

Attachment 1: OEH review of the DP&E Assessment Report

The Assessment Report (dated April 2015) prepared by the Department of Planning and Environment (DP&E) for the Springvale Mine extension project (SSD 5594) identifies key issues and recommends a number of conditions.

OEH still has a number of outstanding issues with regard to the proposal. OEH has conducted reviews of both the Environmental Impact Assessment (EIS) and the Response to Submissions (RTS). Both reviews identified a number of outstanding issues that had not been adequately addressed during the assessment process. OEH's detailed review of the impacts of the proposal on upland swamps is provided in Attachment 2.

OEH provides the following comments for consideration.

1. Relationship between Springvale and Angus Place

It was Centennial's original intention that both Springvale and Angus Place would operate together to collectively produce up to 8.5 Mtpa of ROM coal, which would be conveyed to the Western Coal Services Site for processing and transport to either the Mt Piper Power Station or to the Lidsdale Siding and then railed to port Kembla for export.

However, in October 2014 Centennial placed Angus Place on 'care and maintenance'. It is now Centennial's intention that Angus Place will remain in 'care and maintenance' mode until mining operations are completed at Springvale.

The EISs for the Springvale and Angus Place Mine Extension Projects consider the potential cumulative impacts of both these proposals operating simultaneously. DP&E is satisfied that this remains the appropriate approach, particularly given that Centennial's future plans may change and Angus Place may re-commence operations before the completion of mining at Springvale.

OEH supports the consideration of potential cumulative impacts for both the Springvale and Angus Place proposals.

2 Impacts on swamps

The DP&E assessment report recognises that,

There is general consensus across the studies that predicting impacts on swamps is complex, and that it is still unclear exactly how sensitive swamps are to mining subsidence.

OEH agrees that there are many uncertainties regarding the impacts of subsidence on swamps. OEH's concerns regarding subsidence impacts such as height of fracture, impact to groundwater and water loss in streams are provided in **Attachment 2**.

To address this, DP&E and OEH have prepared a draft *Policy Framework for Biodiversity Offsets for Upland Swamps and Associated Threatened Species Impacted by Longwall Mining Subsidence* (April 2015).

Due to the uncertainty in relation to the extent and nature of potential impacts of underground mining on swamps, DP&E has recommended applying the draft *Policy Framework for Biodiversity Offsets for Upland Swamps and Associated threatened Species Impacted by Longwall Mining Subsidence*.

The draft Swamp Offset Policy requires the applicant to demonstrate how it will legally secure the proposed offsets (for example, how the applicant will purchase the relevant offset site, purchase the biodiversity credits from a landholder or arrange for relevant supplementary measures to be carried out). Suitable means of demonstrating this include ownership of the land or a long-term option to purchase, or provision of an adequate security bond or deposit.

Prior to approval of an Extraction Plan, the applicant must demonstrate that it can satisfy its 'maximum predicted offset liability' for all mining subject to that plan. Conditions of development consent may also require that a suitable 'bank' of offsets is established early in the life of the development, and then maintained as appropriate.

The offsets identified in the Biodiversity Offset Strategy are only required to be secured or credits retired once the outcomes of mining are confirmed through agreed monitoring.

In addition, under the draft conditions of consent (Conditions 3 and 4) offsets for swamps are only required if performance measures are exceeded and the Secretary determines that:

- (a) It is not reasonable or feasible to remediate the impact or environmental consequence
- (b) Remediation measures implemented by the Applicant have failed to satisfactorily remediate the impact or environmental consequence.

If offsets are required under the provisions outlined above, then under the draft Conditions of Consent, the offset must give priority to like-for-like physical environmental offsets, but may also consider payment into any NSW Offset Fund established by OEH, or funding or implementation of supplementary measures such as:

- actions outlined in threatened species recovery programs;
- actions that contribute to threat abatement programs;
- biodiversity research and survey programs; and/or
- rehabilitating degraded habitat.

Monitoring is to be expanded to cover all swamps in the project area, and a Swamp Monitoring Program is to be prepared and approved prior to the commencement of longwall extraction under the project.

At DP&E's request, OEH has conducted an offset scenario (Attachment 3). This scenario was conducted over a subset of the impact area (35.4 ha) and the offset scenario indicates an offset requirement of 520 ha (high condition), 349.5 ha (good-high condition) and 265.5ha.5 ha (good condition).

OEH has also conducted FBA assessments on the 35.4 ha subset of swamps, which comprises Sunnyside East, Carne West Swamp, Gang Gang Swamp South West and Gang Gang Swamp South East (Attachment 3).

Draft Condition 14 requires that, by the end of December 2016, the Applicant shall update the Western Projects Biodiversity Strategy to provide a suitable offset for potential impacts to nine shrub swamps totalling 61.02 ha (including Sunnyside East, Carne West, Gang Gang South West, Gang Gang East, Pine, Pine Upper, Paddy's, Marrangaroo Creek and Marrangaroo Creek Upper Swamps).

OEH notes that the draft Conditions of Consent state that 61.02 ha of shrub swamps will be impacted by subsidence. The Western Blue Mountains vegetation map delineates approximately 73.59 ha for the nine swamps potentially impacted by subsidence. OEH is unable to replicate the 61.02 ha identified in the draft Conditions of Consent, particularly as Pine Swamp and Nine Mile are joined. However OEH notes that Pine Upper Swamp and the upstream portion of Pine Swamp will be directly impacted and therefore the downstream portion of Pine Swamp may be affected through altered hydrological regime.

OEH has concerns with the proponent being solely responsible for monitoring and interpretation of data, particularly with regard to determining whether it is mining that has caused an impact or some other factor. OEH considers that, as a minimum, the proponent should be required to provide all raw data collected to the Consent Authority so that, if required, independent analysis can be conducted.

3 Regional Biodiversity Strategy

Springvale Coal provided a revised Regional Biodiversity Strategy (RBS) with the Response to Submissions (RTS). DP&E understands that Springvale Coal is still negotiating the details of the revised RBS with OEHL and Department of the Environment (DOE).

Note that in OEHL's review of the RTS, the revised RBS was found to be inadequate as it did not fulfil the Principles of the NSW Biodiversity Offsets Policy.

DP&E states that several aspects of the RBS are already incorporated into existing conditions of approval for certain projects, and other aspects of the RBS are now not required due to changed operational arrangements and gives the example of Angus Place being placed in care and maintenance.

DP&E considers therefore that the best approach is to require Springvale Coal to finalise the aspects of the RBS that relate to Springvale, in consultation with OEHL and DOE, by June 2016, and ensure that the commitments made are implemented within a timeframe agreed by these agencies.

This does not fit with consideration of potential cumulative impacts. In addition, the intent of the RBS was to offset Centennial's residual impacts for a number of projects, not just Springvale.

Draft Condition 14 requires the Western Projects Biodiversity Strategy to be updated to provide a suitable offset for:

- (a) *the clearing of 4 hectares of native vegetation associated with the construction of Bore 8, including residual impacts on Persoonia hindii*
- (b) *the clearing of 11.44 hectares of native vegetation associated with surface infrastructure for the development,*
- (c) *potential impacts to nine shrub swamps totalling 61.02 hectares (including Sunnyside East, Carne West, Gang Gang South West, Gang Gang East, Pine, Pine Upper, Paddys, Marrangaroo Creek and Marrangaroo Creek Upper Swamps)*
to the satisfaction of OEHL and the Secretary.

A note under draft Condition 14 states that offsets should be developed in accordance with the NSW Biodiversity Offset Policy for Major Projects, 2014 and the draft Policy Framework for Biodiversity Offsets for Upland Swamps and Associated Threatened Species Impacted by Longwall Mining Subsidence (April 2015), or its current version.

OEHL supports this draft condition.

4 Exploration

OEHL has previously raised concerns regarding the issue of allowing undefined and unquantified exploration activities as part of this project. This issue has not been addressed in the RTS or in DP&E's Assessment Report.

The RTS stated that,

The location of proposed geological exploration boreholes is currently unknown, and as a consequence, detailed environmental and social impact assessment cannot be undertaken at this time. As the required drill hole locations are determined, Centennial Springvale will undertake a series of due diligence assessments to consider ecology, archaeology and noise as relevant. The appropriate industry and legislative guidelines and policies in force at the time will be referenced and the assessments provided to the NSW Planning and Environment, and

Only landowner access approval will be required once Development Consent is granted...Due diligence assessments will be provided to NSW Planning and Environment for their information only. Copies of any due diligence assessments will also be provided to DRE and Forestry Corporation of NSW (or other landowners if not within a State forest).

Exploration activities are currently assessed and approved under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), which requires determining authorities to, *...examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity.*

This means that at present the proponent must prepare an environmental impact assessment in the form of a Review of Environmental Factors (REF) for exploration activities.

The draft consent conditions allow for the undefined exploration as presented in the EIS to occur. This will remove the requirement for a Part 5 assessment, and potentially result in greatly reduced environmental assessment of exploration activity compared with the current requirements. It would also set a precedent for assessment of mining exploration across the State. OEH considers that this undefined exploration should not have been included as part of the EIS, and should not be included in the consent.

5 Gardens of Stone and Blue Mountains National Parks

OEH raised issues with regard to conservation reserves in the area. These include concerns about potential fracturing of steams and swamps affecting creeks flowing into the reserves, construction of access tracks close to the national park boundary, and protection of flora reserves in the area.

The Gardens of Stone National Park is part of the Greater Blue Mountains Area World Heritage Area and National Heritage Place and is located adjacent to the northern-eastern edge of the Project Area. The RTS Report notes that the National Park is approximately 170 m from LW1014A. What the EIS and RTS do not discuss adequately is that many of the streams overlying the project area actually flow into the World Heritage listed greater Blue Mountains National Park (which includes the Gardens of Stone National Park), the two most important of which are Drainage Line 3 and the stream at the base of Trail 6 Swamp over Angus Place. Fracturing, drainage and loss of baseflow from Pine Swamp and Paddy's Swamp over Springvale mine will also likely affect flows in Bungleboori Creek which flows to the Blue Mountains National Park.

Potential fracturing of the bedrock in the streams and swamps has been predicted by the subsidence consultant MSEC which means that water is likely to be diverted away from the streams which subsequently flow to the National Park. The EIS and RTS provide no scientific evidence that any redirected water remerges in these areas and Aurecon (2009) and DgS (2014) both identified that water in East Wolgan Swamp moved down 80m to a lower aquifer. The loss of any baseflow to streams that drain in the National Park will constitute an impact on the World Heritage listed Greater Blue Mountains National Park

The RTS Report states:

In regards to the Gardens of Stone National park, it is acknowledged that while it is possible that minor and isolated fracturing could occur, it is considered extremely unlikely, as fracturing at this distance has only been observed within very large and incised river valleys in the Southern Coalfield. In these cases, the fracturing did not result in any adverse impacts on the stream health or have environmental consequence.

An extensive surface water flow and quality monitoring program is already in place for the Wolgan River and its catchment.

No additional flow monitoring is considered necessary.

OEH disagrees with this subjective assessment since flow monitoring should be specific to potential mine impacts, be located in areas likely to suffer fracturing (as predicted by MSEC) and should be undertaken at a frequency appropriate to the variability in flow in the streams and catchments affected by the proposal. Since flow can change on a daily or even hourly basis, undertaking flow measurements at a handful of ungauged streams at weekly, monthly or longer interval are not supported. OEH does not believe that the flow monitoring detailed in the EIS is either adequate or that current flow monitoring implemented for the proposal has the capacity to unambiguously detect change as a result of subsidence impacts. The loss of any surface flow / baseflow to streams that drain to the National Park as a result of mining will likely lead to a downstream impact on the World Heritage listed Greater Blue Mountains National Park.

OEH raised the issue that a number of dewatering bores are proposed to be constructed in close proximity to the national park boundary. These will require additional access tracks. OEH is concerned regarding damage caused by recreational use of these new tracks and the potential for these to create new access points to the national park. The RTS has increased this concern, as it simply reiterates,

...access tracks upgraded or established as part of the Project on the Newnes Plateau will remain for use as access tracks by recreational users and by Forestry Corporation of NSW.

There is no strategy included in the RTS to discourage use of new access tracks, nor is there a commitment to ensure that no access is created into the adjacent national park.

We also note the presence of two flora reserves, Birds Rock and Snow Gum. These should be afforded equivalent protection to national park estate. This is not discussed in the RTS.

These issues were not adequately addressed in the RTS, and have not been addressed in the DP&E assessment report.

