

28 October 2011

Petroleum and Gas Unit  
Department of Environment and Resource Management  
Level 7, 400 George Street,  
Brisbane Qld 4000

**RE: Basin Sustainability Alliance submission to the Amendment for Environmental Authority for ATP676**

To whom it concerns,

Basin Sustainability Alliance would like the following points to be strongly considered in regards to Arrow's application to amend their Environmental Authority (EA) for Authority to Prospect (ATP) 676:

- Firstly, the new Environmental Authority **must** be based, as a minimum, on the updated EA for ATP 683 due to very similar terrestrial and water features and land use.
- Secondly, the new Environmental Authority **must** reflect the tabled Strategic Cropping Land (SCL) legislation, and therefore any infrastructure to be built on SCL must also fulfil this legislative requirement and be reflected as such. From viewing Arrow's maps it would be estimated at least 70% of the tenure is in a SCL Protection Area. It is Basin Sustainability Alliance's view that 'permanent alienation and/or diminished productivity' will definitely take place.
- For SCL legislation to be considered met, Arrow **must** acknowledge publicly whether their project will or will not last for more than 50 years to ensure the correct policy setting is laid out in the EA. According to the introduced legislation, if a project on SCL lasts for more than 50 years (including rehabilitation), then it has to be given 'exceptional circumstances' classification from the government. This also activates a number of other legislative instruments. The 'exceptional circumstance' declaration would directly affect Basin Sustainability Alliance's constituents, plus the other SCL residents and landholders within the tenure.
- The new Environmental Authority **must** include light contamination in Section E. There is no consideration for light contamination within the EA. This is a key nuisance currently on the floodplain with the nearby mine and power stations. Any further projects that involve night work must have light provision in Schedule E. Should Arrow's EMP need a background level, it must use a local sample for analysis (not Toowoomba based as with particulate matter) as it would not be indicative otherwise.
- Direct additions/changes recommended to the EA are:
  - *B14 (g) increase surface water velocity over 0.3 m/s.* There is research over alluvial floodplains, especially black cracking clay, that have calculated once surface water flow exceeds 0.3 m/s erosion occurs. This should be included in section B14, and as such any works that increase this speed on alluvial floodplains should not occur.
  - *Schedule G Table 1 SAR Limit 6.* It is well researched that saline water will render good soils infertile. Arrow have indicated at a public meeting they are using SAR water of 4 at Theton for dust suppression. It would seem consistent that the SAR limit of 6 at all times (not 80<sup>th</sup> percentile) would be suitable. Any use of water with a SAR of 12 would be unacceptable on the floodplain.
- We note the Dalby Expansion Project EA has the provision; "The holder of this environmental authority must ensure that regulated dams constructed after 15 March 2011: (b) are not constructed in areas that are estimated to be submerged by a flooding event from a recognized water course, at or above an Annual Exceedence Probability (AEP) of 0.02 (1 in 50)." Basin Sustainability Alliance would like to see this added to the EA for ATP 676.

- In reading Arrow's EMP there are certain clauses that seem either vague or inaccurate. For example, 4.7.1.2 states Condamine River Alluvium groundwater occurs 15-20m below ground surface, this is not correct as there are bores on the alluvium that gather from over 100m deep near Macalister. It is hard to document all of these due to the length of the document. The other concerning part from reading the EMP is that floodplain and non-floodplain management plans are somewhat interchangeable. This does not give us confidence that the mitigating practices will be effective.
- Some of the actions, infrastructure planning and development (including access roads), procedures and mitigation strategies will need to rely on having a catchment mentality due to downstream impacts especially surface water. Therefore full flood modelling should be done before proceeding with development. Basin Sustainability Alliance cannot emphasise this more strongly.
- Arrow's EMP Table 12 describes threatened vegetation within the ATP, however misses out Queensland Bluegrass. *Dichanthium sericeum* and/or *Astrelba* spp. is an endangered flora species, as well as the predominate vegetation type for this area.
- There are many questions about the interconnectivity between aquifers and the possible loss of quality and quantity of groundwater that may arise from CSG activities. Although the activity is small at this stage, those landholders with bores in the immediate vicinity of any proposed wells (5km radius) should have their bores tested either by DERM or Arrow as background before construction to ensure no localised damage has occurred after the project has commenced.
- Basin Sustainability Alliance strongly believes the first use of CSG water should be reinjection, followed by substitution and that no other beneficial use of this water should take place.
- Soil is our most valuable asset and loss of soil biology by poor management (i.e. stockpiles and compaction) is of serious concern. Rehabilitation of areas where top soil has been removed and heavy compaction has occurred, will be extremely important. It is a known fact that soil biology is a large factor to the high yielding and high water holding ability of the black cracking clays and the management plans do not give confidence that rehabilitation of these will be acceptable.
- Flowlines (pipelines) must be buried deeper than a top height of 1.5m on a floodplain due to soil movement (rising upwards) and farming activity and must be able to be removed at decommissioning, at the landholder's request due to subsidence and possible land use interference. Well structure must also be buried well below any possible impact with farm use (>2m depth).
- There is a leap of faith with some of these proposed management plans that Basin Sustainability Alliance feel will not be done to community satisfaction. There is a lack of trust within the community, especially with the lack of precise detail available of Arrow's development, of what the impacts will be. It is our hope that DERM will regulate and police Arrow's projects well to ensure our concerns have been recognised. An example of this is the 'dam planning and design has not yet been finalised'.

As some of the members from Basin Sustainability Alliance land holdings are covered by ATP 676 we have felt it necessary to give a constructive critique of the application. Basin Sustainability Alliance's position of a coal seam gas moratorium remains until the environmental and community concerns are satisfied, however we do appreciate being able to be involved in putting forward these concerns.

Yours Sincerely,



**Scott Seis**  
Basin Sustainability Alliance