WORK AUTHORITY. No. 1427

BANTS No 2 QUARRY
"DWARROON"
HOPKINS FALLS ROAD
CUDGEE

MINERAL RESOURCES
(SUSTAINABLE DEVELOPMENT) ACT 1990

Tenement No. WA 1427

Endorsed work plan comprising pages 1-13 + Appendix A

and drawings Project 09-503 Sheets 1-3

Without prejudice to the Department's right to make comment as a Referral Authority, this draft work plan is endorsed as satisfactory to support a planning permit application.

Inspector/Date: EJ Abbott 01/09/2011

Department of Primary Industries

Prepared by Brian Consulting Pty., Ltd.

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SECTION ONE

WORK PLAN TEXT

SECTION ONE - WORK PLAN TEXT

1.1 BACKGROUND

1.1.1 History

The site is approximately 4 Km west of Panmure and north of the Princes Hwy. The quarry is situated where a small maar intercepts with the two kilometre wide Dwarroon Maar to form a spur.

A small volume of volcanic tuff has been extracted from the site for intra farm use within the Dwarroon property. The property has recently been purchased by John and Theresa Bant as a working dairy farm. The new owners are now proposing to expand the existing farm quarry to a licensed quarry.

Bant's have owned and operated the quarry to the east of this site under Work Authority No 32, supplying a variety of road construction products to the council and local farmers. It is proposed to add volcanic tuff from this quarry to the existing supply line.

The proposed extraction falls within an area defined as "volcanic cones of western Victoria" under Aboriginal Heritage Regulations 2007. A Cultural Heritage Management Plan is required by the regulations.

No significant community facilities will be affected by the proposed works.

1.1.2 Environmental Assessment

The Work Authority area sits within the southern crater rim of the Dwarroon Maar. The Dwarroon Maar is approximately 2km across.

The site is generally surrounded by farmland. The closest houses to the quarry are approximately 900m to the south. There is no direct line of site from these houses to an open area of the quarry. The southern batter slope of the quarry will act as a noise barrier in this direction.

There is a farmhouse located to the north of the quarry, 1.5km across the valley. The lack of a solid barrier would mean that some machinery noise could travel the distance. The operator has discussed the WA 32 quarry operations with this resident and has found that impacts are minor.

Quarry earthworks are designed to minimise the visibility of exposed ground from the Hopkins Falls Road. There may be a glimpse of an exposed intermediate face from the road when travelling in an easterly direction. Additional screening can be achieved by planting trees along the southern buffer. Due to the elevated northerly aspect of the extraction area, exposed faces and stockpiles will be visible from the distant north.

It is expected that material from this site will be carted away in trucks along Hopkins Falls Road, thence mostly along Princes Highway.

The floor of the extraction is designed so as not to intersect the water table.

The total amount of area to be opened in this Work Authority will be 21.20ha. Progressive rehabilitation will be possible at the conclusion of Stage 1.

There will not be any clearing of native vegetation.

The site is generally surrounded by farmland.

1.2 GEOLOGICAL INFORMATION

Reference to the Geological Survey of Victoria Map sheet Port Campbell Embayment 1 : 100 000 indicates that the site is an area of newer volcanics consisting of tuff, scoria and lava succession. The proposed quarry is situated on the southern rim of the Dwaroon Maar volcanic crater. Inspection of the existing open area reveals volcanic tuff.

Overburden on the area to be extracted consists of 300mm of topsoil. Depth of clay overburden varies from nothing at the hillcrest to 500mm towards the south.

The tuff material is suitable for use as road base course material, farm tracks and site preparation on building projects.

The volume of material to be excavated is approximately 4 500 000m^3 including topsoil and overburden.

1.3 APPLICATION AREA

1.3.1 Title Details

Title: Volume 8817 Folio 918.
Parcel 2 on TP 424034.
Crown Portion 31
Parish of Tallangatta
Registered Proprietors: John Elford Bant and Theresa Mary Bant
Title Area: 369.8ha
Work Authority Area: 37.77ha

Total area to be opened in this application:	21.66ha extraction area
	2.1ha topsoil stockpile
Maximum area to be open at given time:	9.75ha

Table of Progressive Reclamation

	Opening	Reclaiming	Remaining Open
Existing	-	-	1.41ha
Stage 1	8.34ha	0ha	9.75ha
Stage 2	5.80ha	5.98ha	9.57ha
Stage 3	5.65ha	5.46ha	9.27ha
Final Reclamation	0ha	9.27ha	0ha

1.3.2 Fencing

The road frontage to the site is fenced with a 1.2 metre high post & wire fence and gate. Intra farm fences exist within the site. Additional internal fences will be built if the need arises.

1.3.3 Access

Access to the site is from Hopkins Point Road. Site distances at this location are adequate for ingress and egress.

A haul road will be formed during the extraction of Stage 1 It will be formed as the floor of the quarry is deepened. The haul road will be an 8 metre wide bench at a grade of 1V : 12H.

1.3.4 Buffer Zones

There will be a 10 metre wide buffer zone along the western boundary of the site. A 20 metre wide buffer zone will be provided along the other boundaries.

Trees will be planted along the southern (road frontage) buffer. Trees species will be selected from the list in Appendix A.

No extraction or stockpiling shall take place within the buffer zones.

1.4 PLANT AND EQUIPMENT

Topsoil will be stripped with the use of a bulldozer and scraper.

Extraction will be carried out with the use of a bulldozer and excavator.

The product will be loaded into road transport trucks with the use of a wheel loader.

Reclamation will be carried out with the use of a bulldozer, excavator, trucks, scraper and a grader.

On site material treatment will occur with the use of mobile screening and mobile crushing plant.

There will be no permanent on site storage of fuel. Machinery will be fuelled from a trailer mounted fuel tank.

1.5 METHOD OF WORKING

1.5.1 Topsoil And Overburden

The topsoil that is stripped will be placed in a stockpiles to the south and to the north of extraction limits. Piles will be two metres in height maximum. Overburden stripped from the site will be stored near the southern terminal batter of Stage 2 or permanently placed over the unreclaimed finished floor. Topsoil and overburden stockpiles will be neatly formed with moderate batters and vegetated.

Topsoil from Stage 1 will be stripped and stored for later use during the reclamation of Stage 1. Topsoil stripped from Stage 2 will be used to reclaim Stage 2. Topsoil from Stage 3 will be used to reclaim Stage 3.

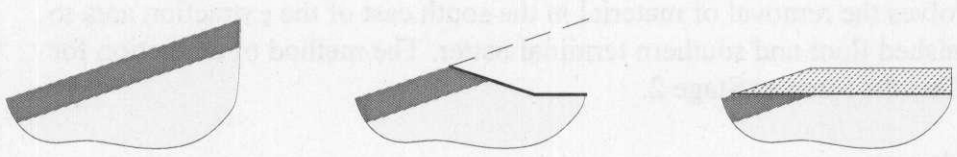
There is minimal overburden on the steep natural slopes and the hillcrest. Depth of overburden increases towards the south. There will be some clay to be stockpiled from Stage 1 extraction. This material will be temporarily stockpiled adjacent to the southern limit of extraction. During reclamation the clay material will be pushed down to the base of the terminal batter and formed into smooth contours prior to topdressing with topsoil.

Overburden from Stages 2 and 3 will be carted to unreclaimed terminal surfaces and formed into smooth contours prior to topdressing with topsoil.

1.5.2 Proposed Extractive Method

Tuff material will be removed with the use of a bulldozer. It will be ripped and pushed down the working face of the quarry where it will be stockpiled for further processing. All batter slopes will be formed at a grade of 1V : 3H maximum.

During the life of the quarry, the discharge of stormwater as sheet flow from an open area needs to be prevented to avoid silty runoff. To do this, a lip will be retained along the northern limit of extraction to retain stormwater to within the open area.



The extracted material shall be crushed, screened and stored in product stockpiles within the floor of the quarry.

1.5.3 Proposed Hours Of Operation

Onsite truck loading activities may only take place between 7:00am to 6:00pm (and until 7:00pm daylight saving periods) on any day except Sunday and public holidays. No truck is permitted to leave the site until 7:30am or after 6:15pm Monday to Friday and until 8:30am or after 3:30 pm on Saturday.

Operations within the quarry shall only take place within the hours of 6:00 am to 6:00 pm Monday to Saturday. No work shall take place outside these hours or on a public holiday except for essential plant maintenance unless approvals are in place.

1.5.4 Explosives

There shall be no blasting or use of explosives.

1.5.5 Details of Staged Extraction

It is proposed to extract material from the site in three stages. The orientation of the stages is parallel to the natural north westerly facing crater slope. Each stage will cover the full width of the quarry forming the southern terminal batter at 1V:3H max down to the finished floor. The finished floor will be graded at 1:200 out to match existing contours on the north side.

Stage 1 of extraction will commence in the existing open area, expanding horizontally to extraction limits and then deepening. Stage 1 will also include the removal of material for the formation of the top end of the haul road.

Stage 2 involves the removal of material through the middle of the extraction area to form finished floor and southern terminal batter. Stage 2 is oriented parallel to Stage 1. If it is found that the quality of material is consistent through the strata, material can be pushed down the working face to the quarry floor for processing or stockpiling. If the material is found to be variable in quality, it will be removed by horizontal ripping across the extent of the stage, progressively lowering the floor to match the finished design.

Stage 3 involves the removal of material in the south east of the extraction area to form the finished floor and southern terminal batter. The method of extraction for Stage 3 will be the same as Stage 2.

1.5.7 Drainage

During the life of the quarry, all of the rain caught in the open quarry area will be trapped within the quarry. To ensure that silt laden stormwater does not discharge from the site a lip will be retained along the northern limit of extraction. (Refer 1.5.2

Proposed Extraction Method above.) Due to the porous nature of the material, stormwater will discharge from the quarry by percolation. After heavy rain, there may be some temporary ponding.

The finished formation will produce a floor grading at 1 : 200 towards the north. The reclaimed landscape will drain as overland sheet flow.

SECTION TWO

ENVIRONMENTAL AND LAND MANAGEMENT PROGRAM

SECTION TWO - ENVIRONMENTAL AND LAND MANAGEMENT PROGRAM

2.1 Vegetation

There will be no clearing of native vegetation.

Tree planting will occur in the southern buffer zone. Inspection of the Moyne Shire ECV Map 4 reveals that the area set aside for tree planting sits within "Zone 9 - Plains and Grassy Woodlands and Forests". Tree species will be selected from this list. (Refer to Appendix A.)

2.2 Reclamation

Reclamation works will be carried out progressively as terminal surfaces are formed. Some terminal floor areas will be left open for use as hardstand areas.

At the conclusion of Stage 1, the Stage 1 southern terminal batter and part of the Stage 1 finished floor will be reclaimed. Clay overburden from Stage 2 will be neatly placed over unreclaimed floor areas.

At the conclusion of Stage 2, the Stage 2 southern terminal batter, the remainder of the Stage 1 finished floor and part of the Stage 2 finished floor will be reclaimed. Clay overburden from Stage 3 will be neatly placed over unreclaimed floor areas.

At the conclusion of Stage 3, all terminal surfaces will be reclaimed.

All terminal surfaces will be trimmed to form smooth contours. The surfaces will be topdressed with 200mm topsoil and sown with seed for pasture.

Furrows will be formed on contour across the terminal batters. One furrow will be formed for every 5m of vertical drop. These furrows will act as soak pits for stormwater discharge by percolation, they will reduce the velocity of overland flow and convert point flow to sheet flow by acting as a level spreader.

Rehabilitated land shall be monitored to ensure that the soil has stabilised and that the pasture has taken well in all areas before it is returned to grazing.

2.3 Drainage

Rainwater falling on exposed earthworks is retained on site to avoid silt laden stormwater discharge. There is very little overland flow in the undisturbed paddock due to the porous nature of the natural ground.

Rainwater falling onto exposed earth will inevitably become silted and have the potential to cause erosion. Exposed earth will occur in two situations, namely the open quarry area and the stockpiles of overburden and topsoil.

Rainwater falling into the open quarry area will be trapped within the quarry by virtue of the quarry design. Rainwater runoff in this area may become silt laden, but this water will be contained inside the quarry where it will be discharged by percolating through the quarry floor leaving the silts behind. The firm composition of the exposed tuff on the batter slopes will not erode.

There will be a haul road formed within the quarry area. The formation of this road will include table drains that will run at a grade of 1V:12H to the quarry floor. There is potential for the water within the table drains to develop sufficient velocity to create scouring. It is expected that the tuff material will be resistant to scouring. However, if scouring becomes evident in the table drain, placing hay bales in the invert of the drain can reduce the velocity of the water in the drains. The quarry manager can monitor the need for remedial work after a storm event.

Rainwater falling onto topsoil and overburden stockpiles has the potential to cause siltation of runoff and erosion of material. To remove the occurrence of these problems it is proposed to vegetate these formations. Overburden and topsoil stockpiles will be seeded with grass. Once the vegetation has established on the mounds, rainwater on these stockpiles will not cause silt laden runoff.

2.4 Visual Impact

There is potential for exposed earth to be visible at times when extraction is happening in elevated areas. This can be reduced by working from north to south using natural topography to screen the operation. As the quarry gets closer to the road, there is a potential for direct line of site into the quarry floor. This is addressed by placing the topsoil stockpile along the southern limit of extraction and by tree planting in the southern buffer zone. Due to the orientation of the working face, the quarry would not be visible from westward travelling vehicles. It is possible that there will be minor visibility of the topmost part of the working faces from eastward bound vehicles. The orientation of the working faces helps to minimise this visibility.

The site is highly exposed to the north, but the nearest farm house to the north is 1.5km away. The open quarry will be visible from Waarumyea Road on the other side of the crater The impact from this direction is minimal because it is 2.3km away.

Exposed surfaces will be visible from the bottom of Dwarroon Maar crater. This area is all farmland with the nearest land being owned by the quarry owner.

2.5 Nuisance

2.5.1 Dust

The access road will be a formation cut into cemented granular volcanic material. It is not anticipated that dust will be a problem. The condition of the road will be continually monitored and suitably maintained. Dust control measures along the access road may be implemented if required. These would include spraying with water and topdressing with a granular material.

Due to the granular nature of the material and the distance to the nearest neighbouring residence, it is not anticipated that dust will be a problem. However, if a dust nuisance does arise, dust suppression will take place with the use of a water truck or modifications to processing plant.

2.5.2 Noise

Acoustic emissions shall be within the levels specified by the E.P.A.'s guidelines for control of noise – document N3/89 "Interim guidelines for control of noise in country Victoria."

Feedback relating the existing operations of Work Authority 32 indicates that noise has not been a problem in the past. However if the need arises, noise monitoring will be undertaken.

2.6 Noxious Weed / Feral Animal Control

The site shall be maintained to ensure compliance with the Catchment and Land Management Act. Noxious weed and feral animal control shall be carried out when required.

2.7 Contamination

Fuel for machinery will be contained in a trailer mounted fuel tank. In the event of a fuel spill, the liquid will be soaked up in saw dust or kitty litter and disposed of off site in a manner acceptable to the EPA.

There will be no other materials stored or used on site that might cause contamination of ground water.

2.8 Litter

The small amounts of litter such as food packaging and equipment packaging will be returned to a vehicle to ensure that it is removed. The site shall be maintained in a neat and tidy condition, free from the accumulation of rubbish. This will prevent the escape of litter.

SECTION TWO - ENVIRONMENTAL AND LAND MANAGEMENT PROGRAM

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APPENDIX A

Indigenous Plants of Moyne Shire
Zone 9 Plains Grassy Woodlands or Forests

Community Engagement Plan

Cultural Heritage Management Plan

Indigenous Plants of Moyne Shire
Zone 9 - Plains Grassy Woodlands or Forests

LARGE TREE SPECIES

Botanical Name	Common Name	Size (H x W)	Easy to Grow	Worth Trying
Acacia melanoxylon	Blackwood	5-30m x 4-15m	X	
Eucalyptus camaldulensis	River Red-gum	12-50m	X	
Eucalyptus ovata	Swamp Gum	8-30m	X	
Eucalyptus viminalis subsp. *viminalis*	Manna Gum	10-50m	X	

LARGE SHRUB/SMALL TREE SPECIES

Botanical Name	Common Name	Size (H x W)	Easy to Grow	Worth Trying
Acacia mearnsii	Black Wattle	8-25m x 6-10m	X	
Acacia myrtifolia	Myrtle Wattle	1-3m x 1-2m	X	
Acacia paradoxa	Hedge Wattle	2-4m x 2-5m	X	
Acacia stricta	Hop Wattle	2-5m x 2-4m	X	
Allocasuarina muelleriana subsp. *muelleriana*	Slaty She-oak	1-2m x 2-3m	X	
Allocasuarina verticillata	Drooping She-oak	4-11m x 3-6m	X	
Banksia marginata	Silver Banksia	1-2m x 1.2m	X	
Bursaria spinosa subsp. *spinosa*	Sweet Bursaria	2-6m x 2-3m		X
Cassinia longifolia	Shiny Cassinia	2-4m x 2-3m	X	
Exocarpos cupressiformis	Cherry Ballart	3-8m x 3-5m		X
Leptospermum continentale	Prickly Tea-tree	1-4m x 1-2m	X	
Leptospermum myrsinoides	Heath Tea-tree	0.5-2.5m x 1m	X	
Leucopogon parviflorus	Coast Beard-heath	1-4m x 2-3m		X
Melaleuca gibbosa	Slender Honey-myrtle	1-2m x 1m	X	
Ozothamnus ferrugineus	Tree Everlasting	2-6m x 1-3m	X	
Sambucus gaudichaudiana	White Elderberry	0.6-2m x 0.5-1.5m		X
Solanum laciniatum	Large Kangaroo Apple	1-3m	X	

SMALL SHRUB SPECIES

Botanical Name	Common Name	Size (H x W)	Easy to Grow	Worth Trying
Astroloma conostephioides	Flame Heath	To 1m		X
Astroloma humifusum	Cranberry Heath	10-50cm x 1-1.5m		X
Eutaxia microphylla var. *microphylla*	Common Eutaxia	Prostrate x 0.5-1.5m	X	
Hibbertia riparia	Erect Guinea-flower	0.3-1m x 0.6m		X
Pimelea curviflora s.l.	Curved Rice-flower	15-30cm x 20-60cm		X
Pimelea glauca	Smooth Rice-flower	30-60cm x 60cm		X
Pimelea humilis	Common Rice-flower	10-50cm x 0.3-1m		X
Rubus parvifolius	Small-leaf Bramble	Trailing to 1m	X	

Adapted from: Sparrow, K & A. Pritchard, 2004, *Plants of the Great South West*
Society for Growing Australian Plants, Warrnambool and District Group Inc. Warrnambool, Victoria.
Funded by the 'Victorian Government's Tackling Weeds on Private Land initiative' and Department of Sustainability & Environment – 2005

Indigenous Plants of Moyne Shire
Zone 9 - Plains Grassy Woodlands or Forests

GRASS SPECIES

Botanical Name	Common Name	Size (H x W)	Easy to Grow	Worth Trying
Austrodanthonia caespitosa	Common Wallaby-grass	Stems to 1.2m	X	
Austrodanthonia carphoides	Short Wallaby-grass	Stems to 30cm	X	
Austrodanthonia setacea	Bristly Wallaby-grass	Stems to 60cm	X	
Austrostipa pubinodis	Tall Spear-grass	Stems to 1.5m	X	
Elymus scaber var. *scaber*	Common Wheat-grass	To 80cm	X	
Lachnagrostis filiformis	Common Blown-grass	0.6m high	X	
Microlaena stipoides var. *stipoides*	Weeping Grass	To 30cm x 60cm	X	
Poa labillardierei	Common Tussock-grass	Up to 1.2m	X	
Poa rodwayi	Velvet Tussock-grass	25-60cm	X	
Poa sieberiana	Grey Tussock-grass	15-90cm x 40cm	X	
Themeda triandra	Kangaroo Grass	To 1m	X	

HERBS & WILDFLOWER SPECIES

Botanical Name	Common Name	Size (H x W)	Easy to Grow	Worth Trying
Arthropodium strictum s.l.	Chocolate Lily	0.2-1m x 0.2-0.8m	X	
Asperula conferta	Common Woodruff	20cm x 0.5-1m		X
Bossiaea prostrata	Creeping Bossiaea	Prostrate x 0.5-1.5m	X	
Brunonia australis	Blue Pincushion	10-50cm x 10-15cm		X
Bulbine bulbosa	Bulbine Lily	20-60cm x 30cm	X	
Burchardia umbellata	Milkmaids	20-50cm		X
Caesia calliantha	Blue Grass-lily	10-30cm x 10-50cm		X
Calocephalus citreus	Lemon Beauty-heads	0.2-0.5m x 0.3-1m		X
Chrysocephalum apiculatum s.l.	Common Everlasting	To 60cm	X	
Chrysocephalum semipapposum	Clustered Everlasting	0.3-1m x 1-3m	X	
Convolvulus erubescens spp. agg.	Pink Bindweed	10-30cm x 50cm		X
Cynoglossum suaveolens	Sweet Hound's-tongue	0.1-1m x 0.5-1.5m		X
Dianella tasmanica	Tasman Flax-lily	0.6-1.5m x 0.5-2m	X	
Eryngium ovinum	Blue Devil	10-60cm x 30-50cm	X	
Eryngium vesiculosum	Prickfoot	10-20cm x 30-60cm		X
Helichrysum scorpioides	Button Everlasting	30cm x 20-30cm	X	
Kennedia prostrata	Running Postman	Prostrate	X	
Leptorhynchos squamatus	Scaly Buttons	15-30cm x 40cm	X	
Pelargonium rodneyanum	Magenta Stork's-bill	10-30cm x 30-50cm		X
Senecio pinnatifolius	Variable Groundsel	To 30 cm	X	
Senecio quadridentatus	Cotton Fireweed	0.4-1m x 0.5-1m	X	
Stylidium graminifolium s.l.	Grass Triggerplant	20-110cm	X	
Thysanotus patersonii	Twining Fringe-lily	Small twiner		X
Villarsia reniformis	Running Marsh-flower	0.4m x 0.5-1m		X
Wahlenbergia gracilis	Sprawling Bluebell	10-50cm	X	
Wahlenbergia stricta subsp. *stricta*	Tall Bluebell	40-90cm x 30-40cm		X

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Indigenous Plants of Moyne Shire
Zone 9 - Plains Grassy Woodlands or Forests

SEDGES & SEDGE TYPE SPECIES

Botanical Name	Common Name	Size (H x W)	Easy to Grow	Worth Trying
Carex appressa	Tall Sedge	To 60cm	X	
Carex breviculmis	Common Grass-sedge	To 15 cm	X	
Gahnia trifida	Coast Saw-sedge	0.6-1.5m x 0.6-1m		X
Juncus pallidus	Pale Rush	0.5-2.3m x 0.3-1m	X	
Juncus procerus	Tall Rush	1-2m x 0.6-1.5m	X	
Lomandra filiformis	Wattle Mat-rush	15-50cm x 15-20cm		X
Lomandra longifolia subsp. *longifolia*	Spiny-headed Mat-rush	0.5-1m x 0.5-1.2m	X	
Lomandra multiflora subsp. *multiflora*	Many-flowered Mat-rush	30-50cm x 30-50cm		X
Lomandra nana	Dwarf Mat-rush	5-15cm x 5-10cm		X

CLIMBING SPECIES

Botanical Name	Common Name	Size (H x W)	Easy to Grow	Worth Trying
Clematis microphylla var. *microphylla*	Small-leaved Clematis	Small twiner	X	
Glycine clandestina	Twining Glycine	Slender twiner	X	
Glycine latrobeana (V v)	Clover Glycine	Slender trailing plant	X	

WEED SPECIES

Botanical Name	Common Name			
**Arctotheca calendula*	Cape Weed			
**Cirsium vulgare*	Spear Thistle			
**Genista monspessulana*	Montpellier Broom			
**Holcus lanatus*	Yorkshire Fog			
**Phalaris aquatica*	Toowoomba Canary-grass			
**Rosa rubiginosa*	Sweet Briar			
**Sonchus asper* s.l.	Rough Sow-thistle			
**Sonchus oleraceus*	Common Sow-thistle			

Adapted from: Sparrow, K & A. Pritchard, 2004, *Plants of the Great South West*
Society for Growing Australian Plants, Warrnambool and District Group Inc. Warrnambool, Victoria.
Funded by the 'Victorian Government's Tackling Weeds on Private Land initiative' and Department of Sustainability & Environment – 2005

	NAME	DATE
DESIGN	-	JAN 10
DRAWN	T BROWNE	JAN 10
CHECKED	-	JAN 10
APPROVED		

CAD FILE 09-503

Brian Consulting
Civil Engineers and Project Managers

28 Kepler Street (PO Box 1154)
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E 646400 E 646500 E 646600 E 646700 E 646800 E 646900 E 647000 E 647100

N 5756700 N 5756600 N 5756500 N 5756400 N 5756300 N 5756200

BENCHMARK IRON ROD RL 50.04

20m WIDE BUFFER ZONE

TOPSOIL STOCKPILE

A

COW TRACK

45° 00' 617.9

129° 50 52" 457.30

B

STAGE 1

DIRECTION OF WORK

OVERBURDEN AND TOPSOIL STOCKPILE

TUFF STOCKPILE

BENCHMARK IRON ROD RL 104.42

TOPSOIL STOCKPILE

QUARRY ACCESS

EXISTING

INTERMEDIATE BATTER 1V : 3H

STAGE 2

DIRECTION OF WORK

STAGE 3

DIRECTION OF WORK

BENCHMARK IRON ROD RL 93.30

TITLE BOUNDARY

STAGE 1 ROAD CUTTING 1V : 2H

HAUL ROAD 1V : 12H

INTERMEDIATE BATTER 1V : 3H

STAGE 3 HAUL ROAD 1V : 12H

TERMINAL BATTER 1V : 3H

0° 00' 322.28

20m WIDE BUFFER ZONE

180° 00' 279.04

10m WIDE BUFFER ZONE

OVERBURDEN STOCKPILE

TOPSOIL STOCKPILE

256° 39' 809.9

HOPKINS FALLS ROAD

MINERAL RESOURCES (SUSTAINABLE DEVELOPMENT) ACT 1990

Tenement No. WA 1427

Endorsed work plan comprising pages 1-3 + Appendix A and drawings Project 09-503 Sheets 1-3

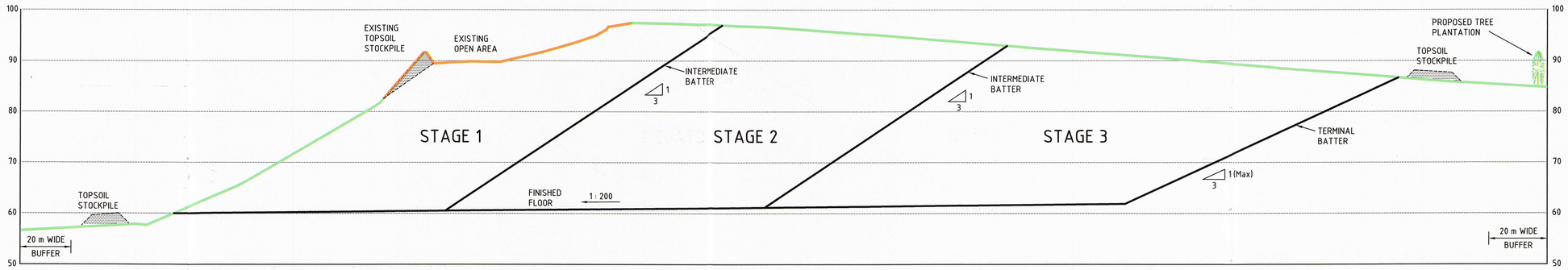
Without prejudice to the Department's right to make comment as a Referral Authority, this draft work plan is endorsed as satisfactory to support a planning permit application.

Inspector/Date: EJ Abbott 01/09/2011

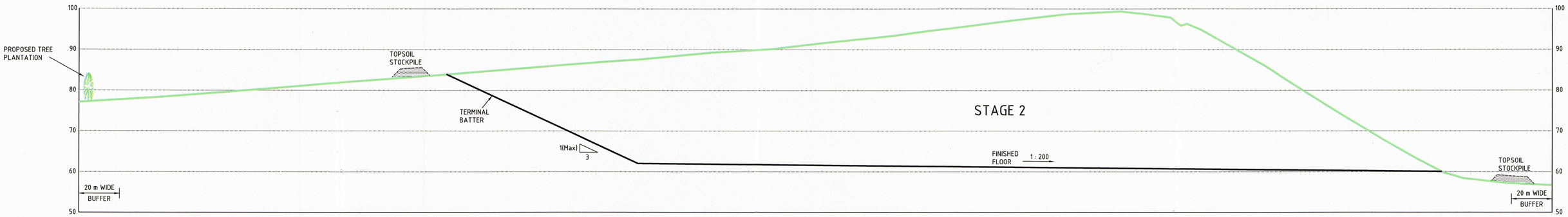
Department of Primary Industries

PROJECT WORK AUTHORITY No 1427
BANTS NO 2 QUARRY
"DWARROON"
HOPKINS FALLS ROAD CUDGEE
WORK PLAN

SIZE	SCALE	PROJECT No.	SHEET No.	REV
A1	1:1250	09-503	1 OF 3	-



SECTION A-A



SECTION B-B

MINERAL RESOURCES
(SUSTAINABLE DEVELOPMENT) ACT 1990
Tenement No. WA 1427
Endorsed work plan comprising pages 13 & Appendix A and drawings Project 09-503 Sheets 1 - 3
Without prejudice to the Department's right to make comment as a Referral Authority, this draft work plan is endorsed as satisfactory to support a planning permit application.
Inspector/Date: E Abbott 01/09/2011
Department of Primary Industries

REVISION	DESCRIPTION	DATE

	NAME	DATE
DESIGN	–	JAN 10
DRAWN	T BROWNE	JAN 10
CHECKED	–	JAN 10
APPROVED		

CAD FILE 09-503

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PROJECT
WORK AUTHORITY 1427
BANTS NO 2 QUARRY
"DWARROON"
HOPKINS FALLS ROAD CUDGEE
SECTIONS

SIZE	SCALE	PROJECT No.	SHEET No.	REV
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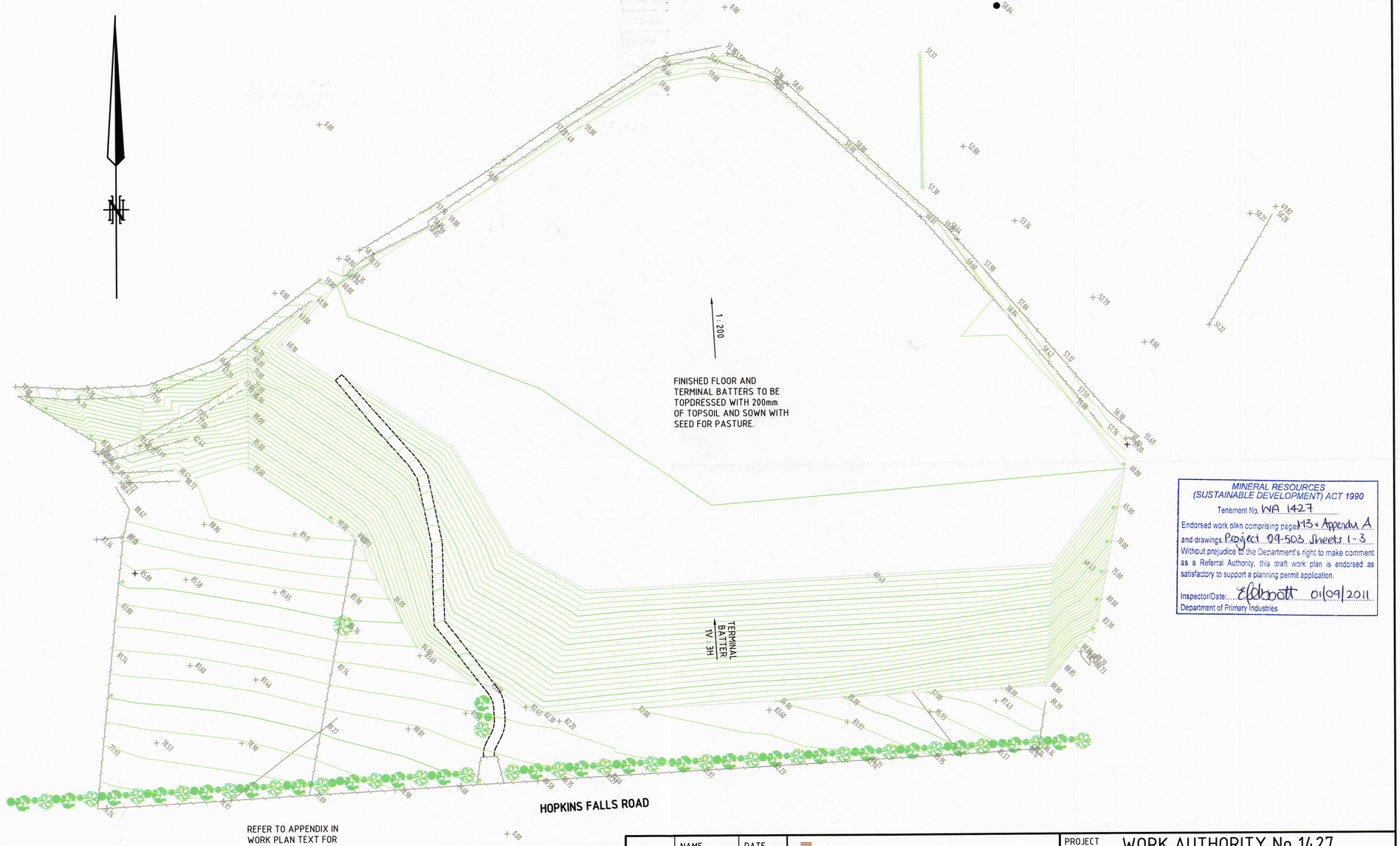

MINERAL RESOURCES (SUSTAINABLE DEVELOPMENT) ACT 1990

Tenement No. WA 1427

Endorsed work plan comprising pages 1-13 + Appendix A and drawings Project 09-503 Sheets 1-3

Without prejudice to the Department's right to make comment as a Referral Authority, this draft work plan is endorsed as satisfactory to support a planning permit application.

Inspector/Date: Elabbott 01/09/2011

Department of Primary Industries

	NAME	DATE
DESIGN	-	JAN 10
DRAWN	T BROWNE	JAN 10
CHECKED	-	JAN 10
APPROVED		
CAD FILE	09-503	

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PROJECT

WORK AUTHORITY No 1427
BANTS NO 2 QUARRY
"DWARROON"
HOPKINS FALLS ROAD CUDGEE
REHABILITATION PLAN

SIZE	SCALE	PROJECT No.	SHEET No.	REV
A1	1:1250	09-503	3 OF 3	-

Environmental Monitoring Program for Youngs Rock Quarry WA 1474, 50 Triggs Lane Laang

Activity/Location	Potential Environmental Impact	Procedures / Controls & Responsibilities	Monitoring, Review & Reporting
Other waste products	Accumulation of rubbish Fire risk Contamination risk	Packaging to be returned to vehicle and removed from site.	All staff to be responsible for their own rubbish Quarry manger to inspect and remove rubbish.
Weeds / Pest Animals	Degrade ecological values.	Quarry Manager to initiate weed eradication program. Quarry Manager to initiate animal controls as required.	Quarry Manager to conduct inspections consistent with neighbouring farm practices.
Cultural Heritage	Total destruction of heritage material	Compliance with Aboriginal Heritage Act	Quarry manager be aware of the potential existence of heritage material report any discoveries.
Visual Amenity	Exposed faces and mounds of disturbed earth may produce unsightly outcome.	Quarry manager to follow work plan	Quarry manager to inspect view lines from public roads into works area continually.
Fire Fighting Preparedness	Fire intensity may increase if combustible material accumulates on site.	Quarry Manager to ensure that there is no long grass during fire season. Quarry Manager to arrange for waste oils to be removed from site. Quarry Manager to ensure that fire fighting equipment is working.	Quarry manager to evaluate before and during fire season.

8 Rehabilitation Plan

8.1 Progressive Rehabilitation

Rehabilitation will be carried out progressively.

Area A

Topsoil and overburden from the initial Stage 1A strip will be stored in a stockpile on the south side of Stage 2A. As Area A develops, the topsoil and overburden will be used for progressive reclamation, being spread over on terminal surfaces immediately after stripping.

The final Stage of Area A will be reinstated from the initial stockpiles.

Area B

Topsoil and overburden from the initial Stage 1B strip will be stored in a stockpile on the north side of Stages 2B and 3B. Topsoil and overburden from Stages 2B, 3B and 4B will be used for progressive reclamation, being spread over terminal surfaces of the previous stage immediately after stripping. The Stage 1B stockpiles will be used for the reclamation of Stage 4B.

At the commencement of Stage 5B, new topsoil and overburden stockpiles will be formed to the north of Stages 5B and 8B. Topsoil and overburden from Stages 6B, 7B and 8B will be used for progressive reclamation, being spread over terminal surfaces of the previous stage immediately after stripping. The Stage 5B stockpiles will be used to reclaim Stage 8B.

At the commencement of Stage 9B, new topsoil and overburden stockpiles will be formed to the north of Stages 9B and 12B. Topsoil and overburden from Stages 10B, 11B and 12B will be used for progressive reclamation, being spread over terminal surfaces of the previous stage immediately after stripping. The Stage 9B stockpiles will be used for the final reclamation of Area B.

The maximum amount of quarry to be open at a given time would be 2.0ha for Area A and 2.0ha for Area B.

The access roads and haul roads will be left in place for use as a farm access tracks.

8.2 Terminal Face Treatment

Terminal benches will be trimmed into smooth batter slopes of 1V : 3H by pushing the top of the vertical face down to fill at the toe of the face. Once trimmed, 500mm of overburden will be placed over the slope to form a smooth surface. The batters will then be topdressed with 150mm of topsoil.

The finished floor will be covered with approximately 500mm of overburden to form a smooth surface. The floor will then be topdressed with 150mm of topsoil.

The fill area will be rehabilitated at the same time as the adjoining quarry stage. This will minimise the amount of expose surface. The fill area will be formed into a smooth formation, track rolled by excavator and topdressed with 150mm of topsoil.

8.3 Rehabilitation Planting

The terminal land formation will be sown with seed for pasture grass.

8.4 Rehabilitation Maintenance

The rehabilitated land shall be monitored to ensure that the soil has stabilised and that the vegetation has taken well in all areas.

8.5 End Use

The aim of the reclamation program is to return the site to the pre-existing use of grazing cattle.

9 Community Facilities Impacted

There are no significant community features that will be adversely affected by the quarrying activities.

Equipment owned by Young's earthmoving is on call for use by the CFA. The grader is available to cut fire breaks and the excavator is available to deal with smouldering trees. The local CFA has also received cash for a 4WD appeal.

Young's earthmoving have donated staff and equipment to do soil cultivation at the Gun Club for native tree planting.

The Allansford Cricket Club received a donation by way of free cartage of clay for their new cricket pitch.

Some speedway races at Laang Speedway are sponsored by Young's.

10 Community Engagement Plan

Previous community engagement activities

1. Spoken to immediate neighbours about the intention to open a quarry.

2. Consulted with affected landowners that fall within the 500m buffer for blasting. The affected land to the west is owned and occupied by Buckley. The affected land to the north and to the north west is owned by Dwyer and occupied by Kyley as manager. The parties concerned have indicated that they have no concerns about the intention to blast and will cooperate with buffer requirements.

Community, Values and Impact level

	Community	Values	Impact Level	Reason
1	Adjoining farms.	Noise Dust Visual impact Fire risk minimisation	Low	There is remnant native vegetation between the quarry area and the nearest adjoining farm houses. Extraction areas could be seen from adjoining paddocks and the adjoining Government Roads which are unconstructed. Earthworks equipment will be available to the CFA in an emergency. Fire fighting equipment will be maintained on site. Combustible fuel will not be held in the quarry. The bare earth of the quarry will act as a fire break.
2	Neighbours on Triggs Lane	Sharing roads Noise Dust	Medium	Trucks and cars sharing roadway is a safety issue. Trucks travelling along the unsealed Triggs Lane may generate noise and dust.
3	Neighbours	Sharing roads Noise Dust	Low	Trucks leaving Triggs Lane will be on sealed roads. This reduces danger, noise and dust.
4	Community organisations	Strengthening community assets Contribute to community activities	Low	Local product or machinery can be donated from time to time towards a community organisation. Machinery is on call to the CFA.
5	Landowners affected by the 500m buffer for blasting	Grazing Land	Low	The 500m buffer zone overlaps adjoining grazing land. Stock will need to be relocated prior to blasting.

Schedule of engagement

	Activity	Timeframe	Communities	Level of Engagement	Comments
1	Face to face discussion	During early planning phase	Adjoining farms. Neighbours Neighbours on Triggs Lane	Inform Consult	Discussion about proposed work plans.
2	Information Letter or email	Prior to Planning Permit application.	Adjoining farms. Neighbours Neighbours on Triggs Lane	Inform	General letter containing details and a brief description of the proposal.
3	Telephone hotline	To commence prior to granting Work	Adjoining farms.	Consult	Telephone number available 24/7 for the life of the quarry.

	Activity	Timeframe	Communities	Level of Engagement	Comments
		Authority	Neighbours Neighbours on Triggs Lane		
4	Donations	Considered as requested.	Community organisations	Consult	Contribution of product or machinery to local community organisations.
5	Advance notice for blasting	During the week prior to blasting	Adjoining farms Neighbours Neighbours on Triggs Lane	Inform	Neighbours will be given advance warning of blasting.
6	Advance notice for blasting	During the week prio to blasting	Landowners affected by the 500m buffer for blasting	Consult	Landowners affected by the 500m buffer for blasting will be consulted and timing will depend on their consent.

Receiving and considering feedback from the community

Telephone Hotline.

Correspondence (mail or email)

Face to face discusions.

The quarry manager will consider the feeback and review operations accordingly.

The quarry manager will not organise a time for blasting without the consent of landowners affected by the 500m buffer for blasting.

Registering, documenting and responding to community issues and/or complaints

Comments received will be entered into a log book. The submitter of the feedback will be given a verbal or written response depending how the feedback was submitted. eg Written respone for written feedback and verbal response for verbal feedback.

Managing community expectations

Feedback relating to niucance will be investigated by monitoring. If the concerns are found to be legitimate, remedial action will be taken.

Feedback relating to blasting will be noted and raised with the blasting contractor. The size of blasts may be scaled down in response to monitoring results or concerns raised by neighbours.

Other comments to your Community Engagement Plan

The quarry operator lives within the affected community and seeks to maintain good relations with the neighbourhood. The operators house is the closest house to the quarry site, so any issues of noise, dust and ground vibration from the quarry that affect a neighbour will most likely affect the operator more so.

Review arrangements

A review of the Community Engagement Plan will be done to correspond with the beginning of every second new stage of the quarry.

Appendix A

Land Title
Geotechnical Test Results

CERTIFICATE OF TITLE - VICTORIA

Volume 11065 Folio 302

124029201190E Page 1 / 1
Produced 25/03/2009 12:24 hr

Under the Transfer of Land Act 1958

I certify that the registered proprietor is the proprietor of the estate and interest in the land subject to the encumbrances, caveats and notices described

REGISTRAR OF TITLES

LAND DESCRIPTION

Crown Allotment 31 Parish of Laang.
PARENT TITLES :
Volume 08095 Folio 342 Volume 08451 Folio 660
Created by instrument AF800284H 23/04/2008

REGISTERED PROPRIETOR

Estate Fee Simple
Joint Proprietors
BRADLEY WILLIAM YOUNG
WENDY JOY YOUNG both of 50 TRIGGS ROAD NARINGAL VIC 3277
AG420321N 25/03/2009

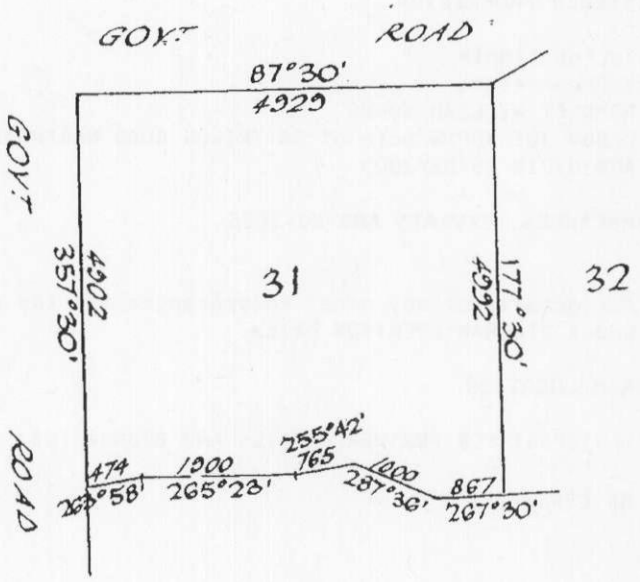
ENCUMBRANCES, CAVEATS AND NOTICES

For details of any other encumbrances see the plan or imaged folio set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE TP838750T FOR FURTHER DETAILS AND BOUNDARIES

END OF CERTIFICATE



MEASUREMENTS ARE IN Links.

CHADWICK T&T Pty Ltd

Geotechnical and Geoenvironmental Consulting Engineers

Head Office
32 Fiveways Blvd
KEYSBOROUGH VIC 3173
Tel: (03) 8796 7900
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Warrnambool Office
11 Robson St
(PO Box 1231)
WARRNAMBOOL VIC 3280
Tel: (03) 5560 5214
Fax: (03) 5561 0482

www.chadwickt.com.au

QUALITY OF MATERIALS REPORT

Customer: B & C Young - Youngs Move Earth
Customer Address: P.O Box 1204, Warrnambool VIC 3280
Project: Material Analysis - B & C Young
Location: Naringal
Customer Order No.: n/a

Report Number: **380451** -1
Report Date: 17/02/11
CT&T Order No: n/a

Testing performed and reported at our Warrnambool Laboratory

Sample No.:	W1100125	W1100126			
ID No.:	1	2			
Lot No.:	n/a	n/a			
Date Sampled:	8/02/2011	8/02/2011			
Time Sampled:	n/a	n/a			
Date Tested:	15/02/2011	15/02/2011			
Material Source:	Youngs - Naringal	Youngs - Naringal			
Material Description:	40mm NDCR	20mm NDCR			
To Be Used As	Road Base Material	Road Base Material			
Sample Location :	Youngs Quarry Naringal 40mm NDCR As supplied by client	Youngs Quarry Naringal 20mm NDCR As supplied by client			
Layer Depth (mm)	n/a	n/a			
Test Depth (mm)	n/a	n/a			
Sampling Procedure	Sampled by client	Sampled by client			

Sieve Analysis Test AS1289.3.6.1 — Specification No: VicRoads Section 812 - Crushed Rock for Base & Subbase Pavement, Table 812.082 (20mm) & Table 812.084 (40mm)

A.S. Sieve Size	Spec. Min.	% Passing Result	Spec Max.	Meets Spec.	Spec. Min.	% Passing Result	Spec Max.	Meets Spec.	Spec. Min.	% Passing Result	Spec Max.	Meets Spec.	Spec. Min.	% Passing Result	Spec Max.	Meets Spec.	Spec. Min.	% Passing Result	Spec Max.	Meets Spec.
300.00mm																				
150.0mm																				
75.00mm																				
53.00mm	100			✓																
37.50mm	95	100	100	✓																
26.50mm	75	87	95	✓	100	100		✓												
19.00mm	64	67	90	✓	95	97	100	✓												
13.2mm		52			75	77	95	✓												
9.50mm	42	45	78	✓	60	63	90	✓												
6.70mm		38				54														
4.75mm	28	34	64	✓	42	46	76	✓												
2.36mm	20	28	50	✓	28	35	60	✓												
1.18mm		23				28														
0.600mm		20				23														
0.425mm	7	18	23	✓	10	21	28	✓												
0.300mm		16				19														
0.150mm		13				15														
0.075mm	2	11	9	☒	2	13	10	☒												
Atterberg Test																				
Liquid limit (%) AS 1289.3.1.1		35				32														
Plastic Limit (%) AS 1289.3.2.1		31				29														
Plasticity Index AS 1289.3.3.1		4				3														
Linear Shrinkage (%) AS 1289.3.4.1		2.5				2.5														
Cracking, Curling, Crumbling (1,2,3)																				
P.I. x % Passing 0.425mm		71				64														
L.S. x % Passing 0.425mm		45				53														
Ratio of % Passing (0.075/0.425)																				
USC AS1726, Appendix A, Section A2																				

Remarks: None

APPROVED SIGNATORY
L Myroniuk
NATA Accreditation No. 12719

Form No.. TC241-11
Issue Date: 1/01/2010

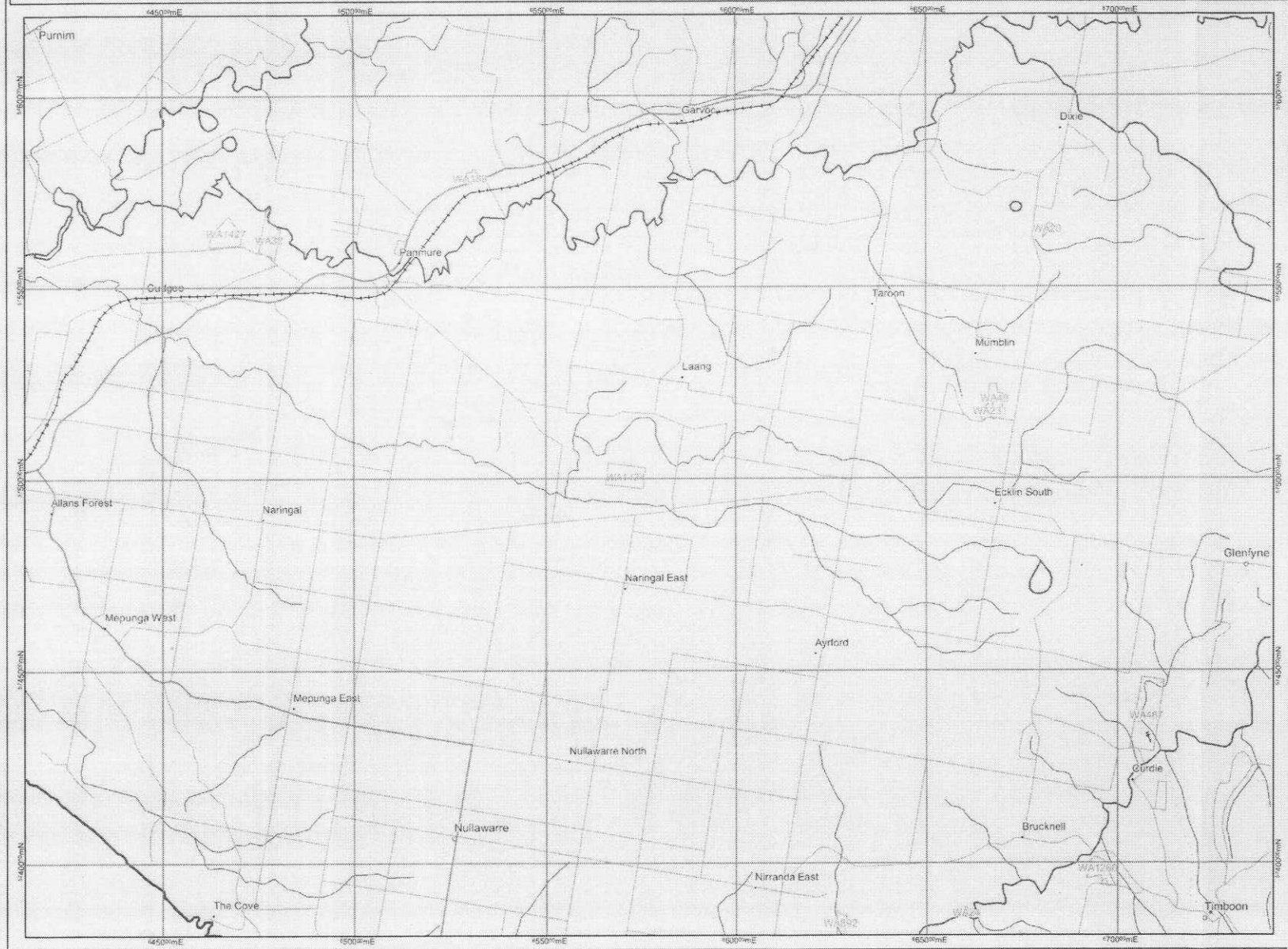
Appendix B

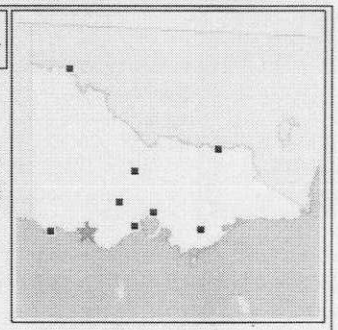
Maps and Plans

Location Map
Regional Map
Work Authority Boundary Plan
Site Plan 1 : 2000 ..... Drawing 11062 Sheet 1
Work Plan and Sections for Area A ..... Drawing 11062 Sheet 2
Work Plan for Area B ..... Drawing 11062 Sheet 3
Sections for Area B ..... Drawing 11062 Sheet 4
Rehabilitation Plan ..... Drawing 11062R

Department of Primary Industries

Work Authority 1474





Legend

TOWNS
- Large Town
- Town
- Locality
- Current Extractive Industry Tenements

Railways
- Railway
- Railway Bridge
- Railway Tunnel
- Railway Siding
- Railway Marshalling Yard
- Underground Railway
- Tramway
- Disused Railway
- Dismantled Railway
- Light Railway
- Railway Trail
- Dismantled Tramway

Roads (250K)
- Major Roads
- Other Roads

Lakes (250K)

Watercourses (250K)
- Major Watercourses
- Other Watercourses

GN MN

Map Server: P00403

Map Service: erd_geovic_v2_7

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Map Scale 1:100,000

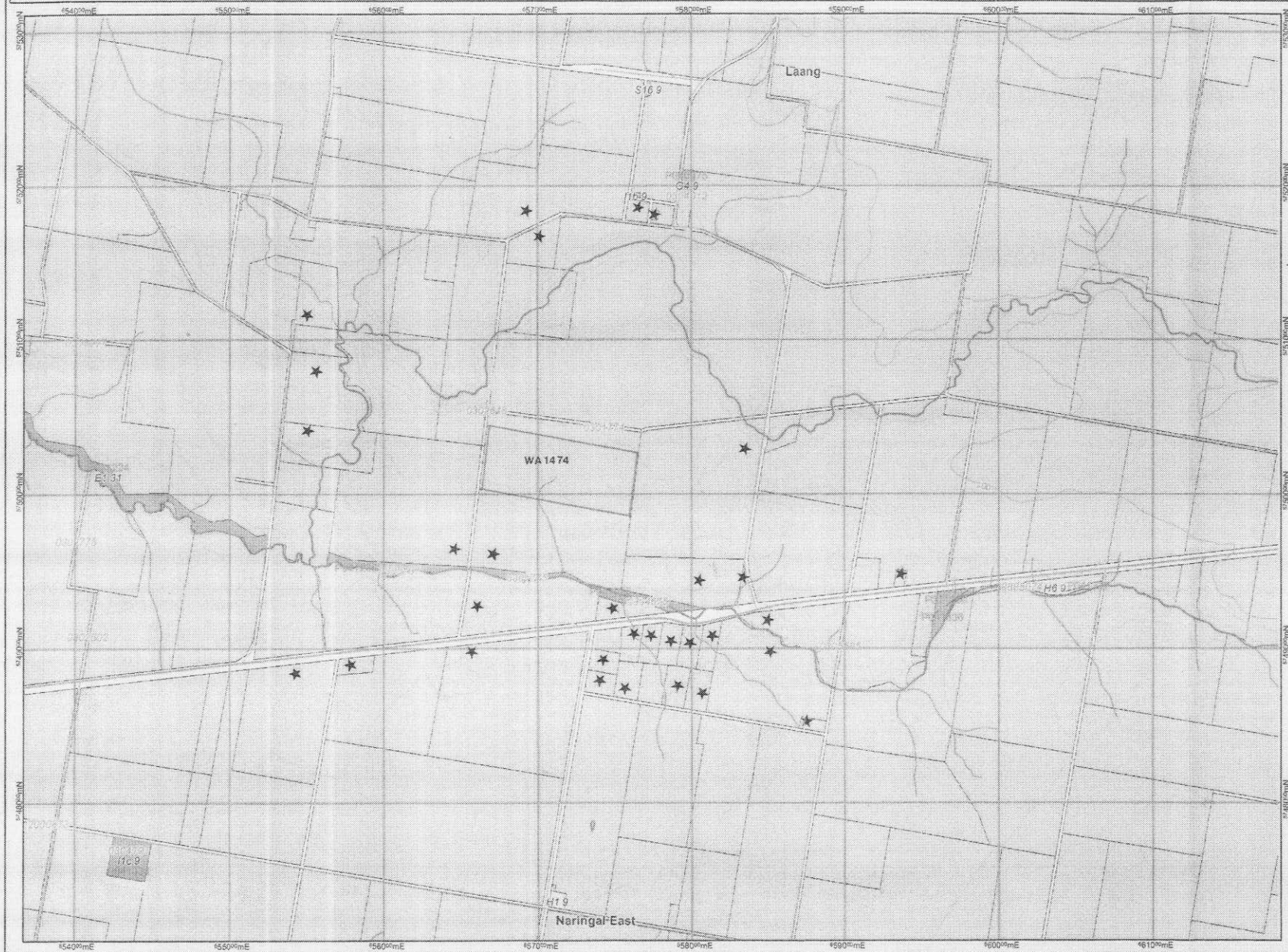
Projection: MGA_54

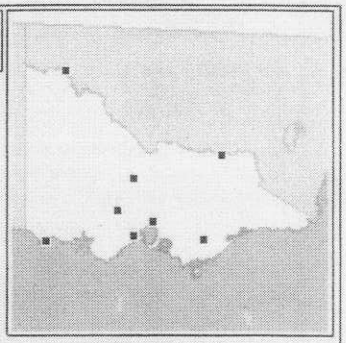
GDA

State Government Victoria

Department of Primary Industries

Work Authority 1474





Legend

★ HOUSE WITHIN 2Km OF WA 1474

GN MN

Map Server: P00403

Map Service: erd_geovic_v2_7

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Map Scale 1:25,000

Projection: MGA_54

GDA

Victoria

MINERAL RESOURCES (SUSTAINABLE DEVELOPMENT) ACT 1990

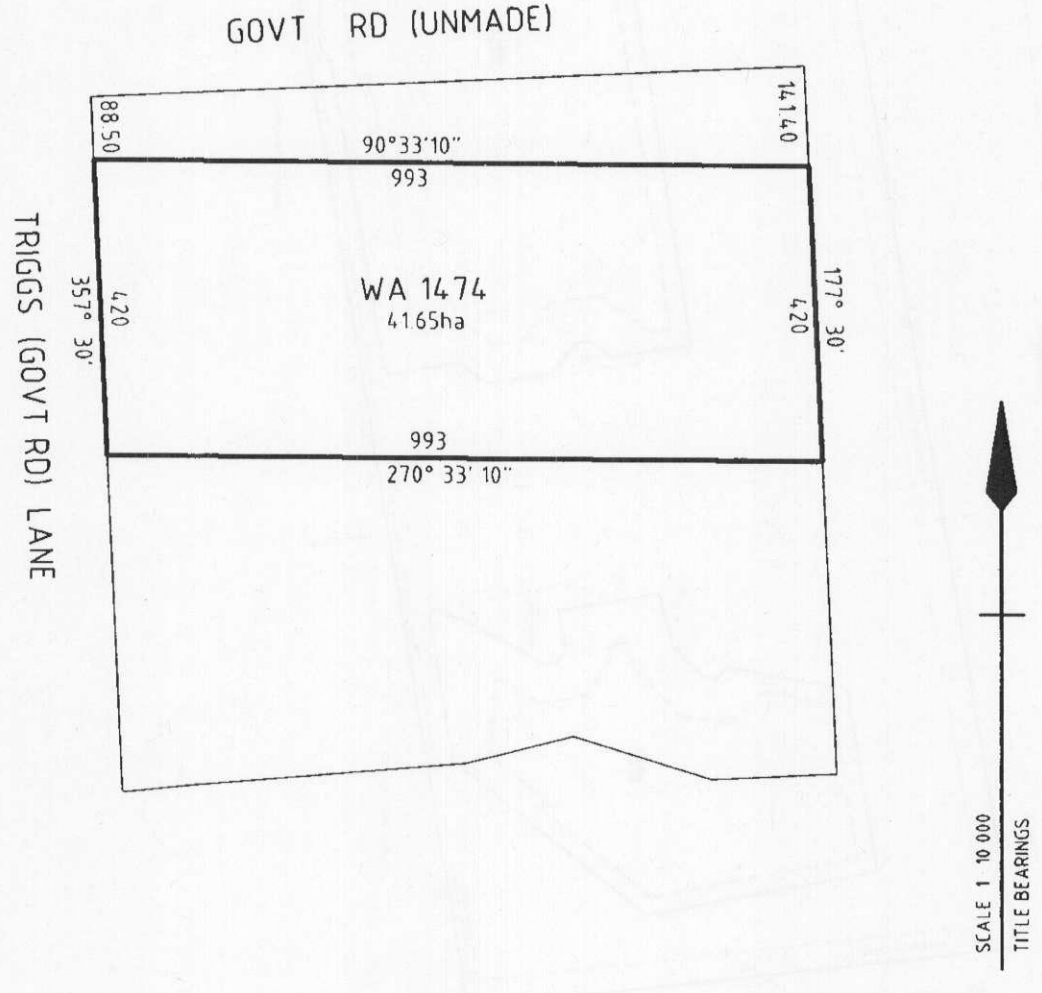
WORK AUTHORITY No. 1474

PLAN OF AREA

Earth Resources
DEPARTMENT
OF PRIMARY
INDUSTRIES
VICTORIA

ISSUED TO: B & W YOUNG

MUNICIPALITY: SHIRE OF MOYNE	TOTAL AREA 41.65 Hectares
PARISHE: LAANG	NET AREA Hectares



ALL MEASUREMENTS ARE IN METRES

Checked Date Record plan

MINERAL RESOURCES (SUSTAINABLE DEVELOPMENT) ACT 1990
Permission No. WA 1474
Statutory work/road work plan comprising maps and drawings Sheet 1-5
Delegate / Date
Department of Primary Industries

NOTES

CO-ORDINATE AND LEVEL DATUM DERIVED FROM HAND HELD GPS

BEARINGS ON WA BOUNDARY ARE TO LAND TITLE VOL 11065 FOL 302

REVISION	DESCRIPTION		NAME	DATE
		SURVEY	CD TP	OCT 11
		DRAWN	C DRURY	OCT 11
		DESIGN	C DRURY	OCT 11
		CHECKED		
		APPROVED		
		CAD FILE	11062 WP1	

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PROJECT

WORK AUTHORITY 1474
YOUNGS BASALT QUARRY
50 TRIGGS LANE LAANG
OVERALL SITE PLAN

SIZE	SCALE	PROJECT No	SHEET No.	REV
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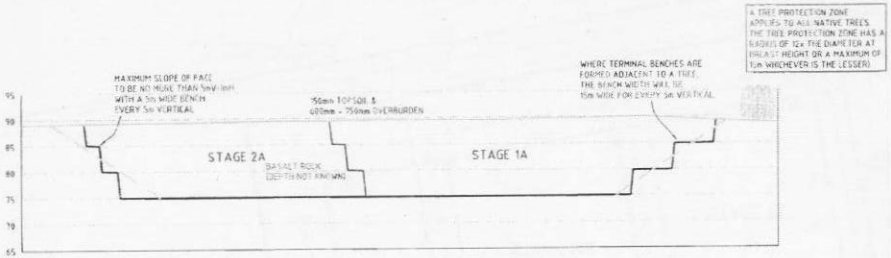
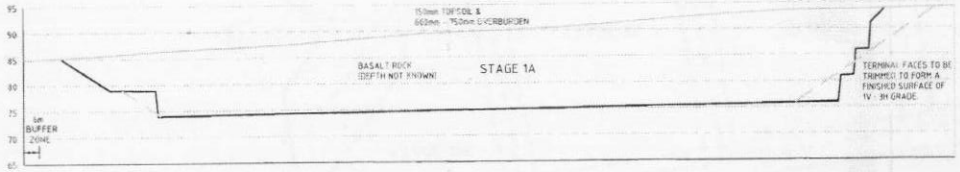
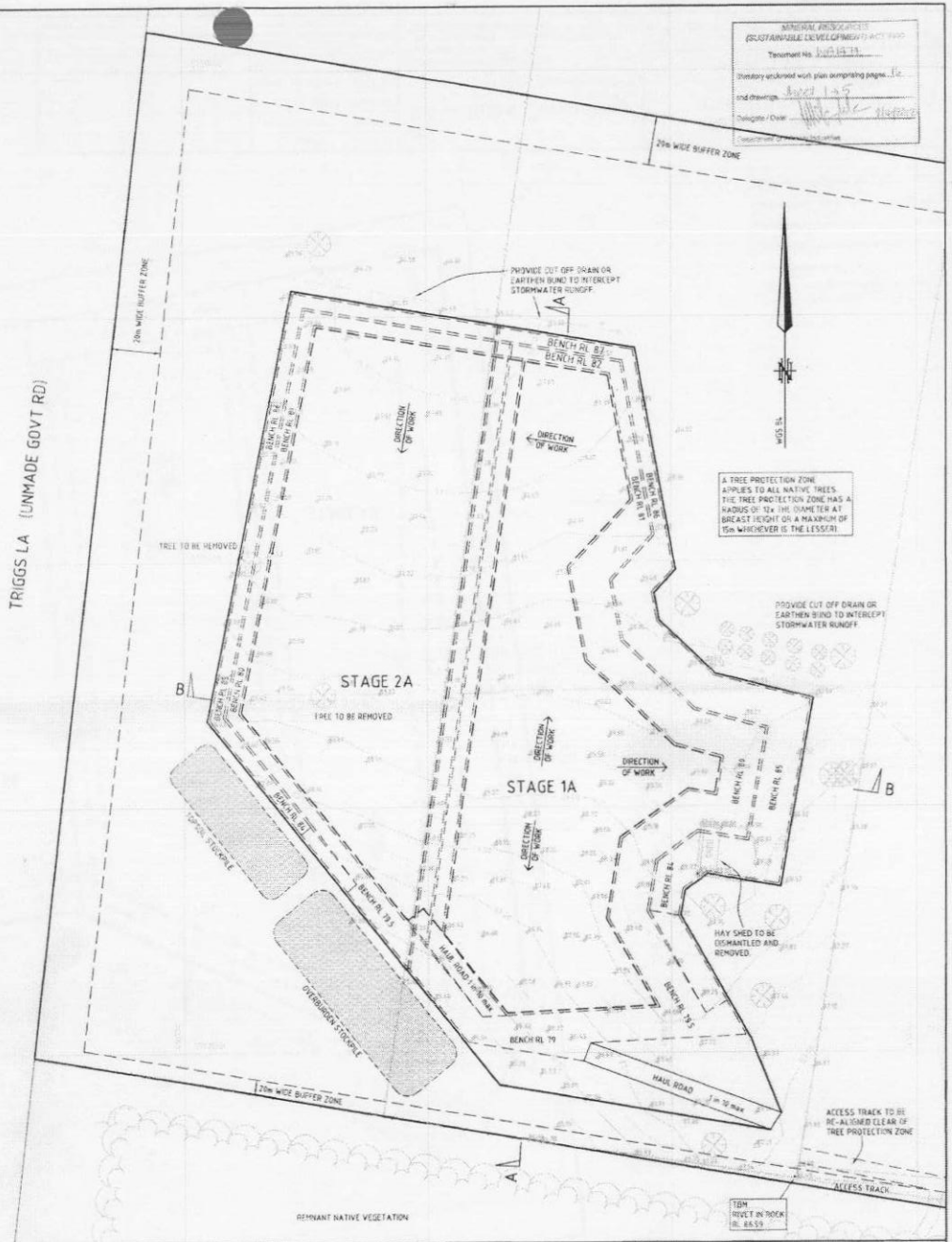


SECTION B - B



SECTION A - A



REVISION	DESCRIPTION	DATE

	NAME	DATE
SURVEY	CD TP	OCT 11
DRAWN	C DRURY	OCT 11
DESIGN	C DRURY	OCT 11
CHECKED		
APPROVED		

CAD FILE 11062 WP1

Brian Consulting
Civil Engineers and Project Managers
28 Kepler Street (PO Box 1154)
Warrnambool Vic 3280
Ph: (03) 5561 3939 Fax: (03) 5561 2033
Email: brianc@bigpond.net.au

PROJECT

WORK AUTHORITY 1474
YOUNGS BASALT QUARRY
50 TRIGGS LANE LAANG
AREA A WORK PLAN AND SECTIONS

SIZE	SCALE	PROJECT No.	SHEET No.	REV
A1	HOR 1: 1000 VER 1: 200	11062-WP2	2 OF 5	-

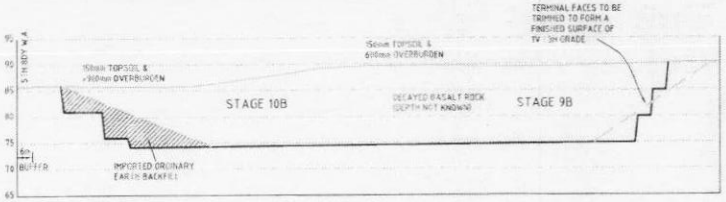
	NAME	DATE
SURVEY	CD TP	OCT 11
DRAWN	C DRURY	OCT 11
DESIGN	C DRURY	OCT 11
CHECKED		
APPROVED		
CAD FILE	11062 WP1	

REVISION | DESCRIPTION

Brian Consulting
Civil Engineers and Project Managers
28 Kepler Street (PO Box 1154)
Warrnambool Vic 3280
Ph: (03) 5561 3939 Fax: (03) 5561 2033
Email: briancon@bigpond.net.au

PROJECT
WORK AUTHORITY 1474
YOUNGS BASALT QUARRY
50 TRIGGS LANE LAANG
WORK PLAN SECTIONS

SIZE	SCALE	PROJECT No.	SHEET No.	REV
A1	1 : 1000	11062-WP2	3 OF 5	-



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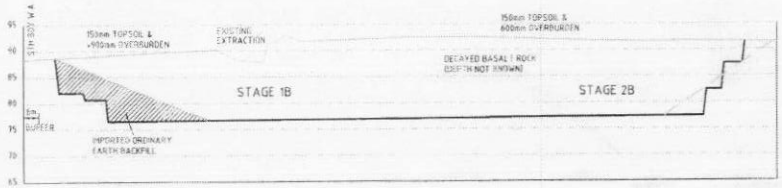

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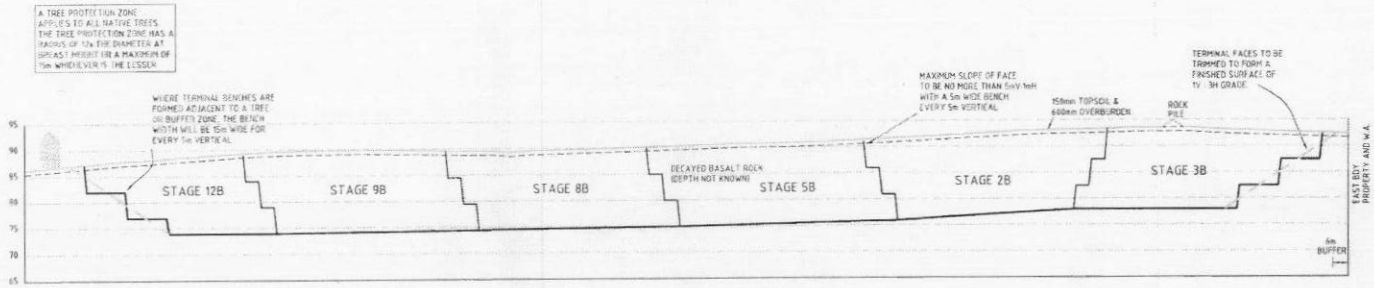


SECTION C - C

MINERAL RESOURCES (SUSTAINABLE DEVELOPMENT) ACT 1990
Tenement No. WA 1474
Statutory endorsed work plan comprising pages 5
and drawings Sheet 1 of 5
Delegate / Date
Department of Primary Industries

REVISION	DESCRIPTION	DATE

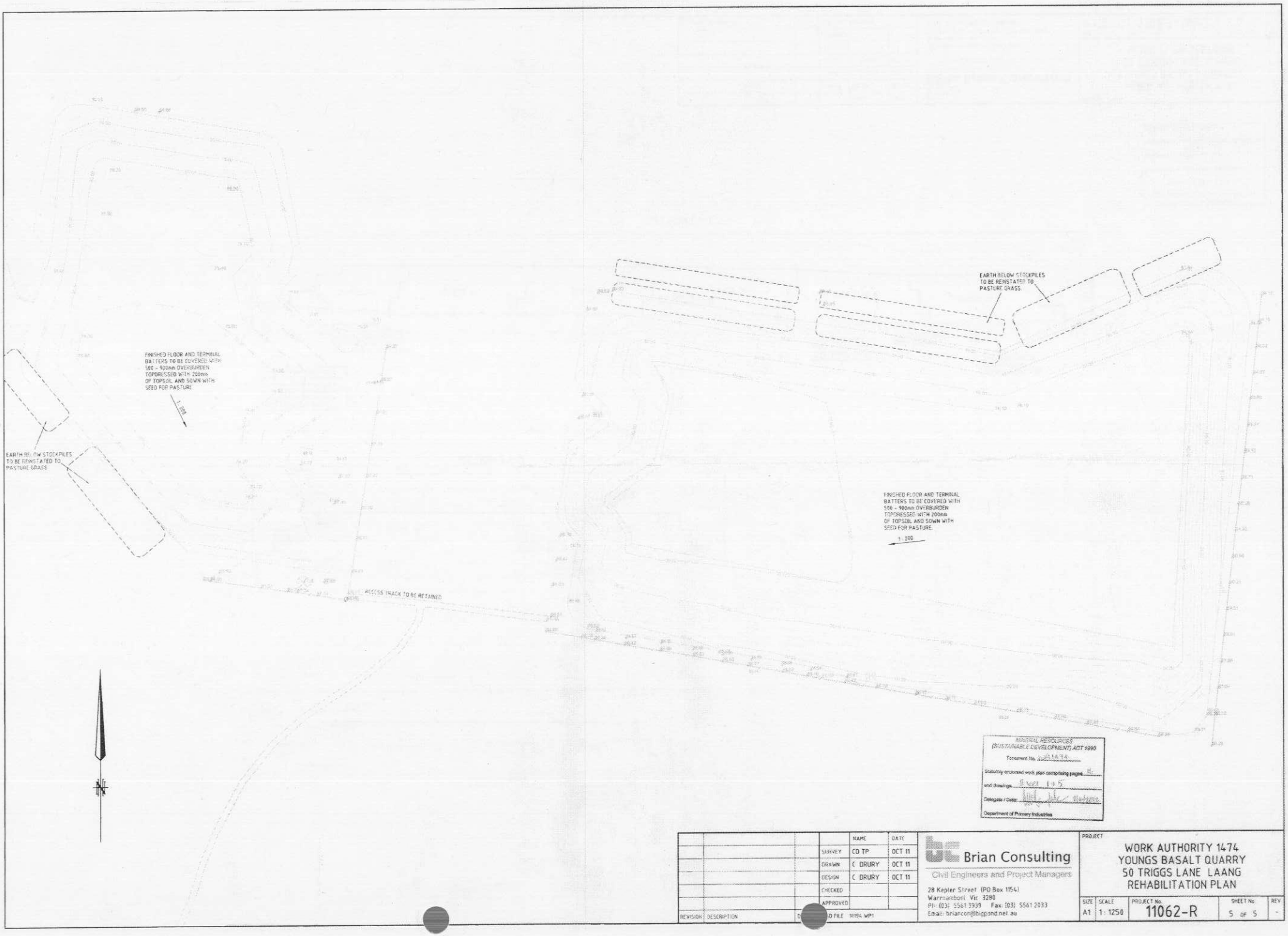
	NAME	DATE
SURVEY	CD TP	OCT 11
DRAWN	C DRURY	OCT 11
DESIGN	C DRURY	OCT 11
CHECKED		
APPROVED		

CAD FILE 11062 WP1

Brian Consulting
Civil Engineers and Project Managers
28 Kepler Street (PO Box 1154)
Warrnambool Vic 3280
Ph: (03) 5561 3939 Fax: (03) 5561 2033
Email: brianconn@bigpond.net.au

PROJECT
WORK AUTHORITY 1474
YOUNGS BASALT QUARRY
50 TRIGGS LANE LAANG
WORK PLAN SECTIONS

SIZE	SCALE	PROJECT No.	SHEET No.	REV
A1	HOR 1 : 1000 VER 1 : 200	11062-WP2	4 OF 5	-



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SURVEY	CD TP	OCT 11
DRAWN	C DRURY	OCT 11
DESIGN	C DRURY	OCT 11
CHECKED		
APPROVED		
D FILE	10194 WP1	

REVISION | DESCRIPTION | D

Brian Consulting
Civil Engineers and Project Managers
28 Kepler Street (PO Box 1154)
Warrnambool Vic 3280
Ph: (03) 5561 3939 Fax: (03) 5561 2033
Email: briancon@bigpond.net.au

PROJECT

WORK AUTHORITY 1474
YOUNGS BASALT QUARRY
50 TRIGGS LANE LAANG
REHABILITATION PLAN

SIZE	SCALE	PROJECT No.	SHEET No	REV.
A1	1:1250	11062-R	5 OF 5	-

Appendix A

Land Title
Geotechnical Test Results

CERTIFICATE OF TITLE - VICTORIA

Volume 11065 Folio 302

124029201190E Page 1 / 1
Produced 25/03/2009 12:24 hr

Under the Transfer of Land Act 1958

I certify that the registered proprietor is the proprietor of the estate and interest in the land subject to the encumbrances, caveats and notices described

REGISTRAR OF TITLES

LAND DESCRIPTION

Crown Allotment 31 Parish of Laang.
PARENT TITLES :
Volume 08095 Folio 342 Volume 08451 Folio 660
Created by instrument AF800284H 23/04/2008

REGISTERED PROPRIETOR

Estate Fee Simple
Joint Proprietors
BRADLEY WILLIAM YOUNG
WENDY JOY YOUNG both of 50 TRIGGS ROAD NARINGAL VIC 3277
AG420321N 25/03/2009

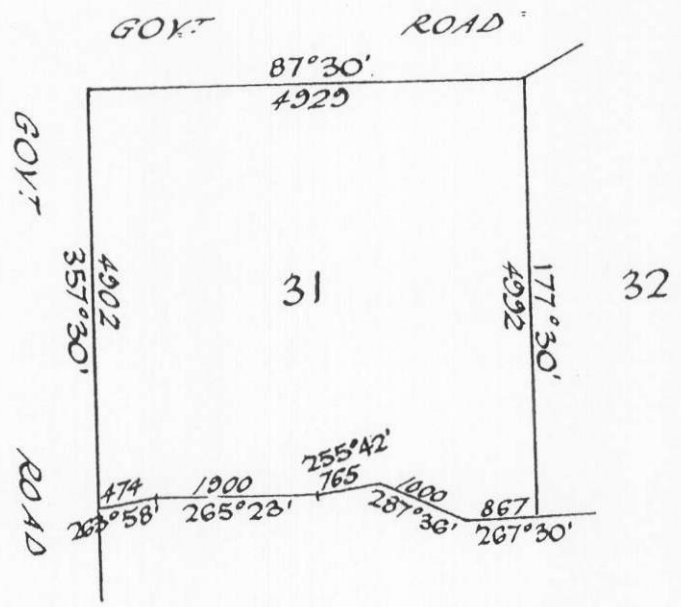
ENCUMBRANCES, CAVEATS AND NOTICES

For details of any other encumbrances see the plan or imaged folio set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE TP838750T FOR FURTHER DETAILS AND BOUNDARIES

END OF CERTIFICATE



MEASUREMENTS ARE IN Links.

CHADWICK T&T Pty Ltd

Geotechnical and Geoenvironmental Consulting Engineers

Head Office
32 Fiveways Blvd
KEYSBOROUGH VIC 3173
Tel: (03) 8796 7900
Fax: (03) 8796 7944

Warrnambool Office
11 Robson St
(PO Box 1231)
WARRNAMBOOL VIC 3280
Tel: (03) 5560 5214
Fax: (03) 5561 0482

www.chadwickt.com.au

QUALITY OF MATERIALS REPORT

Customer: B & C Young - Youngs Move Earth
Customer Address: P.O Box 1204, Warrnambool VIC 3280
Project: Material Analysis - B & C Young
Location: Naringal
Customer Order No.: n/a

Report Number: **380451** -1
Report Date: 17/02/11
CT&T Order No: n/a

Testing performed and reported at our Warrnambool Laboratory

Sample No.:	**W1100125**	**W1100126**			
ID No.:	1	2			
Lot No.:	n/a	n/a			
Date Sampled:	8/02/2011	8/02/2011			
Time Sampled:	n/a	n/a			
Date Tested:	15/02/2011	15/02/2011			
Material Source:	Youngs - Naringal	Youngs - Naringal			
Material Description:	40mm NDCR	20mm NDCR			
To Be Used As	Road Base Material	Road Base Material			
Sample Location :	Youngs Quarry Naringal 40mm NDCR As supplied by client	Youngs Quarry Naringal 20mm NDCR As supplied by client			
Layer Depth (mm)	n/a	n/a			
Test Depth (mm)	n/a	n/a			
Sampling Procedure	Sampled by client	Sampled by client			

Sieve Analysis Test AS1289.3.6.1 — Specification No: VicRoads Section 812 - Crushed Rock for Base & Subbase Pavement, Table 812.082 (20mm) & Table 812.084 (40mm)

A.S. Sieve Size	Spec. Min.	% Passing. Result	Spec Max.	Meets Spec.	Spec. Min.	% Passing. Result	Spec Max.	Meets Spec.	Spec. Min.	% Passing. Result	Spec Max.	Meets Spec.	Spec. Min.	% Passing. Result	Spec Max.	Meets Spec.	Spec. Min.	% Passing. Result	Spec Max.	Meets Spec.
300.00mm																				
150.0mm																				
75.00mm																				
53.00mm	**100**			✓																
37.50mm	**95**	100	**100**	✓																
26.50mm	**75**	87	**95**	✓	**100**	100		✓												
19.00mm	**64**	67	**90**	✓	**95**	97	**100**	✓												
13.2mm		52			**75**	77	**95**	✓												
9.50mm	**42**	45	**78**	✓	**60**	63	**90**	✓												
6.70mm		38				54														
4.75mm	**28**	34	**64**	✓	**42**	46	**76**	✓												
2.36mm	**20**	28	**50**	✓	**28**	35	**60**	✓												
1.18mm		23				28														
0.600mm		20				23														
0.425mm	**7**	18	**23**	✓	**10**	21	**28**	✓												
0.300mm		16				19														
0.150mm		13				15														
0.075mm	**2**	11	**9**	☒	**2**	13	**10**	☒												
Atterberg Test																				
Liquid limit (%) AS 1289.3.1.1		35				32														
Plastic Limit (%) AS 1289.3.2.1		31				29														
Plasticity Index AS 1289.3.3.1		4				3														
Linear Shrinkage (%) AS 1289.3.4.1		2.5				2.5														
Cracking, Curling, Crumbling (1,2,3)																				
P.I. x % Passing 0.425mm		71				64														
L.S. x % Passing 0.425mm		45				53														
Ratio of % Passing (0.075/0.425)																				
USC AS1726, Appendix A, Section A2																				

Remarks: None

APPROVED SIGNATORY
L Myroniuk
NATA Accreditation No. 12719

Form No.: TC241-11
Issue Date: 1/01/2010

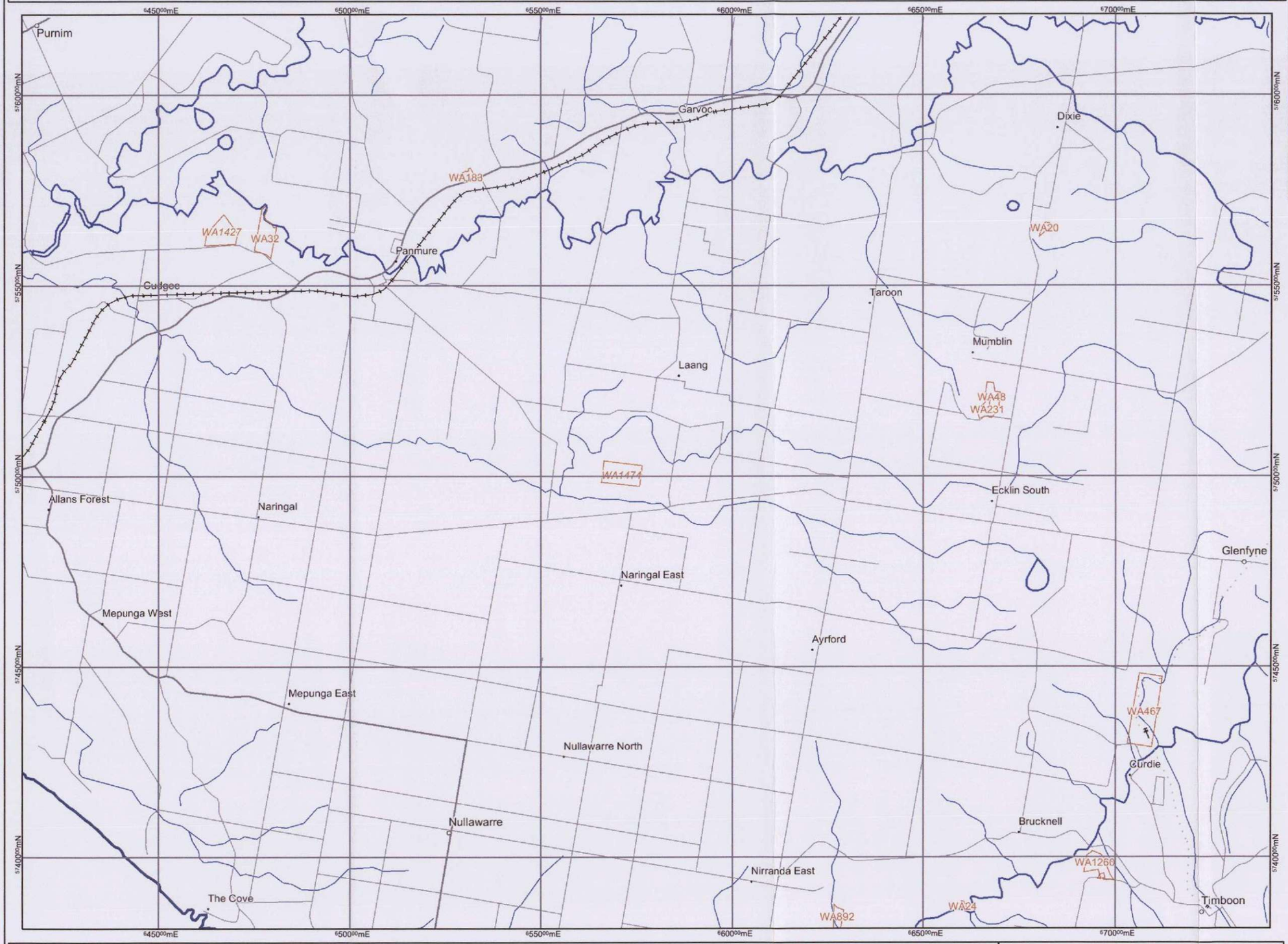
Appendix B

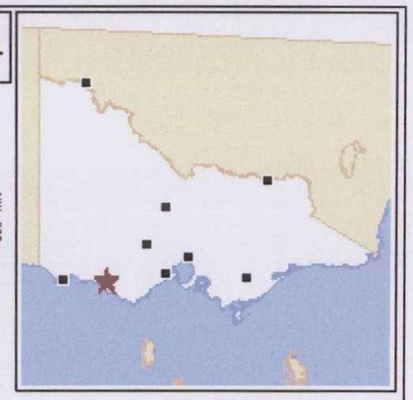
Maps and Plans

Location Map
Regional Map
Work Authority Boundary Plan
Site Plan 1 : 2000 ..... Drawing 11062 Sheet 1
Work Plan and Sections for Area A ..... Drawing 11062 Sheet 2
Work Plan for Area B ..... Drawing 11062 Sheet 3
Sections for Area B ..... Drawing 11062 Sheet 4
Rehabilitation Plan ..... Drawing 11062R

Department of Primary Industries

Work Authority 1474





Legend

TOWNS
- Large Town
- Town
- Locality
- Current Extractive Industry Tenements

Railways
- Railway
- Railway Bridge
- Railway Tunnel
- Railway Siding
- Railway Marshalling Yard
- Underground Railway
- Tramway
- Disused Railway
- Dismantled Railway
- Light Railway
- Railway Trail
- Dismantled Tramway

Roads (250K)
- Major Roads
- Other Roads

Lakes (250K)

Watercourses (250K)
- Major Watercourses
- Other Watercourses

GN MN

Map Server: P00403

Map Service: erd_geovic_v2_7

Generated at http://mapshare2.dse.vic.gov.au/MapShare2EXT/ from GeoVic

Produced on Mon Oct 03 12:42:29 EST 2011

Map Scale 1:100,000

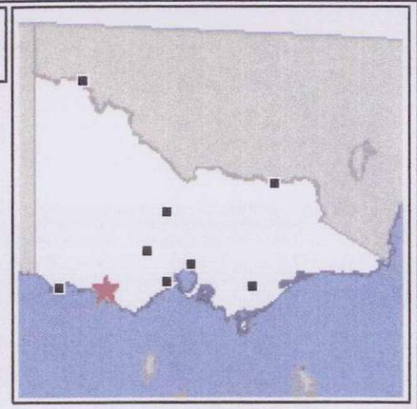
Projection: MGA_54

GDA

State Government Victoria

Department of Primary Industries

Work Authority 1474



Legend

★ HOUSE WITHIN 2Km OF WA 1474

GN MN

Map Server: P00403

Map Service: erd_geovic_v2_7

Generated at http://mapshare2.dse.vic.gov.au/MapShare2EXT/ from GeoVic

Produced on Mon Oct 03 12:50:05 EST 2011

Map Scale 1:25,000

Projection: MGA_54

GDA

State Government Victoria

MINERAL RESOURCES (SUSTAINABLE DEVELOPMENT) ACT 1990

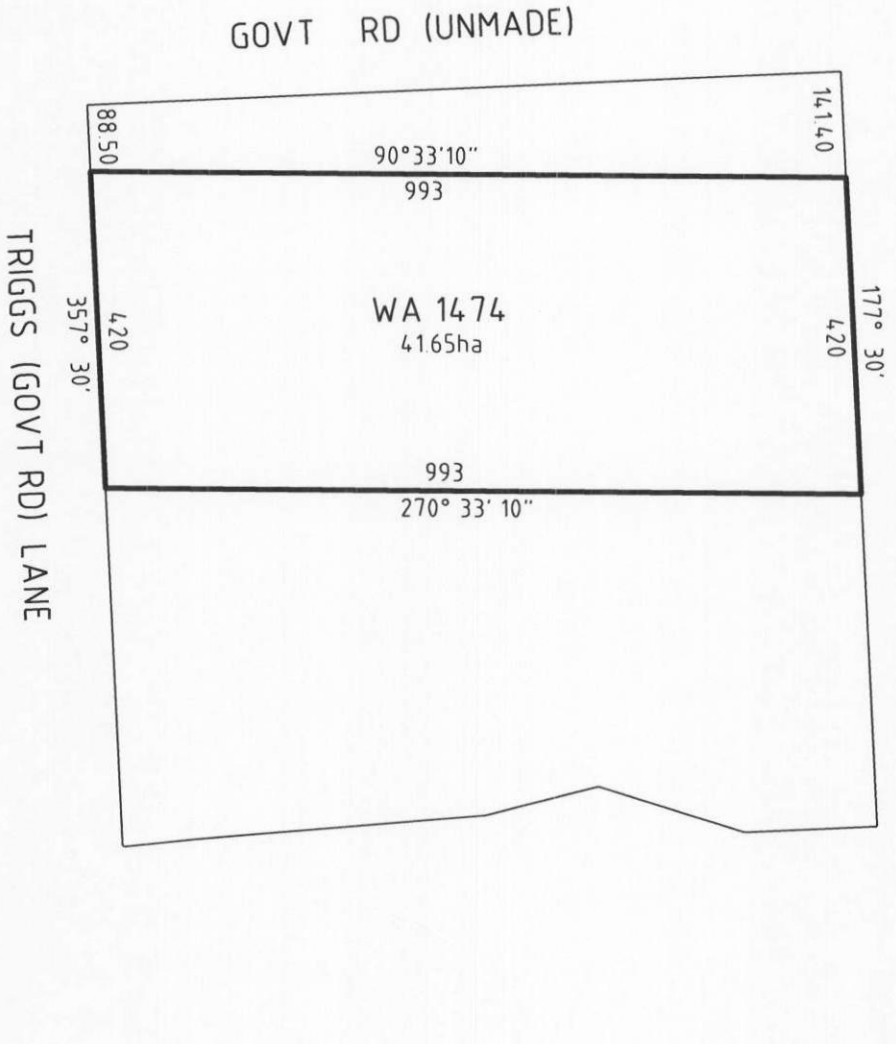
WORK AUTHORITY No. 1474

PLAN OF AREA

Earth Resources
DEPARTMENT
OF PRIMARY
INDUSTRIES
VICTORIA

ISSUED TO: B & W YOUNG

MUNICIPALITY: SHIRE OF MOYNE	TOTAL AREA 41.65 Hectares
PARISHE: LAANG	NET AREA Hectares



SCALE 1 : 10 000

TITLE BEARINGS

ALL MEASUREMENTS ARE IN METRES

Checked Date Record plan

Internal Office Use Only:

Planning Permit App. PL12/233 – *Use and Development of Land for Stone Extraction* at 50 Triggs Lane, LAANG

Proposal details

- The proposal seeks permission to extract 'basalt rock' from the site, commonly known as 'coffee rock'.
- The stone extraction is set to occur within the central eastern extent of the site, north of the existing remnant native vegetation (as shown in the image below):

- The extracted material will be used for the construction of farm tracks within the area in association with the current operation being undertaken by the landowners.
- The extraction site will have an overall area within the Works Authority of 11.66ha and will be undertaken in twelve (12) separate stages, with a maximum area of 2ha that will be open at any one point in time.
- The maximum depth of the quarry is proposed to be 15m.
- The material will be extracted using the following method:
    - Topsoil will be stripped with excavator and trucks;
    - Extraction undertaken with excavator, dump truck and loader;
    - The material will be crushed and screened and then loaded onto trucks.
- No blasting is required to occur to extract the material.
- Hours of operation for the proposed use will be Monday-Friday 8.00am to 5.30pm.
- Vehicular access to the site and extraction area will be provided from Triggs Lane, which itself has access to the Cobden-Warrnambool Road. It is estimated that truck traffic will include approximately 800 traffic movements per year, with a reduction in their scale during the winter months.
- A 20m buffer zone will be included around the extent of the Works Authority boundary.

- Rehabilitation of the site will be carried out progressively based on the staging of the operation. It is intended that the site will be reclaimed and returned to its pre-existing use for agriculture.
- 35 dwellings currently exist within a 2km radius of the site, the nearest of which is sited approximately 500m from the proposed extraction area and is owned by the existing landowner.
- The volume of material to be extracted from the site will equate to approximately 1,435,000 cubic metres, with an estimated annual output of 15,000-20,000 cubic metres.

Department of Primary Industries

29 March 2012

Bradley and Wendy Young
PO Box 1204
WARRNAMBOOL VIC 3280

Dear Mr and Mrs Young

PROPOSAL FOR EXTRACTIVE INDUSTRY WORK AUTHORITY 1474
NOTICE OF STATUTORY ENDORSEMENT

The draft work plan for the above proposed extractive industry at Laang has been assessed and is hereby statutorily endorsed under section 77TD(1) of the *Mineral Resources (Sustainable Development) Act 1990* (MRSDA).

A list of the referral authorities who have been given a copy of this draft work plan in accordance with Section 77TE of the MRSDA is attached. You should now apply for planning permission. You should note that you are required to submit the following documents for council to accept the application:

- A copy of this Notice
- Council Information
- A copy of the attached Statutory Endorsement Referral Authority Checklist
- An **original version** of the work plan that has received statutory endorsement
- A copy of the attached work plan conditions – which include any conditions that have been requested by referral authorities under section 77TD(3) of the MRSDA

This application overlaps with EL5375. Under Section 77S(b) of the MRSDA you must send a copy of the planning permit application to any holder of an exploration or mining licence to which the application applies.

Following the issue of the planning permit you should then lodge the work plan together with the planning permit with your Tenements Officer. After the approval of the work plan you will be advised of the remaining requirements for grant of the Work Authority (Extractive Industry).

I enclose a check list for the approval of a work plan. Please return the checklist with all the required items attached to the above postal address.

Please note a bond of $9,500 is proposed for this operation. Enquiries regarding the bond amount may be directed to Bessie Abbott on 5336 6804.

Please note that it is an offence to operate without required approval.

Please direct all other correspondence and enquiries to Sarah Mills who has been assigned as your Tenements Officer on 5336 6806.

Yours sincerely

E Abbott

Bessie Abbott
Senior Inspector of Mines
Earth Resources Regulation

Cc. ERR Planning Officer

Enc:
Council Information
Statutorily Endorsed work plan and schedule of conditions
Work Plan Checklist
Statutory Endorsement Referral Authority consultation Checklist

Department of Primary Industries

STATUTORY ENDORSEMENT
REFERRAL AUTHORITY CONSULTATION CHECKLIST

APPLICANT NAME(S):	**Bradley & Wendy Young** + Cameron Young
TENEMENT NUMBER: WA1474	
LAND STATUS: ☐ **Crown** ☒ **Private** ☐ **Crown & Private** *(If Crown Land - Has proponent been informed of NT issues?)*	
SITE/PIT NAME: Youngs Basalt Quarry	**MUNICIPALITY/SHIRE: Moyne**
PHYSICAL ADDRESS OF SITE/LOCALITY(local area name): **50 Triggs Lane LAANG VIC 3265**	

USE AND DEVELOPMENT REFERRALS			
Tick If referred	**VPP CLAUSE**	**REFERRAL AUTHORITY**	**REFERRAL TRIGGER**
	66.02-1	EPA	Use or development requiring any of the following: • Works approval Section 19A of EPA 1970 • A licence to discharge or emit waste Section 20 EPA 1970 • Amendment of a licence under Section 20A EPA 1970
✓	66.02-3	DSE	Native Vegetation
	66.02-5	INSERT THE RELEVANT ELECTRICITY TRANSMISSION AUTHORITY	Major electricity line or easement (Check certificate of title)
	66.02-6	INSERT THE RELEVANT WATER BOARD OR SUPPLY AUTHORITY	Special Water Supply Catchment Area as listed in Schedule 5 of the Catchment & Land Protection Act 1994 (refer to Victorian Resources Online – Declared Water Supply Catchments Mapping)
✓	66.02-9	Heritage Victoria	Extractive Industry – Heritage Act 1995 – (Not CHMP issues)
	66.02-9	DSE	Extractive Industry – Crown Land
	66.02-9	DSE	Extractive Industry – Special Areas declared under Section 27 Catchment and Land Protection Act 1994 (refer to Victorian Resources Online – Declared Water Supply Catchments Mapping). – Removal or destruction of native vegetation if total area to be cleared is 10 hectares or greater. – Land identified in the planning scheme as being subject to high erosion risk or areas identified as being subject to salinity management.
	66.02-9	DSE	Extractive Industry – In areas with communities or taxa listed or critical habitat determined under the Flora and Fauna Guarantee Act 1988. – On land which has been identified in the scheme as containing sites of flora or fauna significance.
	66.02-9	DSE	Extractive Industry – on land which is identified in the planning scheme as flood prone
	66.02-9	EPA	Extractive Industry – where the land is intended to be used for land fill at a future date.

Department of Primary Industries

REFERRAL UNDER ZONES AND OVERLAYS			
	37.03-5	INSERT RELEVANT FLOODPLAIN MANAGEMENT AUTHORITY	Urban Floodway Zone (UFZ)
	37.07-5	Growth Areas Authority	UGZ – within Metropolitan Melbourne
	37.07-5	DPCD	UGZ – outside Metropolitan Melbourne
	44.02-3	DSE	Salinity management Overlay (SMO)
	44.03-4	INSERT RELEVANT FLOODPLAIN MANAGEMENT AUTHORITY	Floodway Overlay (FO)
	44.04-4	INSERT RELEVANT FLOODPLAIN MANAGEMENT AUTHORITY	Land Subject to Inundation (LSIO)
	44.05-4	INSERT RELEVANT FLOODPLAIN MANAGEMENT AUTHORITY	Special Building Overlay (SBO)
	44.07-4	INSERT RELEVANT AUTHORITY AS PER SCHEDULE TO CLAUSE	State Resource Overlay (SRO)
✓	44.06-3	CFA Region 5 Hamilton	Bushfire Management Overlay (BMO) (note that this is only applicable where operations include manufacturing process or treatment of waste materials)
	45.01-2	INSERT THE REFERRAL AUTHORITY RESPONSIBLE FOR ACQUIRING THE LAND	Public Acquisition Overlay (PAO)
SHIRE/MUNICIPALITY SPECIFIC OR ADDITIONAL REFERRALS NOT LISTED ABOVE			

Department of Primary Industries

STATUTORY ENDORSEMENT
INFORMATION FOR COUNCIL

APPLICANT NAME(S): (NB. Company/Applicant name)	**Bradley and Wendy Young** + Cameron Young
LAND STATUS: ☐ **Crown** ☒ **Private** ☐ **Crown & Private** *(If Crown Land - Has proponent been informed of NT issues?)*	
SITE/PIT NAME: Young's Basalt Quarry	**MUNICIPALITY/SHIRE: Moyne Shire**
PHYSICAL ADDRESS OF SITE/LOCALITY(local area name): **50 Triggs Lane LAANG VIC 3265**	

A copy of the draft work plan has been given to the referral authorities identified on the attached Statutory Endorsement Referral Authority Checklist. These referral authorities have provided consent to statutory endorsement of the work plan and any conditions requested are incorporated within the attached work plan conditions. Additional agency comments were supplied as part of the referral. These comments have not been included on the work plan and are attached for your consideration.

In accordance with Section 77TG of the *Mineral Resources (Sustainable Development) Act 1990* (MRSDA) the work plan should not be referred to these referral authorities again.

HERITAGE VICTORIA
Heritage Act 1995
Section 127(1) – "A person must not knowingly or negligently deface or damage or otherwise interfere with an archaeological relic or carry out an act likely to endanger a relic except in accordance with a consent issued under Section 129"; and

Section 132(1) – "A person who discovers an archaeological relic must as soon as practicable report the discovery to the Executive Director or an inspector unless he or she has reasonable cause to believe that the relic is recorded in the Heritage Register"; and

Section 132(2) – "If an archaeological relic is discovered in the course of any construction or excavation on any land, the person in charge of the construction or excavation must as soon as practicable report the discovery to the Executive Director".

If any historical archaeological material is exposed at any time during the proposed quarry extension work, it is necessary for all on-site works to cease and for this office to be contacted immediately.

Schedule of Conditions

PART A GENERAL CONDITIONS

1. WORKING IN ACCORDANCE WITH THE APPROVED WORK PLAN

1.1 The Work Authority holder must carry out work in accordance with the Approved Work Plan and any subsequent Approved Work Plan Variations.

1.2 Where any inconsistency occurs between an Approved Work Plan and/or an Approved Work Plan Variation or the associated Approved Work Plan conditions, and the Work Authority conditions and/or regulations, the Work Authority conditions and/or regulations have precedence.

1.3 Where requested by the Department Head, the Work Authority holder must submit a Work Plan Variation.

2. PUBLIC LIABILITY INSURANCE

2.1 Prior to commencing any work, the Work Authority holder must have public liability insurance that covers all work authorised under the Work Authority and ensure the insurance is maintained at all times while work occurs under the Work Authority.

3. WORK AUTHORITY BOUNDARIES

3.1 The Work Authority holder must erect and maintain posts along the boundary of the Work Authority so that the boundary of the Work Authority is clearly identifiable.

3.2 The Work Authority holder must ensure the posts required at 3.1 meet the following specifications:

(a) the post is not less than one metre high above the ground;

(b) the post is painted white;

(c) the Work Authority number is painted within the top 20cm of the post, is legible and in a contrasting colour to the white post;

(d) the posts must be situated so that each post is clearly visible from each post on either side of that post.

3.3 The Work Authority holder must erect and maintain a legible sign at the entrance to the Work Authority that contains the following information:

(a) the name of the Work Authority holder and the Work Authority number;

(b) the Manager of the Work Authority; and

(c) emergency contact details.

4. PUBLIC SAFETY

4.1 The Work Authority holder must ensure that public safety is maintained within the Work Authority area at all times, including through the use of fencing, gates and signage as required around the work area.

4.2 The Work Authority holder must ensure that all fences are maintained to prevent access to the work site and that all gates are locked when the work site is unattended.

5. FIRE RISK MANAGEMENT

5.1 The Work Authority holder must take all reasonable measures to prevent the ignition and spread of fire.

5.2 The Work Authority holder must ensure that all buildings, fixed plant and mobile equipment are fitted with fire-fighting equipment, such as fire extinguishers, fire blankets, knapsack spray pumps and rake-hoes.

5.3 The Work Authority holder must develop and implement a fire response and readiness plan.

6. DESIGNATED PARKING AREAS

6.1 The Work Authority holder must provide designated parking areas for employees and visitors at the work site.

6.2 The Work Authority holder must ensure that the designated parking area is of sufficient size to accommodate the expected number of vehicles that employees and visitors may bring to the work site on a daily basis.

6.3 The Work Authority holder must ensure that designated parking areas are designed and constructed to provide safe access for vehicles and people.

7. COMPLAINTS MANAGEMENT

7.1 The Work Authority holder must establish and maintain a complaints register.

7.2 In response to a complaint, the Work Authority holder must record the following information in the complaints register:

(a) the date and time of the complaint;

(b) who the complaint was from;

(c) the specific issue/s raised in the complaint; and

(d) the actions taken to address the specific issue/s raised in the complaint.

8. NON-COMPLIANCE AND ENVIRONMENT INCIDENT NOTIFICATION

8.1 The Work Authority holder must as soon as is practicable after becoming aware of any non-compliance with the conditions of the Work Authority and/or Approved Work Plan, and/or an environmental incident that will, or is likely to cause, material harm to the environment, notify the relevant District Manager of the non-compliance and/or environmental incident.

8.2 The Work Authority holder must also notify any other relevant government department or agency of the non-compliance and/or incident.

8.3 Where requested to provide a written report on the non-compliance or environmental incident, the Work Authority holder must provide a written report within 5 business days of the request that includes the following information:

(a) the date and time of the non compliance and/or environmental incident;

(b) the cause, or likely cause of the non-compliance and/or environmental incident;

(c) the impacts, or likely impacts of the non-compliance and/or environmental incident;

(d) the actions that have been taken to prevent, minimise or otherwise manage the impacts, or likely impacts of the non-compliance and/or environmental incident; and

(e) the actions that will be taken to prevent such a non-compliance and/or environmental incident from happening again in the future.

PART B ACTIVITY BASED CONDITIONS

9. GROUND DISTURBANCE

9.1 The Work Authority holder must minimise the area of ground disturbance throughout the life of the quarry operation.

9.2 The Work Authority holder must not open up any area for quarrying and ancillary operations except where approved in the Approved Work Plan.

10. TOPSOIL MANAGEMENT

10.1 At the commencement of excavation, the Work Authority holder must ensure that topsoil to a depth of 150mm below the natural surface is removed and placed in stockpiles not exceeding 2m in height.

10.2 The Work Authority holder must ensure that topsoil stockpiles are protected from erosion and compaction.

11. EROSION, DRAINAGE AND DISCHARGE CONTROLS

11.1 The Work Authority holder must design, install and maintain erosion and sediment controls to prevent erosion of areas of disturbed land and sedimentation of waterways.

11.2 Where quarry activities are being conducted in waters or on the banks of waterways with water in them, the Work Authority holder must ensure that sedimentation of the water in the water way is minimised to an acceptable level.

11.3 The Work Authority holder must prevent contaminated runoff from entering receiving waterways.

12. WATER DAMS

12.1 The Work Authority holder must ensure that the location, design, construction, operation and safety management of water dams on the Work Authority area are undertaken in accordance with the Approved Work Plan.

13. VEGETATION MANAGEMENT AND BUFFER ZONES

13.1 The Work Authority holder must avoid, minimise and/or offset the removal and disturbance of native vegetation and faunal habitats.

13.2 The Work Authority holder must erect and maintain posts or star pickets painted yellow to stand not less than 0.75 metres in height at intervals of not more than 50 metres around the final approved limits of extraction.

13.3 The Work Authority holder must not undertake any excavation work, or remove any vegetation, whether in part or in whole, within any buffer zone shown on the Approved Work Plan.

13.4 The Work Authority holder must maintain the buffer zone to ensure that an effective screen is provided between the relevant quarry works and surrounding land and/or buildings.

13.5 Unless otherwise agreed, the Work Authority holder must use species that are Indigenous to the area and are appropriate to the mine areas Ecological Vegetation Class (EVC) when establishing plants within the buffer zone.

14. NOXIOUS WEEDS AND PESTS

14.1 The Work Authority holder must establish and implement a program to control and/or eradicate noxious weeds and pest animals within the Work Authority area.

14.2 The Work Authority holder must take measures to prevent the spread of declared noxious weeds, pest animals and plant diseases within the Work Authority area.

14.3 The Work Authority holder must ensure that all mobile machinery is thoroughly cleaned prior to coming onto, or leaving a work area affected by noxious weeds and plant diseases.

14.4 The Work Authority holder must ensure that all soil that is imported into and exported out of the Work Authority area is free of disease and noxious weeds.

15. DUST EMISSIONS

15.1 The Work Authority holder must prevent a dust release that causes adverse impacts to the surrounding area and residents.

16. NOISE EMISSIONS

16.1 The Work Authority holder must ensure that noise emissions are minimised as far as is practicable and comply with the requirements of the approved Work Plan.

16.2 The Work Authority holder must avoid causing unacceptable noise.

17. VISUAL AMENITY

17.1 The Work Authority holder must take ensure that the colour of fixed plant and buildings do not cause an unwarranted negative impact on surrounding visual amenity.

17.2 The Work Authority holder must consult with the relevant Inspector and the Crown Land manager or the responsible authority on private land prior to painting any fixed plant and/or buildings.

18. HERITAGE SITES

18.1 The Work Authority holder must ensure that no work is carried out, without appropriate consent, within 100 metres laterally of a registered Aboriginal place recorded in the Victorian Aboriginal Heritage Register, or within 100 metres below that place.

18.2 The Work Authority holder must ensure that no work is carried out, without appropriate consent, within 100 metres laterally of an archaeological site on the Heritage Inventory or a place or object included in the Heritage Register or within 100 metres below that site, place or object.

19. HAZARDOUS MATERIALS MANAGEMENT

19.1 The Work Authority holder must prevent contamination of the environment by the release of fuels, lubricants and/or hazardous materials.

19.2 The Work Authority holder must ensure that all fuels, lubricants and/or hazardous materials are stored in accordance with the relevant requirements of AS1940: 2004 The Storage and Handling of Flammable and Combustible Liquids.

19.3 The Work Authority holder must ensure that any drainage from an area where fuels, lubricants and/or hazardous materials are stored, and/or used is directed to a sump or interceptor trap.

19.4 The Work Authority holder must ensure that spill prevention and clean up equipment is readily available in the vicinity of all plant and machinery, including mobile and fixed fuel storages.

19.5 The Work Authority holder must ensure that spills of fuels, lubricants and/or hazardous materials are cleaned up as quickly as practicable. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such contaminant into waterways. Equipment and soil contaminated by fuels, lubricants, hazardous materials and clean up substances which cannot be salvaged must be disposed of in an approved waste facility.

20. SLOPE STABILITY

20.1 The Work Authority holder must ensure that all slopes/batters including excavations, roadways, stockpiles and dumps must be designed, constructed and maintained to ensure stability.

20.2 If there is a significant slope failure event, the Work Authority holder must cease all operations, notify the relevant District Manager and not recommence operations until authorised to do so by the relevant District Manager.

21. INTERNAL ROADS

21.1 The Work Authority holder must consult with the relevant DPI Inspector, the Crown Land manager or private land owner/occupier prior to establishing any roads and access ways on the Work Authority area.

21.2 The Work Authority holder must construct any roads on the Work Authority area in accordance with the direction provided by the DPI Inspector, the Crown Land manager or private land owner/occupier.

21.3 The Work Authority holder must ensure that an internal road is only used by:

(a) employees of, or persons authorised by, the relevant Crown land manager, or persons engaged in fire control where the Work Authority covers Crown land; or

(b) the landowners or their agent/s where the Work Authority covers private land.

21.4 The Work Authority holder must ensure that all roads on the Work Authority area are properly formed, surface treated, drained and maintained to provide for the safe operation of the road.

22. DERELICT AND REDUNDANT PLANT

22.1 The Work Authority holder must ensure that all derelict and redundant plant, vehicles, machinery and equipment be removed from the Work Authority area and deposited at an appropriate waste disposal site or otherwise stored or disposed of in accordance with the Approved Work Plan.

23. REHABILITATION

23.1 The Work Authority holder must ensure that progressive rehabilitation of disturbed land is carried out as soon as possible.

23.2 The Work Authority holder must ensure that, as required, Indigenous species used in rehabilitation must be sourced from the local area, be of local provenance and be appropriate to the site's Ecological Vegetation Class (EVC).

23.3 The Work Authority holder must ensure that final rehabilitation is in accordance with the Approved Work Plan.

24. WORKING HOURS

24.1 The work authority holder must conduct all works in accordance with the working hour requirements of the planning consent or the Approved Work Plan or Work Plan Variation or Work Plan Conditions. Where any inconsistency occurs between the planning consent and the Approved Work Plan or an Approved Work Plan Variation or Work Plan Conditions, the working hour requirements of the planning consent have precedence.

24.2 The work authority holder may apply to the relevant District Manager to vary, or work outside of, the working hours requirements.

MINERAL RESOURCES
(SUSTAINABLE DEVELOPMENT) ACT 1990

Tenement No. WA1474

Statutory endorsed work plan comprising pages 16

and drawings Sheet 1-5

Delegate / Date: 2/4/2012

Department of Primary Industries

WORK AUTHORITY. No. 1474

YOUNG'S ROCK QUARRY
50 TRIGGS LANE LAANG

Copy 1 of 3

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23. 02. 2012

Prepared by Brian Consulting Pty., Ltd.

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WORK PLAN TEXT

1 Background

1.1 Site Locality Description

The site is located on Triggs Lane Laang about 800m north of the Warrnambool – Cobden Road and about 18Km east of the Allansford township. The most southerly extent of extraction will be about 500m north of the Bruckell Creek. The proposed site is grazing farmland.

1.2 Existing Controls

A review of the Moyne Shire Planning Scheme Maps showed that the site is zoned as Farm Zone. There is also a Wildfire Management Overlay.

The Warrnambool – Cobden Road is zoned RDZ1. It is a Category 1 road administered by Vicroads. Access to the road will be via the existing intersection from Triggs Lane.

The proposed extraction area is clear of the areas prescribed in the Aboriginal Heritage Regulations 2007. A Cultural Heritage Management Plan is not required by the regulations.

There are some scattered remnant trees in the resource area. Any tree removal will trigger an offset planting obligation under "Victoria's Native Vegetation Management Framework".

Exploration Licence 5375 covers all of the area in the Work Authority. Consent from the licence hold has been obtained.

1.3 Anticipated Impacts of Development

There are a total of 31 houses within a 2Km radius of the extraction limit. The nearest house to the extraction area is 500m away. This is the residence of the landowner. Neighbouring houses are located 600m south in bush, 640m west and 800m south west in Triggs Lane. There are ten houses 750m to 1320m scattered in the bush on the south side of Warrnambool – Cobden Road. There are three farm houses 660m, 810m and 830m to the east. One of these houses is not occupied. There are another 14 houses that are 1Km to 2Km away and generally scattered.

There is no direct line of site from the quarry area to any of the houses or roads due to a combination of topography, remnant bush, plantation trees and distance.

Truck traffic may adversely affect the house on Triggs Lane near the corner of Warrnambool – Cobden Road. Dust from the unsealed road and the rattle of empty trucks being potential causes of nuisance.

Dust generated on the site is not expected to generate an offsite dust problem from the quarry.

Noise generated by machinery may travel beyond the Work Authority boundaries. Noise levels at critical locations may need to be measured and a line of communication with the neighbours maintained.

Blasting has the potential to cause ground vibration, noise, dust and fly rock impacts beyond the Work authority boundary.

Truck traffic might be in the order of 800 per year with less traffic during winter months. A peak day might generate 20 – 30 trucks in a day. The low traffic volume will not impact greatly on the area beyond Triggs Lane because the road is already a Category 1 Vicroads road.

Impacts of this development will be the removal of two remnant native trees in the paddock. This would trigger an offset planting obligation.

This development is well located to provide farm track material to the Naringal, Mepunga and Nullawarre area. This would reduce the distance to cart the product which will in turn reduce the transport cost and reduce the amount of road usage.

2 Resource Description

2.1 Resource Assessment

Reference to Geological Survey of Victoria "Port Campbell Embayment 1 : 100000 reveals that the site is in an area of Newer Volcanics consisting of undifferentiated lava flows, lava ridges and valley flows.

Basalt in this area has been quarried in the past from Coulahans Road approximately 1.3 km west of Area A.

Approximately 20 test holes have been dug over the extraction areas to determine overburden depths and to prove the resource. These holes revealed that the Work Authority area contains two distinct areas containing rock. The western area, named Area A, revealed basalt rock below the clay layer. The eastern extraction area, named Area B, revealed decayed basalt commonly termed coffee rock. The rock in Area A was assessed by visual inspection. The rock in area B was tested by Chadwick's.

2.2 Reserve Estimates

The volume of material to be extracted from Area A is 660 000m³.

The volume of material to be excavated from Area B is 1 500 000m³. However, Area B consists of a lower value product and the overburden increases to the south. For this reason, the actual amount of material that can economically be won could be less than this.

2.3 Soil and Overburden Estimates

The topsoil is about 150mm in depth. The overburden is a clay layer 600mm – 900mm deep.

From Area A there will be approximately 3500m³ of topsoil stockpiled and approximately 8000m³ of overburden stockpiled.

From Area B there will be approximately 3500m³ of topsoil stockpiled and approximately 8000m³ of overburden stockpiled. The overburden increases in depth towards the south of Area B.

2.4 Geotechnical Regime

The basalt located in Area A of this Work Authority is a crystalline basalt. This material has not been tested but, by visual inspection, should yield good quality crushed rock for road making.

The basalt in Area B is a weathered basalt. Testing by Chadwicks determined that the coffee rock is not suitable for use as a base course for public road construction, but is suitable for farm tracks and hardstand construction. The coffee rock has been used on intra-farm tracks and found to be successful.

It is possible that a better quality of rock will emerge from Area B at depth.

3 **Markets**

3.1 Markets Available

A major component of Young's Earth Moving business comes from the construction of farm tracks. Material for this has been purchased from other licensed quarries in the area. Material from this quarry will supply the product that Young's use for farm track construction.

It is expected that other contractors working in the area will source material from this quarry. As the quarry develops, products other than coffee rock will be produced and new customers emerge.

3.2 Estimated Annual Output

The estimated annual output will be 15 000m³ to 25 000m³.

4 Site and Access Details

4.1 Title and Easement Descriptions

Title: Volume 11065 Folio 302.
Crown Allotment 21
Parish of Laang
Registered Proprietors: Bradley William Young and Wendy Joy Young
Title Area: 96.75ha
Encumbrances: Easements - nil
Mortgage - nil

4.2 Site Security

The perimeter of the farm is fenced by a stock proof, 1.2m high post and wire fence. Internal fencing is partly post and wire fence and partly electric fence. The existing farm fences adequately protect the site.

4.3 Access to Site

Access to the site is via Triggs Lane. Triggs Lane is a formed, unsealed Government Road. The distance along Triggs Lane from the front gate of the property to the Warrnambool – Cobden Road intersection is 500m.

4.4 Internal Access

From the front gate of the property, access will by via the existing formed access track. The road will be a 6 metre wide formation through the open paddock. Where there is only a single width laneway through the native vegetation, passing bays will be constructed to allow for passing of oncoming vehicles.

The haul road into the quarry floor will have a maximum grade of 1 : 10.

4.5 Buffer Zone

There is be a 20m wide buffer zone along the northern and western Work Authority boundaries. There is a 6m buffer zone along the southern and eastern boundaries.

No extraction or product stockpiling shall take place within the buffer zones.

4.6 Topsoil and Overburden Storage

Area A

Topsoil and overburden from the initial Stage 1A strip will be stored in a stockpile on the south side of Stage 2A. As Area A develops, the topsoil and overburden will be

used for progressive reclamation, being spread over on terminal surfaces immediately after stripping.

The final Stage of Area A will be reinstated from the initial stockpiles.

Area B

Topsoil and overburden from the initial Stage 1B strip will be stored in a stockpile on the north side of Stages 2B and 3B. Topsoil and overburden from Stages 2B, 3B and 4B will be used for progressive reclamation, being spread over terminal surfaces immediately after stripping. The Stage 1B stockpiles will be used for the reclamation of Stage 4B.

At the commencement of Stage 5B, new topsoil and overburden stockpiles will be formed to the north of Stages 5B and 8B. Topsoil and overburden from Stages 6B, 7B and 8B will be used for progressive reclamation. The Stage 5B stockpiles will be used to reclaim Stage 8B.

At the commencement of Stage 9B, new topsoil and overburden stockpiles will be formed to the north of Stages 9B and 12B. Topsoil and overburden from Stages 10B, 11B and 12B will be used for progressive reclamation. The Stage 9B stockpiles will be used for the final reclamation of Area B.

Topsoil stockpiles will have a maximum height of 2 metres, neatly formed with moderate batters. Overburden stockpiles will have a maximum height of 6 metres, neatly formed with moderate batters. The stockpiles will be vegetated to prevent erosion.

5 Infrastructure

5.1 Fixed Plant

There will be not fixed processing plant on the site.

5.2 Mobile Plant

Topsoil will be stripped with the use of an excavator and trucks.

Extraction will be carried out with the use of an excavator, dump truck and loader.

The product will be loaded into road transport trucks with the use of an excavator or loader.

Reclamation will be carried out with the use of a hired dozer, excavator, trucks and grader.

Stone will be crushed with a mobile crushing plant.

Crushed stone will be screened with the use of mobile screen.

The existing machinery shed situated on the access road, but outside the Work Authority Area will be used as the site office.

The toilet will be the facility at the machinery shed.

5.3 Power Supply

There is no electricity supply to the site.

5.4 Fuel Storage

Machinery is fuelled from a vehicle mounted mobile fuel tanks.

5.5 Water Supply

There is no town water supply to the site.

6 Operations

6.1 Operating Hours

Except with the consent of the responsible authority, the excavation, crushing and screening of the material extracted from the site must only occur between the hours of 7.30am to 5.30pm Monday to Saturday provided that the day is not a declared public holiday.

Except with the further consent of the responsible authority, product loading must only occur between the hours of 7:30 am to 6.00 pm Monday to Saturday.

6.2 Extraction Operations

To remove the basalt stone the benching method of quarrying is used. A large excavator is used to remove and break rocks for crushing.

Work Authority Area:
Total area to be opened in this application:

Area A	5.44ha extraction footprint
	0.4ha topsoil and overburden stockpiles
Area B	12.60ha extraction footprint
	0.4ha topsoil and overburden stockpiles.

6.3 Extraction Staging

It is proposed to open Area A and Area B simultaneously.

Area A will be worked out in two stages. Stage 1A will be opened up in the southern part of the extraction area. It will be expanded out to form southern and eastern terminal faces, haul road and intermediate batter along the west side. This stage has been designed to avoid remnant trees in the paddock. The stage will then extend northwards to the form the northern terminal face.

The western face of Stage 1A will become the working face into Stage 2A. Rock will be extracted out to the western limit of extraction running along the northern terminal face and then southwards to the southern limit of extraction running down the western terminal face.

The south eastern corner of Area A has been designed around three remnant trees. If these trees have died when Stage 2A is completed, a Work Plan variation may be prepared to apply for extraction of material from this location.

Area B will be worked out in 12 Stages.

Stage 1B of Area B will commence from the existing intra-farm pit. It will be expanded out to the full east – west width of the Stage and then southwards to the southern limit of extraction. It is expected that overburden depths will increase in the southern area and extraction southwards could be abandoned before the designed limit. The northern face of Stage 1B will then be the working face, pushing into Stage 2B to the northern limit of extraction.

The eastern face of Stage 2B will become the working face into Stage 3B. Rock will be extracted out to the eastern limit of extraction forming the northern terminal face. The southern face of Stage 3B will become the working face for Stage 4B pushing southwards to the southern limit of extraction forming the eastern terminal face.

Stage 5B will be a fresh start abutting the western face of Stage 2B. Stage 5B followed by Stage 6B will be worked out from north to south.

Stage 7B will be worked westwards from Stage 6B.

Stage 8B will be worked from south to north out of Stage 7B.

Stage 9B will be a fresh start abutting the western face of Stage 8B. Stage 9B followed by Stage 10B will be worked out from north to south.

Stage 11B will be worked westwards from Stage 10B.

To complete Area B, Stage 12B will be worked from south to north out of Stage 11B.

6.4 Working Faces

The benched faces in the quarry are usually near vertical (5V:1H) with a maximum height of 5 metres. There will be a 5 metre wide bench for every 5 metres of vertical face. The maximum depth of extraction across the site is 15 metres.

6.5 Terminal Faces

The finished batter slopes are 1V:3H. However, the terminal benches form an average angle of 1V : 1H in some locations and 1V : 3H in other places. Either way, the extraction limit will be reshaped to form a 1V:3H batter slope. Material will be pushed from the top down to fill at the toe to achieve a smooth finished surface.

6.6 Haul Roads

Haul roads will be an 8m wide formation cut into the southern limit of extraction graded at 1V:10H maximum slope.

6.7 Explosives

Explosives may be needed in Area A. From time to time, rock may need to be blasted from the working face. EPA document AQ 2/86 "Recommended Buffer Distances for Industrial Residual Air Emissions" requires a buffer distance of 500m to the receptor location. The buffer distance is achieved for all neighbouring houses, but the landowner's house is 430m south of the southern limit of extraction. The existing stand of trees between the landowners house and the extraction area will offer protection. If any problems are reported, the quarry manager will refrain from blasting when the wind direction is unfavourable.

The 500m buffer distance will overlap onto neighbouring land. Affected landowners will be consulted prior to blasting so that grazing stock can be removed from the buffer. Other neighbours will be notified prior to blasting, but this practice may stop if no issues are reported.

Prior to blasting, a procedure and schedule will be submitted to DPI Earth Resources for approval. Blasting will only occur during the hours of 9:00am to 5:00pm Monday to Friday.

All blasting will be done by a licensed explosives contractor who will supply, undertake and be in control of all blasting on the site. In the first instance, a square of about 19m x 19m square will be pattern drilled to a depth of 6m. If this blast exceeds the monitoring limits, the depth of the drill holes will be reduced for subsequent blasts.

No explosives will be stored on-site.

Blasts will be documented and the noise and vibration impact will be monitored using measuring devices compliant with relevant standards, operated by suitably trained operators.

6.8 Surface Water

Overland flow from adjoining undisturbed areas will not discharge into the quarry area. Cut off drains or earthen bunds will be constructed across the northern extraction limit of Area A to divert surface water away from the opened quarry. There is already a drain to the north of Area B. This drain will be extended west to take surface water away from the quarry.

During the life of the quarry, all of the rain caught in the open quarry area (including the imported fill area) will be trapped within the quarry.

Rainwater will drain vertically through fissures in the stone. After heavy rain there may be instances of prolonged ponding. This water will be managed by forming sumps. The sumps will discharge by seepage and evaporation. If the discharge of water this way is too slow, the water will be pumped into the area of remnant vegetation. Hay bale filters will be used if the pumped water is turbid. Water discharged by pumping will be filtered by sheet flow through 500m of remnant vegetation before entering the Brucknell Creek.

The finished floor will grade to the south end of the reclaimed quarry. This will create periodic inundation.

6.9 Erosion Control

The solid composition of the exposed rock on the batter slopes will not erode.

The haul road and access track will be made from crushed rock and will resist erosion.

Rainwater falling onto topsoil and overburden stockpiles has the potential to cause siltation of runoff and erosion of material. To remove the occurrence of these problems it is proposed to vegetate the topsoil stockpiles with grass. Once the grass has established on the mounds, rainwater on stockpiles will not cause silt laden runoff.

Water discharged from the site by percolation will not cause erosion. Water pumped from the site could cause erosion at the discharge point. This will be monitored and protection measures taken if needed.

6.10 Processing Operations

Extracted material will be crushed and screened on site.

6.11 Imported Fill

Some ordinary earth will be imported to the site as clean surplus fill. This material will be placed at the foot of the southern batter of Area B. The location will depend on which area of the quarry is open at the time. This material will reduce the southern terminal batter to a gentler slope and might raise the finished floor. The nature of the earthmoving jobs undertaken by Young's suggest that the volume of imported earth could be about 10% of the output volume. (For every ten truck loads of product to leave the site, one truck load of surplus earth may be imported.)

7 Environmental Management Program

7.1 Native Vegetation

Two trees will be removed from Area A. The trees to be removed are manna gums measuring 57cm and 55cm DBH. Reference to "Indigeounous Plants of Moyne Shire" indicates that the site is in a "Dry Forests" ECV. The trees to be removed would be classified as medium size under the ECV benchmark.

The trees to be removed are not within 30m of a waterway, not on a slope less than 1 in 5, will not create an erosion problem and will not increase the risk of salinity.

Quarrying activities will occur in close proximity to other remnant native vegetation consisting of isolated trees in the paddock and a remnant patch to the south of the Work Authority boundary. A Tree Protection Zone will exist for the duration of the quarry to protect the vegetation against soil compaction and excavation. The Tree Protection Zone will have a radius 12x the diameter at breast height or a maximum of 15m (whichever is the lesser).

The extraction limit and terminal batter slope limit will be located clear of the Tree Protection Zone.

7.2 Net Gain and Offset Management Plan

The offset work will be carried out within the existing stand of remnant vegetation to the south of the quarry area. Offsets will commence prior to the removal of the trees and be completed no more than twelve months after the removal of the trees. The success of the offset will be monitored and replanting will happen if needed. The offset area will be protected from stock grazing.

Tree species to be used for planting will be from the following list:

Acacia melanoxylon	Blackwood
Eucalyptus oblique	Messmate Stringybark
Eucalyptus ovate	Swamp Gum
Eucalyptus viminalis subsp viminalis	Manna Gum

These tree species have been selected from "Indigenous Plants of Moyne Shire, Zone 2, Dry Forests".

7.3 Operational Noise

Acoustic emissions shall comply with levels specified in EPA publication 1411, Noise from Industry in Regional Victoria, section 3.2 - Earth Resources Levels.

Noise levels will be measured initially at the quarry boundary, and then at sensitive locations offsite if the initial evaluation indicates the potential for excessive noise emission. The quarry manager will review the noise data. Non-complying noise emissions will be addressed by altering machinery or altering work practices.

7.4 Internal Noise

Noise levels within the quarry will be monitored to ensure compliance with Occupational Health and Safety Regulations 2007, Part 3.2 Noise, Division 2 Duties of Employers. Machinery emitting non-complying noise emissions will be modified or taken out of service if possible. If noise exposure standards are still exceeded, hearing protection will be provided to reduce the exposure to a suitable level.

7.5 Vibration from Blasting

Blasts will be documented and the noise and vibration impact will be monitored to demonstrate compliance with "Ground Vibration and Airblast Limits for Blasting in Mines and Quarries". Measuring devices will be compliant with relevant standards and be operated by suitably trained operators.

7.6 Air Quality

EPA document AQ 2/86 "Recommended Buffer Distances for Industrial Residual Air Emissions" requires a buffer distance of 500m to the receptor location when hard rock blasting is carried out. The buffer distance is achieved for all neighbouring houses, but the landowner's house is 430m south of the southern limit of extraction. The existing stand of trees between the landowners house and the extraction area will offer protection. The 500m buffer distance overlaps neighbouring land. Each blast will require the consent of affected landowners. If any problems are reported, the quarry manager will refrain from blasting when the wind direction is unfavourable.

It is not anticipated that a dust problem will arise from the mechanical extraction and processing of the rock. Crushing and screening of the hard rock product does not generate dust. The weight of the basalt means that airborne particles fall to the ground. The hardstand areas and access tracks will be formed with crushed rock which will keep dust to a minimum.

Work will be suspended during unfavourable weather conditions such as strong north winds during summer.

If a dust nuisance does arise, dust suppression will take place with the use of a water truck or other dust suppressant means.

7.7 Surface Water

Rainwater falling onto exposed earth will inevitably become silted and have the potential to cause erosion. Exposed earth will occur in two situations, namely the open quarry area (incorporating the imported fill area) and the stockpiles of topsoil.

Rainwater falling into the open quarry area will be trapped within the quarry by virtue of the quarry design. Rainwater runoff in this area may become silt laden, but this water will be contained inside the quarry where it will be discharged by percolating through the quarry floor leaving the silts behind. If the discharge of water this way is too slow, the water will be pumped into the area of remnant vegetation. Hay bale filters will be used if the pumped water is turbid. Water discharged by pumping will be filtered by sheet flow through 500m of remnant vegetation before entering the Brucknell Creek.

Topsoil stockpiles will be vegetated with grass. Once the grass has established on the mounds, rainwater on stockpiles will not cause silt laden runoff.

Overland flow from adjoining undisturbed areas will not discharge into the quarry area. Cut off drains or earthen bunds will be constructed across the northern extraction limit of Area A to divert surface water away from the opened quarry. There is already a drain to the north of Area B. This drain will be extended west to take surface water away from the quarry.

There will be no shedding of silt laden overland flow. The discharged water will be monitored to ensure that discharge off site complies with the State Environment Protection Policy ("The Waters Of Victoria").

7.8 Groundwater

The quarry has been design such that the extraction will not intercept ground water. Water bores on neighbouring farms report ground water at 110 feet deep (33.5m). The maximum depth of extraction is 15m.

Stormwater soaking into the ground must be free from contaminants to protect ground water. If fuel is spilled, it will be soaked up using saw dust or other absorption material. The contaminated material will then be disposed of in a manner acceptable to the EPA.

There will be no other materials stored or used on site that might cause contamination of ground water.

7.9 Effluent Control

There will not be any sewerage effluent on the site.

7.10 Imported Fill

Imported fill procedures will comply with the EPA Cleanfill Guidelines and CCF Environmental Guidelines for Civil Construction.

Clean fill will consist of clay, silt, sand, gravel and rock. Topsoil will only be received with a written assessment that demonstrates that the material is not contaminated and contains no noxious weeds.

Clean fill must not contain domestic waste, industrial waste (such as concrete, brick, asphalt, pipe, plastics, metal or wood), organic matter, category A, B or C prescribed industrial waste, acid sulphate soil and rock, asbestos or asbestos contaminated soil.

Clean fill must not contain noxious weeds.

Clean fill will only be imported from destination sites of the quarry product. Truck loads will be inspected by the quarry manager to ensure that the imported material is compliant. The quarry manager will also make inquiries about the land use history of the source location. Where a historic land use would raise the suspicion of contamination the material will not be accepted without a written assessment.

7.11 Other Waste Products

The small amounts of litter such as food packaging and equipment packaging will be returned to a vehicle to ensure that it is removed. The site shall be maintained in a neat and tidy condition, free from the accumulation of rubbish. This will prevent the escape of litter.

There will be no other materials stored or used on site that might cause contamination.

7.12 Vermin and Noxious Weeds

The site shall be maintained to ensure compliance with the Catchment and Land Management Act.

Feral animal control shall be carried out when required.

Weeds will be monitored by quarry staff on a seasonal basis. Weed monitoring and eradication practices will be similar to the practices employed by farmers in the surrounding area. Different species of weed require attention at different times of the year. A combination of chemical, mechanical and manual techniques will be used.

7.13 Cultural Heritage

The proposed extraction area is clear of the areas prescribed in the Aboriginal Heritage Regulations 2007. A Cultural Heritage Management Plan is not required by the regulations.

7.14 Visual Amenity

Overall the quarry is generally hidden by topography, remnant native vegetation, plantations and distance. There is no proposal to undertake any visual screening measures.

7.15 Fire Fighting Preparedness

The nature of the business provides a minimal risk of a dangerous goods fire or incident. Combustible material will not be allowed to accumulate on site. Waste oils and rubbish will be removed. Grass will be kept low during the fire season.

The office will contain a first aid kit, water bottles and fire blanket. Fire extinguishers will be located on machinery and in the site office. The extinguishers will be checked for charge.

Fire trucks will be able to access the site via the access road. Alternative emergency exit routes exist through neighbouring properties by mutual consent.

7.16 Summarised Environmental Management Plan

Environmental Monitoring Program for Youngs Rock Quarry WA 1474, 50 Triggs Lane Laang

Activity/Location	Potential Environmental Impact	Procedures / Controls & Responsibilities	Monitoring, Review & Reporting
Movement of heavy vehicles around perimeter of quarry and access road	Damage to tree roots.	Protect unscalped areas from unnecessary disturbance from machinery and trucks.	Quarry Manager to monitor the protection of unscalped areas.
Net Gain and Offset Management Plan	Depletion of native vegetation	Offset planting to satisfy Victoria's Native Vegetation Framework.	Offset planting to commence prior to tree removal.
Operational Noise	Environmental noise impacts	Compliance with EPA Publication 1411 Noise From Industry in Regional Victoria	Quarry manager to monitor noise at sensitive locations and implement changes as required. Quarry inspector may request noise measurement.
Internal Noise	OH&S impacts	Noise within quarry to comply with OH&S Regs	Quarry manager to monitor noise within quarry and take action according OH&S Regs Quarry inspector may request noise measurement.
Blasting	Ground vibration may cause damage to buildings. Ground vibration and airblast may be a nuisance to neighbours Residual air emissions	Compliance with DPI publication Ground Vibration and Airblast Limits for Mines and Quarries Neighbours will be notified prior to blasting Compliance with EPA Publication AQ2/86 Buffer Distances For Industrial Residual Air Emissions	Blasting Contractor to monitor each blast and report to Quarry Manager. Feedback from neighbours will be recorded. Blasting methods modified if needed. Landowners affected by Buffer Distances to give consent prior to blasting.
Dust	Offsite impacts, potential OH&S impacts	Dust minimisation measures to be implemented if needed.	Quarry Manager to be vigilant
Surface water	Potential for silt laden runoff. Erosion	Rainwater that falls into open quarry area and fill area to be retained within the quarry. Topsoil stockpile to be vegetated	Quarry manager to monitor formation contours. Quarry manager to monitor vegetation of topsoil stockpile.
Ground water	Possible contamination from machinery fluid spill. Possible contamination from fuel spill	Machinery fluid waste to be removed offsite by qualified contractor. Suitable absorption material stored onsite	Quarry manager to inspect and arrange removal of machinery fluid waste Refuelling activities to be monitored. All staff to be prepared to respond to spill.
Effluent Control	Sewerage is a potential health risk and potential environmental contaminant	Toilet in machinery shed connected to council approved septic tank.	Quarry manager to inspect and arrange pump out by suitable contractor when required.
Imported Fill	Contamination of land. Contamination of surface water or g ground water. Transportation of noxious weeds	Compliance with EPA Cleanfill Guidelines and CCF Environmental Guidleines for Civil Construction	Quarry Manager to inspect truck loads. Quarry manager to obtain knowledge about history of the source site.

Department of Primary Industries

STATUTORY ENDORSEMENT
INFORMATION FOR COUNCIL

APPLICANT NAME(S): (NB. Company/Applicant name)	**Bradley and Wendy Young** + Cameron Young
LAND STATUS: ☐ **Crown** ☒ **Private** ☐ **Crown & Private** *(If Crown Land - Has proponent been informed of NT issues?)*	
SITE/PIT NAME: Young's Basalt Quarry	**MUNICIPALITY/SHIRE: Moyne Shire**
PHYSICAL ADDRESS OF SITE/LOCALITY(local area name)**: 50 Triggs Lane LAANG VIC 3265**	

A copy of the draft work plan has been given to the referral authorities identified on the attached Statutory Endorsement Referral Authority Checklist. These referral authorities have provided consent to statutory endorsement of the work plan and any conditions requested are incorporated within the attached work plan conditions. Additional agency comments were supplied as part of the referral. These comments have not been included on the work plan and are attached for your consideration.

In accordance with Section 77TG of the *Mineral Resources (Sustainable Development) Act 1990* (MRSDA) the work plan should not be referred to these referral authorities again.

HERITAGE VICTORIA
Heritage Act 1995
Section 127(1) – "A person must not knowingly or negligently deface or damage or otherwise interfere with an archaeological relic or carry out an act likely to endanger a relic except in accordance with a consent issued under Section 129"; and

Section 132(1) – "A person who discovers an archaeological relic must as soon as practicable report the discovery to the Executive Director or an inspector unless he or she has reasonable cause to believe that the relic is recorded in the Heritage Register"; and

Section 132(2) – "If an archaeological relic is discovered in the course of any construction or excavation on any land, the person in charge of the construction or excavation must as soon as practicable report the discovery to the Executive Director".

If any historical archaeological material is exposed at any time during the proposed quarry extension work, it is necessary for all on-site works to cease and for this office to be contacted immediately.

Schedule of Conditions

PART A GENERAL CONDITIONS

1. WORKING IN ACCORDANCE WITH THE APPROVED WORK PLAN

1.1 The Work Authority holder must carry out work in accordance with the Approved Work Plan and any subsequent Approved Work Plan Variations.

1.2 Where any inconsistency occurs between an Approved Work Plan and/or an Approved Work Plan Variation or the associated Approved Work Plan conditions, and the Work Authority conditions and/or regulations, the Work Authority conditions and/or regulations have precedence.

1.3 Where requested by the Department Head, the Work Authority holder must submit a Work Plan Variation.

2. PUBLIC LIABILITY INSURANCE

2.1 Prior to commencing any work, the Work Authority holder must have public liability insurance that covers all work authorised under the Work Authority and ensure the insurance is maintained at all times while work occurs under the Work Authority.

3. WORK AUTHORITY BOUNDARIES

3.1 The Work Authority holder must erect and maintain posts along the boundary of the Work Authority so that the boundary of the Work Authority is clearly identifiable.

3.2 The Work Authority holder must ensure the posts required at 3.1 meet the following specifications:

(a) the post is not less than one metre high above the ground;

(b) the post is painted white;

(c) the Work Authority number is painted within the top 20cm of the post, is legible and in a contrasting colour to the white post;

(d) the posts must be situated so that each post is clearly visible from each post on either side of that post.

3.3 The Work Authority holder must erect and maintain a legible sign at the entrance to the Work Authority that contains the following information:

(a) the name of the Work Authority holder and the Work Authority number;

(b) the Manager of the Work Authority; and

(c) emergency contact details.

4. PUBLIC SAFETY

4.1 The Work Authority holder must ensure that public safety is maintained within the Work Authority area at all times, including through the use of fencing, gates and signage as required around the work area.

4.2 The Work Authority holder must ensure that all fences are maintained to prevent access to the work site and that all gates are locked when the work site is unattended.

5. FIRE RISK MANAGEMENT

5.1 The Work Authority holder must take all reasonable measures to prevent the ignition and spread of fire.

5.2 The Work Authority holder must ensure that all buildings, fixed plant and mobile equipment are fitted with fire-fighting equipment, such as fire extinguishers, fire blankets, knapsack spray pumps and rake-hoes.

5.3 The Work Authority holder must develop and implement a fire response and readiness plan.

6. DESIGNATED PARKING AREAS

6.1 The Work Authority holder must provide designated parking areas for employees and visitors at the work site.

6.2 The Work Authority holder must ensure that the designated parking area is of sufficient size to accommodate the expected number of vehicles that employees and visitors may bring to the work site on a daily basis.

6.3 The Work Authority holder must ensure that designated parking areas are designed and constructed to provide safe access for vehicles and people.

7. COMPLAINTS MANAGEMENT

7.1 The Work Authority holder must establish and maintain a complaints register.

7.2 In response to a complaint, the Work Authority holder must record the following information in the complaints register:

(a) the date and time of the complaint;

(b) who the complaint was from;

(c) the specific issue/s raised in the complaint; and

(d) the actions taken to address the specific issue/s raised in the complaint.

8. NON-COMPLIANCE AND ENVIRONMENT INCIDENT NOTIFICATION

8.1 The Work Authority holder must as soon as is practicable after becoming aware of any non-compliance with the conditions of the Work Authority and/or Approved Work Plan, and/or an environmental incident that will, or is likely to cause, material harm to the environment, notify the relevant District Manager of the non-compliance and/or environmental incident.

8.2 The Work Authority holder must also notify any other relevant government department or agency of the non-compliance and/or incident.

8.3 Where requested to provide a written report on the non-compliance or environmental incident, the Work Authority holder must provide a written report within 5 business days of the request that includes the following information:

(a) the date and time of the non compliance and/or environmental incident;

(b) the cause, or likely cause of the non-compliance and/or environmental incident;

(c) the impacts, or likely impacts of the non-compliance and/or environmental incident;

(d) the actions that have been taken to prevent, minimise or otherwise manage the impacts, or likely impacts of the non-compliance and/or environmental incident; and

(e) the actions that will be taken to prevent such a non-compliance and/or environmental incident from happening again in the future.

PART B ACTIVITY BASED CONDITIONS

9. GROUND DISTURBANCE

9.1 The Work Authority holder must minimise the area of ground disturbance throughout the life of the quarry operation.

9.2 The Work Authority holder must not open up any area for quarrying and ancillary operations except where approved in the Approved Work Plan.

10. TOPSOIL MANAGEMENT

10.1 At the commencement of excavation, the Work Authority holder must ensure that topsoil to a depth of 150mm below the natural surface is removed and placed in stockpiles not exceeding 2m in height.

10.2 The Work Authority holder must ensure that topsoil stockpiles are protected from erosion and compaction.

11. EROSION, DRAINAGE AND DISCHARGE CONTROLS

11.1 The Work Authority holder must design, install and maintain erosion and sediment controls to prevent erosion of areas of disturbed land and sedimentation of waterways.

11.2 Where quarry activities are being conducted in waters or on the banks of waterways with water in them, the Work Authority holder must ensure that sedimentation of the water in the water way is minimised to an acceptable level.

11.3 The Work Authority holder must prevent contaminated runoff from entering receiving waterways.

12. WATER DAMS

12.1 The Work Authority holder must ensure that the location, design, construction, operation and safety management of water dams on the Work Authority area are undertaken in accordance with the Approved Work Plan.

13. VEGETATION MANAGEMENT AND BUFFER ZONES

13.1 The Work Authority holder must avoid, minimise and/or offset the removal and disturbance of native vegetation and faunal habitats.

13.2 The Work Authority holder must erect and maintain posts or star pickets painted yellow to stand not less than 0.75 metres in height at intervals of not more than 50 metres around the final approved limits of extraction.

13.3 The Work Authority holder must not undertake any excavation work, or remove any vegetation, whether in part or in whole, within any buffer zone shown on the Approved Work Plan.

13.4 The Work Authority holder must maintain the buffer zone to ensure that an effective screen is provided between the relevant quarry works and surrounding land and/or buildings.

13.5 Unless otherwise agreed, the Work Authority holder must use species that are Indigenous to the area and are appropriate to the mine areas Ecological Vegetation Class (EVC) when establishing plants within the buffer zone.

14. NOXIOUS WEEDS AND PESTS

14.1 The Work Authority holder must establish and implement a program to control and/or eradicate noxious weeds and pest animals within the Work Authority area.

14.2 The Work Authority holder must take measures to prevent the spread of declared noxious weeds, pest animals and plant diseases within the Work Authority area.

14.3 The Work Authority holder must ensure that all mobile machinery is thoroughly cleaned prior to coming onto, or leaving a work area affected by noxious weeds and plant diseases.

14.4 The Work Authority holder must ensure that all soil that is imported into and exported out of the Work Authority area is free of disease and noxious weeds.

15. DUST EMISSIONS

15.1 The Work Authority holder must prevent a dust release that causes adverse impacts to the surrounding area and residents.

16. NOISE EMISSIONS

16.1 The Work Authority holder must ensure that noise emissions are minimised as far as is practicable and comply with the requirements of the approved Work Plan.

16.2 The Work Authority holder must avoid causing unacceptable noise.

17. VISUAL AMENITY

17.1 The Work Authority holder must take ensure that the colour of fixed plant and buildings do not cause an unwarranted negative impact on surrounding visual amenity.

17.2 The Work Authority holder must consult with the relevant Inspector and the Crown Land manager or the responsible authority on private land prior to painting any fixed plant and/or buildings.

18. HERITAGE SITES

18.1 The Work Authority holder must ensure that no work is carried out, without appropriate consent, within 100 metres laterally of a registered Aboriginal place recorded in the Victorian Aboriginal Heritage Register, or within 100 metres below that place.

18.2 The Work Authority holder must ensure that no work is carried out, without appropriate consent, within 100 metres laterally of an archaeological site on the Heritage Inventory or a place or object included in the Heritage Register or within 100 metres below that site, place or object.

19. HAZARDOUS MATERIALS MANAGEMENT

19.1 The Work Authority holder must prevent contamination of the environment by the release of fuels, lubricants and/or hazardous materials.

19.2 The Work Authority holder must ensure that all fuels, lubricants and/or hazardous materials are stored in accordance with the relevant requirements of AS1940: 2004 The Storage and Handling of Flammable and Combustible Liquids.

19.3 The Work Authority holder must ensure that any drainage from an area where fuels, lubricants and/or hazardous materials are stored, and/or used is directed to a sump or interceptor trap.

19.4 The Work Authority holder must ensure that spill prevention and clean up equipment is readily available in the vicinity of all plant and machinery, including mobile and fixed fuel storages.

19.5 The Work Authority holder must ensure that spills of fuels, lubricants and/or hazardous materials are cleaned up as quickly as practicable. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such contaminant into waterways. Equipment and soil contaminated by fuels, lubricants, hazardous materials and clean up substances which cannot be salvaged must be disposed of in an approved waste facility.

20. SLOPE STABILITY

20.1 The Work Authority holder must ensure that all slopes/batters including excavations, roadways, stockpiles and dumps must be designed, constructed and maintained to ensure stability.

20.2 If there is a significant slope failure event, the Work Authority holder must cease all operations, notify the relevant District Manager and not recommence operations until authorised to do so by the relevant District Manager.

21. INTERNAL ROADS

21.1 The Work Authority holder must consult with the relevant DPI Inspector, the Crown Land manager or private land owner/occupier prior to establishing any roads and access ways on the Work Authority area.

21.2 The Work Authority holder must construct any roads on the Work Authority area in accordance with the direction provided by the DPI Inspector, the Crown Land manager or private land owner/occupier.

21.3 The Work Authority holder must ensure that an internal road is only used by:

(a) employees of, or persons authorised by, the relevant Crown land manager, or persons engaged in fire control where the Work Authority covers Crown land; or

(b) the landowners or their agent/s where the Work Authority covers private land.

21.4 The Work Authority holder must ensure that all roads on the Work Authority area are properly formed, surface treated, drained and maintained to provide for the safe operation of the road.

22. DERELICT AND REDUNDANT PLANT

22.1 The Work Authority holder must ensure that all derelict and redundant plant, vehicles, machinery and equipment be removed from the Work Authority area and deposited at an appropriate waste disposal site or otherwise stored or disposed of in accordance with the Approved Work Plan.

23. REHABILITATION

23.1 The Work Authority holder must ensure that progressive rehabilitation of disturbed land is carried out as soon as possible.

23.2 The Work Authority holder must ensure that, as required, Indigenous species used in rehabilitation must be sourced from the local area, be of local provenance and be appropriate to the site's Ecological Vegetation Class (EVC).

23.3 The Work Authority holder must ensure that final rehabilitation is in accordance with the Approved Work Plan.

24. WORKING HOURS

24.1 The work authority holder must conduct all works in accordance with the working hour requirements of the planning consent or the Approved Work Plan or Work Plan Variation or Work Plan Conditions. Where any inconsistency occurs between the planning consent and the Approved Work Plan or an Approved Work Plan Variation or Work Plan Conditions, the working hour requirements of the planning consent have precedence.

24.2 The work authority holder may apply to the relevant District Manager to vary, or work outside of, the working hours requirements.

Youngs Proposed Rock Quarry Triggs Lane Laang

Minutes of Site Meeting 21-9-11

Present

Cameron Young	Proponent	55591444
Bradley Young	Proponent	55662344
Wendy Young	Proponent	55662344
Bessie Abbott	DPI Earth Resources	0407 106015
Gary Wills	Southern Rural Water	0418 996878
Yvonne Ingeme	DSE Biodiversity	55730734
Chris Loorham	Moyne Shire	55680555
Chris Drury	Brian Consulting	55613939
Tom Browne	Brian Consulting	55613939

Apologies

Graeme Jeffery	CMA
Tya Lovett	AAV

Bradley Young gave a brief description of Young's earthmoving business. A large part of the business was the construction of farm tracks. Young's are purchasing material from local quarries. They wish to be able to source their own material. Thus this proposal.

The rock is coffee rock with about 150mm of topsoil over 600 – 900mm depth of overburden. (Coffee rock is the name given to weathered basalt.) The material has been tested and came up short of standards required for public road construction. But it suitable for farm tracks.

Young's own the land.

The quarry might put out about 20 000 tonne per year. This might generate 800 trucks per year with a peak of 20-30 trucks during the summer. The proposal is for about 5ha and 5m deep but if the rock goes deeper would want to chase it. The material would not be available to the public and would mostly be used by Young's.

Access to the quarry would be via the existing farm track.

Machinery, oils and fuels would be stored off site in a shed. Machinery would be fuelled from a mobile tank.

Some water may be used in the quarry. (eg dust suppression)

There is no need to do any blasting. The rock can be ripped out with excavator.

The nearest house is 800m south. Next is 1.2km east but it is not occupied. The next is 3 km north.

Yvonne Ingeme DSE

The area has been farmed in the past and there is no native vegetation in the paddock. There is a remnant stand of trees to the south and a buffer would be needed to protect them.

The southern bent winged bat is known to live in the area but there are no caves in the paddock.

There would be no fauna in the paddock.

There are no creeks in the proposed area.

Bessie Abbott DPI

Need to consider the way that water will be discharged from the site. Soakage? Discharge point?

Need to consider final land use and shape of finished contours.

If clean earth fill is back loaded to the quarry, this must be a written into the Work Plans.

Should consider long term potential of site. If the material is there why not apply for as much area as possible.

Chris Loorham Moyne Shire Council

Planning permit will be required. Application goes through Moyne Shire Council. The application would be referred to authorities including DPI. This might result in planning permit conditions.

DPI are responsible for onsite issues. Council is interested in the impact of the quarry outside the boundary.

Neighbours will be notified of planning permit application. This is broader than immediate neighbours. Recommend that Young's talk with neighbours about proposal and maintain good relations.

Gary Watts Southern Rural Water

Attended meeting to give advice about is the taking of water from aquifers.

Water that ponds after rainfall can be taken and used. (Incidental water.)

A sump built into the floor of a quarry may require a licence. If in doubt contact Southern Rural Water for advice.

SRW would like to see the proximity of the water table to the floor of the quarry. This can be obtained by request to a consultant. SRW can provide a list of suitable consultants.

The nearby drain line is not a problem.

Meeting Closed

After the meeting Bessie Abbott recommended to Bradley Young that the quarry application should be made big enough to get maximum access to resource.

Bradley Young indicated that the resource extended westward beyond the area nominated to the meeting.

Yvonne Ingeme noted that the larger area contained some remnant trees. These could be left alone with a buffer around them. Or if they are removed, offset planting would be needed.

Sunday 25th Sept 2011

Mick in Bush - NO concerns

Logans - NO concerns

Pat + Ange - concern intercestion at end of Triggs Lar with

26/9/11 Whitehouse - NO concerns

Barry - Jim Dwyer - all Fine, just wondering about plan - depths etc.

MINERAL RESOURCES
(SUSTAINABLE DEVELOPMENT) ACT 1990

Tenement No. WA1474

Statutory endorsed work plan comprising pages 16

and drawings Sheet 1-5

Delegate / Date: 24/2012

Department of Primary Industries

WORK AUTHORITY. No. 1474

YOUNG'S ROCK QUARRY
50 TRIGGS LANE LAANG

DPI MINERALS & PETROLEUM BALLARAT
Copy 1 of 3
RECEIVED
23. 02. 2012

Prepared by Brian Consulting Pty., Ltd.

Table of Contents

WORK PLAN TEXT

1 Background

1.1 Site Locality Description

The site is located on Triggs Lane Laang about 800m north of the Warrnambool – Cobden Road and about 18Km east of the Allansford township. The most southerly extent of extraction will be about 500m north of the Bruckell Creek. The proposed site is grazing farmland.

1.2 Existing Controls

A review of the Moyne Shire Planning Scheme Maps showed that the site is zoned as Farm Zone. There is also a Wildfire Management Overlay.

The Warrnambool – Cobden Road is zoned RDZ1. It is a Category 1 road administered by Vicroads. Access to the road will be via the existing intersection from Triggs Lane.

The proposed extraction area is clear of the areas prescribed in the Aboriginal Heritage Regulations 2007. A Cultural Heritage Management Plan is not required by the regulations.

There are some scattered remnant trees in the resource area. Any tree removal will trigger an offset planting obligation under "Victoria's Native Vegetation Management Framework".

Exploration Licence 5375 covers all of the area in the Work Authority. Consent from the licence hold has been obtained.

1.3 Anticipated Impacts of Development

There are a total of 31 houses within a 2Km radius of the extraction limit. The nearest house to the extraction area is 500m away. This is the residence of the landowner. Neighbouring houses are located 600m south in bush, 640m west and 800m south west in Triggs Lane. There are ten houses 750m to 1320m scattered in the bush on the south side of Warrnambool – Cobden Road. There are three farm houses 660m, 810m and 830m to the east. One of these houses is not occupied. There are another 14 houses that are 1Km to 2Km away and generally scattered.

There is no direct line of site from the quarry area to any of the houses or roads due to a combination of topography, remnant bush, plantation trees and distance.

Truck traffic may adversely affect the house on Triggs Lane near the corner of Warrnambool – Cobden Road. Dust from the unsealed road and the rattle of empty trucks being potential causes of nuisance.

Dust generated on the site is not expected to generate an offsite dust problem from the quarry.

Noise generated by machinery may travel beyond the Work Authority boundaries. Noise levels at critical locations may need to be measured and a line of communication with the neighbours maintained.

Blasting has the potential to cause ground vibration, noise, dust and fly rock impacts beyond the Work authority boundary.

Truck traffic might be in the order of 800 per year with less traffic during winter months. A peak day might generate 20 – 30 trucks in a day. The low traffic volume will not impact greatly on the area beyond Triggs Lane because the road is already a Category 1 Vicroads road.

Impacts of this development will be the removal of two remnant native trees in the paddock. This would trigger an offset planting obligation.

This development is well located to provide farm track material to the Naringal, Mepunga and Nullawarre area. This would reduce the distance to cart the product which will in turn reduce the transport cost and reduce the amount of road usage.

2 Resource Description

2.1 Resource Assessment

Reference to Geological Survey of Victoria "Port Campbell Embayment 1 : 100000 reveals that the site is in an area of Newer Volcanics consisting of undifferentiated lava flows, lava ridges and valley flows.

Basalt in this area has been quarried in the past from Coulahans Road approximately 1.3 km west of Area A.

Approximately 20 test holes have been dug over the extraction areas to determine overburden depths and to prove the resource. These holes revealed that the Work Authority area contains two distinct areas containing rock. The western area, named Area A, revealed basalt rock below the clay layer. The eastern extraction area, named Area B, revealed decayed basalt commonly termed coffee rock. The rock in Area A was assessed by visual inspection. The rock in area B was tested by Chadwick's.

2.2 Reserve Estimates

The volume of material to be extracted from Area A is 660 000m^3.

The volume of material to be excavated from Area B is 1 500 000m³. However, Area B consists of a lower value product and the overburden increases to the south. For this reason, the actual amount of material that can economically be won could be less than this.

2.3 Soil and Overburden Estimates

The topsoil is about 150mm in depth. The overburden is a clay layer 600mm – 900mm deep.

From Area A there will be approximately 3500m³ of topsoil stockpiled and approximately 8000m³ of overburden stockpiled.

From Area B there will be approximately 3500m³ of topsoil stockpiled and approximately 8000m³ of overburden stockpiled. The overburden increases in depth towards the south of Area B.

2.4 Geotechnical Regime

The basalt located in Area A of this Work Authority is a crystalline basalt. This material has not been tested but, by visual inspection, should yield good quality crushed rock for road making.

The basalt in Area B is a weathered basalt. Testing by Chadwicks determined that the coffee rock is not suitable for use as a base course for public road construction, but is suitable for farm tracks and hardstand construction. The coffee rock has been used on intra-farm tracks and found to be successful.

It is possible that a better quality of rock will emerge from Area B at depth.

3 **Markets**

3.1 Markets Available

A major component of Young's Earth Moving business comes from the construction of farm tracks. Material for this has been purchased from other licensed quarries in the area. Material from this quarry will supply the product that Young's use for farm track construction.

It is expected that other contractors working in the area will source material from this quarry. As the quarry develops, products other than coffee rock will be produced and new customers emerge.

3.2 Estimated Annual Output

The estimated annual output will be 15 000m³ to 25 000m³.

4 Site and Access Details

4.1 Title and Easement Descriptions

Title: Volume 11065 Folio 302.
Crown Allotment 21
Parish of Laang
Registered Proprietors: Bradley William Young and Wendy Joy Young
Title Area: 96.75ha
Encumbrances: Easements - nil
Mortgage - nil

4.2 Site Security

The perimeter of the farm is fenced by a stock proof, 1.2m high post and wire fence. Internal fencing is partly post and wire fence and partly electric fence. The existing farm fences adequately protect the site.

4.3 Access to Site

Access to the site is via Triggs Lane. Triggs Lane is a formed, unsealed Government Road. The distance along Triggs Lane from the front gate of the property to the Warrnambool – Cobden Road intersection is 500m.

4.4 Internal Access

From the front gate of the property, access will by via the existing formed access track. The road will be a 6 metre wide formation through the open paddock. Where there is only a single width laneway through the native vegetation, passing bays will be constructed to allow for passing of oncoming vehicles.

The haul road into the quarry floor will have a maximum grade of 1 : 10.

4.5 Buffer Zone

There is be a 20m wide buffer zone along the northern and western Work Authority boundaries. There is a 6m buffer zone along the southern and eastern boundaries.

No extraction or product stockpiling shall take place within the buffer zones.

4.6 Topsoil and Overburden Storage

Area A

Topsoil and overburden from the initial Stage 1A strip will be stored in a stockpile on the south side of Stage 2A. As Area A develops, the topsoil and overburden will be

used for progressive reclamation, being spread over on terminal surfaces immediately after stripping.

The final Stage of Area A will be reinstated from the initial stockpiles.

Area B

Topsoil and overburden from the initial Stage 1B strip will be stored in a stockpile on the north side of Stages 2B and 3B. Topsoil and overburden from Stages 2B, 3B and 4B will be used for progressive reclamation, being spread over terminal surfaces immediately after stripping. The Stage 1B stockpiles will be used for the reclamation of Stage 4B.

At the commencement of Stage 5B, new topsoil and overburden stockpiles will be formed to the north of Stages 5B and 8B. Topsoil and overburden from Stages 6B, 7B and 8B will be used for progressive reclamation. The Stage 5B stockpiles will be used to reclaim Stage 8B.

At the commencement of Stage 9B, new topsoil and overburden stockpiles will be formed to the north of Stages 9B and 12B. Topsoil and overburden from Stages 10B, 11B and 12B will be used for progressive reclamation. The Stage 9B stockpiles will be used for the final reclamation of Area B.

Topsoil stockpiles will have a maximum height of 2 metres, neatly formed with moderate batters. Overburden stockpiles will have a maximum height of 6 metres, neatly formed with moderate batters. The stockpiles will be vegetated to prevent erosion.

5 Infrastructure

5.1 Fixed Plant

There will be not fixed processing plant on the site.

5.2 Mobile Plant

Topsoil will be stripped with the use of an excavator and trucks.

Extraction will be carried out with the use of an excavator, dump truck and loader.

The product will be loaded into road transport trucks with the use of an excavator or loader.

Reclamation will be carried out with the use of a hired dozer, excavator, trucks and grader.

Stone will be crushed with a mobile crushing plant.

Crushed stone will be screened with the use of mobile screen.

The existing machinery shed situated on the access road, but outside the Work Authority Area will be used as the site office.

The toilet will be the facility at the machinery shed.

5.3 Power Supply

There is no electricity supply to the site.

5.4 Fuel Storage

Machinery is fuelled from a vehicle mounted mobile fuel tanks.

5.5 Water Supply

There is no town water supply to the site.

6 Operations

6.1 Operating Hours

Except with the consent of the responsible authority, the excavation, crushing and screening of the material extracted from the site must only occur between the hours of 7.30am to 5.30pm Monday to Saturday provided that the day is not a declared public holiday.

Except with the further consent of the responsible authority, product loading must only occur between the hours of 7:30 am to 6.00 pm Monday to Saturday.

6.2 Extraction Operations

To remove the basalt stone the benching method of quarrying is used. A large excavator is used to remove and break rocks for crushing.

Work Authority Area:
Total area to be opened in this application:

Area A	5.44ha extraction footprint
	0.4ha topsoil and overburden stockpiles
Area B	12.60ha extraction footprint
	0.4ha topsoil and overburden stockpiles.

6.3 Extraction Staging

It is proposed to open Area A and Area B simultaneously.

Area A will be worked out in two stages. Stage 1A will be opened up in the southern part of the extraction area. It will be expanded out to form southern and eastern terminal faces, haul road and intermediate batter along the west side. This stage has been designed to avoid remnant trees in the paddock. The stage will then extend northwards to the form the northern terminal face.

The western face of Stage 1A will become the working face into Stage 2A. Rock will be extracted out to the western limit of extraction running along the northern terminal face and then southwards to the southern limit of extraction running down the western terminal face.

The south eastern corner of Area A has been designed around three remnant trees. If these trees have died when Stage 2A is completed, a Work Plan variation may be prepared to apply for extraction of material from this location.

Area B will be worked out in 12 Stages.

Stage 1B of Area B will commence from the existing intra-farm pit. It will be expanded out to the full east – west width of the Stage and then southwards to the southern limit of extraction. It is expected that overburden depths will increase in the southern area and extraction southwards could be abandoned before the designed limit. The northern face of Stage 1B will then be the working face, pushing into Stage 2B to the northern limit of extraction.

The eastern face of Stage 2B will become the working face into Stage 3B. Rock will be extracted out to the eastern limit of extraction forming the northern terminal face. The southern face of Stage 3B will become the working face for Stage 4B pushing southwards to the southern limit of extraction forming the eastern terminal face.

Stage 5B will be a fresh start abutting the western face of Stage 2B. Stage 5B followed by Stage 6B will be worked out from north to south.

Stage 7B will be worked westwards from Stage 6B.

Stage 8B will be worked from south to north out of Stage 7B.

Stage 9B will be a fresh start abutting the western face of Stage 8B. Stage 9B followed by Stage 10B will be worked out from north to south.

Stage 11B will be worked westwards from Stage 10B.

To complete Area B, Stage 12B will be worked from south to north out of Stage 11B.

6.4 Working Faces

The benched faces in the quarry are usually near vertical (5V:1H) with a maximum height of 5 metres. There will be a 5 metre wide bench for every 5 metres of vertical face. The maximum depth of extraction across the site is 15 metres.

6.5 Terminal Faces

The finished batter slopes are 1V:3H. However, the terminal benches form an average angle of 1V : 1H in some locations and 1V : 3H in other places. Either way, the extraction limit will be reshaped to form a 1V:3H batter slope. Material will be pushed from the top down to fill at the toe to achieve a smooth finished surface.

6.6 Haul Roads

Haul roads will be an 8m wide formation cut into the southern limit of extraction graded at 1V:10H maximum slope.

6.7 Explosives

Explosives may be needed in Area A. From time to time, rock may need to be blasted from the working face. EPA document AQ 2/86 "Recommended Buffer Distances for Industrial Residual Air Emissions" requires a buffer distance of 500m to the receptor location. The buffer distance is achieved for all neighbouring houses, but the landowner's house is 430m south of the southern limit of extraction. The existing stand of trees between the landowners house and the extraction area will offer protection. If any problems are reported, the quarry manager will refrain from blasting when the wind direction is unfavourable.

The 500m buffer distance will overlap onto neighbouring land. Affected landowners will be consulted prior to blasting so that grazing stock can be removed from the buffer. Other neighbours will be notified prior to blasting, but this practice may stop if no issues are reported.

Prior to blasting, a procedure and schedule will be submitted to DPI Earth Resources for approval. Blasting will only occur during the hours of 9:00am to 5:00pm Monday to Friday.

All blasting will be done by a licensed explosives contractor who will supply, undertake and be in control of all blasting on the site. In the first instance, a square of about 19m x 19m square will be pattern drilled to a depth of 6m. If this blast exceeds the monitoring limits, the depth of the drill holes will be reduced for subsequent blasts.

No explosives will be stored on-site.

Blasts will be documented and the noise and vibration impact will be monitored using measuring devices compliant with relevant standards, operated by suitably trained operators.

6.8 Surface Water

Overland flow from adjoining undisturbed areas will not discharge into the quarry area. Cut off drains or earthen bunds will be constructed across the northern extraction limit of Area A to divert surface water away from the opened quarry. There is already a drain to the north of Area B. This drain will be extended west to take surface water away from the quarry.

During the life of the quarry, all of the rain caught in the open quarry area (including the imported fill area) will be trapped within the quarry.

Rainwater will drain vertically through fissures in the stone. After heavy rain there may be instances of prolonged ponding. This water will be managed by forming sumps. The sumps will discharge by seepage and evaporation. If the discharge of water this way is too slow, the water will be pumped into the area of remnant vegetation. Hay bale filters will be used if the pumped water is turbid. Water discharged by pumping will be filtered by sheet flow through 500m of remnant vegetation before entering the Brucknell Creek.

The finished floor will grade to the south end of the reclaimed quarry. This will create periodic inundation.

6.9 Erosion Control

The solid composition of the exposed rock on the batter slopes will not erode.

The haul road and access track will be made from crushed rock and will resist erosion.

Rainwater falling onto topsoil and overburden stockpiles has the potential to cause siltation of runoff and erosion of material. To remove the occurrence of these problems it is proposed to vegetate the topsoil stockpiles with grass. Once the grass has established on the mounds, rainwater on stockpiles will not cause silt laden runoff.

Water discharged from the site by percolation will not cause erosion. Water pumped from the site could cause erosion at the discharge point. This will be monitored and protection measures taken if needed.

6.10 Processing Operations

Extracted material will be crushed and screened on site.

6.11 Imported Fill

Some ordinary earth will be imported to the site as clean surplus fill. This material will be placed at the foot of the southern batter of Area B. The location will depend on which area of the quarry is open at the time. This material will reduce the southern terminal batter to a gentler slope and might raise the finished floor. The nature of the earthmoving jobs undertaken by Young's suggest that the volume of imported earth could be about 10% of the output volume. (For every ten truck loads of product to leave the site, one truck load of surplus earth may be imported.)

7 **Environmental Management Program**

7.1 Native Vegetation

Two trees will be removed from Area A. The trees to be removed are manna gums measuring 57cm and 55cm DBH. Reference to "Indigeounous Plants of Moyne Shire" indicates that the site is in a "Dry Forests" ECV. The trees to be removed would be classified as medium size under the ECV benchmark.

The trees to be removed are not within 30m of a waterway, not on a slope less than 1 in 5, will not create an erosion problem and will not increase the risk of salinity.

Quarrying activities will occur in close proximity to other remnant native vegetation consisting of isolated trees in the paddock and a remnant patch to the south of the Work Authority boundary. A Tree Protection Zone will exist for the duration of the quarry to protect the vegetation against soil compaction and excavation. The Tree Protection Zone will have a radius 12x the diameter at breast height or a maximum of 15m (whichever is the lesser).

The extraction limit and terminal batter slope limit will be located clear of the Tree Protection Zone.

7.2 Net Gain and Offset Management Plan

The offset work will be carried out within the existing stand of remnant vegetation to the south of the quarry area. Offsets will commence prior to the removal of the trees and be completed no more than twelve months after the removal of the trees. The success of the offset will be monitored and replanting will happen if needed. The offset area will be protected from stock grazing.

Tree species to be used for planting will be from the following list:

Acacia melanoxylon	Blackwood
Eucalyptus oblique	Messmate Stringybark
Eucalyptus ovate	Swamp Gum
Eucalyptus viminalis subsp viminalis	Manna Gum

These tree species have been selected from "Indigenous Plants of Moyne Shire, Zone 2, Dry Forests".

7.3 Operational Noise

Acoustic emissions shall comply with levels specified in EPA publication 1411, Noise from Industry in Regional Victoria, section 3.2 - Earth Resources Levels.

Noise levels will be measured initially at the quarry boundary, and then at sensitive locations offsite if the initial evaluation indicates the potential for excessive noise emission. The quarry manager will review the noise data. Non-complying noise emissions will be addressed by altering machinery or altering work practices.

7.4 Internal Noise

Noise levels within the quarry will be monitored to ensure compliance with Occupational Health and Safety Regulations 2007, Part 3.2 Noise, Division 2 Duties of Employers. Machinery emitting non-complying noise emissions will be modified or taken out of service if possible. If noise exposure standards are still exceeded, hearing protection will be provided to reduce the exposure to a suitable level.

7.5 Vibration from Blasting

Blasts will be documented and the noise and vibration impact will be monitored to demonstrate compliance with "Ground Vibration and Airblast Limits for Blasting in Mines and Quarries". Measuring devices will be compliant with relevant standards and be operated by suitably trained operators.

7.6 Air Quality

EPA document AQ 2/86 "Recommended Buffer Distances for Industrial Residual Air Emissions" requires a buffer distance of 500m to the receptor location when hard rock blasting is carried out. The buffer distance is achieved for all neighbouring houses, but the landowner's house is 430m south of the southern limit of extraction. The existing stand of trees between the landowners house and the extraction area will offer protection. The 500m buffer distance overlaps neighbouring land. Each blast will require the consent of affected landowners. If any problems are reported, the quarry manager will refrain from blasting when the wind direction is unfavourable.

It is not anticipated that a dust problem will arise from the mechanical extraction and processing of the rock. Crushing and screening of the hard rock product does not generate dust. The weight of the basalt means that airborne particles fall to the ground. The hardstand areas and access tracks will be formed with crushed rock which will keep dust to a minimum.

Work will be suspended during unfavourable weather conditions such as strong north winds during summer.

If a dust nuisance does arise, dust suppression will take place with the use of a water truck or other dust suppressant means.

7.7 Surface Water

Rainwater falling onto exposed earth will inevitably become silted and have the potential to cause erosion. Exposed earth will occur in two situations, namely the open quarry area (incorporating the imported fill area) and the stockpiles of topsoil.

Rainwater falling into the open quarry area will be trapped within the quarry by virtue of the quarry design. Rainwater runoff in this area may become silt laden, but this water will be contained inside the quarry where it will be discharged by percolating through the quarry floor leaving the silts behind. If the discharge of water this way is too slow, the water will be pumped into the area of remnant vegetation. Hay bale filters will be used if the pumped water is turbid. Water discharged by pumping will be filtered by sheet flow through 500m of remnant vegetation before entering the Brucknell Creek.

Topsoil stockpiles will be vegetated with grass. Once the grass has established on the mounds, rainwater on stockpiles will not cause silt laden runoff.

Overland flow from adjoining undisturbed areas will not discharge into the quarry area. Cut off drains or earthen bunds will be constructed across the northern extraction limit of Area A to divert surface water away from the opened quarry. There is already a drain to the north of Area B. This drain will be extended west to take surface water away from the quarry.

There will be no shedding of silt laden overland flow. The discharged water will be monitored to ensure that discharge off site complies with the State Environment Protection Policy ("The Waters Of Victoria").

7.8 Groundwater

The quarry has been design such that the extraction will not intercept ground water. Water bores on neighbouring farms report ground water at 110 feet deep (33.5m). The maximum depth of extraction is 15m.

Stormwater soaking into the ground must be free from contaminants to protect ground water. If fuel is spilled, it will be soaked up using saw dust or other absorption material. The contaminated material will then be disposed of in a manner acceptable to the EPA.

There will be no other materials stored or used on site that might cause contamination of ground water.

7.9 Effluent Control

There will not be any sewerage effluent on the site.

7.10 Imported Fill

Imported fill procedures will comply with the EPA Cleanfill Guidelines and CCF Environmental Guidelines for Civil Construction.

Clean fill will consist of clay, silt, sand, gravel and rock. Topsoil will only be received with a written assessment that demonstrates that the material is not contaminated and contains no noxious weeds.

Clean fill must not contain domestic waste, industrial waste (such as concrete, brick, asphalt, pipe, plastics, metal or wood), organic matter, category A, B or C prescribed industrial waste, acid sulphate soil and rock, asbestos or asbestos contaminated soil.

Clean fill must not contain noxious weeds.

Clean fill will only be imported from destination sites of the quarry product. Truck loads will be inspected by the quarry manager to ensure that the imported material is compliant. The quarry manager will also make inquiries about the land use history of the source location. Where a historic land use would raise the suspicion of contamination the material will not be accepted without a written assessment.

7.11 Other Waste Products

The small amounts of litter such as food packaging and equipment packaging will be returned to a vehicle to ensure that it is removed. The site shall be maintained in a neat and tidy condition, free from the accumulation of rubbish. This will prevent the escape of litter.

There will be no other materials stored or used on site that might cause contamination.

7.12 Vermin and Noxious Weeds

The site shall be maintained to ensure compliance with the Catchment and Land Management Act.

Feral animal control shall be carried out when required.

Weeds will be monitored by quarry staff on a seasonal basis. Weed monitoring and eradication practices will be similar to the practices employed by farmers in the surrounding area. Different species of weed require attention at different times of the year. A combination of chemical, mechanical and manual techniques will be used.

7.13 Cultural Heritage

The proposed extraction area is clear of the areas prescribed in the Aboriginal Heritage Regulations 2007. A Cultural Heritage Management Plan is not required by the regulations.

7.14 Visual Amenity

Overall the quarry is generally hidden by topography, remnant native vegetation, plantations and distance. There is no proposal to undertake any visual screening measures.

7.15 Fire Fighting Preparedness

The nature of the business provides a minimal risk of a dangerous goods fire or incident. Combustible material will not be allowed to accumulate on site. Waste oils and rubbish will be removed. Grass will be kept low during the fire season.

The office will contain a first aid kit, water bottles and fire blanket. Fire extinguishers will be located on machinery and in the site office. The extinguishers will be checked for charge.

Fire trucks will be able to access the site via the access road. Alternative emergency exit routes exist through neighbouring properties by mutual consent.

7.16 Summarised Environmental Management Plan

Environmental Monitoring Program for Youngs Rock Quarry WA 1474, 50 Triggs Lane Laang

Activity/Location	Potential Environmental Impact	Procedures / Controls & Responsibilities	Monitoring, Review & Reporting
Movement of heavy vehicles around perimeter of quarry and access road	Damage to tree roots.	Protect unscalped areas from unnecessary disturbance from machinery and trucks.	Quarry Manager to monitor the protection of unscalped areas.
Net Gain and Offset Management Plan	Depletion of native vegetation	Offset planting to satisfy Victoria's Native Vegetation Framework.	Offset planting to commence prior to tree removal.
Operational Noise	Environmental noise impacts	Compliance with EPA Publication 1411 Noise From Industry in Regional Victoria	Quarry manager to monitor noise at sensitive locations and implement changes as required. Quarry inspector may request noise measurement.
Internal Noise	OH&S impacts	Noise within quarry to comply with OH&S Regs	Quarry manager to monitor noise within quarry and take action according OH&S Regs Quarry inspector may request noise measurement.
Blasting	Ground vibration may cause damage to buildings. Ground vibration and airblast may be a nuisance to neighbours Residual air emissions	Compliance with DPI publication Ground Vibration and Airblast Limits for Mines and Quarries Neighbours will be notified prior to blasting Compliance with EPA Publication AQ2/86 Buffer Distances For Industrial Residual Air Emissions	Blasting Contractor to monitor each blast and report to Quarry Manager. Feedback from neighbours will be recorded. Blasting methods modified if needed. Landowners affected by Buffer Distances to give consent prior to blasting.
Dust	Offsite impacts, potential OH&S impacts	Dust minimisation measures to be implemented if needed.	Quarry Manager to be vigilant
Surface water	Potential for silt laden runoff. Erosion	Rainwater that falls into open quarry area and fill area to be retained within the quarry. Topsoil stockpile to be vegetated	Quarry manager to monitor formation contours. Quarry manager to monitor vegetation of topsoil stockpile.
Ground water	Possible contamination from machinery fluid spill. Possible contamination from fuel spill	Machinery fluid waste to be removed offsite by qualified contractor. Suitable absorption material stored onsite	Quarry manager to inspect and arrange removal of machinery fluid waste Refuelling activities to be monitored. All staff to be prepared to respond to spill.
Effluent Control	Sewerage is a potential health risk and potential environmental contaminant	Toilet in machinery shed connected to council approved septic tank.	Quarry manager to inspect and arrange pump out by suitable contractor when required.
Imported Fill	Contamination of land. Contamination of surface water or g ground water. Transportation of noxious weeds	Compliance with EPA Cleanfill Guidelines and CCF Environmental Guidleines for Civil Construction	Quarry Manager to inspect truck loads. Quarry manager to obtain knowledge about history of the source site.

Environmental Monitoring Program for Youngs Rock Quarry WA 1474, 50 Triggs Lane Laang

Activity/Location	Potential Environmental Impact	Procedures / Controls & Responsibilities	Monitoring, Review & Reporting
Other waste products	Accumulation of rubbish Fire risk Contamination risk	Packaging to be returned to vehicle and removed from site.	All staff to be responsible for their own rubbish Quarry manger to inspect and remove rubbish.
Weeds / Pest Animals	Degrade ecological values.	Quarry Manager to initiate weed eradication program. Quarry Manager to initiate animal controls as required.	Quarry Manager to conduct inspections consistent with neighbouring farm practices.
Cultural Heritage	Total destruction of heritage material	Compliance with Aboriginal Heritage Act	Quarry manager be aware of the potential existence of heritage material report any discoveries.
Visual Amenity	Exposed faces and mounds of disturbed earth may produce unsightly outcome.	Quarry manager to follow work plan	Quarry manager to inspect view lines from public roads into works area continually.
Fire Fighting Preparedness	Fire intensity may increase if combustible material accumulates on site.	Quarry Manager to ensure that there is no long grass during fire season. Quarry Manager to arrange for waste oils to be removed from site. Quarry Manager to ensure that fire fighting equipment is working.	Quarry manager to evaluate before and during fire season.

8 Rehabilitation Plan

8.1 Progressive Rehabilitation

Rehabilitation will be carried out progressively.

Area A

Topsoil and overburden from the initial Stage 1A strip will be stored in a stockpile on the south side of Stage 2A. As Area A develops, the topsoil and overburden will be used for progressive reclamation, being spread over on terminal surfaces immediately after stripping.

The final Stage of Area A will be reinstated from the initial stockpiles.

Area B

Topsoil and overburden from the initial Stage 1B strip will be stored in a stockpile on the north side of Stages 2B and 3B. Topsoil and overburden from Stages 2B, 3B and 4B will be used for progressive reclamation, being spread over terminal surfaces of the previous stage immediately after stripping. The Stage 1B stockpiles will be used for the reclamation of Stage 4B.

At the commencement of Stage 5B, new topsoil and overburden stockpiles will be formed to the north of Stages 5B and 8B. Topsoil and overburden from Stages 6B, 7B and 8B will be used for progressive reclamation, being spread over terminal surfaces of the previous stage immediately after stripping. The Stage 5B stockpiles will be used to reclaim Stage 8B.

At the commencement of Stage 9B, new topsoil and overburden stockpiles will be formed to the north of Stages 9B and 12B. Topsoil and overburden from Stages 10B, 11B and 12B will be used for progressive reclamation, being spread over terminal surfaces of the previous stage immediately after stripping. The Stage 9B stockpiles will be used for the final reclamation of Area B.

The maximum amount of quarry to be open at a given time would be 2.0ha for Area A and 2.0ha for Area B.

The access roads and haul roads will be left in place for use as a farm access tracks.

8.2 Terminal Face Treatment

Terminal benches will be trimmed into smooth batter slopes of 1V : 3H by pushing the top of the vertical face down to fill at the toe of the face. Once trimmed, 500mm of overburden will be placed over the slope to form a smooth surface. The batters will then be topdressed with 150mm of topsoil.

The finished floor will be covered with approximately 500mm of overburden to form a smooth surface. The floor will then be topdressed with 150mm of topsoil.

The fill area will be rehabilitated at the same time as the adjoining quarry stage. This will minimise the amount of expose surface. The fill area will be formed into a smooth formation, track rolled by excavator and topdressed with 150mm of topsoil.

8.3 Rehabilitation Planting

The terminal land formation will be sown with seed for pasture grass.

8.4 Rehabilitation Maintenance

The rehabilitated land shall be monitored to ensure that the soil has stabilised and that the vegetation has taken well in all areas.

8.5 End Use

The aim of the reclamation program is to return the site to the pre-existing use of grazing cattle.

9 **Community Facilities Impacted**

There are no significant community features that will be adversely affected by the quarrying activities.

Equipment owned by Young's earthmoving is on call for use by the CFA. The grader is available to cut fire breaks and the excavator is available to deal with smouldering trees. The local CFA has also received cash for a 4WD appeal.

Young's earthmoving have donated staff and equipment to do soil cultivation at the Gun Club for native tree planting.

The Allansford Cricket Club received a donation by way of free cartage of clay for their new cricket pitch.

Some speedway races at Laang Speedway are sponsored by Young's.

10 **Community Engagement Plan**

Previous community engagement activities

1. Spoken to immediate neighbours about the intention to open a quarry.

2. Consulted with affected landowners that fall within the 500m buffer for blasting. The affected land to the west is owned and occupied by Buckley. The affected land to the north and to the north west is owned by Dwyer and occupied by Kyley as manager. The parties concerned have indicated that they have no concerns about the intention to blast and will cooperate with buffer requirements.

Community, Values and Impact level

	Community	Values	Impact Level	Reason
1	Adjoining farms.	Noise Dust Visual impact Fire risk minimisation	Low	There is remnant native vegetation between the quarry area and the nearest adjoining farm houses. Extraction areas could be seen from adjoining paddocks and the adjoining Government Roads which are unconstructed. Earthworks equipment will be available to the CFA in an emergency. Fire fighting equipment will be maintained on site. Combustible fuel will not be held in the quarry. The bare earth of the quarry will act as a fire break.
2	Neighbours on Triggs Lane	Sharing roads Noise Dust	Medium	Trucks and cars sharing roadway is a safety issue. Trucks travelling along the unsealed Triggs Lane may generate noise and dust.
3	Neighbours	Sharing roads Noise Dust	Low	Trucks leaving Triggs Lane will be on sealed roads. This reduces danger, noise and dust.
4	Community organisations	Strengthening community assets. Contribute to community activities.	Low	Local product or machinery can be donated from time to time towards a community organisation. Machinery is on call to the CFA.
5	Landowners affected by the 500m buffer for blasting	Grazing Land	Low	The 500m buffer zone overlaps adjoining grazing land. Stock will need to be relocated prior to blasting.

Schedule of engagement

	Activity	Timeframe	Communities	Level of Engagement	Comments
1	Face to face discussion	During early planning phase.	Adjoining farms. Neighbours Neighbours on Triggs Lane	Inform Consult	Discussion about proposed work plans.
2	Information Letter or email	Prior to Planning Permit application.	Adjoining farms. Neighbours Neighbours on Triggs Lane	Inform	General letter containing details and a brief description of the proposal.
3	Telephone hotline	To commence prior to granting Work	Adjoining farms.	Consult	Telephone number available 24/7 for the life of the quarry.

GRAZING FARMLAND

GOVT RD (UNMADE)

GRAZING FARMLAND

88.50

TRIGGS LA (UNMADE GOVT RD)

357° 30'
420

20m WIDE BUFFER ZONE

20m WIDE BUFFER ZONE

90° 33' 10"
933

1414.0

6m WIDE BUFFER ZONE

AREA A
REFER SHEET 2

POSSIBLE FUTURE EXTRACTION

AREA B
REFER SHEET 3

177° 30'
420

GRAZING FARMLAND

6m WIDE BUFFER ZONE

REMNANT NATIVE VEGETATION

270° 33' 10"
933

ACCESS ROAD

REMNANT NATIVE VEGETATION

HOUSE

HOUSE

5750400
5750200
5750000
5749800
5749600
656400
656800
657000
657200
657400
657600

MINERAL RESOURCES
(SUSTAINABLE DEVELOPMENT) ACT 1990
Tenement No. WA 1474
Statutory endorsed work plan comprising pages 16
and drawings Sheet 1-5
Delegate / Date: 2/4/2012
Department of Primary Industries

NOTES

CO-ORDINATE AND LEVEL DATUM DERIVED FROM HAND HELD GPS
BEARINGS ON WA BOUNDARY ARE TO LAND TITLE VOL 11065 FOL 302

REVISION	DESCRIPTION	DATE

	NAME	DATE
SURVEY	CD TP	OCT 11
DRAWN	C DRURY	OCT 11
DESIGN	C DRURY	OCT 11
CHECKED		
APPROVED		
CAD FILE	11062 WP1	

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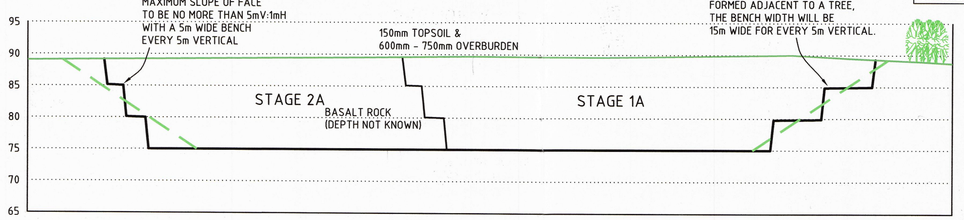
PROJECT

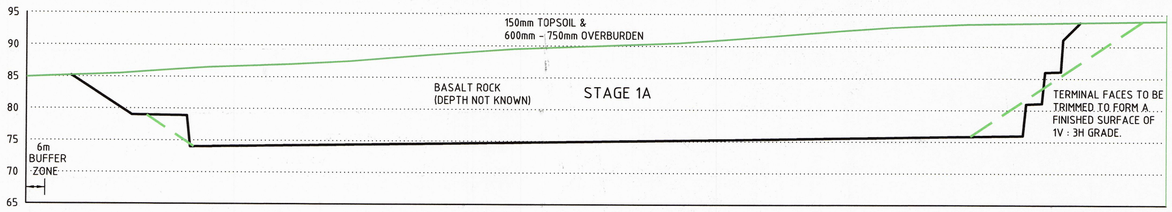
WORK AUTHORITY 1474
YOUNGS BASALT QUARRY
50 TRIGGS LANE LAANG
OVERALL SITE PLAN

SIZE	SCALE	PROJECT No.	SHEET No.	REV
A1	1 : 2000	11062-WP1	1 OF 5	-

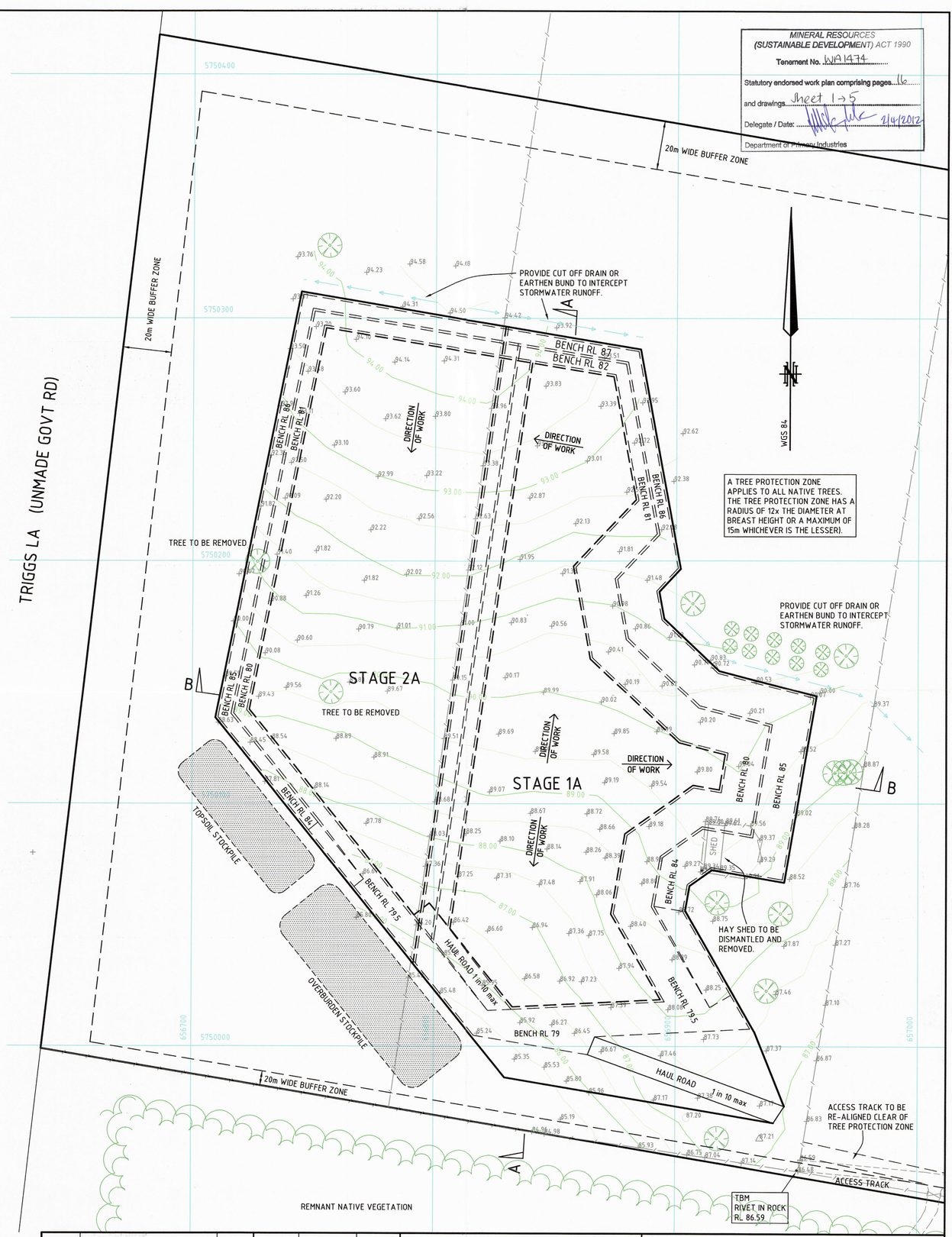


A TREE PROTECTION ZONE APPLIES TO ALL NATIVE TREES. THE TREE PROTECTION ZONE HAS A RADIUS OF 12x THE DIAMETER AT BREAST HEIGHT OR A MAXIMUM OF 15m WHICHEVER IS THE LESSER).

SECTION B - B



SECTION A - A



REVISION	DESCRIPTION	DATE		NAME	DATE
			SURVEY	CD TP	OCT 11
			DRAWN	C DRURY	OCT 11
			DESIGN	C DRURY	OCT 11
			CHECKED		
			APPROVED		
			CAD FILE	11062 WP1	

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PROJECT

WORK AUTHORITY 1474
YOUNGS BASALT QUARRY
50 TRIGGS LANE LAANG
AREA A WORK PLAN AND SECTIONS

SIZE	SCALE	PROJECT No.	SHEET No.	REV
A1	HOR 1 : 1000 VER 1 : 200	11062-WP2	2 OF 5	-

OVERBURDEN STOCKPILE

GRAZING FARMLAND

20m WIDE BUFFER ZONE

PROVIDE CUT OFF DRAIN
TO INTERCEPT STORMWATER.

EXISTING DRAIN

STAGE 1B TOPSOIL STOCKPILE

6m WIDE BUFFER ZONE

TOPSOIL STOCKPILE

OVERBURDEN STOCKPILE

STAGE 1B OVERBURDEN STOCKPILE

STAGE 9B TOPSOIL STOCKPILE

STAGE 9B OVERBURDEN STOCKPILE

STAGE 5B TOPSOIL STOCKPILE

STAGE 5B OVERBURDEN STOCKPILE

STAGE 12B

STAGE 9B

STAGE 8B

STAGE 5B

STAGE 3B

STAGE 2B

STAGE 11B

STAGE 10B

STAGE 7B

STAGE 6B

STAGE 1B

STAGE 4B

DIRECTION OF WORK

ACCESS TRACK

ACCESS TRACK TO BE RE-ALIGNED
CLEAR OF TREE PROTECTION ZONE

IMPORTED ORDINARY EARTH
TO BE PLACE ALONG THE
TOE OF THE SOUTH BATTER

HAUL ROAD 1 in 10 max

BENCH RL 82

A TREE PROTECTION ZONE
APPLIES TO ALL NATIVE TREES.
THE TREE PROTECTION ZONE HAS A
RADIUS OF 12x THE DIAMETER AT
BREAST HEIGHT OR A MAXIMUM OF
15m WHICHEVER IS THE LESSER).

REMNANT NATIVE VEGETATION

GRAZING FARMLAND

MINERAL RESOURCES
(SUSTAINABLE DEVELOPMENT) ACT 1990
Tenement No. WA 1474
Statutory endorsed work plan comprising pages 16
and drawings Sheet 1-5
Delegate / Date: 21/12/2012
Department of Primary Industries

REVISION	DESCRIPTION	DATE		NAME	DATE
			SURVEY	CD TP	OCT 11
			DRAWN	C DRURY	OCT 11
			DESIGN	C DRURY	OCT 11
			CHECKED		
			APPROVED		
			CAD FILE	11062 WP1	

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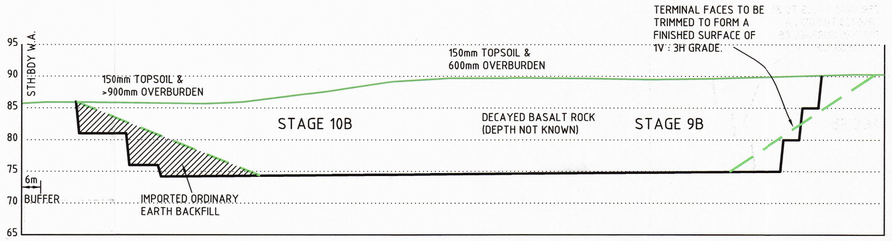
PROJECT
WORK AUTHORITY 1474
YOUNGS BASALT QUARRY
50 TRIGGS LANE LAANG
WORK PLAN SECTIONS

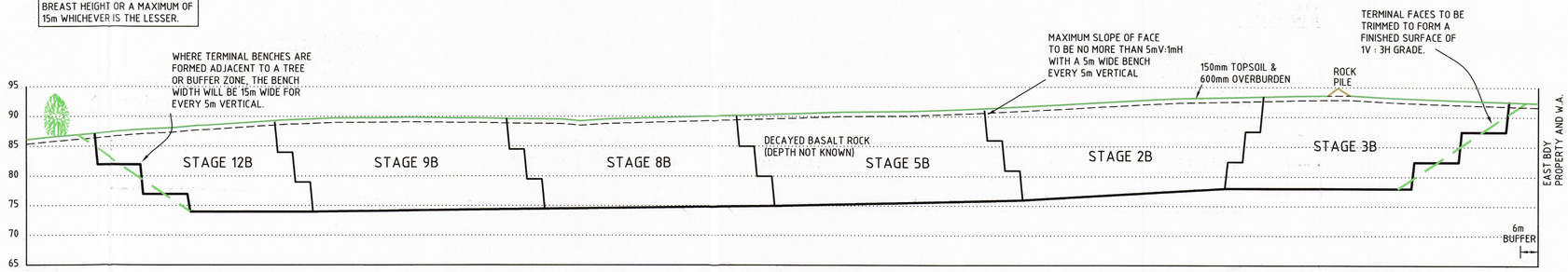
SIZE	SCALE	PROJECT No.	SHEET No.	REV
A1	1 : 1000	11062-WP2	3 OF 5	-



SECTION E - E

SECTION D - D

A TREE PROTECTION ZONE APPLIES TO ALL NATIVE TREES. THE TREE PROTECTION ZONE HAS A RADIUS OF 12x THE DIAMETER AT BREAST HEIGHT OR A MAXIMUM OF 15m WHICHEVER IS THE LESSER.



SECTION C - C

MINERAL RESOURCES
(SUSTAINABLE DEVELOPMENT) ACT 1990
Tenement No. WA 1474
Statutory endorsed work plan comprising pages... 16
and drawings... Sheet 1 → 5
Delegate / Date: 2/4/2012
Department of Primary Industries

REVISION	DESCRIPTION	DATE		NAME	DATE
			SURVEY	CD TP	OCT 11
			DRAWN	C DRURY	OCT 11
			DESIGN	C DRURY	OCT 11
			CHECKED		
			APPROVED		
			CAD FILE	11062 WP1	

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PROJECT
WORK AUTHORITY 1474
YOUNGS BASALT QUARRY
50 TRIGGS LANE LAANG
WORK PLAN SECTIONS

SIZE	SCALE	PROJECT No.	SHEET No.	REV
A1	HOR 1 : 1000 VER 1 : 200	11062-WP2	4 OF 5	-

FINISHED FLOOR AND TERMINAL BATTERS TO BE COVERED WITH 500 - 900mm OVERBURDEN TOPDRESSED WITH 200mm OF TOPSOIL AND SOWN WITH SEED FOR PASTURE.

1 : 200

EARTH BELOW STOCKPILES TO BE REINSTATED TO PASTURE GRASS.

ACCESS TRACK TO BE RETAINED

EARTH BELOW STOCKPILES TO BE REINSTATED TO PASTURE GRASS.

FINISHED FLOOR AND TERMINAL BATTERS TO BE COVERED WITH 500 - 900mm OVERBURDEN TOPDRESSED WITH 200mm OF TOPSOIL AND SOWN WITH SEED FOR PASTURE.

1 : 200

MINERAL RESOURCES
(SUSTAINABLE DEVELOPMENT) ACT 1990
Tenement No. WA 1474
Statutory endorsed work plan comprising pages 16
and drawings Sheet 1 → 5
Delegate / Date: 21/4/2012
Department of Primary Industries

				NAME	DATE
			SURVEY	CD TP	OCT 11
			DRAWN	C DRURY	OCT 11
			DESIGN	C DRURY	OCT 11
			CHECKED		
			APPROVED		
REVISION	DESCRIPTION	DATE	CAD FILE	10194 WP1	

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PROJECT

WORK AUTHORITY 1474
YOUNGS BASALT QUARRY
50 TRIGGS LANE LAANG
REHABILITATION PLAN

SIZE	SCALE	PROJECT No.	SHEET No.	REV
A1	1 : 1250	11062-R	5 OF 5	-