

**Independent Expert Scientific Committee on Coal Seam Gas and
Large Coal Mining Development (IESC)
Meeting 48, 14-15 November 2017**

**MINUTES
Sydney**

Attendance and Apologies

IN ATTENDANCE

Dr Chris Pigram (Chair)
Professor Craig Simmons
Professor Joan Esterle
Dr Jenny Stauber (day 1)
Dr Andrew Boulton
Dr Wendy Timms
Dr Ian Prosser

APOLOGY

Dr Glen Walker
Dr Jenny Stauber (day 2)

SECRETARIAT AND SUPPORT

Matthew Dadswell
Emily Grant
Benjamin Klug
Ann Hartley

STAFF OF THE DEPARTMENT OF THE ENVIRONMENT AND ENERGY

Peter Baker Office of Water Science	Mio Kuhnen Office of Water Science
Mitchell Bouma Office of Water Science	Jo Brennan Office of Water Science

INVITED GUESTS

Professor Bruce Hebblewhite (Item 4.2) University of New South Wales	
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The meeting commenced at 8:30am on 14 November 2017.

1. Welcome and Introductions

The Chair, Dr Chris Pigram, 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 Declaration of interest

Before the meeting commenced, IESC members completed the Meeting Specific Declaration of Interest and an Advice Specific Declaration of Interest for the Alfredson Block CSG Project - Extension.

The meeting specific determinations recorded at this meeting are available at *Attachment A*.

1.3 Confirmation of agenda

The IESC endorsed the agenda for Meeting 48.

1.4 Action items

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

1.5 Confirmation of out-of-session decisions

The IESC noted the following items have been agreed out of session:

- advice on Spring Gully North-West and North-East CSG Project was finalised consistent with the IESC's deliberations and provided to the decision makers; and
- minutes of the IESC's forty-seventh meeting on 11-12 October were confirmed and agreed for publication.
- the IESC Annual Review of Activities was endorsed by the Chair.

1.6 Correspondence

The IESC noted the status of correspondence to 30 October 2017.

1.7 Forward planning agenda

The IESC noted the forward planning agenda, including changes to meeting dates in December 2017. It was agreed the next meeting would be scheduled for 12-14 December in Canberra.

1.8 Environmental scan

The Office of Water Science provided an update on developments since the October 2017 IESC meeting, including:

- Senate Inquiry into Water use by the Extractive Industry;
- CSIRO's Oil and Gas Roadmap;
- Scientific inquiries into fracking in Western Australia and the Northern Territory.
- The Gas Industry Social and Environmental Research Alliance report, "Uncertainty analysis of CSG-induced GAB flux and water balance changes in the Narrabri Gas Project area".

2. Advice on projects referred by governments

2.1 Alfredson Block CSG Project – Expansion

The IESC received a request from the Australian Government Department of the Environment and Energy to provide advice on the Alfredson Block CSG Project – Expansion in Queensland.

The proposed project is an extension of a coal seam gas (CSG) project approximately 16 km south-east of Condamine, 45 km south of Miles and 35 km northwest of Tara in south central Queensland. The extension involves the installation of 68 CSG wells, drill pads, access roads and water gathering and flowlines, with an operational life of approximately 40 years. The proposed project disturbance area is approximately 208 ha within a 3,821 ha project area.

The Alfredson Block CSG Project – Expansion is located on the south-western edge of a region with significant CSG development. The IESC considers that potential impacts associated with the installation of an additional 68 wells will potentially result in an incremental decrease in groundwater pressures in important aquifers within and near the proposed project area. The IESC notes that some risks associated with various chemicals to be used during the proposed project, for example associated with chemical mixture toxicity, have not been identified or assessed and therefore have not been demonstrated to be appropriately managed.

The IESC reviewed and discussed the information provided and considered the key potential issues as follows:

- changes to groundwater level and pressure within aquifers overlying the Walloon Coal Measures. The extent and magnitude of the change cannot be accurately predicted at the local scale using the analytical groundwater model presented in the draft Preliminary Documentation; and,
- cumulative reductions in groundwater level and pressure at some landholder bores and groundwater-dependent ecosystems (GDEs).

There are some risks that have not been assessed due to limited information on the persistence, bioaccumulation and toxicity, including mixture toxicity, of some drilling and hydraulic fracturing chemicals as well as limited assessments of some exposure pathways. Monitoring and data is needed to adaptively manage the risk of vertical connectivity of hydraulic fracturing.

The cumulative impacts of broad-scale land application of drilling muds using the landspray while drilling (LWD) method have not been assessed. While the risks to water resources from LWD from this project alone are low, the effect of numerous CSG developments will multiply the risks and potential for cumulative impacts to water resources near any areas used to dispose of drilling muds.

Consistent with the EPBC Regulations, the advice will be published on the IESC's website within 10 business days of being provided to the Australian Government Department of the Environment and Energy.

4. Other Business

4.1 Update from the Chair on meetings with the Minister and stakeholders

Dr Chris Pigram, IESC Chair provided a brief overview of his meeting with the Minister for the Environment and Energy, the Hon Josh Frydenberg MP, on the 24 October 2017.

Dr Pigram provided an overview of his meeting with key stakeholders in Adelaide on the 10 November 2017, including the South Australian:

- Chamber of Mines and Energy
- Department of the Premier and Cabinet
- Environment Protection Authority
- Department of Environment, Water and Natural Resources.

4.2 Longwall mine design effects on subsidence and valley closure

Presentation by Professor Bruce Hebblewhite, Mining and Engineering University of New South Wales on longwall mine design effects on subsidence and valley closure.

Close of Meeting

The meeting closed at 11:30am on Wednesday 15 November 2017.

The Chair thanked everyone for their contribution to the meeting.

Next Meeting

The next meeting is scheduled for 12-14 December 2017 in Canberra.

Minutes confirmed as true and correct:

Dr Chris Pigram

IESC Chair

25 November 2017

Item	IESC member	Disclosure	Determination
2.1	Wendy Timms	I consider that there may be a possible conflict of interest in relation to project advice arising from my employer providing some expert input into a small part of a University of Queensland research project for several coal seam gas companies in the Surat Basin. The project will look at baseline ground surface movement outside CSG production area, with my postdoctoral fellow specifically focused on soils and shallow groundwater processes. My role is to review my postdoctoral fellow's research on this project.	No actual, potential or perceived conflict of interest exists and Dr Wendy Timms participated fully in the IESC meeting.