

DIXON SAND (PENRITH) P/L

A.C.N. 002 278 686

Quarries

MAROOKA (02) 4566 8348
AGNES BANKS 0414 727 223

P.O Box 148, Penrith
NSW, 2751

Phone: (02) 4729 0640
Fax: (02) 4729 1857

21 January 2000

Baulkham Hills Shire Council
PO Box 75
Castle Hill 1765

Attn: Ron Zwicker/Carolyn Collier – Senior Town Planning

RE: Reply to letter from BHSC dated 07 January 2000

Enclosed is the information that you have requested in your letter dated the 7th of January. Should there be any further outstanding information please inform us. The application was lodged on the 30 August 1999 and we trust you have the necessary information to formalise a recommendation.

From your site visit on the 18th of this month we understand that you are satisfied with the works that have been achieved and the arrangements for alternative access across Lot 29.

We trust that this information meets your requirements and look forward to a favourable approval.

Yours Truly



Mark Dixon

- Attachments sent
1. DLW Letter of Consent
 2. Plans Lot 29 Access 1-4
 3. Gonskos Consent
 4. Taouk Consent
 5. Flora Veg Map Lots 1/2
 6. Fauna/Flora Report Supplement
 7. Colour copies of EIS
 8. Elevation Plan of Plant
 9. Photomony 1-3
 10. Resonse Check K&D P/L
 11. ACO.R Consultants Hydrology
 12. Heritage Correspondence
 13. Landscaping Marooka School

21.1.2000
Sent to Council

**RESPONSES TO BAULKHAM HILLS SHIRE
COUNCIL LETTER DATED 7 JANUARY 2000**

**DEVELOPMENT APPLICATION No. 796/00/HE –
Proposed Extractive Industry
Lots 29 & 196 DP 752025 Old Northern Road Maroota.**

January 2000

Prepared by:

**ACOR Consultants Pty Ltd
Southern Environmental Pty Ltd
Keown & Drummond Pty Ltd
Gunninah Environmental Consultants Pty Ltd
Dixon Sand Pty Ltd**

1.0 Consent from the Department of Land and Water Conservation.

Attached is written consent for the following:

- Consent from the DLWC for extraction of the Existing Crown Road reserve between Lots 29 and 196 in accordance with the EIS
- Consent to use and upgrade the existing Crown Road access to Old Northern Road.

2.0 Extraction of Crown Road Reserve in between Lot 196 and Lot 29

2.1 Extraction of Crown Road

It is intended to remove the existing landbridge between Lot 29 and Lot 196 and rehabilitate in accordance with the EIS.

In an agreement between the Department of Land and Water Conservation and the owners of Lot 29 the Crown Road shall be mined and a final access route reinstated. A letter of agreement from the landowner is attached.

The process will occur in three stages:

Stage 1- the existing Crown Road reserve will be mined and reduced to uniform landform and rehabilitated in accordance with the EIS.

All works and storage facilities shall be limited to within 50 metres from the *Kunzea Rupestris* colonies on Lot 29.

Stage 2 – alternative access arrangements will be made for existing users of the Crown Road. A 20 metre wide temporary access road along the north and eastern boundary of Lot 29 shall be constructed and maintained in accordance with the relevant Council and State Department specifications. See Sheet No 2 of 4 – Plan Showing Temporary Access Route within Lot 29 D.P. 752025.

Stage 3 - Once extraction of the Crown Road Reserve is complete the final access route shall be reinstated. In the license

agreement the DLWC has allowed for the final access route to be reinstated along its original position ie Existing Crown Road Route. To remove traffic from the threatened plant colony *Kunzea Rupestris*, the landowner is offering a right of way access across Lot 29 for PF Formation. See sheet No 3 of 4 – Plan Showing Final Access Route within Lot 29 D.P. 752025.

2.2. Estimated Time Frame for Construction of Temporary and Final Access Routes.

The timeframe for the provision of the temporary access route and final access route consecutively shall be reliant on the extraction and rehabilitation sequencing in accordance with the EIS and as summarized below:

Step 1. 0-12 months Construction of the temporary access route must be complete prior to the extraction of the Crown Road Reserve.

Step 2. Year 0-4 Extraction of the remaining resources of Lot 29 (Precinct 10 & 11) and the Crown Road Reserve to top of bank level in Overflow Dam – Precinct 4 and 10

Precinct 10 used to store runoff from site.

Step 3. Year 4-10 – The Overflow dam (Precinct 4- Lot 196) and Precinct 11 is to be dewatered, reduced to final landform contours and rehabilitated during the final stages of operations. The final access route shall then reinstated to final landform contours – see Sheet No 1 of 4 Final Landform Plan showing Access Route between Lots 29 & 196 D.P. 752025.

The final rehabilitation of Precincts 4,10,11 shall be undertaken in the final years including the re-establishment of the natural creekline .

2.3 Engineering Plans.

Detailed Engineering Plans shall be submitted to Council prior to excavation works commencing on the Crown Road Reserve.

2.4 Construction of the temporary and final access routes.

2.4.1 Temporary Access Route.

The location of the proposed access route is shown on Sheet No 2 of 4. The road reserve shall be 20 metres wide with a 10 metre setback maintained to Lot 117. A 3 metre high sound attenuating bund wall shall be provided along the northern boundary of Lot 29 and along the western boundary of Lots 1 & 2.

2.4.2 Road & Drainage Construction.

The access road shall be constructed with road base material from site. The road shall be constructed to the specifications contained within the DCP 500, and Figure 4 - Typical Cross Section of Internal Haul Roads. A drainage bund shall be constructed on both sides of the carriageway and grassed with native species. The bund will contain flows within the road reserve. Water discharging from the road reserve shall be directed into sediment traps before entering the pond system. These traps are to be constructed and maintained to the satisfaction of the EPA and DLWC.

2.5 Final Access Route.

The proposed location of the final access route is shown in Sheet No 3 of 4. The final access route shall be 20.115 metres wide, constructed to the same specifications as outlined above and in accordance with DCP 500 specifications. The final access shall be constructed along final landform contours. Engineering Plans showing the final levels of the proposed access shall be submitted to Council for approval prior to any works commencing.

2.6 Final Landform Plan showing final access arrangements

Sheet No 1 (Final Landform Plan showing access route between Lots 29 & 196 D.P. 752025), shows the final landform contours with the proposed final access route.

2.7 Confirmation of setbacks as proposed along Lot 29 boundary.

Council's DCP 500 requires that internal access carriageways be provided with a 10 metre setback to a property boundary. A 20 m wide temporary access route is to be located along the eastern and northern boundaries of Lot 29.

A 10 metre setback shall be maintained along the northern boundary adjacent to Lot 117.

A setback is not proposed along the eastern boundary of Lot 29 adjacent to Lots 1 & 2 D.P. 547255. The reasons for this exclusion are as follows:

- a letter of agreement from the landowner Mr A. Taouk of Lot 2 for the exclusion of a setback is enclosed. Lot 1 is owned by Dixon Sand.
- the land has been previously cleared.
- a 20 metre wide strip along the boundary has been retained at original landform.

2.8 Flora and Fauna adjacent to proposed temporary access route across Lot 29

A vegetation map prepared by Gunninah Environmental Consultants Pty Ltd is attached. No threatened species are located within 50 metres of the boundary as shown in the diagram. The vegetation map shows the following:

- 3 - *Tetratheca glandulosa*, a vulnerable species (Schedule 2) listed under the TSC Act – recorded approximately 150 metres from the eastern boundary of Lot 29.

3.0 Supplementary information

3.1 Legible copy of Supplementary Fauna and Flora Report submitted to Council on the 20th September 1999.

A copy of this report is attached for Council's perusal.

3.2 Colour copies of all figures and diagrams and photographs as requested.

Attached.

3.3 Supplement to Appendix C9 of EIS - Visual Amenity and Scenic Quality Study

This supplementary assessment is to be read in conjunction with the EIS Volume 2 Appendix C9 - Visual Amenity Assessment

3.3.1 Elevations of the proposed plant.

An elevation plan showing approximate heights above ground level of the existing and proposed plant is enclosed.

Two cyclone towers (Height above Ground Level is 21 metres) will be visible from Vantages point 1 & 2 as shown in Figure 3 Lines of Sight and Photomontage No 2 & 3.

3.3.2 Visual Impact of Proposed Plant as viewed from Old Northern Road.

The following photomontages are taken from a standing position at three locations along Old Northern Road, in the vicinity of the Crown Road Entrance. These three locations have the best visual access to the site and have been used to highlight the visual amenity of the proposed plant.

Photomontage 1. Is taken from the low point along the road at the entrance to the site. The proposed plant would not be visible from this location. The difference in height is approximately 26 metres between ground levels.

Photomontage 2. The proposed plant is visible but is predominantly screened by existing vegetation within Lot 117. The height difference is approximately 45 metres between ground levels.

Photomontage 3. This location provides the optimum visual access to the site, where the proposed plant is visible. The difference in height is approximately 40 metres.

3.3.3 Tree Screening.

Tree screening along the Northwest/ North/Eastern boundaries of Lot 196 was carried out in October 1998 to soften any visual impacts in the future.

Although this screening will not eliminate the visual access in the short time it will soften the impact of the site and plant in accordance with DCP 500.

3.3.4 Visual Impact of Machinery.

The plant works area is located within a hollow and machinery will not be visible from this area as shown in the accompanying montages. Extraction equipment ie scrapers will be visible during extraction of Precinct 9. This is an intermittent visual impact, which will progressively diminish as the landform is reduced and the tree screening takes effect.

3.4 Resource Quantity Check.

The original resource estimate was carried out by Lyall & Macoun Consulting Engineers Pty Ltd.

Upon the request of Council a re-estimate of the remaining resource quantities on Lots 196 and 29 have been estimated by

Keown & Drummond Pty Ltd – Consulting Surveyors and Town Planners, for the preparation of this report. See report attached.

This estimate includes the resource quantity contained within the Crown Road Reserve between Lot 196 and Lot 29.

3.5 Maroota Public School

Dixon Sand have approached the School regarding the upcoming application and specifically relating to any impacts from truck movements past the school. The conclusions from the discussions were that truck noise was not a noticeable discomfort to the School. Visual impact during morning assembly and minor dust nuisances was noticeable. To alleviate these a minor landscaping treatment was proposed and a copy of the plan to be approved by Council is attached. Dixon Sand have expressed a keen interest to work in with the School should there be any outstanding problems.

5.0 Issues raised by Public Authorities

Additional responses to issues raised by public authorities

5.1 Responses to letter from the Department of Land and Water Conservation dated 8 th October 1999.

5.1.1 Creek Restoration/Riparian Zones/ Native Vegetation.

It is intended to restore the natural characteristics of the original creek during the final stages of rehabilitation in accordance with the EIS.

The riparian corridor shall be returned to similar cross-sectional dimensions as taken from the Lower Portland topographical map 1:25000. The restored creek shall maintain a 20 metre width along the top of bank for the full length of restored creek.

5.1.2 Control of Exotic Species.

As stated in the EIS the control of weeds on the site shall be taken in accordance with the Noxious Weeds Act. Exotic species originating from upstream catchments and agricultural treatments of the land including fertilizers and mulches enter the site and downstream creek. It is suggested that weeds located along the existing creek on Lot 196 be progressively removed and replaced with native species. Although this will not prevent further invasions as the problem does not originate from the site, it will be carried out and monitored.

A native propagation nursery shall be established on site and serviced by a part time bush regenerator for the purposes of re-establishing an extensive rehabilitation program. The facility shall propagate only locally sourced native grasses, shrubs and trees.

5.1.3 Impact Assessment on downstream hydrology and Wetland 88

An independent report from a qualified water hydrologist has been prepared as a supplement to the Integrated Surface Water Report undertaken by Lyall & Macoun Pty Ltd.

5.1.4 Crown Land Issues.

The overextracted portion in the Western corner of Lot 29 shall be filled to final landform levels and rehabilitated in accordance with the EIS.

Survey benchmarks are to be set up adjacent to extraction precincts to enable efficient spot leveling checks to be carried out. Laser leveling equipment is located on site.

Sheet No 1 of 4 – Final Landform Plan, shows the depth limitation of 15.24 metres below original surface as compared to final landform contours.

A commitment to pay the Crown for extraction below 15.24 metres has been entered into for monetary compensation.

5.2 Responses to NSW Heritage Office to letter dated 20.9.99

A request for a written response from the NSW Heritage Office has been undertaken. Correspondence is attached which includes:

- Attachment to letter to BHSC of Friday 29 October 1999 giving a response to issues raised by NSW Heritage
- Letter dated 13 January 2000 requesting a reply.
- Phone conversations requesting a written response

5.3 Responses to letter from National Parks and Wildlife Service dated 4.11.99

5.3.1 Boundary Setbacks and Buffer Areas

The NPWS has indicated concern over the impact of the disturbed site on adjoining bushland and as a consequence have suggested a 40 metre setback be maintained to the western boundary.

- under original requirements a 10 metre setback was maintained.
- the existing boundary has been previously extracted along the boundary before Dixon Sand occupation of the site. A 3 metre high vegetated bund wall and associated erosion controls have since been constructed for noise attenuation and screening. Drainage and erosion control measures are

- in place along the boundary and working efficiently. To rehabilitate to a 40 metre setback would require further disturbance and relocation of systems already in place.
- Approximately 50 % of the western boundary is either remnant vegetation or currently proposed for rehabilitation. Only the north western boundary will be extracted within a distance of 40 metres.
 - The entire western section of the shall be properly rehabilitated with original floristics once extraction sequences are completed.

5.3.2 Impacts on the Hydrology and Groundwater

The objectives of the Groundwater Impact Assessment Lots 196 and 29 are presented in Appendix C5 of the EIS.

On-site monitoring to define the upper shallow aquifer began as a requirement of the Maroota Groundwater Study.

The report has been prepared in accordance with objectives set down by Council's DCP 500 and State Department's recommendations including the DLWC, HNCMT and the EPA. The recommendations for these authorities relies heavily on the findings of the Maroota Groundwater Study. These recommendations are as follows:

1. That excavation above the water table are (at this stage) expected to have minimal impact on the groundwater flow regime at the shallow aquifer.
2. The base of all excavations made for the purpose of sandmining should be maintained at least 2 metres above the seasonally highest elevation of the shallow watertable.
3. Up to 3 piezometers should be installed on site.
4. The use of 180 metres AHD as an arbitrary limit on the depth of excavation should be discontinued.

In addition to these requirements it is intended to:

- monitor existing springs located on the site for water hydrology assessment and for impacts upon groundwater.
- Measure the infiltration rate at the surface of backfilled operations. Once the recharge pattern to the aquifer is better understood it can be established the procedure for backfilling operations.

5.3.3 Water Management System

The proposed Water Management System is contained within Section 4. Of Appendix C3 – Integrated Surface Water Management System.

NPWS have expressed concern that additional water requirements will be required by the new wash plant. A site water balance for the existing plant and proposed plant has been undertaken. This shows a maximum water requirement for the plant of 941 ML for both existing and future requirements. No additional water requirements are required in the model as the water is contained within a closed system. The only losses to the system are through evaporation. These losses have been included in the model.

5.3.4 Threatened Species

A proposal to divert the existing traffic away from the existing colony of *Kunzea Rupestris* located towards the western boundary of Lot 29.

This access road is currently used by PF Formation. This involves the extraction of the Existing Crown Road Reserve to final landform and the temporary relocation of access across Lot 29.

5.4 Responses to Hawkesbury Nepean Catchment Management Trust (HNCMT)

5.4.1 Tailings Management

The HNCMT has raised questions regarding the tailings management and the 'sequencing of tailings disposal with rehabilitation'.

Tailings disposal has been allocated for Precinct 3 and 5 in the NorthEast portion of Lots 196 – see Extraction Plan. Tailings shall be used as a fill to achieve a final landform similar to original. Precinct 3 shall be used as a tailings until required depth is reached whereby Precinct 5 will be used. Precinct 3 shall be rehabilitated in years 2/3.

5.4.2 EMP – Environmental Management Plan.

An Environmental Management Plan prepared by a qualified Environmental Consultant shall be submitted to Council annually following granting of consent.

5.4.3 Landform Design

The final landform design has been undertaken by Lyall & Macoun Consulting Engineers Pty Ltd, based upon:

- the desired final use of the land for agricultural purposes;
- the original shape of the land.
- Efficient drainage and the re-establishment of original natural creek systems. Desired levels have been achieved close to original in the North/East and South/West of Lot 196 to allow creek lines to be reinstated. This process will require intensive rehabilitation works.

The filling of tailings dams to achieve final landform levels has proved geomorphologically stable in past operations. Once tailings have settled they progressively de-water depending upon the surface area, surrounding temperature conditions and permeability of surrounding medium. The semi-permeable hawkesbury sandstone provides stable containment of tailings with a low transmissivity, which means dewatering can be slow. Capping and revegetation of tailings storage's can effectively increase the dewatering process achieving a stable landform more readily.

The tailings dams contain water for efficient reuse and recycling through the plant.