

SUZIE
HOLT

Growing Groom together.



SUZIE HOLT PRESENTS:

PROTECTING PRIME AGRICULTURAL LAND

WITH SPECIAL GUEST SENATOR DAVID POCOCK

A SYMPOSIUM ON OUR BLACK SOIL FLOODPLAIN FEATURING



Soil and Water experts, land owners,
environmental lawyers, climate
scientists, and a local expert on the
endangered Condamine Earless Dragon

Protecting Prime Ag Land

26 August, 11am-3.30pm,

'Glendon' 246 Watson Road, Nangwee, Qld, 4407

Morning Tea and Lunch (BBQ by the local

Lions Club) will be provided

Free Admission

**Protecting prime agricultural land:
a community meeting about rural futures at Cecil Plains, Queensland.**

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1. OBJECTIVE FOR THE DAY. OUTCOME EXPECTED. DISCLAIMER

Protecting prime agricultural land: a community meeting about rural futures at Cecil Plains, Queensland

**10.00 - registration and morning tea
11.00 to 15.30. SATURDAY 26 AUGUST 2023. "GLENDON"***

**if wet, alternatively adjourn to Cecil Plains Hall*

OBJECTIVES FOR THE DAY

In response to an appeal by the Cecil Plains community from the Darling Downs, a community forum has been scheduled to:

- **Provide relevant information and insight** on the potential impacts and risks to the prime agricultural land of the Condamine Floodplain and to the Condamine Alluvium from coal seam gas (CSG) development.
- **Raise awareness** of well-founded community concerns in regards to CSG development occurring in this area.
- **Gauge consensus** and **discuss** how to best protect Darling Downs prime agricultural land.
- **Advocate for stronger legal protections** of the scarce and finite, highly productive, prime agricultural areas within Australia (land that has an inherent capacity for long term sustainable production), for the purposes of national food, fibre, and water security, now and into the future, especially in times of evermore challenging climatic conditions.

REASONING FOR THE DAY

The scientific uncertainty, alongside the lack of quantification of risk, and assurance of liability, particularly in consideration of the high value assets at stake, to both food producing land and good quality groundwater, renders coal seam gas development on the Condamine River Alluvial floodplain a reckless undertaking, which contravenes the inter-generational aspirations.

OUTCOME EXPECTED

To generate a consensus declaration which can then instruct and guide our federal representatives to update and strengthen legal protections for prime agricultural land. Our suggested specific legal amendments are included in this document and will likely be refined in the coming weeks with legal advice but will follow the principles of the declaration agreed to today.

DISCLAIMER

Suzie Holt declares that she has no conflict of interest upon having this meeting, and instead has created a considered agenda that can observe and provide a setting to voice community needs and positively assess a way to move forward that incorporates the current land-use, economy, sustainability, and challenges from a variety of elements.

The organisers declare the information contained herein is subject to change without notice. The organisers shall not be liable for others' opinions, technical or other errors or omissions contained herein. The reader/user accepts all risks and responsibility for losses, damages, costs and other consequences resulting directly or indirectly from using this information.

2. AGENDA

TIME	SESSION	SPEAKERS
10.00	Registration and morning tea	
11.00	OPEN 1a. Introduction to organisers, the MC, an overview of the day with other important housekeeping matters	Suzie Holt, Liza Balmain Prof. Peter McIlveen
	1b. Official welcome	Suzie Holt
11.10	1c. Setting the scene (Why are we having this day? Defining Prime Agricultural Land; The significance of 'water triggers') 2. LAW AND LEGALITIES - A LANDHOLDERS PERSPECTIVE (Agricultural production and challenges; Groundwater issues; Legal considerations.)	Liza Balmain Revel Pointon Dr Madeline Taylor (video) Sean Ryan
11.30	3. IMPORTANCE OF LAND AND SOIL, AND GROUNDWATER (Protecting groundwater from coal seam gas development)	Prof. Snow Barlow Prof. Peter Dart Prof. Matthew Currell (video)
12.00	4. THE ECONOMIC AND SOCIAL CONTEXT OF CSG (including social aspects)	Prof. Mark Ogge Dr Hanabeth Luke
12.25	5. THE CONDOMINE EARLESS DRAGON AND ECOSYSTEMS	Laura Harms
12.35	Q&A	
12.50	LUNCH	
13.45	Planning experiences from another region –The Scenic Rim (video)	Mayor Councillor Greg Christensen Innes Larkin

TIME	SESSION	SPEAKERS
14.00	6. COMMUNITY PERSPECTIVES AND EXPERIENCES, FUTURE SUSTAINABILITY, AND THE NEXT GENERATION	Orla Balmain Alice Hubbard St Mary's Lachlan Thompson Luke Conway Rosemary Nankivell Bev Newton Zena Ronnfeldt Liza Balmain Glenn Ogden Wes Back
14.40	Q&A	
14.55	7a. POLITICAL CONSIDERATIONS Proposing a resolution to achieve meeting consensus on a 'declaration'***	Suzie Holt, Liza Balmain, Adj A/P David George
15.05	7b. POLITICAL CONSIDERATIONS Reflections from the day and actions to follow-on	Senator David Pocock
15.20	8. SUMMARY - WRAP-UP - WHAT NEXT?	Suzie Holt, Liza Balmain
15.30	CLOSE. EVALUATION. Closing address and thanks	Suzie Holt
	AFTERNOON TEA	

**** Suzie to propose a resolution the group moves a motion to vote on (proponent xxx and seconder xxx) the following:-
Given the situation and conditions discussed, we unanimously declare...**

→ Amend and strengthen the Federal ENVIRONMENTAL PROTECTION BIODIVERSITY CONSERVATION ACT 1999 (EPBC), to enable better protections as needed and outlined above (ensuring inclusion of the essence detailed in #Addendum 1). Specifically, to insert the following into the EPBC Act:





Section 24D (1)(a)(ii); 24D (2)(a)(ii) and 24D (3)(a)(ii); and likewise at section 24E respectively, FROM "large coal mining development" TO "coal mining development"








Subdivision FB FROM "Protection of water resources from coal seam gas development and large coal mining development" TO "Protection of water resources from coal seam gas development and coal mining development";

Insert new Subdivision FC "Protection of prime agricultural land from coal seam gas development and coal mining development."

Furthermore, to amend definitions in Section 528 so that coal mining includes coal seam gas; and, prime agricultural land includes land that has inherent capacity for long term sustained production.

3. SPEAKERS BIODATA

<p><u>Liza Balmain</u> and her husband David, alongside their two children, farm “Glendon”, which has been in David’s family for over 100 years. David and Liza farm a mixed irrigation and dryland cropping enterprise, growing up to 6 crop types in one year, ranging from wheat, barley, chickpeas, sorghum, mungbeans and cotton. Liza hails from Cornwall in the UK, and has fallen in love with the Cecil Plains community. After 20 years of farming in this district, Liza understands and values its amazing qualities that make it inducive to growing abundant and sustainable food and fibre.</p>	
<p><u>Professor Peter Mcilveen</u>. Peter is a professor with the Faculty of Business Education Law & Arts at the University of Southern Queensland, researching and teaching in psychology. Peter’s research program is focused on adaptive capacity and career development learning, and the psychology of working.</p>	
<p><u>Orla Balmain</u> is the daughter of David and Liza and represents the 5th generation farming at “Glendon”. Orla has a keen interest in agriculture and animals, and hopes to continue the family farming legacy at “Glendon”.</p>	
<p><u>Alice Hubbard</u> lives and works on her family farm near Cecil Plains and is passionate about agriculture. Alice has every intension of studying Ag Science at University once leaving school so as to pursue a career in Agriculture. She enjoys the freedom of country life and doesn’t want that to change.</p>	
<p><u>Lachlan Thompson</u> and <u>Luke Conway</u>. Students of St Mary’s College Toowoomba who will speak to Food Security.</p>	
<p><u>Rosemary Nankivell</u>. Rosemary is a fourth generation farmer from ‘Wimboyne’, on the Liverpool Plains in NSW, and runs three properties with her husband and sons. The farms produce canola, wheat and dryland cotton as well as an Angus and Wagyu-cross herd.</p>	
<p><u>Glenn Ogden</u>, his wife Judy and their family operate a large farming enterprise, with properties in the St Ruth, Cecil Plains and Texas areas. They farm cotton, a variety of grains, hay and cattle - all underpinned by the availability of groundwater irrigation. Glenn has been farming on the Darling Downs for over 30 yrs, originally coming from Western Qld. He has always been passionate about working the land, knowing that we are merely ‘Stewards of the Land’ for the following generations. He has a solid understanding of the use of water on these black soil plains and will do anything to preserve the uniqueness of this area and its undeniable ability to produce food and fibre.</p>	
<p><u>Zena Ronnfeldt</u> is Director of a grain and cotton agricultural production business and Chartered Accountant. One of her family farms is in an early CSG field which started producing gas from late 2000’s expanding to reach the farm boundary by mid-2010. Her irrigated farm is the first highly productive intensive cropping floodplain land with very little slope to report serious impacts from subsidence caused by established CSG mining.</p>	

<p><i><u>Bev Newton</u> has been living and farming on the Condamine Floodplain for 45 years, and so understands and has intricate knowledge of how floodplains function. Bev has a scientific background with a degree in Veterinary Science and has run a successful local vet practice for many years. She has first-hand experience as to the complete lack of scientific studies and understanding into the detrimental impact CSG activities have in certain regions.</i></p>	
<p><i><u>Wes Back</u> is a local farmer in Cecil Plains.</i></p>	
<p><i><u>Dr Hanabeth Luke</u> works with Southern Cross University's Faculty of Science and Engineering, and is a passionate educator who has been teaching and conducting research since 2011. She is deeply motivated by helping regional communities and farmers to become more resilient in times of transition, bringing communities and science together. These understandings underpin her role as the founding coordinator of the world-first Southern Cross University courses in Regenerative Agriculture.</i></p>	
<p><i><u>Laura Harms</u>. Laura is a student at The University of Queensland and is researching the Condamine Earless Dragon</i></p>	
<p><i><u>Revel Pointon</u>. Managing Lawyer - Southern and Central Queensland at the Environmental Defenders Office.</i></p>	
<p><i><u>Dr Madeline Taylor</u> is Director of Research Training and Senior Lecturer at Macquarie Law School, Deputy Director of the Centre for Energy and Natural Resources Innovation and Transformation (CENRIT), and Honorary Associate at the Sydney Environment Institute. Madeline specialises in issues at the intersection of socio-legal aspects of energy and natural resources law, as well as property and commercial law. Her research advances the novel examination of transitioning energy regulation and energy policy from comparative and socio-legal perspectives, including the governance of energy and the division of rights and benefits between the state, energy developers, landholders, and communities.</i></p>	
<p><i><u>Mayor Councillor Greg Christensen</u>. From the factory floor to the executive floor, Cr Greg Christensen's lengthy career across the manufacturing, mining and agriculture sectors has prepared him for his current role as Mayor of the Scenic Rim region.</i></p>	
<p><i><u>Suzie Holt</u> is an advocate for protecting prime agricultural land (amongst many other things).</i></p>	

<p><i><u>Professor Snow Barlow</u> is an Emeritus Professor of Agriculture at the University of Melbourne who grew up at Mungindi, (north-west NSW). Snow has been intimately involved in climate change research and policy for four decades including as a member of the Australian delegation to the Kyoto Protocol negotiations. He then chaired the Federal Carbon Farming Futures Research program. Snow also co-ordinated the Primary Industries Adaptation Research Network and directed the development of a Climate Change Research Strategy for Primary Industries. He was awarded the Australian Medal in Agricultural Science in 2009.</i></p>	
<p><i><u>David Pocock</u>. David is honoured to serve the ACT as its first independent senator. His ambition is to engage in a new kind of politics grounded in community, integrity and building a better future for us all.</i></p>	
<p><i><u>Professor Mark Ogge</u>. Mark Ogge is Principal Adviser at The Australia Institute. He is widely published on climate and energy issues, specialising in the gas industry and the impacts of climate change, particularly the effects of heat and heatwaves. He also takes The Australia Institute’s research to regional communities across Australia, particularly those most impacted by the expansion of the coal and gas mining. Prior to joining The Australia Institute he was a director at Beyond Zero Emissions.</i></p>	
<p><i><u>Associate Professor Peter Dart</u>. Peter is an agricultural scientist in the School of Agriculture and Food Sustainability at The University of Queensland. He is concerned about climate change, rangeland management and the effect of fossil fuel mining on agroecosystems. His involvement with black vertosols characteristic of the Darling Downs dates back to his childhood experiences on his grandparents’ farm at Inverell.</i></p>	
<p><i><u>Professor Matthew Currell</u>, RMIT, School of Engineering. Matthew is Program Manager for the Bachelor of Engineering (Environmental Engineering)(Hons) degree and an active researcher in the field of hydrogeology and geochemistry. He has published more than 70 peer-reviewed journal articles, was lead editor of a book and has served on the editorial board of the Hydrogeology Journal.</i></p>	
<p><i><u>Sean Ryan</u> is Principal Lawyer at Nixon Law</i></p>	
<p><i><u>Adjunct Associate Professor David George</u>, Australian Rivers Institute, Griffith University (Formerly, Senior Natural Resources Management Specialist with the Climate Change Practice [WBI] at The World Bank), David has developed, delivered and evaluated applied climate courses in the primary industries sector. He established national accreditation of Developing climate risk management strategies into the Australian Qualifications Framework.</i></p>	

5. SOME COMMON Q&A's

5.1 Why should we have this approach with legislative emphasis and why now?

Response:

We actually need the equal combination and emphasis of both statutory power and political will. Because we have no real control over the latter, apart from petitions, deputations, scientific and economic logic, and declarations which we consider have now been exhausted, we now see no other conclusion to draw apart from putting our energy into finding out where legislative power needs strengthening, and propose the matter more widely to see if we can reach concurrence and muster support for action now.

5.2. Why do you consider this urgent and important?

Response:

We realise if we use the precautionary principle with the current unknowns about mining and groundwater, then we have no other choice but to put in place greater strengthening for the protection of prime agricultural land.

5.3. Land and food is abundant here in Australia, why should we worry or have special concern about this particular area?

Response:

This is not an entirely true statement that can be applied for all areas and all times. Although we do have a large land area, we have a variable climate and streamflow. We have had a 98% of crop failure in the past given climate variability and droughts (e.g. rice in NSW in the summer and drought of 2007/08), with catastrophic negative impacts on people, livelihoods, ecosystems. Given climate change, food security needs greater consideration. Furthermore, socio-economic, and environmental concerns need to be given equal attention. The Darling Downs is a unique area and the prime agricultural land makes up ~4% of Queensland, yet its area is critically important for food production for state, national and international markets. Extra protections need to be put in place as it is deemed the current legislation leaves it to be still vulnerable.

5.4. We use the money generated from mining royalties to pay for our current standard of living - since we have other areas to grow food, extra protections here would appear unnecessary....what is your response?

Response:

With due respect to other parts of Queensland, excising ~4% would have a negligible impact on mining royalties. In addition, the reliance on fossil fuels is waning globally. Markets, if not already, will soon require or demand greater cross-compliance about emissions targets and carbon equivalent emissions reductions and sequestration. Alternative income streams will need to be sourced. The sooner this is done, the better off we will all be.

5.5. What do you consider are other important issues to convince me this is the right and equitable thing to do?

Response:

The notion of climate change warns frequency, severity and duration of extreme events will increase. Adapting to climate change and mitigating emissions is essential, not optional. If this action is not addressed now, given all the scientific, economic, and socio-environmental justifications, then when? The carbon economy which has been useful for global development over the last 150 years, has now reached its 'use-by date', and new approaches are needed. The old carbon economy is evolving and requires a fresh outlook, to examine strengths and weaknesses, to build on the former, and overcome the latter. Already other countries are taking this more seriously (e.g. Europe, Singapore). Australia should do likewise.

5.6. What is the cost for the extinction of an endangered species?

Response:

Priceless.

5.7. What is 'World's Best Practice' for protecting Prime Agricultural Land, and is this really it, or can we do better?

Response: ??? (deliberatively left as a question mark)

6. FURTHER READING

Anon. (2016). *Groundwater connectivity between the Condamine Alluvium and the Walloon Coal Measures: A hydrogeological investigation report*. Department of Natural Resources and Mines. Office of Groundwater Impact Assessment. Queensland Government, Brisbane. 103 pp.

Comino, M., Tan, P.L. and George, D.A. (2014). Between the cracks: water governance in Queensland, Australia and potential cumulative impacts from mining Coal Seam Gas. *Journal of Water Law*. 23, 219-228.

Currell, M., McCance, W. and Jones, O. (2022). Novel molecular tracers for the assessment of groundwater pollution. *Current Opinion in Environmental Science & Health*, 26, 1 - 7

George, D.A., Clewett, J.F., Lloyd, D.L., McKellar, R., Tan, P.L., Howden, S.M., Ugalde, D., Rickards, L. and Barlow, E.W.R. (2019). Research priorities and best practices for managing climate risk and climate change adaptation in Australian agriculture. *Australasian Journal of Environmental Management*. 26(1), 6-24. <https://doi.org/10.1080/14486563.2018.1506948>

Lynam, C., Dart, P., Edwards, G. and Pointon, R. (2022). *Coal Seam Gas Mining - An Assault on Farming Land, Water Resources and Property Rights*. Proceedings of the Royal Society of Queensland.

https://www.royalsocietyqld.org/wp-content/uploads/2022/Proceedings%20131/Dart_Supplement_Web.pdf

Tan, P.L., George, D.A. and Comino, M. (2015). Cumulative risk management, coal seam gas, sustainable water and agriculture in Australia. *International Journal of Water Resources Development*. 31(4), pp. 682-700, DOI: 10.1080/07900627.2014.994593.

DIGITAL LINKS

Regional Interests Map of Qld. It shows the scarce Priority Agricultural Area (PAA) land in yellow, that we are propose needs safeguarding from extractive resources.

Source: <https://dsdmipprd.blob.core.windows.net/general/rpi-guideline-11-16-dilgp-companion-guide.pdf> (p11)

Map showing the granted Petroleum Leases and the PAA land represented in purple.

Source: <https://georesglobe.information.qld.gov.au/>

An Isopach Map showing the depth of the 'transition zone' (a somewhat impermeable clay-like layer) between the Condamine Alluvium and the underlying Walloon Coal Measures, the target measures for the gas extraction. The white areas of the Alluvium denote no or low transition zone.

The 2 stars represent the locations of the pumping pressure tests for the Connectivity Study carried out by OGIA in collaboration with Arrow in 2016. As you will see, these were carried out where the transition zone is thicker and hence a lesser possibility of connectivity. An alternative to research the real risk of connectivity, is to pump pressure testing where the transition zone is thin or absent, and most certainly in more than 2 locations.

Source: https://www.resources.qld.gov.au/_data/assets/pdf_file/0019/403282/condamine-report-hydrogeological-investigation.pdf (p35)

Maps showing the predicted CSG-induced subsidence and change in slope as at the time of the Underground Water Impact Report 2021. For reference, since this was published, the OGIA UWIR [Annual Report 2022](#) now states that they are witnessing 120mm of subsidence in existing areas of CSG development, whereas in the UWIR 2021 they were predicting that most areas will experience less than 100mm of subsidence, therefore I estimate the predicted amounts in the UWIR 2021 will in reality be exceeded.

Source: https://www.rdmw.qld.gov.au/_data/assets/pdf_file/0005/1584725/uwir-2021-appendices.pdf (p. APX-47)

Map which shows all the geological formations, and groundwater systems of the Surat CMA, with a section showing the outcrop areas and groundwater flow direction.

Source: https://www.rdmw.qld.gov.au/_data/assets/pdf_file/0008/1584728/uwir-2021-report.pdf (p6)

7. GLOSSARY

Coal Associated Gas (CAG)	All methane contained within a coal seam and the immediate surrounding strata above and below the seam.
Coal Seam Gas (CSG)	Methane found in coal seams. It is formed during coalification, the process that transforms plant material into coal. Also known as Coal Seam Methane and Coalbed Methane.
Condamine Alluvium	The Condamine Alluvium is incised into the Walloon Coal Measures in most of the central part of the alluvium. The Walloon Coal Measures is the target for coal seam gas (CSG) production along the western margins of the Condamine Alluvium footprint which can therefore potentially impact the groundwater resources of the Condamine Alluvium. The degree of impact will depend partly upon the hydraulic connectivity between the Condamine Alluvium and the Walloon Coal Measures. The Condamine Alluvium is a major aquifer system. It is recharged primarily by leakage from the Condamine River and its tributaries in the east and southeast. Currently, most of the discharge is from groundwater extraction through private water bores (Anon 2016).
Extraneous gas	Gas released from locations other than the seam being worked, as a consequence of the coal extraction process (not necessarily simultaneously)
Greenhouse Gas	Greenhouse gases are those gases in the atmosphere that raise the surface temperature of Earth. What distinguishes them from other gases is that they absorb the wavelengths of radiation that a planet emits, resulting in the greenhouse effect. The Earth is warmed by sunlight, causing its surface to radiate heat, which is then mostly absorbed by water vapor (H ₂ O), carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O), and ozone (O ₃).
Greenhouse Gas Emissions	Greenhouse gas (GHG) emissions from human activities strengthen the greenhouse effect, contributing to climate change. Most is carbon dioxide from burning fossil fuels: coal, oil, and natural gas. Human-caused emissions have increased atmospheric carbon dioxide by about 50% over pre-industrial levels.
Precautionary principle	The precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage. The principle provides guidance on a process for avoiding serious or irreversible harm under conditions of uncertainty. Precautionary measures are triggered when, for a given action, A: there is potential for unacceptable harm and B: there is uncertainty about causality and magnitude of impacts.
Subsidence	CSG-induced subsidence occurs where groundwater is extracted by gas companies to allow gas production to occur, leading to compaction of the coal seams and possible surface-level subsidence. This has created concerns and uncertainty for landholders in relation to impacts on their agribusiness activities.
Surface well	To produce coal seam gas (CSG), wells are drilled into underground coal seams, bringing water (CSG water) from the seams to the surface. This process reduces pressure in the seams which allows CSG to be released.

8. ANNEXURES

8.1 Suggested Legislative amendments.

8.2 Location map of the Condamine Alluvium

8.3 Connectivity Study, which shows the main groundwater systems and geology in the Surat CMA

(8.1) Suggested Legislative amendments

Amend and strengthen the Federal ENVIRONMENTAL PROTECTION BIODIVERSITY CONSERVATION ACT 1999 (EPBC), to enable better protections as needed and outlined above (ensuring inclusion of the essence detailed in #Addendum 1). Specifically, to insert the following into the EPBC Act:

Section 24D (1)(a)(ii); 24D (2)(a)(ii) and 24D (3)(a)(ii); and likewise at section 24E respectively, FROM “large coal mining development” TO “coal mining development”

Subdivision FB FROM “Protection of water resources from coal seam gas development and large coal mining development” TO “Protection of water resources from coal seam gas development and coal mining development”;

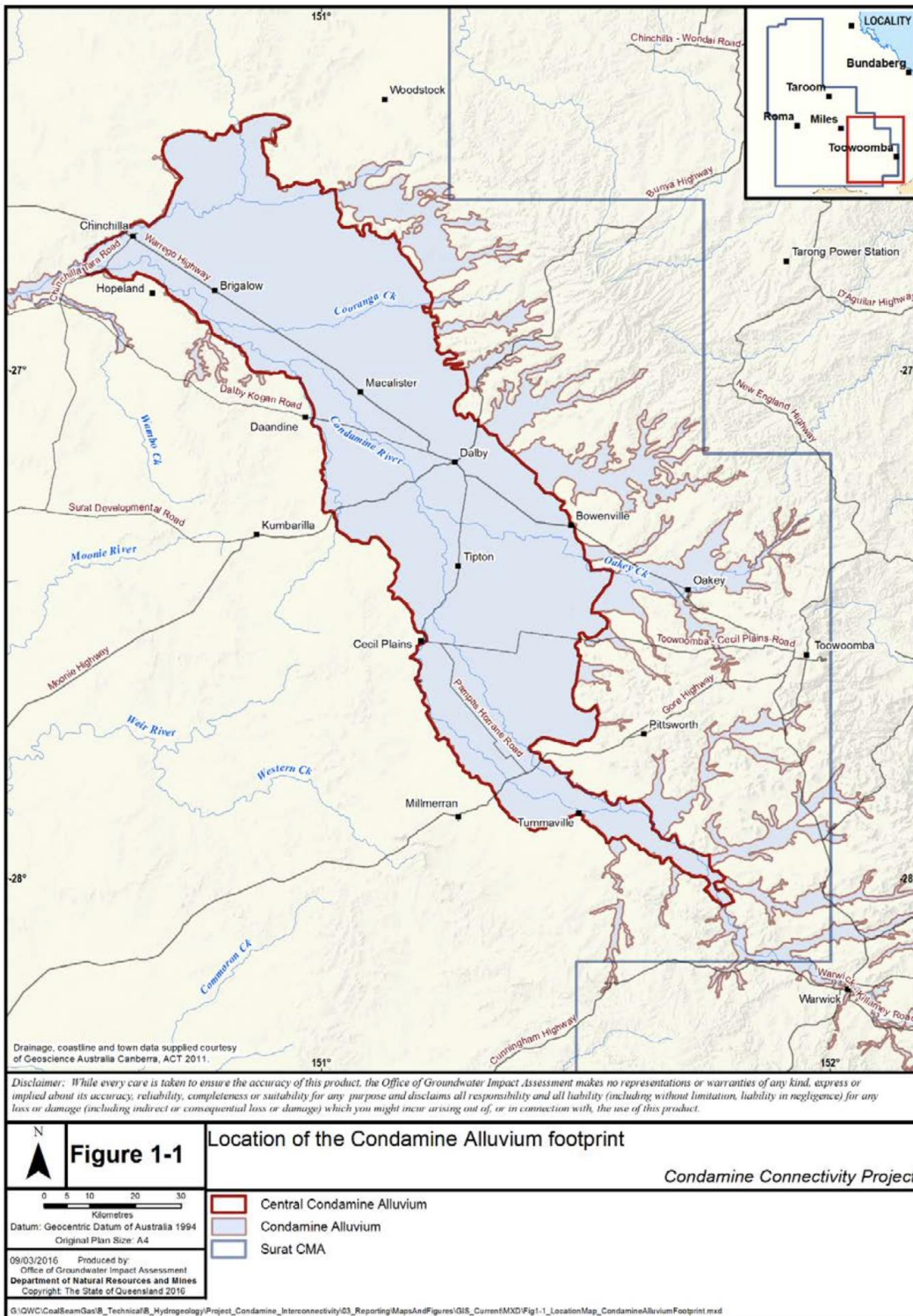
Insert new Subdivision FC “Protection of prime agricultural land from coal seam gas development and coal mining development”

Furthermore, to amend definitions in Section 528 so that coal mining includes coal seam gas; and, prime agricultural land includes land that has inherent capacity for long term sustained production.

#Addendum 1. Important points of inclusion for comprehension

- 1. Expand the net:** clarify the scope of the trigger in 24D(1)(a)(ii) and other associated sections to "coal mining development" not just “large coal mining development" (and associated definition change in s528). Clarify that it captures associated infrastructure which is for, or partially for, a coal mine or CSG such as water pipelines - including coal or gas power stations, not just mines.
- 2. Lower the threshold:** clarify the threshold for what would be considered a 'significant impact' on water resources to include objective limits, perhaps extraction 'greater than 1ML' or 'greater than 1 ML in a high quality agricultural area'.
- 3. Reverse the onus:** Given the high level of uncertainty, importance of agriculture, and the precautionary principle, the proponent must demonstrate to the satisfaction of the decision maker (considering IESC advice) that the activity will not have a significant impact on water resources.
- 4. Beef up the IESC:** Appoint more impartial academics to IESC rather than those who have strong relationships with industry. Perhaps ban members from working for industry for 5 years after their tenure. Significantly increase funding to allow IESC to undertake its own modelling. Give IESC power to pause assessment if data necessary to properly model impacts is not provided. Ideally the water modelling and assessment would be done entirely by IESC rather than proponent. Give the IESC right of final reply (so that proponents can't rely on peer reviews to counter IESC advice). Give IESC power to undertake post approval audits, perhaps on a biennial basis, to determine if predictions made during assessment were accurate and whether conditions complied with; to be applied retrospectively to existing approvals.
- 5. Empower Landholders:** Map high quality agricultural areas and require projects with significant impacts in those areas to obtain the consent of affected landholders, including traditional custodians. Consent could potentially be obtained by compensating landholders.
- 6. Constrain approval power:** similar to s137, provide that the decision maker cannot make a decision inconsistent with a 'water conservation plan' and then promulgate water conservation plans for high quality agricultural areas setting strict extraction limits (or perhaps bringing coal and into the same regimes that limit farmers water take, e.g. Great Artesian Basin). Require that any decision not be inconsistent with the Paris Agreement.
- 7. Require cumulative impact assessment:** require proponent to assess the cumulative impact of their activity together with all known and potential impacts on the water resource.
- 8. Model climate change scenarios:** require the proponent to also model the impact on the water resource under a range of future climate scenarios over the life of the activity.
- 9. Protection of prime agricultural land:** Insert a trigger in s24 for the ‘protection of prime agricultural land from coal seam gas and coal mining development’

(8.2) Location map of the Condamine Alluvium



Source: Office of Groundwater Impact Assessment, of the Department of Natural Resources and Mines (2016). *Groundwater connectivity between the Condamine Alluvium and the Walloon Coal Measures. A hydrogeological investigation report.* Queensland Government, Brisbane. (p. 2). Pp. 120

(8.3) Connectivity Study, which shows the main groundwater systems and geology in the Surat CMA

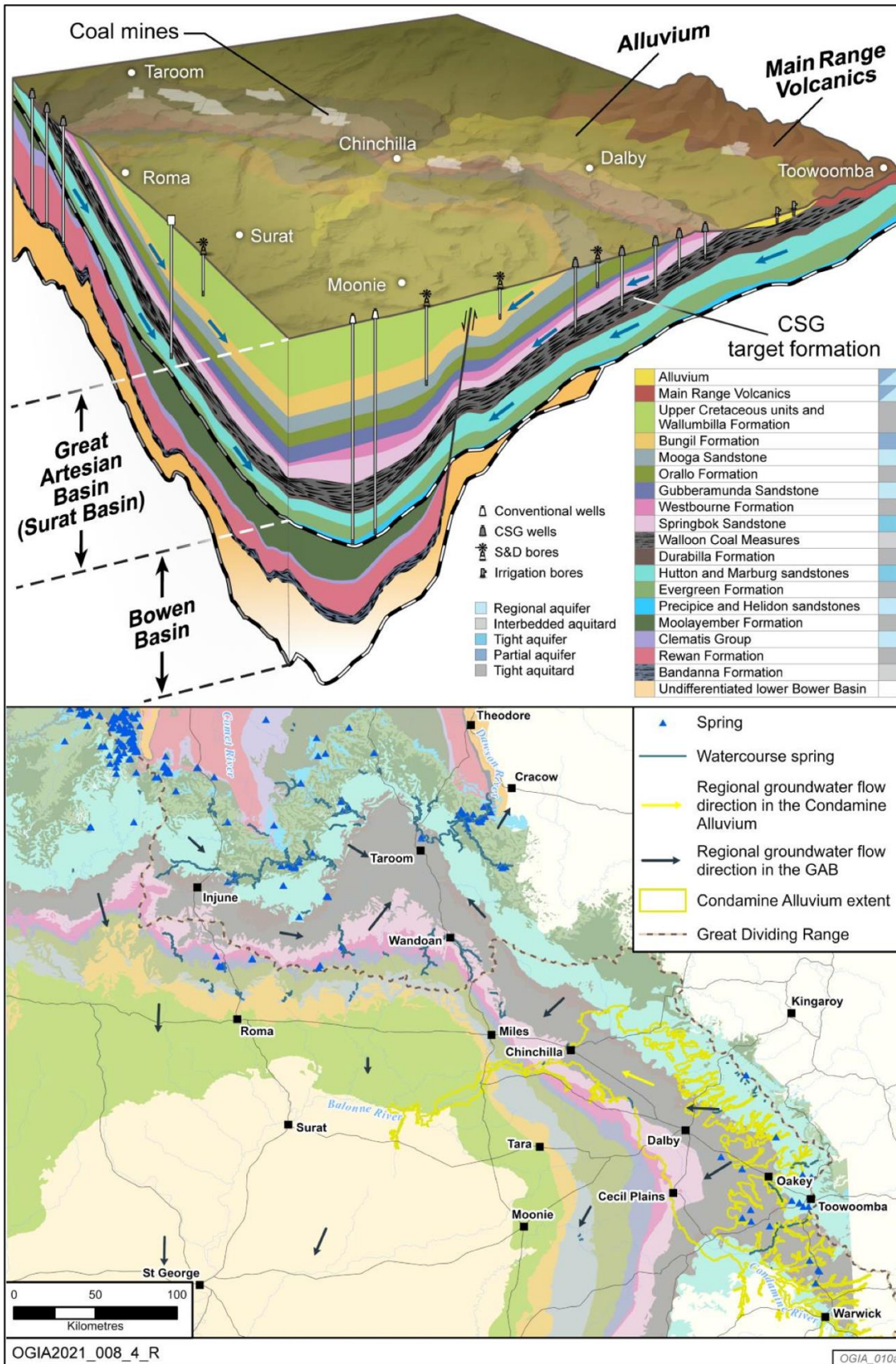


Figure 1-3: Representation of the main groundwater systems and geology in the Surat CMA

Source: https://www.rdmw.qld.gov.au/_data/assets/pdf_file/0008/1584728/uwir-2021-report.pdf (p6)

9. EVALUATION

**PROTECTING PRIME AGRICULTURAL LAND
EVALUATION**

Saturday 26 August 2023, 'Glendon,' 246 Watson Road, Nangwee, Old.

VALUE OF EACH OF THE SESSIONS

Please tick your *considered value* of the different sessions,
(where 1-3=no/low value; 5=moderate value and skill; 8-10=high to very high value):

VALUE OF THE SESSION(S)	1	2	3	4	5	6	7	8	9	10
1. INTRODUCTION - AIMS - OBJECTIVES										
2. LAW AND LEGALITIES-A LANDHOLDERS PERSPECTIVE										
3. IMPORTANCE OF LAND AND SOIL, AND GROUNDWATER										
4. CONTEXT OF ECONOMICS AND CSG										
5. EARLESS DRAGON AND ECOSYSTEMS										
6. FUTURE SUSTAINABILITY AND THE NEXT GENERATION										
7. POLITICAL CONSIDERATIONS										
8. SUMMARY - WRAP-UP - WHAT NEXT?										

KNOWLEDGE AND SKILLS – Did the day help you in gaining new knowledge and skills? Why or why not?

FUTURE USE OF INFORMATION - Are you planning to apply the information learnt on the day? How?

WHAT WOULD BE YOUR OVERALL RATING (1= poor; 10 = excellent) _____ Why?

DO YOU HAVE ANY OTHER COMMENTS YOU WOULD LIKE TO MAKE?

NAME (optional): _____

Thank you so much for your comments and participation.