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Science sidelined in approval of Australia's largest coal mine

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Supplementary Text

Detailed summary of mine approval process

The key stages of approval of the Carmichael coal mine are summarized. Whether key hydrological issues were: (i) raised for the first time, (ii) reiterated, (iii) accepted or (iv) ignored is outlined in the table below.

Supplementary Table 1.

Outlining major events in approval of the Carmichael coal mine. (i) Issues raised for the first time, (ii) re-iterated by new scientific outputs, (iii) accepted in a decision, (iv) rejected/ignored in a decision.

		Uncertainty over aquifer parameters adopted in model	Data gap: Sufficient reliable groundwater elevation data	Data gap: Spring water levels, flux rates and eco-hydrological data	Whether numerical model is fit for purpose	Possible existence of faults as pathways through the Rewan	Source aquifer for the Doongmabulla Spring Complex	Source aquifer for Mellaluka Springs	Cumulative Impacts from other Galilee Basin Mines	Reference
Major event in mine approval	Date									
Federal approval of the GMMP and GDEMP by Minister for the Environment, Hon. Melissa Price	8 Apr 2019	(iv)			(iv)	(iv)	(iv)			
Federal election called	11 Apr 2019									
Australian Federal Election. Labor party perform poorly in Queensland, amid strong pro-mine sentiment	18 May 2019									
Position Paper by Concerned Scientists: Deficiencies in the scientific assessment of the Carmichael Mine impacts to the Doongmabulla Springs, provided to Queensland Department of Environment & Science (DES)	31 May 2019	(ii)	(ii)	(ii)	(ii)	(ii)	(ii)		(ii)	(5)
CSIRO and GA, Carmichael Coal Mine: Advice on Groundwater Dependent Ecosystem Management Plan v11b to DES	7 Jun 2019			(ii)	(ii)		(ii)			(4)

Reference	
Cumulative Impacts from other Galilee Basin Mines	
Source aquifer for Mellaluka Springs	
Source aquifer for the Doongmabulla Spring Complex	(iii)
Possible existence of faults as pathways through the Rewan	(iii)
Whether numerical model is fit for purpose	
Data gap: Spring water levels, flux rates and eco-hydrological data	
Data gap: Sufficient reliable groundwater elevation data	(iii)
Uncertainty over aquifer parameters adopted in model	(iv)
Date	13 Jun 2019
Major event in mine approval	Adani claim to have addressed concerns raised by CSIRO and GA. Groundwater plans receive final approval, paving way for mine construction to begin