

Appendix 1

Development Consent No. 267-11-99



Department of
Urban Affairs and Planning

Dr L. S. Martin
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Development and Infrastructure
Assessment

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P98/00772 Pt 3

Dear Dr. Martin,

Extraction of sand, clay and pebble – DA number 267-11-99

The Minister for Urban Affairs and Planning, the Hon Andrew Refshauge MP, has granted consent to your Development Application for the extraction and on-site processing of sand, clay and pebble at lots 1 and 2 DP 228308 and Lot 2 DP 312327, Roberts Road, Maroota, in the Baulkham Hills Local Government Area, subject to conditions. Pursuant to clause 68A of the *Environmental Planning and Assessment Regulation, 1994* a copy of the development consent is attached for your information.

The Instrument of Consent sets out the date on which the Application was determined and reasons for the conditions. The Consent becomes effective and operates 28 days from the date of this letter in accordance with Section 83 of the *Environmental Planning and Assessment Act 1979*.

If you are dissatisfied with this decision, section 97 of the *Environmental Planning and Assessment Act, 1979* gives you the right to appeal to the Land and Environment Court within 12 months after the date on which you receive this notice.

If you have any questions, please contact Caitlin Richards on (02) 9391 2176.

Yours sincerely

Richard Lloyd
Senior Environmental Planning Officer
Development and Infrastructure Assessment

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

DETERMINATION OF A DEVELOPMENT APPLICATION UNDER SECTION 80(1) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

I, the Minister for Urban Affairs and Planning, under Section 80(1) of the Environmental Planning and Assessment Act, 1979 (the Act), determine the Development Application referred to in Schedule 1 by granting consent to the Application, subject to the conditions set out in Schedule 2.

The reason for the imposition of conditions is to minimise any adverse environmental effects of the development, consistent with the objectives of the Act.



Andrew Refshauge MP
Minister for Urban Affairs and Planning

Sydney 31 MAY 2000

File No. S98/00772

SCHEDULE 1

Application made by:	Dr L. S. Martin ("the Applicant").
To:	The Minister for Urban Affairs and Planning ("the Minister").
In respect of:	Lots 1 and 2 DP 228308, Lot 2 DP 312327, Roberts Road, Maroota, in the Baulkham Hills Local Government Area.
For the following:	Extraction and on-site processing of sand, clay and pebble; construction of a bund wall.
Development Application:	DA No. 267-11-99 lodged with the Department of Urban Affairs and Planning on 22 November 1999, accompanied by a Environmental Impact Statement prepared by Nexus Environmental Planning Pty Ltd. and dated November 1999.
Determination:	<ol style="list-style-type: none"> 1) To ascertain the date upon which the consent becomes effective, refer to Section 83 of the Act. 2) To ascertain the date upon which the consent is liable to lapse, refer to Section 95 of the Act. 3) Section 97 of the Act confers on an applicant who is dissatisfied with the determination of a consent authority a right of appeal to the Land and Environment Court exercisable within 12 months after receipt of notice.

SCHEDULE 2**Conditions of Development Consent****Abbreviations and Interpretation**

The Act	<i>Environmental Planning and Assessment Act 1979</i> , as amended.
Approval from EPA	means approved in writing by the EPA or as specified as a condition of a licence.
BCA	Building Code of Australia
construction	construction of the perimeter bund wall
Council	Baulkham Hills Shire Council
DA	Development Application
DCP 500	Baulkham Hills Shire Council Development Control Plan No. 500 – Extractive Industry
The Department	the Department of Urban Affairs and Planning
The Director-General	Director-General of the Department of Urban Affairs and Planning, or nominee
DLWC	Department of Land and Water Conservation
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EPA Licence	means a licence under the <i>Protection of the Environment Operations Act 1997</i>
GTA	General Term of Approval
L _{A10} (15 minute)	is the sound pressure level that is exceeded for 10% of the time when measured over a 15 minute period.
NPWS	National Parks and Wildlife Service
PCA	Principal Certifying Authority
Subject Site	Lots 1 and 2 DP 228308, Lot 2 DP 312327, Roberts Road, Maroota, in the Baulkham Hills Local Government Area.

INTEGRATED DEVELOPMENT

Integrated development is development (not being complying development) that, in order for it to be carried out, requires development consent and one or more of the approvals set out in the Act. The subject proposal is integrated development, as it requires development consent and the approval of the Environment Protection Authority under the *Protection of the Environment Operations Act 1997* and, the approval of the Department of Land and Water Conservation under Parts 2 and 5 of the *Water Act 1912*. The general terms of approval of both the EPA and the DLWC therefore form part of this Consent.

GENERAL***Obligation to Prevent and Minimise Harm to the Environment***

1. There is an obligation on the Applicant to prevent and minimise harm to the environment throughout the life of the project. This requires that all practicable measures are to be taken to prevent and minimise harm that may result from the construction, operation and, where relevant, the decommissioning of the development.

Adherence to Terms of DA and EIS

2. Development shall be carried out in accordance with:
 - (a) DA No. 267-11-99;

- (b) the Environmental Impact Statement prepared by Nexus Environmental Planning Pty Ltd., dated November 1999, including the landscaping plan attached to the EIS;
- (c) all additional information supplied to the Department in relation to the development including:
- the two faxes from Dick Benbow and Associates Pty Ltd. dated 17 February 2000 and attachments;
 - the letter from Dick Benbow and Associates Pty Ltd dated 27 January 2000;
 - the letter from Dick Benbow and Associates Pty Ltd dated 5 January 2000 and attachments;
 - the fax from Holmes Air Sciences dated 21 December 1999;
 - the letter from Nexus Environmental Planning Pty Ltd dated 21 December 1999 and attachments;
 - the letter from Woodward-Clyde dated 21 December 1999; and,
 - the letter from Woodward-Clyde dated 16 December 1999

except as modified by the following Conditions.

In the event of an inconsistency between this Consent and DA No. 267-11-99 (and the accompanying EIS), this Consent shall prevail.

Compliance

3. The Applicant shall comply with all reasonable requirements of the Director-General in respect of the implementation of the Conditions of this Consent, within such time as the Director-General agrees. The Director-General may order the Applicant to cease work until non-compliance has been addressed to the Director-General's satisfaction.
4. The Applicant shall ensure that all contractors and sub-contractors are aware of, and comply with, the Conditions of this Consent.
5. The Applicant shall comply with all relevant conditions prescribed in Part 7 of the *Environmental Planning and Assessment Regulation 1994*, as required by Section 80A (11) of the Act.
6. The Applicant will submit a Conditions Compliance Report to the Director-General prior to the commencement of extraction in areas that are not currently subject to extraction. Subsequent reports will be submitted annually for the first three years of extraction in areas not currently subject to extraction. Further reports shall be submitted as required by the Director-General.

To enable ready comparison with the EIS's predictions, diagrams and tables, the Conditions Compliance Reports shall include, but not be limited to, the following matters:

- (a) a compliance audit of the performance of the project against conditions of Consent and statutory approvals;
- (b) a review of the effectiveness of the environmental management of the development;
- (c) the results of environmental monitoring required under this Consent or other approvals, including interpretations and discussion by a suitably qualified person;
- (d) a listing of any variations obtained to approvals applicable to the DA since the last report;
- (e) a record of all complaints and the actions taken to mitigate all such complaints;
- (f) a report detailing the rehabilitation measures undertaken since the last report; and
- (g) environmental management targets and strategies for stages of the development yet to be completed.

7. The Director-General may, after considering a Conditions Compliance Report, notify the Applicant of any reasonable requirements for compliance with this Consent. The Applicant shall comply with those requirements within such time as the Director-General may direct.

Note: The Applicant is obliged to ensure that all statutory requirements, including all relevant legislation, Regulations, Australian Standards, Codes, Guidelines and Notices, Conditions and Directions of the Councils and relevant government agencies are met and approvals obtained.

Commencement and duration

8. No extraction shall commence in areas that are not currently subject to extraction, until the Applicant has:
- (a) constructed the perimeter bund wall;
 - (b) submitted the Conditions Compliance Report required under Condition 6; and
 - (c) obtained all licences necessary for the commencement of extraction.
9. The duration of extraction under this Consent is for a maximum period of 15 years. The Applicant shall ensure that rehabilitation of all disturbed areas is completed within six months of completion of extraction.

Complaints Procedures

10. Prior to commencement of construction, the Applicant shall:
- (a) publicise a telephone number on which complaints about the subject development can be registered during the hours of operation in Condition 16; and
 - (b) publicise a postal address where written complaints may be lodged.
- The telephone number and postal address shall be displayed on the property where it can be read from a public road, for the duration of the development.
11. The Applicant shall record details of all complaints received and actions taken in response to complaints in an up-to-date log book. The log book shall be made available for inspection upon request by the Director-General, the EPA or the Council; and a summary of complaints received shall be included in the Conditions Compliance Reports under Condition 6.
12. The Applicant shall ensure that an initial response to complaints is provided to the complainant within 24 hours of receipt. The Applicant shall then:
- (a) investigate the concerns raised by the complainant and undertake all reasonable attempts to determine the cause of concern; and
 - (b) if adverse impacts are identified, undertake all practicable measures to modify the activity which may be causing the impacts.
13. If the Applicant's response does not address the complaint to the satisfaction of the complainant within six weeks, the Applicant shall inform the Director-General and take any action as directed by the Director-General. This may include a requirement to carry out independent investigations of noise and/or dust at the cost of the Applicant, in accordance with Condition 14.
14. If the Director-General is satisfied that an independent investigation is required, the Applicant shall:
- (a) appoint a qualified independent person or team to plan and implement an investigation to qualify the impact and determine the sources of the impact; and
 - (b) bear the cost of the independent investigation and make available plans, programs and other information necessary for the independent person to form an appreciation of the past, present and future works and their effects on dust and/or noise emissions.

This investigation is to be carried out in accordance with a documented Plan. The Plan shall be designed and implemented to measure and/or compute (with appropriate calibration by measurement) the relevant noise and/or dust levels at the complainant's property, that are emitted by the development; and specify a monitoring period and reporting schedule.

The independent person or team, the Plan and the timing of its implementation, shall be approved by the Director-General. The independent person or team shall report to the Director-General and the Applicant.

Further independent investigations shall cease if the Director-General is satisfied that the relevant levels are not being exceeded and are unlikely to be exceeded in the future.

Dispute Resolution

15. In the event that the Applicant, Council, the PCA, or a government authority other than the Department, cannot agree on the specification or requirements applicable under this Consent, the matter shall be referred by either party to the Director-General or, if not resolved, to the Minister, whose determination of the disagreement shall be final and binding on the parties.

HOURS OF OPERATION

16. Unless prior written approval of the EPA is obtained, the hours of operation are:
- construction: 7.00am to 6.00pm Monday to Friday
 - extraction and processing of material: 7.00am to 6.00pm, Monday to Friday and 7.00am to 1.00pm on Saturdays
 - vehicle loading: 6.00am to 6.00pm, Monday to Friday and 6.00am to 1.00pm on Saturdays.
- No works shall be undertaken on Sundays or Public Holidays.

These restrictions do not apply to routine maintenance work, such as the repair of machinery, provided the work does not result in exceedance of the noise limits in Condition 47.

DEPTH OF EXTRACTION

17. Baulkham Hills Shire Council Development Control Plan for Extractive Industries (DCP 500) requires that the depth of extraction incorporate a 2m freeboard above the wet weather high groundwater level. To meet the objectives of this policy, the Applicant shall ensure that the depth of extraction is consistent with the depth as shown in the extraction plan in the EIS and follow the procedures in Condition 40 if groundwater is encountered during extraction.

ENVIRONMENTAL MANAGEMENT PLAN

18. The Applicant shall prepare a Construction Environmental Management Plan (EMP) to the satisfaction of the Director-General prior to commencement of construction. The Construction EMP shall contain appropriate measures which demonstrate how the environmental objectives for the project will be achieved, including objectives stated in this Consent; and contain a monitoring, reporting and response program.
19. The Applicant shall prepare an Operational Environmental Management Plan (EMP) in consultation with the relevant authorities and to the satisfaction of the Director-General, prior to the commencement of extraction under this Consent. The EMP shall incorporate and integrate environmental management for the existing extraction areas, as well as the areas approved under this Consent.
20. The Operational EMP shall include, but not be limited to:
- (a) environmental objectives for the site;
 - (b) the Air Quality Management Plan (Condition 29);

- (c) the Soil and Water Management Plan (Condition 38);
 - (d) the Noise Management Plan (Condition 46);
 - (e) the Road Noise Management Plan (Condition 48);
 - (f) the Flora and Fauna Management Plan (Condition 55); and
 - (g) the Rehabilitation Plan (Condition 58).
21. The Applicant shall make copies of both EMPs available to Council, EPA and DLWC within 14 days of approval by the Director-General. The Applicant shall also make a current copy of the EMPs available for inspection by the public or these agencies, for the duration of the Consent.
22. The Applicant shall, in consultation with the Director-General, the EPA and the DLWC, update the Operational EMP from time to time in order to ensure continuing compliance with the Conditions of this Consent and all relevant approvals and licenses. The EMR shall be responsible for determining if any significant changes to the Operational EMP should be referred to the Director-General for approval.

Environmental Management Representative

23. The Applicant shall be ultimately responsible for ensuring that all environmental safeguards proposed for the development, and as required by this Consent and other statutory approvals, are monitored and complied with. The Applicant shall nominate a management representative who has the authority to stop work if an adverse impact on the environment has occurred or is likely to occur. The Director-General shall approve the management representative.

The management representative shall:

- (a) oversee the receipt of, and response to, complaints about the environmental performance of the development; and
 - (b) liaise with the community in relation to matters of concern associated with the environmental impact of the development – this may involve public meetings from time to time.
24. The Applicant shall, for the duration of this Consent, engage suitably qualified environmental consultant(s) to assist the management representative in the environmental management of the project.

The environmental consultant(s) shall, in addition to assisting with the matters listed in Condition 23:

- (a) be responsible for the preparation or certification of all environmental management plans;
- (b) be responsible for considering and advising the Applicant on matters specified in the Conditions of this Consent and compliance with such matters;
- (c) facilitate an induction and training program for all persons involved with construction, extraction and rehabilitation activities; and
- (d) be present on-site during any critical construction or operation activities as defined in the EMPs.

INDEPENDENT ENVIRONMENTAL AUDIT

25. Every three (3) years from the date of this Consent, at the completion of works under this Consent, and at any additional time(s) as the Director-General may direct, the Applicant will arrange for an Independent Environmental Audit of the development. The audit will be conducted pursuant to ISO 14010 – Guidelines and General Principles for Environmental Auditing and ISO 14011 – Procedures for Environmental Auditing (or the current versions) and any specifications of the Director-General. The Applicant shall submit 4 copies of the report to the Director-General, who shall provide a copy to the EPA, DLWC and Council.

The audit will :

- (a) assess compliance with the requirements of this Consent, licence and approvals;
- (b) review the effectiveness of the environmental management of the development, including any mitigation works;

- (c) be carried out at the Applicant's expense; and
 - (d) be conducted by a duly qualified independent person or team approved by the Director-General.
26. The Director-General may, after considering an audit report and any submissions made by the EPA, DLWC and Council on the report, notify the Applicant of any reasonable requirements for compliance with this Consent. The Applicant shall comply with those requirements within such time as the Director-General may direct.

WASTE

27. The Applicant must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal, or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by a licence under the *Protection of the Environment Operations Act 1997*. This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence under the *Protection of the Environment Operations Act 1997*.¹

AIR QUALITY

Air Quality Criteria

28. The Applicant shall take all practical steps to manage the development so that the ambient air quality goals for total suspended particles (TSP) of 90ug/m³ (annual average) and the dust deposition goal of 4gm/m² (annual average) are not exceeded as a result of the development, when measured at any monitoring location specified in the Air Quality Management Plan.

Air Quality Management

29. The Applicant shall prepare and implement an Air Quality Management Plan as part of the EMP. The Air Quality Management Plan shall:
- (a) identify existing and potential sources of dust deposition, TSP and fine particulates (PM₁₀ and PM_{2.5}) and specify appropriate monitoring intervals and locations. The purpose of the monitoring is to evaluate, assess and report on these emissions and the ambient impacts with the objective of understanding the development's contribution to levels of dust deposition, TSP and fine particulates in ambient air around the site;
 - (b) provide a monitoring plan having regard to local meteorology and the relevant Australian Standards, identifying the methodologies to be used, including justification for monitoring intervals, weather conditions, seasonal variations, selecting locations, periods and times of measurements;
 - (c) provide details of dust suppression measures for all sources of dust from the development, including a planting and watering regime to ensure that no more than 3 hectares of the site are exposed and active at any one time. The use of a polymer in the water to minimise dust impacts shall be investigated as part of this Plan;
 - (d) provide details of actions to ameliorate impacts if they exceed the relevant criteria; and
 - (e) provide the design of the reactive management system intended to reduce the day-to-day impacts of dust and fine particulates due to the development.
30. Activities occurring at the premises must be carried out in a manner that will minimise emissions of dust from the premises.²
31. The Applicant shall cease offending work at such times when the operations are resulting in visible dust emissions blowing in a direction so as to cross onto public roads or lands not owned by the Applicant.

¹ Environment Protection Authority General Term of Approval

² Environment Protection Authority General Term of Approval

32. The Applicant shall install, operate and maintain a sprinkler system to adequately water all cleared areas and stockpiles so as to minimise dust emissions to acceptable levels.
33. The Applicant shall ensure that all vehicular movements on unsealed areas are restricted to specific routes and that all vehicles within the subject site keep to a speed limit of 30 km/h.
34. The Applicant shall ensure that trucks are covered when entering and leaving the premises carrying loads of potentially dust generating material.

Air Quality Monitoring

35. All monitoring equipment is to be installed and operational prior to commencement of construction.
36. Operation of dust deposition gauges and monitoring must be carried out in accordance with;
 - (a) Australian Standard 3580.10. 01 (1991) Particulates – Deposited Matter – Gravimetric Method. Approved method AM-19 referred to in *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*, December 1999.
 - (b) Australian Standard 2724.3 (1984) Particulate Matter – Determination of Total Suspended Particulates (TSP) - High Volume Sampler Gravimetric Method. Approved method AM 15 referred to in *Approved Methods for the sampling and Analysis of Air Pollutants in New South Wales*, December 1999.
 - (c) Australian Standard 3580.9.6 (1990) for Suspended Particulate Matter – PM10 High Volume Sampler with Size Selective Inlet-Gravimetric Method. Approved method AM-18 referred to in *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*, December 1999³
37. A meteorological station measuring wind speed and direction must be installed and operated by the Applicant at a site determined in consultation with the EPA.⁴

WATER QUALITY

Soil and Water Management Plan

38. The Applicant shall prepare and implement a Soil and Water Management Plan as part of the EMP. This plan shall be updated on an annual basis, to the satisfaction of DLWC and in consultation with DLWC. This Plan shall have particular regard to the most recent editions of the Department of Housing's publications *Managing Urban Stormwater: Soils and Construction (1998)*, and the requirements of Council's Development Control Plan 500 – Extractive Industries.

The Soil and Water Management Plan shall contain, but not be limited to:

- (a) management of the impacts of all phases of the development on the quality and quantity of surface and groundwater, including water in storage, sedimentation dams and flooding impacts;
- (b) details of measures to be employed to minimise soil erosion and the discharge of sediment to land and/or waters;
- (c) management of the impacts of the development on nearby creeks and waterbodies, in particular, the Hawkesbury River;
- (d) a strategy for the decommissioning of water management structures, including storage, sedimentation and leachate dams once extraction is complete;
- (e) identification of all potential sources of water pollution and a detailed description of the remedial action to be taken or management systems to be implemented to minimise emissions of these pollutants from all sources within the subject site;

³ Environment Protection Authority General Term of Approval

⁴ Environment Protection Authority General Term of Approval

- (f) description of monitoring methodologies and standards that will be adhered to;
- (g) identification of the locations where monitoring will be carried out;
- (h) detailed description of the monitoring cycle and the duration of each monitoring cycle;
- (i) details of actions to ameliorate impacts if they exceed the relevant criteria;
- (j) detail any exceedances and the mitigative actions used; and
- (k) emergency contingency plans for implementation in the event that the groundwater is encountered during excavation (see Condition 40).

Water Monitoring

39. Groundwater monitoring shall be undertaken on a regularly scheduled basis to provide data suitable for the determination of the wet weather high groundwater level, to the satisfaction of DLWC. A network of monitoring bores shall be installed at appropriate locations across the site to accommodate these objectives.⁵

Groundwater Management

40. The Applicant shall immediately notify DLWC in the event of groundwater being encountered during excavation. The location and elevation of such intersections is to be reported to allow determination by DLWC whether the water table occurs within a perched aquifer or if it is at a regional level. In the event of breaching of the groundwater table, operations are to cease and DLWC consulted immediately to determine the basis upon which extraction may recommence.⁶ If no response is received from DLWC within 24 hours, the Applicant shall implement the emergency contingency plans as described in the Soil and Water Management Plan (Condition 38). The Applicant shall advise the Director-General of the results of any such incidents under this Condition.
41. Site works and excavations are to be backfilled or infilled only with earth and rock materials sourced as a result of extraction operations in the Maroota area.⁷ This condition does not apply to the construction of the perimeter bund wall.

Licensable Groundwater Works

42. All groundwater investigation/monitoring and groundwater supply works are required to be licensed with the DLWC under the provisions of the *Water Act 1912*. A licence under Part 5 of the *Water Act 1912* is required to authorise a water supply bore (10BL157594) for industrial (Sand Washing) purposes and stock.

Surface Water Management

43. The applicant shall not allow any tailwater drainage to discharge into or onto:
- any adjoining public or Crown road;
 - any other persons land;
 - any Crown land;
 - any river, creek or watercourse;
 - any groundwater aquifer;
 - any native vegetation as described under the *Native Vegetation Conservation Act 1997*;
 - any wetlands of environmental significance.⁸
44. Surface stormwater runoff from the disturbed areas on the site must be directed to the sedimentation dam(s).⁹

⁵ Department of Land and Water Conservation General Term of Approval

⁶ Department of Land and Water Conservation General Term of Approval

⁷ Department of Land and Water Conservation General Term of Approval

⁸ Department of Land and Water Conservation General Term of Approval

Dam Licensing

45. A license will be required for any new dams under Part 2 of the *Water Act 1912*. The Applicant shall submit design plans/ survey of the structures as required by DLWC.¹⁰

NOISE

Noise Management Plan

46. The Applicant shall prepare and implement a Noise Management Plan as part of the EMP.

The Noise Management Plan shall:

- (a) identify existing and potential noise sources and their relative contribution to noise impacts from the development;
- (b) specify appropriate intervals for noise monitoring to evaluate, assess and report noise emission levels due to construction and normal operations of the development under prevailing weather conditions;
- (c) outline the methodologies to be used, including justification for monitoring intervals, weather conditions, seasonal variations, selecting locations, periods and times of measurements, the design of any noise modelling or other studies, including the means for determining the noise levels emitted by the development;
- (d) specify measures to be taken to document any higher level of impacts or patterns of temperature inversions, and detail actions to quantify and ameliorate enhanced impacts if they occur;
- (e) provide details of noise amelioration measures, including measures to be used to reduce the impact of intermittent, low frequency and tonal noise (including truck reversing alarms) and reactive management responses for particular noise sources; and
- (f) contingency measures to be implemented should noise complaints be received.

Operational Noise Limits

47. Noise from the premises must not exceed:
- an $L_{A10(15\text{ minute})}$ noise emission criterion of 45 dB(A) (7am to 6pm) Monday to Saturday.
 - an $L_{A10(15\text{ minute})}$ noise emission criterion of 40 dB(A) (6am and 7am) Monday to Saturday.
 - an $L_{A1\text{ minute}}$ noise emission criterion of 50 dB(A) (6am and 7am) Monday to Saturday

Noise from the premises is to be measured at any affected receptor to determine compliance with this Condition.

Note: Noise measurement

For the purpose of noise measures required for this Condition, the L_{A10} noise level must be measured or computed at any point as specified below over a period of 15 minutes using "FAST" response on the sound level meter.

For the purpose of the noise criteria for this condition, 5dBA must be added to the measured level if the noise is substantially tonal or impulsive in character. The location or point of impact can be different for each development, for example, at the closest residential receiver or at the closest boundary of the development. Measurement locations can be:

- 1 metre from the facade of the residence for night time assessment;
- at the residential boundary;

⁹ Environment Protection Authority General Term of Approval

¹⁰ Department of Land and Water Conservation General Term of Approval

- 30 metres from the residence (rural situations) where boundary is more than 30 metres from residence.

The noise emission limits identified in this condition apply for prevailing meteorological conditions (winds up to 3m/s), except under conditions of temperature inversions. Noise impacts that may be enhanced by temperature inversions must be addressed by:

- documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions;
- where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under temperature inversions conditions should be developed and implemented.¹¹

TRAFFIC AND TRANSPORT

Road Noise Management Plan

48. The Applicant shall ensure that traffic noise from the development does not exceed (L Aeq(1 hr)) 55 dB(A) between 7 am and 10 pm and 50 dB(A) between 10 pm and 7 am at any affected residence under adverse weather conditions. Where ambient Leq levels already exceed these criteria, the Applicant shall ensure that traffic noise from the development does not result in an increase of more than 2 dB(A).

Note: Adverse weather conditions means in the presence of winds up to 3 metres per second and/or temperature inversions of up to 4 degrees Centigrade per 100 metres.

49. The Applicant shall prepare a Road Noise Management Plan as part of the EMP. The Plan shall document measures to be taken to meet the criteria, including a monitoring, reporting and response program; and methods for educating drivers in the reduction of road noise impacts.

Truck movements

50. The Applicant shall ensure that truck movements associated with the development do not exceed 100 movements per day (50 laden truck movements) or 20 (10 laden truck movements) movements per hour, during construction or operation.

Section 94A Contributions

51. The Applicant shall pay to Council a contribution under Section 94A of the Act at the rate of \$0.65 per tonne of all extracted/ processed material transported from the subject site.

The following conditions apply to the payment of this contribution:

- (A) The contribution will be calculated and paid monthly from the date of this Consent;
- (b) The contribution will be indexed and adjusted annually as from the date of Consent, in accordance with the Consumer Price Index. This adjustment will be applicable to each financial year for the duration of this Consent and shall take effect from and including July each year, commencing 1 July 2000;
- (c) On or before the fourteenth day of each month for the duration of the Consent, the Applicant shall deliver to Council weighbridge records showing the true quantities of extracted/processed material transported from the property during the immediately preceding month and the Council will then, as soon as it can conveniently do so, issue an invoice to the Applicant, to be paid within fourteen days;
- (d) The Council has the right to inspect and have the original records relating to any extraction/processing material, including numbers and types of laden trucks, trailers and load

¹¹ Environment Protection Authority General Term of Approval

quantities transported from the property audited, at any time when Council makes a written request to do so;

- (e) The Council will pay all the said contribution payments into a specially identified account for payment towards the rehabilitation, restoration, repair and/or maintenance of Old Northern and Wisemans Ferry Roads within the Baulkham Hills Shire boundary.

Note: This condition has been imposed in accordance with Council's Contributions Plan No. 6 – Extractive Industries. A copy of this plan may be inspected at the Customer Service Centre, Council's Administration Complex, corner of Carrington and Showground Roads, Castle Hill, between the hours of 8:30 am and 4:30 pm weekdays.

FLORA AND FAUNA

52. The Applicant shall conserve the six *Acacia bynoeana* plants in the following manner:
- (a) a conservation area is to be established, containing the six plants and incorporating a 30 metre buffer;
 - (b) the boundary of the conservation area shall be surveyed and marked by a suitably qualified surveyor, with the assistance of a botanist/ecologist;
 - (c) the surveyed boundary shall be fenced to prevent vehicles entering the area;
 - (d) no clearing, construction or extraction shall occur within 30 metres of any plant identified in the EIS until steps (a) to (c) have occurred.
53. The Applicant shall not clear the strip of remnant vegetation along the southern fence line (Old Northern Road) and the vegetation to the north of the site entrance (Roberts Road) containing Blue Mountains Mahogany (*Eucalyptus notabilis*). This area shall be fenced off to prevent vehicles entering the area.
54. In constructing the perimeter bund wall, the Applicant shall minimise disturbance to existing native vegetation.

Flora and Fauna Management Plan

55. The Applicant shall prepare a Flora and Fauna Management Plan as part of the EMP. The Plan shall be prepared in consultation with National Parks and Wildlife Service and Council, and shall:
- (a) describe the characteristics and location of species, populations and communities that the proposal may impact upon;
 - (b) consider the feasibility and practicality of salvaging trees removed for the development for relocation to conserved or rehabilitated areas, for the purposes of reconstructing habitat for ground fauna
 - (c) contain a program for the active management and maintenance of all conserved and rehabilitated vegetation (as detailed in the EIS and required under this Consent) including consideration of:
 - post-extraction land use objectives for the site;
 - utilisation of local endemic species or species naturally occurring in the Maroota area;
 - planting around the *Acacia bynoeana* conservation area to further buffer this species and enhance its long term viability as a bushland ecosystem;
 - connection of existing areas and future areas of revegetation to form a network of wildlife corridors throughout site and to adjoining lands to facilitate species recruitment through natural immigration;
 - provision of rocks of varying sizes to provide refuge and basking sites for herpetofauna;
 - fencing of revegetated areas to prohibit grazing by stock; and
 - provision of artificial nest boxes for a range of arboreal fauna.
 - (d) mitigation measures to be implemented should operations compromise the significant flora and fauna communities identified in the EIS; and

- (e) an ongoing monitoring program of the existing and proposed revegetated areas to assess their floristical structure and diversity, resilience and robustness to disturbance, and fauna species diversity. The information obtained from the monitoring shall be used to guide future revegetation and management efforts.
56. The Applicant shall maintain the revegetated areas for the duration of the Consent. Maintenance may include:
- replanting failed or unsatisfactory areas
 - repairing erosion problems
 - fire management – fire suppression or fire encouragement
 - pest and weed control
 - control of feral animal populations
 - maintain and repair fencing
 - fertiliser application
 - watering plants in drier areas, especially in the establishment phase
 - application of lime or gypsum to control pH and improve soil structure.

HERITAGE

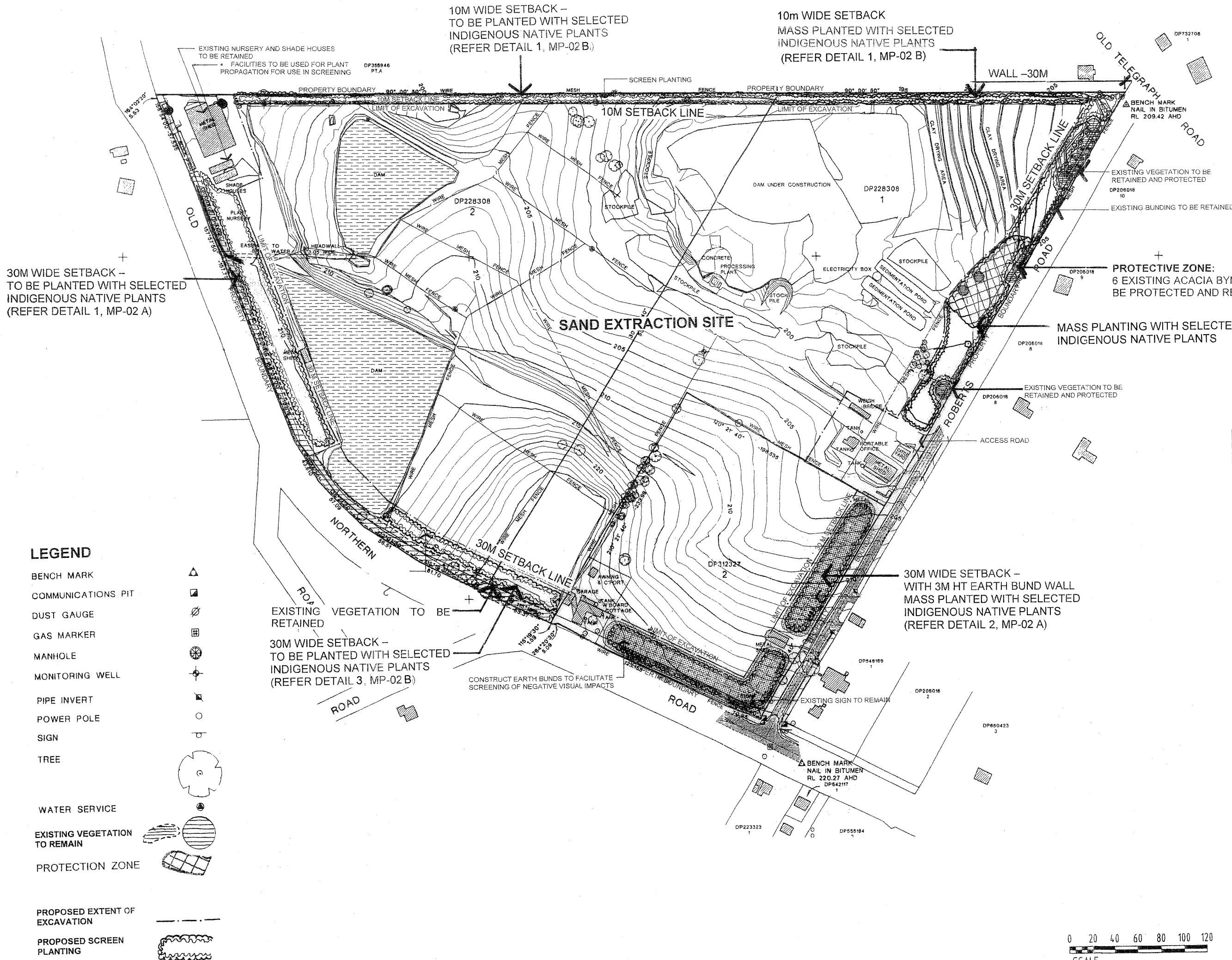
57. If, during the development, the Applicant becomes aware of any heritage or archaeological material, all work likely to affect the material shall cease immediately and the relevant authorities consulted about an appropriate course of action prior to recommencement of work. The relevant authorities may include NPWS, the Heritage Office, and the Local Aboriginal Land Councils. Any necessary permits or consents shall be obtained and complied with prior to recommencement of work.

REHABILITATION PLAN

58. The Applicant shall prepare a Plan for the staged rehabilitation of the site as part of the EMP. The Rehabilitation Plan shall:
- (a) outline procedures for the implementation of rehabilitation measures within an acceptable timeframe;
 - (b) document the source of material for rehabilitation and methods to ensure that no contaminated or otherwise unsuitable material is brought onto the site; and
 - (c) detail the preferred option for the final landform and the implementation of this landform.

Appendix 2

**Landscape Plans MP-02B to MP-05B
Plus a series of photographs of the existing bunds**



30M WIDE SETBACK - TO BE PLANTED WITH SELECTED INDIGENOUS NATIVE PLANTS (REFER DETAIL 1, MP-02 A)

10M WIDE SETBACK - TO BE PLANTED WITH SELECTED INDIGENOUS NATIVE PLANTS (REFER DETAIL 1, MP-02 B)

10m WIDE SETBACK MASS PLANTED WITH SELECTED INDIGENOUS NATIVE PLANTS (REFER DETAIL 1, MP-02 B)

PROTECTIVE ZONE: 6 EXISTING ACACIA BYNOEANA TO BE PROTECTED AND RETAINED

MASS PLANTING WITH SELECTED INDIGENOUS NATIVE PLANTS

30M WIDE SETBACK - WITH 3M HT EARTH BUND WALL MASS PLANTED WITH SELECTED INDIGENOUS NATIVE PLANTS (REFER DETAIL 2, MP-02 A)

EXISTING VEGETATION TO BE RETAINED
30M WIDE SETBACK - TO BE PLANTED WITH SELECTED INDIGENOUS NATIVE PLANTS (REFER DETAIL 3, MP-02 B)

CONSTRUCT EARTH BUNDS TO FACILITATE SCREENING OF NEGATIVE VISUAL IMPACTS

LEGEND

- BENCH MARK
- COMMUNICATIONS PIT
- DUST GAUGE
- GAS MARKER
- MANHOLE
- MONITORING WELL
- PIPE INVERT
- POWER POLE
- SIGN
- TREE
- WATER SERVICE
- EXISTING VEGETATION TO REMAIN
- PROTECTION ZONE
- PROPOSED EXTENT OF EXCAVATION
- PROPOSED SCREEN PLANTING

North point

	D.A. ISSUE - BUND REMOVED IN SELECTED AREAS	JULY 00
B	D.A. ISSUE	OCT 99
Issue	Rev.	Revision Description

Landscape Architect

SCOTT MURRAY & ASSOCIATES
Landscape Architecture
Golf Course Architecture
Environmental Planning
Urban Design

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Prepared by

NEXUS ENVIRONMENTAL PLANNING PTY LTD

Project

**LOT 1 + 2 DP 228308
LOT 2 DP 312327
MAROOTA**

Title

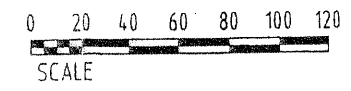
INITIAL EARTH BUNDING & BOUNDARY PLANTING PLAN

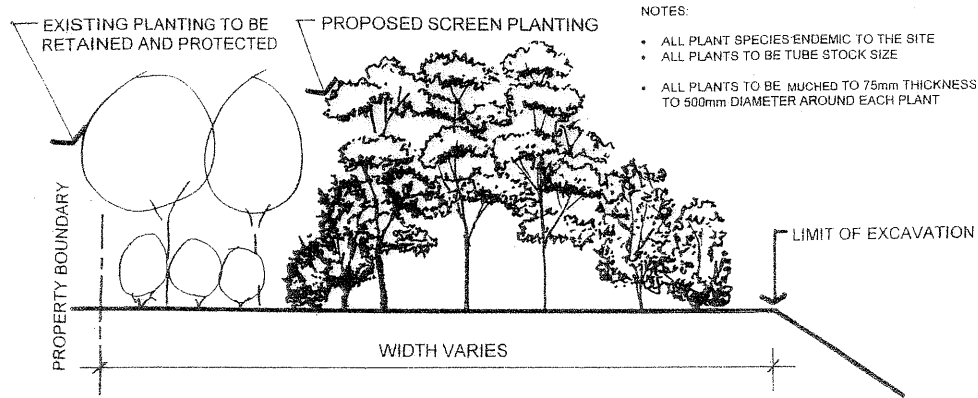
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Date			Director Verification

Job Number - Drawing Number

MP-01

B

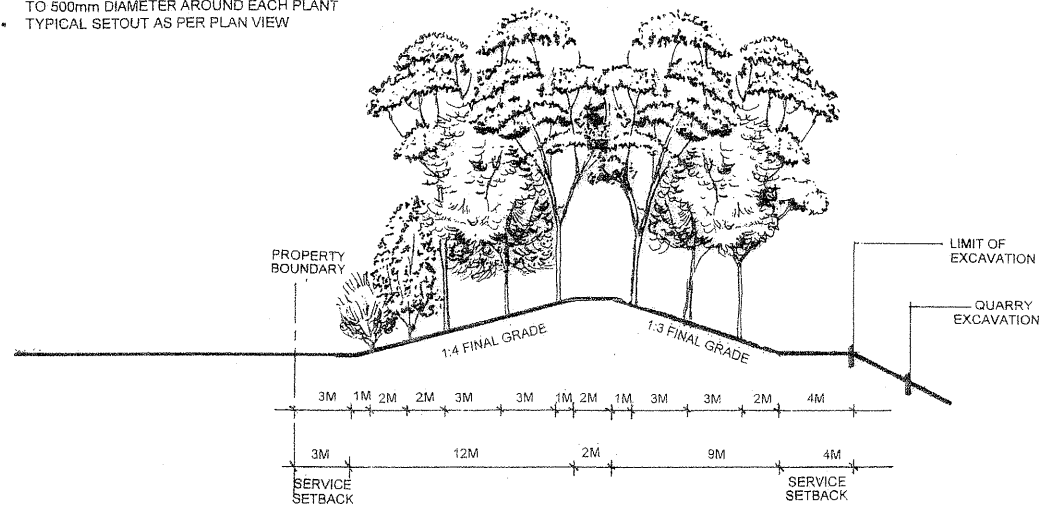




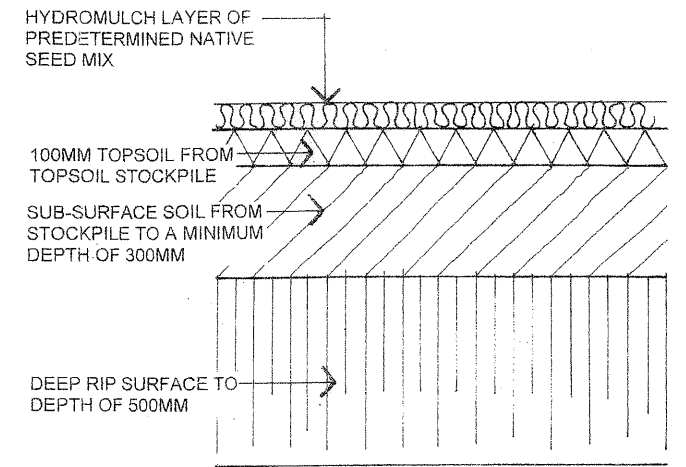
1 TYPICAL SCREEN PLANTING DETAIL WITHIN 10M SETBACK TO BOUNDARY NTS

- NOTES:
- ALL PLANT SPECIES ENDEMIC TO THE SITE
 - ALL PLANTS TO BE TUBE STOCK SIZE
 - ALL PLANTS TO BE MULCHED TO 75mm THICKNESS TO 500mm DIAMETER AROUND EACH PLANT

- NOTES:
- ALL PLANT SPECIES ENDEMIC TO THE SITE
 - ALL PLANTS TO BE TUBE STOCK SIZE
 - ALL PLANTS TO BE MULCHED TO 75mm THICKNESS TO 500mm DIAMETER AROUND EACH PLANT
 - TYPICAL SETOUT AS PER PLAN VIEW

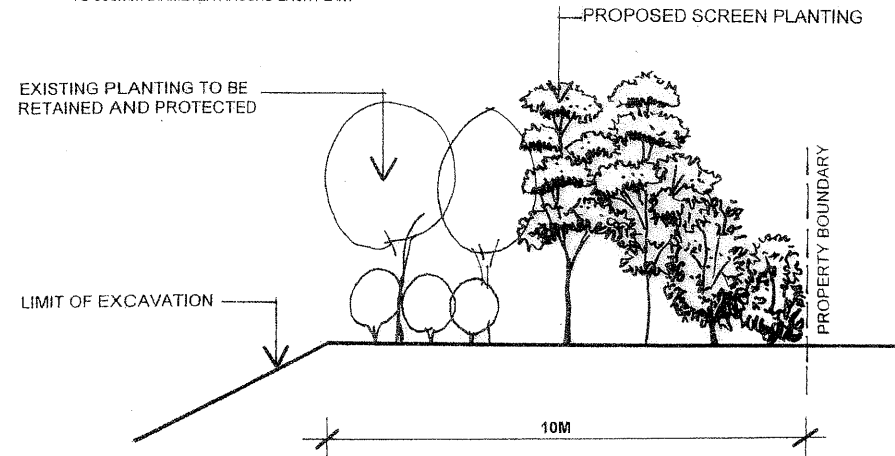


2 TYPICAL 30M WIDE BUND PLANTING DETAIL 1:200



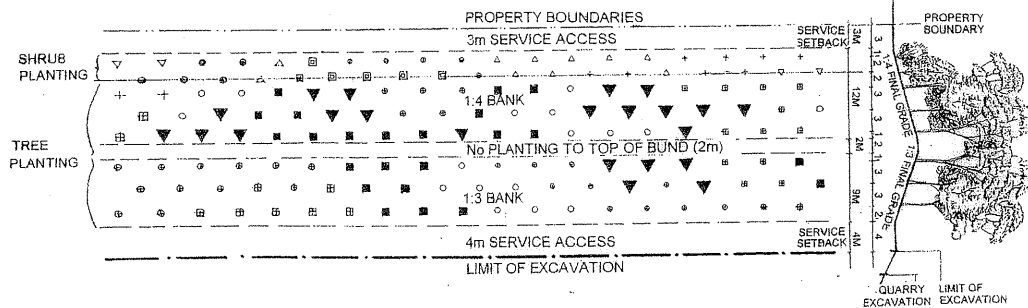
5 TREATMENT OF FINAL EXCAVATED SURFACES 1:10

- NOTES:
- ALL PLANT SPECIES ENDEMIC TO THE SITE
 - ALL PLANTS TO BE TUBE STOCK SIZE
 - ALL PLANTS TO BE MULCHED TO 75mm THICKNESS TO 500mm DIAMETER AROUND EACH PLANT



3 TYPICAL SCREEN PLANTING DETAIL WITHIN 30M SETBACK TO BOUNDARY NTS

- NOTES:
- TREES & SHRUBS TO BE PLANTED IN COPSES WITH A MINIMUM NUMBER OF 5 & A MAX OF 1 PER COPSE
 - PLEASE NOTE THAT THIS MATRIX IS TYPICAL & PLANTS SHOULD BE SET-OUT AS SHOWN



4 TYPICAL PLANTING SET-OUT TO BUNDS (Matrix) 1:500

GRASS SEED MIX

The grass seed component of the hydromulch mix shall, depending on the season, be made up of the following grasses: -

Autumn / Winter Mix

Oats	15Kg/ha
Rye Grass	10Kg/ha
White Clover	5Kg/ha
Red Clover	5Kg/ha

Summer / Spring Mix

Japanese Millet	20Kg/ha
Dobson Ryegrass	8Kg/ha
White Clover	3Kg/ha
Red Clover	3Kg/ha

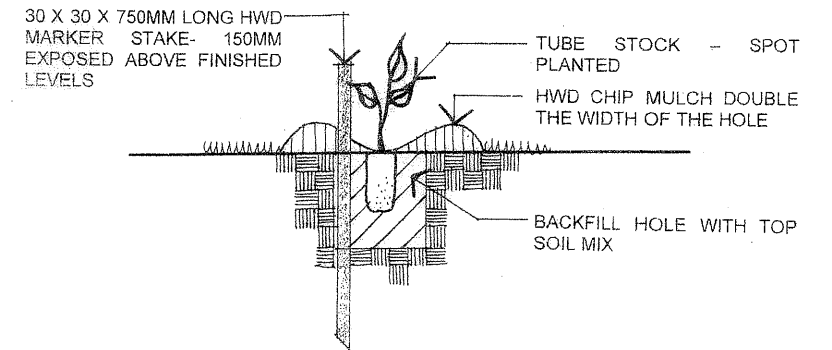
Grass seed mixes for areas where a permanent grass cover is required shall also contain: -

Rhodes Grass	5Kg/ha
Hulled Couch	5 Kg/ha

PLANT SCHEDULE

TYPE: SANDSTONE-SHALE TRANSITION FOREST

BOTANICAL NAME	COMMON NAME	ULTIMATE HEIGHT
Trees		
<i>Allocasuarina littoralis</i>	Black She-Oak	10M
<i>Angaphora costata</i>	Smooth Barked Apple	15M
<i>Angaphora floribunda</i>	Rough Barked Apple	15M
<i>Eucalyptus acmenoides</i>	White Mahogany	18M
<i>Eucalyptus agglomerata</i>	Blue-leaved Stringybark	15M
<i>Eucalyptus eugenoides</i>	Thin leaved - Stringybark	15M
<i>Eucalyptus gummifera</i>	Red Bloodwood	10M
<i>Eucalyptus notabilis</i>	Blue Mountains Mahogany	15M
<i>Eucalyptus punctata</i>	Grey Gum	12M
<i>Eucalyptus paniculata</i>	Red Mahogany	18M
<i>Syncarpia glomulifera</i>	Turpentine	18M
Shrubs		
<i>Acacia longifolia</i>	Sydney Golden Wattle	5M
<i>Acacia parramattensis</i>	Parramatta Green wattle	5M
<i>Banksia spinulosa</i>	Short Leaved Banksia	1M
<i>Kunzea ambigua</i>	Thick Bush	2M
<i>Leptospermum polygalifolium</i>	Yellow Tea Tree	3M
<i>Leptospermum trinerium</i>	Cherry Ballart	3M
<i>Hakea sericea</i>	Bushy Needlebush	3M



6 TYPICAL TUBE STOCK PLANTING DETAIL 1:10

North point

B D.A. ISSUE - BUND REMOVED IN SELECTED AREAS JULY 00

A D.A. ISSUE OCT 98

Issue	Rev.	Revision Description	Date

Landscape Architect

s.m.a.

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NEXUS ENVIRONMENTAL PLANNING PTY LTD

Project

**LOT 1 + 2 DP 228308
LOT 2 DP 312327
MAROOTA**

Title

EARTH BUNDS & PLANTING DETAILS

Scale:

SMA Proj. No:

Drawn	Checked	Coordinated	PM Approval	Director Verification

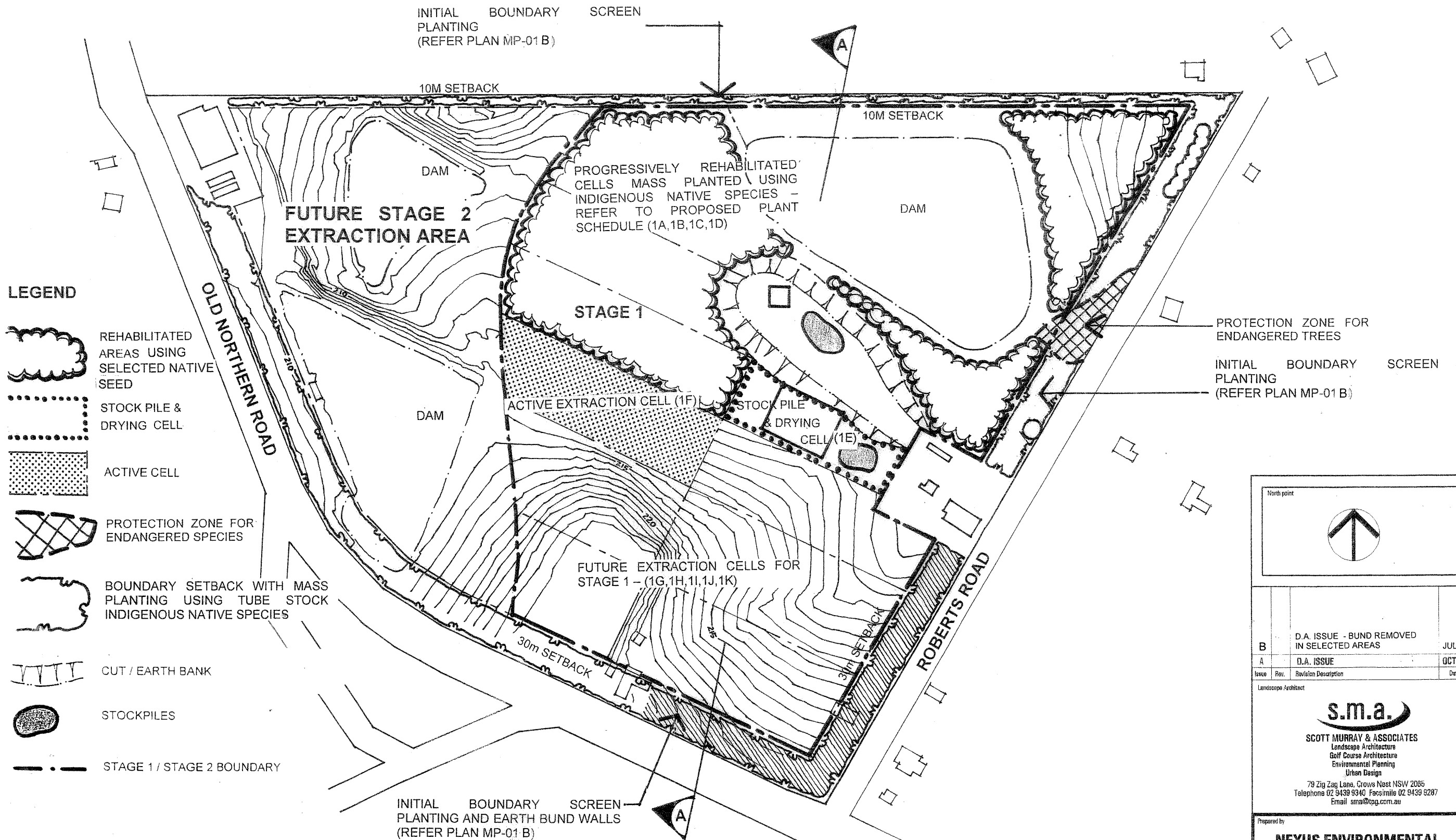
Date

Job Number - Drawing Number

Issues

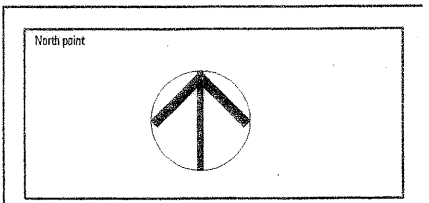
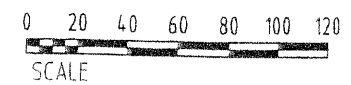
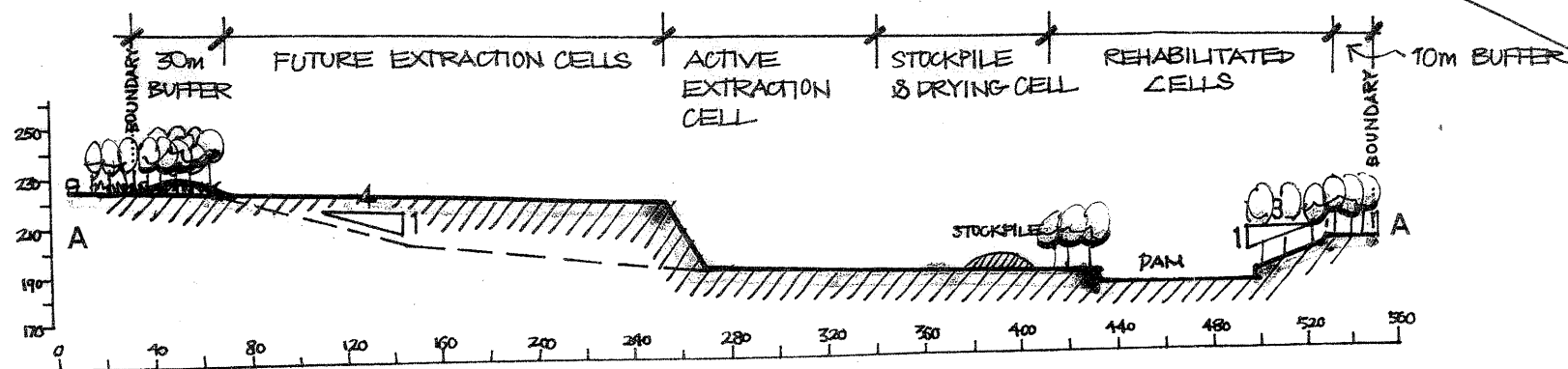
MP-02

B



LEGEND

- REHABILITATED AREAS USING SELECTED NATIVE SEED
- STOCK PILE & DRYING CELL
- ACTIVE CELL
- PROTECTION ZONE FOR ENDANGERED SPECIES
- BOUNDARY SETBACK WITH MASS PLANTING USING TUBE STOCK INDIGENOUS NATIVE SPECIES
- CUT / EARTH BANK
- STOCKPILES
- STAGE 1 / STAGE 2 BOUNDARY



B	D.A. ISSUE - BUND REMOVED IN SELECTED AREAS	JULY 00
A	D.A. ISSUE	OCT 99
Issue	Rev.	Revision Description
		Date

s.m.a.

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NEXUS ENVIRONMENTAL PLANNING PTY LTD

Project
LOT 1 + 2 DP 228308
LOT 2 DP 312327
MAROOKA

YEAR 3 PROGRESSIVE REHABILITATION PLAN & SECTION - STAGE 1 WORKS

Scale:	SMA Proj. No.:			
Drawn	Checked	Coordinated	PM Approval	Director Verification
Date				

Job Number - Drawing Number
MP-03

Issue
B

10M WIDE SETBACK -
TO BE PLANTED WITH SELECTED
INDIGENOUS NATIVE PLANTS
(REFER DETAIL 1, MP-02 B)

10m WIDE SETBACK-
TO BE PLANTED WITH SELECTED
INDIGENOUS NATIVE PLANTS
(REFER DETAIL 1, MP-02 B)

10M SETBACK

30m SETBACK

DAM

STOCKPILE &
DRYING CELL (2B)

PROGRESSIVELY REHABILITATED
CELLS MASS PLANTED USING
INDIGENOUS NATIVE SPECIES -
REFER TO PROPOSED PLANT
SCHEDULE (2A)

ACTIVE EXTRACTION
CELL (2C)

REHABILITATED
STAGE 1

PROTECTIVE ZONE:
6 EXISTING ACACIA BYNOEANA TO
BE PROTECTED AND RETAINED

INITIAL BOUNDARY SCREEN
PLANTING
(REFER PLAN MP-01 B)

OFFICE / ACCESS

ROBERTS ROAD

30M WIDE SETBACK -
WITH 3M HT EARTH BUND WALL
MASS PLANTED WITH SELECTED
INDIGENOUS NATIVE PLANTS
(REFER DETAIL 2, MP-02 A)

FUTURE EXTRACTION CELLS FOR
STAGE 1 - (2D)

30m SETBACK

30m SETBACK

OLD NORTHERN ROAD

INITIAL BOUNDARY SCREEN
PLANTING AND EARTH BUND WALLS
(REFER PLAN MP-01 B)

LEGEND

REHABILITATED
AREAS USING
SELECTED NATIVE
SEED

STOCK PILE &
DRYING CELL

ACTIVE CELL

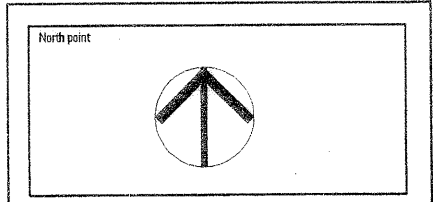
PROTECTION ZONE FOR
ENDANGERED SPECIES

BOUNDARY SETBACK WITH MASS
PLANTING USING TUBE STOCK
INDIGENOUS NATIVE SPECIES

CUT / EARTH BANK

STOCKPILES

STAGE 1 / STAGE 2 BOUNDARY



B	D.A. ISSUE - BUND REMOVED IN SELECTED AREAS	JULY 00
A	D.A. ISSUE	OCT 99
Issue	Rev.	Revision Description
Date		

Landscape Architect

s.m.a.

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**NEXUS ENVIRONMENTAL
PLANNING PTY LTD**

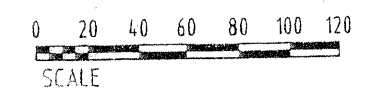
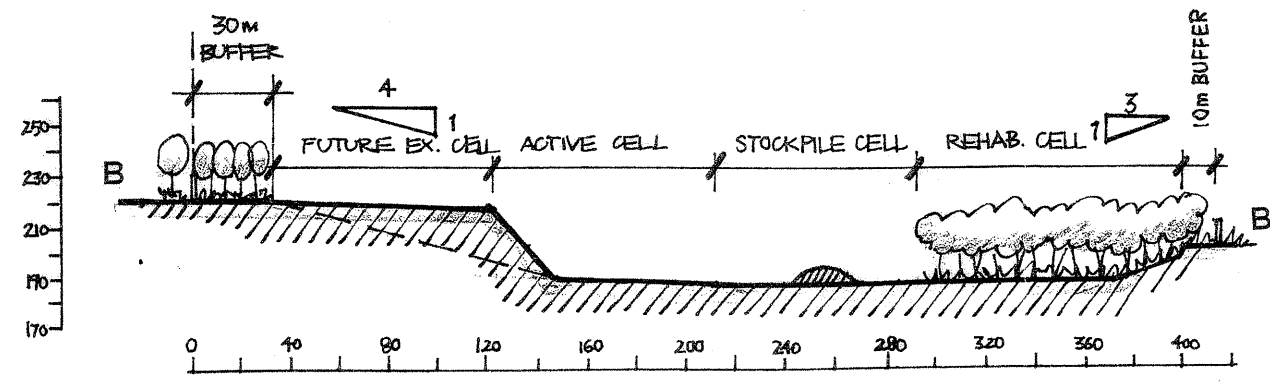
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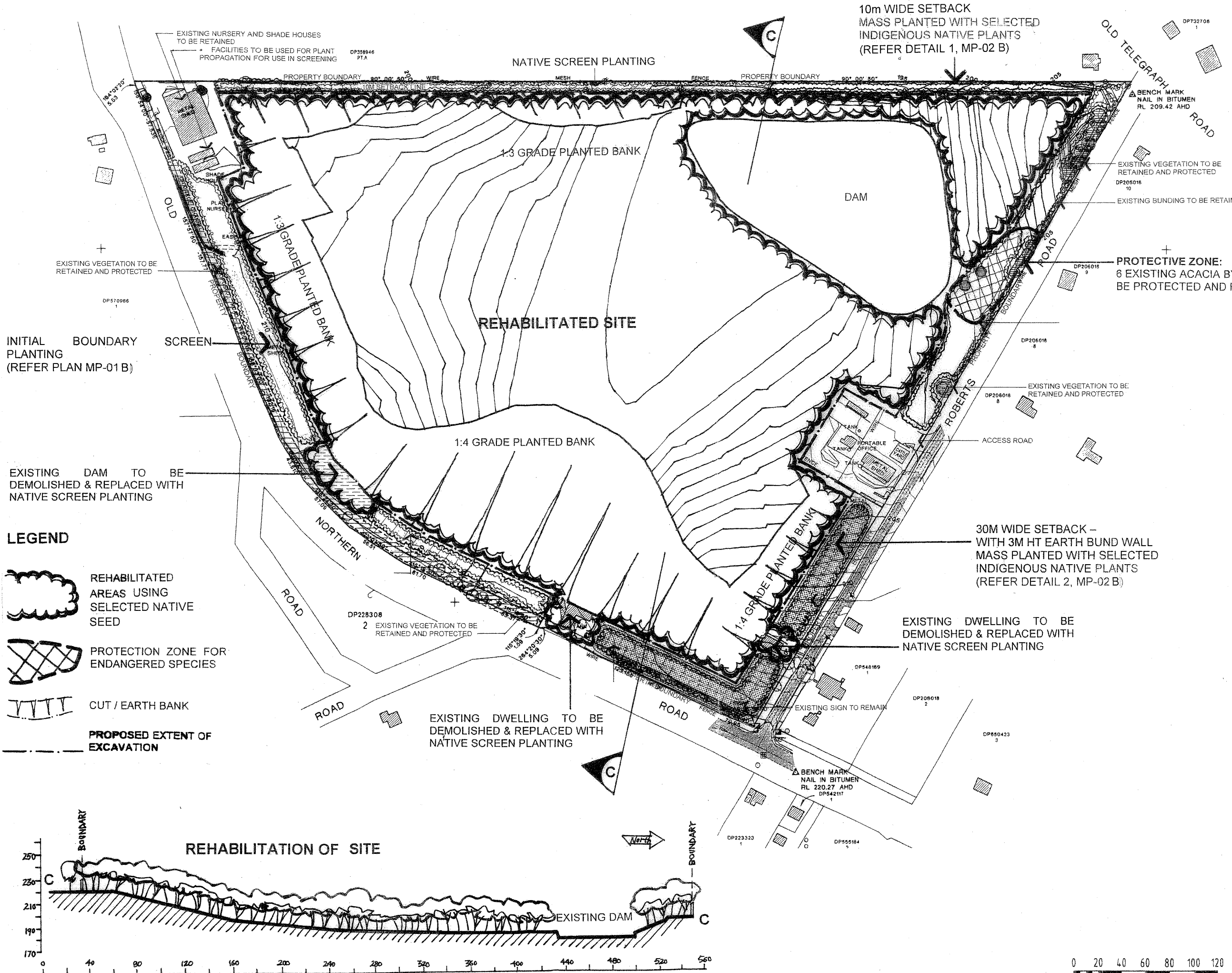
**LOT 1 + 2 DP 228308
LOT 2 DP 312327
MAROOTA**

**YEAR 8 PROGRESSIVE
REHABILITATION PLAN &
SECTION - STAGE 2 WORKS**

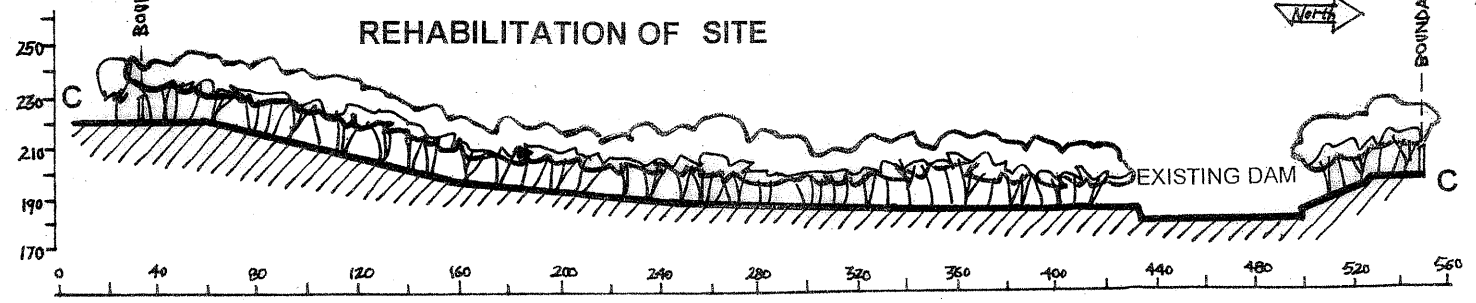
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Date:				

Job Number - Drawing Number	Issue
MP-04	B

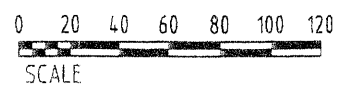




- LEGEND**
- REHABILITATED AREAS USING SELECTED NATIVE SEED
 - PROTECTION ZONE FOR ENDANGERED SPECIES
 - CUT / EARTH BANK
 - PROPOSED EXTENT OF EXCAVATION



North point			
B	D.A. ISSUE - BUND REMOVED IN SELECTED AREAS	JULY 00	
A	D.A. ISSUE	OCT 99	
Issue	Rev.	Revision Description	Date
Landscape Architect			
s.m.a.			
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Prepared by			
NEXUS ENVIRONMENTAL PLANNING PTY LTD			
Project			
LOT 1 + 2 DP 228308 LOT 2 DP 312327 MAROOKA			
Title			
FINAL LANDFORM / REHABILITATION PLAN			
Scale:	SMA Proj. No.:		
Drawn	Checked	Coordinated	PM Approval
Date:			Director Verification
Job Number - Drawing Number			Issue
MP-05			B



Appendix 3

29 November 2000 Modification (1)



Department of
Urban Affairs and Planning

Development and Infrastructure
Assessment
Level 22, 1 Farrer Place
Sydney NSW 2000
GPO Box 3927
Sydney NSW 2001

Telephone: 02 9391 2384
Facsimile: 02 9391 2151

Dr L.S. Martin,
C/- Nexus Environmental Planning
P.O. Box 212
CONCORD NSW 2157

Dear Dr Martin,

Proposed Modification of Extractive Industry
Our reference: S98/00772

I refer to the application and Statement of Environmental Effects lodged to modify the consent for the above development under section 96(2) of the *Environmental Planning and Assessment Act 1979* (the Act).

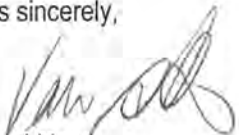
The Minister for Urban Affairs and Planning has now determined the application subject to conditions and a copy of the determination is enclosed for your information. The reasons for the imposition of conditions are to:

- (i) minimise the adverse impact of the development;

If you are dissatisfied with this decision, section 96 (6A) of the Environmental Planning and Assessment Act, 1979 gives you the right to appeal to the Land and Environment Court.

Should you require any further information on this matter, please contact Val Smith on (02) 9391 2384

Yours sincerely,

 6/12/00
Richard Lloyd
Senior Environmental Planning Officer
Development and Infrastructure Assessment

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

**NOTICE OF MODIFICATION TO A DEVELOPMENT CONSENT PURSUANT TO
SECTION 96 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT
1979**

I, the Minister for Urban Affairs and Planning, under Section 96(2) of the amended Environmental Planning and Assessment Act, 1979, modify the development consent referred to in Schedule 1 in the manner set out in Schedule 2. I am satisfied that the development to which the development consent, as modified, will relate, is substantially the same development.



Andrew Refshauge MP
Minister for Urban Affairs and Planning,

Sydney, 29 November 2000

File No: S00/00772

SCHEDULE 1

Development consent granted by the Minister for Urban Affairs and Planning on 31 May 2000 to a development application made by Dr. L.S. Martin for extraction and on-site processing of sand, clay and pebble, and construction of a bund wall, on Lots 1 and 2 DP 228308, Lot 2 DP312327, Roberts Road, Maroota.

SCHEDULE 2

The development consent is modified as follows:

Abbreviations and Interpretation

Delete the word "perimeter" from the definition of "construction".

General

Condition 2(c)

Insert after "the two faxes from Dick Benbow and Associates Pty Ltd dated 17 February 2000 and attachments" the following:

"except as modified by the report of Dick Benbow and Associates (Report No 10065 Issue 1) dated 26 June 2000."

Commencement and Duration

Condition 8 (a)

Delete all the words in Condition 8(a) and insert instead:

"constructed the bund walls at the corner of Roberts Road and Old Northern Road;"

Groundwater Management

Condition 41

Delete the sentence "This condition does not apply to the construction of the perimeter bund wall."

NOISE

Noise Management Plan

Condition 46

Insert after subclause (f) the following:

- "(g) Provision for the notification of adjoining property owners of the commencement and duration of works adjoining the boundary.
- (h) Construction of temporary noise shielding to residences affected by short-term noise impacts."

Operational Noise Limits

Condition 47

Insert after Condition 47 the following new conditions:

- "47(a) The excavator to be used is to be fitted with acoustic mufflers to achieve a noise level of approximately 76dB(A) when measured at 7 metres.
- 47(b) The on-site generator is to be fitted with an acoustic enclosure to ensure that noise levels less than 44dB(A) at 30m are achieved.
- 47(c) A noise compliance investigation is to undertaken within one month of the installation of the equipment to demonstrate compliance with the noise level limits stated in Conditions 47(a) and 47(b). The results of the compliance investigation are to be provided for the approval of the Director-General within 14 days of the completion of the investigations."

FLORA AND FAUNA

Condition 54

Delete all the words in Condition 54 and insert instead:

"In construction of the bund walls at the corner of Roberts Road and Old Northern Road, the Applicant shall minimise disturbance to existing native vegetation."

REHABILITATION PLAN

Condition 58

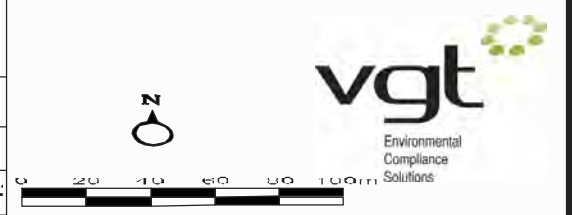
Delete the word "and" at the end of the sentence in subclause (b) and insert after subclause (c) the following:

- "(d) detail proposals for the integration of the visual bund walls into the final landform of the site.
 - (d) Provide evidence of consultation with Council in the design of the final landform for the site."
-

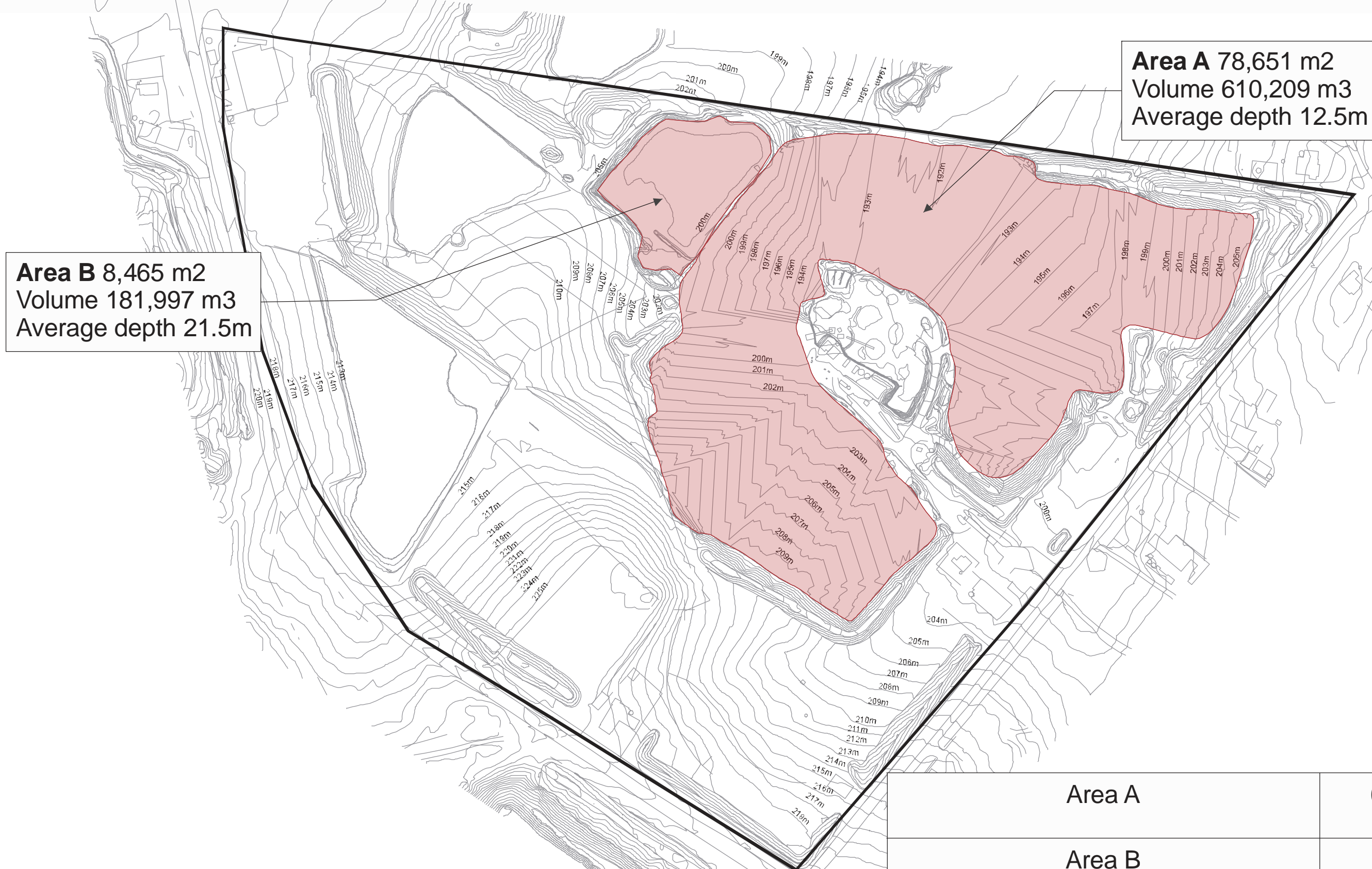
Appendix 4

**Diagram showing approximate volumes of materials
already extracted from the Site**

Plan of:	HB Maroota Quarry Extracted Volume Estimates	Location:	HB Maroota Quarry, Maroota	Source:	Photomapping	Our Ref:	V:\Jobs_HB Maroota\2014\Figures\Fig 2
Figure:	???	Council:	Hills Shire Council	Survey:	December 2013	Plan By:	TC
Sheet:	5 of 5	Tenures:	N/A	Projection:	MGA	Project Manager:	GVT
Version/Date:	A 3/02/2014	Client:	Hodgson Quarry Products Pty Ltd	Contour Interval:	1m	Office:	Thornton



vgt
Environmental
Compliance
Solutions



Area A 78,651 m²
Volume 610,209 m³
Average depth 12.5m

Area B 8,465 m²
Volume 181,997 m³
Average depth 21.5m

Area A	610,209m ³
Area B	181,997m ³
Estimated Total Volume Extracted	792,206 m³

Appendix 5

Secretary's Requirements for Environmental Assessment



Mr Martin Hodgson
Hodgson Quarry Products Pty Ltd
PO Box 1778
GOSFORD NSW 2250

Dear Mr Hodgson

**Section 75W Modification – Secretary's Requirements
Roberts Road Quarry (DA 267-11-99 MOD 2)**

I have attached the Secretary's requirements for the preparation of an Environmental Assessment (EA) for the Roberts Road Quarry Section 75W Modification.

These requirements are based on the information you have provided to date, and have been prepared in consultation with the relevant government agencies. The agencies' comments are attached for your information (see Attachment 2).

Please note that the Department will review the EA for the modification carefully before putting it on public exhibition, and require you to submit an amended EA if it fails to adequately address these requirements.

Yours sincerely

David Kitto 29/5/14

David Kitto
Director, Mining Projects
as delegate for the Secretary

Secretary's Environmental Assessment Requirements

Section 75W of the *Environmental Planning and Assessment Act 1979*

Application Number	DA 267-11-99 MOD 2
Proposal	<p>The modification includes:</p> <ul style="list-style-type: none"> • continuing existing approved development on site for an additional 10 years (within existing disturbance areas); • modifying the approved sand extraction methods and sequence; • modifying the approved water supply dam ; and • progressively rehabilitating the site.
Location	Roberts Road, Maroota
Applicant	Hodgson Quarry Products Pty Ltd
Date of Issue	30 May 2014
General Requirements	<p>The Environmental Assessment (EA) for the modification must include:</p> <ul style="list-style-type: none"> • a full description of the development, including: <ul style="list-style-type: none"> – the resource to be extracted, demonstrating efficient resource recovery within environmental constraints; – the site layout and extraction plan; – processing activities; – a waste (overburden, leachate, etc.) management strategy, dealing with the EPA's requirements (see Attachment 2); – a water management strategy, dealing with the EPA's and DPIs' requirements (see Attachment 2); – a rehabilitation strategy, having regard to the key principles in the <i>Strategic Framework for Mine Closure</i>; and – the likely interactions between the development and any other existing, approved or proposed extractive industry development in the vicinity of the site; • a list of any approvals that must be obtained before the development may commence; • an assessment of the likely impacts of the development on the environment, focussing on the specific issues identified below, including: <ul style="list-style-type: none"> – a description of the existing environment likely to be affected by the development, <u>using sufficient baseline data</u>; – an assessment of the likely impacts of all stages of the development, including any cumulative impacts, taking into consideration any relevant laws, environmental planning instruments, guidelines, policies, plans and industry codes of practice; – a description of the measures that would be implemented to mitigate and/or offset the likely impacts of the development, and an assessment of: <ul style="list-style-type: none"> ○ whether these measures are consistent with industry best practice, and represent the full range of reasonable and feasible mitigation measures that could be implemented; ○ the likely effectiveness of these measures; and ○ whether contingency plans would be necessary to manage any residual risks; – a description of the measures that would be implemented to monitor and report on the environmental performance of the development if it is approved; • a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EA;

	<ul style="list-style-type: none"> • consideration of the development against all relevant environmental planning instruments; and • the reasons why the development should be approved having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development. <p>While not exhaustive, Attachment 1 contains a list of some of the environmental planning instruments, guidelines, policies, and plans that may be relevant to the environmental assessment of this development.</p>
<p>Key Issues</p>	<p>The EA must address the following specific matters:</p> <ul style="list-style-type: none"> • Air – including an assessment of the likely air quality impacts of the development in accordance with the <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i> and the EPA’s additional requirements (see Attachment 2); • Noise – including: <ul style="list-style-type: none"> - an assessment of the likely operational noise impacts of the development (including construction noise) in accordance with the <i>NSW Industrial Noise Policy</i> and the EPA’s additional requirements (see Attachment 2), and paying particular attention to cumulative noise impacts and the obligations in chapters 8 and 9 of the policy; - if a claim is made for specific construction noise criteria for certain activities, then this claim must be justified and accompanied by an assessment of the likely construction noise impacts of these activities under the <i>Interim Construction Noise Guideline</i>; and - an assessment of the likely road noise impacts of the development under the <i>NSW Road Noise Policy</i>; • Water – including: <ul style="list-style-type: none"> - an assessment of the likely impacts of the development on the quantity and quality of the region’s surface and groundwater resources, having regard to the EPA’s and DPI’s requirements (see Attachment 2); and - an assessment of the likely impacts of the development on aquifers, watercourses, riparian land, water-related infrastructure, and other water users; • Land – including an assessment of the compatibility of the development with other land uses in the vicinity of the development in accordance with the requirements in Clause 12 of <i>State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007</i>, and having regard to the Department of Primary Industries’ requirements (see Attachment 2); • Traffic – including an assessment of the likely traffic impacts of the development on the capacity, condition, safety and efficiency of the local and State road network, having regard to the RMS’s requirements (see Attachment 2); • Biodiversity – ongoing management of approved impacts on biodiversity; • Heritage – ongoing management of approved impacts on Aboriginal and historic heritage (cultural and archaeological); • Visual – including: <ul style="list-style-type: none"> - ongoing management of approved visual impacts; and - an assessment of any additional visual impacts of the development on private landowners in the vicinity of the development and key vantage points in the public domain; and • Social & Economic – including: <ul style="list-style-type: none"> - an assessment of the likely social impacts of the development (including any perceived impacts); and - an assessment of the likely economic impacts of the development, paying particular attention to: <ul style="list-style-type: none"> ○ the significance of the resource; ○ economic benefits of the project for the State and region; and ○ the demand for the provision of local infrastructure and services.

Consultation	<p>During the preparation of the EA, you must consult with relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners.</p> <p>The EA must describe the consultation that was carried out, identify the issues raised during this consultation, and explain how these issues have been addressed in the EA.</p>
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ATTACHMENT 1

Environmental Planning Instruments, Policies, Guidelines & Plans

Air	
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA)
Noise	
	NSW Industrial Noise Policy (EPA)
	NSW Road Noise Policy (EPA)
	Interim Construction Noise Guideline (EPA)
Water	
Water Sharing Plans	Greater Metropolitan Region Groundwater Source 2011
	Greater Metropolitan Region Unregulated River Water Sources 2011
Groundwater	NSW State Groundwater Policy Framework Document (NOW)
	NSW State Groundwater Quality Protection Policy (NOW)
	NSW State Groundwater Quantity Management Policy (NOW)
	NSW Aquifer Interference Policy 2012 (NOW)
	Australian Groundwater Modelling Guidelines 2012 (Commonwealth)
	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	Guidelines for the Assessment & Management of Groundwater Contamination (EPA)
	NSW Government Water Quality and River Flow Objectives (EPA)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (EPA)
	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
Surface Water	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Effluent Management (ARMCANZ/ANZECC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (EPA)
	Managing Urban Stormwater: Soils & Construction (Landcom) and associated Volume 2E: Mines and Quarries (EPA)
	Managing Urban Stormwater: Treatment Techniques (EPA)
	Managing Urban Stormwater: Source Control (EPA)
	Technical Guidelines: Bunding & Spill Management (EPA)
	Environmental Guidelines: Use of Effluent by Irrigation (EPA)
	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
NSW Guidelines for Controlled Activities (NOW)	
Traffic	
	Guide to Traffic Generating Development (RMS)
	Road Design Guide (RMS) & relevant Austroads Standards
Waste	
	Waste Classification Guidelines (EPA)
Rehabilitation	
	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)
	Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)

Strategic Framework for Mine Closure (ANZMEC-MCA)

Environmental Planning Instruments - General

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

State Environmental Planning Policy (State and Regional Development) 2011

State Environmental Planning Policy (Infrastructure) 2007

The Hills Local Environment Plan (2012)

Sydney Regional Environmental Plan No 9 – Extractive Industry

Sydney Regional Environmental Plan No 20 – Hawkesbury-Nepean River

Development Control Plans

The Hills Development Control Plan (2012) Part B Section 1 – Rural

The Hills Section 94A Contributions Plan (2013)

ATTACHMENT 2

Agency Correspondence

Appendix 6

Responses to Consultation

THE HILLS SHIRE COUNCIL

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PO Box 7064, Baulkham Hills BC NSW 2153

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Facsimile +61 2 9843 0409

DX 9966 Norwest

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www.thehills.nsw.gov.au

ABN No. 25 034 494 656

23 April 2014

Ms Elle Donnelley - Planner Mining Projects
Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Your Ref: 267-11-99 Mod 2

Dear Ms Donnelley

**Request for Input for Director General Requirements - Proposed Section 75W
Modification Request to an Existing Extractive Industry
Hodgson Quarry Products – Lots 1 and 2 DP 228308 and Lot 2 DP 312327, Roberts
Road, Maroota**

I refer to your email dated 14 April 2014 in which you request comments regarding the preparation of Director General Requirements for a proposed extractive industry at the above site. The following comments are provided for your incorporation into the Requirements.


1. The submission of full details describing the proposal.
2. The submission of **details confirming the proposal's relationship with the existing** extractive industry operations upon the site
3. The submission of plans and supporting written evidence showing the proposed final landform configuration and end use of land having regard to the existing approvals in place and ensuring that the modified extraction methods will result in the extraction area being rehabilitated in a consistent manner with the existing approvals. This is to include details of the progressive rehabilitation works.
4. **The submission of full details regarding the proposal's compliance with the** requirements of SEPP Mining and Extractive Industries (2007), **Council's Development** Control Plan Part B Section 1 – Rural, Sydney Regional Environmental Plan No. 9 – Extractive Industry, Sydney Regional Environmental Plan No. 20 – Hawkesbury – Nepean River and Baulkham Hills Local Environmental Plan 2012, and other relevant legislation, **including the Section 91** 'Integrated Development' provisions of the NSW EP & A Act, 1979 if relevant.
5. The EIS is required to identify the maximum yearly extraction rate and the life of the extraction (based on resource within the quarry) and also the subsequent timeframe for the completion of rehabilitation works upon the site.
6. The submission of a detailed traffic impact assessment report addressing the increased maximum number of truck movements associated with the operation.

7. The submission of a comprehensive noise impact assessment report addressing the existing noise level and the likely noise levels associated with the modified extraction methods within the site, and including truck movements to / from the central processing plant.
8. Address the potential for increase amenity impacts to adjoining property owners given the additional ten year extraction period.

Please note that all reports and information are to be prepared by suitably qualified persons.

Should you have any further questions please contact me on 9843 0319.

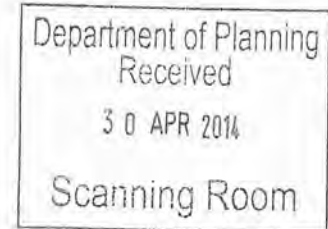
Yours faithfully

A handwritten signature in black ink, appearing to read 'K McKenzie', written in a cursive style.

Kristine McKenzie
PRINCIPAL EXECUTIVE PLANNER



Ms E Donnelly
Planner
Mining Projects
NSW Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001



Notice Number 1521552
File Number EF13/3063 & DOC14/52305
Date 16-Apr-2014

RE: Request for the EPA's Director-General's Requirements (DGRs) for an Environment Impact Assessment (EIA) for the Proposed Modification to the Development Consent for HB Maroota Pty Ltd Quarry situated on Roberts Road, Maroota, Environment Protect Licence No. 6535

Dear Ms Donnelly

I refer to your email dated 14 April 2014 requesting the Environment Protection Authority's EPA Director General Requirements (DGRs) for the Environmental Impact Assessment (EIA) in regard to the above proposal..

The EPA has considered the details of the proposal as provided by proponent and has identified the information it requires to issue its general terms of approval in Attachment A. In summary, the EPA's key information requirements for the proposal include an adequate assessment of:

1. Potential air pollution, including potential dust emissions from the site;
2. Potential surface and ground water pollution from the site;
3. Potential noise and vibration impacts from the site;
4. management of chemicals and wastes generation and/or stored at the site;
5. Rehabilitation of the site to its required usage after extraction has ceased.

If you require any further information please call Mr Nazrul Chowdhury on 9995 6862

Yours sincerely



A handwritten signature in black ink, appearing to read "D. Gathercole", written over a horizontal dotted line.

David Gathercole
Acting Head
Metropolitan - Sydney Industry
(by Delegation)

ATTACHMENT A:

Director-General's Requirements (DGRs) for an Environment Impact Assessment (EAI) for the Proposed Modification to the Development Consent for HB Maroota Pty Ltd's Quarry situated on Roberts Road, Maroota, Environment Protection Licence No. 6535

How to use these requirements

The EPA's requirements have been structured in accordance with the DoP&I EIS Guidelines, as follows. It is suggested that the EIA follow the same structure:

- A. Executive summary
- B. The proposal
- C. The location
- D. Identification and prioritisation of issues
- E. The environmental issues
- F. List of approvals and licences
- G. Compilation of mitigation measures
- H. Justification for the proposal



A Executive summary

The executive summary should include a brief discussion of the extent to which the proposal achieves identified environmental outcomes.

B The proposal

1. Objectives of the proposal

- The objectives of the proposal should be clearly stated and refer to:
 - a) the size and type of the operation, the nature of the processes and the products, by-products and wastes produced
 - b) a life cycle approach to the production, use or disposal of products
 - c) the anticipated level of performance in meeting required environmental standards and cleaner production principles
 - d) the staging and timing of the proposal and any plans for future expansion
 - e) the proposal's relationship to any other industry or facility.

2. Description of the proposal

General

- Outline the production process including:
 - a) the environmental "mass balance" for the process – quantify in-flow and out-flow of materials, any points of discharge to the environment and their respective destinations (sewer, stormwater, atmosphere, recycling, landfill etc)
 - b) any life-cycle strategies for the products.
- Outline cleaner production actions, including:
 - a) measures to minimise waste (typically through addressing source reduction)
 - b) proposals for use or recycling of by-products
 - c) proposed disposal methods for solid and liquid waste
 - d) air management systems including all potential sources of air emissions, proposals to re-use or treat emissions, emission levels relative to relevant standards in regulations, discharge points
 - e) water management system including all potential sources of water pollution, proposals for re-use, treatment etc, emission levels of any wastewater discharged, discharge points, summary of options explored to avoid a discharge, reduce its frequency or reduce its impacts, and rationale for selection of option to discharge.
 - f) soil contamination treatment and prevention systems.
- Outline construction works including:
 - a) actions to address any existing soil contamination
 - b) any earthworks or site clearing; re-use and disposal of cleared material (including use of spoil on-site)
 - c) construction timetable and staging; hours of construction; proposed construction methods

- d) environment protection measures, including noise mitigation measures, dust control measures and erosion and sediment control measures.

Air

- Identify all sources of air emissions from the development.
Note: emissions can be classed as either:
 - *point (eg emissions from stack or vent) or*
 - *fugitive (from wind erosion, leakages or spillages, associated with loading or unloading, conveyors, storage facilities, plant and yard operation, vehicle movements (dust from road, exhausts, loss from load), land clearing and construction works).*
- Provide details of the project that are essential for predicting and assessing air impacts including:
 - a) the quantities and physio-chemical parameters (eg concentration, moisture content, bulk density, particle sizes etc) of materials to be used, transported, produced or stored
 - b) an outline of procedures for handling, transport, production and storage
 - c) the management of solid, liquid and gaseous waste streams with potential for significant air impacts.

Noise and vibration

- Identify all noise sources from the development (including both construction and operation phases). Detail all potentially noisy activities including ancillary activities such as transport of goods and raw materials.
- Specify the times of operation for all phases of the development and for all noise producing activities.
- For projects with a significant potential traffic noise impact provide details of road alignment (include gradients, road surface, topography, bridges, culverts etc), and land use along the proposed road and measurement locations – diagrams should be to a scale sufficient to delineate individual residential blocks.

Water

- Provide details of the project that are essential for predicting and assessing impacts to waters:
 - a) including the quantity and physio-chemical properties of all potential water pollutants and the risks they pose to the environment and human health, including the risks they pose to Water Quality Objectives in the ambient waters (as defined on www.environment.nsw.gov.au/ieo, using technical criteria derived from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, ANZECC 2000)
 - b) the management of discharges with potential for water impacts
 - c) drainage works and associated infrastructure; land-forming and excavations; working capacity of structures; and water resource requirements of the proposal.



- Outline site layout, demonstrating efforts to avoid proximity to water resources (especially for activities with significant potential impacts eg effluent ponds) and showing potential areas of modification of contours, drainage etc.
- Outline how total water cycle considerations are to be addressed showing total water balances for the development (with the objective of minimising demands and impacts on water resources). Include water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.

Waste and chemicals

- Provide details of the quantity and type of both liquid waste and non-liquid waste generated, handled, processed or disposed of at the premises. Waste must be classified according to the EPA's guideline title "*Waste Classification Guidelines, 2008*".
- Provide details of liquid waste and non-liquid waste management at the facility, including:
 - a) the transportation, assessment and handling of waste arriving at or generated at the site
 - b) any stockpiling of wastes or recovered materials at the site
 - c) any waste processing related to the facility, including reuse, recycling, reprocessing (including composting) or treatment both on- and off-site
 - d) the method for disposing of all wastes or recovered materials at the facility
 - e) the emissions arising from the handling, storage, processing and reprocessing of waste at the facility
 - f) the proposed controls for managing the environmental impacts of these activities.
- Provide details of spoil disposal with particular attention to:
 - a) the quantity of spoil material likely to be generated
 - b) proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil
 - c) the need to maximise reuse of spoil material in the construction industry
 - d) identification of the history of spoil material and whether there is any likelihood of contaminated material, and if so, measures for the management of any contaminated material
 - e) designation of transportation routes for transport of spoil.
- Provide details of procedures for the assessment, handling, storage, transport and disposal of all hazardous and dangerous materials used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes.
- Provide details of the type and quantity of any chemical substances to be used or stored and describe arrangements for their safe use and storage.
- Reference must be made to the EPA's guideline title "*Waste Classification Guidelines, 2008*".

ESD

- Demonstrate that the planning process and any subsequent development incorporates objectives and mechanisms for achieving ESD, including:
 - f) proper valuation and pricing of environmental resources
 - g) identification of who will bear the environmental costs of the proposal.
- an assessment of a range of options available for use of the resource, including the benefits of each option to future generations

3. Rehabilitation

- Outline considerations of site maintenance, and proposed plans for the final condition of the site (ensuring its suitability for future uses).

4. Consideration of alternatives and justification for the proposal

- Consider the environmental consequences of adopting alternatives, including alternative:
 - a) sites and site layouts
 - b) access modes and routes
 - c) materials handling and production processes
 - d) waste and water management
 - e) impact mitigation measures
 - f) energy sources
- Selection of the preferred option should be justified in terms of:
 - a) ability to satisfy the objectives of the proposal
 - b) relative environmental and other costs of each alternative
 - c) acceptability of environmental impacts and contribution to identified environmental objectives
 - d) acceptability of any environmental risks or uncertainties
 - e) reliability of proposed environmental impact mitigation measures
 - f) efficient use (including maximising re-use) of land, raw materials, energy and other resources.

C The location

1. General

- Provide an overview of the affected environment to place the proposal in its local and regional environmental context including:
 - a) meteorological data (eg rainfall, temperature and evaporation, wind speed and direction)
 - b) topography (landform element, slope type, gradient and length)
 - c) surrounding land uses (potential synergies and conflicts)
 - d) geomorphology (rates of landform change and current erosion and deposition processes)
 - e) soil types and properties (including erodibility; engineering and structural properties; dispersibility; permeability; presence of acid sulfate soils and potential acid sulfate soils)
 - f) ecological information (water system habitat, vegetation, fauna)
 - g) availability of services and the accessibility of the site for passenger and freight transport.

2. Air

- Describe the topography and surrounding land uses. Provide details of the exact locations of dwellings, schools and hospitals. Where appropriate provide a perspective view of the study area such as the terrain file used in dispersion models.

Describe surrounding buildings that may effect plume dispersion.

- Provide and analyse site representative data on following meteorological parameters:
 - a) temperature and humidity
 - b) rainfall, evaporation and cloud cover
 - c) wind speed and direction
 - d) atmospheric stability class
 - e) mixing height (the height that emissions will be ultimately mixed in the atmosphere)
 - f) katabatic air drainage
 - g) air re-circulation.
- For deposited dust, the data file should include hourly average values for the following additional parameters:
 - a) Monin-Obukhov length (m);
 - b) Surface friction velocity (m/s); and
 - c) Surface roughness height (m).

3. Noise and vibration

- Identify any noise sensitive locations likely to be affected by activities at the site, such as residential properties, schools, churches, and hospitals. Typically the location of any noise sensitive locations in relation to the site should be included on a map of the locality.
- Identify the land use zoning of the site and the immediate vicinity and the potentially affected areas.

4. Water

- Describe the catchment including proximity of the development to any waterways and provide an assessment of their sensitivity/significance from a public health, ecological and/or economic perspective. The Water Quality and River Flow Objectives on the website: www.environment.nsw.gov.au/ieo should be used to identify the agreed environmental values and human uses for any affected waterways. This will help with the description of the local and regional area.

5. Soil Contamination Issues

- Provide details of site history – if earthworks are proposed, this needs to be considered with regard to possible soil contamination, for example if the site was previously a landfill site or if irrigation of effluent has occurred.

D Identification and prioritisation of issues / scoping of impact assessment

- Provide an overview of the methodology used to identify and prioritise issues. The methodology should take into account:
 - a) relevant NSW government guidelines
 - b) industry guidelines
 - c) EISs for similar projects
 - d) relevant research and reference material
 - e) relevant preliminary studies or reports for the proposal
 - f) consultation with stakeholders.
- Provide a summary of the outcomes of the process including:
 - a) all issues identified including local, regional and global impacts (eg increased/ decreased greenhouse emissions)
 - b) key issues which will require a full analysis (including comprehensive baseline assessment)
 - c) issues not needing full analysis though they may be addressed in the mitigation strategy
 - d) justification for the level of analysis proposed (the capacity of the proposal to give rise to high concentrations of pollution compared with the ambient environment or environmental outcomes is an important factor in setting the level of assessment).

E The environmental issues

1. General

- The potential impacts identified in the scoping study need to be assessed to determine their significance, particularly in terms of achieving environmental outcomes, and minimising environmental pollution.
- Identify gaps in information and data relevant to significant impacts of the proposal and any actions proposed to fill those information gaps so as to enable development of appropriate management and mitigation measures. This is in accordance with ESD requirements.

Note: The level of detail should match the level of importance of the issue in decision making which is dependent on the environmental risk.

Describe baseline conditions

- Provide a description of existing environmental conditions for any potential impacts.

Assess impacts

- For any potential impacts relevant for the assessment of the proposal provide a detailed analysis of the impacts of the proposal on the environment including the cumulative impact of the proposal on the receiving environment especially where there are sensitive receivers.
- Describe the methodology used and assumptions made in undertaking this analysis (including any modelling or monitoring undertaken) and indicate the level of confidence in the predicted outcomes and the resilience of the environment to cope with the predicted impacts.
- The analysis should also make linkages between different areas of assessment where necessary to enable a full assessment of environmental impacts eg assessment of impacts on air quality will often need to draw on the analysis of traffic, health, social, soil and/or ecological systems impacts; etc.
- The assessment needs to consider impacts at all phases of the project cycle including: exploration (if relevant or significant), construction, routine operation, start-up operations, upset operations and decommissioning if relevant.
- The level of assessment should be commensurate with the risk to the environment.

Describe management and mitigation measures

- Describe any mitigation measures and management options proposed to prevent, control, abate or mitigate identified environmental impacts associated with the proposal and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.
- Proponents are expected to implement a 'reasonable level of performance' to minimise environmental impacts. The proponent must indicate how the proposal meets reasonable levels of performance. For example, reference technology based criteria if available, or identify good practice for this type of activity or development. A 'reasonable level of performance' involves adopting and implementing

technology and management practices to achieve certain pollutant emissions levels in economically viable operations. Technology-based criteria evolve gradually over time as technologies and practices change.

- Use environmental impacts as key criteria in selecting between alternative sites, designs and technologies, and to avoid options having the highest environmental impacts.
- Outline any proposed approach (such as an Environmental Management Plan) that will demonstrate how commitments made in the EIS will be implemented. Areas that should be described include:
 - a) operational procedures to manage environmental impacts
 - b) monitoring procedures
 - c) training programs
 - d) community consultation
 - e) complaint mechanisms including site contacts
 - f) strategies to use monitoring information to improve performance
 - g) strategies to achieve acceptable environmental impacts and to respond in event of exceedences.

6. Air

Describe baseline conditions

- Provide a description of existing air quality and meteorology, using existing information and site representative ambient monitoring data. This description should include the following parameters:
 1. dust deposition rates;
 2. total suspended particles;
 3. PM10 and PM2.5 concentrations and crystalline; and
 4. crystalline silica impacts

The parameters must be determined in accordance with the EPA's approved methods titled "*Approved Method and Guidance for the Modelling and Assessment of Air Pollutants in NSW, 2005*."

Assess impacts

- Identify all pollutants of concern and estimate emissions by quantity (and size for particles), source and discharge point.
- Estimate the resulting ground level concentrations of all pollutants. Where necessary (eg potentially significant impacts and complex terrain effects), use an appropriate dispersion model to estimate ambient pollutant concentrations. Discuss choice of model and parameters with the EPA.
- Describe the effects and significance of pollutant concentration on the environment, human health, amenity and regional ambient air quality standards or goals.
- Describe the contribution that the development will make to regional and global pollution, particularly in sensitive locations.

- For potentially odorous emissions provide the emission rates in terms of odour units (determined by techniques compatible with EPA procedures). Use sampling and analysis techniques for individual or complex odours and for point or diffuse sources, as appropriate.

Note: With dust and odour, it may be possible to use data from existing similar activities to generate emission rates.

- Reference must be made to EPA's documents titled:
 1. *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW*, 2005;
 2. *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW*, 2007;
 3. *Assessment and Management of Odour from Stationary Sources in NSW*, 2006;
 4. *Technical Notes: Draft Policy: Assessment and Management of Odour from Stationary Sources in NSW*, 2006; and
 5. *Load Calculation Protocol for use by holders of NSW Environment Protection Licences when calculating Assessable Pollutant Loads*, 2009.

Describe management and mitigation measures

- Outline specifications of pollution control equipment (including manufacturer's performance guarantees where available) and management protocols for both point and fugitive emissions. Where possible, this should include cleaner production processes.

6. Noise and vibration

Describe baseline conditions

- Determine the existing background (LA90) and ambient (LAeq) noise levels in accordance with the *NSW Industrial Noise Policy*.
- Determine the existing road traffic noise levels in accordance with the *NSW Environmental Criteria for Road Traffic Noise*, where road traffic noise impacts may occur.
- The noise impact assessment report should provide details of all monitoring of existing ambient noise levels including:

details of equipment used for the measurements

- h) a brief description of where the equipment was positioned
- i) a statement justifying the choice of monitoring site, including the procedure used to choose the site, having regards to the definition of 'noise sensitive locations(s)' and 'most affected locations(s)' described in Section 3.1.2 of the *NSW Industrial Noise Policy*
- j) details of the exact location of the monitoring site and a description of land uses in surrounding areas
- k) a description of the dominant and background noise sources at the site

- l) day, evening and night assessment background levels for each day of the monitoring period
- m) the final Rating Background Level (RBL) value
- n) graphs of the measured noise levels for each day should be provided
- o) a record of periods of affected data (due to adverse weather and extraneous noise), methods used to exclude invalid data and a statement indicating the need for any re-monitoring under Step 1 in Section B1.3 of the *NSW Industrial Noise Policy*
- p) determination of LAeq noise levels from existing industry.

Assess impacts

- Determine the project specific noise levels for the site. For each identified potentially affected receiver, this should include:
 - a) determination of the intrusive criterion for each identified potentially affected receiver
 - b) selection and justification of the appropriate amenity category for each identified potentially affected receiver
 - c) determination of the amenity criterion for each receiver
 - d) determination of the appropriate sleep disturbance limit.
- Maximum noise levels during night-time period (10pm-7am) should be assessed to analyse possible affects on sleep. Where LA1(1min) noise levels from the site are less than 15 dB above the background LA90 noise level, sleep disturbance impacts are unlikely. Where this is not the case, further analysis is required. Additional guidance is provided in Appendix B of the *NSW Environmental Criteria for Road Traffic Noise*.
- Determine expected noise level and noise character (eg tonality, impulsiveness, vibration, etc) likely to be generated from noise sources during:
 - a) site establishment
 - b) construction
 - c) operational phases
 - d) transport including traffic noise generated by the proposal
 - e) other services.

Note: The noise impact assessment report should include noise source data for each source in 1/1 or 1/3 octave band frequencies including methods for references used to determine noise source levels. Noise source levels and characteristics can be sourced from direct measurement of similar activities or from literature (if full references are provided).

- Determine the noise levels likely to be received at the most sensitive locations (these may vary for different activities at each phase of the development). Potential impacts should be determined for any identified significant adverse meteorological conditions. Predicted noise levels under calm conditions may also aid in quantifying the extent of impact where this is not the most adverse condition.
- The noise impact assessment report should include:
 - a) a plan showing the assumed location of each noise source for each prediction scenario

- b) a list of the number and type of noise sources used in each prediction scenario to simulate all potential significant operating conditions on the site
 - c) any assumptions made in the predictions in terms of source heights, directivity effects, shielding from topography, buildings or barriers, etc
 - d) methods used to predict noise impacts including identification of any noise models used. Where modelling approaches other than the use of the ENM or Sound Plan computer models are adopted, the approach should be appropriately justified and validated
 - e) an assessment of appropriate weather conditions for the noise predictions including reference to any weather data used to justify the assumed conditions
 - f) the predicted noise impacts from each noise source as well as the combined noise level for each prediction scenario under any identified significant adverse weather conditions as well as calm conditions where appropriate
 - g) for developments where a significant level of noise impact is likely to occur, noise contours for the key prediction scenarios should be derived
 - h) an assessment of the need to include modification factors as detailed in Section 4 of the *NSW Industrial Noise Policy*.
- Discuss the findings from the predictive modelling and, where relevant noise criteria have not been met, recommend additional mitigation measures.
 - The noise impact assessment report should include details of any mitigation proposed including the attenuation that will be achieved and the revised noise impact predictions following mitigation.
 - Where relevant noise/vibration criteria cannot be met after application of all feasible and cost effective mitigation measures the residual level of noise impact needs to be quantified by identifying:
 - a) locations where the noise level exceeds the criteria and extent of exceedence
 - b) numbers of people (or areas) affected
 - c) times when criteria will be exceeded
 - d) likely impact on activities (speech, sleep, relaxation, listening, etc)
 - e) change on ambient conditions
 - f) the result of any community consultation or negotiated agreement.
 - For the assessment of existing and future traffic noise, details of data for the road should be included such as assumed traffic volume; percentage heavy vehicles by time of day; and details of the calculation process. These details should be consistent with any traffic study carried out in the EIS.
 - Where blasting is intended an assessment in accordance with the *Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration* (ANZECC, 1990) should be undertaken. The following details of the blast design should be included in the noise assessment:
 - a) bench height, burden spacing, spacing burden ratio
 - b) blast hole diameter, inclination and spacing
 - c) type of explosive, maximum instantaneous charge, initiation, blast block size, blast frequency.

Describe management and mitigation measures

- Determine the most appropriate noise mitigation measures and expected noise reduction including both noise controls and management of impacts for both construction and operational noise. This will include selecting quiet equipment and construction methods, noise barriers or acoustic screens, location of stockpiles, temporary offices, compounds and vehicle routes, scheduling of activities, etc.
- For traffic noise impacts, provide a description of the ameliorative measures considered (if required), reasons for inclusion or exclusion, and procedures for calculation of noise levels including ameliorative measures. Also include, where necessary, a discussion of any potential problems associated with the proposed ameliorative measures, such as overshadowing effects from barriers. Appropriate ameliorative measures may include:
 - a) use of alternative transportation modes, alternative routes, or other methods of avoiding the new road usage
 - b) control of traffic (eg: limiting times of access or speed limitations)
 - c) resurfacing of the road using a quiet surface
 - d) use of (additional) noise barriers or bunds
 - e) treatment of the facade to reduce internal noise levels buildings where the night-time criteria is a major concern
 - f) more stringent limits for noise emission from vehicles (i.e. using specially designed 'quite' trucks and/or trucks to use air bag suspension)
 - g) driver education
 - h) appropriate truck routes
 - i) limit usage of exhaust breaks
 - j) use of premium muffles on trucks
 - k) reducing speed limits for trucks
 - l) ongoing community liaison and monitoring of complaints
 - m) phasing in the increased road use.

1. Water

Describe baseline conditions

- Describe existing surface and groundwater quality – an assessment needs to be undertaken for any water resource likely to be affected by the proposal and for all conditions (e.g. a wet weather sampling program is needed if runoff events may cause impacts).
Note: Methods of sampling and analysis need to conform with an accepted standard (e.g. Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (EPA 2004) or be approved and analyses undertaken by accredited laboratories).
- Provide site drainage details and surface runoff yield.
- State the ambient Water Quality and River Flow Objectives for the receiving waters. These refer to the community's agreed environmental values and human uses endorsed by the Government as goals for the ambient waters. These environmental values are published on the website: www.environment.nsw.gov.au/ieo. The EIS should state the environmental values listed for the catchment and waterway type relevant to your proposal. NB: A consolidated and approved list of environmental values are not available for groundwater resources. Where groundwater may be affected the EIS should identify appropriate groundwater environmental values and justify the choice.
- State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC 2000 *Guidelines for Fresh and Marine Water Quality* (<http://www.deh.gov.au/water/quality/nwqms/volume1.html>) (Note that, as at 2004, the NSW Water Quality Objectives booklets and website contain technical criteria derived from the 1992 version of the ANZECC Guidelines. The Water Quality Objectives remain as Government Policy, reflecting the community's environmental values and long-term goals, but the technical criteria are replaced by the more recent ANZECC 2000 Guidelines). NB: While specific guidelines for groundwater are not available, the ANZECC 2000 Guidelines endorse the application of the trigger values and decision trees as a tool to assess risk to environmental values in groundwater.
- State any locally specific objectives, criteria or targets, which have been endorsed by the government e.g. the Healthy Rivers Commission Inquiries (www.hrc.nsw.gov.au) or the NSW Salinity Strategy (DLWC, 2000) (www.dlwc.nsw.gov.au/care/salinity/#Strategy).
- Where site specific studies are proposed to revise the trigger values supporting the ambient Water Quality and River Flow Objectives, and the results are to be used for regulatory purposes (e.g. to assess whether a licensed discharge impacts on water quality objectives), then prior agreement from the EPA on the approach and study design must be obtained.
- Describe the state of the receiving waters and relate this to the relevant Water Quality and River Flow Objectives (i.e. are Water Quality and River Flow Objectives being achieved?). Proponents are generally only expected to source available data and information. However, proponents of large or high risk developments may be required to collect some ambient water quality / river flow / groundwater data to enable a suitable level of impact assessment. Issues to include in the description of the receiving waters could include:
 - a) lake or estuary flushing characteristics
 - b) specific human uses (e.g. exact location of drinking water offtake)
 - c) sensitive ecosystems or species conservation values
 - d) a description of the condition of the local catchment e.g. erosion levels, soils, vegetation cover, etc

- e) an outline of baseline groundwater information, including, but not restricted to, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment
- f) historic river flow data where available for the catchment.

Assess impacts

- No proposal should breach clause 120 of the *Protection of the Environment Operations Act 1997* (i.e. pollution of waters is prohibited unless undertaken in accordance with relevant regulations).
- Identify and estimate the quantity of all pollutants that may be introduced into the water cycle by source and discharge point including residual discharges after mitigation measures are implemented.
- Include a rationale, along with relevant calculations, supporting the prediction of the discharges.
- Describe the effects and significance of any pollutant loads on the receiving environment. This should include impacts of residual discharges through modelling, monitoring or both, depending on the scale of the proposal. Determine changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, wetland hydrologic regimes and groundwater).
- Describe water quality impacts resulting from changes to hydrologic flow regimes (such as nutrient enrichment or turbidity resulting from changes in frequency and magnitude of stream flow).
- Identify any potential impacts on quality or quantity of groundwater describing their source.
- Identify potential impacts associated with geomorphological activities with potential to increase surface water and sediment runoff or to reduce surface runoff and sediment transport. Also consider possible impacts such as bed lowering, bank lowering, instream siltation, floodplain erosion and floodplain siltation.
- Identify impacts associated with the disturbance of acid sulfate soils and potential acid sulfate soils.
- Containment of spills and leaks shall be in accordance with the technical guidelines section 'Bunding and Spill Management' of the *Authorised Officers Manual* (EPA, 1995) (<http://www.environment.nsw.gov.au/mao/bundingspill.htm>) and the most recent versions of the Australian Standards referred to in the Guidelines. Containment should be designed for no-discharge.
- The significance of the impacts listed above should be predicted. When doing this it is important to predict the ambient water quality and river flow outcomes associated with the proposal and to demonstrate whether these are acceptable in terms of achieving protection of the Water Quality and River Flow Objectives. In particular the following questions should be answered:
 - a) will the proposal protect Water Quality and River Flow Objectives where they are currently achieved in the ambient waters; and
 - b) will the proposal contribute towards the achievement of Water Quality and River Flow Objectives over time, where they are not currently achieved in the ambient waters.
- Consult with the EPA as soon as possible if a mixing zone is proposed (a mixing zone could exist where effluent is discharged into a receiving water body, where the quality of the water being discharged does not immediately meet water quality objectives. The mixing zone could result in dilution, assimilation and decay of the effluent to allow water quality objectives to be met further downstream, at the edge of the mixing zone). The EPA will advise the proponent under what conditions a mixing zone will and will not be acceptable, as well as the information and modelling requirements for assessment.

Note: The assessment of water quality impacts needs to be undertaken in a total catchment management context to provide a wide perspective on development impacts, in particular cumulative impacts.

- Where a licensed discharge is proposed, provide the rationale as to why it cannot be avoided through application of a reasonable level of performance, using available technology, management practice and industry guidelines.
- Where a licensed discharge is proposed, provide the rationale as to why it represents the best environmental outcome and what measures can be taken to reduce its environmental impact.
- Reference must be made to guidelines titled:
 1. " *Managing Urban Stormwater: Soils and Construction (Landcom, 2004), Guidelines for Fresh and Marine Water Quality ANZECC 2000*"; and
 2. " *Environmental Guidelines: Use of effluent by Irrigation, 2004*".

Describe management and mitigation measures

- Outline stormwater management to control pollutants at the source and contain them within the site. Also describe measures for maintaining and monitoring any stormwater controls.
- Outline erosion and sediment control measures directed at minimising disturbance of land, minimising water flow through the site and filtering, trapping or detaining sediment. Also include measures to maintain and monitor controls as well as rehabilitation strategies.
- Describe waste water treatment measures that are appropriate to the type and volume of waste water and are based on a hierarchy of avoiding generation of waste water; capturing all contaminated water (including stormwater) on the site; reusing/recycling waste water; and treating any unavoidable discharge from the site to meet specified water quality requirements.
- Outline pollution control measures relating to storage of materials, possibility of accidental spills (eg preparation of contingency plans), appropriate disposal methods, and generation of leachate.
- Describe hydrological impact mitigation measures including:
 - a) site selection (avoiding sites prone to flooding and waterlogging, actively eroding or affected by deposition)
 - b) minimising runoff
 - c) minimising reductions or modifications to flow regimes
 - d) avoiding modifications to groundwater.
- Describe groundwater impact mitigation measures including:
 - a) site selection
 - b) retention of native vegetation and revegetation
 - c) artificial recharge
 - d) providing surface storages with impervious linings
 - e) monitoring program.
- Describe geomorphological impact mitigation measures including:

- a) site selection
 - b) erosion and sediment controls
 - c) minimising instream works
 - d) treating existing accelerated erosion and deposition
 - e) monitoring program.
- Any proposed monitoring must be undertaken in accordance with the EPA's document titled " *Approved Methods for the Sampling and Analysis of Water Pollutants in NSW* , 2004.

5. Soils and contamination

Describe baseline conditions

- Provide any details (in addition to those provided in the location description - Section C) that are needed to describe the existing situation in terms of soil types and properties and soil contamination.

Assess impacts

- Identify any likely impacts resulting from the construction or operation of the proposal, including the likelihood of:
 - a) disturbing any existing contaminated soil
 - b) contamination of soil by operation of the activity
 - c) subsidence or instability
 - d) soil erosion
 - e) disturbing acid sulfate or potential acid sulfate soils.
- Reference must be made to the EPA's guidelines titled:
 1. "*Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites, 2011*"; and
 2. "*Contaminated Sites – Guidelines on the Duty to Report Contamination under the Contaminated Land management Act , 2009*."

Describe management and mitigation measures

- Describe and assess the effectiveness or adequacy of any soil management and mitigation measures during construction and operation of the proposal including:
 - a) erosion and sediment control measures
 - b) proposals for site remediation – see *Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land* (Department of Urban Affairs and Planning and Environment Protection Authority, 1998)

- c) proposals for the management of these soils – see *Assessing and Managing Acid Sulfate Soils*, Environment Protection Authority, 1995 (note that this is the only methodology accepted by the EPA).

6. Waste and chemicals

Describe baseline conditions

- Describe any existing waste or chemicals operations related to the proposal.

Assess impacts

- Assess the adequacy of proposed measures to minimise natural resource consumption and minimise impacts from the handling, transporting, storage, processing and reprocessing of waste and/or chemicals.
- Reference must be made to EPA's document titled "*Waste Classification Guidelines, 2008*".

Describe management and mitigation measures

- Outline measures to minimise the consumption of natural resources.
- Outline measures to avoid the generation of waste and promote the re-use and recycling and reprocessing of any waste.
- Outline measures to support any approved regional or industry waste plans.

7. Cumulative impacts

- Identify the extent that the receiving environment is already stressed by existing development and background levels of emissions to which this proposal will contribute.
- Assess the impact of the proposal against the long term air, noise and water quality objectives for the area or region.
- Identify infrastructure requirements flowing from the proposal (eg water and sewerage services, transport infrastructure upgrades).
- Assess likely impacts from such additional infrastructure and measures reasonably available to the proponent to contain such requirements or mitigate their impacts (eg travel demand management strategies).

F. List of approvals and licences

- Identify all approvals and licences required under environment protection legislation including details of all scheduled activities, types of ancillary activities and types of discharges (to air, land, water).

G. Compilation of mitigation measures

- Outline how the proposal and its environmental protection measures would be implemented and managed in an integrated manner so as to demonstrate that the proposal is capable of complying with statutory obligations under DECCW licences or approvals (eg outline of an environmental management plan).
- The mitigation strategy should include the environmental management and cleaner production principles which would be followed when planning, designing, establishing and operating the proposal. It should include two sections, one setting out the program for managing the proposal and the other outlining the monitoring program with a feedback loop to the management program.

H. Justification for the Proposal

- Reasons should be included which justify undertaking the proposal in the manner proposed, having regard to the potential environmental impacts.

28 April 2014

Our Reference: SYD14/00384 (A6612417)
DP&I Ref: Mod 2 (DA 267-11-99)

Director
Mining Projects
Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

Attention: Elle Donnelley

ROBERTS ROAD QUARRY MODIFICATION 2 – CONTINUED OPERATIONS (DA267-11-99 MOD 2) REQUEST FOR DIRECTOR GENERAL'S REQUIREMENTS

Reference is made to your email dated 14 April 2014 requesting Roads and Maritime Services (Roads and Maritime) to provide details of key issues and assessment requirements regarding the abovementioned development for inclusion in the Director General's Environmental Assessment (EA) requirements.

Roads and Maritime require the following issues to be included in the transport and traffic impact assessment of the proposed development:

1. Daily and peak traffic movements likely to be generated by the proposed development including the impact on nearby intersections and the need/associated funding for upgrading or road improvement works (if required).
2. Details of the proposed accesses and the parking provisions associated with the proposed development including compliance with the requirements of the relevant Australian Standards (ie: turn paths, sight distance requirements, aisle widths, etc).
3. Proposed number of car parking spaces and compliance with the appropriate parking codes.
4. Details of service vehicle movements (including vehicle type and likely arrival and departure times).
5. Roads and Maritime will require in due course the provision of a traffic management plan for all demolition/construction activities, detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures.

Any inquiries in relation to this development application can be directed to Angela Malloch on 8849 2041 or Angela.Malloch@rms.nsw.gov.au

Yours faithfully

A handwritten signature in black ink, appearing to read 'Pahee Rathan', with a stylized flourish at the end.

Pahee Rathan
A/Senior Land Use Planner
Network and Safety Section

Elle Donnelley - Fwd: Fw: Roberts Road Quarry - Modification 2 (DA 267-11-99) - Request for Input into DGRs

From: Andrew Docking <andrew.docking@dpi.nsw.gov.au>
To: <elle.donnelley@planning.nsw.gov.au>
Date: 6/05/2014 2:00 PM
Subject: Fwd: Fw: Roberts Road Quarry - Modification 2 (DA 267-11-99) - Request for Input into DGRs
Attachments: Agriculture-issues-for-extractive-industry-development.pdf

Elle

The location has had a history of agriculture and now extractive industries.

The rehabilitation of the site should where possible to allow continued agricultural development.

DGRs should cover:

Development Applications duly consider the following potential impacts and identify suitable mitigation responses for:

- Impacts on agricultural resources;
- Transport and access changes;
- Rehabilitation plans;
- Consultation with rural stakeholders;
- Mitigation and monitoring

Further details are in the attached guideline.

Regards

Andrew Docking | Resource Management Officer
 Agriculture Land Use Planning
 NSW Department of Primary Industries | Locked Bag 21 | ORANGE | NSW 2800
 T: 02 8843 1122 | M: 0431 651 015
 E: andrew.docking@dpi.nsw.gov.au | W: www.industry.nsw.gov.au
 Land use planning information and guidelines are available at:
<http://www.dpi.nsw.gov.au/agriculture/resources/lup>
<http://www.dpi.nsw.gov.au/agriculture/resources/lup/analysis-census-data>

Building thriving, sustainable Agriculture for tomorrow's communities

----- Forwarded message -----

From: Cathy Kelly <cathy.kelly@dpi.nsw.gov.au>
Date: 15 April 2014 11:00
Subject: Fwd: Fw: Roberts Road Quarry - Modification 2 (DA 267-11-99) - Request for Input into DGRs
To: Andrew Docking <andrew.docking@dpi.nsw.gov.au>

Andrew

I was advised that this one is for you

Thanks

Catherine Kelly | Executive Assistant to
 Director, Office of Agricultural Sustainability & Food Security |
 Department of Primary Industries
 161 Kite Street | Locked Bag 21 | ORANGE NSW 2800 |
 ☎: 02 6391 3314 | F: 02 6391 3551 |
 E: cathy.kelly@dpi.nsw.gov.au W: www.dpi.nsw.gov.au

Neil Kennan

From: Wayne Jones <wayne.jones@dpi.nsw.gov.au>
Sent: Tuesday, 8 July 2014 4:29 PM
To: kennan@ozemail.com.au
Subject: Roberts Road Quarry, Maroota

Dear Mr Kennan

I refer to your letter dated 19 June to our NSW Office of Water, Penrith Office requesting EA requirements for the above project. I have copied requirements from the Office of Water below. However, please note that other agencies within the Dept of Primary Industries (Fisheries NSW, Agriculture NSW, Crown Lands, etc) may have other requirements relevant to this project.

I can refer to these agencies or wait until the EA is exhibited and refer for comment at that time. Let me know how you wish to proceed. Call me on the number below if you need to discuss.

Comment by NSW Office of Water

The NSW Office of Water (Office of Water) has reviewed the supporting documentation accompanying the request for Secretary's Environmental Assessment Requirements (SEARs) and provides the following comments below, and further detail in **Attachment A**.

It is recommended that the EIS be required to include:

- Details of water proposed to be taken (including through inflow and seepage) from each surface and groundwater source as defined by the relevant water sharing plan.
- Assessment of any volumetric water licensing requirements (including those for ongoing water take following completion of the project).
- The identification of an adequate and secure water supply for the life of the project. Confirmation that water can be sourced from an appropriately authorised and reliable supply. This is to include an assessment of the current market depth where water entitlement is required to be purchased.
- Full technical details and data of all surface and groundwater modelling undertaken.
- A detailed and consolidated site water balance.
- A detailed assessment against the NSW Aquifer Interference Policy (2012) using the NSW Office of Water's assessment framework.
- Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts.
- Proposed surface and groundwater monitoring activities and methodologies.
- Proposed management and disposal of produced or incidental water
- Details surrounding the final landform of the site, including final void management (where relevant) and rehabilitation measures.
- Assessment of any potential cumulative impacts on water resources, and any proposed options to manage the cumulative impacts.
- Consideration of relevant policies and guidelines.
- A statement of where each element of the SEARs is addressed in the EIS (i.e. in the form of a table).

Should you require further information please contact Vanessa Hornsby, Water Regulation Officer on (02) 8838 7816.

ATTACHMENT A

**NSW Office of Water Comments on Secretary's Environmental Assessment Requirements
Roberts Road Quarry Maroota – MOD 2
(DA 267-11-99 MOD 2)**

For further information visit the NSW Office of Water website, www.water.nsw.gov.au

Key Relevant Legislative Instruments

This section provides a basic summary to aid proponents in the development of an Environmental Impact Statement (EIS), and should not be considered a complete list or comprehensive summary of relevant legislative instruments that may apply to the regulation of water resources for a project.

The EIS should take into account the objects and regulatory requirements of the *Water Act 1912* (WA 1912) and *Water Management Act 2000* (WMA 2000), and associated regulations and instruments, as applicable.

Water Management Act 2000 (WMA 2000)

Key points:

- Volumetric licensing in areas covered by water sharing plans
- Works within 40m of waterfront land
- SSD & SSI projects are exempt from requiring water supply work approvals and controlled activity approvals as a result of the *Environmental Planning & Assessment Act 1979 (EP&A Act)*.
- No exemptions for volumetric licensing apply as a result of the *EP&A Act*.
- Basic landholder rights, including harvestable rights dams
- Aquifer interference activity approval and flood management work approval provisions have not yet commenced and are regulated by the *Water Act 1912*
- Maximum penalties of \$2.2 million plus \$264,000 for each day an offence continues apply under the *WMA 2000*

Water Act 1912 (WA 1912)

Key points:

- Volumetric licensing in areas where no water sharing plan applies
- Monitoring bores
- Aquifer interference activities that are not regulated as a water supply work under the *WMA 2000*.
- Flood management works
- No exemptions apply to licences or permits under the *WA 1912* as a result of the *EP&A Act*.
- Regulation of water bore driller licensing.

Water Management (General) Regulation 2011

Key points:

- Provides various exemptions for volumetric licensing and activity approvals
- Provides further detail on requirements for dealings and applications.

Water Sharing Plans – these are considered regulations under the *WMA 2000*

Access Licence Dealing Principles Order 2004

Harvestable Rights Orders

Water Sharing Plans

The proposal is located within the area covered by the *Greater Metropolitan Region Unregulated River Water Sources Water Sharing Plan* and the *Greater Metropolitan Region Groundwater Sources Water Sharing Plan*. The EIS is required to:

- Demonstrate how the proposal is consistent with the relevant rules of the Water Sharing Plan including rules for access licences, distance restrictions for water supply works and rules for the management of local impacts in respect of surface water and groundwater sources, ecosystem protection (including groundwater dependent ecosystems), water quality and surface-groundwater connectivity.
- Provide a description of any site water use (amount of water to be taken from each water source) and management including all sediment dams, clear water diversion structures with detail on the location, design specifications and storage capacities for all the existing and proposed water management structures.
- Provide an analysis of the proposed water supply arrangements against the rules for access licences and other applicable requirements of any relevant WSP, including:
 - Sufficient market depth to acquire the necessary entitlements for each water source.

- Ability to carry out a “dealing” to transfer the water to relevant location under the rules of the WSP.
- Daily and long-term access rules.
- Account management and carryover provisions.
- Provide a detailed and consolidated site water balance.
- Further detail on licensing requirements is provided below.

Relevant Policies and Guidelines

The EIS should take into account the following policies (as applicable):

- NSW Guidelines for Controlled Activities on Waterfront Land (NOW, 2012)
- NSW Aquifer Interference Policy (NOW, 2012)
- Risk Assessment Guidelines for Groundwater Dependent Ecosystems (NOW, 2012)
 - Australian Groundwater Modelling Guidelines (NWC, 2012)
- NSW State Rivers and Estuary Policy (1993)
- NSW Wetlands Management Policy (1996)
- NSW State Groundwater Policy Framework Document (1997)
- NSW State Groundwater Quality Protection Policy (1998)
- NSW State Groundwater Dependent Ecosystems Policy (2002)
 - NSW Water Extraction Monitoring Policy (2007)
 - Groundwater Monitoring and Modelling Plans - Information for prospective mining and petroleum exploration activities (NOW, 2014)

Office of Water policies can be accessed at the following links:

<http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/default.aspx>
<http://www.water.nsw.gov.au/Water-licensing/Approvals/Controlled-activities/default.aspx>

An assessment framework for the NSW Aquifer Interference Policy can be found online at: <http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/Aquifer-interference>.

Licensing Considerations

The EIS is required to provide:

- Identification of water requirements for the life of the project in terms of both volume and timing (including predictions of potential ongoing groundwater take following the cessation of operations at the site – such as evaporative loss from open voids or inflows).
- Details of the water supply source(s) for the proposal including any proposed surface water and groundwater extraction from each water source as defined in the relevant Water Sharing Plan/s and all water supply works to take water.
- Explanation of how the required water entitlements will be obtained (i.e. through a new or existing licence/s, trading on the water market, controlled allocations etc.).
- Information on the purpose, location, construction and expected annual extraction volumes including details on all existing and proposed water supply works which take surface water, (pumps, dams, diversions, etc).
- Details on all bores and excavations for the purpose of investigation, extraction, dewatering, testing and monitoring. All predicted groundwater take must be accounted for through adequate licensing.
- Details on existing dams/storages (including the date of construction, location, purpose, size and capacity) and any proposal to change the purpose of existing dams/storages
- Details on the location, purpose, size and capacity of any new proposed dams/storages.
- Applicability of any exemptions under the *Water Management (General) Regulation 2011* to the project.

Water allocation account management rules, total daily extraction limits and rules governing environmental protection and access licence dealings also need to be considered.

The Harvestable Right gives landholders the right to capture and use for any purpose 10 % of the average annual runoff from their property. The Harvestable Right has been defined in terms of an equivalent dam capacity called the

Maximum Harvestable Right Dam Capacity (MHRDC). The MHRDC is determined by the area of the property (in hectares) and a site-specific run-off factor. The MHRDC includes the capacity of all existing dams on the property that do not have a current water licence. Storages capturing up to the harvestable right capacity are not required to be licensed but any capacity of the total of all storages/dams on the property greater than the MHRDC may require a licence.

For more information on Harvestable Right dams visit:

<http://www.water.nsw.gov.au/Water-licensing/Basic-water-rights/Harvesting-runoff/Harvesting-runoff>

Dam Safety

Where new or modified dams are proposed, or where new development will occur below an existing dam, the NSW Dams Safety Committee should be consulted in relation to any safety issues that may arise. Conditions of approval may be recommended to ensure safety in relation to any new or existing dams.

See www.damsafety.nsw.gov.au for further information.

Surface Water Assessment

The predictive assessment of the impact of the proposed project on surface water sources should include the following:

- Identification of all surface water sources including watercourses and wetlands transected by or adjacent to the proposed project.
- Detailed description of dependent ecosystems and existing surface water users within the area, including basic landholder rights to water and adjacent/downstream licensed water users.
- Assessment of predicted impacts on the following:
 - flow of surface water, sediment movement, channel stability, and hydraulic regime,
 - water quality,
 - dependent ecosystems,
 - existing surface water users, and
 - planned environmental water and water sharing arrangements prescribed in the relevant water sharing plans.

Groundwater Assessment

To ensure the sustainable and integrated management of groundwater sources, the EIS needs to include adequate details to assess the impact of the project on all groundwater sources including:

- The predicted highest groundwater table at the site.
- Works likely to intercept, connect with or infiltrate the groundwater sources.
- Any proposed groundwater extraction, including purpose, location and construction details of all proposed bores and expected annual extraction volumes (Office of Water "GW" registration numbers and licence/approval numbers should be supplied).
- A description of the flow directions and rates and physical and chemical characteristics of the groundwater source (including connectivity with other groundwater and surface water sources).
- Sufficient baseline monitoring for groundwater quantity and quality for all aquifers and GDEs to establish a baseline incorporating typical temporal and spatial variations.
- The predicted impacts of any final landform on the groundwater regime.
- The existing groundwater users within the area (including the environment), any potential impacts on these users and safeguard measures to mitigate impacts.
- An assessment of the quality of the groundwater for the local groundwater catchment.
- An assessment of the potential for groundwater contamination (considering both the impacts of the proposal on groundwater contamination and the impacts of contamination on the proposal).
- Measures proposed to protect groundwater quality, both in the short and long term.
- Measures for preventing groundwater pollution so that remediation is not required.
- Protective measures for any groundwater dependent ecosystems (GDEs).

- Proposed methods of the disposal of waste water and approval from the relevant authority.
- The results of any models or predictive tools used.

Where potential impact/s are identified the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:

- Any proposed monitoring programs, including water levels and quality data.
- Reporting procedures for any monitoring program including mechanism for transfer of information.
- An assessment of any groundwater source/aquifer that may be sterilised from future use as a water supply as a consequence of the proposal.
- Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category).
- Description of the remedial measures or contingency plans proposed.
- Any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period.

Groundwater Dependent Ecosystems

The EIS must consider the potential impacts on any Groundwater Dependent Ecosystems (GDEs) at the site and in the vicinity of the site and:

- Identify any potential impacts on GDEs as a result of the proposal including:
 - the effect of the proposal on the recharge to groundwater systems;
 - the potential to adversely affect the water quality of the underlying groundwater system and adjoining groundwater systems in hydraulic connections; and
 - the effect on the function of GDEs (habitat, groundwater levels, connectivity).
- Provide safeguard measures for any GDEs.

Watercourses, Wetlands and Riparian Land

The EIS should address the potential impacts of the project on all watercourses likely to be affected by the project, existing riparian vegetation and the rehabilitation of riparian land. It is recommended the EIS provides details on all watercourses potentially affected by the proposal, including:

- Scaled plans showing the location of:
 - wetlands/swamps, watercourses and top of bank;
 - riparian corridor widths to be established along the creeks;
 - existing riparian vegetation surrounding the watercourses (identify any areas to be protected and any riparian vegetation proposed to be removed);
 - the site boundary, the footprint of the proposal in relation to the watercourses and riparian areas; and
 - proposed location of any asset protection zones.
- Photographs of the watercourses/wetlands and a map showing the point from which the photos were taken.
- A detailed description of all potential impacts on the watercourses/riparian land.
- A detailed description of all potential impacts on the wetlands, including potential impacts to the wetlands hydrologic regime; groundwater recharge; habitat and any species that depend on the wetlands.
- A description of the design features and measures to be incorporated to mitigate potential impacts.
- Geomorphic and hydrological assessment of water courses including details of stream order (Strahler System), river style and energy regimes both in channel and on adjacent floodplains.
- Any construction activity within 40m of a watercourse, should be designed by a suitably qualified person, consistent with the NSW Guidelines for Controlled Activities (July 2012).

Landform rehabilitation or final void management

The EIS should include:

- Justification of the proposed final landform with regard to its impact on local and regional surface and groundwater systems;

- A detailed description of how the site would be progressively rehabilitated and integrated into the surrounding landscape;
- Detailed modelling of potential groundwater volume, flow and quality impacts of the presence of an inundated final void on identified receptors specifically considering those environmental systems that are likely to be groundwater dependent;
- An outline of the measures to be put in place to ensure that sufficient resources are available to implement the proposed rehabilitation; and
- The measures that would be established for the long-term protection of local and regional aquifer systems and for the ongoing management of the site following the cessation of the project.

End Attachment A

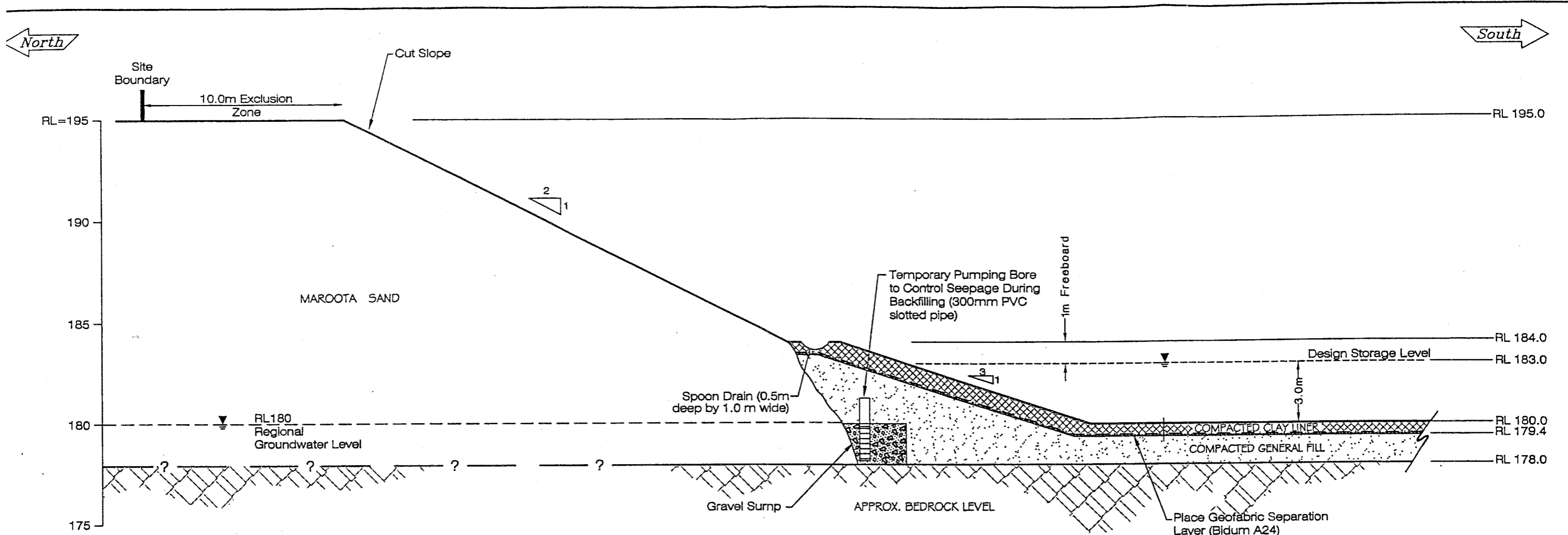
Regards
Wayne

Wayne Jones | Land Use Planning Coordinating Officer
Department of Primary Industries
Level 48, MLC Centre, 19 Martin Place Sydney NSW 2000
T:02 9338 6708 | E: wayne.jones@dpi.nsw.gov.au

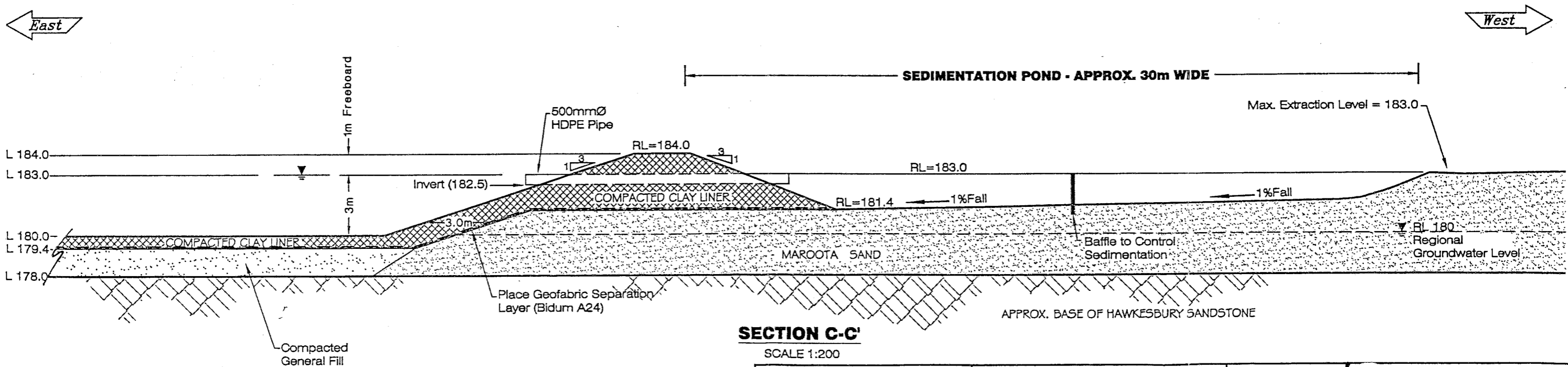
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Appendix 7

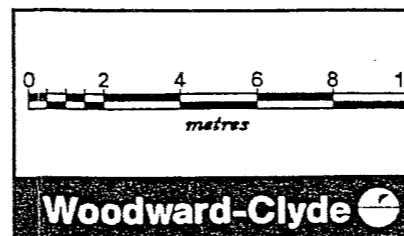
Figures 13 & 14 of Original EIS showing Approved Dam Construction



SECTION B-B'
SCALE 1:200



SECTION C-C'
SCALE 1:200



CLIENT
NEXUS ENVIRONMENTAL PLANNING PTY LTD

PROJECT
LOT 1 & 2, DP228308, LOT 2, DP31327,
MAROOTA DEVELOPMENT APPLICATION-
PROCESS WATER DAM DESIGN

REVISION:
B

SCALE:
AS SHOWN

DRAWING No:
A8602019/0001

CAD FILE No:
Q008

DATE:
22/6/99

DESIGNER:
SRR

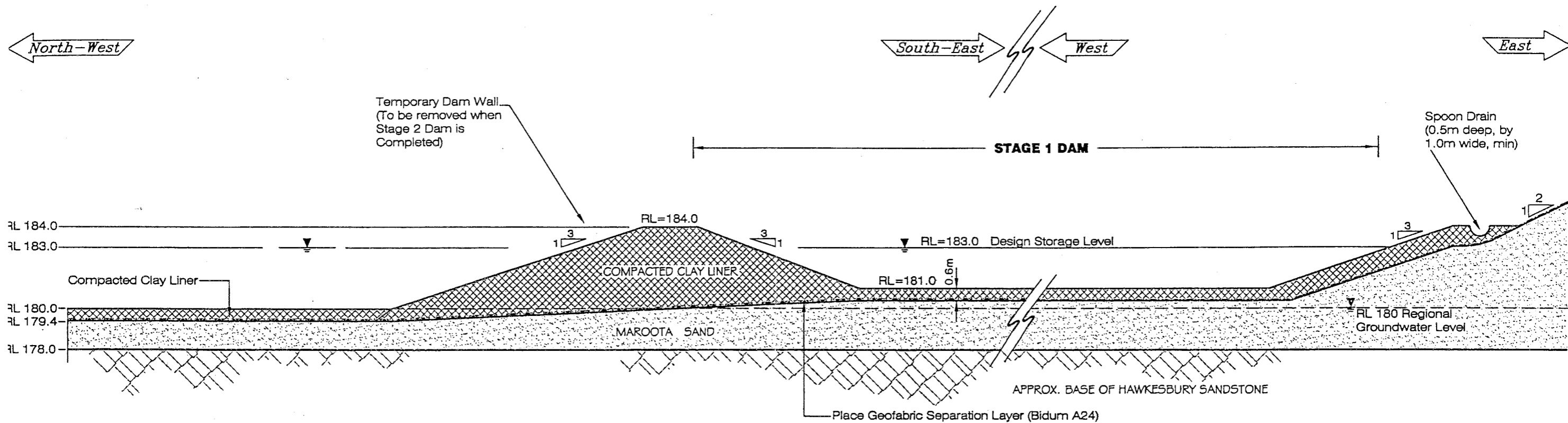
DRAWN:
LJE

CHECKER:
SRR

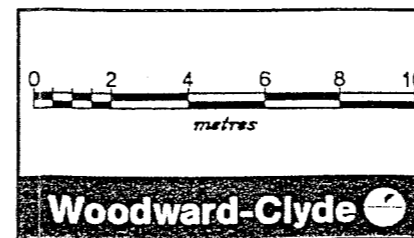
APPROV:
FC

STATUS:
FINAL

**Figure 13
PROPOSED WATER
DAM CROSS SECTIONS**



SECTION D-D'
SCALE 1:200



CLIENT
NEXUS ENVIRONMENTAL PLANNING PTY LTD

PROJECT
LOT 1 & 2, DP228308, LOT 2, DP31327,
MAROOTA DEVELOPMENT APPLICATION
PROCESS WATER DAM DESIGN

REVISION:
B

SCALE:
AS SHOWN

DRAWING No:
A8602019\0001

CAD FILE NO:
G017

DATE:
22/6/19

DESIGN
SRR

DRAWN
LJE

CHECK
SRA

APPRO
FC

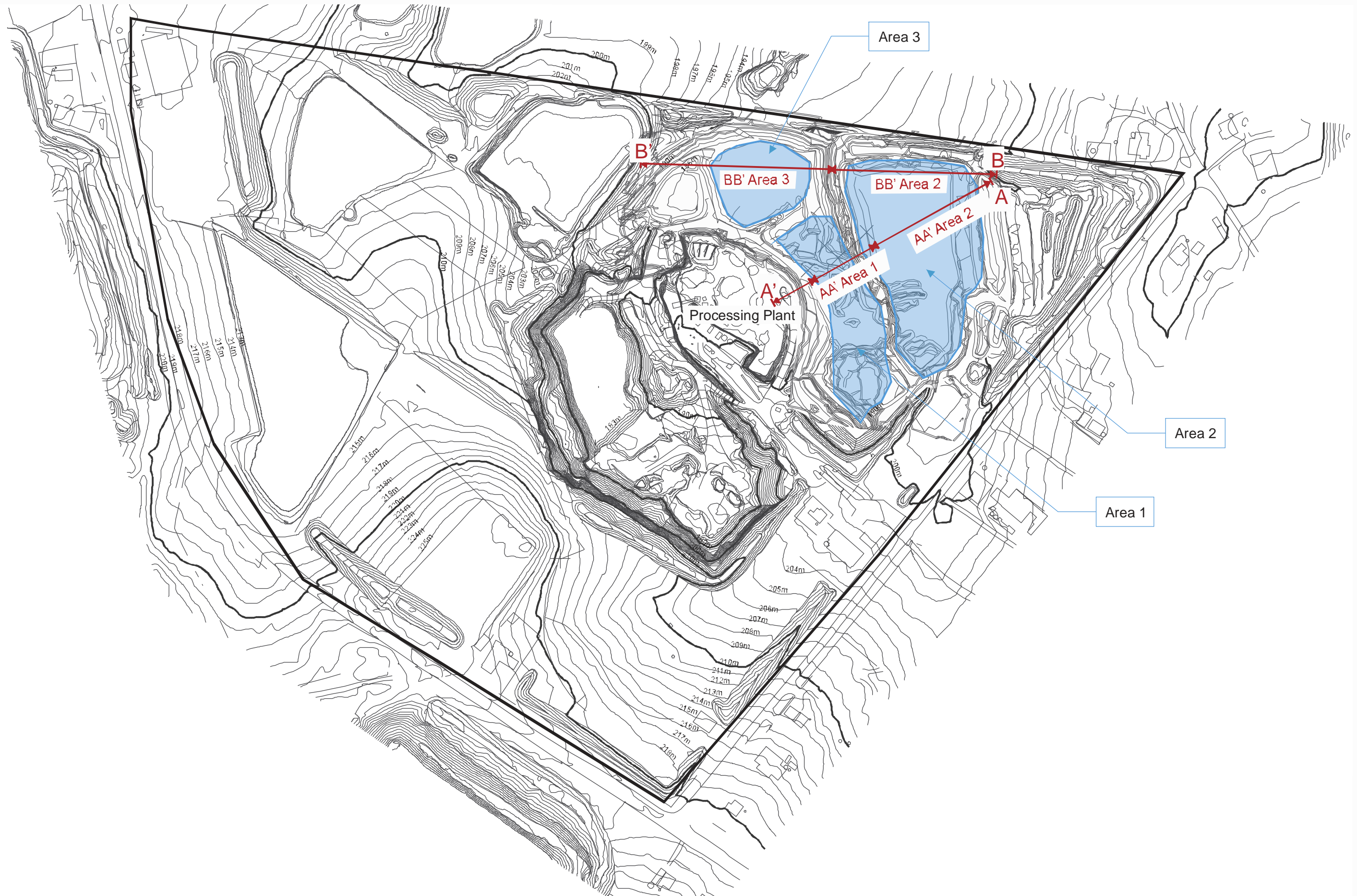
STATUS
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**Figure 14
PROPOSED TEMPORARY
WATER DAM
CROSS SECTION**

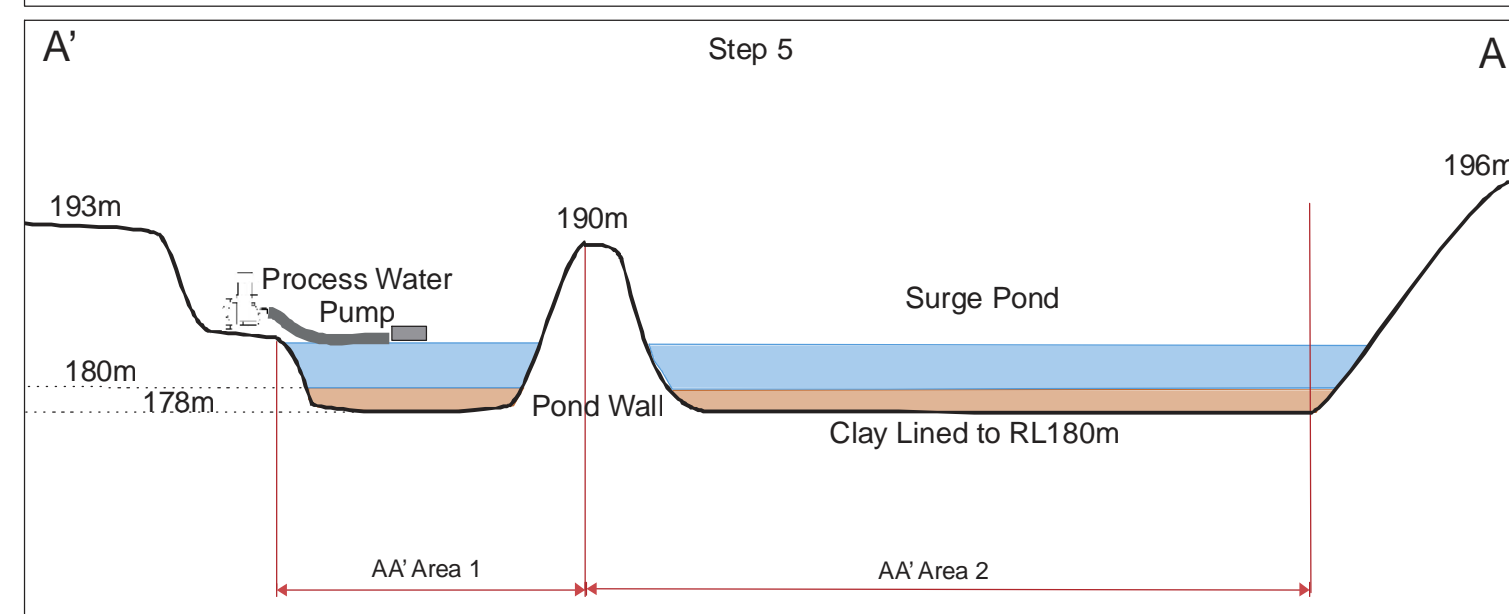
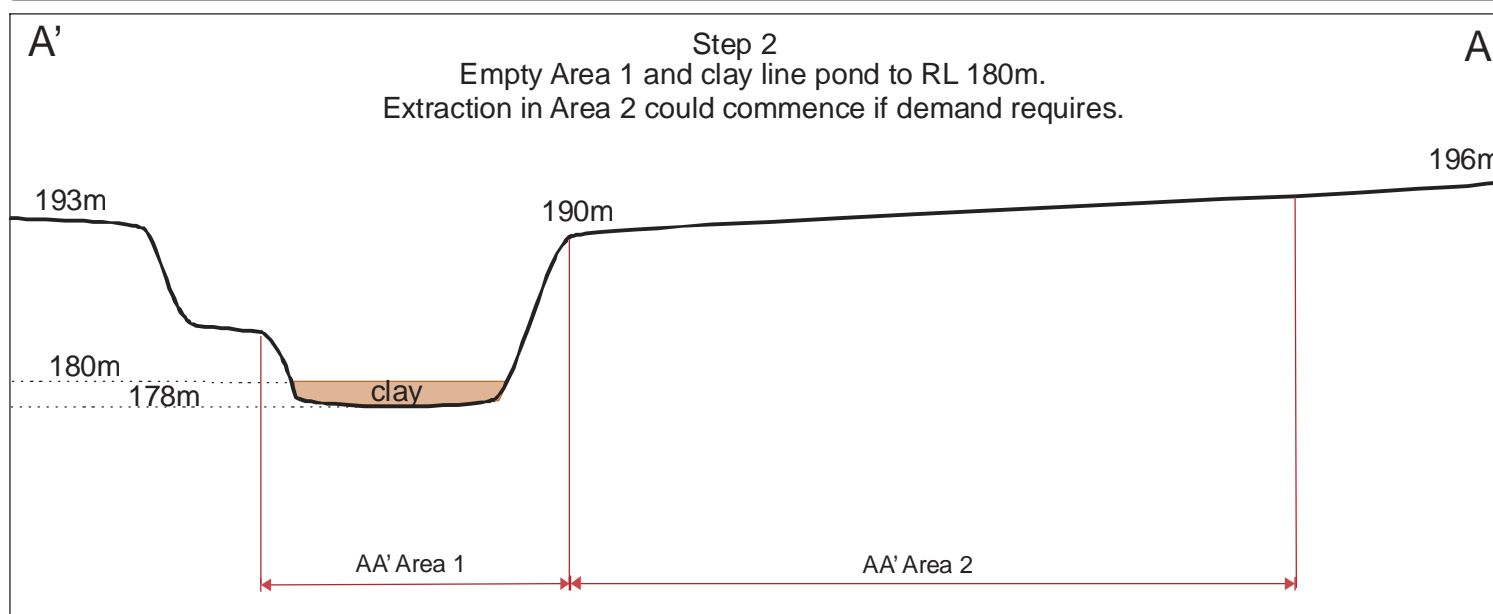
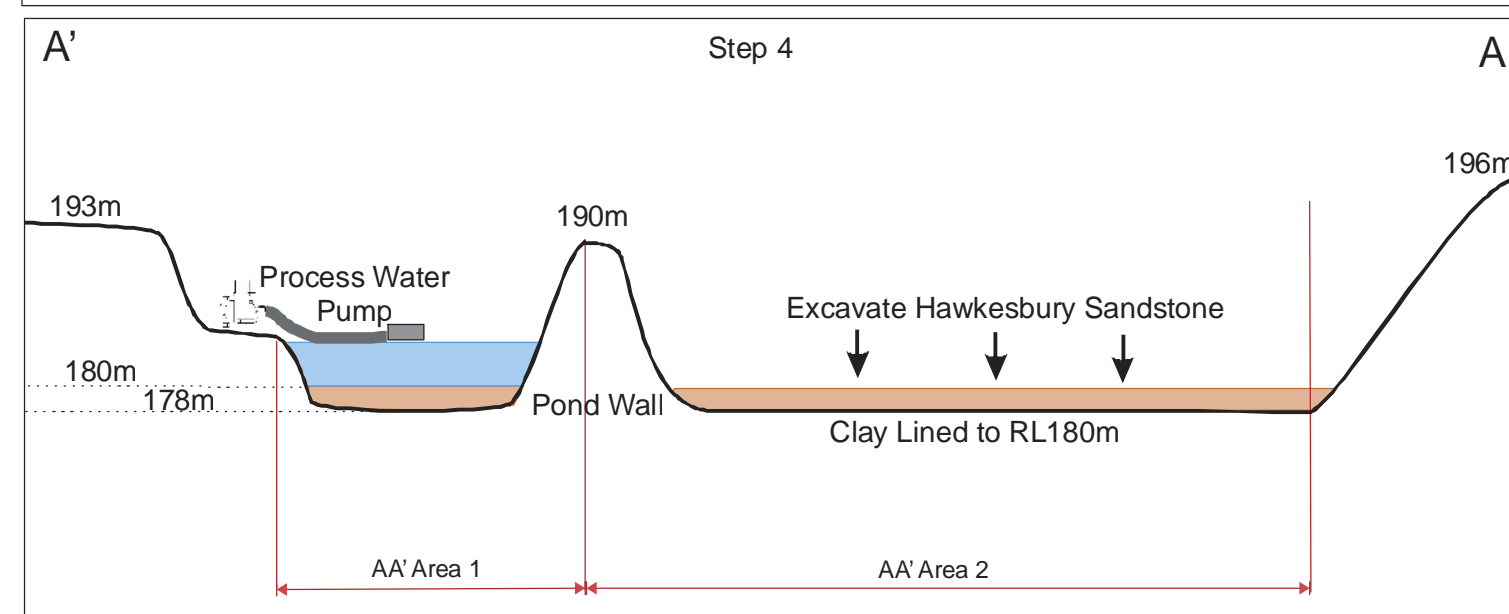
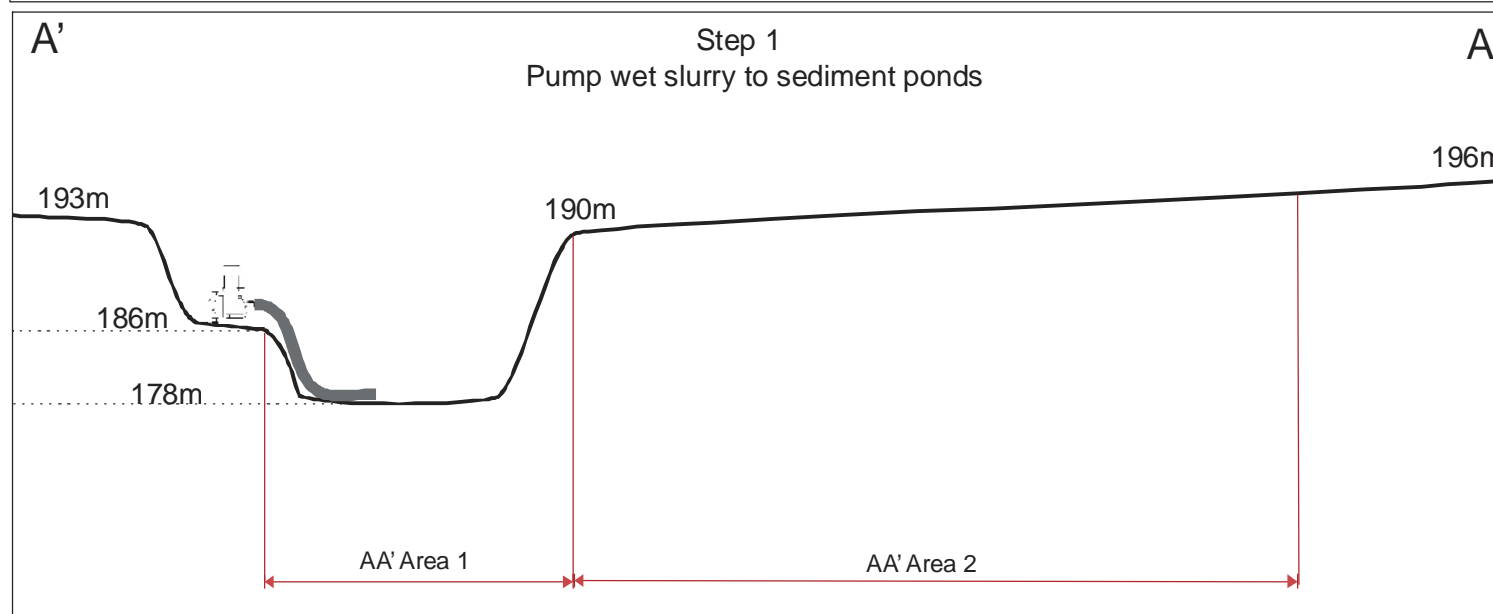
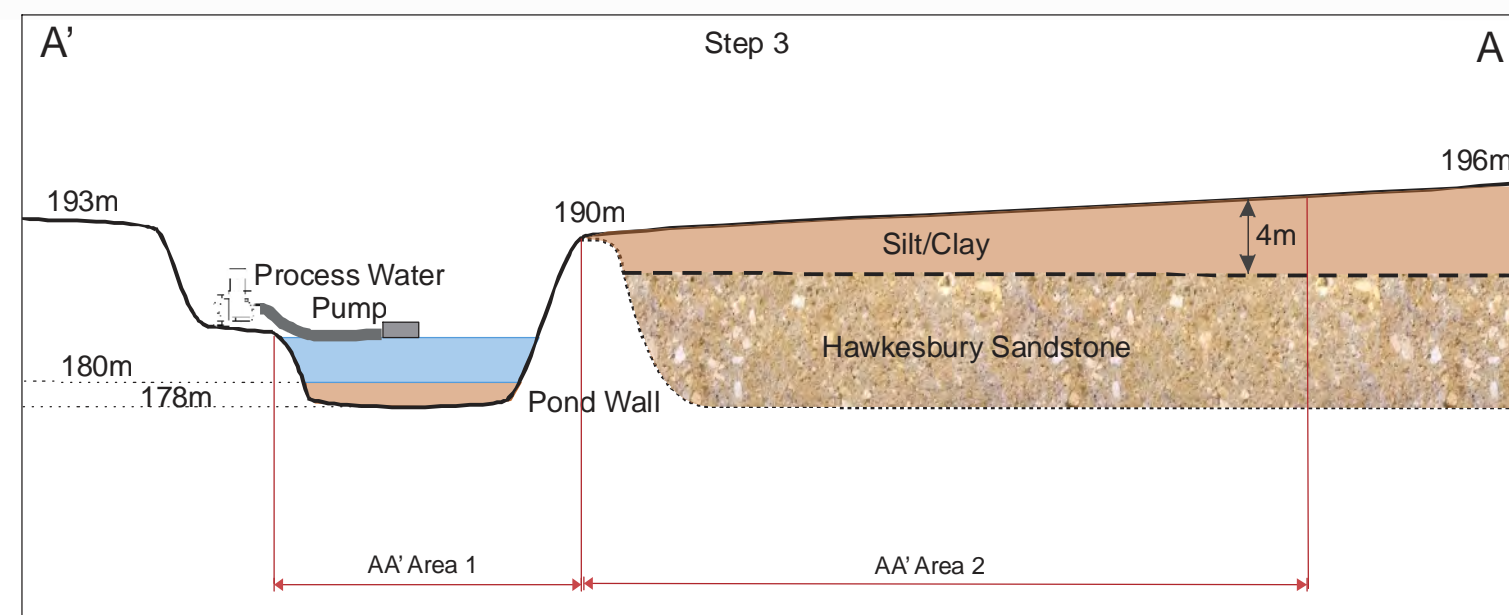
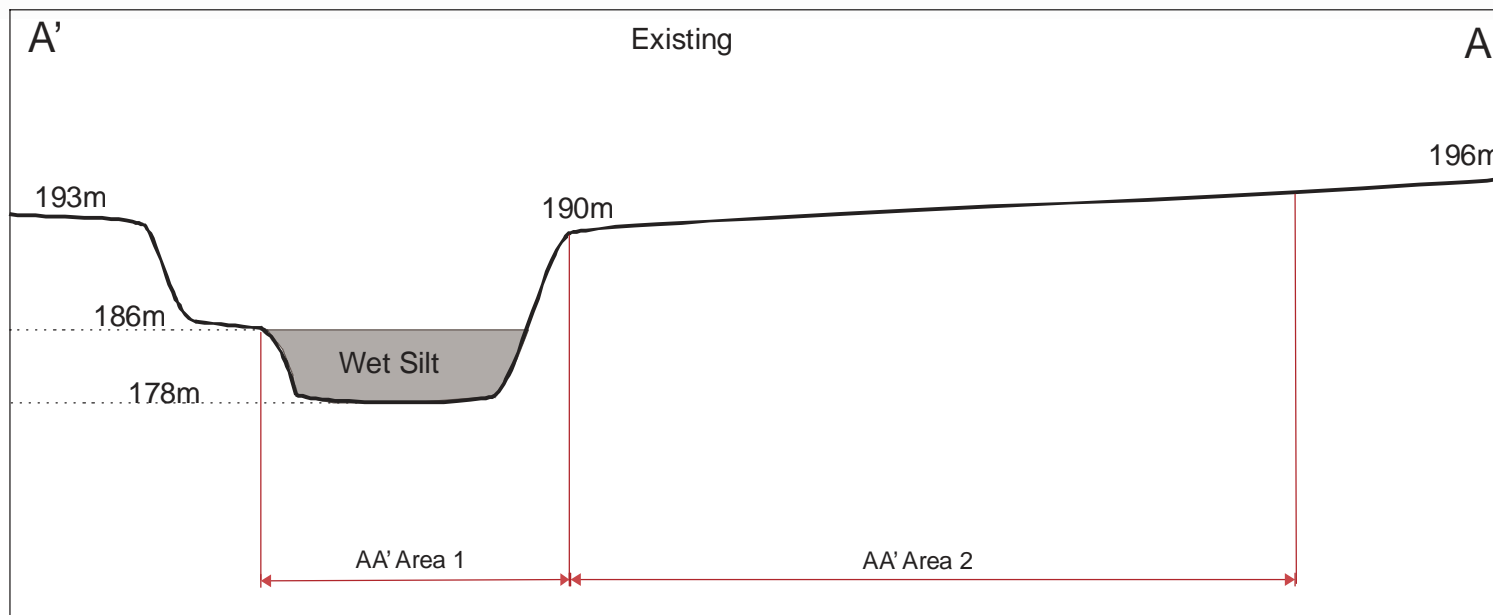
Appendix 8

**Plans showing the proposed three stage construction
of the approved dam**

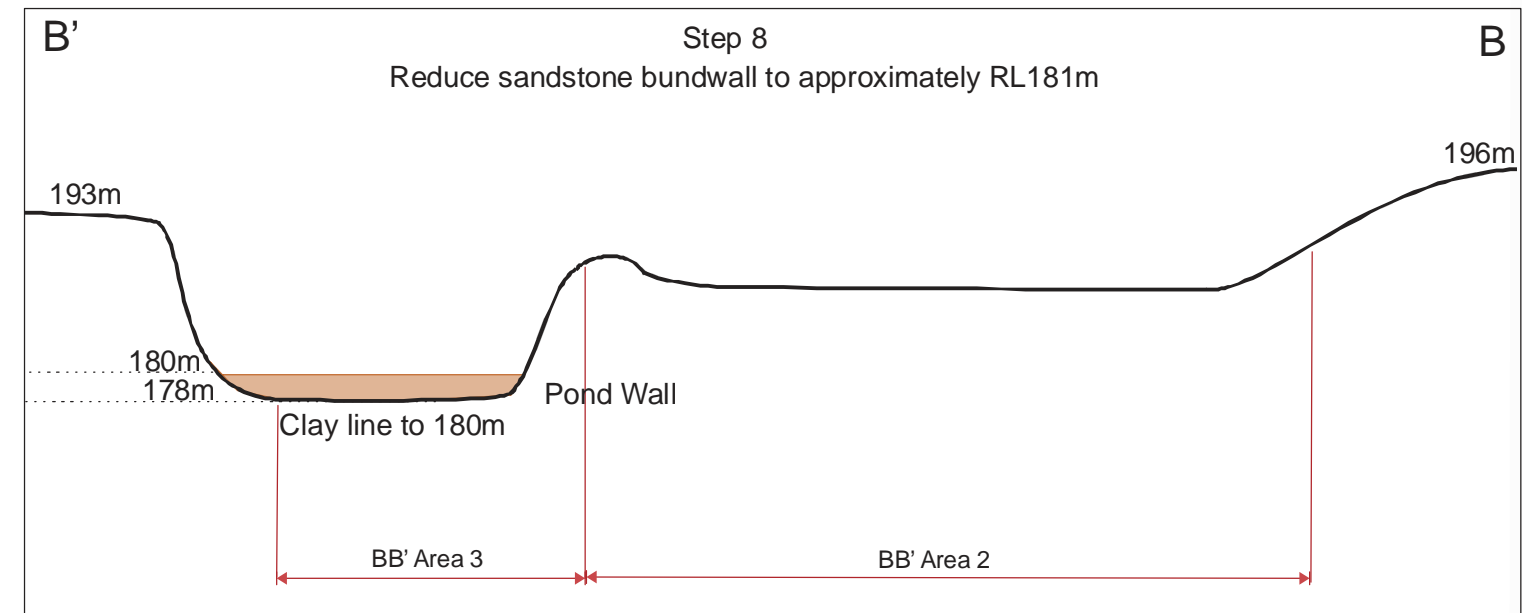
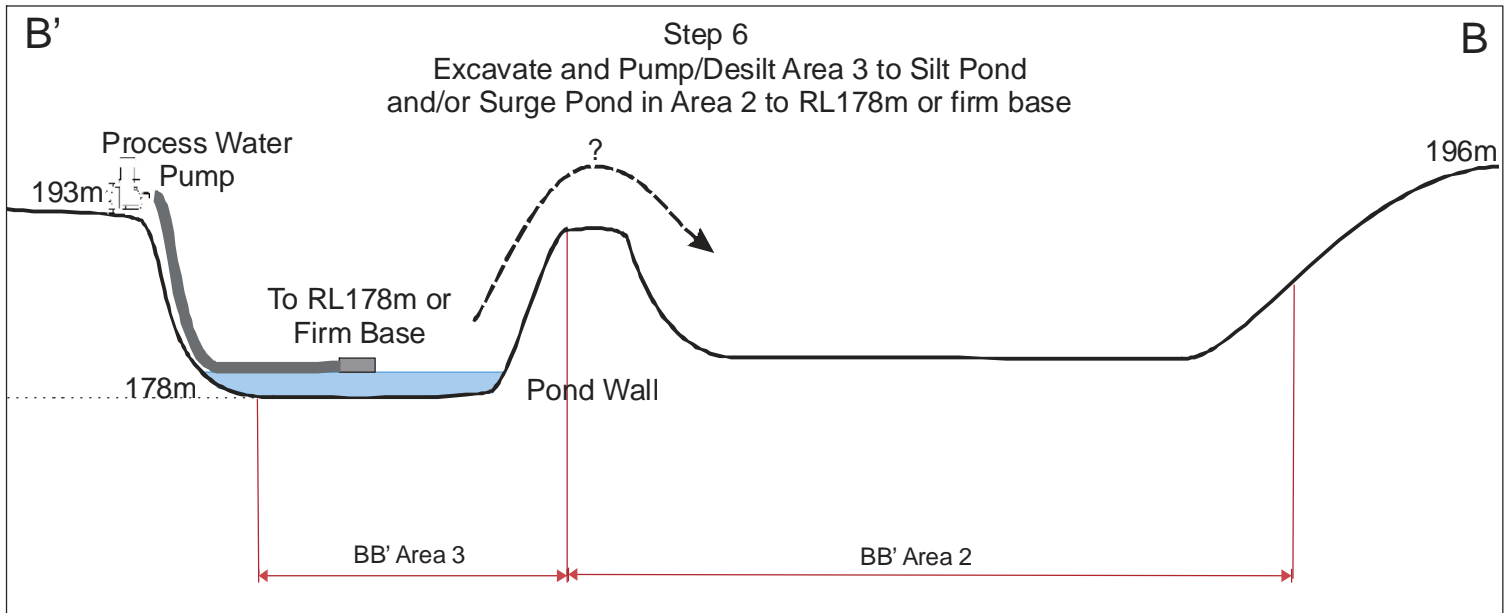
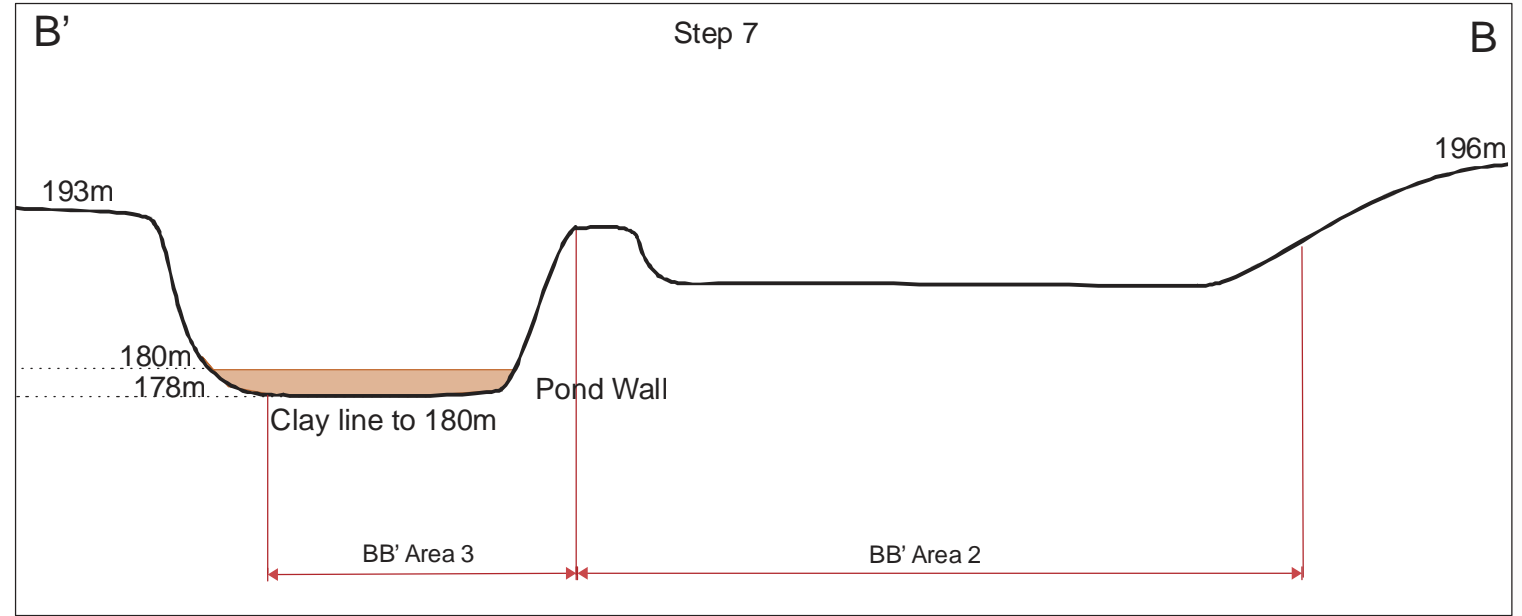
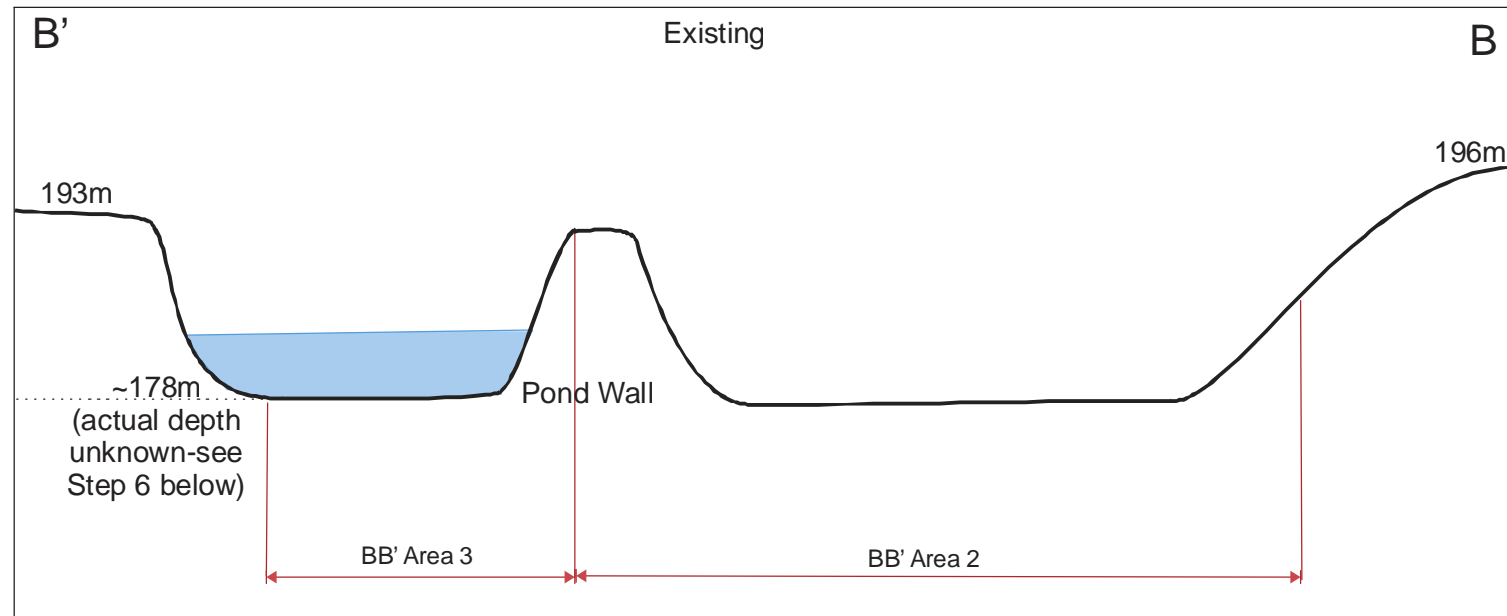
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Sheet:	1 of 5	Tenures:	N/A	Projection:	Plan	Project Manager:	GVT
Version/Date:	A 17/07/2014	Client:	Hodgson Quarry Products Pty Ltd	Contour Interval:	1m	Office:	Thornton
						Scale:	



Plan of:	Hodgson Maroota Quarry Dam Progress Cross Section A- A'	Location:	Hodgson Maroota Quarry, Maroota	Source:	Photomapping	Our Ref:	V:\Jobs_HMA Maroota\2014DA 2014\Figures\Fig 3(2)	
Figure:	FIVE	Council:	Hills Shire Council	Survey:	December 2013	Plan By:	TC	
Sheet:	2 of 5	Tenures:	N/A	Projection:	Plan	Project Manager:	GVT	
Version/Date:	A 17/07/2014	Client:	Hodgson Quarry Products Pty Ltd	Contour Interval:	1m	Office:	Thornton	
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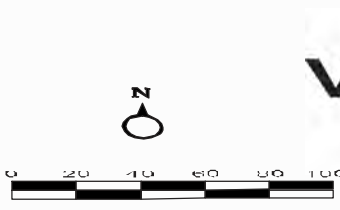

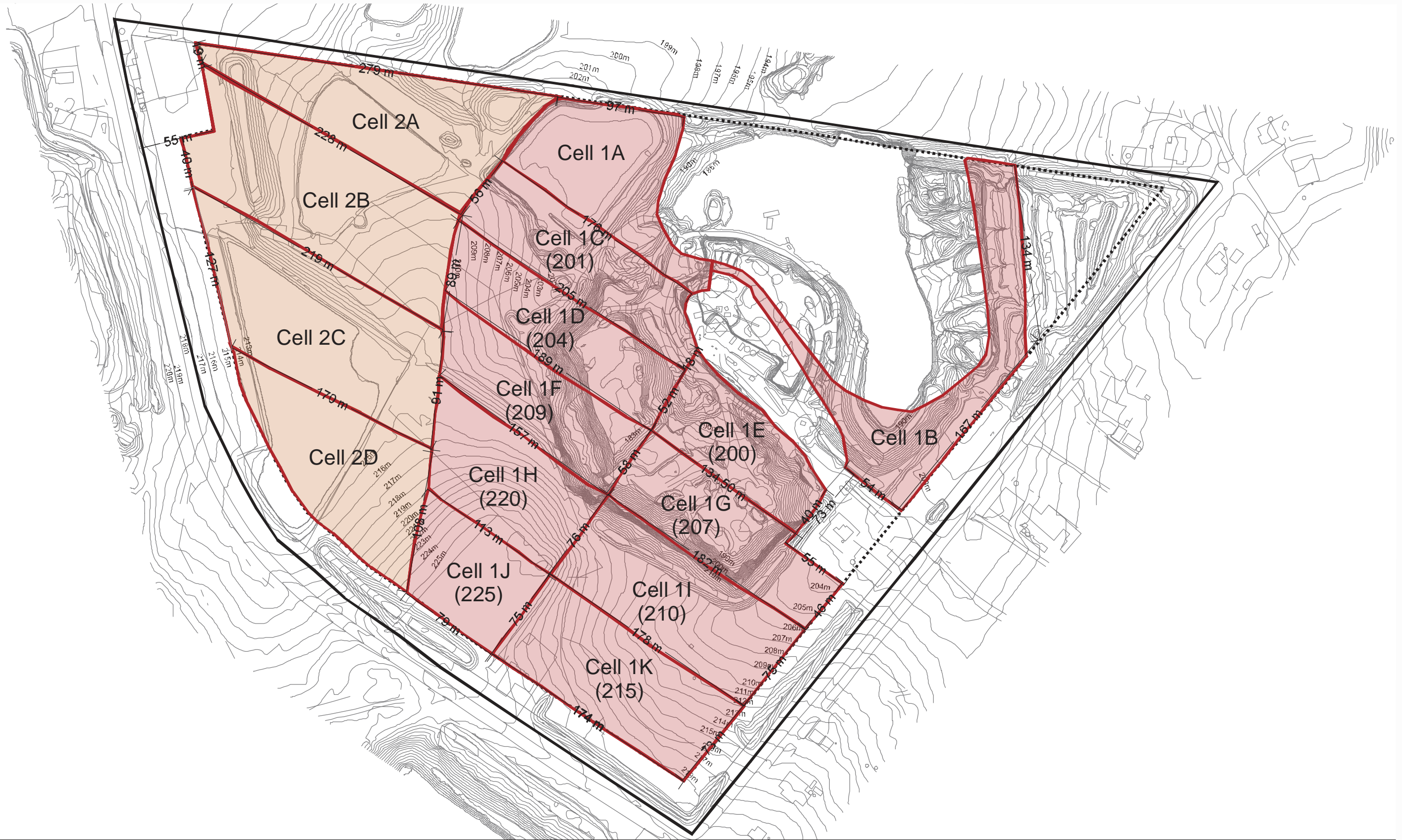
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Version/Date:	A 17/07/2014	Client:	Hodgson Quarry Products Pty Ltd	Contour Interval:	1m	Office:	Thornton Scale:







Appendix 9

Figure 2.12 of the Environmental Assessment

Plan of:	HB Maroota Quarry Existing Site	Location:	HB Maroota Quarry, Maroota	Source:	Photomapping	Our Ref:	V:\Jobs_HB Maroota\2014\Figures\Fig 2
Figure:	TWC	Council:	Hills Shire Council	Survey:	December 2013	Plan By:	TC
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Version/Date:	A 3/02/2014	Client:	Hodgson Quarry Products Pty Ltd	Contour Interval:	1m	Office:	Thornton

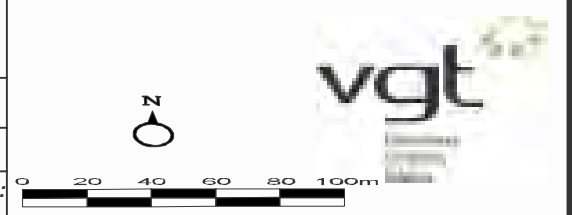
Legend

	Property Boundary		Stage One (from EIS)
	30 metre buffer		Stage Two (from EIS)

Appendix 10

Plans of the modified sequence of extraction

Plan of:	Hodgson Maroota Quarry Proposed Works- All Phases (final Phase Six)	Location:	Hodgson Maroota Quarry, Maroota	Source:	Photomapping	Our Ref:	V:\Jobs_HMA_Maroota\2014DA 2014\Figures\Fig 3(2)
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Sheet:	1 of 7	Tenures:	N/A	Projection:	Plan	Project Manager:	GVT
Version/Date:	A 17/07/2014	Client:	Hodgson Quarry Products Pty Ltd	Contour Interval:	1m	Office:	Thornton



Note: Phases are indicative only and will depend on market demand



Bundwall to be constructed

Bundwall to be constructed

Legend	
	Phase 1
	Phase 2
	Phase 3
	Phase 4
	Phase 5
	Phase 6

Ongoing North East Dam Development.
This will continue for the life of the project.
Fill will be sandstone and clay.

Ongoing Dam Development.
This will continue for the life of the project.

Bundwall to be constructed

Bundwall to be constructed