

**Independent Expert Scientific Committee on Unconventional Gas Development and  
Large Coal Mining Development (IESC)  
Meeting 113, 5 – 6 March 2025**

**MINUTES  
Videoconference**

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**ATTENDANCE AND APOLOGIES**

**IN ATTENDANCE**

Dr Chris Pigram (Chair)  
Dr Andrew Boulton  
Professor Jenny Davis  
Dr Jenny Stauber  
Dr Juliette Woods  
Associate Professor Phil Hayes  
Professor Rory Nathan  
Professor Wendy Timms

**INVITED GUESTS**

*Item 3.2*

Dr Dirk Mallants, Team Leader, Water Security Program, Environment Research Unit, CSIRO  
Dr Rohan Glover, Post Doctoral Researcher, The University of Adelaide

**OFFICE OF WATER SCIENCE (OWS)**

*Note: OWS attendees include those with full or partial attendance.*

Dr Des Owen, Director	Isabelle Francis
Amelia Lewis	Jason Smith
Ben Klug	Dr Laura Richardson
David Cameron	Loren Pollitt
Dylan Stinton	Tess Nelson
Frances Knight	

**1. Welcome and Introductions**

The Chair acknowledged the traditional owners, past and present, on whose lands this meeting was held, and welcomed members of the Independent Expert Scientific Committee on Unconventional Gas Development and Large Coal Mining Development (IESC) to the meeting.

**1.1 Attendance and Apologies**

IESC members in attendance and apologies are recorded above.

## 1.2 Disclosure of Interests

Committee members were invited to make disclosures. Committee members and guests also completed a Meeting Declaration of Interests before the meeting commenced. No actual, potential or perceived conflicts of interest were recorded for this meeting. Details on disclosures of interests are at Attachment A.

## 1.3 Confirmation of Agenda

The Committee endorsed the agenda for Meeting 113.

## 1.4 Confirmation of Out-of-Session Decisions

The Committee noted that:

- minutes of the Committee's 112<sup>th</sup> meeting on 29 – 31 January 2025 were agreed out-of-session and published on 14 February 2025.

## 1.5 Correspondence

The Committee noted the status of correspondence to 19 February 2025.

## 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 as a videoconference on 8 April 2025.

## 1.8 Environmental Scan

The OWS reported on recent events.

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

### 2.1 Mahalo North CSG Project

The Mahalo North CSG Project (the 'project') is a coal seam gas (CSG) project proposed by Comet Ridge Mahalo North Pty Ltd in the Bowen Basin, Queensland. The project will include the construction, decommissioning and rehabilitation of 68 CSG production wells (34 vertical and 34 lateral) and supporting infrastructure, including water- and gas-gathering pipelines, a gas compression facility and a water treatment plant.

Within the project area, several species listed by the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) are known or likely to occur, including koala (*Phascolarctos cinereus*), ornamental snake (*Denisonia maculata*), grey snake (*Hemiaspis damelii*) and white-throated snapping turtle (*Elseya albagula*). There are also two Threatened Ecological Communities (TECs): Brigalow (*Acacia harpophylla* dominant and co-dominant) and Semi-evergreen Vine Thicket.

The proponent concludes that there is no hydraulic connection between the target coal seam formation and upper layer aquifers and predicts that groundwater drawdown resulting from project activities will not impact surface and regional water resources. However, evidence provided by the proponent to support this statement does not clearly demonstrate a lack of hydraulic connection between the target formation and the aquifer-bearing overlying strata. It remains unclear whether groundwater drawdown from the project could impact shallow aquifers that may contain subterranean groundwater-dependent ecosystems (GDEs) and support terrestrial and aquatic GDEs, some of which are likely to be habitat for EPBC Act-listed species such as the white-throated snapping turtle.

Key potential impacts from this project are:

- spills, leaks and overflows of contaminated water from the water management system into the surrounding environment, including seepage into the shallow aquifers and flow into receiving watercourses, impacting EPBC Act-listed species (e.g., white-throated snapping turtle) and riparian vegetation;
- groundwater drawdown in the target formation propagating into the overlying aquifers, thus lowering the water table, impacting GDEs within and surrounding the project area and altering surface water-groundwater interactions along the Comet River and Humboldt Creek; and
- cumulative impacts of the individual project and with the proposed and existing projects surrounding the project area.

Additional work to address these key potential impacts is summarised below.

- Collection of adequate site-specific baseline groundwater data to characterise the existing environment to improve understanding of potential groundwater impact pathways and inform impact assessment modelling.
- An impact assessment of groundwater drawdown in the Tertiary and alluvial aquifers to the baseflow of the Comet River and Humboldt Creek if the hydraulic connection between target formation and upper aquifers is proven to exist.
- Characterisation of the alluvial aquifer and groundwater-surface water interactions along Humboldt Creek and the Comet River to improve conceptualisation and understand potential impact pathways to riparian vegetation and refugial habitat for the white-throated snapping turtle.
- Stormwater modelling to inform design capacity of produced water and brine storages, and to ensure rain events will not overtop storages and release contaminated water into the environment.
- Water quality baseline data to evaluate risks associated with accidental spills or leakage of produced water from the water management system.
- Further baseline sampling and ongoing monitoring of potential subterranean, terrestrial and aquatic GDEs in and surrounding the project area.
- Development of project-specific and appropriately targeted monitoring and mitigation plans, including defined triggers and responses.
- Evidence-based conceptualisation of both the baseline conditions and the potential impact propagation pathways to inform the impact assessment of possible project-specific and cumulative impacts, specifically to alluvial groundwater, potential watercourse refugial pools and GDEs.

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 Presentation on Incorporating Climate Change into Environmental Risk Assessment**

Dr Jenny Stauber and Prof Rory Nathan presented to the Committee on potential approaches and challenges to integrating projected changes in climate-related stressors into an ecological risk assessment framework.

#### **3.2 Presentation on National Noble Gas Facility for Groundwater**

Dr Dirk Mallants, CSIRO, and Dr Rohan Glover, The University of Adelaide, presented to the Committee on the aim to establish a world-class National Noble Gas Facility for Groundwater to deliver a globally unique groundwater research infrastructure.

### 3.3 Explanatory Notes and IESC Research Priorities

The Committee planned for delivery of the IESC's information materials, engagement activities and site visits over the next 12 months, and reviewed the IESC's 2017 research priorities.

#### **4. Close of Meeting**

The meeting closed at 2.45 pm on Thursday 6 March 2025.

#### **Next Meeting**

The next meeting is scheduled as a videoconference on 8 April 2025.

Minutes confirmed as true and correct:

Dr Chris Pigram AM, FTSE

IESC Chair

19 March 2025

**Attachment A**

Item(s)	IESC Member	Disclosure	Determination
2.1	A/Prof Phil Hayes	<p>I consider that there may be a possible conflict of interest, as follows. From industry meetings I have met and spoken to Tor McCaul, the Managing Director of Comet Ridge the proponents of the Mahalo North CSG Project. On a couple of occasions over the last 2 to 3 years we have discussed progress with Comet Ridge's four Mahalo projects, not specifically about Mahalo North. These discussions concentrated on Exploration and Appraisal activities, but did also touch on environmental studies. I have not worked on the project. Nor have I completed any work, or had any financial involvement with Comet Ridge.</p>	<p>It was determined that no actual, potential or perceived conflict of interest exists and A/Prof Phil Hayes can participate fully with the Committee during agenda item 2.1 (Mahalo North CSG Project).</p>