

Dear Department of Planning and Environment,

Having read the executive summary and “chapter 11 groundwater and geology” from the environmental impact statement provided by Santos for the south-west Narrabri coal seam gas project I want to make a public comment relating to the underground environmental function of the gas that is being extracted.

Tests need to be done to see whether the depressurisation of the coal seams and the extraction of underground gas destabilises the geology in the long-term. Furthermore if consolidated aquifers are being “potentially” fractured, this may create conduits for gas to travel and therefore the surrounding geology becoming less impervious. The risk of gas coming to the surface not being of concern, but rather the inability for these coal seams to regenerate or re-pressurise with gas over time.

Further tests should be done to determine the nature of the Gunnedah Basin Aquifer. For example further exploratory core drilling at depths much lower than the gas being extracted to determine geological and hydrogeological characteristics of the Bohna trough. This would help give more insight into the geology and hydrogeology below the cavity being potentially fractured and whether a change in density, lack of gas or prevented re-pressurisation with gas will cause pressure changes and influence surrounding aquifers.

I would like to see the project go ahead, so perhaps the tests would be done post-extraction on some wells. Removal of such huge quantities of water and gas will surely create some effect, and the cavity in time will supposedly be filled back up with air or water, and it is unknown whether this will make the surrounding geology unstable.

Thanks,

Joshua Ebert