

Appendix 7

Report on Water Availability, Purchasing and Potential Impacts

Prepared by

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Peter Hennessy Water



Consulting to the Irrigation Industry for 20 Years

AZL Water Purchasing and Impacts on Agriculture in the Macquarie Valley.

Prepared for: Australian Zirconia Ltd
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Macquarie and Cudgegong Regulated Rivers Water Source

The Macquarie / Cudgegong Rivers have a combined total of approximately 18,225 Megalitres (ML) of High Security water.

We have broken down the High Security licences by volume into the following categories;

- Licences which cannot be traded including Agricultural Research Stations, Councils, golf clubs and other community groups make up 10,052 ML.
- Licences currently in use in industry, mining or agriculture (approximately 6,508 ML) and which will not be available for other uses unless those businesses decide to sell. Agricultural uses make up approximately 40% of this category. (2,620 ML). The capital cost of high security water sees it go to high value uses. This is reflected in the agricultural activities using high security water, cotton and permanent plantings. Cotton production accounts for over 1400ML and permanent plantings such as citrus and vineyards make up just fewer than 600 ML. The remaining 600 ML is held evenly between mixed cropping enterprise and a few licences bought as an investment which are traded each year. A large holding (3300 ML) by Cobborah Holdings Corporation (Proposed Coal Mine) is currently traded by temporary transfer back to the market. This has benefited several cotton farmers for the past two years and will continue until the mine is in production.
- High Security Water purchased by AZL to date amounts to 846 ML.
- Water that would potentially be, or currently is, available is estimated to be 820 ML. Of this approximately 60% (490ML) are vineyards or former vineyards, and other small farming operations and 40% (330ML) would be considered sleeper licences. Within this group there could be sellers with higher than market price expectations and potentially non sellers in the short term for a variety of reasons.

The amount of High Security water used in agriculture and viticulture is small relative to the amount of General Security water used by agriculture. The economic down turn in viticulture and certain horticulture crops has reduced the demand for high security water and we see more economically sustainable industries or activities taking up this water. Of the available water in the market place some licences have been for sale for some time and in some cases 2 years, also reflecting a reduced demand for this water and also reflecting the limited industries which can afford to purchase High Security water and make a viable return on investment in this category.

General Security water in the Macquarie and Cudgegong Valleys is held by 615 Water Access licences (WALs) and totals 631,716 ML.

The largest holder of water in the Macquarie and Cudgegong Rivers is the NSW and Federal governments, "Environmental Water". Environmental water would make up at least 40% of the total.

The General Security category has faced a lot of change in the last few years with the entering of the market by the NSW and Federal Governments. The cost of production and farm debt and relatively small returns to farmers has seen a large amount of water being redistributed. The term used by the government "willing sellers" indicates that non profitable and sleeper licences were their target market. The amount of inquiry from sellers that missed the opportunity to sell to the government would indicate that there are still a number of willing sellers. Once the government ceased purchasing water in the Macquarie/ Cudgegong Rivers the price per ML eased significantly with current sales \$50 to \$100 per ML cheaper than during the government water buy back. There were parcels still on offer, (in excess of 4000 ML) to the Government at the close of the water buy backs at \$1250 per ML or greater and are still listed for sale.

Upper Macquarie Alluvial Ground Water Source

Ground water that would be targeted by AZL falls in the Upper Macquarie Alluvial Ground Water Source. In this ground water source there are 123 licences with a total of 27,675 ML. In 2012/2013 season there were 75 licences considered to be inactive. The active licence used a total volume of 13390.2 ML. The NSW Office of Water indicates that any development would need to be assessed and not impact on existing users. The Water sharing plan allows for trading and a project like AZL should be able to develop a sustainable approach to water extraction.

Fractured Rock Aquifer (Lachlan Fold Belt) Groundwater Source

This groundwater source covers a huge area of some 17,977,118 hectares and has 9 management zones. In general, subject to assessment, trading between the zones is allowed at present and under future water sharing plans so the following information will be inclusive of the whole water source.

The long-term average annual extraction limit (LTAAEL) is 917,073 ML/year. At present there is only 73,909 ML/year licensed ground water entitlement issued. The Office of water has identified unassigned water to be 768,853 ML/year. Stock and domestic is currently at 74,311 ML/year.

There are currently 789 ground water licences granted in this water source.

Water availability is known to be poor and needs more investigation on localised sites.

As far as trading opportunities there is huge potential to acquire licences from this large area. The privacy act prevents us accessing the data base of licence holders, so a more hands on approach will be needed to find the targets in the water source. Current sales have been quoted at \$1,150 to 1,200 per ML.

A controlled water release by the Office of Water of 36,375 ML will impact on the market and the above statistics, and we will see prices set at a new level, this expected to be \$800 per Meg.

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Peter Hennessy Water



Peter Hennessy graduated from University Of Western Sydney with a Bachelor of Applied Science (Systems Agriculture) in 1992.

Peter started Peter Hennessy Consultancy & Commodity Trading initially and more recently Peter Hennessy Water as an agricultural consultant and in time providing a particular focus on irrigation water trading. This sector of the agricultural industry was identified by Peter to be a growth area that wasn't being serviced.

Peter Hennessy has now been successfully brokering sales of Permanent and Temporary Water allocation assignments on the Macquarie and Cudgegong Rivers for the past 20 years. Water Consultancies to a variety of industry groups such as Mining, Viticulture and Government Agencies have also developed into a strategic side of the business.

Being local, experienced and situated in Dubbo, Peter has a good knowledge of the Macquarie/Cudgegong market place. Geographically located in the middle of the trading area, Peter provides exceptional service to water clients of both the Macquarie and Cudgegong Rivers.