Submission: State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) Amendment 2014 [NSW]
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Submission via website.

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I oppose the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) Amendment 2014* because it changes the rules that determine which coal seam gas and other unconventional gas projects require development consent

In the present regulations development consent was required for all drilling for a set of more than five production or exploration wells that are within 3km of any other well in the same title. The proposed regulation changes significantly this part of the regulation by measuring the distance from the geometric centre of the NEW set of wells rather than the closest existing well.

The regulation change is ambiguous, so it may be interpreted that it refers to the geometric centre of the existing wells not the new set of proposed wells.

The change uses a using a dynamic (changing) reference point dependent on the proposed location of the new wells in the new well set rather than the fixed points of existing wells. This is a mathematically flawed model that sets a dangerous precedent for the calculation of environmental and health offsets of any development in the future.

It would seem that the author of the regulation changes has confused the terms ***geometric centre*** and the ***geographical centre***. A formula for calculation of the geometric centre has not been included in the regulation or explanatory notes, as it should. The Minister, and the Parliamentary Counsel's Office legislative drafter, probably do not understand the mathematics of the calculation involved and hence its impact. The ***Explanatory Note*** does not

explain the purpose or effect of using a geometric centre of six or more new wells, in relation to the location of existing wells.

Irregular hexagons (six sided figures with six vertices/ or six wells on a map) or irregular polygons with more than six vertices or sides do not have a geometric centre. They have a centroid or centre of gravity.

Regardless of whether geometric centre, centroid or geographical centre is being used this is a significant change to the application of this part of the regulation. It changes the rules for calculation of the distance from a set measurable distance from a fixed point (a well) to a dynamic point calculated from the centroid of an irregular polygon made up by the new wells. As more wells are added the location of the centroid changes, resulting in a meaningless application of the intention of the regulation. The addition of one new well changes the positon of the centroid, it is not clear what is the purpose of using a dynamic reference point rather than fixed points, is.

The figure "Senario one" shows how close a set of six new wells can get to an existing set of six wells under the present regulations. The figure "scenario two" shows how close the six new wells can get to the old wells under the new regulations. As is shown in "Scenario two"it would be possible for an additional three wells (wells 3, 4 and 5) to crowd in amongst the existing six old wells and be placed very close to existing wells B and C . This type of graphical analysis is only possible using regular hexagons or regular polygons. If the polygons become irregular, as they would in real life, it becomes a much more complex calculation to find the centroid.

Using "Scenario two" if you use an irregular hexagon which moves Well number 1 further away from the other new wells, the centroid moves to the right until wells six and two are also encompassed within the red line showing how the present regulations work. This would mean that five out of the six new wells would be within the boundaries set by the current regulations.

Using the proposed method of calculation new wells that are placed as 'outliers' could be placed strategically to significantly move the geometric centre of the new well set so that many wells are placed well within the polygon formed by the existing 'old' wells. Given that all the new wells will not be developed at the same time, this would be a method of placing wells in a concentrated area, and leaving the outlier wells 'to be developed at a later date'. As petroleum titles can be significant in size, the outlier wells could have a much more significant weighting on the location of the geometric centre of

the new well set. This will place residences well within three kilometres of the nearest well.

The regulation does not take into account the situation where one or more of the new proposed wells is not developed, essentially changing the geometric centre of the new well set and opening the process to question.

The method of the calculation of the geometric centre of the well set has not been provided or named in the regulation. It is not clear if the calculation would be in two dimensions (a calculation that assumes that the earth if flat like a map) or three dimensions taking into account altitude. This is an oversight in the proposed regulation change and needs clarification.

What constitutes a well or a well set is not clearly defined. I have assumed that when mapping the location of a well that well head is used as the point location of the well, regardless of where the underground laterals go.

I oppose the *Environmental Planning and Assessment Amendment (Mining and Petroleum Development) Regulation 2014* that does not include in the gateway process Strategic Agricultural Land identified after January 2014.

The proposed changes to the *EP&A Regulation* make it clear that the requirement for Part 3A project modifications that impact on Strategic Agricultural Land to obtain a Gateway certificate does not apply if the land was not shown on the Strategic Agricultural Land Map before 28 January 2014 or the application was made before 3 October 2013.

Previously, the gateway process applied to all applications made since 10 September 2012.

Strategic Agricultural Land Mapping was conducted on a broad regional scale and there will be circumstances where the maps do not fully reflect the existence of Strategic Agricultural Land "on the ground". Strategic Agricultural Land that has been missed under these circumstances should not be exempted.

Part of the regulation changes on exhibition, are changes to the Critical Industry Cluster maps that include viticulture and equine properties that were not included in previous maps. These properties and their industry activities were in existence before this date and should not be exempted from the Gateway process.

This change to the regulation that excludes both Strategic Agricultural land and Critical Industry Clusters mapped after January 2014 is unfair to the land holders who own these properties.

Critical Industry Activities

The critical industry clusters should be expanded to include other critical industries such as dairy farming, food production and fodder production.

Critical Alluvial Soils are a special case of Strategic Agricultural Land that needs its own definition and protection.

The inherent value of alluvial soils is very high, regardless of the agricultural activity that takes place on that land. Alluvial soils must be placed off limits from mining as they are part of the complex system of water interaction

between the river, alluvium and aquifers that agricultural industries depend upon. Mining of Alluvial soils has a significant impact on water resources.

These critical alluvial soils should have their own category under this legislation and Critical Alluvial Land and be protected from mining development in the same way that Critical Industry Clusters are protected.

I oppose the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) Amendment 2014* because it amends the exemption for transitional Part 3A projects from the coal seam gas exclusions creating more opportunities for companies extracting coal seam gas .

In October 2013, exclusion zones were brought into force in New South Wales that prevented coal seam gas activities near residential areas and in critical industry clusters. At that time, any project that already had transitional Part 3A approval at the time the exclusions came into effect was exempted from these new rules, including the already approved Gloucester Gas project and the Camden gas field. The exemption also applied to any transitional Part 3A project that was not yet approved, but had a concept plan approved.

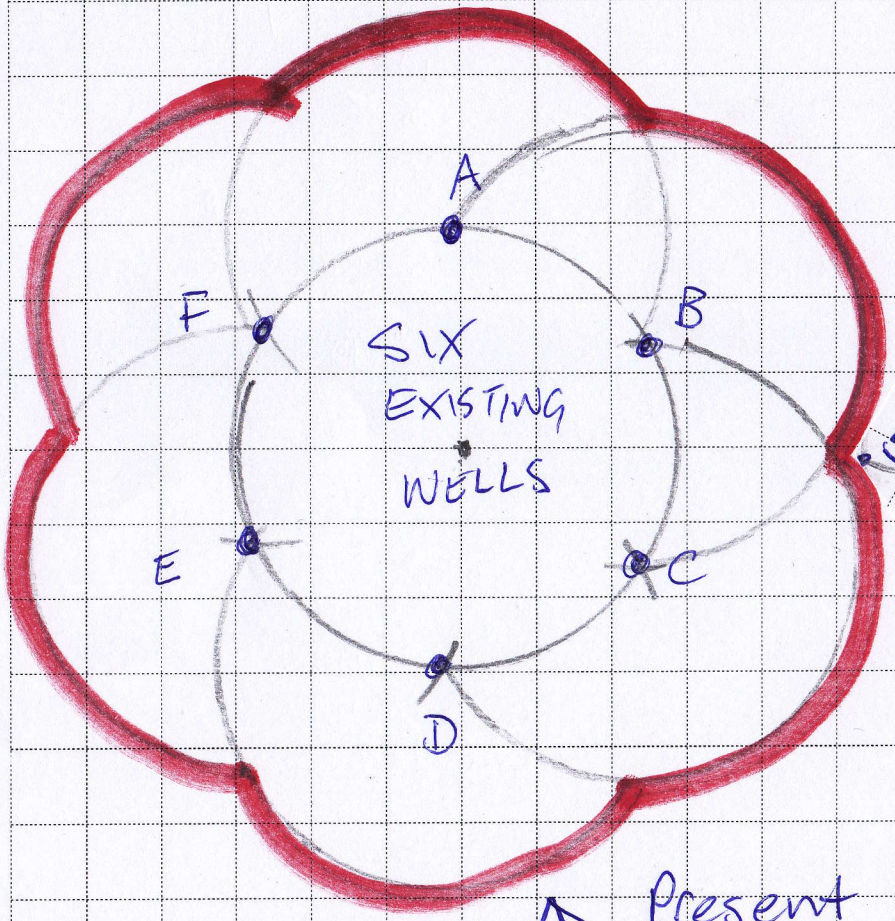
The regulation changes now on exhibition extends the exemption from the residential no-go zone to modifications of approved Part 3A transitional projects where the modification is for wells that are already approved, and the Minister is satisfied there is "minimal" environmental impact.

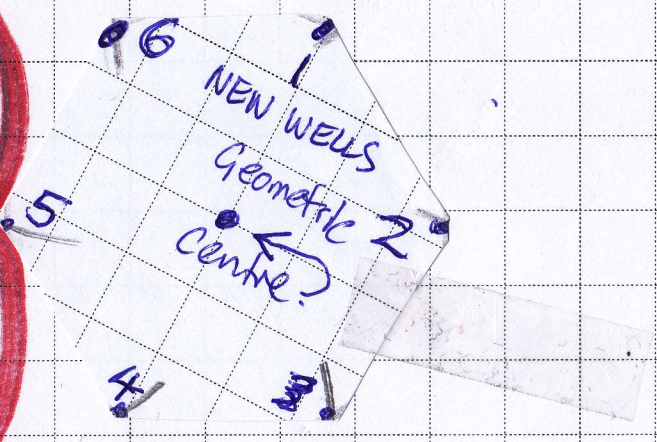
AGL had concept approval for an additional 330 wells in Gloucester prior to the exclusion zones coming into force, but they only had project approval for 110 wells. This seems to make it possible for AGL to apply to modify their existing Stage 1 approval to drill some of the 220 wells that are approved by their concept plan without the residential exclusion zone applying.

An increase in the size of the gas field from 110 wells to 220 wells cannot be considered a "modification" of an existing consent that has "minimal" harm.

SCALE 1cm = 1km

SCENARIO ONE - PRESENT REGS
TWO SETS OF WELLS
IDENTICAL SETS OF SIX WELLS
PLACED 3KM APART



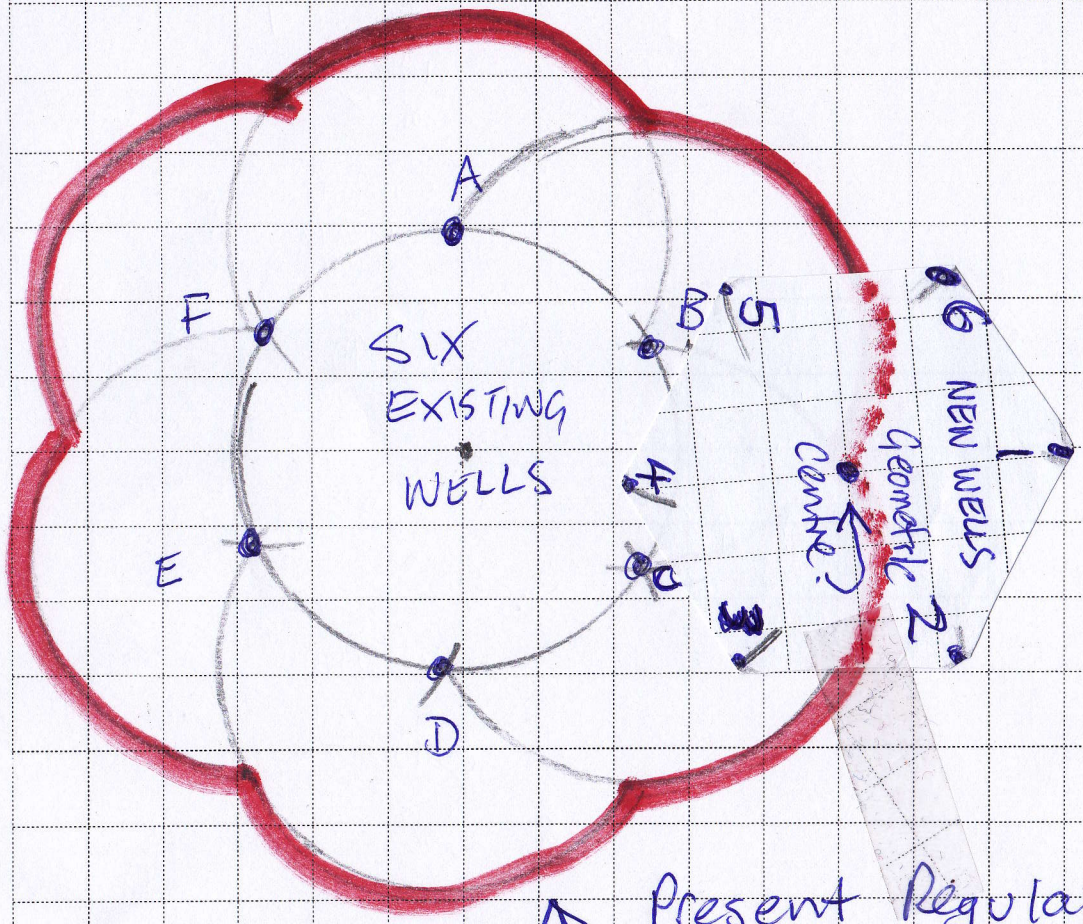


Present Regulations:
Red line shows the 3km boundary around six wells placed 3km from each other

SCALE 1cm = 1km

SCENARIO ~~ONE~~ TWO - ~~PRESENT~~ NEW REGS

TWO SETS OF WELLS WITH IDENTICAL SETS OF SIX WELLS PLACED 3KM APART



Present Regulations:
Red line shows the 3km boundary around six wells placed 3km from each other