



Our ref: DOC20/664326

Senders ref: SSD 8445

Andrew Rode
Senior Environmental Assessment Officer
Resource Assessments
Planning & Assessments
E-mail: andrew.rod@planning.nsw.gov.au

Dear Mr Rode

Subject: Tahmoor South Project – Response To Submissions (SSD 8445)

Thank you for your referral of 30 July 2020 requesting comments on the second amendment to the abovementioned major project. The South East Branch of the Biodiversity and Conservation Division (BCD), in consultation with our Policy, Strategy and Science Division, have reviewed the document. Our comments are detailed at Attachment A, and in summary:

- We are supportive of the proposal that the reject emplacement area (REA) be retained at its current approved footprint, therefore not requiring additional clearing of *Shale Sandstone Transition Forest* Critically Endangered Ecological Community (SSTF CEEC) in this location and significantly reducing the overall quantum of clearing of the community to 10.1 hectares in total (a 77% reduction from the EIS proposal). Significant reductions in clearing of threatened species, notably *Persoonia bargoensis* and *Grevillea parviflora* are also proposed.
- The proposal remains likely to have a significant impact on the Commonwealth listed SSTF CEEC and will require assessment by BCD under the bilateral agreement process prior to any project approval. Any impacts to endangered entities, particularly the SSTF CEEC, should be avoided wherever possible and we encourage a reduced clearing footprint and mitigation measures, such as micro-siting, to further reduce impacts where possible.
- We recommend that conditions of consent be imposed relating to submission of a final Biodiversity Offset Strategy detailing the staged offset approach, submission of a biodiversity management plan, and micro-siting of surface infrastructure to further minimise clearing impacts on SSTF CEEC and threatened species. We request an opportunity to contribute to and review draft conditions of approval prior to a recommendation to the Independent Planning Commission being finalised.
- The Biodiversity Offset Strategy needs to be updated to account for the reduced credit requirements proposed by this project amendment. The updated BOS should include maps showing proposed BSA sites, as per the February 2020 Biodiversity Assessment Report. Prior to project approval, the proponent also needs to submit the biobank credit calculator case data for BCD review.
- In line with legislative requirements the retirement of credits need to occur prior to impacts on biodiversity, in accordance with the proposed staged offset approach. Early consultation with the Biodiversity Conservation Trust (BCT) is recommended to ensure that Biodiversity Stewardship Agreements can be established in a timely manner in order to ensure credits are retired prior to impact.
- Outstanding issues remain with the mine layout's avoidance of significant features such as 3rd order and above streams, notably in the vicinity of Dog Trap Creek and LW101B, as

detailed in our RTS submission and discussed further at Attachment A. In summary, impacts from the current mine layout upon these streams are almost inevitable and insufficient justification has been provided that these streams are repairable. As previously suggested, further reductions to LW101B would assist in reducing the risk of impact to these streams.

- There also remain outstanding issues with hydrological and groundwater modelling and associated data, as detailed in our RTS submission. A meeting with the proponent is scheduled in the week commencing 17/8/20 to clarify our position and discuss this matter. Further detailed comments on streams and watercourses will be provided following this meeting and receipt of any subsequent response received from the proponent.
- Finally, we note that since the RTS was submitted, the NSW Government has now released its *Strategic Statement on Coal Exploration and Mining in NSW*. In particular, we highlight that the Statement includes in its Actions “Improving certainty about where coal mining should not occur” and “Reducing the impact of coal mining”. We suggest that this latest NSW Government policy position be reflected in the project assessment, and that conditions of consent as recommended by BCD be imposed to minimise the project’s impacts.

Please also note that, as of 1 July 2020, Department of Premier & Cabinet (Aboriginal Cultural Heritage Regulation) are now responsible for dealing with Aboriginal cultural heritage matters and will respond separately regarding the heritage matters raised in BCD’s previous advice on the RTS.

Please do not hesitate to contact Mr Chris Page, Senior Team Leader (Planning), via chris.page@environment.nsw.gov.au or 4224 4180 to discuss this matter further.

Yours sincerely



17/8/2020

Michael Saxon

**Director, South East Branch
Biodiversity & Conservation Division
Environment, Energy and Science**

Attachment A - Tahmoor South mine expansion- Second Amendment - Key Issues EES RTS submission 25 Mar 2020

Attachment A - Tahmoor South mine expansion- Second amendment - Key Issues from EES RTS submission 25 Mar 2020

Issue No.	Description:	Extent and Timing:	RTS comment:	Second amendment response:	EES Comment:	Response satisfactory:
1	Avoidance of impacts – terrestrial biodiversity	Response To Submissions	<ul style="list-style-type: none"> The proponent did not thoroughly demonstrate how the “avoid” principle of biodiversity assessment was met at EIS stage, particularly regarding the quantum of clearing of CEEC (Shale Sandstone Transition Forest). The RTS amendments included: <ul style="list-style-type: none"> removal of LW109 reconfigured layout to provide two series of shorter longwall panels Reduced subsidence throughout the proposed mine layout & longwall geometry reduced vegetation clearing for the Reject Emplacement Area (REA), from 43ha to 11ha 	<ul style="list-style-type: none"> The second amendment project has further avoided impacts by amending the mining layout as follows: <ul style="list-style-type: none"> Removal of LW107B & 108B in the vicinity of Bargo township Reduced subsidence throughout the proposed mine layout No further vegetation clearing required for the expanded Reject Emplacement Area (REA), reduced from 11ha at RTS stage. 	<ul style="list-style-type: none"> We are supportive of the proposed REA being retained without further expansion, and therefore no impact on Shale Sandstone Transition Forest (SSTF) CEEC in this location. Whilst some clearing of SSTF CEEC is proposed for surface infrastructure, we note this has been reduced and that opportunities for micro-siting will be investigated. The residual impact on threatened flora species has also been significantly reduced, as discussed under Key Issue 3 below. 	Yes

Issue No.	Description:	Extent and Timing:	RTS comment:	Second amendment response:	EES Comment:	Response satisfactory:
			<ul style="list-style-type: none"> As vegetation to be cleared still includes a substantial area of SSTF CEEC we request further detail on avoidance of SSTF. Further detail on avoidance for the ventilation shaft sites, particularly with regard to threatened flora species (<i>Grevillea parviflora</i> and <i>Persoonia bargoensis</i>). 	<ul style="list-style-type: none"> Reduced clearing for ancillary surface works Reduction in total clearing from 37.8ha at RTS stage to 24.3ha, including 10.1ha of SSTF CEEC Significantly reduced impact on threatened flora species & on fauna species habitat 		
2	Biodiversity	Response To Submissions	<ul style="list-style-type: none"> As vegetation to be cleared still includes a substantial area of CEEC (Shale Sandstone Transition Forest), we request further detail on avoidance of this community as detailed above. It remains unclear in the hollow-bearing tree 	<ul style="list-style-type: none"> The revised design will result in no clearing of SSTF for the REA. The height of the REA is to be raised to accommodate the additional reject material, from RL 310 to RL 320. 	<ul style="list-style-type: none"> A significant impact to SSTF is still likely to occur, given 10.1ha will be cleared. However, we recognise that this is a major reduction from EIS and RTS stages. Notably, the extent of SSTF clearing from the EIS project to the current proposal has been reduced by 77%, from 43.4ha to 10.1ha, with 4.12 ha considered to be in “good” condition 	Yes – subject to conditions

Issue No.	Description:	Extent and Timing:	RTS comment:	Second amendment response:	EES Comment:	Response satisfactory:
			<p>survey which trees can be retained, and which will be cleared, particularly in the vent shaft areas.</p> <ul style="list-style-type: none"> Recommend opportunities to avoid further clearing at ventilation shaft sites TSC1 and TSC2 by consolidating infrastructure requirements be fully explored. 	<ul style="list-style-type: none"> A total 10.1ha of SSTF is proposed to be removed across the project footprint, reduced from 23.57ha, which includes all surface disturbance. The surface disturbance for TSC1, TSC2 and transmission lines has been further refined. Total clearing for these elements, comprising SSTF, sites has been reduced from 12.51ha to 10.1ha. 	<p>and 5.98 ha considered to be in “derived” condition.</p> <ul style="list-style-type: none"> The revised surface works footprints would significantly reduce impacts on hollow-bearing trees. Reduction of further impacts to hollow bearing trees can be achieved at biodiversity management plan stage, and we recommend this matter be conditioned. There are also opportunities for further micro-siting of surface infrastructure elements at TSC 1, TSC 2 and the transmission lines to refine the clearing footprint and impacts to hollow bearing trees. This will also minimise the impacts upon SSTF CEEC. We recommend that a condition of consent regarding micro-siting at TSC 1, TSC 2 and the transmission lines be imposed, as discussed with the proponent. 	
3	Biodiversity	Response To Submissions	<ul style="list-style-type: none"> Further detail on avoidance of Impacts for Further Consideration (IFFC) species, particularly 	<ul style="list-style-type: none"> The REA re-design has further reduced the clearing of <i>Persoonia</i> 	<ul style="list-style-type: none"> The impacts on <i>P. bargoensis</i> resulting from the amended 	Yes

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			<p><i>Persoonia bargoensis</i> in ventilation shaft sites, is still recommended as required by the IFFC assessment accordance with s9.2 of the NSW Framework for Biodiversity Assessment (FBA).</p>	<p><i>bargoensis</i> from 8 individuals to 1.</p> <ul style="list-style-type: none"> Further impacts on <i>Grevillea parviflora</i> have also been significantly reduced from removal of 491 individuals at RTS stage to removal of 55. Impacts to this species are now considered unlikely to be 'significant'. No individuals of <i>Pomaderris brunnea</i> will be removed and the 1 individual previously identified within the impact area will now be retained. 	<p>footprint are now considered to be minimal.</p> <ul style="list-style-type: none"> Impacts on some individuals of <i>G. parviflora</i> will remain but is now not at a level likely to be considered "significant". No impacts on <i>P. brunnea</i> are now proposed. 	
4	Biodiversity offsets	Response To Submissions	<ul style="list-style-type: none"> Conditions of consent must address staging, timing of establishment of BSAs and credit 	<ul style="list-style-type: none"> There are now significant reductions in offsets required. 	<ul style="list-style-type: none"> We note the findings of the biodiversity assessment update (Niche, August 2020). Once the preferred project footprint is 	Yes – subject to conditions

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			<p>retirement as well as payment to the fund.</p> <ul style="list-style-type: none"> • Need to consider if the 2019-20 bushfires have impacted the proposed stewardship sites, particularly for entities that are vulnerable to fire (eg. <i>Persoonia bargoensis</i>). Further detail on obtaining credits for HN556 (PCT 1395) is also required. • A requirement to develop a Biodiversity Management Plan in consultation with EES should be imposed as a condition of consent. 	<p>Notably, 455 credits are required for communities aligning with SSTF CEEC (HN556), a reduction of 629 credits from the EIS proposal.</p> <ul style="list-style-type: none"> • Likewise only 77 species credits for <i>P. bargoensis</i> are now required, a reduction of 539, and 770 species credits for <i>G. parviflora</i>, a reduction of 6104 credits. • A three staged approach is proposed for offsets: <ul style="list-style-type: none"> ○ Stage 1: TSC1 ○ Stage 2: TSC2, power line & REA (partial - now zero) 	<p>finalised, we request that the BAR be updated in final and issued to BCD prior to determination.</p> <ul style="list-style-type: none"> • We note that the credit offset liability has been reduced significantly. • The biobanking credit calculator was re-run to reflect the amended footprint and the proponent must submit the case for EES to review prior to approval. • The BSA sites proposed appear unchanged from RTS stage, and our query regarding potential fire impact has not been addressed. • The final BOS will need to identify whether fire has impacted the proposed BSA sites in light of the reduced offset liability, notably for vulnerable flora species credit species. • We recommend conditions of consent be imposed for the following: <ul style="list-style-type: none"> ○ Staged offset approach, including retirement of requisite credits (including 	

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				<ul style="list-style-type: none"> ○ Stage 3: REA (remainder) • Payment into the fund is still proposed to address any shortfall, and other opportunities to acquire offset landholdings are also being explored. 	<ul style="list-style-type: none"> ○ Biodiversity Conservation Fund payments) prior to impact occurring. ○ Finalisation & submission of Biodiversity Offset Strategy (BOS) as required by s11.1 of the FBA & in consultation with EES, prior to commencement of Stage 1 ○ Submission of a Biodiversity Management Plan, in consultation with BCD. ○ Micro-siting of surface infrastructure elements at TSC 1, TSC 2 vent shaft sites and transmission lines to further minimise impacts, as discussed previously with the proponent. • We request the opportunity to review draft conditions of consent prior to any recommendation being finalised and remain available to assist with wording as required. 	
7	Water & subsidence	Response To Submissions	<ul style="list-style-type: none"> • Insufficient avoidance of 3rd order and above streams or cumulative impact assessment for loss 	<ul style="list-style-type: none"> • The removal of LW107B & 108B will avoid some impacts upon some 	<ul style="list-style-type: none"> • Impacts to 3rd order Dog Trap Creek pools and flow will be almost inevitable given the proposed mine layout. Once impacted, Dog Trap 	No

Issue No.	Description:	Extent and Timing:	RTS comment:	Second amendment response:	EES Comment:	Response satisfactory:
			<p>of water/flow to the Upper Nepean River catchment.</p> <ul style="list-style-type: none"> • Recommend considering further amendments to the layout to reduce the fracture, drainage and permanent impacts to 3rd order streams. • Consider avoiding impacts to the sections of the project undermining 3rd order streams • Although further information was supplied in the RTS regarding the adopted remediation plans for Redbank and Myrtle Creeks, it has not been demonstrated to date that these areas can be successfully remediated. 	<p>overlying streams in this section of the project footprint.</p> <ul style="list-style-type: none"> • No changes to LW101B & 103B in the vicinity of Dog Trap Creek are proposed. • Additional raw modelling data has been supplied to EES following lodgement of the second amendment report. • Additional work has been undertaken as follows: <ul style="list-style-type: none"> ○ Sensitivity analysis on Redbank Ck catchment ○ Extrapolation of baseflow loss to Nepean River 	<p>Creek is unlikely to be repairable or continue to flow in the area of mining (except after heavy rain).</p> <ul style="list-style-type: none"> • Insufficient justification has been provided to demonstrate that impacts to undermined streams and watercourses, notably 3rd order streams Dog Trap Creek, will be repairable. • To date the proponent has not demonstrated that “no flow loss” to Redbank Creek (or other streams impacted by mining) will occur due to inadequate experimental design of monitoring (eg. significant lack of appropriate baseline data). • The second amendment report does not provide a proper assessment of the ongoing impact of mine wastewater on the receiving environment, or how this will be improved in the future if the Tahmoor South proposal is approved. • Mine wastewater is currently discharged into Tea Tree Hollow (where a barium precipitate appears 	

Issue No.	Description:	Extent and Timing:	RTS comment:	Second amendment response:	EES Comment:	Response satisfactory:
				<ul style="list-style-type: none"> Comparison of Redback Creek R11 monitored flows to Stonequarry Creek at Picton 	<p>to be deposited) and then goes on to pollute the Bargo River all the way down to its junction with the Nepean River. Previous work on the quality of the discharge demonstrated that it was toxic to sensitive aquatic life (Cardno, 2010).</p> <ul style="list-style-type: none"> There is no timeline to address improved treatment of the discharge (eg. reverse osmosis) or what water quality objectives will be set or met. Due to high level of uncertainty in groundwater model predictions, there remains a residual concern that the Amendment Project still predicts minor impacts to Thirlmere Lakes within the Greater Blue Mountains World Heritage Area. EES is meeting with the proponent in the week commencing 17/8/20 to discuss this matter in further detail. The outcome of this meeting will inform further detailed comments regarding streams and watercourses, to be provided following this submission. 	

**Note: For response to RTS Key Issues 5 & 6 relating to Aboriginal cultural heritage, refer to Heritage NSW submission.*