

**Independent Expert Scientific Committee on Coal Seam Gas and
Large Coal Mining Development (IESC)
Meeting 98, 30 – 31 August 2023**

**MINUTES
Videoconference**

ATTENDANCE AND APOLOGIES

IN ATTENDANCE

Dr Chris Pigram (Chair)
Dr Andrew Boulton
Professor Jenny Davis
Dr Jenny Stauber (Items 1 & 2 [absent 31 August])
Dr Juliette Woods
Associate Professor Phil Hayes
Professor Wendy Timms

APOLOGIES

Professor Rory Nathan

OFFICE OF WATER SCIENCE (OWS)

Des Owen, Director
Loren Pollitt
Amelia Lewis
Aranza Bulnes-Beniscelli
Ben Klug
Sarah Taylor
Tess Nelson

Frances Knight
Sue Powell
Dylan Stinton
Laura Richardson
Jason Smith
Andriana Stoddart

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

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 Coal Seam Gas 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 also completed a Meeting Declaration of Interests before the meeting commenced. No actual, potential or perceived conflicts of interest were recorded for this meeting.

1.3 Confirmation of Agenda

The Committee endorsed the agenda for Meeting 98.

1.4 Confirmation of Out-of-Session Decisions

The Committee noted that:

- minutes of the Committee's ninety-seventh meeting on 25 – 26 July 2023 were agreed out-of-session and published on 21 August 2023;
- advice on the Cadia Valley Operations Gateway Application was provided to the regulator on 1 August 2023 and published on 8 August 2023; and
- the Information Guidelines Explanatory Note: Subsidence associated with underground coal mining was published on 15 August 2023.

1.5 Correspondence

The Committee noted the status of correspondence to 16 August 2023.

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 4 October 2023.

1.8 Environmental Scan

The OWS reported on recent events.

2. Advice on Projects referred by governments

2.1 Atlas Stage 3 Gas Project

The Atlas Stage 3 Gas Project (the 'project') is a proposed coal seam gas (CSG) project by Senex Energy Pty Ltd in the northern Surat Basin in Queensland. The project will include the construction, decommissioning and rehabilitation of up to 151 CSG wells and supporting infrastructure. Construction of the production wells is expected to disturb approximately 100 ha of previously cleared land, with the proponent committing to a maximum disturbance limit of 530 ha for all project infrastructure.

Within the project area, several groundwater-dependent ecosystems (GDEs) occur, including riparian vegetation that provides potential habitat for Koala (*Phascolarctos cinereus*), Central Greater Glider (*Petauroides armillatus*) and Glossy Black Cockatoo (*Calyptorhynchus lathami lathami*) which are listed species under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The riparian vegetation was identified as likely being sensitive to changes in groundwater availability and providing important landscape connectivity.

The proponent has concluded that there is no hydraulic connection between the alluvium and the regional Upper Springbok Sandstone aquifer and predicted that groundwater drawdown in the Upper Springbok Sandstone will not impact GDEs. However, the evidence provided by the proponent to support this statement does not conclusively demonstrate a lack of hydraulic connection between the alluvium and the various underlying strata (Westbourne Formation, Gubberamunda Sandstone, Upper Springbok Sandstone and Orallo Formation) across the site and at off-site locations where potential impacts to GDEs were also identified. As such, it remains unclear whether groundwater drawdown from the project could impact the riparian vegetation, adversely affecting its ecological condition and provision of habitat for EPBC Act-listed species and dispersal corridors for terrestrial wildlife.

Key potential impacts from this project are:

- potential groundwater drawdown in the alluvium and other shallow aquifers which could reduce groundwater availability for GDEs, including riparian vegetation along Wandoan, Woleebee and other creeks and result in a decline in vegetation condition, loss of habitat for EPBC Act-listed species, and loss of the dispersal corridors needed to maintain faunal biodiversity. Given the extensive prior land clearing in the project area, the remaining riparian corridors have increased importance for movement and persistence of local wildlife;
- disturbance of riparian corridors for construction of linear infrastructure, reducing habitat and disrupting habitat connectivity which is vital to maintain the viability of local wildlife;
- additional stores of produced water and brine in the landscape which provide a potential source of contaminants through seepage from the brine ponds or overflow of the produced water stores to surface water and shallow groundwater systems, as well as the risk of accidental spills; and
- changes to overland flows and flooding from project infrastructure, the potential impacts of which are unclear based on the information provided.

The IESC has identified areas in which additional work is required to address the key potential impacts, as detailed in this advice. These are summarised below.

- Collection of adequate baseline data to characterise the existing environment which will allow for improved design of monitoring, mitigation and management processes and plans.
- Evidenced-based conceptualisation of both the baseline conditions and the potential impact propagation pathways to inform the impact assessment, particularly of the possible project-specific and cumulative impacts on alluvial groundwater, potential watercourse springs and other GDEs.
- Improved assessment of the occurrence of, and potential impacts to, potential watercourse springs and other GDEs, especially riparian vegetation, to better characterise the groundwater systems and potential connectivity.
- Provision of more detail on the location of infrastructure to enable an improved assessment of potential impacts to water resources, including from changes to overland flows and flooding.
- Development of project-specific and appropriately targeted monitoring and mitigation plans.

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 Groundwater Monitoring Guidelines

The Committee discussed the revised draft guidelines following clarification of scope and purpose. The Committee agreed to undertake additional targeted consultation, following the completion of technical updates, arising from a public consultation process.

4. Close of Meeting

The meeting closed at 11.00am on Thursday 31 August 2023.

Next Meeting

The next meeting is scheduled as a videoconference on 4 October 2023.

Minutes confirmed as true and correct:

Dr Chris Pigram AM, FTSE

IESC Chair

8 September 2023