

Issues in aquifer drawdown in the Surat and Bowen Basins

Condamine Alluvium

The Independent Expert Scientific Committee (IESC) (2012), had this to say about the Arrow Energy Surat Basin EIS (at: <http://www.arrowenergy.com.au/community/project-assessment-eis/surat-gas-project-eis>) in its assessment for the Commonwealth.

“The proponent’s modelling predicts a cumulative drawdown in the Condamine Alluvium of approximately 2.5 m. There are concerns about the lack of information on both the spatial distribution and the hydraulic properties of the low permeability transition layer between the Condamine Alluvium and the Walloon Coal Measures” (IESC 2012:3).

“The Surat Gas Project would significantly contribute to cumulative impacts associated with the Condamine Alluvium groundwater. There is limited information provided to determine the project’s contribution to cumulative impacts, including impacts to Matters of National Environmental Significance from changes to hydrology and water quality” (IESC 2012:4).

Table: Potential impacts identified as medium or above significance

Impacts on Land Use and Property					
Increased landholder and community uncertainty	C,O	Negative	Likely	Moderate	High
Reduced vulnerability to impacts associated with agriculture (drought, pests)	C, O	Positive	Likely	Moderate	Medium
Loss of social connection to land/ agricultural production	PC, C	Negative	Possible	Moderate	Medium

Source: Arrow Energy Pty Ltd (2012a).

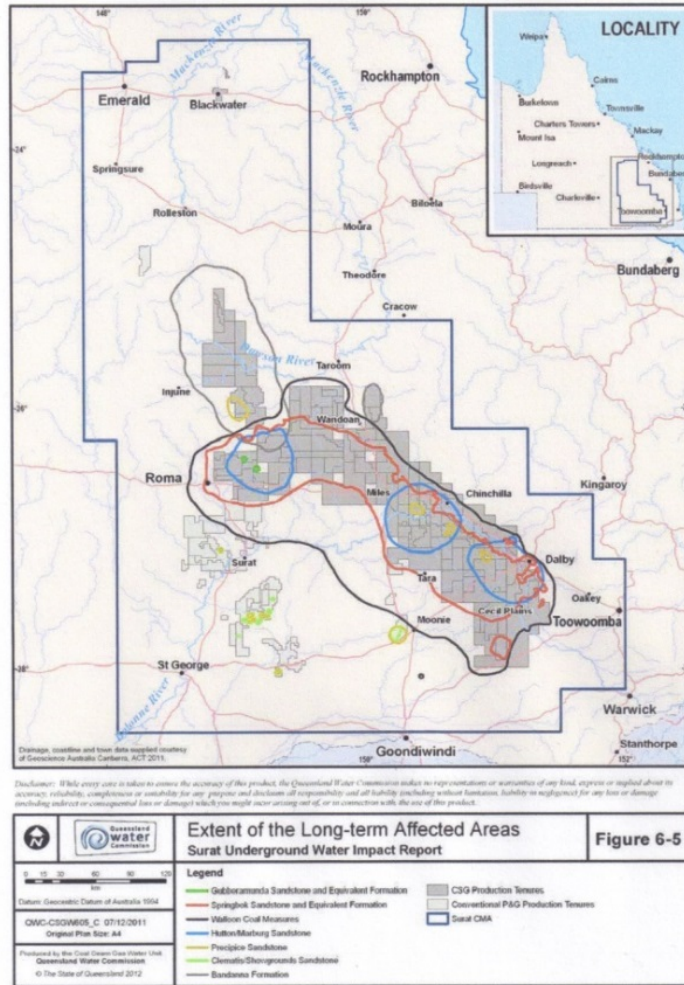
References:

Independent Expert Scientific Committee (IESC) 2012. Advice to decision-maker on coal seam gas project (EPBC 2010/5344) – expansion, for the Department of Sustainability Environment and Water, Population and Communities, 14 January, Independent Expert Scientific Committee, Canberra.

Arrow Energy Pty Ltd, 2012a. Arrow Surat Gas project EIS, Social Impact Management Plan, Arrow Energy, Brisbane, Table 1.9, p.20.

Extent of long term effects of CSG on Great Artesian Basin: Walloon Coal Measure

The Walloon Coal measure is the target CSG formation in the Surat Basin (Queensland Water Commission, 2012). For most of the area the long term impact is expected to be less than 150 m. In the more westerly areas, where the coal formation is relatively deep, the impacts are expected to be up to 700 m. There are 400 private water bores that source water from the formation in the affected area, comprised mainly of 369 stock and domestic bores and 27 agricultural bores. Half of the affected bores are likely to experience an impact of less than 21 m.



Reference:

Queensland Water Commission, 2012. Draft underground water impact report, Surat Cumulative Management Area, consultation draft, Queensland Government, Brisbane, pp. xiii, 57.

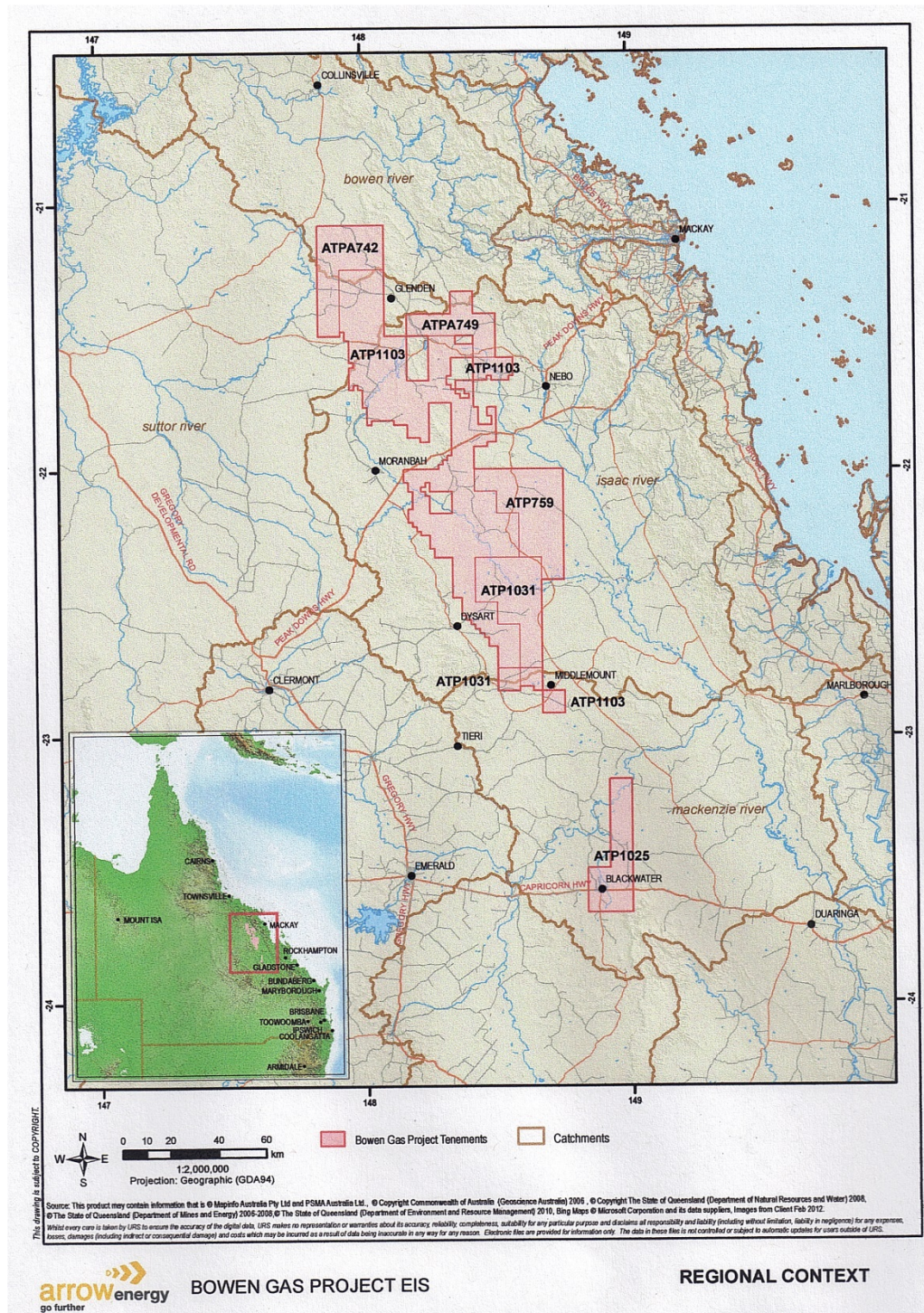
Bowen Basin

The Independent Expert Scientific Committee (IESC 2012), had this to say about the Arrow Energy Bowen Basin EIS (at: <http://www.arrowenergy.com.au/community/project-assessment-eis/bowen-gas-project-eis>) in its assessment for the Commonwealth.

“The committee notes that this project consists of approximately 7,000 coal seam gas wells and associated infrastructure. The regional scale of the project will result in interactions with other coal seam gas and coal mine proposals in the area. The committee considers that information relating to the potential impacts of this project should be commensurate with its scale” (IESC 2012:1).

“The committee recommends further emphasis should be provided within the Terms of Reference on the need for a cumulative risk assessment to account for the combined impacts from all mining projects, particularly with relation to Lake Elphinstone and downstream water dependent matters in the Fitzroy Catchment and the World Heritage listed Great Barrier Reef Marine Park. It is further recommended that the Terms of Reference assess cumulative impacts in accordance with the practices and procedures set out in the Mineral Council of Australia’s Water Accounting Framework for the Minerals Industry (Minerals Council of Australia, 2012” (IESC 2012:1).

“The committee recommends the Terms of Reference for the Environmental Impact Statement should provide additional information to articulate how water management strategies (including co-produced water) will evolve over the lifetime of the project, considering that the development will be staged and will occur over a large project area, which is comprised of several land parcels that are not geographically connected (e.g. Blackwater tenements)” (IESC 2012:2).



References:

Independent Expert Scientific Committee (IESC) 2012. Advice to decision-maker on Bowen Basin gas project (EPBC 2012/6377), for the Department of Sustainability Environment and Water, Population and Communities, 31 July, Independent Expert Scientific Committee, Canberra.

Arrow Energy Pty Ltd, 2012b. Arrow Bowen Gas Project EIS, Project Description, Arrow Energy, Brisbane, Fig. 4.2. p. 4-4.
