PURSEHOUSE FARMS PTY LTD

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NSW Government Planning & Infrastructure

GPO Box 39

SYDNEY NSW 2001

Attention: Director Mining and Industry Projects

Re: Watermark Coal Mine

App No: SSD-4975, Watermark Coal Project

Name: Pursehouse Farms Pty Ltd

E-mail: andrewpursehouse@bigpond.com

Address: "Breeza Station"

Breeza NSW 2381

Disclose reportable donations: I have made a reportable political donation – No

Privacy Statement: I have read the Department's Privacy Statement and agree to the Department using my submission in the ways it describes. I understand this includes full publication on the Department's website of my submission, any attachments, and any of my personal information in those documents, and possible supply to third parties such as state agencies, local government and the proponent. I agree to the above statement? Yes

I am a member of the Caroona Coal Action Group. I object to the proposed Shenhua Watermark Coal Mine at Breeza NSW. I have reviewed the submission prepared by Earth Systems for the Caroona Coal Action Group (CCAG) and I am writing in support of the CCAG submission.

Background

I am the owner and manager of a family farming business at Breeza NSW. Writing a submission such as this is the first time I have ever felt compelled enough to write to a Government Department.

I cannot believe the stupidity and lack of due diligence in ever awarding an Exploration Licence for mining on the Liverpool Plains. Clearly and without question it is the best land Australia has for agricultural production. The future for agriculture in this region is for food and fibre production for the nation and the world. Why anyone would want to risk the long term sustainable production from this area for short term coal production is beyond belief.

The Minister and Department responsible for ever issuing a mining licence on the Liverpool Plains, will go down in history as the destroyer of one of our nation's most important agricultural areas.

The farming aggregation my family owns and operates is called "Breeza Station". I have included in the submission a one page outline of the property. My wife and I are 54 years of age, and our three children are keen to continue the operation in the future. The children are 23, 21 and 19. Eldest son has a Bachelor of Agriculture, middle son will do a Diploma of Farm Business Management next year, and our daughter is in the 1st year of a Nursing Degree.

The farm has a land asset value of $25 million and a consistent gross income of between $5 and $6 million per annum. Farm staff consists of 4 full time plus my wife and I, and 2 part time staff. One third of farm is irrigated by 6 large bores. The sustainable high quality water comes from layers of alluvial aquifers underneath the farm. Water is also obtained from the Unregulated Mooki River during high flow events. The remainder of the farm is dry land farmed, and grazed with beef cattle.

Concerns

We have serious concerns with the mega mine development proposed by Shenhua. Our farm now shares three boundary fences and also shares a river boundary with Shenhua. This EIS is obviously only a stepping stone to the real coal potential available from the deeper reserves with long wall mining after the open cut resource is exhausted.

The major concerns are as follows:

- Underground Water
  Under the NSW Government's Upper Namoi Zone 8 Groundwater Sharing plans our area has received a 67% cut in allocation over the last 10 years. The resource is now considered sustainable for the future. The mine has created a risk to this limited resource by the potential to depressurising the aquifer. Further draw- downs will result in pumps unable to produce viable quantities of water, increased pumping costs, or nil water if the aquifer dewaters. This risk is too great; it can never be replaced or repaired.
  Present pumping for agricultural use utilises the resource mostly in summer. This allows recovery in water levels throughout the winter. If the mine relies on groundwater it potentially will be used throughout the year, not allowing the usual recovery period.
  Irrigation land will be devalued by half to existing dry land values if the resource is harmed. Our present equity in the farm is 65%; the loss of asset value would essentially bring in the banks. Environmentally and economically a mine at Breeza is far too risky to all farm

businesses in the area. A mistake with the underground water at Breeza would have a carry on effect to all zones in the Namoi Valley groundwater aquifers to the North West, due to the natural flow gradient from South to North.

It is proposed by Shenhua in the EIS to purchase RAW water from offsite supplies. They have already inherited, with a land purchase a neighbouring farm, a Groundwater Licence. This is criminal; this high quality pristine water which currently grows food and fibre and supports the local economy will now wash coal for China and lay dust on roads.

The EIS also indicates RAW or imported water supplies in years 5 to 17 are 900-920 ML, no mention is made of water requirements after that, why?

The mine area is a natural catchment for the alluvial aquifers. Clearing the vegetation initially and then mining will interrupt this natural recharge process, creating a further risk to the long term sustainability of the aquifer. Farmers have not been able to clear land in this same area for the last 30 years for this very same reason.

- Surface water contamination

  The Mooki River and its tributaries drain the majority of rainfall run off from the Liverpool Plains. The smaller Coxes Creek system drains the western part of the Plains.

  The EIS is contradictory in regards to run off of excess water from the mine. In one section it promotes the mine as being unique as a nil discharge mine, and in another part says only in extreme circumstances will water enter the Mooki River. In a community meeting held at the Breeza Hall April 9th 2013, a Shenhua representative told the local community there will be no discharge into the river. This is incorrect and an insult to the intelligence of the local community. One only has to look at Boggabri coal mine near Gunnedah, where last year it was given a licence to pollute the Namoi River when water in the mine pit had to be discharged. Werris Creek mine to the east of this mine had to increase the size of their water holding capacity ten times because of numerous breeches from its dam led to EPA fines. Central Queensland Coal mines polluted the Nogoa, Mackenzie, and Fitzroy River systems twice in the last 4 years and water had to be released from Fairbairn Dam to dilute the polluted water. The Hunter River is regularly flushed from Glenbawn Dam to minimise the effect of polluted water from Hunter mine sites. The serious issue for the Shenhua mine is we do not have a Regulated Dam in our upper catchment to avoid a major pollution threat occurring regularly. The soil on the hills of the Shenhua mine sites are very prone to severe run off.

  The contaminated water will be accidently pumped into on farm storages from Breeza and continue on to the Namoi River system and the Murray Darling network. What an environmental disaster.

  A dual pipeline exists in the EIS from the mine site to the Mooki River. Many have asked Shenhua to please explain. Is this water to the mine or water from the mine or one each way. The latter is the presumed; why else would there be two. Our farm is on the opposite side of the River at this point, and is also the proposed river pumping site as well.

  The EIS indicates the Mooki River is in a degraded state currently. This we refute, the River certainly has European Carp issues as does all inland rivers, however native golden Perch (Yellow Belly), Murray Cod, Yabbies, and turtles thrive. The river has continuously run for the last 3 years. The long term records show the Mooki River & its tributaries, as a water source for irrigation, is more reliable than the Namoi Regulated supply from Keepit Dam.

- Coal Dust on crops

  As with many properties in our area we grow cotton near the proposed mine site. Our nearest fields are only 4 km from the first mine. Cotton when maturing is very indeterminate (flowers over an extended period) and between the months of March to May white cotton bolls are exposed to the environment before harvest. During these months often dew will form on the cotton until about 10am in the morning. The prevailing wind is straight towards our farm and neighbouring cotton farms, exposing our crops to potential and costly damages from degraded cotton. So who pays for this?

  Other crops are grown include Durum wheat (for pasta), Bread wheat, Barley, Chickpeas, Corn (for Cornflakes /Corn chips/stockfeed), Sorghum, Sunflowers, Soybeans.

  The EIS has incorrectly stated the prevailing wind direction. Only one year of wind data has been utilised for the EIS. The Bureau of Meteorology data from Gunnedah and Tamworth clearly shows the long term prevailing wind direction is from the North West and West at 3pm.

  When selling grain and cattle most purchase contracts now have a declaration required to be completed and signed indicating chemical and pesticide residues. The seller warrants that the commodity complies with all State & Federal Laws & requirements. Contaminates from coal dust from the mine site could be a very real concern in the future, particularly with human consumption grains.

- Koala's

  The wonderful population of Koala's at our "Breeza Station" homestead area is a source of pride to us and any visitor from far and wide. They are very healthy (no Chlamydia disease) and live in safety around the Breeza hill area. We have anywhere from 2 to 5 females around the homestead area (5 houses plus sheds) and each bear young regularly. The population has been monitored by the University of NSW in the past.

  Our concern for the Koala population is firstly the relocation of the mine area population which has proven to be very unsuccessful in other areas. Secondly, the natural Koala corridor which presently exists between Breeza and Gunnedah will be effectively cut off, leaving our local population isolated. The long term effect of this on the population could be devastating.

  The Koala population has been steadily increasing in the area to the south and east of Breeza. The south being helped by a State Government Soil Conservation initiative about 10-15 years ago, a koala tree corridor was planted beside the Mooki River by unemployed people and the Soil Conservation Service personal.

  Conclusion

  I would like to express my utmost plea to the decision makers of this mining licence, to sit back take a good hard look at the facts. Ask yourselves if this mine approval is worth the risk involved to what many say is some of the best country in the world. As well as the best soils, the Liverpool Plains has a wonderful climate, rarely has droughts and produces reliable summer and winter crops every year. Add to this the high quality sustainable underground water resources, and you can understand why people are so passionate to stop this nonsense. If New South Wales needs coal revenue so badly, go mine marginal western country where abundant coal and gas exists, for marginally more freight. If this mine goes ahead you will see civil unrest.

PURSEHOUSE FARMS PTY LTD **Farm Details - 2013**
"BREEZA STATION"
BREEZA N.S.W. 2381

Pursehouse Farms Pty Ltd is a family owned & operated farming & grazing business, located at Breeza, on the Liverpool Plains (Breeza Plains) region, in North West N.S.W. Australia. The principals are Andrew & Cindy Pursehouse & family, James (23), Hugh (21) & Anna (19).
Key staff includes Operations Manager Peter Baldo (employed 23 years), Head field operator Bill Gray (employed 10 years), Hugh Pursehouse, Jamie Trail, Transport Manager/mechanic Anthony Trudgett, & casual staff and family employed as required. (James is an Agronomist for CGS Wee Waa, Anna is at Uni in Newcastle)
Agronomic advice is provided by Pursehouse Rural. Matt Roseby operates a 'Premium Ag' intensive agronomic management service, and cotton consultant is John Nott (both based at Pursehouse Rural Gunnedah Branch)
The property aggregation is called "Breeza Station", and produces cotton, grain & beef. The historic property was originally settled by the Clift family in the 1830's. The Pursehouse family are only the second owners, purchasing the property from the original owners in 1984. Located next to & west of the Liverpool Ranges (Great Dividing Range) a reliable rainfall average of 650mm p.a occurs evenly throughout winter & summer. Tamworth is 65 km north east, Gunnedah 40km North West & Quirindi 40km south. Sydney is 4 hours drive south.
Winter crops grown include Wheat (bread & durum), Barley, Canola, Fababeans, & Chickpeas.
Summer crops include Cotton, Sorghum, Corn, Sunflowers, and Pigeon Peas.
Cattle consist of 120 Poll Hereford breeders, plus their progeny are fattened on farm.
Land area owned is 3,012 hectares (7,439acres). 1,040 hectares is furrow irrigated, 1,700 hectares is dryland farmed, & 272 hectares is grazed.
Soil type is self mulching black earth, many metres deep. Basalt in origin, & predominately tree less plain country. Some areas of red brown soil exist, with native yellow, white & bimble box trees. Koalas are always prevalent.
Irrigation water is sourced from an underground aquifer, with 6 turbine pumps set 30-70 metres below ground level. The pumps extract between 5 & 13 Mega litres /day each (50 – 135,000 gallons per hour each), of beautiful quality water. All tail water & stormwater is collected in water storages & recycled. Stock water is obtained 20-25 metres below by windmills & also from the Mooki River.
Dryland farming has been no-tilled continuously since 1992-94. Permanent beds, and controlled traffic lanes, has been used since 1996.
New in 2012 is the introduction of 4 metre spaced tracks (instead of 2m) utilizing 2 John Deere tracked tractors, &12 metre wide machinery (instead of 8m).Spraying is achieved by a Miller Nitro self-propelled sprayer with a 36metre wide boom.
Yield mapping of grain production commenced 1998, & Cotton in 2000.This GPS technology has been used intensively to analyse all management, of the farm". A philosophy of "*If you can't measure it, you cannot manage it*".
Laser levelling technology is utilised extensively, both irrigated land, channels & more recently on dryland paddocks. The farm has its own laser levelling machinery.
Global Positioning technology is used to yield map grain & cotton, and to automatically steer the farms main tractors and self propelled sprayer, to RTK 2cm accuracy. In 2011 a major change occurred with purchase of a new John Deere 7760 Round bale cotton picker and associated handling gear and JCB Loader.

Rose of Wind direction versus Wind speed in km/h (07 Feb 1992 to 30 Sep 2010)

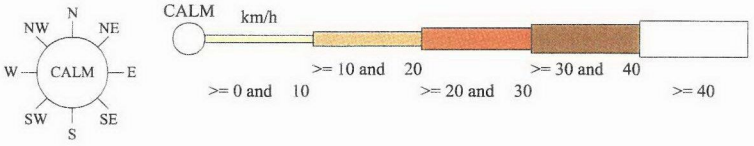
Custom times selected, refer to attached note for details

TAMWORTH AIRPORT AWS

Site No: 055325 • Opened Jan 1992 • Still Open • Latitude: -31.0742° • Longitude: 150.8362° • Elevation 394.m

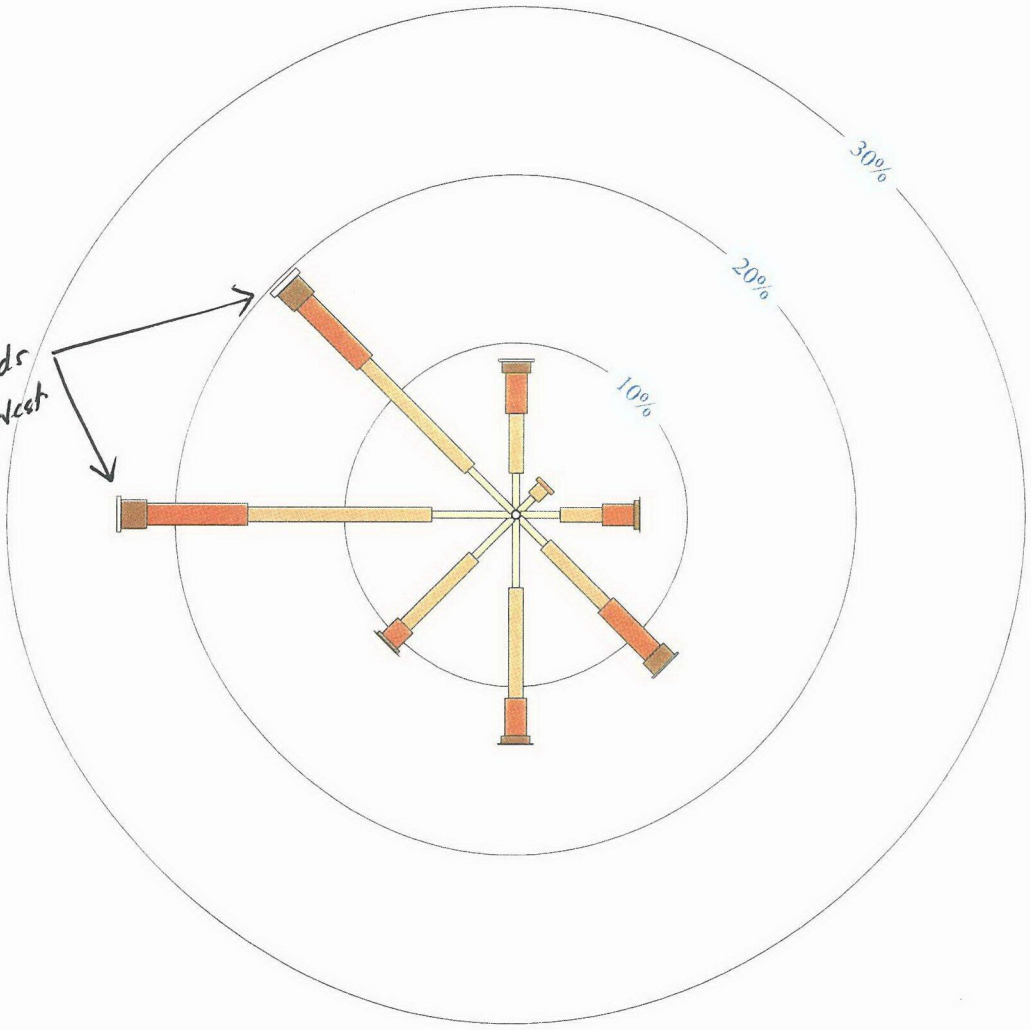
18 years of Data.

An asterisk (*) indicates that calm is less than 0.5%.
Other important info about this analysis is available in the accompanying notes.



3 pm
6185 Total Observations

Calm 1%



Predominant Winds West & North West

Rose of Wind direction versus Wind speed in km/h (01 Feb 1877 to 30 Sep 2010)

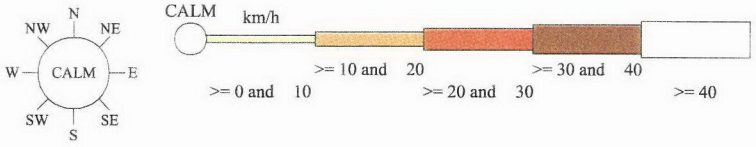
133 years of Data.

Custom times selected, refer to attached note for details

GUNNEDAH POOL

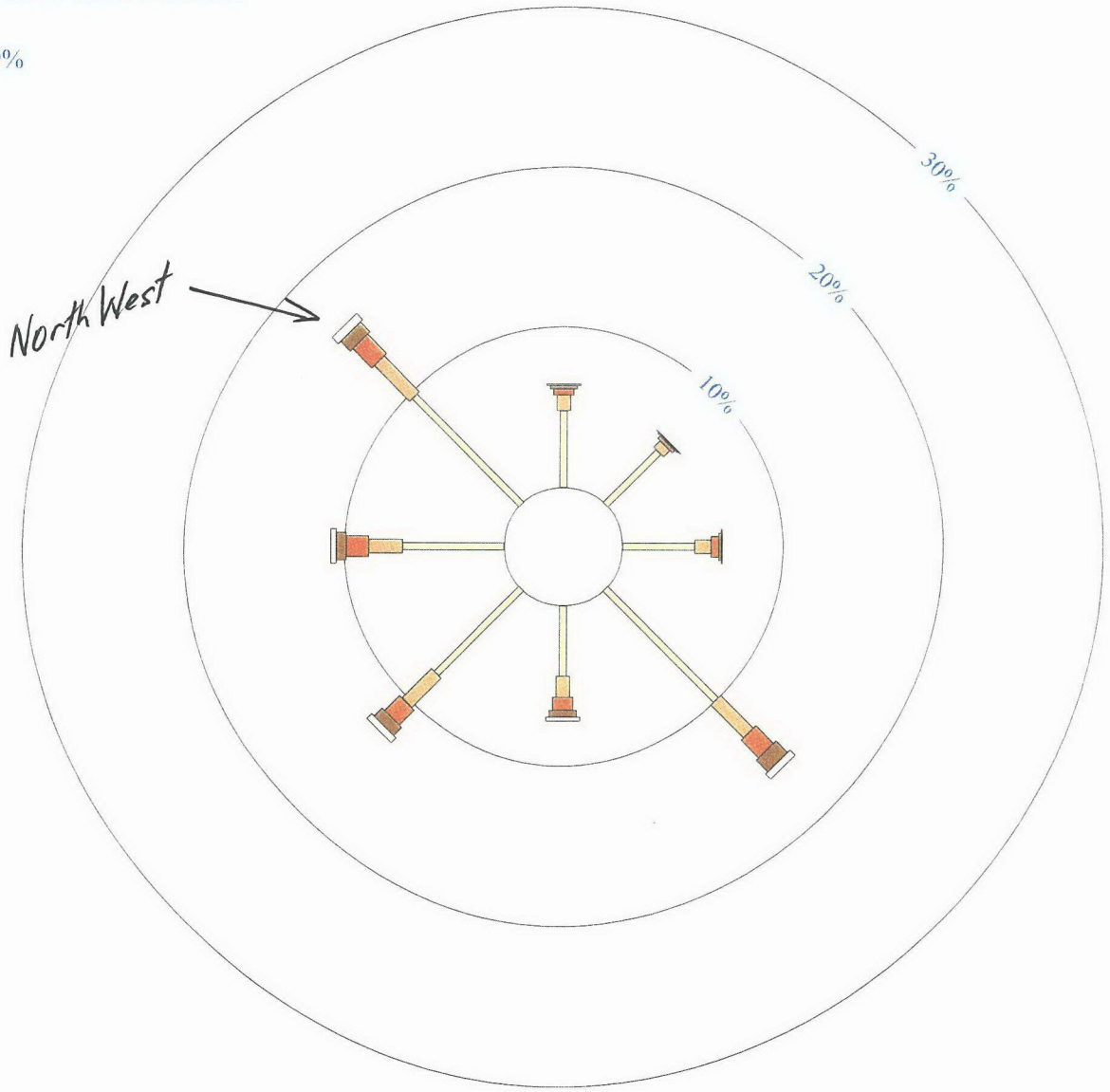
Site No: 055023 • Opened Jan 1876 • Still Open • Latitude: -30.9841° • Longitude: 150.254° • Elevation 285m

An asterisk (*) indicates that calm is less than 0.5%.
Other important info about this analysis is available in the accompanying notes.



3 pm
17299 Total Observations

Calm 19%



2.4.2 Rainfall

The maximum rainfall within the Project Boundary occurs during November and December with maximum mean monthly values of 180.3 millimetres (mm) at WS1 and 134.4 mm at WS2. Low rainfall is generally experienced at both monitoring stations during June and July with minimum mean monthly values of 14.1 mm at WS1 and 4.6 mm at WS2.

The maximum rainfall across the region occurs during January with mean monthly values of 74.0 mm to 84.4 mm, respectively. These maximum rainfall events are typically experienced marginally later in the broader region than that within the Project Boundary. Low rainfall typically occurs between the months of April to September in the region with mean minimum values of 39.5 mm at Breeza and 35.7 mm at the Gunnedah Resource Centre. These values are substantially higher than that recorded within the Project Boundary.

2.4.3 Evaporation

Data from the BoM Gunnedah Resource Centre station was used to assess representative evaporative trends typical of the region. Summer months experienced higher daily evaporation in direct correlation with increased temperature and presence of afternoon winds.

Mean monthly pan evaporation rates varying seasonally from 239 mm during January and December to 57 mm during June, with an annual mean evaporation of 146 mm.

2.4.4 Wind Speed and Direction

Seasonal windroses for WS1 and WS2 are presented in **Figure 5**. The figure indicates the following:

- The prevailing wind direction at WS1 is east south-easterly and south-easterly in the spring, summer, and autumn months, and west south-westerly and south-easterly in the winter months;
- The prevailing wind direction at WS2 is southerly throughout all seasons;
- At WS2 there are almost no northerly winds, with the exception of slight north north-westerly to north north-easterly winds during the winter months;
- Recorded wind speeds were generally between 1.5 metres per second (m/s) and 6 m/s throughout all seasons; and
- Summer months appear to experience the lowest calms (i.e. wind speeds less than 0.5 m/s).

The variations observed between WS1 and WS2 are a result of local topographic influences.

One years data only

2.5 Geology

2.5.1 Exploration

Authorisation 216 was originally held by the Director-General of the NSW Department of Primary Industries on behalf of the Crown for the purposes of prospecting for coal within the Gunnedah Basin. Preliminary exploration by the Department identified major resources of more than 1 billion tonnes (bt) of in situ coal within the Watermark deposit. This subsequently resulted in the Department inviting competitive tenders for part of Authorisation 216. As a result, Shenhua Group submitted an expression of interest for a five year EL. Following the competitive tender process, Shenhua Watermark was granted EL 7223 in October 2008 by the NSW Minister for Mineral Resources, which included the following special conditions (amongst others):

- *"54 - ...the licence holder shall provide $A1 million per annum during its exploration and feasibility program, up to a maximum of five years, to a new Regional Community Trust to be established with the regional communities...;*
- *55 – The licence holder shall, within a reasonable period of time, establish a "Watermark Coal Exploration Project – Community Consultative Committee"...;*
- *59 – The licence holder...shall, within the timeframe specified in the EOI Information document, pay the Department of Primary Industries an amount of A$23.6 million;*
- *60 – The licence holder shall, within the timeframe specified in its successful EOI, pay the Department of Primary Industries the nominated additional amount of A$276.3 million;*
- *61 – Subject to ongoing title tenure and the future grant of a mining lease, the licence holder shall pay the Department of Primary Industries the nominated additional amount of A$200 million...;"*

Shenhua Watermark has complied with the terms of EL 7223. Subsequently, EL 7223 was renewed in January 2012 until February 2016, inclusive of the following additional special conditions:

- *"47 – If the licence holder purchases or has purchased any land within the area of the licence that was used for prime agricultural purposes immediately prior to the purchases', the licence holder is to ensure that the land continues to be used for prime agricultural purposes during the life of the exploration licence;*
- *48 – Any development approval sought by the licence holder within the initial term of the licence or during any extensions or renewals of the licence shall not include any of the following activities in the area covered by the licence:*
  - *Long wall mining underneath the "deep alluvial irrigation aquifers";*
  - *Long wall mining underneath the "floodplain";*
  - *Open cut mining anywhere on the "floodplain".*

SHENHUA WATERMARK COAL PTY LIMITED
神华沃特马克煤矿有限公司
Hansen Bailey

WATERMARK COAL PROJECT

Watermark Windroses

FIGURE 5