

EXTRACTIVE INDUSTRIES ACT 1966  
EXTRACTIVE INDUSTRIES REGULATIONS 1989

**APPLICATION FOR EXTRACTIVE  
INDUSTRY LEASE NO. 407.**

**INCORPORATING THE RENEWAL  
APPLICATION FOR  
EXTRACTIVE INDUSTRY LICENCE**

**NO. 742-1 &  
LEASE NO'S 115-1 & 243-1**

**WORKING PROPOSAL**

**BORAL QUARRY - CHARLTON**

**BORAL RESOURCES (VIC.) PTY. LIMITED.  
TRADING AS BORAL RESOURCES (COUNTRY)**

June 1995

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### Appendices:

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**Notes:**

**1. Plans referred to in this report are:-**

<b>Description</b>	<b>Size</b>	<b>Drawing No.</b>
Existing Conditions Plan	(A1)	VQ22-5
Future Development	(A1)	VQ22-6
Cross Sections	(A1)	VQ22-7
Long Sections	(A1)	VQ22-8
Staged Development Plan	(A1)	VQ22-9
Location Plan	(A4)	VQ22-10

## **1. INTRODUCTION**

The quarry is located on the northern end of a north-south trending topographical spur, that rises some fifty to sixty metres above the surrounding plain. Outcropping rock is present throughout the length of the spur. The area has a sparse tree cover comprising mainly of box and eucalypts. Extensive tree planting has taken place within the buffer zones adjacent to the Calder Highway.

## **2. HISTORY OF OPERATION**

Extractive Industry Licence No 742 and Extractive Industry Leases 115 and 243 were issued during May 1976 to BMG Resources Ltd for a period of ten years. The tenure has since been renewed to May 1996.

Boral Resources (Vic) Pty Ltd acquired the properties from BMG Resources on the 28th July 1989.

Application for Extractive Industries Lease 407 was made on the 7th September 1990.

## **3. GEOLOGY**

The rock is an unweathered well jointed hornfelsed siltstone of Ordovician age. It is dense, dark coloured, schistose in parts with only minor amounts of mica.

## **4. RESERVES**

Total reserves of stone are very large; development plans have been prepared for the extraction of some five million tonnes.

## 5. MARKETS

### (a) Crushed Rocks

Crushed rocks are provided to the local authorities and Councils, as well as the Shires in the Wimmera district.

### (b) Aggregates.

Concrete aggregates are provided to the local concrete plants as well as to the Boral plant adjacent to the quarry.

Sealing aggregates are used by Vic Roads and Emoleum. Ballast is occasionally supplied to Vic Rail.

## 6. OUTPUT

Output is at present some 100,000 tonnes per annum.

## 7. LAND DETAILS

### Extractive Industry Licence 742

Certificate of Title	:	Vol 5875	Folio 1174806
Easements	:	None	
Lease Arrangements	:	Land owned by Boral	
Parish	:	Charlton East	
County	:	Gladstone	
Planning Scheme	:	Charlton Planning Scheme	
Municipal District	:	Shire of Buloke	
Zoning	:	R16 - Stone Reserve	
Planing Permit	:	Not Applicable	

**Extractive Industry Lease 115**

Certificate of Title : Crown Land  
Easements : None  
Lease Arrangements : E.I. Lease 115 entered in register book  
Vol 335, Fol 081  
Parish : Charlton East  
County : Gladstone  
Planning Scheme : Charlton Planning Scheme  
Municipal District : Shire of Buloke  
Zoning : R16 - Stone Reserve

**Extractive Industry Lease 243**

Certificate of Title : Crown Land  
Easements : None  
Lease Arrangements : Extractive Industry Lease 243 entered in register book  
Vol 335, Fol 214  
Parish : Charlton East  
County : Gladstone  
Planning Scheme : Charlton Planning Scheme  
Municipal District : Shire of Buloke  
Zoning : R16 - Stone Reserve

**Extractive Industry Lease Application No. 407**

Certificate of Title : Crown Land  
Parish : Charlton East  
County : Gladstone  
Planning Scheme : Charlton Planning Scheme  
Municipal District : Shire of Buloke  
Zoning : R16 - Stone Reserve

**8. FENCING**

Farm type fencing is used throughout the lease and licence area.

**9. ACCESS ROADS**

Access from the quarry gates is directly onto the Calder Highway.

**10. VEHICLE PARKING AREAS**

Visitor parking for four cars is located adjacent to the office and weighbridge. Employee parking is provided at the rear of the workshop.

**11. BUFFER ZONES**

Buffer zones are marked on the existing conditions plan and are as required under the licence conditions, ie, twenty metres on the northern boundary and ten metres elsewhere except along common boundaries.

**12. TOPSOIL & OVERBURDEN STORAGE**

No topsoil or overburden is present within the quarry.

**13. WATER SUPPLY**

Water is pumped from the Wimmera Water Supply Channel to the quarry for approximately 6 weeks in any one year. This water is held in a water hole on site, immediately adjacent to the quarry area; and pumped from this location to a header tank as indicated on the plans.

#### 14. DUST SUPPRESSION

##### (a) Fixed Plant

Water sprays are fitted to the plant.

##### (b) Haul Roads

A 5,000 litre water cart is fitted with a spray action for dust suppression on the internal roads and stockpile areas.

##### (c) Stockpiles

Dust from stockpile and load out areas will be controlled by the water cart

#### 15. PLANT AND EQUIPMENT

##### (a) Fixed Plant

##### (i) Crushing/Screening Plant

###### Crushing Plant

- Primary - 36 x 24 Jaques Double Toggle
- Secondary - 3' Jaques Gyratory
- Tertiary - 2' 4" Jaques Gyratory  
36" Symonds Cone

##### (ii) Pug Mill

A pugmill has recently been installed.



**(b) Mobile Plant**

- (i) **Quarry** - R600 Mac Bin Dumper  
988B Caterpillar Loader

International Water Cart, 5,000 litre capacity  
A contractor uses a variety of vehicles to cart  
from the face to the Primary crusher.

- (ii) **Sales** - 380 Komatsu Loader.

**(c) Power Supply**

The main source of power is obtained from the S.E.C.V. grid.  
(see plan VQ22-5)

**(d) Fuel Storage**

Distillate is contained in 2 x 5,000 litre underground tanks.  
(see plan VQ22-5). A containing wall is to be constructed that will control any  
likely spillage of distillate on the ground surface. This will be constructed to  
the Mines Inspectors specification.

**16. WORKING METHOD****(a) General**

The quarry has been developed on four benches, the upper bench having  
reached its maximum extent.

Development will continue on the lower benches with the bench heights  
maintained below 12 metres.

**(b) Blast Details**

Drill patterns are at present 2.5 x 2.8 metres. Bulk explosives with Nonel detonators are used in conjunction with laser profiling. Size of shot 28,000 tonnes.

**(c) Drainage**

**Extraction area -** All water collected in the working area drains into the collection pond and is recycled through the plant.

**Plant Area -** Water around the plant and vehicle parking area evaporates and/or disappears from the site.

**(d) Staged Extraction****Stages 1 and 2**

Stages 1 and 2 will be worked in conjunction utilising the existing bench levels at RL 204, 197 and 189. This work will involve the complete removal of all stone to a floor level of RL 189, in the process removing the high face that forms the Southern boundary of the old northern quarry area. (See development plans VQ22-9 ). Reserves of stone available from this development are:-

Surface - RL 197      150,000 solid cubic metres.

RL 197 - RL 189      440,000 solid cubic metres.

Estimated time span for completion 8-10 years.

### Stages 3 and 4

Development plans have provided for two additional ten metre benches, below 189, giving an additional resource of  $1.4 \times 10^6$  solid cubic metres, sufficient at the present rate of production for thirty years.

## 17. RECLAMATION

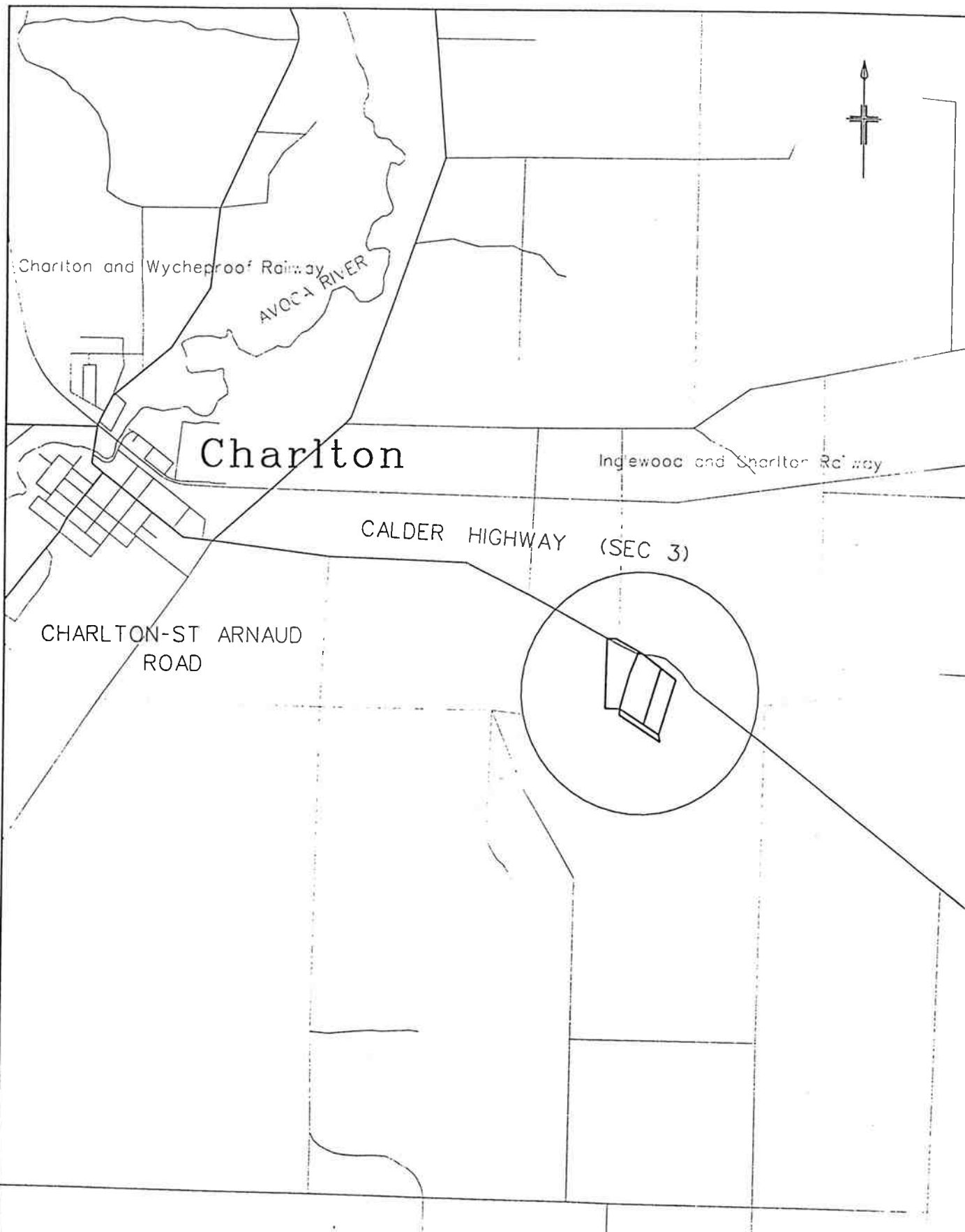
Within the time span of the proposed development, reclamation proposals are to:-

- (1) Stabilise the high terminal southern face, from RL 199, by battering the existing face to a  $30^\circ$  angle. It is for this purpose that the application has been made for extractive minerals lease 407.
- (2) Removal of the high face within the old workings. This will be achieved by the completion of stages 1 and 2 of the development proposals.
- (3) Further tree planting along the eastern margin of the proposed workings, thus breaking the sharp outline of the bench at RL 189 when it reaches the margin of development.

## APPENDIX A

### LOCATION PLAN

VQ22-10



EXTRACTIVE INDUSTRY LEASE  
NO'S 115 & 243  
LICENCE NO. 742

SCALE OF METRES

500 250 0 500 1000 1500 2000 2500

BORAL RESOURCES (Vic) PTY. LIMITED

## CHARLTON QUARRY LOCATION PLAN

DATE : APRIL 1995 DRAWN : RCM DRAWING NUMBER