Independent Expert Scientific Committee
on Coal Seam Gas and Large Coal Mining Development

Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC)
Meeting 88, 27 - 28 July 2022

MINUTES
Videoconference

ATTENDANCE AND APOLOGIES

IN ATTENDANCE

Dr Chris Pigram (Chair)
Dr Andrew Boulton
Professor Craig Simmons
Dr Jenny Stauber
Associate Professor Phil Hayes (Items 1 and 3)
Professor Rory Nathan
Professor Wendy Timms

APOLOGIES

Professor Jenny Davis

INVITED GUESTS

Item 3.2

Dr Joseph Guillaume, IWF Research Fellow, Australian National University
Louisa Rochford, Research Assistant, Australian National University
Leila Noble, Research Assistant, Australian National University

OFFICE OF WATER SCIENCE (OWS)

Peter Baker, Director
Aimee McAllister
Andriana Stoddart
Aranza Bulnes-Beniscelli
Benjamin Klug
Christina Fawns
Fiona McKenzie-Smith
Frances Knight
Isabelle Francis
James Rae
Kelly Lawler
Mio Kuhnen
Praveen Sebastian
Sarah Taylor

Note: OWS attendees listed above include those with full or partial attendance at Meeting 88.

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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 lands this meeting was held.

1.2 Disclosure of Interests

Committee members were invited to make disclosures. Committee members also completed a Meeting Declaration of Interests before the meeting commenced. Details on disclosures of interests are at Attachment A.

1.3 Confirmation of Agenda

The Committee endorsed the agenda for Meeting 88.

1.4 Confirmation of Out-of-Session Decisions

The Committee noted that:

- minutes of the Committee's eighty-seventh meeting on 23 June 2022 were agreed out-of-session and published.

1.5 Correspondence

The Committee noted the status of correspondence to 10 July 2022.

1.6 Action Items

Ongoing items were noted and updates were provided on the timing of completion.

1.7 Forward Planning Agenda

The Committee noted the forward planning agenda.

It was agreed that the next meeting be scheduled for 30 August - 1 September 2022.

1.8 Environmental Scan

The OWS reported on recent events.

2. Advice on Projects referred by governments

2.1 Fairview Water Release Scheme

The Fairview Water Release Scheme (the 'project') is in the Dawson River sub-catchment of the Fitzroy River, central Queensland, approximately 50 km east of Injune. It is co-located with Santos' coal seam gas (CSG) fields of Arcadia, Fairview, Scotia and Roma.

The project is a proposed expansion of the existing Dawson River Release Scheme (DRRS) for the management of produced CSG water. The DRRS currently releases reverse osmosis-treated produced CSG water from the Gladstone Liquified Natural Gas (GLNG) Project (EPBC 2008/4059). The proponent seeks approval to commence the release of reverse osmosis-treated produced water (up to 18 ML/day) derived from the Gas Field Development (GFD) Project (EPBC 2012/6615) using the DRRS water management system (treated releases). In addition, the proponent is seeking approval for the release of untreated produced water at times of higher (>100 ML/day) flow in the Dawson River (event-based untreated releases).

Much of the reach of the Dawson River where these releases are proposed is a near-permanent section fed by groundwater discharge, some of which comes from multiple vents of the Yebna 2/311 spring complex, part of a Threatened Ecological Community (TEC) listed by the *Environment Protection and Biodiversity Conservation Act (1999)* (EPBC Act). This river reach also provides important habitat for two species of EPBC Act-listed turtles as well as other aquatic plants and animals. The reach's riparian vegetation supports many terrestrial species, some of which are also EPBC Act-listed. Groundwater fauna

(stygofauna and hyporheos) are very likely in the saturated alluvial sediments of the river bed and banks but have not been sampled.

Releases of both treated and untreated produced CSG water from the GFD project are currently permitted under the Queensland Environmental Authority (EA) EPPG00928713. However, they are not currently permitted under the EPBC Act approval for the GFD project (EPBC 2012/6615). The Commonwealth conditions of approval for the GFD project specifically require that any release of produced CSG water (whether treated or not) be referred to the Minister for approval (see Condition 2A of the conditions of approval for EPBC 2012/6615).

Key potential impacts from this project are:

- Changes to water quality and flow regimes from the release of produced CSG water. Impacts could arise from both untreated produced water (up to approximately 52 event-based releases a year) and from regular releases of up to 18 ML/day of treated produced water.
    - Untreated water releases could contain contaminant concentrations sometimes substantially above the background water quality and water quality objectives (WQOs).
    - Approximately 12 km of the Dawson River, currently unimpacted by produced water releases, will be subjected to the release of untreated produced CSG water which may have major impacts on instream and riparian zone biota and ecological processes.
    - Water resources, including aquatic, terrestrial and subterranean groundwater-dependent ecosystems (GDEs) present at and downstream of the project site, may be impacted. This could include loss of habitat; exposure to chemical contaminants; changes to food resources; changes to water regimes; changes to nutrient cycling; and changes to erosion and sedimentation processes.
    - The EPBC Act-listed White-throated snapping turtle (critically endangered) and the Fitzroy River turtle (vulnerable) may be impacted, especially via direct and indirect exposure to contaminants.

The IESC considers that untreated produced CSG water should not be released into any surface waters, even during high flows, because of the risks of short- and long-term impacts of mixtures of chemical contaminants on downstream aquatic, riparian and shallow subterranean ecosystems. Downstream legacy impacts of some of these contaminants are unlikely to be resolved merely by dilution, especially as the releases of untreated water are projected to potentially continue until 2066.

3. Other business

3.1 Uncertainty Analysis Explanatory Note

The Committee discussed the first draft of the updated Uncertainty Analysis Explanatory Note.

3.2 Minimum Groundwater Monitoring Requirements

The Committee discussed with Dr Joseph Guillaume, Louisa Rochford, and Leila Noble the draft national minimum groundwater monitoring guidelines, developed by the Fenner School of Environment & Society and Institute for Water Futures at the Australian National University.

4. Close of Meeting

The Chair thanked everyone for their contribution to the meeting.

The meeting closed at 3.40 pm on Thursday 28 July 2022.

Next Meeting

The next meeting is scheduled for 30 August - 1 September 2022.

Minutes confirmed as true and correct:

Dr Chris Pigram AM, FTSE

IESC Chair

3 August 2022

Attachment A

Item(s)	IESC Member	Disclosure	Determination
2.1	Associate Professor Phil Hayes	I have a direct or indirect pecuniary interest in a matter being considered or about to be considered by the IESC, as follows: COI (conflict of interest): In relation to the Fairview Water Release Scheme (EPBC 2021/8914), I consider that there may be a possible conflict of interest as the project proponent is owned by Santos, who via GLNG are a part funder of my employer, the University of Queensland Centre for Natural Gas.	That Associate Professor Phil Hayes not be present during agenda item 2.1 (Fairview Water Release Scheme), so as to not be present during any deliberation of the Committee about the matters, and to not take part in any decision of the Committee about the matters.