

Advice to decision maker on coal mining project

Proposed action: Stratford Extension Project (EPBC 2011/6176) – Expansion

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| Requesting agency | Department of Sustainability, Environment, Water, Population and Communities |
| Date of request | 18 January 2013 |
| Date request accepted | 21 January 2013 |
| Advice stage | Environment Impact Assessment (draft) |
| Summary of request from the regulator | <p>The Department of Sustainability, Environment, Water, Population and Communities (the Department) is currently assessing the proposed project in accordance with the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act).</p> <p>The Department notifies the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (the Committee) of an opportunity to comment on a draft Environmental Impact Statement (EIS). Specifically, the Department seeks the advice of the Committee on:</p> <ol style="list-style-type: none"> 1. What are the likely impacts of the proposed mine on surface and ground water resources, in particular, changes to surface and groundwater dynamics and water resources which may support terrestrial and aquatic habitat? 2. Does the Committee find the water balance and conclusions relating to water management provided by the proponent and attached to the brief to be reasonable? |

Advice

The Committee was requested to provide advice to the Commonwealth regulator on the Stratford Extension Project at the Environmental Impact Assessment stage.

Question 1: What are the likely impacts of the proposed mine on surface and ground water resources, in particular, changes to surface and ground water dynamics and water resources which may support terrestrial and aquatic habitat?

1. The Committee considers that the project is likely to have a range of impacts on both surface and groundwater and that the combination of these impacts is likely to affect aquatic habitats. Three nationally listed frog species (the Green and Golden Bell Frog, Giant Barred Frog and Booroolong Frog) may be of particular significance for the site and although the proponent has concluded the species are not present; this conclusion is not supported by sufficient evidence. The Committee recommends that:

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- a. adequate monitoring be undertaken for the threatened frog species through additional targeted surveys, consistent with relevant Commonwealth and state survey guidelines, in potential habitat areas on the project site, and
 - b. mitigation action(s) be identified to ensure the protection of species found on site.
2. The Committee considers that there is insufficient information provided to adequately assess cumulative impacts of surrounding coal mining and coal seam gas proposals including the Stratford Extension, Stage One Gloucester Coal Seam Methane Gas and Rocky Hill Coal Mine projects.
 3. The Committee considers that, as a result of the project, there may be locally significant impacts on aquatic habitats from stream diversions, loss of catchment area and a reduction in baseflow, particularly during low flow conditions. The Committee recommends the development of a comprehensive monitoring, management and mitigation plan to address these impacts on Avondale Creek, Dog Trap Creek, Avon River and their tributaries.

Question 2: Does the Committee find the water balance and conclusions relating to water management provided by the proponent and attached to the brief to be reasonable?

4. The Committee considers that the water balance for the project area is inadequate and a regional water balance has not been provided.
5. The Committee questions the veracity of the groundwater modelling that predicts extreme reductions in groundwater pressure (in one instance, approximately 1.5 kilometre groundwater drawdown) from cumulative impacts of the Stratford Extension, Stage One Gloucester Coal Seam Methane Gas and Rocky Hill Coal Mine proposals. The Committee has a low level of confidence in the combined results of numerical groundwater modelling and the water balance conceptualisation, given the significant variation in groundwater inflows required to calibrate the water balance model. The Committee recommends that further refinement of the groundwater model be undertaken to increase confidence in the predicted outcomes, including boundary conditions, geological characterisation and model calibration/validation.
6. The Committee recommends that a regional water balance model be developed to enable a thorough assessment of cumulative water impacts. The regional water balance should be developed with data relating to existing and proposed coal mining and coal seam gas projects within the Gloucester Basin. Given the extent of resource development proposed, the Committee recommends that a coordinated groundwater monitoring program covering all of the Gloucester Basin is undertaken by coal mining and coal seam gas proponents within the Basin.
7. The Committee notes that the water balance results predict overflow from disturbed area dams to the Avondale Creek catchment. The Committee recommends that dams be redesigned with sufficient capacity to contain a 1 in 100 year event.
8. The Committee notes that the project includes three final voids. The Committee considers that the backfilling of voids and the minimisation of pit lakes is best environmental practice for post-mining management.
9. The Committee notes that the Gloucester Basin is a component of the Northern Sydney Basin region and that this area has been identified as a Bioregional Assessment priority region. The Committee considers that data and relevant information from the project should be made accessible for this Bioregional Assessment.

Date of advice 20 February 2013

Source documentation Stratford Coal Pty Ltd 2012. Stratford Extension Project Environmental Impact Statement. Available at: www.stratfordcoal.com.au/environment/environmental-

available to the [assessment-a-approval-documents.php](#) (accessed 20/02/2013)
Committee in the
formulation of this
advice
