

REV: DESCRIPTION: DATE: BY: 35/11/11 LT:

Legend:

- Blast Monitor Locations (BM1, BM2, BM3, BM4)
- Water Monitoring Locations (WM)
- Dust Monitoring Locations (DM)

Data Source: Photography: 22 May 2010 - Google, Vector: 2011-09-17 Topography: Vtms, Date mapping: 16 February 2004 and 17 September 2011 Esri, Esri, HERE, and the map provider.

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Project: Kin Kin Quarry

Title: Figure 8 - Monitoring Locations

Data Source: Photography: 22 May 2010 - Google, Vector: 2011-09-17 Topography: Vtms, Date mapping: 16 February 2004 and 17 September 2011 Esri, Esri, HERE, and the map provider.

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Project: Kin Kin Quarry

Title: Figure 8 - Monitoring Locations

Data Source: Photography: 22 May 2010 - Google, Vector: 2011-09-17 Topography: Vtms, Date mapping: 16 February 2004 and 17 September 2011 Esri, Esri, HERE, and the map provider.

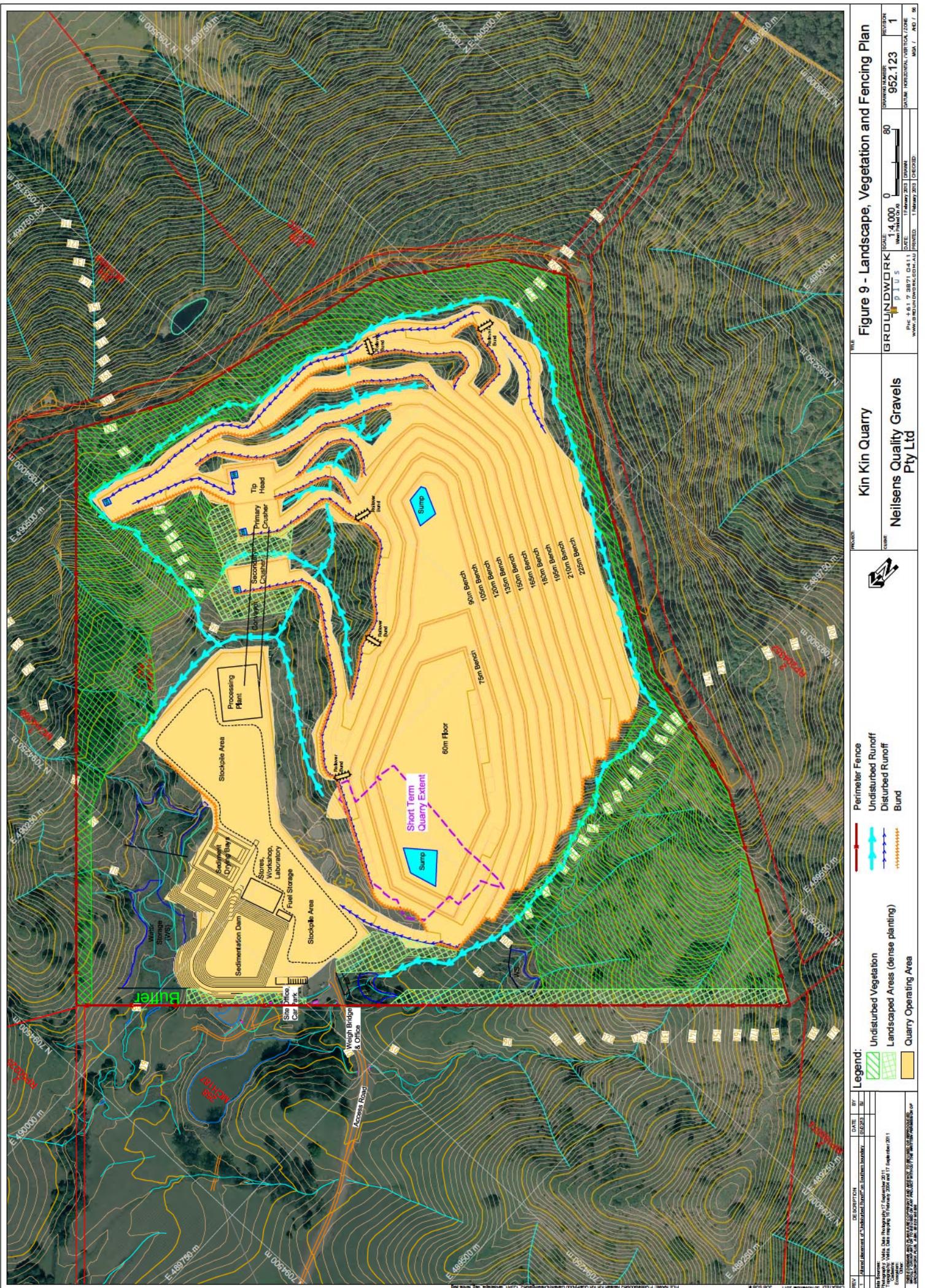
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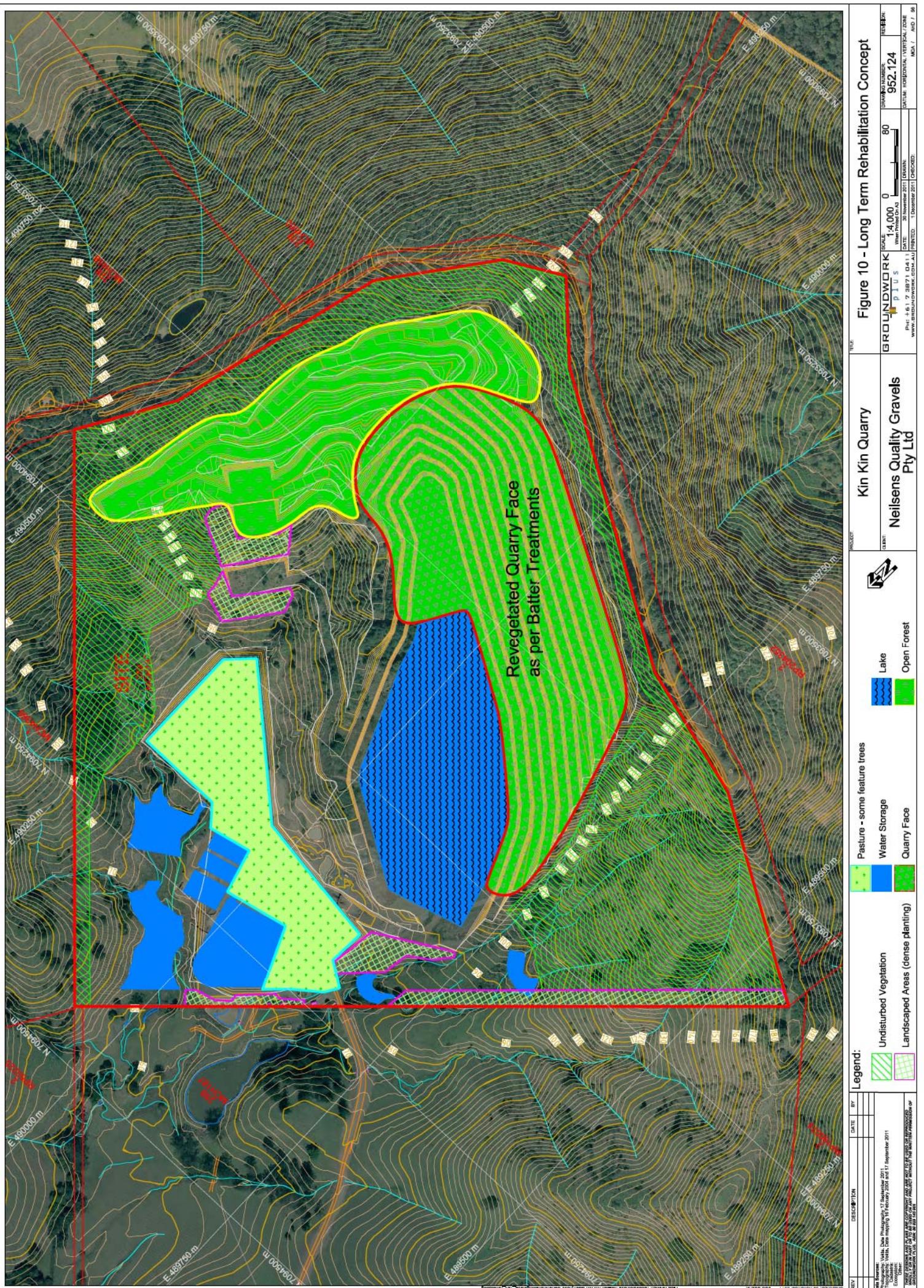
GROUNDWORK plus

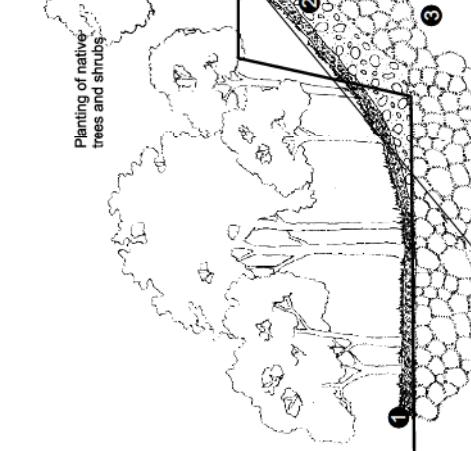
Scale: 1:10,000 0 200 Drawing Number: 952.093 Revision: 1

Date: 26 November 2011 When Printed On A3

Printed: 26 November 2011 Checked: MGA / J 96



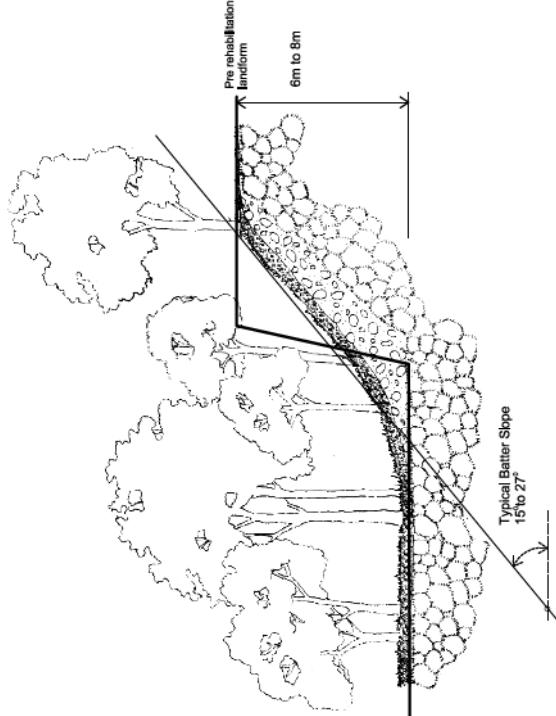




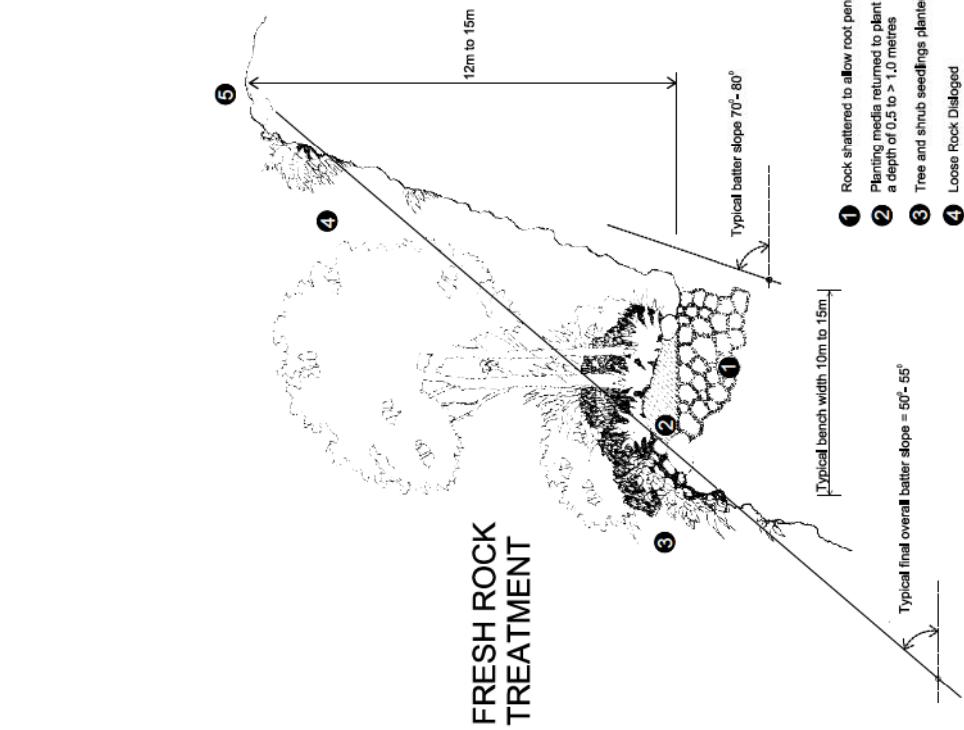
HIGHLY TO MODERATELY WEATHERED ROCK TREATMENT

Pre rehabilitation landform
Typical Batter Slope 30° to 45°
10m to 15m

1 Redimensioned planting media applied to each bench
2 Shot rock from Final Blast Shot
3 Pre-existing sub-strata



COMPLETELY WEATHERED ROCK



- 1 Rock shattered to allow root penetration
- 2 Planting media returned to plant sites to a depth of 0.5 to > 1.0 metres
- 3 Tree and shrub seedlings planted
- 4 Loose Rock Dislodged
- 5 Edge rounded with Hydraulic pick

Typical bench width 10m to 15m

Typical final overall batter slope = 50° - 55°

Typical batter slope 70° - 80°

Figure 11 - Batter Treatments

GROUNDWORLD		DRAWING NUMBER:	SCALE:
■ P U S		PH: +61 7 31871 0411 www.groundworld.com.au	1:5000 PRINTED: 3 October 2011 CHECKED: 3 October 2011

Legend:

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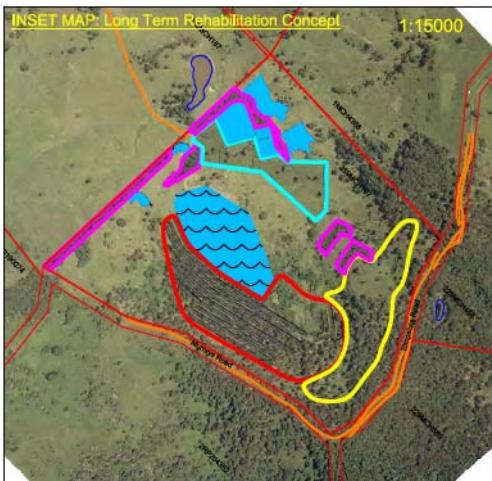
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REV.	DESCRIPTION	DATE	BY

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REV.	DESCRIPTION	DATE	BY

Legend:


Legend:

- Pasture - some feature trees
- Landscaped Areas (Dense Planting)
- Water Storages
- Quarry Benches
- Lake
- Open Forest

Structural Function:
US Upper Story
MS Mid Story
GC Ground Cover

GENERAL SPECIFICATIONS
TREE AND SHRUB PLANTING

All plants shall be true to scheduled nomenclature, healthy, well formed, hardened off, pest and disease free, nursery stock.

Seedlings shall not have been grown in their final containers for less than eight weeks. Form, habit and leaves shall be of normal size, shape, colour and texture with a minimum of physical or insect damage. All plants delivered to the site shall be clearly and accurately named to botanical nomenclature. Labels shall be water resistant and securely fixed to the plant. The preferred container size is not less than 150mm.

PLANTING TECHNIQUE

Position plants in pots in correct locations as shown on the plan. Sufficient soil shall be added to the excavated hole to bring the top of the potting level with the ground surface. The plant shall be carefully removed from the container and the positioning of the plant shall be carried out with a minimal amount of root disturbance.

Plants shall be set plumb and at such a level that on well firming and settlement, a normal and natural relationship of the crown of the plant with the ground surface will be established.

BACKFILLING

Holes shall be backfilled with good quality friable, organic rich soil and shall be free from weeds, stones, clods of subsoil, other extraneous material, or any substance toxic to plants. Soil shall be progressively firmed during backfilling to avoid air pockets.

FERTILISER

Each plant should be fertilised with suitable native plant fertiliser

MULCHING

Planting areas shall be covered with an organic mulch or similar to a minimum depth of 60mm.

PREPARATION OF PLANT AREAS

Individual holes shall be excavated to such a size to allow for a minimum of 100mm backfilling beneath and around the root system. Use a spade or fork to roughen edges and base of hole (digging will often leave smooth sides to a hole which can stop roots from spreading into the surrounding soil). Each hole shall be filled with fresh clean water which shall be allowed to soak away prior to planting if soil moisture levels are low.

WATERING

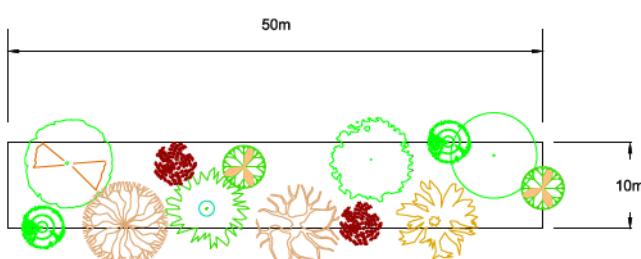
Plants shall be thoroughly watered in immediately after planting and at such other times depending on climate to enable plants to establish free of water stress.

REPLACEMENT

All tree and shrub planting shall be inspected to identify seedlings that have not taken, died, or have been destroyed. Such inspections are to be carried out annually as part of the maintenance program until all specified plants are established and showing healthy growth.

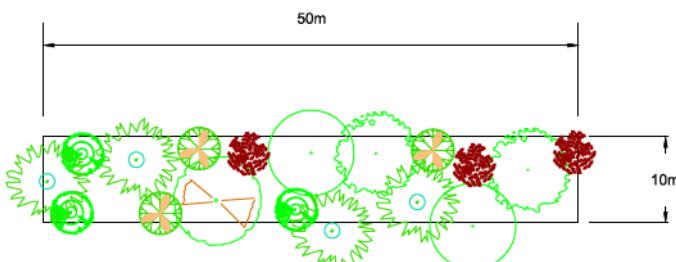
MONITORING AND GENERAL MAINTENANCE

Monitoring and maintenance will be required on a regular basis to replace damaged or diseased stock, apply fertiliser, refurbish mulching materials, inspect erosion controls, clear weeds, and generally tend to works.

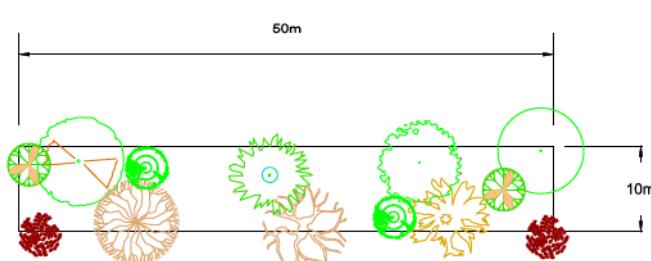

QUARRY BENCH PLANTING LAYOUT


*Groundcovers not illustrated in planting layout

Graphic Symbol	Botanical Name	Height (metres)	Structural Function	Spacing (metres)
	<i>Angophora Leioarpa</i>	10 - 25	US	50
	<i>Eucalyptus crebra</i>	10 - 30	US	50
	<i>Eucalyptus microcorys</i>	10 - 50	US	50
	<i>Eucalyptus tereticornis</i>	10 - 50	US	50
	<i>Corymbia citriodora</i>	10 - 40	US	50
	<i>Eucalyptus propinqua</i>	10 - 20	US	50
	<i>Lophostemon confertus</i>	6 - 8	US	50
	<i>Acacia fimbriata</i>	2 - 10	MS	25
	<i>Acacia concurrens</i>	2 - 10	MS	25
	<i>Alphitona excelsa</i>	2 - 10	MS	25
	<i>*Poa labillardierii</i>	1	GC	1
	<i>*Microlaena stipoides</i>	0.5	GC	1


DENSE/LANDSCAPE PLANTING LAYOUT


Graphic Symbol	Botanical Name	Height (metres)	Structural Function	Spacing (metres)
	<i>Angophora Leioarpa</i>	10 - 25	US	12
	<i>Eucalyptus crebra</i>	10 - 30	US	25
	<i>Eucalyptus microcorys</i>	10 - 50	US	25
	<i>Eucalyptus tereticornis</i>	10 - 50	US	50
	<i>Acacia concurrens</i>	2 - 10	MS	17
	<i>Acacia fimbriata</i>	2 - 10	MS	17
	<i>Alphitona excelsa</i>	2 - 10	MS	17


OPEN FOREST PLANTING LAYOUT


*Groundcovers not illustrated in planting layout

Graphic Symbol	Botanical Name	Height (metres)	Structural Function	Spacing (metres)
	<i>Angophora Leioarpa</i>	10 - 25	US	50
	<i>Eucalyptus crebra</i>	10 - 30	US	50
	<i>Eucalyptus microcorys</i>	10 - 50	US	50
	<i>Eucalyptus tereticornis</i>	10 - 50	US	50
	<i>Corymbia citriodora</i>	10 - 40	US	50
	<i>Eucalyptus propinqua</i>	10 - 20	US	50
	<i>Lophostemon confertus</i>	6 - 8	US	50
	<i>Acacia fimbriata</i>	2 - 10	MS	25
	<i>Acacia concurrens</i>	2 - 10	MS	25
	<i>Alphitona excelsa</i>	2 - 10	MS	25
	<i>*Poa labillardierii</i>	1	GC	1
	<i>*Microlaena stipoides</i>	0.5	GC	1

REV DESCRIPTION DATE BY

1 Revised water storage areas. 30/11/11 LT

Data Source:

Photography:

Topography:

Ecology:

Other:

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Legend:

PROJECT:

Kin Kin Quarry

CLIENT:

Neilsen's Quality Gravels Pty Ltd



Figure 12 - Planting Layout
DRAWING NUMBER: 952.094
REVISION: 1
DATE: 30 November 2011 DRAWN: DATUM: HORIZONTAL / VERTICAL / ZONE /
PRINTED: 30 November 2011 CHECKED: / /