

OEH –Report on Site Verification Certificate

SVC Application No. 14_6526

Project Name : Warkworth Continuation 2014

Proponents Name: Rio Tinto Coal Australia

Proponents Address: 123 Albert St, Brisbane, Queensland 4000

OEH Reference:

Date application received by OEH: 12/05/2014

Date report dispatched to DP&I:

Summary of Project: Warkworth Mine is an open cut coal mine approximately 15 kilometres (km) south-west of Singleton in the Hunter Valley, NSW. Warkworth Mine has been in operation since 1981 and the originally approved development has been modified several times. Immediately to the south of Warkworth Mine is Mount Thorley Operations (MTO). Since 2004, the two mines have integrated at an operational level, with a single management team responsible for all the operations. Warkworth Mine currently operates three integrated open cut mining areas, namely North, West and South pits with West and North pits being the focus of production. Coal from Warkworth is transported via conveyor to either the Mount Thorley Coal Loader – where it is loaded onto trains for export from the Port of Newcastle – or to the Redbank Power Station.

In 2010 an extension of the Warkworth Mine to the west of the current pit wall (North and West pits) towards Wollombi Brook was sought. The proposal was referred to as Warkworth Extension Project (PA09_0202). Project approval from the Planning Assessment Commission (PAC), as delegate of the Minister, was received on 3 February 2012 for PA 09_0202. Approval under the EPBC Act was subsequently obtained from the Commonwealth Minister for the Environment for the extension (EPBC 2009/5081). The EPBC approval (EPBC 2002/629) was modified on 13 July 2012 as part of the 2010 extension. Subsequently, the project approval was overturned in the NSW Land and Environment Court (L&E Court).

Under the development consent granted in 2003, Warkworth Mine has approval to mine until 19 May 2021. The current proposal seeks a 21 year development consent period from the date of any approval. If approval is granted in late 2014, operations at Warkworth Mine are forecast to continue to 2035, a 14 year extension over the current approval.

The Warkworth Continuation 2014 (the proposal) seeks to extend mining beyond the current limits of approval to ensure it remains economically viable and coal is extracted in the most economic manner as required under clause 15 of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.

The footprint of the extension proposal (approximately 667.5ha) is located within a mining lease 20 m below ground level, but will require a mining lease from the surface to 20 m below surface level. This mining lease is yet to be approved.

Under the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) Amendment 2013* (the 2013 Mining SEPP amendment), an application for a state significant mining or petroleum development must be accompanied by (a) a gateway certificate, or (b) a site verification certificate (SVC) that certifies that the land on which the proposed development is to be carried out is not biophysical strategic agricultural land. The 2013 Mining SEPP amendment sets out the steps required to apply for an SVC. The process to be followed is at <http://majorprojects.planning.nsw.gov.au/application/SVC>. The application must be accompanied by supporting documentation which has been prepared in accordance with the *Interim Protocol for Site verification and Mapping of Biophysical Strategic Agricultural Land*. The final determination is made by the Delegate under the SEPP (currently, the A/Secretary of the Department of Planning and Environment).

OEH received the SVC application and supporting documentation (*BSAL Site Verification Certificate Report – Warkworth Continuation 2014*) on 12 May 2014. It is noted that the supporting report is based on a desk-top study which draws on previous soil surveys of the area, with no data having been collected specifically for the SVC application. On 9 May the Department of Planning and Environment (DPE) requested OEH's assessment be completed using the hard-copy data provided in the application report, with associated GIS files to be provided by the proponent on request.

OEH has now completed the review of the report and data provided in support of this application. This review identifies that the data provided does not meet the requirements of the *Interim Protocol for site verification and mapping of biophysical strategic agricultural land* (the *Interim Protocol*). Details are provided in the assessment report that follows.

OEH cannot complete an assessment of the SVC application against the Interim Protocol, as required by the current publicly available process for obtaining an SVC, without the required data. However, OEH notes that the data that the proponent has provided is consistent with OEH knowledge and data of the area. No BSAL has been mapped in the locality and OEH notes that the soil types known to be in the area are of low fertility.

OEH recommends that the Delegate under the SEPP considers requesting the proponent provide the data required by the *Interim Protocol*. This will allow the SVC assessment process to be completed as per the Interim Protocol and current publicly available procedure.

OEH Assessment against the Interim Protocol:

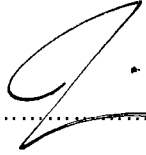
OEH provides the following assessment against the Interim Protocol on the SVC application provided by the proponent for Warkworth Continuation 2014.

Applicant's soil and land data appears consistent with the interim protocol for site verification and mapping of biophysical strategic agricultural land	No
Applicant's soil and land data appears consistent with OEH soil survey knowledge and existing soil and landscape data of the general area	Unable to assess against the <i>Interim Protocol</i>

Applicant's project area, or part thereof, is likely to contain BSAL according to the protocol for site verification and mapping of biophysical strategic agricultural land

Unable to
assess
against the
*Interim
Protocol*

Approved by:



16 May 2014

Brian Jenkins, Senior Team Leader, Assessment, Ecosystem Management Science,
Office of Environment and Heritage

OEI INTERIM ASSESSMENT OF BSAL SITE VERIFICATION CERTIFICATE APPLICATION

14_6526 WARKWORTH CONTINUATION

SUMMARY OF ASSESSED ITEMS	Appropriate as per the Protocol		Justification
	Yes	No	
PERSONNEL			
Evidence provided by the applicant that a qualified soil scientist oversaw the verification assessment and signed off on the quality and extent of the work	X		The project was oversighted by Dr Timothy Rohde, a Certified Practising Soil Scientist (CPSS, Stage 2) with the Australian Society of Soil Science Inc.
MAPS			
Geographically accurate base map (at 1:25,000) of assessment area supplied as per Protocol. Spatial dataset (boundary of assessment area) supplied in GIS format as per <i>Interim Protocol</i> .	X		GIS data supplied 14 th May 2014.
Soil map (at 1:25,000) of project area supplied including all observation (Detailed, Check and Exclusion) sites as per Protocol. Spatial datasets (soil map, observation sites and data reliability/data source diagram) supplied in GIS format as per <i>Interim Protocol</i> .	X		GIS data supplied 14 th May 2014. No data source/data reliability diagram, and no evidence that soil map includes >100 m buffer on soil map. Soil map does not include a ~70 m (max) wide strip of land at the N end of the application area.
Map of assessment area showing BSAL (at 1:25,000) and exclusion zones marked according to their BSAL limitation. Spatial dataset (boundary of BSAL		X	No BSAL map provided.

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areas) supplied in GIS format as per <i>Interim Protocol</i> .			
Maps presented in correct datum with appropriate symbology, north points, unambiguous legends, meaningful colour ramps, scale bars, and sampling grid included as per the Protocol.	X		
Metadata for spatial datasets have been provided as per the <i>Interim Protocol</i> .		X	No metadata supplied.
LODGEMENT OF SITE AND LABORATORY DATA			
All site observations lodged on BSAL Soil Data Cards and all required field attributes completed correctly for each observation type as per the <i>Interim Protocol</i> (i.e. check. exclusion and detailed).		X	No site data supplied on BSAL Soil Data cards or in digital format. Assessment was made on site data contained in the hard copy report. Site observations do not contain all attributes required under the <i>Interim Protocol</i> , e.g., slope, rock outcrop and surface rockiness, microrelief, full Australian Soil Classification (ASC) classification, drainage.
All laboratory data supplied in the SALIS Lab Data Template, appropriate test procedures (e.g. National Test Code) identified and all relevant test results completed as per the <i>Interim Protocol</i> .		X	No lab data supplied in SALIS Lab Data Template.
MODEL OF SOILS DISTRIBUTION			
Where the proponent does not have access to the land, a model of soils distribution is provided detailing the methodology used to enable an	N/A	N/A	

SUMMARY OF ASSESSED ITEMS	Appropriate as per the Protocol		Justification
	Yes	No	
assessment of the land in question to be made.			
SITE ASSESSMENT			
The project area or part thereof contains a contiguous area of at least 20 hectares which meets all BSAL conditions – possible/verified BSAL adjoining the assessment area may need to be considered	N/A	N/A	Not possible to assess this from the report and data provided. BSAL mapping has not been provided, soil types and sites are insufficiently described (e.g., not enough sites per soil type) and data supplied was insufficient to make an assessment. Based on existing knowledge and data, OEH considers the 2 detailed sites within the application area are unlikely to qualify as BSAL under the <i>Interim Protocol</i> .
Sampling density is as specified in the <i>Interim Protocol</i>		X	The sample density complies with the density requirements for low levels of agricultural impact in the <i>Interim Protocol</i> , though not for high-intensity development such as open-cut coal mining. There are insufficient sites to adequately describe the soil types mapped within the application area. 2 sites have been provided within the footprint area whilst a further 25 sites have been provided outside. Only sites within the area are relevant to the BSAL assessment.
Observation sites (check, detailed and exclusion sites) are relatively evenly distributed across the survey area		X	Data is only provided for 2 sites which occur in the northern and central parts of the application area. There are no sites

SUMMARY OF ASSESSED ITEMS	Appropriate as per the Protocol		Justification
	Yes	No	
			in the southern part.
Each soil type identified has at least three detailed sites		X	No. There are four soil types. Two have one detailed site each. The other two have no detailed sites.
All relevant data has been collected and provided for detailed sites as per the <i>Interim Protocol</i>		X	None of the profiles, either inside or outside the assessment area, were collected for this SVC. The SVC instead relies on 2 previous surveys carried out for different purposes. Neither of these studies were provided as part of the SVC application. The proponent has provided a desktop assessment based on an amalgamation of this data. Detailed sites (Appendix B) have only grid references and incomplete Australian Soil Classification (ASC), with no information on landform (e.g., landform element, slope, slope measurement method, locational accuracy), no BSAL site status and somewhat limited soil data (e.g., no field pH). ASC classifications (only to Suborder level) are insufficient to determine soil fertility in some cases, and required full classification by OEH to determine their soil fertility. Laboratory data has been collected at set depth ranges that

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	Yes	No	
			do not match profile layers, thus it is difficult to match the lab data to the layers in each soil profile.
Detailed sites are representative of the soil type being assessed	X		
Description of detailed sites is accompanied by a photograph of the site and of the soil profile being described		X	The application does not include any site or soil photos.
Appropriate information (as specified in the Protocol) collected for all exclusion sites	N/A	N/A	The data provided does not include any exclusion sites.
At least two exclusion sites per polygon in excluded areas (except for areas with no access e.g. only remote modelling of attributes)	N/A	N/A	The data provided does not include any exclusion sites or excluded areas.
Adequate numbers of check sites used to (i) allocate a site to a soil type and soil map unit and, (ii) confirm existing mapping		X	The data provided does not include any check sites.
CROSS REFERENCE ASSESSMENT WITH OEH SOILS DATA			
Soil mapping and attributes appear consistent with OEH soil and landscape data and expected/anticipated soil types in the project area or locality	X		The data that has been provided is consistent with OEH knowledge and data available in the Soil and Landscape Information System (SALIS) database for the area. No BSAL has been mapped in the locality.

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	Yes	No	
			The Statewide BSAL mapping in this area is based on Singleton 1:250,000 mapping. The application area is almost completely mapped as Brantxton (bxy), dominated by Yellow Podzolic Soils (Brown Chromosols) and Yellow Soloths (Sodosols). These soils are all of low fertility. The Yellow Soloth soils also have a high salinity hazard. The closest area of mapped BSAL are Chocolate Soils of the Saxonvale (sxz) soil landscape ~4.5 km S of the application area, and Alluvial Soils of the Hunter (hux) soil landscape ~5 km E.