEN REVEGETATED WITH SHORT TERM COVER CROP. FINAL REHABILITATION BY PLANTING WITH APPROVED SPECIES.”</p> <p>Landforming works were undertaken during September 2018 in accordance with the Rehabilitation Works Plans and Specifications.</p> <p>Topsoil emplaced in October 2018 and planting undertaken in early November 2018.</p> <p>Planting now completed and no further work considered to be required except for monitoring and maintenance.</p>	Planting now completed and no further work considered to be required except for monitoring and maintenance.
PZE3	East side of future fire trail. Comprises part of Area 1 in the Rehabilitation Works Plans and Specifications	<p>Area outside of areas to be revegetated under Enforceable Undertaking. However, this area will be impacted by the re-landforming of the fire trail. Following fire trail re-landforming it is expected this will need some revegetation.</p> <p>Once fire trail is re-landformed batter to be planted with shrubs selected by Mark Free.</p> <p>Landforming works were undertaken during September 2018 in accordance with Rehabilitation Works Plans and Specifications.</p>	<p>Further rectification works undertaken in February 2019 as instructed by Martens &amp; Associates to ensure compliance with Rehabilitation Works Plans and Specifications.</p> <p>Planting is not required by Enforceable Undertaking, although is under consideration. Planting not undertaken in November 2018 due to possible need for further landshaping. It has been decided to plant this area and Mark Free is identifying suitable species.</p> <p>Planting is intended to be undertaken in 2<sup>nd</sup> Quarter of 2019.</p>
PZE4	Lower west facing batter above Sediment Pond No 1	<p>Area landformed and hydromulched in January 2018. Grass well established with some native plants self-generating.</p> <p>Minor alteration to location of road, relocating the lower access trail further west to allow for reduction of batter in area PZE5 Upper was undertaken during September 2018 in accordance with Rehabilitation Works Plans and Specifications.</p> <p>Initial stages or shrub plantings undertaken in early November 2018.</p> <p>Minor additional grassing to be undertaken at edges of reformed road.</p> <p>Planting now completed and no further worked considered to be required except for monitoring and maintenance.</p>	Planting now completed and no further work considered to be required except for monitoring and maintenance.



Zone	Description	Status	Activity in <del>February</del> <u>March</u> 2019 and Future Plans
PZE5 (upper portion)	Upper west facing batter above Sediment Pond No 1. Comprises Area 2 in the Rehabilitation Works Plans and Specifications	<p>Area landformed to remove eroded slope and rilling in March/April 2018. Enforceable Undertaking requires area to be re-landformed to reduce batter and then revegetated.</p> <p>Once the batter is reformed to a reduced gradient area to be hydromulched (if required) and planted with shrubs selected by Mark Free.</p> <p>Rehabilitation Works Plans and Specifications requires the following action:  REGRADE BATTER FROM LOWER TRACK TO PROVIDE MAXIMUM 50% GRADE. UPPER TRACK WIDTH TO BE ADJUSTED TO SUIT. UPPER TRACK SINGLE CROSS FALL TO SOUTH EAST TO BE MAINTAINED WITH DISCHARGE TO MITRE DRAIN AT NORTH EASTERN END OF AREA.  LOWER TRACK TO BE REPROFILED WITH OUTFALL DRAINAGE TO REVEGETATED SLOPE TO WEST.</p> <p>Landforming works were undertaken during September 2018 in accordance with the Rehabilitation Works Plans and Specifications.</p> <p>Planting undertaken in November 2018.</p> <p>Planting now completed. Some bare patches of soil exist where grass has not taken. Further monitoring required.</p>	<p>Planting now completed. Some bare patches of soil exist where grass has not taken. Expect to scour these areas, apply topsoil and hand seed in 2<sup>nd</sup> Quarter of 2019. Grass seed <del>has</del> <u>is currently being</u> sourced to plant this area.</p>
PZE5 (lower portion)	Southern batter facing west above Sediment Pond No 1.	<p>Site of new drain and reformed batters where topsoil store previously located, fringed by vegetated and rehabilitated areas.</p> <p>Topsoil store removed and area re-landformed and drain constructed in August 2018. Seeded topsoil spread in August 2018.</p> <p>Planting undertaken in November 2018.</p> <p>Planting now completed and no further work considered to be required except for monitoring and maintenance.</p>	<p>Area to be monitored to see if grass germinates and strikes given sandy quality of the endemic topsoil store and monitoring for erosion.</p> <p><del>Depending on success or not of grass cover, the area may be hydromulched.</del></p> <p>Bare patches have begun to establish grass cover, so hydromulching has been deferred and grass establishment is being monitored and assisted by water cart irrigation. Current position is that further grassing will not be required, <u>including as a result of</u> <del>but to be reviewed after an</del> examination of consequences of heavy rainfall in mid-March 2019.</p>
PZE6	Dam wall and edges to Sediment Pond No 1	<p>No landforming works required. Large culvert from PZE5 (lower portion) drain to Sediment Pond No 1 discharges to a highly eroded bank. Downstream area to be concrete filled to prevent further erosion.</p> <p>Revegetation required.</p> <p>Dam wall to be topsoiled as required to support selected plantings. Area to be planted with grasses and other vegetation selected by Mark Free.</p> <p><u>Planting undertaken in November 2018.</u></p> <p>Planting now completed and no further work considered to be required except for monitoring and maintenance.</p>	<p><del>Planting undertaken in November 2018.</del> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u></p>



Zone	Description	Status	Activity in <del>February</del> <u>March</u> 2019 and Future Plans
PZE7	Batter below level pad. Comprises Area 5b in the Rehabilitation Works Plans and Specifications	<p>Steeper batter showing some signs of rilling and erosion, but with a scattering of well-established shrubs. Hydromulched in January 2018 with limited grass cover established from that exercise.</p> <p>Bund to be constructed to stop water flowing from level pad PZE8 above. Erosion rills to be filled with seeded topsoil and plantings undertaken to assist in stabilising slope.</p> <p>Rehabilitation Works Plans and Specifications requires the following action: WHERE VEGETATION HAS NOT ESTABLISHED AND WHERE SURFACE RILLS HAVE FORMED REPROFILE WITH TOOTHED EXCAVATOR BUCKET {ACCESS FROM ROADWAY ABOVE OR ON SLOPE WHERE POSSIBLE). APPLY TOPSOIL THEN PROVIDE SHORT TERM COVER CROP. FINAL REHABILITATION BY PLANTING WITH APPROVED SPECIES.</p> <p>Bund established during September 2018.</p> <p>Half of the eroded area successfully re-topsoiled during September 2018.</p> <p><a href="#">Further topsoil emplacement, scouring with excavator bucket teeth and shrub plantings carried out in February 2019.</a></p>	<p><del>Further topsoil emplacement, scouring with excavator bucket teeth and shrub plantings carried out in February 2019.</del></p> <p>Shrub plantings expected to be in April 2019.</p>
PZE8	Level Pad	<p>Landform finished except bund described in PZE7. Seeded in November 2017 and Hydromulched in January 2018.</p> <p>Bund to be constructed to stop water flowing to batter in PZE7 below. Area to be planted with shrubs selected by Mark Free.</p> <p>Bund established during September 2018.</p>	<p>Minor additional grassing to be undertaken at edges where new bund erected.</p> <p>Timing of shrub plantings expected to be in April 2019.</p>
PZE9	Batter below access trail to settlement areas. Comprises Area 5a in the Rehabilitation Works Plans and Specifications	<p>Hydromulched in January 2018 with very limited success. Scattered shrubs developed in clusters.</p> <p>Rehabilitation Works Plans and Specifications requires the following action: WHERE VEGETATION HAS NOT ESTABLISHED AND WHERE SURFACE RILLS HAVE FORMED REPROFILE WITH TOOTHED EXCAVATOR BUCKET {ACCESS FROM ROADWAY ABOVE OR ON SLOPE WHERE POSSIBLE). APPLY TOPSOIL THEN PROVIDE SHORT TERM COVER CROP. FINAL REHABILITATION BY PLANTING WITH APPROVED SPECIES.</p> <p>Drain concreting undertaken in November 2018.</p> <p>Trial emplacement of seeded topsoil from road above undertaken during September 2018 which appears to have been successful.</p> <p><a href="#">Major drain from Sediment Pond No 1 perimeter road to Sediment Pond No 1 was rebuilt as a rock-lined chute in February 2019.</a> <del>Trial hydromulch to be undertaken in 1<sup>st</sup> Quarter 2019 with shrub plantings to follow.</del></p>	<p><del>Major drain from Sediment Pond No 1 perimeter road to Sediment Pond No 1 was rebuilt as a rock chute in February 2019.</del></p> <p>Further seeded topsoil to be emplaced where required in 1<sup>st</sup> Half 2019, followed by hydromulching and shrub planting.</p> <p>Timing of shrub plantings not yet determined.</p>
PZE10	Site of concrete pipe drain from above.	<p>Highly eroded and disturbed area.</p> <p>Rehabilitation of highly eroded batter and new drain to be installed, and then hydromulched and revegetated.</p> <p>Area filled with fill sand and seeded topsoil during September 2018.</p> <p>Concrete canvas drain installed to take discharge from concrete pipe in September 2018. Drain across access trail rocked in November 2018. Minor repairs and bunding of new drain to be undertaken before hydromulching and planting.</p> <p><a href="#">Blocking vegetation removed and bunding and fill added to drain to prevent edge erosion and improve performance undertaken in February 2019.</a></p>	<p><del>Performance observed during recent rainfall and observed to perform well, future erosion largely eliminated, minor erosion at edges of concrete canvas drain.</del></p> <p><del>Blocking vegetation removed and bunding and fill added to drain to prevent edge erosion and improve performance undertaken in February 2019.</del></p> <p>Area to be hand seeded and planted in 2<sup>nd</sup> Quarter 2019 and planted with shrubs selected by Mark Free. Planting expected to be completed in April 2019.</p>



Zone	Description	Status	Activity in <del>February</del> <u>March</u> 2019 and Future Plans
PZE11	Batter area. Comprises Area 4 in the Rehabilitation Works Plans and Specifications	<p>Partially completed batter, awaiting further fill material and topsoil.</p> <p>Rehabilitation Works Plans and Specifications requires the following action: EXTEND BATTER WEST AND SOUTH TO PROVIDE MAXIMUM 50% BATTER SLOPES DOWN FROM ROAD. BATTER TO BE TRACK ROLLED, TOPSOILED THEN REVEGETATED WITH SHORT TERM COVER CROP. FINAL REHABILITATION BY PLANTING WITH APPROVED SPECIES.</p> <p>Further fill emplacement undertaken and seeded topsoil spread during September 2018.</p> <p>Part of PZE12 planting extended into the northeast sector of PZE11 during the November planting campaign.</p> <p><a href="#">Further fill emplacement and completion of batter undertaken in February 2019.</a></p>	<p>Now being monitored for drainage performance and erosion.</p> <p>Area to be planted with shrubs selected by Mark Free.</p> <p><del>Further fill emplacement and completion of batter undertaken in February 2019.</del></p> <p>Timing of hand seeded grass and shrub plantings expected to be April 2019.</p>
PZE12	South East facing batter	<p>Landforming works complete and finished with seeded topsoil. Grass has germinated and beginning to establish.</p> <p>Planting now completed and no further work considered to be required except for monitoring and maintenance.</p> <p>Area planted in November 2018.</p> <p>Planting now completed and no further work considered to be required except for monitoring and maintenance.</p>	<p>Now being monitored for drainage performance and erosion.</p> <p><a href="#">Planting now completed and no further work considered to be required except for monitoring and maintenance.</a></p>
PZE13	Settlement area	<p>Boggy and very wet flat area. Sedge grass and other suitable species have been established and are being monitored.</p> <p>Planting of shrubs considered difficult if not impossible due to dangerous ground conditions meaning access for planting is unsafe.</p> <p>Trial plantings conducted in November 2018 will be monitored, together with ground water conditions to establish if further plantings in PZE13 are possible or necessary.</p> <p>Drainage boxes were altered during September 2018 in an attempt to lower the water level within the settlement area to see if water can be better drained to improve access conditions. Subject to ongoing monitoring.</p> <p>Trial plantings conducted in November 2018.</p>	<p>Planting at the very south end (where the ground level is higher) is considered possible.</p> <p>Trial plantings conducted in November 2018 will be monitored, together with ground water conditions, to establish if further plantings in PZE13 are possible or necessary.</p>
PZE14	Upper reaches of Sediment Pond No 1	<p>Comprises plume from settlement area PZE13 and runoff from road. Grasses slowly establishing themselves and small shrubs and sedge clumps establishing.</p> <p>Area to be planted with grasses and shrubs selected by Mark Free.</p>	<p>Road to be stabilised with road fill and possibly some drainage works to prevent further eroded runoff.</p> <p>Timing of shrub plantings not yet determined. Timing will depend on whether more radical earthworks are required to drain the settlement area PZE13 which might involve excavation of drainage lines in PZE14.</p>
PZE15	East facing batter. Comprises Area 3 in the Rehabilitation Works Plans and Specifications	<p>Batter was landformed and topsoiled with seeded topsoil in late 2017. Small patches of un-topsoiled area remain where no vegetation exists, although these are not eroding. Shrubs have established well at the boundary with Sediment Pond No 1.</p> <p>Area to be planted with shrubs selected by Mark Free.</p> <p>Rehabilitation Works Plans and Specifications requires the following action: ESTABLISHMENT OF VEGETATION TO BE MONITORED. WHERE VEGETATION ESTABLISHMENT IS INADEQUATE FURTHER SEEDING, HYDROMULCHING OR PLANTING TO BE UNDERTAKEN. WHERE SIGNIFICANT EROSION OCCURS (RILLS &gt; 300 MM) FURTHER TOPSOILING, REPROFILING OR RIPPING WITH ADDITIONAL</p>	<p>Inspection reveals no significant rilling or erosion and grass and low profile vegetation has taken well without any need for further topsoil or grassing. Timing of shrub plantings not yet determined, likely to be mid 2019.</p> <p>Monitoring of batter has not revealed any erosion problems to date.</p> <p>Minor additional work and topsoil required on lower portions in conjunction with finalisation of access road alignment.</p>



Zone	Description	Status	Activity in <del>February</del> March 2019 and Future Plans
		REVEGETATION WORKS TO ACHIEVE LONG TERM STABLE AND VEGETATED BATTER.	
PZE16	Flat pad former stockpile area	Stockpiles have all been removed during August 2018 and September 2018 except for topsoil awaiting emplacement in areas PZE7 through PZE12 inclusive.	Being monitored for erosion, at present no material erosion evident.  Identified as one of the final areas to be topsoiled and planted, due to its suitability for, and use for, access, equipment parking and stockpile location. Expected to be ripped, topsoiled, seeded and planted in 2 <sup>nd</sup> Quarter 2019.
PZE17	Existing topsoil stockpile	Stockpile remains and occasionally is accessed to remove and screen topsoil for use in rehabilitation.  Screening plant has been removed to Westside stockpile area.	Identified as one of the final areas to be rehabilitated and planted. Topsoil stockpile to be removed in 2 <sup>nd</sup> Quarter 2019, then the site will be topsoiled, seeded and planted in 2 <sup>nd</sup> Quarter 2019.
"Stony Hillside"	Area identified as "stony hillside" in Mark Free monitoring report August 2018.  Not shown in the plan above.	Mark Free Report identifies "Plantings on the stony hillside continue to develop slowly and there is some leaf litter buildup. Although there is little natural recruitment in these difficult conditions, a number of planted trees are very well established with Blackbutt, Turpentine, Coast banksia and Blackwood wattle forming an open canopy. Conditions will improve as leaf litter and organic material continues to build up.  It has been decided to intervene to rehabilitate this area more quickly, and to introduce some topsoil, mulch and plant suitable species to complete the rehabilitation of area RE1 as identified in Mark Free's reports. This work was undertaken in November 2018. Work has been undertaken in a manner that preserves access to the spillway for inspection, water sampling and maintenance.  Planting now completed and no further work considered to be required except for monitoring and maintenance.	Monitoring and maintenance are ongoing.  <a href="#">Planting now completed and no further work considered to be required except for monitoring and maintenance.</a>

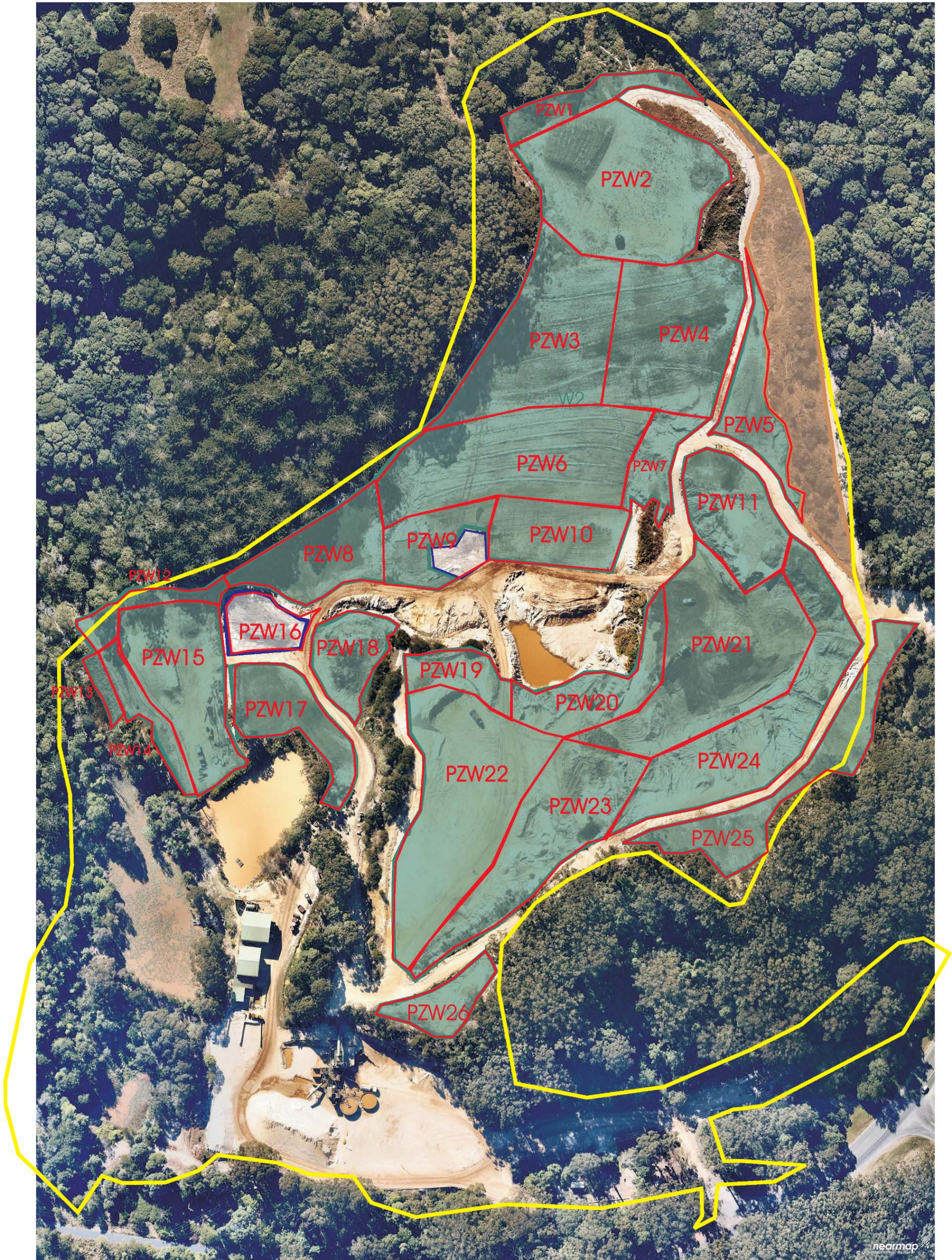




Figure 51 – Replica of Figure 2 –Eastside November 2018 plantings and April 2019 planned plantings



Annexure B Westside Sectors



AREA W2 - Final Plantings



AREA W3- Planting Inventory



PZW - Planting Zone (Westside)



## Westside Rehabilitation Zones

Zone	Description	Status	Activity in <del>February</del> <u>March</u> 2019 and Future Plans
PZW1	Northern batter of western top pad	Well vegetated and not requiring further work. To be monitored	Nil
PZW2	Western top pad	Topsoiled and hydromulched in January 2018. Contains topsoil store.	Topsoil store required to be removed. Shrub planting expected in 2 <sup>nd</sup> Quarter of 2019
PZW3	South facing batter in lowland rainforest rehabilitation area. Contains Areas 6 and 7 in Rehabilitation Works Plans and Specifications	Topsoiled and successfully hydromulched in January 2018. <a href="#">Drain rehabilitation work undertaken in March 2019.</a>	<del>Drain rehabilitation work undertaken in March 2019.</del> Shrub planting expected in 2 <sup>nd</sup> Quarter of 2019
PZW4	Upper south facing batter in blackbutt rehabilitation area. Contains Areas 9, 10 and part 11 in Rehabilitation Works Plans and Specifications	Topsoiled and successfully hydromulched in January 2018. <a href="#">Drain rehabilitation work undertaken in March 2019.</a>	<del>Drain rehabilitation work undertaken in March 2019.</del> Shrub planting expected in 2 <sup>nd</sup> Quarter of 2019
PZW5	Upper south east facing batter and flat area in above Area W3	Hydromulched in January 2018. Grass establishment patchy. <a href="#">Minor road realignment and profiling to undertaken in March 2019 to eliminate need for eastern drain, followed by topsoil application and hydromulching. Drain works on western side of access road work undertaken in March 2019.</a>	<del>Minor road realignment and profiling to undertaken in March 2019 to eliminate need for eastern drain, followed by topsoil application and hydromulching. Drain works on western side of access road work undertaken in March 2019.</del> Shrub planting expected in 2 <sup>nd</sup> Quarter of 2019
PZW6	Lower south facing batter	Topsoiled and successfully hydromulched in January 2018. <a href="#">Drain rehabilitation work undertaken in 1<sup>st</sup> Quarter 2019.</a>	<del>Drain rehabilitation work undertaken in 1<sup>st</sup> Quarter 2019.</del> Shrub planting expected in 2 <sup>nd</sup> Quarter of 2019
PZW7	Lower south east facing batter and drain location. Contains part Area 11 in Rehabilitation Works Plans and Specifications	Hydromulched in January 2018. Grass establishment patchy. Drain rehabilitation works undertaken in September 2018. <a href="#">Further topsoil application undertaken in March 2019. Drain works on western side of access road undertaken in March 2019, with additional rock emplacement in March 2019.</a>	<del>Further topsoil application undertaken in March 2019. Drain works on western side of access road undertaken in March 2019, with additional rock emplacement expected in April 2019.</del> Shrub planting expected in 2 <sup>nd</sup> Quarter of 2019
PZW8	Flat area in lowland rainforest rehabilitation area	Grassed previously and well established. Cut-off drain cleared in December 2018. <a href="#">Shrub planting undertaken in March 2019.</a>	<del>Shrub planting expected in March 2019.</del> Planting of cleared cut off drain expected to be undertaken in June 2019
PZW9	Upper wetland area	Initial establishment of wetland form undertaken in September 2018 and October 2018. Gradual establishment of new landform and wetland basin being undertaken, with progress work undertaken in November 2018 and December 2018. Wetland basin formed and wall, spillway and drain created in January 2019. <a href="#">Final works completed in March 2019.</a>	Final drain rehabilitation and wetland charging and releases systems to be reviewed and implemented. Shrub planting and wetland planting expected in 2 <sup>nd</sup> Quarter of 2019.
PZW10	Flatlands and Central Dam bypass batter	<del>Being</del> <a href="#">Previously</a> used for storage and drying of Central Dam desilting materials. Materials removed in November 2018 and December 2018.	Topsoil to be added and grassed/hydromulched once removal and landform complete. Shrub planting and wetland planting expected in 2 <sup>nd</sup> Quarter of 2019
PZW11	North west sloping batter	Landformed and topsoiled in September 2018. <a href="#">Final landform works undertaken in 1<sup>st</sup> Quarter 2019.</a>	<del>Further landform works undertaken in 1<sup>st</sup> Quarter 2019.</del> Shrub planting expected in 2 <sup>nd</sup> Quarter of 2019
PZW12	Former cut off drain area	Vegetation well established <del>except in former cut off drain.</del>	Following review of these areas which have self-vegetated well, no further works considered necessary
PZW13	Lilypond batter area	Landform finalised. <a href="#">Shrub planting undertaken in March 2019</a>	<del>Shrub planting expected in March 2019</del> <a href="#">Planting now completed and no further work considered to be required except for monitoring and maintenance.</a>



Zone	Description	Status	Activity in <del>February</del> <u>March</u> 2019 and Future Plans
		<u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>	
PZW14	Lilypond pad west of bund	Landform finalised. <u>Topsoil application and shrub planting undertaken in March 2019</u> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>	<del>Topsoil application and shrub planting expected in 1<sup>st</sup> Quarter of 2019</del> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>
PZW15	Lilypond pad east of bund	Landform finalised Cut-off drain cleared in December 2018.	Topsoil application and shrub planting expected in 2 <sup>nd</sup> Quarter of 2019. Reduction in size and partial relocation of bund to be undertaken. Minor reprofiling of pad to drain towards Process Pond or cut off drain recommended. Cut off drain to be vegetated in June 2019.
PZW16	Lower wetland. Contains Area 14 in Rehabilitation Works Plans and Specifications	Current location of topsoil store <u>Wetland formation works partially undertaken in March 2019</u>	Topsoil to be removed and used, likely on PZW15, and wetland to be formed in 2 <sup>nd</sup> Quarter of 2019 and planted in 2 <sup>nd</sup> Quarter 2019.
PZW17	Flat pad west of Process Pond	Landform finalised. Previously grassed. <u>Shrub planting undertaken in March 2019.</u> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>	<del>Shrub planting expected in 1<sup>st</sup> Quarter of 2019</del> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>
PZW18	Flat pad west of Central Dam. Contains Area 13 in Rehabilitation Works Plans and Specifications	Landform finalised. Previously grassed <u>Shrub planting undertaken in March 2019</u>	<del>Shrub planting expected in 1<sup>st</sup> Quarter of 2019</del> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>
PZW19	North facing batter and dam bank south of Central Dam	Landformed in September 2018 and topsoiled in October 2018. Replacement drain for runoff from batter on PZW24 and PZW21 established across PZW19 in November 2018. <u>Shrub planting east of rock-lined chute undertaken in March 2019. New rock lined chute to take waterflows from PZW21 and PZW22 into Central Dam constructed in March 2019.</u>	<del>To be monitored to establish if hydromulching required. Shrub planting expected in March 2019. New rock lined chute to take waterflows from PZW21 and PZW22 into Central Dam to be constructed in March 2019. Shrub planting west of rock-lined chute to be undertaken when Central Dam spillway rectification works complete</del>
PZW20	South bank of Central Dam. Contains Area 12 in Rehabilitation Works Plans and Specifications	Landformed in September 2018 and topsoiled in October 2018. Old drain into Central Dam diverted and rehabilitated in November 2018. <u>Shrub planting undertaken in March 2019.</u> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>	<del>To be monitored to establish if hydromulching required. Shrub planting expected in 1<sup>st</sup> Quarter of 2019</del> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>
PZW21	Westside fill emplacement area	<del>Landforming continuing. Currently occupied by partially complete fill and fill and topsoil stockpiles.</del> Water diversion bund established in October 2018. Batter at western end of PZW21 on border with PZW23 regraded in November 2018 with drainage bund partially established. Further fill and grading work undertaken in December 2018. <u>Fill work completed in March 2019 except for removal of topsoil stockpiles, with final landform and drainage works established.</u> <u>Shrub planting partially completed in March 2019.</u>	<del>Fill work to continue until March 2019, when final landform established, topsoil and drainage works to be established and hydromulching undertaken. Topsoil to be established in April 2019 and grassed. Topsoil stockpile to be removed and used on PZW21, PZW22 and PZW23.</del> Shrub planting to be <del>carried completed</del> out in 2 <sup>nd</sup> Quarter of 2019
PZW22	Blue level pad	Landform finalised, currently occupied by fill and roadbase stockpiles <u>Fill and roadbase stockpiles removed in March 2019 and landform completed. Topsoil partially placed in March 2019.</u>	<del>Fill to be relocated to PZW21 and PZW23 and roadbase used on roads throughout BHQ by March 2019.</del> Topsoil <del>to be application</del> <u>to be completed in March-April 2019;</u> including minor reprofiled to ensure flows drain to Central Dam. Grass seeding/hydromulching <u>to be completed in April 2019</u> and shrub planting to be carried out in 2 <sup>nd</sup> Quarter of 2019



Zone	Description	Status	Activity in <del>February</del> <u>March</u> 2019 and Future Plans
PZW23	Blue level batter	Landform <del>largely</del> finalised. Hydromulched in January 2018 but only upper areas were successfully grassed. <u>Topsoil partially applied in March 2019.</u> <u>Shrub planting of upper half of batter carried out in March 2019.</u>	Topsoil <del>and hydromulch</del> to be <del>applied</del> <u>completed</u> in <del>March</del> <u>April</u> 2019. Shrub planting of <del>upper half of batter to be carried out in March 2019 and</del> remainder to be carried out in 2nd Quarter of 2019
PZW24	Upper level pad	Landform <del>largely</del> finalised. Hydromulched in January 2018. <del>Patchy results due to impact of ongoing earthworks in PXW 21.</del> Bund and minor temporary drainage works established in March 2018 and have been adjusted occasionally. <u>Shrub planting carried out in March 2019.</u> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>	<del>Shrub planting to be carried out in March 2019</del> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>
PZW25	Vegetation areas east of upper road	Landform finalised. Previously grassed <u>Shrub planting undertaken in March 2019.</u> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>	<del>Shrub planting expected in March 2019.</del> Possible road base application to road <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>
PZW26	Vegetation areas south of upper road	Landform finalised. Previously grassed <u>Shrub planting expected in March 2019. Possible road base application to road.</u> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>	<del>Shrub planting expected in March 2019. Possible road base application to road and upgrade of drain to south of road.</del> <u>Planting now completed and no further work considered to be required except for monitoring and maintenance.</u>
Washplant	Not subject to Enforceable Undertaking provisions, but intended to be removed	Washplant removed, further infrastructure removal, safety work and works to be undertaken	Further infrastructure removal, safety work and works to be undertaken in 1 <sup>st</sup> Half 2019.
Weighbridge	Not subject to Enforceable Undertaking provisions, but weighbridge and weighbridge office intended to be removed. Other accommodation and toilet facilities and water tank to remain.	Weighbridge sold and deposit received. No removal works undertaken, weighbridge still operational	Weighbridge unlikely to be decommissioned and removed by June 2019, but works not required under Undertaking





Figure 52 – Replica of Figure 3 – Westside March 2019 plantings and April 2019 planned plantings