METROPOLITAN COLLIERIES PTY LTD

ABN: 91 003 135 635

100 Melbourne Street
South Brisbane Qld 4101

PO Box 402
Helensburgh NSW 2508
Australia
Tel + 61 (0) 2 4294 7202
Fax + 61 (0) 2 4294 2064

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NSW Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Attention: The Executive Director – Resources & Industry Policy

RE: METROPOLITAN COAL - SUBMISSION ON POLICY FRAMEWORK FOR BIODIVERSITY OFFSETS FOR UPLAND SWAMPS AND ASSOCIATED THREATENED SPECIES

Metropolitan Coal is a wholly owned subsidiary of Peabody Energy Australia. Metropolitan Coal was granted approval for the Metropolitan Coal Project on 22 June 2009. The Project comprises the continuation, upgrade and extension of underground mining operations and surface facilities at Metropolitan Coal.

The current economic environment has seen an emphasis on cutting operational costs at mining operations across the country. In this environment, Metropolitan Coal has been forced to make the difficult decision to scale back production by some 600,000 tonnes. Up to 90 individuals (~25% of employees and contractors) will cease employment at the operation in the near-term.

The NSW Government's *Policy Framework for Biodiversity Offsets for Upland Swamps and Associated Threatened Species* (the Policy) would, in its current guise, have significant impacts on the ongoing viability of Metropolitan Coal. Metropolitan Coal, as part of Peabody Energy Australia, is pleased to provide a submission on the Policy as part of the *Integrated Mining Policy* consultation process.

A number of issues have been identified in the Policy as currently drafted, including:

- the presumption that changes in groundwater levels result in long-term impacts to swamps rather than using the results of direct vegetation and habitat monitoring to identify environmental consequences;
- the requirement to establish baseline groundwater conditions in all swamps, when evidence shows that it is not technically feasible to do so in all cases;
- the lack of transitional provisions to allow a two year period to meet the specific data requirements of the Policy;
- the definition of a "maximum predicted offset liability"; and
- the affective retrospective imposition of additional offset liability to a project that has an existing Project Approval and offset conditions.

These issues are described in further detail below.

Groundwater Levels

The Policy incorrectly states that impacts to "shallow groundwater levels" results in an impact to swamps. Groundwater levels within the swamp substrate (i.e. within the sediments above the underlying bedrock) support the flora and fauna habitat within upland swamps. Changes to shallow groundwater levels do not necessarily result in any short-term or long-term changes in swamp substrate groundwater levels, as has been observed through extensive monitoring of upland swamps at Metropolitan Coal. This monitoring has shown that the groundwater levels in swamps are naturally highly dynamic.

The Policy states that … *if monitoring demonstrates that the shallow groundwater aquifer is impacted, then there is a presumption of long-term impacts on the swamp.* This presumption is not valid, regardless of whether it refers to changes in "shallow" or "swamp substrate" groundwater levels. Monitoring of swamps at Metropolitan Coal has shown:

- Instances where changes in "shallow" groundwater levels due to subsidence have not resulted in impacts to "swamp substrate" groundwater levels, or associated impacts to swamp vegetation.

  As an example, monitoring of groundwater levels at Swamp 25 showed that the shallow groundwater level (within the underlying sandstone) dropped approximately 4 metres with the passing of Longwall 21 beneath the swamp, while changes in the substrate groundwater level at the same time were found to be due to climatic effects (through monitoring of a control swamp)[1].

- Instances where changes in "swamp substrate" groundwater levels due to subsidence have not resulted in impacts to swamp vegetation to date (three years of monitoring since changes to swamp substrate groundwater levels occurred).

  Groundwater level monitoring at Swamp 20 has found that subsidence has impacted both the shallow and substrate groundwater levels, however the mining induced impact to groundwater levels has been found to have resulted in a negligible impact on threatened species[1].

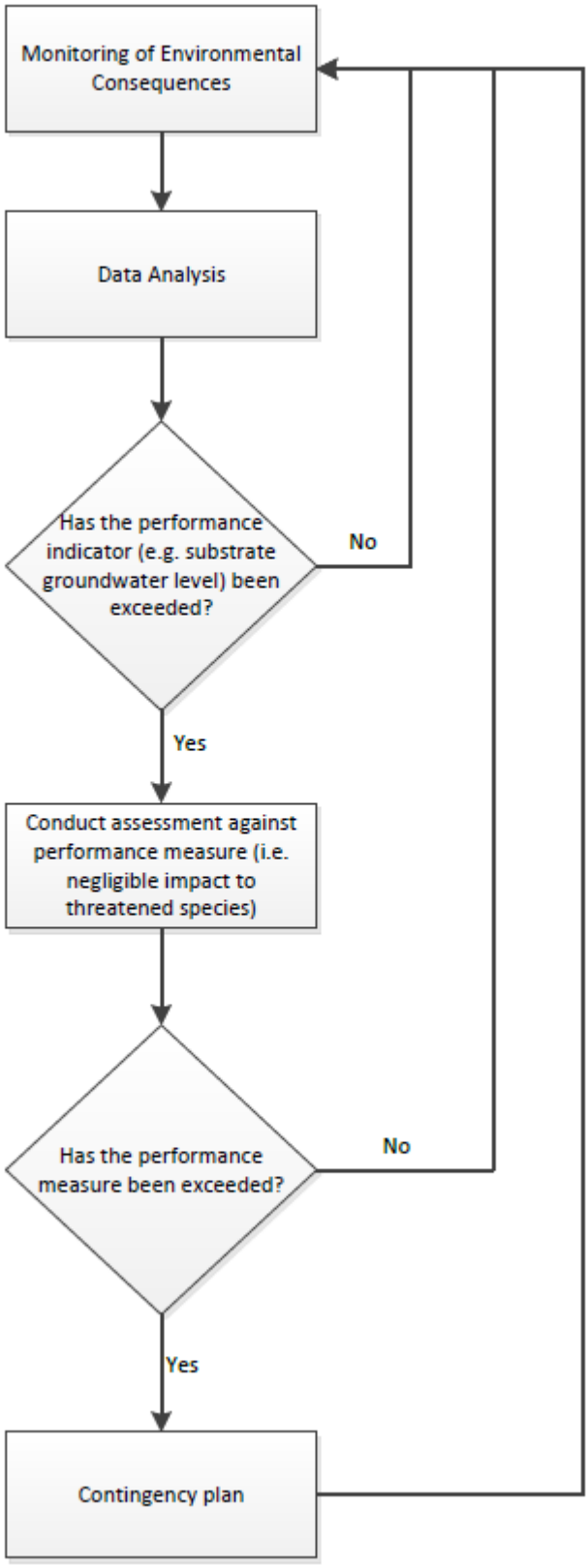
Metropolitan Coal's approved Longwalls 20-22 and 23-27 Extraction Plans use substrate groundwater level as a **performance indicator** for upland swamps. Performance indicators based on vegetation monitoring are also established. If a performance indicator is triggered an assessment against the **performance measure** *negligible impact on threatened species* is conducted based on environmental consequence monitoring data (i.e. assessment of impacts to vegetation, habitat and threatened species). The process is illustrated in Figure 1.

Monitoring of substrate groundwater levels can be used as an early indicator of the *potential* for mining induced effects to swamp hydrology. However the identification of long-term environmental consequences to upland swamps should be based on the results of repeatable, scientific and quantitative vegetation monitoring.

Accordingly, impacts to shallow groundwater levels should not be used as a reliable or primary indicator/definition for long-term impacts to upland swamps. In particular, it should be acknowledged that transient, short-term changes in substrate groundwater levels may not result in environmental consequences to upland swamps. The Policy as currently drafted does not reflect the complexity of the systems involved.

[1] Metropolitan Coal 2014 Annual Review and AEMR/Rehabilitation Report (Metropolitan Coal, 2015).

Figure 1
Metropolitan Coal Environmental Assessment Process



Establishment of Baseline Conditions

Implementation of the Policy would require a proponent to install groundwater monitoring bores within every upland swamp across the underground mining area at least two years prior to impact. This is not economically or practically feasible. Metropolitan Coal has found that the practical ability to monitor substrate groundwater levels is limited by the shallow substrate depth within the majority of upland swamps.

Of the thirteen upland swamps above or immediately adjacent to Longwalls 23-27, only four swamps were found to have a sufficient depth of substrate to install a groundwater bore/standpipe (i.e. greater than 800 millimetres deep). Accordingly, it is practical and sensible to monitor vegetation to assess impacts to upland swamps, rather than groundwater levels.

The vegetation disturbance associated with the installation of monitoring bores in each of the 84 upland swamps overlying Metropolitan Coal's 300 Series longwalls would be significant (as too would be the financial impost). It is noted that the NSW Government's *Impacts of Underground Coal Mining on Natural Features in the Southern Coalfield – Strategic Review* (2008) found that:

> *The establishment of a measurement and monitoring regime aimed at increasing predictive accuracy (i.e. additional monitoring bores and associated surface infrastructure) might result in greater impact on the natural environment (at the surface) than may result from subsidence alone.*

Monitoring groundwater levels and vegetation/habitats (i.e. monitoring the potential environmental consequences associated with any change to the groundwater regime) within a representative selection of upland swamps (based on the likelihood of potential impacts, as informed by subsidence predictions, swamp characterisation [such as position in the landscape and vegetation types], the likely groundwater regime and experience to date)) is considered to be a much more appropriate method of identifying impacts to upland swamps.

Transitional Arrangements

It is also noted that transitional arrangements would need to be included in the Policy if it is to be implemented from 1 October 2015 to account for projects which wouldn't have established a two year baseline dataset by this date.

Defining the 'Maximum Predicted Offset Liability'

The Policy does not describe how to identify a "potential maximum" or "worst case" scenario. In the absence of any guidance, it is likely that the views of proponents, regulators, independent experts and community groups would differ significantly on what a potential maximum impact would be, and therefore become a strongly contested and difficult to resolve issue in any assessment.

Additional Offset Requirement

It is noted that the Metropolitan Coal Project was approved in 2009, predating the listing of the *Coastal Upland Swamp in the Sydney Basin Bioregion* as an Endangered Ecological Community under the *Threatened Species Conservation Act 1995* in 2012. The potential impacts to this community were assessed and approved through the Project Approval (08_0149).

Metropolitan Coal's Project Approval Condition 6, Schedule 6 requires Metropolitan Coal to provide a suitable offset to compensate for particular impacts that exceed the performance measures and have not been adequately remediated.

It is not considered appropriate that additional offset liabilities would be imposed on existing operations if impacts are successfully remediated in accordance with an operation's existing Project Approval or Development Consent.

Conclusion

In its current form, the Policy would result in a significant financial impost to Metropolitan Coal without having proper regard to actual environmental consequence or currently approved mechanisms to address consequences that may arise. The Policy requires revision to better reflect the complexity of swamp systems and the need for appropriate measures of potential environmental consequence.

Metropolitan Coal looks forward to further consultation with the NSW Government regarding the Policy.

Please don't hesitate to contact the undersigned if you would like to discuss.

Yours sincerely,

RYAN PASCOE
Manager - Safety & Environmental Services
Metropolitan Coal
rpascoe@peabodyenergy.com
02 4294 7222