

**Independent Expert Scientific Committee on Coal Seam Gas and
Large Coal Mining Development (IESC)
Meeting 64, 1-3 October 2019**

**MINUTES
Canberra, ACT**

ATTENDANCE AND APOLOGIES

IN ATTENDANCE

Dr Chris Pigram (Chair)
Professor Wendy Timms (Days 2 & 3)
Professor Jenny Davis
Associate Professor Rory Nathan
Dr Jenny Stauber (except Item 2.1)
Professor Craig Simmons (via teleconference)

APOLOGIES

Dr Andrew Boulton

OFFICE OF WATER SCIENCE

Peter Baker
Petah Rhynehart (Item 3.1)
Carol Nelson (Item 3.1)
Kelly Strike (Items 2.1, 3.1, 3.2)
Sarah Taylor (Items 2.1, 3.1, 3.2)
Carl Zimmermann (Items 2.2, 3.2)
Mio Kuhnen (Day 1 Item 2.2)
Ben Klug
Jason Smith

OTHER STAFF OF THE DEPARTMENT OF THE ENVIRONMENT AND ENERGY

Tia Stevens (Items 1, 2.2, 3.1)
Bruce Edwards (Item 3.1)

The meeting commenced at 1.00pm on Tuesday 1 October 2019.

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 a project advice specific declaration for the Dendrobium Mine Extension Project and the Mangoola Coal Continued Operations Project.

Declarations of interests are recorded at *Attachment A*.

1.3 Confirmation of Agenda

The Committee endorsed the agenda for Meeting 64.

1.4 Confirmation of Out-of-Session decisions

The Committee noted that:

- minutes of the Committee's sixty-third meeting on 28-29 August were agreed out-of-session and published.

1.5 Correspondence

The Committee noted the status of correspondence to 17 September 2019.

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 4-7 November 2019 in Brisbane.

1.8 Environmental Scan

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

- Shenhua Watermark Coal Mine site visit by the Office of Water Science; and
- Bylong Coal Project decision by the NSW Independent Planning Commission.

2. Advice on Projects referred by governments

2.1 Dendrobium Mine Extension Project

'Dendrobium Mine – Plan for the future: Coal for steelmaking' is a proposed expansion of the operational Dendrobium Underground Mine located 8 km west of Wollongong in the Southern Coalfield of New South Wales. The project is located in the Metropolitan Special Area, a restricted-access area designed to protect Sydney's drinking water supply catchments. The expansion would allow access to Areas 5 and 6 to mine coal from the Bulli and Wongawilli Seams respectively. Mining would continue at an approximate rate of 5.2 million tonnes per annum run-of-mine in total with Area 5 to be mined between 2024 and 2038 and Area 6 between 2043 and 2048.

Key potential impacts from this project are:

- surface impacts from subsidence, including vertical subsidence, cracking and fracturing of streambeds and swamp bases, and diversion of surface water underground;
- permanent changes to the flow regimes of numerous first-, second- and third-order stream reaches that will considerably decrease streamflows and increase the number of low- and no-flow days under all rainfall scenarios;

- major changes to water regimes and drying severity in swamps. Twenty six swamps will be directly undermined and impacted by subsidence with an additional 20 potentially impacted as these are located partially or wholly within 600 m of planned longwall panels;
- irreversible changes will occur in EPBC-listed swamps, instream and riparian environments (including major changes in important ecological processes such as organic matter decomposition and microbial activity in the hyporheic zones) and water-dependent flora and fauna, such as the state-listed Giant Dragonfly (*Petalura gigantea*), resulting from the above mentioned changes to flows and water regimes in streams and swamps;
- adverse impacts on water quality of inflows to water supply storages associated with the expected changes in the upland environment. Such water quality impacts are likely to include changes in turbidity, nutrient loads and pathogens;
- groundwater drawdown within the Hawkesbury Sandstone aquifers; and
- potential long-term unquantified impacts to groundwater levels and quality post-mining.

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 Mangoola Coal Continued Operations Project

The Mangoola Continued Operations Project is a proposed extension to the existing Mangoola Coal Mine. It is located approximately 20 km west of Muswellbrook in the Upper Hunter Valley of New South Wales. The project consists of an additional open-cut pit to the north of this site, separated from the existing open-cut operation by Big Flat Creek, and will use existing mine infrastructure. The project involves extraction of 13.6 million tonnes of run-of-mine coal per year and has an expected operational life of 8 years.

Key potential impacts from this project are:

- contribution to cumulative impacts on groundwater-dependent vegetation and associated biota in the vicinity of Big Flat Creek;
- presence of a final void in the rehabilitated landscape which will have impacts on water quantity and may also impact on groundwater quality;
- potential ongoing water quality issues associated with sedimentation from both the proposed infrastructure and the unquantified impacts from uncontrolled discharges from sediment dams;
- potential impacts from water discharges on erosion and water quality in Big Flat Creek; and
- drawdown in four private bores of >2 m.

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 EPBC Act Review Update

Mr Bruce Edwards, Department of the Environment and Energy, provided the Committee with a general overview of the timing and likely process of the review of the *Environment Protection and Biodiversity Conservation Act 1999*.

3.2 IESC Research Project(s)

The Committee discussed possible research options on voids or surface water-groundwater connectivity. Options will be considered further and discussed at a Committee meeting later this year.

Close of Meeting

The Chair thanked everyone for their contribution to the meeting.

The meeting closed at 2.30pm on Thursday 3 October 2019.

Next Meeting

The next meeting is scheduled for 4-7 November 2019 in Brisbane, Queensland.

Minutes confirmed as true and correct:

Dr Chris Pigram AM, FTSE

IESC Chair

15 October 2019

Item(s)	IESC Member	Disclosure	Determination
2.1	Dr Jenny Stauber	<p>Dendrobium mine was owned by Illawarra Coal Holdings which is a subsidiary of South 32 in which I jointly hold shares.</p> <p>I consider that there may be a possible conflict of interest in relation to project advice arising from my joint ownership of shares in South 32.</p>	<p>A potential or perceived conflict of interest did exist in relation to the Dendrobium Mine Extension Project and Dr Stauber was excluded from the process of developing advice in relation to the Request for Advice for the Dendrobium Mine Extension Project.</p>
2.1	Professor Wendy Timms	<p>There may be a possible conflict of interest in relation to project advice arising from I have visited the Dendrobium site 3 times through UNSW Mining Engineering trips and a PhD project for which the company provided data, but no funding.</p>	<p>No actual, potential or perceived conflict of interest exists and Professor Timms participated fully in the meeting.</p>