



MINISTER FOR THE ENVIRONMENT; SCIENCE

Statement No.

000796

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED  
(PURSUANT TO THE PROVISIONS OF THE  
ENVIRONMENTAL PROTECTION ACT 1986)**

VOYAGER QUARRY  
LOTS 11 & 14, HORTON ROAD, THE LAKES  
AVON LOCATION 1881  
SHIRE OF NORTHAM

**Proposal:** The development and operation of a quarry incorporating excavation of approximately 60 million tonnes of hard rock, approximately 2 million tonnes of gravel and approximately 12 million tonnes of clay from the quarry footprint. The total area of disturbance will be up to 85 hectares, as documented in schedule 1 of this statement.

**Proponent:** BGC (Australia) Pty Ltd

**Proponent Addresses:**  
BGC (Australia) Pty Ltd  
ABN 62005736005  
Lot 4 Stirling Crescent  
HAZELMERE WA 6055

**Assessment Number:** 1413

**Report of the Environmental Protection Authority:** Bulletin 1169

The proposal referred to above may be implemented by the proponent subject to the following conditions and procedures:

**1 Implementation**

- 1-1 The proponent shall implement the proposal as documented in schedule 1 of this statement subject to the conditions and procedures of this statement.

Published on

**16 DEC 2005**

## **2 Proponent Commitments**

- 2-1 The proponent shall implement the environmental management commitments documented in schedule 2 of this statement.

## **3 Proponent Nomination and Contact Details**

- 3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person as the proponent for the proposal.
- 3-2 If the proponent wishes to relinquish the nomination, the proponent shall apply for the transfer of proponent and provide a letter with a copy of this statement endorsed by the proposed replacement proponent that the proposal will be carried out in accordance with this statement. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposal shall also be provided.
- 3-3 The nominated proponent shall notify the Department of Environment of any change of contact name and address within 60 days of such change.

## **4 Commencement and Time Limit of Approval**

- 4-1 The proponent shall substantially commence the proposal within five years of the date of this statement or the approval granted in this statement shall lapse and be void.

Note: The Minister for the Environment will determine any dispute as to whether the proposal has been substantially commenced.

- 4-2 The proponent shall make application for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement to the Minister for the Environment, prior to the expiration of the five-year period referred to in condition 4-1.

The application shall demonstrate that:

1. the environmental factors of the proposal have not changed significantly;
2. new, significant, environmental issues have not arisen; and
3. all relevant government authorities have been consulted.

Note: The Minister for the Environment may consider the grant of an extension of the time limit of approval not exceeding five years for the substantial commencement of the proposal.

## **5 Compliance Audit and Performance Review**

- 5-1 The proponent shall prepare an audit program and submit compliance reports to the Department of Environment which address:
1. the status of implementation of the proposal as defined in schedule 1 of this statement;
  2. evidence of compliance with the conditions and commitments; and
  3. the performance of the environmental management plans and programmes.
- 5-2 The proponent shall prepare a performance review program and submit annual performance review reports to the Department of Environment which address:
1. the major environmental issues associated with the project; the environmental objectives for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those objectives;
  2. the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology;
  3. significant improvements gained in environmental management, including the use of external peer reviews; and
  4. the proposed environmental objectives for the operations, including improvements in technology and management processes.

Note: Under sections 48(1) and 47(2) of the *Environmental Protection Act 1986*, the Chief Executive Officer of the Department of Environment is empowered to monitor the compliance of the proponent with the statement and should directly receive the compliance and performance review documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement.

## **6 Operating Hours**

- 6-1 Activities relating to quarrying, crushing and screening shall only be undertaken between the hours of 0700 and 1900 on weekdays which are not public holidays and between the hours of 0700 and 1330 on Saturdays. Activities relating to quarrying, crushing and screening must not be carried out on Sundays, public holidays or outside the permitted hours of operation required by this condition.

## **7 Protection of Bushland**

- 7-1 The proponent shall not clear or otherwise disturb native bushland on Lot 11 Horton Road, nor clear or otherwise disturb native bushland on Lot 14 Horton Road outside the 85 hectare operational boundary marked on Figure 2.
- 7-2 The proponent shall fence the perimeter of Lot 11 and Lot 14 Horton Road, and the perimeter of the operational boundary shown on Figure 3, to the requirements of the Minister for the Environment on advice of the Department of Conservation and Land Management.
- 7-3 Throughout the entire life of the quarry, the proponent shall maintain the fencing referred to in condition 7-2 in good condition, to the requirements of the Minister for the Environment on advice of the Department of Conservation and Land Management.

## **8 Fauna Relocation and Habitat**

- 8-1 Prior to clearing of vegetation or excavation of soil or rock in any area, whichever is the sooner, the proponent shall prepare a Fauna Relocation and Habitat Plan in consultation with the Department of Conservation and Land Management, to the requirements of the Minister for the Environment.

This Plan shall detail actions to relocate fauna to a place which reasonably approximates their existing habitat, and shall address relocation of the following fauna species:

- Brush-tailed Phascogale (*Phascogale tapoatafa*);
- Western Brush Wallaby (*Macropus irma*);
- Carpet Python (*Morelia spilota imbricata*);
- Dell's Skink (*Ctenotus delli*);
- Echidna (*Tachyglossus aculeatus*);
- Chuditch (*Dasyurus geoffroii*);
- Possums of any species; and
- Western Grey Kangaroo (*Macropus fuliginosus*).

This plan shall also address the salvage and relocation of tree hollows and habitat logs to provide habitats for fauna species.

- 8-2 The proponent shall implement the Fauna Relocation and Habitat Plan, required by condition 8-1, to the requirements of the Minister for the Environment on advice of the Department of Conservation and Land Management.
- 8-3 The proponent shall make the Fauna Relocation and Habitat Plan, required by condition 8-1, publicly available.

## **9 Restricted Area and Management of Trapdoor Spiders**

- 9-1 Subject to condition 9-2, no ground-disturbing activity shall occur in the area designated A on Figure 2.
- 9-2 Where the proponent demonstrates to the satisfaction of the Minister for the Environment on advice of the Environmental Protection Authority that:
- a) a similar sized population of the trapdoor spider present on Lots 11 and 14 Horton Road is present on other land; or
  - b) the remaining population of trapdoor spiders located on Lot 11 Horton Road and the portions of Lot 14 Horton Road to remain undisturbed will remain viable if the individuals located within Area A are removed; or
  - c) the population can be successfully translocated to the wild,
- then ground-disturbing activity may occur in Area A.
- 9-3 Prior to clearing of vegetation or excavation of soil or rock, the proponent shall prepare an Interim Trapdoor Spider Management Plan to ensure the protection of trapdoor spiders located within Area A from indirect impacts from quarrying activities.

## **10 Closure and Rehabilitation**

- 10-1 Prior to clearing of vegetation or excavation of soil or rock, whichever is the sooner, the proponent shall prepare a Closure and Rehabilitation Strategy, to the requirements of the Minister for the Environment.

The objective of this Strategy is to ensure that closure planning and rehabilitation are carried out as an integral part of quarry planning, development and operation.

The Strategy shall be consistent with the "Strategic Framework for Mine Closure (2000)" produced by the Minerals Council of Australia and the Australian and New Zealand Minerals and Energy Council, and shall:

- 1. detail the rehabilitation practices and timing of rehabilitation of all disturbed areas including stockpiles, overburden disposal areas, access roads, quarry pits and sumps;
- 2. detail the rehabilitation work to be undertaken in conjunction with site operations;
- 3. address rehabilitation of areas already cleared which do not form part of the operational footprint; and
- 4. incorporate a Visual Impact Strategy formulated to manage, ameliorate and screen visual impacts of the operations, including impacts from artificial lighting.

- 10-2 The proponent shall implement the Closure and Rehabilitation Strategy required by condition 10-1 and any subsequent updates as required by condition 10-3, to the requirements of the Minister for the Environment.
- 10-3 The proponent shall review and update the Closure and Rehabilitation Strategy required by condition 10-1 every five years, and shall include the outcomes of consultation with the owners and residents of land surrounding the project area to the requirements of the Minister for the Environment.
- 10-4 The proponent shall make the Closure and Rehabilitation Strategy required by condition 10-1 publicly available.

## **11 Ambient Dust Standard**

- 11-1 The proponent shall ensure that dust emissions from Lot 14 do not exceed an ambient PM<sub>10</sub> level of 50 micrograms per cubic metre averaged over a 24 hour period when measured at the property boundary.

## **12 Dust Monitoring and Remedial Action**

- 12-1 Prior to clearing of vegetation or excavation of soil or rock, whichever is the sooner, the proponent shall prepare a Dust Monitoring and Remedial Action Programme, to the requirements of the Minister for the Environment.

The objective of this Programme is, by monitoring dust concentrations, to ensure that dust associated with all operations (including land clearing, excavation, blasting, dust lift-off from stockpiles and general operational activities such as screening, crushing and transport) which emanates from and leaves the site complies with the standard prescribed in condition 11-1.

This Programme shall include but not be limited to:

1. continuous dust and meteorological monitoring;
  2. ambient dust monitoring at two or more Sensitive Sites in the vicinity of the quarry (See note 1, condition 17.);
  3. a reporting schedule for monitoring data and results;
  4. improvements to monitoring and reporting; and
  5. remedial action to be undertaken to prevent exceedances if the dust source is within the proposal area, or the dust arises from operational activities (including vehicular movements).
- 12-2 The proponent shall implement the Dust Monitoring and Remedial Action Programme required by condition 12-1 and any subsequent updates as required by condition 12-3.

- 12-3 The proponent shall review and update the Dust Monitoring and Remedial Action Programme required by condition 12-1 annually.
- 12-4 The proponent shall report to the Department of Environment any exceedances of the standard prescribed in condition 11-1.
- 12-5 The proponent shall provide a report to the Department of Environment relating to the exceedances referred to in condition 11-1 within seven days of being recorded, identifying the sources of the dust, and, if the source is within the proposal area, or from operational activities (including vehicular movements) and indicating remedial action undertaken to prevent further such exceedances.
- 12-6 The proponent shall make the Dust Monitoring and Remedial Action Programme required by condition 12-1 publicly available.

### **13 Ground and Surface Water**

- 13-1 Prior to clearing of vegetation or excavation of soil or rock, whichever is the sooner, the proponent shall prepare a Ground and Surface Water Monitoring and Remedial Programme, to the requirements of the Minister for the Environment.

The objective of this Programme is to monitor groundwater levels adjacent to the quarry, and the quantity and quality of surface water leaving the site to ensure that the operations are not resulting in a reduction of water levels of existing bores of neighbours or any significant decline in the quality of waters downstream of the quarry, and to define management actions and contingency measures to be implemented in the event of adverse impacts on the water levels of bores or salinity in downstream waters caused by quarry and associated operations.

This Programme shall:

- 1. be designed and implemented in a manner which is capable of identifying any adverse impacts from quarrying and associated activities on surface and groundwater in the vicinity of the proposal;
- 2. incorporate separate monitoring for surface water and groundwater;
- 3. identify key monitoring locations;
- 4. identify water quality criteria and limits to be met;
- 5. identify baseline levels for groundwater supplies on adjacent properties;
- 6. include a monitoring schedule;
- 7. include a reporting schedule; and

8. define management actions and contingency measures to be implemented in the event of adverse impacts on the water levels of bores or water quality in downstream waters caused by quarry and associated operations.
- 13-2 The proponent shall implement the Ground and Surface Water Monitoring and Remedial Programme required by condition 13-1 and any subsequent updates as required by condition 13-6.
- 13-3 The proponent shall ensure that water quality criteria and limits identified within the Ground and Surface Water Monitoring and Remedial Programme are not exceeded.
- 13-4 The proponent shall report any exceedance of the limits identified within the Ground and Surface Water Monitoring and Remedial Programme to the Department of Environment within 24 hours of being observed.
- 13-5 The proponent shall provide a report to the Department of Environment relating to the exceedances referred to in condition 13-4 within seven days of being recorded, identifying the sources of the exceedance within the proposal area and indicating remedial action undertaken to prevent further such exceedances.
- 13-6 The proponent shall review and update the Ground and Surface Water Monitoring and Remedial Programme required by condition 13-1 annually.
- 13-7 The proponent shall make the Ground and Surface Water Monitoring and Remedial Programme required by condition 13-1 publicly available.

#### **14 Management of Topsoil**

- 14-1 The proponent shall not stockpile overburden and topsoil onsite except in exceptional circumstances.

Note: "Stockpiling" means placement and storage of materials for periods of two weeks or more. Exceptional circumstances may include instances where vehicles and plant are not available to relocate stored material, or instances when inclement weather prevents the handling and/or transport of stored material.

#### **15 Noise from Vegetation Clearing and Site Preparation**

- 15-1 Prior to clearing of vegetation or excavation of soil or rock from any area (to a maximum depth of five metres), whichever is the sooner, the proponent shall prepare an Area-Specific Noise Management Plan to the requirements of the Minister for the Environment.
- 15-2 The proponent shall implement Area-Specific Noise Management Plans required by condition 15-1 and any subsequent updates as required by condition 15-3.



- 15-3 The proponent shall review and update the Area-Specific Noise Management Plans required by condition 15-1 annually, until completion of the particular area referred to in condition 15-1.
- 15-4 The proponent shall only carry out clearing of vegetation and excavation activities between 0700 hours and 1900 hours on any day which is not a Saturday, Sunday or a public holiday. The proponent may not carry out clearing of vegetation or excavation on Saturdays, Sundays, or public holidays or between the hours of 19:00 hours and 07:00 hours.
- 15-5 The proponent shall undertake a programme of noise quantification (incorporating modelling of predicted noise levels prior to commencement of clearing of vegetation and excavation of soil) and verification through noise monitoring for each stage of vegetation clearing and excavation activities, to the requirements of the Minister for the Environment.
- 15-6 The proponent shall ensure that the level of noise emissions associated with clearing of vegetation or excavation of soil or rock from any area to a maximum depth of five metres, when determined at any point that is within 15 metres of a residence on a noise-sensitive premises in accordance with regulation 7(3) of the *Environmental Protection (Noise) Regulations 1997*, does not exceed the following noise limits:
- 55dB(A) for more than 10 per cent of any one-hour period; and
  - 70dB(A) at any time,
- when measured as  $L_{A\ slow}$  values in accordance with Part 3 of the *Environmental Protection (Noise) Regulations 1997*.
- 15-7 During clearing of vegetation or excavation of soil or rock from any area to a maximum depth of five metres, whichever is the sooner, the proponent shall report to the Department of Environment within 24 hours of the recording of any exceedances of the noise limits specified in condition 15-6.
- 15-8 During clearing of vegetation or excavation of soil or rock from any area to a maximum depth of five metres, whichever is the sooner, upon identifying any exceedances of the noise limits specified in condition 15-6, the proponent shall provide a report within seven days of exceedances being recorded to the Department of Environment on the source/reason for the exceedance, remedial actions undertaken or intended to prevent further such exceedances.
- 15-9 The proponent shall make the Area-Specific Noise Management Plans required by condition 15-1 publicly available.

## **16 Operational Noise**

- 16-1 Prior to any excavation works below five metres depth from the surface, the proponent shall prepare an Operational Noise Measurement Programme to ensure that all noise

from the quarry is measured in accordance with Part 3 of the *Environmental Protection (Noise) Regulations 1997*.

- 16-2 The proponent shall implement the Operational Noise Measurement Programme required by condition 16-1 and any subsequent updates as required by condition 16-3.
- 16-3 The proponent shall review and update the Operational Noise Measurement Programme required by condition 16-1 annually.
- 16-4 The proponent shall utilise that form of safety alarm on items of equipment which produces the least noise whilst complying with all statutory requirements, particularly safety requirements.
- 16-5 The proponent shall report any exceedances of the *Environmental Protection (Noise) Regulations 1997*, aside from those which meet the requirements of condition 15-6, to the Department of Environment within 24 hours of exceedances being recorded.
- 16-6 Upon identifying any exceedances of the *Environmental Protection (Noise) Regulations 1997*, aside from those which meet the requirements of condition 15-6, the proponent shall provide a report, within seven days of exceedances being recorded, to the Department of Environment on the source/reason for the exceedance, remedial actions undertaken or intended to prevent further such exceedances.
- 16-7 The proponent shall make the Noise Measurement Programme required by condition 16-1 publicly available.

## **17 Ground Vibration Levels**

- 17-1 The proponent shall measure for each blast, the peak particle velocity (in millimetres per second) in the ground at a measurement point on two or more "Sensitive Sites", to the requirements of the Minister for the Environment (See Note 1 below).

Measurements of ground vibration levels shall be undertaken at points which are at a distance of at least the longest dimension of the foundations of a building or structure away from the building or structure, and between that building or structure and the blasting site.

- 17-2 The proponent shall ensure that the ground vibration generated by any blast does not exceed 10 millimetres per second peak particle velocity at any sensitive premises.
- 17-3 The proponent shall ensure that not more than one blast in any ten consecutive blasts (regardless of the interval between each blast) generates ground vibration which exceeds 5 millimetres per second peak particle velocity at any sensitive premises.
- 17-4 In the event that ground vibration levels in excess of the levels referred to in conditions 17-2 or 17-3 are recorded, the proponent shall notify the Department of Environment within six hours of the exceedance being recorded.

- 17-5 Within seven days following the levels referred to in conditions 17-2 or 17-3 being recorded, the proponent shall submit a report to the Department of Environment outlining the reasons for the levels being exceeded, and what steps are proposed to prevent recurrence.

Notes:

1. A "Sensitive Site" is defined as including any land within 10 metres of a residence, hospital, school or other premises in which people could reasonably be expected to be free from undue annoyance and nuisance caused by blasting.
2. The transducer is to be attached to the surface in accordance with AS2187.2.
3. "Peak Particle Velocity" is the instantaneous sum of the velocity vectors (measured in millimetres per second) of the ground movement caused by the passage of vibration from blasting.

## **18 Blast and Vibration Management Plan**

- 18-1 Prior to clearing of vegetation or excavation of soil or rock, whichever is the sooner, the proponent shall prepare a Blast and Vibration Management Plan to the requirements of the Minister for the Environment.

The objective of this Plan is to manage blasting activities to prevent unacceptable impacts on the amenity of nearby residents.

The Plan shall:

1. detail blast management and monitoring procedures at the quarry; and
2. identify communication procedures with local residents with respect to blasting.

- 18-2 The proponent shall implement the Blast and Vibration Management Plan required by condition 18-1 and any subsequent updates as required by condition 18-3.

- 18-3 The proponent shall review and update the Blast and Vibration Management Plan required by condition 18-1 annually and include the outcomes of consultation with the owners and residents of land surrounding the project area.

- 18-4 The proponent shall make the Blast and Vibration Management Plan required by condition 18-1 publicly available.

## **19 Community Liaison Group**

- 19-1 Prior to the finalisation of plans, strategies and programmes required by conditions 8-1, 9-3, 10-1, 12-1, 13-1, 15-1, 16-1 and 18-1, the proponent shall make reasonable endeavours to establish a Community Liaison Group to the requirements of the Minister for the Environment.

- 19-2 The objective of the Community Liaison Group is to provide a forum for consultation on matters relating to the planning, construction and operation of the proposal.
- 19-3 The Community Liaison Group shall be chaired by an independent person approved by the Minister for the Environment.
- 19-4 The proponent shall provide funding to cover the cost of work carried out by the approved chairperson as part of his/her role as chair of the Community Liaison Group.
- 19-5 Membership of the Community Liaison Group shall include representatives of:
- Local residents and landowners;
  - Local government authorities; and
  - Government agencies, including the Department of Environment.

### Procedures

- 1 The Environmental Protection Authority may seek advice from other agencies or organisations, as required, in order to provide its advice to the Department of Environment.
- 2 Where a condition lists advisory bodies, it is expected that the proponent will request the advice of those listed as part of its compliance reporting to the Department of Environment.
- 3 During the course of the operation of the project, in conjunction with the preparation of any plans, programmes, strategies or reports required under this statement, the proponent shall enquire of the local authority as to any matters raised by third parties with the local authority to the effect that the operation of the project has caused harm to the environment which exceeds any of the levels or standards required to be met under the conditions of this statement, and shall demonstrate in the relevant plan, program strategy or report that the proponent has responded reasonably to such matters.

### Notes

1. The Minister for the Environment will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environment over the fulfilment of the requirements of the conditions.
2. The proponent is required to apply for a Works Approval and Licence for this project under the provisions of Part V of the *Environmental Protection Act 1986*.

Dr Judy Edwards MLA  
MINISTER FOR THE ENVIRONMENT; SCIENCE

16 DEC 2005

## Schedule 1

### The Proposal (Assessment No. 1413)

The proposal is to undertake the development and operation of the Voyager Quarry in The Lakes, covering an area of approximately 85 hectares in the Shire of Northam. This proposal is also essentially a relocation to the west of the proponent's existing quarry at The Lakes, located on Great Southern Highway, to Lot 14 Horton Road (Avon Location 1881).

The development and operation of a quarry incorporating excavation of approximately 16 million tonnes of hard rock, approximately 2 million tonnes of gravel and approximately 12 million tonnes of clay from the quarry footprint. This will allow for approximately 50 million tonnes of granite to be excavated from the site over a 50-year period. The quarry footprint itself covers an area of approximately 59 hectares. Conventional drilling and blasting, loading and hauling, crushing and screening methods will be employed.

It is expected that the project's development will occur in six stages over the life of mine, with Stage 1 and Stage 2 being initially developed to provide room for the new below-ground facilities and infrastructure. Subsequent stages will then be developed as the need to access granite resources arises. The staged approach will ensure that excavation of the topsoil and subsoil (gravel and clay) will only occur on six occasions during the life of the mine, thereby enabling progressive rehabilitation. All infrastructure, crushing and screening plants and product stockpiles will be housed below ground level, and the site will be surrounded by a buffer of trees and vegetation.

A package of environmental offsets has been developed which seeks to permit revegetation and protection of approximately 170 hectares of land, as well as provide protection for further remnant vegetation managed by the Department of Justice.

The offsets package includes:

- The covenanting of approximately 120 hectares of native vegetation in good condition, held as freehold by the proponent. This should include the rehabilitation of the areas of native vegetation on the freehold land outside the proposed operational footprint, previously cleared by the proponent;
- The provision of up to 15 kilometres of fencing materials to the Department of Justice, to protect remnant vegetation and the Wooroloo Brook on land managed as prison farms; and
- The rehabilitation of approximately 60 hectares of gravel pits and other degraded lands within the region, managed by Local and State Government agencies to a standard agreed with the Department of Conservation and Land Management and the Department of Environment.

The key characteristics of the proposal are listed in Table 1 below.

**Table 1 - Key Proposal Characteristics (Assessment No. 1413)**

Element	Description
Type of Project	Hard rock quarry
Project Life	Approximately 50 years
Rate of Extraction	6,000 to 10,000 tonnes per day
Extraction Method	Conventional drilling, blasting, loading and hauling techniques
Location of Crushing and Screening Operations	Within the quarry pit, approximately 30 metres below the ground surface
Crushing and Screening Equipment	New equipment to be utilised onsite, incorporating improved pollution controls. Primary crusher will be housed within a noise reduction structure.
Final Quarry Dimensions	Length approximately 900 metres Width approximately 450 metres Depth approximately 50 metres
Footprint of Quarry pit	Approximately 59 hectares
Footprint of all Disturbances	Approximately 85 hectares
Quarry Operating Hours	0700 hours to 1900 hours during land clearing and excavation activities on any day which is not a Saturday, Sunday or Public Holiday  <u>Normal Operating Times</u> 0700 hours to 1900 hours Monday to Friday 0700 hours to 1330 hours Saturday  Note: No quarrying activities will be carried out on Sundays, public holidays or outside the permitted hours of operation as outlined above.
Major Components	Quarry Product Stockpiles Water Storage Dam Infrastructure (including processing plant, administration buildings, workshop and roads)
Water Storage Dam Capacity	150,000 kilolitres (kL)
Water Supply Source	Surface runoff and groundwater seepage
Average Daily Water Requirements	Summer - Approximately 380 kilolitres Winter - Approximately 780 kilolitres
Maximum Annual Water Requirements	Approximately 95,000 kL
Anticipated Quarry Yield	Gravel 1 to 2 million tonnes Clay 12 million tonnes approximately Hard rock 60 million tonnes approximately
Offsets Package	<ul style="list-style-type: none"> <li>The covenanting of approximately 120 hectares of native vegetation in good condition, held as freehold by the proponent, including the rehabilitation of the areas of native vegetation on the freehold land outside the proposed operational footprint, previously cleared by the proponent.</li> <li>Provision of not less than 15 kilometres of fencing to protect remnant vegetation on land managed by the Department of Justice.</li> <li>Rehabilitation of approximately 60 hectares of gravel pits and other degraded lands.</li> </ul>

**Figures (attached)**

Figure 1 – Regional setting

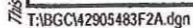
Figure 2 – Proposed Relocation of the Voyager Quarry.

Figure 3 – Areas of Lot 11 and Lot 14 Horton Road to be fenced.



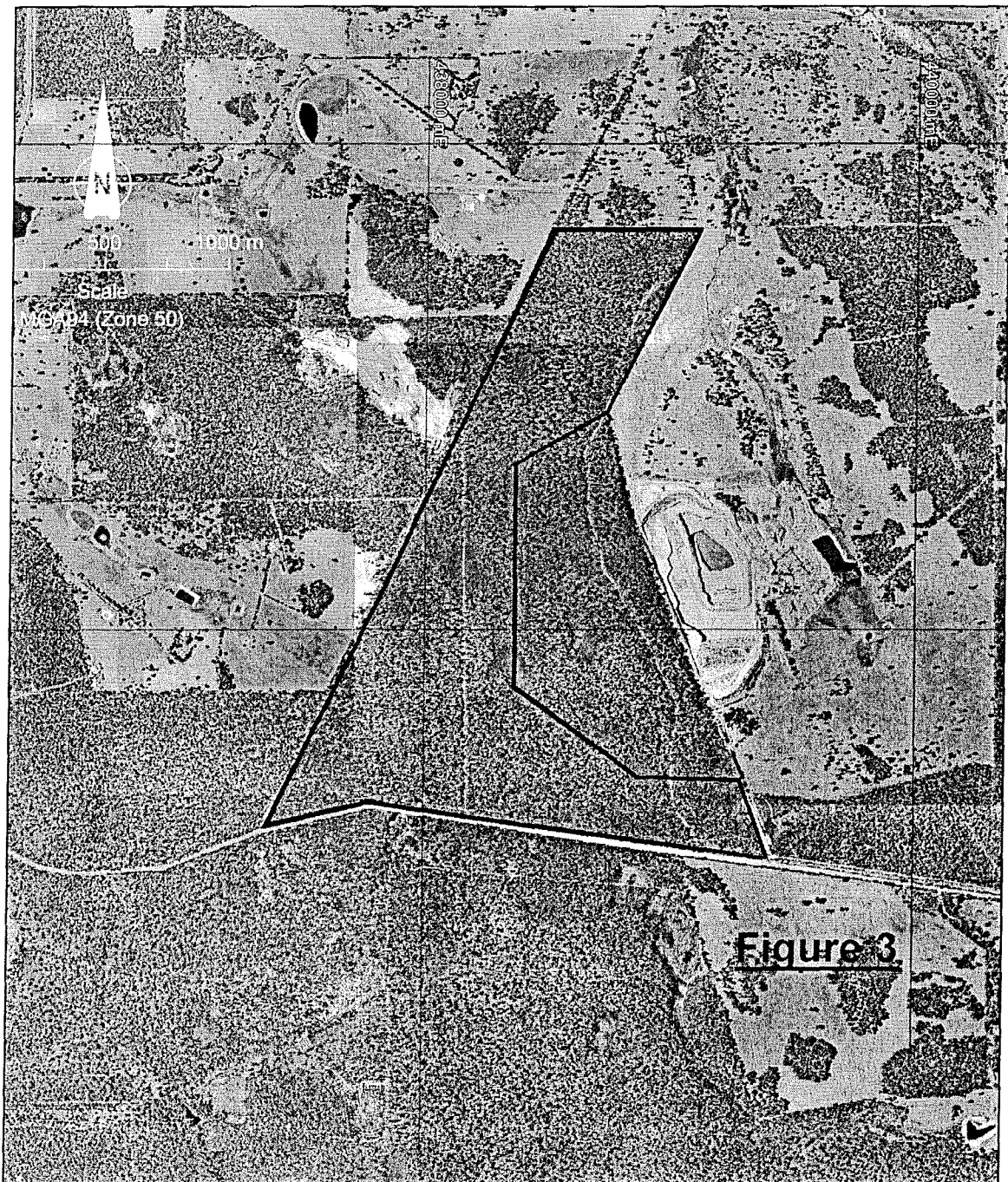
Figure 1 Regional setting





### Figure 2





*Figure 3: Areas of Lot 11 and Lot 14 Horton Road to be fenced*

**Proponent's Environmental Management Commitments**

May 2005

VOYAGER QUARRY  
LOTS 11 & 14, HORTON ROAD, THE LAKES  
AVON LOCATION 1881  
SHIRE OF NORTHAM

(Assessment No. 1413)

BGC (Australia) Pty Ltd

## Proponent's Environmental Management Commitments – May 2005

### Voyager Quarry, Lots 11 & 14 Horton Road, The Lakes, Avon Location 1881, Shire of Northam (Assessment No. 1413)

**Note:** The term "commitment" as used in this schedule includes the entire row of the table and its separate parts as follows:

- a commitment number
- a commitment topic;
- the objective of the commitment;
- the 'action' to be undertaken by the proponent;
- the timing requirements of the commitment; and
- the body/agency to provide technical advice to the Department of Environment.

No.	Topic	Objective	Action	Timing	Advice
1.	Protection and revegetation of areas of remnant vegetation	To increase the area of remnant vegetation within conservation reserves, and to provide suitable rehabilitation for areas of land already subject to disturbance	1. The covenanting of approximately 120 hectares of native vegetation in "good" condition, held as freehold by the proponent, including the rehabilitation of the areas of native vegetation on the freehold land outside the proposed operational footprint, previously cleared by the proponent	Prior to clearing vegetation or excavating soil or rock from any area, whichever is sooner.	CALM
			2. The provision of not less than 15 kilometres of fencing to the Department of Justice (DOJ), to protect 100 to 150 hectares of remnant vegetation and the Wooroloo Brook on land managed by DOJ as prison farms.	Programmes of work to address the revegetation of the remaining areas of land should commence within 12 months after approval for the Voyager Quarry is given.	CALM DOJ
			3. The rehabilitation of approximately 60 hectares of gravel pits and other degraded lands managed by Local and State Government agencies.	Programmes of work to address the revegetation of the remaining areas of land should commence within 12 months after approval for the Voyager Quarry is given.	CALM

#### Abbreviations:

CALM = Department of Conservation & Land Management

DOJ = Department of Justice

DRF = Declared Rare Flora

PER = Public Environmental Review

**ATTACHMENT 1 TO MINISTERIAL STATEMENT 706**

**NOTICE OF CHANGES TO IMPLEMENTATION CONDITIONS**

(section 46C of the *Environmental Protection Act 1986*)

VOYAGER QUARRY, LOTS 11 AND 14 HORTON ROAD, THE LAKES,  
AVON LOCATION 1881, SHIRE OF NORTHAM

Pursuant to section 46C(1)(a) of the *Environmental Protection Act 1986*, the implementation conditions applying to the above proposal are changed in accordance with this Notice. I consider these changes to be of a minor nature and desirable in order to standardise conditions relating to different proposals.

[Signed 20 May 2015]

**HON ALBERT JACOB MLA**  
**MINISTER FOR ENVIRONMENT; HERITAGE**

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1. **Condition 7-1 of Ministerial Statement 706 is deleted.**

## Attachment 2 to Ministerial Statement 706

### Change to proposal approved under section 45C of the *Environmental Protection Act 1986*

This Attachment replaces Schedule 1 of Ministerial Statement 706

**Proposal:** Voyager Quarry, Lots 11 and 14 Horton Road, The Lakes, Avon  
Location 1881, Shire of Northam

**Proponent:** BGC (Australia) Pty Ltd

#### Changes:

- Increase in the disturbance footprint by 6.5 hectares.
- Removal of 'Quarry Operating Hours'.
- Removal of elements that are not key proposal characteristics, or managed under other legislation.

**Table 1: Summary of the Proposal**

Proposal Title	Voyager Quarry, Lots 11 and 14 Horton Road, The Lakes, Avon Location 1881, Shire of Northam
Short Description	The development and operation of a quarry incorporating excavation of approximately 60 million tonnes of hard rock, approximately 2 million tonnes of gravel and approximately 12 million tonnes of clay from the quarry footprint.

**Table 2: Key Proposal Characteristics**

Element	Previously Authorised Extent	Authorised Extent
Type of Project	Hard rock quarry	<b>Deleted as incorporated into 'Summary of the Proposal'</b>
Project Life	Approximately 50 years	<b>Removed as not a key proposal characteristic</b>
Rate of Extraction	6,000 to 10,000 t per day	<b>Removed as regulated under Part V of the <i>Environmental Protection Act 1986</i></b>
Extraction Method	Conventional drilling, blasting, loading and hauling techniques	Conventional drilling, blasting, loading and hauling techniques
Location of Crushing and Screening Operations	Within the quarry pit, approximately 30 m below the ground surface.	Within the quarry pit, approximately 30 m below the ground surface.
Crushing and Screening Equipment	New equipment to be utilised onsite, incorporating improved pollution controls. Primary crusher will be housed within a noise reduction structure.	New equipment to be utilised onsite, incorporating improved pollution controls. Primary crusher will be housed within a noise reduction structure.
Final Quarry Dimensions	Length approximately 900 m Width approximately 450 m Depth approximately 50 m	Length approximately 900 m Width approximately 450 m Depth approximately 50 m

Element	Previously Authorised Extent	Authorised Extent
Footprint of Quarry Pit	Approximately 59 ha	<b>Not more than 59 ha</b>
Footprint of all Disturbances	Approximately 85 ha	<b>Not more than 91.5 ha</b>
Quarry Operating Hours	0700 hours to 1900 hours during land clearing and excavation activities on any day which is not a Saturday, Sunday or Public Holiday. <u>Normal Operating Times</u> 0700 hours to 1900 hours Monday to Friday 0700 to 1330 hours Saturday Note: No quarrying activities will be carried out on Sundays, public holidays or outside the permitted hours of operation as outlined above.	<b>Removed as regulated under Part V of the <i>Environmental Protection Act 1986</i> and the <i>Environmental Protection (Noise) Regulations 1997</i>.</b>
Major Components	Quarry Product Stockpiles Water Storage Dam Infrastructure (including processing plant, administration buildings, workshop and roads).	Quarry Product Stockpiles Water Storage Dam Infrastructure (including processing plant, administration buildings, workshop and roads).
Water Storage Dam Capacity	150,000 kL	150,000 kL
Water Supply Source	Surface runoff and groundwater seepage	Surface runoff and groundwater seepage
Average Daily Water Requirements	Summer – approximately 380 kL Winter – approximately 780 kL	<b>Deleted as dust impacts are regulated under Part V of the <i>Environmental Protection Act 1986</i></b>
Maximum Annual Water Requirements	Approximately 95,000 kL	<b>Deleted as dust impacts are regulated under Part V of the <i>Environmental Protection Act 1986</i></b>
Anticipated Quarry Yield	Gravel 1 to 2 million t Clay 12 million t approximately Hard rock 60 million t approximately	<b>Deleted as not a key proposal characteristic. Incorporated into 'Summary of the Proposal'.</b>
<b>Protection and management of areas of remnant vegetation</b>	<ul style="list-style-type: none"> <li>The covenanting of approximately 120 ha of native vegetation in good condition, held as freehold by the proponent, including the rehabilitation of the areas of native vegetation on the freehold land outside the proposed operational footprint, previously cleared by the proponent.</li> <li>Provision of not less than 15 km of fencing to protect remnant vegetation on land managed by the Department of Justice.</li> <li>Rehabilitation of approximately 60 ha of gravel pits and other degraded lands.</li> </ul>	<ul style="list-style-type: none"> <li><b>The protection and management of</b> approximately 120 ha of native vegetation in good condition, held as freehold by the proponent, including the rehabilitation of the areas of native vegetation on the freehold land outside the proposed operational footprint, previously cleared by the proponent.</li> <li>Provision of not less than 15 km of fencing to protect remnant vegetation on land managed by the Department of Justice.</li> <li>Rehabilitation of approximately 60 ha of gravel pits and other degraded lands.</li> </ul>

Note: Text in **bold** in Table 2 indicates a change to the proposal.

**Table 3: Abbreviations**

Abbreviation	Term
ha	hectare
kL	kilolitre
km	kilometre
m	metre
t	tonnes

**List of Replacement Figures – all previous Figures are replaced by the following:**

- Figure 1      Locality of the Voyager II Quarry  
Figure 2      Voyager II Quarry Project Boundary and Project Footprint  
Figure 3      Areas of Lot 11 and Lot 14 Horton Road to be fenced

[Signed 27 May 2015]

**Dr Paul Vogel**  
CHAIRMAN  
Environmental Protection Authority  
under delegated authority





Figure 1: Locality of the VoyagerII Quarry





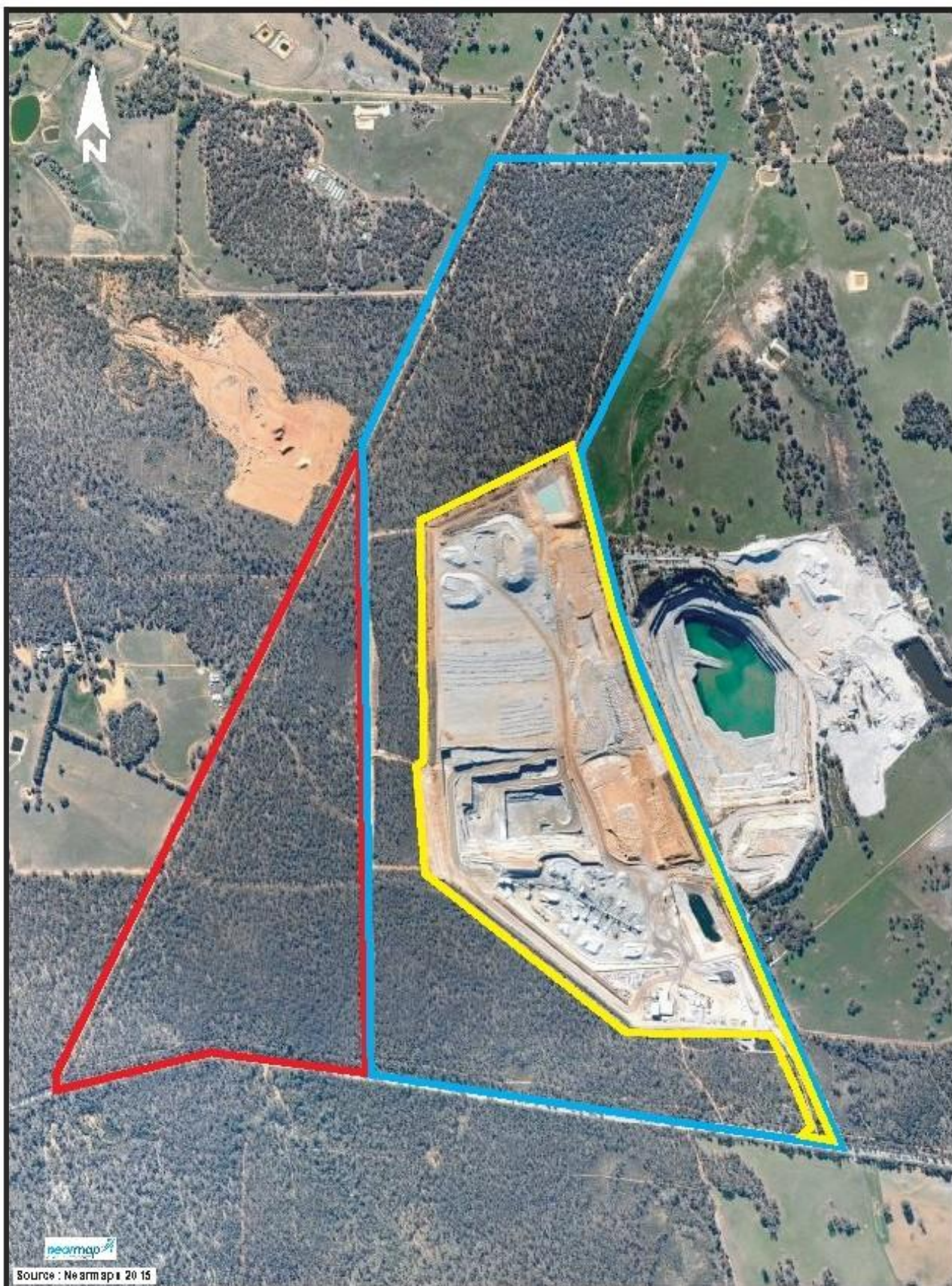


Figure 2: Voyager II Quarry Project Boundary and Project Footprint

- Lot 11 Boundary (Shire of Mundaring)
- Lot 14 Boundary (Shire of Northam)
- Project Footprint





Figure 3: Areas of Lot 11 and Lot 14 Horton Road to be fenced

— Fencing