
Exemptions from cease-to-pump rules in the Hunter coal field: mines 1, aquifers 0

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The Hunter coal field is the largest of five major coal fields in New South Wales.¹ It is home to 20 of the largest coal mines in the world.² Major mining operators in the region include BHP Billiton, Xstrata, Rio Tinto, Yancoal and Peabody Energy. Between them, these five companies operate 19 open-cut and underground mines.³ These include Ashton Coal Mine,⁴ Wambo Mine,⁵ Ravensworth (open-cut), Ravensworth (underground),⁶ Mount Thorley Warkworth, Hunter Valley Operations,⁷ and the region's largest open-cut operation, Mount Arthur, which produces some 20 million tonnes of coal per annum.⁸

These mines are located within a catchment characterised by a high degree of connectivity between up-river alluvial aquifers and surface water resources, as well as numerous groundwater-dependent ecosystems (GDEs).⁹ By way of background, alluvial aquifers are in most instances shallower than sedimentary and fractured rock aquifers and therefore vulnerable to contamination,¹⁰ while changes to the quality and quantity of groundwater will have the greatest impact on highly dependent ecosystems.¹¹

The Hunter Unregulated Alluvial Water Sharing Plan (Hunter WSP), which covers 39 water sources, is described in the official background document as including "water sharing rules for the highly connected alluvial aquifers".¹² This document goes on to indicate that "water sharing rules have been developed to protect significant groundwater-dependent ecosystems (GDEs) where they are known to occur in alluvial aquifers". These include highly dependent subterranean cave ecosystems rich in biodiversity and highly dependent coastal wetlands, as well as a number of "potentially dependent" endangered ecological communities (EECs) located on alluvial floodplains, which "may be further investigated during the term of the Plan".¹³

Report cards for each water source within the Hunter WSP also detail their respective "instream value" (based on biodiversity, threatened species and so on), as well as risks to those values. Report cards tend to highlight the impact of extractions on the hydrological functioning of groundwater and surface water in the catchment. For example, cards for the Glennies water source and the

Upper Wollombi Brook water source both indicate that they are under a "high" level of hydrological stress due to demand for water exceeding availability during peak periods.¹⁴

Emphasis has been placed on Glennies and Wollombi Brook due to their proximity to a significant number of coal mines. These include Ashton Coal Mine, Hunter Valley Operations, Ravensworth (open-cut and underground), Mount Owen and Mount Thorley Warkworth. Rules in the Hunter WSP should ideally seek to protect and restore the hydrological functioning of these and other highly stressed water sources, as well as maintain connectivity between alluvial aquifers and surface water. This necessarily involves imposing rules that regulate where, when and how much water can be extracted from aquifers by mining companies.

Amendments to the Hunter WSP — exemptions for mining companies

On 22 February 2012, the Minister for Primary Industries exercised her power under s 45(1)(a) of the Water Management Act 2000 (NSW) (WM Act) and made an order amending the Hunter WSP (Order),¹⁵ which came into effect on 8 March 2013.

While it is beyond the scope of this article to analyse each amendment, of particular concern are changes to rules originally intended to protect alluvial aquifers during periods of low flow. Specifically, all water taken under an aquifer access licence for the purposes of a development approved under Pt 3A, Pt 4 (if it is State Significant Development) or Pt 5.1 of the Environmental Planning and Assessment Act 1979 (NSW) (EPA Act) is now exempt from cease-to-pump rules.¹⁶ To clarify, these three parts of the EPA Act cover almost all forms of mining exploration and production. Consequently, all large coal mining developments will be permitted to continue extracting water from alluvial aquifers during periods of "very low flow", which necessarily includes periods of drought.

As previously indicated, it is known that alluvial aquifers in the Hunter are highly connected to one another, as well as to rivers and their tributaries. Thus, interfering with the hydrological functioning of one

aquifer will in turn impact on other connected water sources. It will also potentially undermine the health of GDEs, such as wetlands and caves — both of which support a range of flora and fauna.

In addition to compromising the environment, these exemptions introduce a hierarchy among holders of aquifer access licences. While it is not the intent of this article to suggest that the exemptions should apply more broadly (on the contrary, they should be repealed), it is important to note that they have been made to the detriment of other users — in particular, irrigators.

Lack of parliamentary and community scrutiny

The Order included some 121 amendments to what is a particularly labyrinthine set of rules governing water use in the Hunter catchment. Despite the scale, complexity, and environmental and social impacts of these amendments, the Minister was not required under the WM Act to consult with the community before making the Order.

Analysis of the Interpretation Act 1987 (NSW) also revealed that the Minister did not have to table the Order in Parliament. Specifically, the Interpretation Act only provides for statutory rules (the definition of which excludes orders of this nature) to be subject to disallowance.¹⁷ Indeed, it appears that WSPs do not satisfy the definition of a statutory rule, which in turn means that they are non-disallowable instruments.¹⁸

It is clearly undesirable for every piece of delegated legislation — however minor — to be subject to disallowance. However, instruments vested with significant regulatory power should be subject to parliamentary oversight and potential disallowance. WSPs fall squarely within this category insofar as they govern how water is allocated between users across an entire catchment. Consequently, they are one of the most important components of natural resource law in New South Wales.

The aforementioned analysis highlights the need for reform in this area. Ideally, this would include amendments to the WM Act compelling the Minister to consult with the community before making orders amending certain categories of rules in WSPs — in particular, cease-to-pump rules and rules designed to protect connectivity between water sources. The WM Act should also be amended to ensure that WSPs meet the definition of a statutory rule, and are therefore disallowable. This would be as simple as requiring the Minister to obtain the Governor's approval before making a Plan.¹⁹

Activation of s 61I of the Water Management Act

The Order amending the Hunter WSP cannot be considered in isolation from another significant amendment to the WM Act that came into force one week prior.

In short, s 61I of the WM Act was activated on 1 March 2013, thereby requiring mining companies to hold water access licences for all extractions, including incidental take. Incidental take, which occurs when a mine is excavated beneath the water table, can result in significant quantities of water being diverted from aquifers. Prior to the activation of s 61I, incidental take did not need to be accounted for with an access licence, and so on paper was “invisible”.

However, as incidental take is continuous, it will be difficult for mining companies to comply with cease-to-pump rules. Thus, it is plausible that the aforementioned amendments to the Hunter WSP were made to protect mining companies from breaching rules limiting or prohibiting take during periods of low flow. This being the case, these amendments essentially cement in law a special “right” to extract water in all circumstances, including during periods of drought — as long as the company is in possession of the requisite licence(s). This is arguably tantamount to conceding that mining activities that excavate beneath the water table are incapable — whether licensed or not — of maintaining a sustainable level of take. Put differently, it suggests that mines in this category are more likely than not to compromise the hydrological functioning of alluvial aquifers and interconnected water sources.

Conclusion

Reform is needed to ensure that WSPs are disallowable instruments, and therefore subject to parliamentary scrutiny. Similarly, orders amending certain rules in WSPs should be exhibited for public comment. While both of these recommendations will no doubt meet with vigorous opposition from certain quarters, they are the sorts of measures that build community confidence in law making and political processes.

Developing legislation capable of effectively managing the ongoing impacts of large-scale mining activities on water resources is considerably more complex. However, for a regulatory framework to have teeth, it must fulfil two basic requirements. First, it must strive to implement ecologically sustainable development (ESD). If we concede that many mines in the Hunter cannot help but continuously extract water from aquifers, this necessarily involves assessing cumulative impacts of mining and other activities at a *catchment* level, and ensuring that overall development does not exceed the capacity of ecosystems within the catchment.²⁰ Second (and in order to translate ESD into outcomes), it must be

based on best-available science, which requires governments to fund specialised research units over the long term.

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Footnotes

1. See the “Mining in NSW” section of the New South Wales Minerals Council Ltd website at www.nswmin.com.au (accessed 17 April 2013).
2. See the “Hunter River Catchment” page at www.environment.nsw.gov.au.
3. See www.riotintocoalaustralia.com.au; www.yancoal.com.au; www.peabodyenergy.com (accessed 18 April 2013).
4. Yancoal Australia owns 90% of the Ashton Coal Mine: www.ashtoncoal.com.au (accessed 18 April 2013).
5. Peabody Energy owns 75% of the Wambo Mine Complex: www.peabodyenergy.com (accessed 18 April 2013).
6. Xstrata owns 100% and 90% of these mines, respectively: www.xstratacoal.com (accessed 18 April 2013).
7. Coal and Allied Industries Ltd owns 80% and 100% of these mines, respectively; they are operated by Rio Tinto Coal Australia: www.riotintocoalaustralia.com.au (accessed 18 April 2013).
8. Mount Arthur is a wholly owned subsidiary of BHP Billiton: www.bhpbilliton.com (accessed 18 April 2013).
9. NSW Government, Department of Water and Energy, *Water Sharing Plan: Hunter Unregulated and Alluvial Water Sources — Background Document*, August 2009, pp 18–21.
10. Geoscience Australia, “Alluvial aquifers”, at www.ga.gov.au (accessed 18 April 2013).
11. Geoscience Australia, “Groundwater dependent ecosystems”, at www.ga.gov.au (accessed 18 April 2013).
12. NSW Government, Department of Water and Energy, above, n 9, pp 18–21.
13. NSW Government, Department of Water and Energy, above, n 9, p 21.
14. See the “Hunter Unregulated and Alluvial” section of the NSW Office of Water website at www.water.nsw.gov.au.
15. Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources Amendment Order, 22 February 2013.
16. Above, n 15, item 96 (cl 68(6)); item 50 (cl 19). Note that these rules will apply from year six of the Plan, which is 2015.
17. Interpretation Act, s 21 (definition of “statutory rule”), s 41.
18. Interpretation Act, s 41; Water Management Act, ss 41, 50.
19. Above, n 17.
20. See, for example, J Williams, Scientific Services Pty Ltd, *An Analysis of Coal Seam Gas Production and Natural Resource Management in Australia — Issues and Ways Forward (A Report Prepared for the Australian Council of Environmental Deans and Directors)*, October 2012.