

**Independent Expert Scientific Committee on Coal Seam Gas and  
Large Coal Mining Development (IESC)  
Meeting 67, 2-3 March 2020**

**MINUTES  
Sydney, NSW**

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**ATTENDANCE AND APOLOGIES**

**IN ATTENDANCE**

Dr Chris Pigram (Chair)  
Professor Wendy Timms  
Associate Professor Rory Nathan  
Dr Andrew Boulton  
Dr Catherine Moore  
Professor Jenny Davis  
Dr Jenny Stauber  
Professor Craig Simmons

**OFFICE OF WATER SCIENCE**

Peter Baker  
Jason Smith  
Praveen Sebastian  
Mio Kuhnen  
Sarah Taylor (Item 2.2 on 2 March and Items 2, 3.1, 3.3 and 3.4 on 3 March)  
Kelly Strike (Items 1.5-1.8 and 3.2 on 2 March and Items 2, 3.1, 3.3 and 3.4 on 3 March)  
Petah Rhynehart (Items 2, 3.1, 3.3 and 3.4 on 3 March)  
Dominica O’Dea (Items 2, 3.1, 3.3 and 3.4 on 3 March)  
Harrison Martin (Items 2, 3.1, 3.3 and 3.4 on 3 March)  
Nastaran Mazloumi (Items 2, 3.1, 3.3 and 3.4 on 3 March)  
Alex Hannan-Joyner (Items 2, 3.1, 3.3 and 3.4 on 3 March)

**INVITED GUESTS**

Professor Graeme Samuel AC, Independent Reviewer of the EBPC Act, and (by teleconference) two staff  
from the EPBC Act Review Secretariat (Item 3.1)  
Titus Murray, Author of the Faults Explanatory Note (Item 3.2)

The meeting commenced at 9.00am on Monday 2 March 2020.

## **1. Welcome and Introductions**

The Chair welcomed members of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) to the meeting.

### **1.1 Acknowledgement of Country**

The Chair acknowledged the traditional owners, past and present, on whose land this meeting was held.

### **1.2 Disclosure of Interests**

Before the meeting commenced, Committee members completed the Meeting Specific Declaration of Interests and project advice specific declarations for the Russell Vale Revised Underground Expansion Project and the Glendell Continued Operations Project.

### **1.3 Confirmation of Agenda**

The Committee endorsed the agenda for Meeting 67.

### **1.4 Confirmation of Out-of-Session decisions**

The Committee noted that:

- advice on the Bulga Optimisation Project MOD3/Bulga Underground Operations MOD7 Project was provided to the regulator and published in accordance with agreed timeframes; and
- minutes of the Committee's sixty-sixth meeting on 11-12 December 2019 were agreed out-of-session and published.

### **1.5 Correspondence**

The Committee noted the status of correspondence to 13 February 2020.

### **1.6 Action Items**

Ongoing items were noted and an update was provided on the timing of completion.

### **1.7 Forward Planning Agenda**

The Committee noted the forward planning agenda.

It was agreed the next meeting be scheduled for 7-8 April 2020 in Canberra.

### **1.8 Environmental Scan**

Committee members and secretariat reported back on developments in recent months, including:

- The new Department of Agriculture, Water and the Environment, of which the Office of Water Science (OWS) is a part; and
- Chair and OWS Director reporting back on their attendance and presentations at Sub20, the inaugural Deep Earth Imaging Conference.

## **2. Advice on Projects referred by governments**

### **2.1 Russell Vale Revised Underground Expansion Project**

The proposed Russell Vale Colliery Underground Expansion Project (the project) is an extension to the existing Russell Vale Colliery, and is located approximately 8 kilometres north of Wollongong, New South Wales. The current proposal is for bord-and-pillar extraction east of Cataract Reservoir, involving only first workings in the Wongawilli Seam and extracting up to 3.7 million tonnes of run-of-mine coal over a five-year period.

The project is located within the Cataract Reservoir catchment. Cataract Reservoir is a source of drinking water for Sydney and lies within the Metropolitan Special Area, a restricted-access area designated to protect Sydney's drinking-water catchments. The project is on the Woronora Plateau which supports groundwater-dependent ecosystems (GDEs) such as Coastal Upland Swamps in the Sydney Basin

Bioregion. These swamps are listed as Endangered Ecological Communities (EECs) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the *New South Wales Threatened Species Conservation Act 1995* (TSC Act).

The Committee has been requested by the NSW Department of Planning, Industry and Environment to consider the peer-reviewed uncertainty analysis and a quantitative assessment of the risk of pillar failure for the project, both of which were recommended by the IESC in its advice published on the 3 December 2019. However, an independent peer-review, by a recognised expert in multi-seam geomechanical stability, of the quantitative assessment of the risk of pillar failure has not been provided. The IESC maintains that this independent review of the quantitative assessment is crucial in understanding any underlying risks from the project as the proponent asserts that there will be no further collapse of the overlying strata and almost no possibility of additional impacts.

Key potential impacts from this project are:

- changes to water regimes and irreversible changes in EPBC Act-listed swamps;
- impacts on in-stream and riparian environments and water-dependent flora and fauna, resulting from changes to flows and water regimes in streams and swamps as a result of pillar collapse;
- potential long-term impacts to groundwater levels and quality post-mining where discharge from adits may occur in perpetuity; and
- the receiving environment of Bellambi Creek being influenced by the discharge of adit water with exceedances of the ANZG (2018) default guideline values for freshwater aquatic ecosystems (95% species protection level) for copper, zinc and nickel.

Consistent with the *Environment Protection and Biodiversity Conservation Regulations 2000*, advice will be published on the IESC's website within 10 business days of being provided to the regulators.

## 2.2 Glendell Continued Operations Project

The Glendell Continued Operations Project is a proposed open-cut extension of the existing Glendell Mine. The project is in the New South Wales Hunter Valley in an area with considerable historical and current mining. Although the project will utilise existing infrastructure, major changes will be required including diverting Yorks Creek and moving its confluence with Bowmans Creek approximately 4 km upstream. A single final void will be left by the project.

Key potential impacts from this project are:

- the Yorks Creek diversion which will result in the loss of existing aquatic, riparian and subsurface habitat within Yorks Creek, and potentially alter flows and habitat in the 4 km reach of Bowmans Creek which will now receive higher flows due to relocation of its confluence with the diverted Yorks Creek. The proposed diversion may be unable to recreate the lost habitat or continue to provide habitat which is characteristic of lower stream reaches in the region;
- the proposed final void which may be a source of evapo-concentrated recharge to the hard rock aquifers;
- changes to baseflows due to groundwater drawdown and altered catchment areas. This will in turn affect the persistence of, and water quality within, refugial pools;
- additional drawdown in the alluvial aquifers which will impact groundwater-dependent ecosystems including riparian vegetation, aquatic biota and stygofauna; and,
- additional cumulative impacts to surface water, groundwater and biota.

Consistent with the *Environment Protection and Biodiversity Conservation Regulations 2000*, advice will be published on the IESC's website within 10 business days of being provided to the regulators.

### **3. Other Business**

#### **3.1 Independent Review of the EPBC Act**

The Committee discussed their draft submission to the Independent Review of the EPBC Act and was later joined for further discussions by Professor Graeme Samuel AC, the Independent Reviewer of the EPBC Act, and accompanied via teleconference by two staff from the EPBC Act Review Secretariat. Afterwards the Committee further revised the draft submission by addressing drafting notes and providing suggestions for a subsequent revision to be done out of session.

#### **3.2 Faults Explanatory Note**

Discussions took place around the draft Faults Explanatory Note and the Committee was joined by the author, Titus Murray, to facilitate further discussions. The Committee later considered next steps in the Explanatory Note's development.

#### **3.3 Research Proposal**

The Committee discussed and agreed on a proposed scope of research into the characterisation of existing and proposed coal mine final voids in Queensland.

#### **3.4 Other**

The Committee had time to discuss additional items.

Arrangements for the Explanatory Notes Symposium were discussed including changes to the draft agenda, delivery of the Masterclass sessions, facilitation of the Symposium, and timing for the distribution of formal invites.

The Committee received an update on the development of web-based Frequently Asked Questions, including the expansion of existing web site content.

Future research opportunities were also discussed.

#### **Close of Meeting**

The Chair thanked everyone for their contribution to the meeting.

The meeting closed at 3.30pm on Tuesday 3 March 2020.

#### **Next Meeting**

The next meeting is scheduled for 7-8 April 2020, in Canberra, ACT.

Minutes confirmed as true and correct:

Dr Chris Pigram AM, FTSE

IESC Chair

20 March 2020