

**Independent Expert Scientific Committee on Coal Seam Gas and  
Large Coal Mining Development (IESC)  
Minutes – Meeting 21, 9-10 September 2014**

**MINUTES – Meeting 21  
Old Parliament House, Canberra ACT**

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**Attendance and Apologies**

IN ATTENDANCE

Ms Lisa Corbyn (Chair)  
Professor Craig Simmons (Deputy Chair)  
Emeritus Professor Angela Arthington  
Ms Jane Coram  
Emeritus Professor Peter Flood  
Dr Andrew Johnson (by teleconference Day 1)  
Mr Jim McDonald  
Professor Dayanthi Nugegoda

APOLOGIES

Nil

OFFICE OF WATER SCIENCE (OWS) - SECRETARIAT AND SUPPORT

Gayle Milnes  
Sean Lane  
Kimberley Hammond  
Helen Vooren

OTHER STAFF OF THE DEPARTMENT OF THE ENVIRONMENT

Scott Lawson (Item 2) Office of Water Science	Natasha Amerasinghe (Item 2) Office of Water Science
Craig Moore (Item 2) Office of Water Science	Carla Morgan (Item 2) Office of Water Science
Mark Say (Item 2) Office of Water Science	Peter Baker (Item 3) Office of Water Science
Rod Dann (Item 2) Office of Water Science	Edwina Johnson (Item 3,4) Office of Water Science
Kim Bennett (Item 2) Office of Water Science	James Hill (Item 3) Office of Water Science
Emily Turner (Item 2) Office of Water Science	Craig Watson (Item 3) Office of Water Science
Moya Tomlinson (Item 2,3,4) Office of Water Science	Geraldine Cusack (Item 3) Office of Water Science
Ben Roudnew (Item 2) Office of Water Science	Anthony Swirepik (Item 4) Office of Water Science
Mitchell Bouma (Item 2) Office of Water Science	Al Usher (Item 4) Office of Water Science

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Crystal Bradley (Item 5) Office of Water Science	Sophie Alexander (Item 5) Office of Water Science
Berlinda Bowler (Item 5) Office of Water Science	Jason Smith (Item 5) Office of Water Science

**INVITED GUESTS**

Dr Brent Henderson (Item 3) CSIRO	Dr Alexander Herr (Item 3) CSIRO
Dr Simon Barry (Item 3) CSIRO	Dr David Post (Item 3) CSIRO
Dr Trevor Dhu (Item 3) Geoscience Australia	Ms Julie Burke (Item 3) Bureau of Meteorology

The meeting commenced at 9.00 am on 9 September 2014.

**1. Welcome and Introductions**

The Chair, Lisa Corbyn, welcomed members of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) to the meeting.

There were no apologies.

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

**1.3 Confirmation of agenda**

The IESC endorsed the agenda for Meeting 21.

**1.4 Action items**

Completed items were noted. A number of follow-up items were listed on the agenda for this or later meetings.

**1.5 Confirmation of out-of-session decisions**

The Chair noted the following out-of-session items:

- Minutes of the IESC's twentieth meeting (12-13 August 2014) were agreed out-of-session and posted on the IESC's website; and
- Advice for two projects were finalised, agreed out-of-session and provided to regulators on 27 August 2014:

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- i. the Angus Place Mine Extension, NSW; and
- ii. the Springvale Mine Extension, NSW.

**1.6 Correspondence**

The IESC noted the action taken and the status of correspondence 9 September 2014.

**1.7 Environmental scan**

The Office of Water Science (OWS) provided an update on developments since the August IESC meeting including: proposed legislative changes to the EPBC Act; one stop shop negotiations with states; several white papers on Federalism and Energy; and progress on publication of the IESC's (interim and statutory) advice on 72 projects - 10 remain unpublished and are being discussed with the regulators to facilitate their release as soon as possible. The protocol for release of future advices according to the new regulations is in place and was followed for the release of the advices from meeting 20, within the 10 day timeframe.

On 24 September 2014, a briefing from NSW Land and Water Commissioner, Mr Jock Laurie, has been scheduled to provide the IESC, the OWS and Bioregional Assessment programme partner agencies BoM, CSIRO and Geoscience Australia, information on the new 'Water Monitoring Framework' recently announced by the NSW Government.

On 28 October 2014, IESC members and OWS officers will meet with the NSW Chief Scientist, Professor Mary O'Kane, in Sydney to discuss the bioregional assessments and other research projects.

**1.8 Forward Planning Agenda**

The IESC noted the forward planning agenda and items due for consideration through to April 2015. As there are no requests for advice currently scheduled for the October meeting, it was agreed to shorten the October meeting to one day (Wednesday 15 October) with a focus on the bioregional assessments and research items.

**2. Advice on Projects referred by Governments**

**2.1 Russell Vale Colliery Underground Expansion Project, NSW**

The Australian Government Department of the Environment and the New South Wales Department of Planning and Environment sought the IESC's advice on the Russell Vale Colliery Underground Expansion Project which is at the referral and assessment stages respectively.

The proposed project is an extension to an existing underground coal mining operation. It is located in the southern portion of the Sydney Basin in New South Wales, approximately 8 kilometres north of Wollongong and extending west beneath the Illawarra Escarpment State Recreation Area. The majority of the proposed project area is located within the Metropolitan Special Area proclaimed under the *NSW Sydney*

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*Water Catchment Management Act 1998*. It is expected that the mine output will be up to 3 million tonnes per annum of run-of-mine coal over a 5 year period.

Matters of interest to the IESC included:

- predicted impacts from surface cracking below EPBC listed Coastal Upland Swamp communities which will be wholly or partially undermined;
- potential for streamflow losses and increased iron seepages in Cataract Creek and resultant impacts to EPBC listed fish and frog habitat;
- potential impacts to water storage in Cataract Reservoir caused by subsidence induced cracking and loss of stream flow and baseflow in its contributing catchment.

Consistent with the Regulations of the EPBC Act, the advice on this project will be published on the IESC's website within 10 business days of being provided to the Department of the Environment and the New South Wales Department of Planning and Environment.

The IESC was advised that a separate but related request for advice on the Russel Vale Colliery Longwall 6 Mining Project was received on 9 September 2014 from the Australian Government Department of the Environment. As this is related to the current larger Russell Vale Colliery Underground Expansion Project but entails additional information not yet reviewed by the IESC, it was agreed that the IESC would expedite its assessment of this project and complete the separate advice out of session.

## 2.2 Muja Coal Mine Extension, WA

The Australian Government Department of the Environment sought the IESC's advice on the Muja South Extension Project which is at the draft assessment stage.

The proposed project is an extension of the existing Muja and Chicken Creek Coal Mine open cut coal mining operation. It is located in the Collie Basin in Western Australia, approximately 200 kilometres south of Perth, 70km east of Bunbury and 18 kilometres south-east of Collie. The project is in the Collie Basin and within the Collie River surface water catchment.

It is expected that the proposed mine output will average 9.14 million tonnes per annum of run-of-mine coal over a 22 year period.

Matters of interest to the IESC included:

- long-term groundwater drawdown and potential impacts to groundwater dependant ecosystems;
- the accumulation of saline, acidic, metalliferous groundwater in mine voids;
- altered hydrology and water quality in the re-aligned Chicken Creek;

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- impacts to the Chicken Creek damplands;
- long-term impacts of mine water discharge to the hydrology, geomorphology, water quality, riparian vegetation communities and instream fauna of the Collie River East Branch and associated permanent pools; and
- contribution to cumulative groundwater and surface water impacts in the region.

Consistent with the Regulations of the EPBC Act, the advice on this project will be published on the IESC's website within 10 business days of being provided to the Department of the Environment.

### 2.3 Development of theme sheet: flood management

The IESC considered the progress on the draft flood management theme sheet and the incorporation of the comments previously provided.

The IESC endorsed direction of the theme sheet and the additional work to be completed before it is presented as a final draft at the December meeting.

## 3. **Bioregional Assessments**

### 3.1 Bioregional Assessments progress

An update on the status of and science underpinning the various components of the Bioregional Assessment methodology was provided to the IESC. The IESC discussed the BA Narrative paper describing how the bioregional assessment products are being defined and will be used, including to inform the IESC advice on coal seam gas and large coal mining developments.

Comments by IESC members included: adding a description of how products will be used by regulators post approval; expanding on the text describing modelling to include modelling of subsidence and indications of where models will be coupled; articulating clearly aspects not within the scope of the bioregional assessments; clarifying the role of the assessments in the area of mitigation; and inserting a table to summarise the possible uses of products. The IESC also discussed the potential use of this document as a basis for future communication products.

The IESC provided feedback on the proposed Coal Resource Development Pathways for the Namoi and Galilee subregions, including suggesting that the rationale for inclusion or not should be more clearly articulated.

The IESC agreed to schedule a discussion under the BA standing agenda item for the November meeting on the quality and use of the BA products, given budget and timeframes and in light of the progress to date and in the context of the potential use of BA's in adaptive management.

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3.2 Bioregional Assessment presentation: Assigning receptors to assets

Dr Brent Henderson, Science Director for the Bioregional Assessment Programme, CSIRO and other members of the Bioregional Assessment programme partner agencies presented to the IESC on approaches used in the programme to assign receptors and impact variables to water-dependent assets.

Key points discussed were that:

- economic and socio-cultural water-dependent assets will be considered through the assessments, as well as ecological assets;
- a landscape classification approach is proposed as a mechanism for selecting representative receptors and consideration will be given to including iconic species where appropriate; and
- the time periods covered in reporting may vary on a subregion by subregion basis, and is likely to be informed by the Coal Resource Development Pathway.

The Chair thanked Dr Henderson and the other attendees for sharing their insights and requested that the IESC be kept informed of progress of this work.

**4. Research**

4.1 Update on Research

Key developments on research were reported to and discussed by the IESC, including:

- the conduct of a workshop in September with key government and industry representatives to review the final reports on *Monitoring and management of subsidence induced by longwall coal mining*;
- progress on the future research on Faults, Aquitards and Modelling; and
- the recent public release of three Peat Swamps reports, and forthcoming publication of the *Field survey of the EPBC listed GAB fed springs Volume 1 and 2*, the *Groundwater modelling to simulate the impacts of Coal Seam Gas extraction*, and the *Managing Co-produced Water* factsheet.

Ecology Research Scoping Paper

The draft scope for ecology research as endorsed by the IESC Research Sub-Committee was tabled for consideration. This scope was developed following a review by the OWS of ecological impact assessment needs identified in Environmental Impact Statements and the Ecology modelling workshop held in July 2014. IESC member Angela Arthington, the Office of Groundwater Impact Assessment (Qld) and Bioregional Assessments Ecology leads were consulted in the development of the scope.

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The IESC endorsed the scope, subject to minor changes and reinforced the importance of being clear how the 4 components will be interrelated and how the results will be disseminated. It was noted that the IESC does not make decisions on funding for the research projects.

**4.2 Groundwater hydrochemical characterisation of the Surat and Laura Basin project.**

The IESC noted the impending release of the outcomes of the project commissioned under the National Collaboration Framework Project Agreement between Geoscience Australia and the Office of Water Science. The IESC requested that OWS review whether the report should provide any additional context about the source of the funding, acknowledgements and branding.

**4.3 Monitoring and management of subsidence induced by coal seam gas extraction**

The IESC noted the positive comments from the peer reviewers and endorsed the report subject to minor changes.

**4.4 Cumulative impacts – summary of tools and information for projects in the Galilee and Namoi sub-regions**

The IESC received a presentation by the OWS on the tools and information sources available to OWS and the IESC when evaluating a proponent's assessment of the water-related cumulative impacts. OWS agreed to revise the summaries and IESC cumulative impacts checklist to include references to geological tools and information, to add projects on which the IESC had provided advice in the region, to consider a summary for the Bowen Basin, and to consider avenues for making the tools and information sources available to the public. The IESC agreed to include an agenda item on recent Queensland legislative proposals and changes at the November meeting in order to understand any implications for IESC advices, particularly on cumulative impacts.

**5. Strategic Discussions**

**5.1 Amendments to operating protocols to take account of new EPBC regulations**

OWS confirmed that no changes were required to the IESC's operating protocols and informed IESC members of changes to internal operating procedures for the IESC to comply with its new regulatory responsibilities, in particular the recent amendments to the EPBC Regulations requiring IESC advice to be published within 10 business days of its provision to the regulator.

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**Close of Meeting**

The Chair thanked everyone for their contribution to the meeting.

**Next Meeting**

The next meeting is scheduled for 15 October 2014 in Canberra.

The Chair and Deputy Chair advised that they will be overseas for that meeting, with the Chair participating by phone and it was agreed that Emeritus Professor Flood will chair the meeting.

The meeting closed at 3.40 pm 10 September 2014.

Minutes confirmed as true and correct:

Ms Lisa Corbyn  
IESC Chair

September 2014



Item(s)	IESC member	Disclosure	Determination
2	<b>Ms Lisa Corbyn</b>	I do not consider there to be any actual, potential or perceived conflict of interest that would preclude me from fully participating in this meeting or properly performing my duties as a member of the committee. For the record, I note that I was previously the Director General of the Environment Protection Authority which regulates a mine being considered as a project, and Chief Executive Officer of the NSW Office of Environment and Heritage and the Sydney Catchment Authority. I am not involved with any of these agencies now nor have I been for over 2 ½ years.	No actual, potential or perceived conflict of interest exists and Ms Corbyn participated fully in the IESC meeting. The reason for the decision is the lack of current association with former agencies and the length of time elapsed since Ms Corbyn's involvement with the NSW agencies identified.
4	<b>Ms Jane Coram</b>	I consider that there may be a possible conflict of interest in relation to agenda item 4.2 arising from <i>Geoscience Australia's role in providing the report in question.</i>	No actual, potential or perceived conflict of interest exists and Ms Coram participated fully in the IESC meeting. The reason for the decision is that the IESC is not making decisions on funding of research and therefore there is not conflict in relation to this meeting.
4	<b>Professor Craig Simmons</b>	I consider that there may be a possible conflict of interest in relation to agenda item 4 (Research) arising from <i>National Centre for Groundwater Research and Training (NCGRT) being a potential provider of R&amp;D to the IESC/OWS.</i>	No actual, potential or perceived conflict of interest exists and Professor Simmons participated fully in the IESC meeting. The reason for the decision is that the IESC is not making decisions on research funding therefore there is no conflict in relation to the meeting.