

**ENVIRONMENTAL ASSESSMENT REPORT
FOR EPIC MINING PTY LIMITED
275 ADAMS ROAD, LUDDENHAM, NSW**

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BENBOW ENVIRONMENTAL

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ENVIRONMENTAL

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ABBREVIATIONS

AS	Australian Standard
BCA	Building Code of Australia
BE	Benbow Environmental Pty Ltd
DCP	Development Control Plan
DECC	Department of Environment and Climate Change
DP	Deposited Plan
DNR	Department of Natural Resources
the Department	Department of Planning and Infrastructure
EAR	Environmental Assessment Report
EP&A Act	Environmental Planning & Assessment Act 1979
ESD	Environmentally Sustainable Development
INP	NSW Industrial Noise Policy
LCC	Liverpool City Council
LLEP	Liverpool Local Environmental Plan
LEP	Local Environmental Plan
LGA	Local Government Area
NPI	National Pollutant Inventory
NPWS	National Parks & Wildlife Service
NSW EPA	New South Wales Environment Protection Authority
ODU	Odour Detection Unit
OEH	Office of Environment and Heritage

pa	per annum
POEO	Protection of the Environment Operations Act 1997
QA	Quality Assurance
QC	Quality Control
REP	Regional Environmental Plan
SEPP	Sydney Regional Environmental Plan

UNITS OF MEASUREMENT

°C	degree centigrade	(unit of temperature)
dB(A)	A-weighted decibels	(unit of noise)
dB(lin)	Linear-weighted decibels	(unit of noise)
D/T	Dilutions to threshold	(unit of odour)
g	gram	(unit of mass)
kg	kilogram	(unit of mass)
m	metre	(unit of length)
m ³	cubic meter	(unit of volume)
T	Tonnes	(measurement of weight)
µg	microgram	(10 ⁻⁶ gm – unit of mass)
µg/m ³	microgram/cubic meter	(concentration)
ODU	odour detection unit	(unit of odour)



EXECUTIVE SUMMARY

This Environmental Assessment Report (EAR) has been prepared by Benbow Environmental Pty Ltd (BE) on behalf of Epic Mining Pty Limited (the applicant). The EAR is based on the original Environmental Assessment Report prepared by Planning Direction Pty Ltd in April 2013. This report provides the information contained within the original EA and includes additional studies and information to ensure that the report adequately addresses the requirements of the planning and other regulatory authorities.

The applicant proposes to modify their existing consent DA No 315-7-2003 to facilitate stockpiling of excavated clay and shale on-site in combination with the approved works at 275 Adams Road, Luddenham. In addition to the above proposed modification the matters outlined below are also addressed in this report as requested by the applicant in consistency with the advice obtained from the NSW Department of Planning and Infrastructure (Department):

- facilitate stockpiling of clay and shale in combination with the approved work at the commonwealth land (Lot 1 in DP 838361),
- to review the locations of all environmental monitoring points as requested by the NSW Environment Protection Authority (EPA),
- to review the frequency of all monitoring requirements in accordance with the EPA's licensing requirements,
- to address the community consultation issue as requested by the Department; and
- to address the non-commercial composting activities as requested by the Department.

The EAR has considered all aspects of the proposed modifications and it will be demonstrated that the proposed modifications as designed will readily satisfies all statutory requirements in current planning and environmental legislation.

The operations at the premises commenced in January 2010 by Blue Sky Mining (Aust) Pty Ltd. Soon after Epic Mining Pty Limited (the applicant) was formed and took over the operations at that site.

The applicant holds an Environment Protection Licence No 12863 (EPL) which was issued by the EPA on 5 June 2009 and was varied on 15 March 2010 and 28 November 2011.

The EPL authorises the applicant to quarry materials within the scale of 100000 – 500000 tonnes per year, however the Consent was granted for a maximum of 300000 tonnes per year for 15 years. This upper limit has not been reached so far and it will remain the same throughout the life of the project. The proposed modification does not alter the scale or the upper limit.

The existing development was classified as State Significant Development under section 76A(7) of the Environmental Planning and Assessment Act 1979 (EP&A Act).

The quarry operation was also classified as Integrated Development due to its proximity to Oaky Creek (and proposed construction of a road to Elizabeth Drive).



The development was classified as Designated Development due to the requirements for other approval/licences from other authorities.

The original application, lodged in 2004, was prepared on the basis of the quarry operating as a 'shovel and truck activity'. Changes to operational circumstances of suppliers, has meant that there is a need for product to be stored on-site rather than at the site of the brick works. Also stockpiling of product on-site ensures that the necessary scouring and fretting process of the extracted raw material occurs in a controlled and well managed environment. Stockpiling enables greater flexibility to provide the correct clay/shale mixes and allows for the removal of unwanted shale-sandstone materials. This process ensures that the best quality of raw material is delivered to local brickworks. More detailed information is included in other Sections of this document.

The proposed stockpiling works are contained within the approved quarry operation area as well as temporary stockpiling of materials within the adjacent land owned by the Commonwealth.

It will be demonstrated that appropriate environmental measures and management practices are in place to minimise any potential impacts (i.e. environmental, social or economic) associated with the proposed activities as a result of the proposed modification works. Further, no changes are required to the existing quarry operations to facilitate the proposed modification works.

It will also be demonstrated in this EAR that all proposed modifications to the existing activities will have negligible impact on human health and the environment provided that all recommended additional mitigation measures and amelioration strategies, where required, are implemented.

It is anticipated that there will be directly additional 3-5 full time staff as a result of the proposed modifications. There will also be tens of indirectly additional jobs as a result of the modifications.

The aspects that have been addressed in this EAR are: Statutory Environmental and Planning Context, Air Quality, Noise, Groundwater and Surface Water, Flora and Fauna, Aboriginal and Cultural Heritage, Visual, Traffic and Transport, Social and Economic, Waste Management, Environmental Monitoring and Reporting, Environmental Discharge/Monitoring Points, Non-Commercial Composting, Other Stockpiling Aspects, Chemicals, Community Consultation, Hours of Operations.

Statutory Environmental and Planning Context

The existing development is subject to several planning and environmental legislations as well as planning policies and plans.

The proposed modifications do not alter in any way these requirements and this will be demonstrated in details in Section 3 of this report. This Section includes all applicable legislation, policies and plans under both State and Commonwealth Governments. Section 3 includes detailed information regarding this aspect.



Air Quality

Air emissions have been based on our extensive experience with similar activities and subsequently for the proposed activities it is anticipated that no additional air, odorous or nuisance impact is likely to occur as a result of the modifications. This arises from the nature of the materials being handled which are dominantly clay and shale. There are no chemical reactions at the site or any chemical processes that may result in air emissions other than some minor localised dust from the normal quarry activities. Section 4 includes detailed information regarding this aspect.

Noise

The applicant has always complied with the criteria specified in both the EPL and Development Consent. We believe that the noise levels from the proposed modifications will comply with the EPA's Industrial Noise Policy as well as the criteria specified in both the EPL and Development Consent. Section 5 includes detailed information regarding this aspect. The applicant has also noted the comments received so far from the Acoustic Consultants in relation to the current background noise levels in the area and the fact that due to many changes in the area in the past 10-12 years, this has caused the background noise levels to be much higher than those used during the preparation of the EIS at which time the project specific noise level was set to 41 dB(A). The applicant is of the opinion that this limit be reviewed in light of the current environmental status of the area in the absence of its activities on the site.

Groundwater and Surface Water

The status of the groundwater will not be affected by the development modifications since the groundwater is not altered or disturbed in any activity conducted on site.

In addition to the fact that the applicant has implemented a "nil water discharge policy" since day one of its operations, surface water within the site will not be affected by the stockpiling activities to a great degree and this is addressed in Section 6 of this report. Also, surface water of the stockpiling activities within both the approved area and the Commonwealth land will be managed in accordance with this report.

No adverse impact on the stormwater system or any waterway is likely to eventuate as a result of the modifications provided that the recommended mitigation measures are implemented on site. Section 6 includes detailed information regarding this aspect.

Flora and Fauna

Despite the fact that site was subjected to extensive flora and fauna studies as part of the preparation of the EIS and as part of the assessment undertaken for the second Airport at Badgerys Creek. It was determined that a brief assessment be conducted by suitably qualified consultants to confirm the previous findings. No fauna or flora impact was found due to the proposed development modifications. Section 7 includes detailed information regarding this aspect.



Aboriginal and Cultural Heritage

Based on previous assessments by qualified consultants conducted at the site and the adjoining properties as part of the proposal's EIS, and the assessment for the second airport at Badgerys Creek in nearby properties including the subject parcel of the Commonwealth, no Aboriginal or European items of cultural heritage were identified or found within the areas subject to the modifications. However, the area adjacent to the Riparian Zone has been identified that it may contain some items of Aboriginal Heritage and hence it is fully segregated from the remainder of the site, fenced and locked. Access to this zone is available to authorised people and the Aboriginal community only. Section 8 includes detailed information regarding this aspect.

Visual Impact

Due to the fact that quarrying activities are located away from residential premises and the installation of an earth berm, the visual impact was determined to be minimal. The proposed activities within and outside the approved areas have been assessed and the outcomes of the assessments are included in the relevant Sections of this report. Generally, the visual impact is greatly reduced by the general topography of the area. The visual impact will be further reduced provided that the recommended mitigation measures are implemented by the applicant. Section 9 includes detailed information regarding this aspect.

Traffic and Transport

A comprehensive traffic impact assessment was conducted as part of the preparation of the original EIS. As a result of the assessment an access road was built from the quarry to Elizabeth Drive. The intersection of Elizabeth Drive and the access road was upgraded in accordance with RTA's instructions. The proposed development modifications do not alter or change the traffic as previously assessed but rather it improves the flow of the traffic by reducing the number of truck movements for short durations and spreads the truck movements for a longer period of time without changing the daily number of movements or their classifications. Section 10 includes detailed information regarding this aspect.

Social and Economic

The existing development has resulted in considerable social and economic benefits at both the local and regional levels.

The proposed modifications are expected to increase these benefits and possibly extend them to include the State level as well. Section 11 includes detailed information regarding this aspect.

Waste Management

Due to the nature and scale of activities, waste is not generated on site except from the employees and the workshop. The proposed modifications do not influence greatly the generation or management of waste on site. Section 12 includes detailed information regarding this aspect.



Environmental Monitoring and Reporting

The applicant has been so far complying with all monitoring and reporting requirements included in all statutory instruments.

Following consultation with the EPA regarding the provision included in the EPL which requires the EPA to review the monitoring and reporting requirements after 12 months of operations, comprehensive environmental inspections and reviewing of monitoring and reporting results, the EPA advised the applicant that these requirements should be reviewed in consultation with relevant parties including the Department since these modifications will require changes to the Development Consent. Section 13 includes detailed information regarding this aspect.

Environmental Discharge and Monitoring Points

Following several site inspections by EPA officers and environmental consultants, and reviewing of environmental monitoring results, both parties advised that it is necessary to review the locations of some of these points to ensure that they reflect the impacts from the activities conducted by the applicant only rather than from other activities that are not associated with the applicant. In addition, the EPA believes that the number of environmental monitoring points is too excessive for a variety of reasons including the location and scale of the quarry and suggested that the number be reduced from 5 to a maximum of 4 locations. Section 14 includes detailed information regarding this aspect.

Non-Commercial Composting

Despite the fact that this activity does not meet the definition of composting included in the Protection of the Environment Operations Act 1997 (POEO Act), for the purpose of this document, it will be referred to as a non-commercial composting activity.

A small scale non-commercial composting activity is currently being conducted on an adjacent site which is leased by the applicant from the Commonwealth Government. This parcel of land is used for the sole purpose of composting. The composting activity is not for commercial purposes but rather for in-house use only as part of the site rehabilitation plan including the riparian zone. These activities were approved by both the EPA and the Department previously. No other approvals were required mainly due to the fact that the scale of these activities was well below the threshold under both the POEO Act 1997 and the Environmental Planning and Assessment Act 1979 and that the materials used in this process are exempt materials under the POEO Waste Regulation 2005. An assessment of these activities has been undertaken and it is included in Section 15. Based on that assessment these activities will have no adverse impact on the environment.

Other Stockpiling Aspects

There are temporary stockpiling activities conducted by the applicant on an adjacent parcel of land owned by the Commonwealth Government under a special agreement. These activities are considered as part of the applicant's overall quarrying activities. Section 16 includes detailed information regarding this aspect.



Chemicals

There are no processes undertaken on site requiring chemicals and therefore only very small quantities of chemicals would be kept on site. There is a small quantity of diesel which is located inside the workshop. Section 17 includes detailed information regarding this aspect.

Community Consultation

The applicant has conducted community consultation in accordance with the development consent for the first 12-15 months of the operations. However, due to the lack of attendance of community representatives, the applicant determined that a more appropriate approach to continue with community consultation is to meet regularly with all neighbouring residents on an individual basis. This has proven to be a successful approach since residents could easily raise any concerns directly with the quarry management. Section 18 includes detailed information regarding this aspect.

Hours of Operations

The applicant has always complied with the hours of operations specified in the development consent and the EPL.

The modifications do not require any changes to these approved hours of operations and the applicant is committed to comply fully with the approved hours. Section 19 includes detailed information regarding this aspect.

Justifications for the Modifications

This Section provides comprehensive list of justifications for the modifications in addition to addressing the Ecologically Sustainable Development considerations.

It is noted that the proponent has always acted in good faith in its attempt to comply with all statutory requirements as specified by all government departments. In relation to the temporary stockpiling activities conducted on the Commonwealth land, the proponent was advised that state legislation does not apply to the activities conducted on this site and that no other approvals were required for these activities from NSW Government since they are endorsed by the Commonwealth Government. In any case, detailed assessments of the potential impacts of these activities show that these activities do not have any adverse impact on human health and/or the environment.

Details of the Environmental Assessment report (EAR) are provided within this document.

Approval from the Department in respect of the proposed modifications is requested.