FILETRON PTY LTD
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Mr Clay Preshaw
Executive Director, Resource Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Lodged at the website portal on 13th July 2017

Re: Hume Coal Project SSD 15_7172: Southern Highlands NSW – Objection to Project Approval by Mr Ben Cottle on behalf of Filetron Pty Ltd

BACKGROUND

Filetron Pty Ltd has received various correspondence from *Hume Coal Pty Ltd* in relation to impacts on our groundwater supplies and infrastructure. More particularly, we refer to correspondence dated 23rd May, 2017, where an overview of two of our bores, located at 'Elgin', 300 Exeter Road Sutton Forest 2577 defines the specific impacts on those bores, based on Hume's determinations (*refer to Attachment 1*). We understand that similar correspondence has been sent to other landholders affected by the proposed mine, where 'make do' provisions are designed to override the principles of the *Aquifer Interference Policy* (AIP).

In this submission, we wish to point out the poor content of advice received, the erroneous data supplied, and the misinformation concerning the proposed management of our bores. We are also highly concerned that the groundwater model predictions on which the impacts are based are unrealistic, based on other studies, particularly those determined by *Coal Free Southern Highlands Inc*.

Filetron Pty Ltd, together with other associated companies are the holders of a number of WALs in the Southern Highlands, at properties which adjoin the proposed mine area. Our aggregate WAL interests within 8km of the centre of the proposed mine attain approximately 625ML's. In addition to that, we hold in excess of 500ML's in adjacent lands, all of which are currently assigned to 'irrigation' purposes.

The protection of our interests and associated agricultural business has been strongly defended throughout the protracted period of active exploration in the area by the proponent. In this submission, we provide for consideration many issues which seriously concern us, and other landholders.

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MAIN ISSUES

Our bores are used for all farm water sources, being 'irrigation', 'stock & domestic'. The reliance on these bores is paramount to our productive capacity. The following are some of the main issues that we are faced with:

- Reduced bore production;
- Potential loss of water supply;
- Increased costs for pumping, lowering pumps & associated costs with likelihood of requiring higher head pumps;
- Reduced water quality;
- Uncertain aquifer quality and sustainability after being dewatered for such a long period of time;
- Enormous timeframe of bore recovery;
- Inconvenience, intrusion and associated concerns;

MAKE DO PROVISIONS

Hume Coal propose that the loss or impact on landholder water supplies can be 'made good' by other provisions, some of which have been proposed by the proponent as noted below:

1. *Replace the 'stock & domestic' bore*. We question as to how a bore can be replaced where the aquifer is 'lost' by mining, and where there is no groundwater potential at a deeper level; loss of water quality; higher pumping and infrastructure costs;
2. *Deepen the pump*. This may not be effective, as outlined below; *Hume Coal* have a very poor understanding of pump installation, pump design and operational management of bores;
3. *Replace the irrigation bore*. That may be impossible if the aquifer is lost. Is it proposed to replace the irrigation equipment which has been precisely engineered to the groundwater supply yield and flow rate?
4. *Increased pumping cost adjustments*. How can this be practically managed for so many bores affected, often requiring deeper installations and infrastructure?
5. *Provision of off-site water*. The likely need for this will be difficult to achieve, particularly in relation to water volumes, farm storage, deliverability, chemistry, potability and logistics;

DATA PROVIDED BY HUME COAL

The application of the AIP for affected bores is critically based on the impact of the lowering of the water table at a particular bore, beyond a threshold level of 2m variation.

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The following table summarises the information provided by *Hume Coal* in respect of our 'Elgin' bores, as part of their bore census, compared with data recorded on the *NSW Office of Water* (NOW) database, provided by the driller. We have not permitted *Hume Coal* on our property. However, based on published data, obvious errors are noted.

	Bore GW105102		**Bore GW107006**		**COMMENTS**
Bore Details	Hume Coal Advice	NOW record (2003)	Hume Coal Advice	Now Record (2004)	
Initial SWL (m)	72.1	52.1	112.0	64.0	Incorrect data
Screens/open hole (m)	85.0–151.0	85.0–151.0	90.0-175.0	90.0-175.0	
Bore depth	151.0	151.0	175.0	175	
Modelled estimated impacts					
Project drawdown max (m)	2.5		3.7		
Project time to max drawdown (yrs)	25.5		225.5		erroneous
Project time to 2m drawdown (yrs)	22.4		20.5		
Project time to 2m recovery (yrs)	35.0		42.1		Long duration
Number of years drawdown >2m (yrs)	12.6		21.6		Why so different

The following is evident:

- Hume records are erroneous, particularly in respect of the SWL, without, in our case, having sourced freely available data from the NOW website;
- The data utilised by *Hume* in the determination of impacts on landholder bores must be seriously questioned;
- The sloppiness of published data recording, and provided to us as 'qualified professional advice' must be treated with 'low' confidence;
- We can assume that the data provided to us is that which has been generated from the *Hume Coal* groundwater model, as provided in their EIS. The integrity of that model is questioned, and cannot be relied-upon by us;
- The additional costs of pumping will endure for 48 to 63 years. That is, well beyond the 23 year mine life, and long after mine closure, when the operator has departed;

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- It is noted that the two bores are only 600m apart, and yet in the case of GW107006, the project time to maximum drawdown is 225.5 years, compared to 25.5 years in the case of GW105102. That is, way beyond the life of the mine!
- It is not possible that landholders can accept the validity of advice or predictions of impacts if advice provided by *Hume Coal* is based on invalid predictions and poor data integrity, particularly where groundwater levels are crucial to any development approval;
- Further, we question the validity of all basic 'static water level' data used by the proponent in determining water level thresholds upon which the AIP is being implemented as 'make good' provisions; the use of 'old' data as provided by the driller may have no relationship to current static water levels, where precise data is necessary;

PUMPING COSTS

Hume Coal have provided a schematic drawing of the '*Make good strategy – increased pumping costs only'*, as attached. The advice provided to us in their correspondence is that the *only* costs will be increased pumping costs. That is` erroneous for the following reasons:

1. If the pumping head of a bore is increased, costs are associated with the added cost of running the pump for a longer period of time to obtain the same quantity of water for the desired purpose;
2. If the pumping head is increased significantly, the pump may not deliver the necessary volume of water to satisfy the needs, and a complete new pump with a different pump performance curve will need to be installed;
3. When water levels are reduced, there a number of effects - the motor can burn-out if run dry, aeration can occur, and water quality can deteriorate as cascading water dewaters the aquifers;
4. Our bores have all been scientifically equipped, based on detailed drawdown and recovery data analysis, where the impacts of dewatering have been minimized. We are now faced with a complete change in those parameters;
5. It is not just a simple case of lowering the pump without a complete reinstall and aquifer drawdown test under different conditions of reduced head;
6. Hume determine that if 20% of the initial hydraulic head is available, then the bore is assumed to be viable. This nonsense, as the viability of a bore depends on the inter-relationship of the water level and positions of the aquifers;

COMMENTS ON HUME GROUNDWATER MODEL IN RELATION TO LANDHOLDER BORES

We understand that in the EIS several groundwater models have been generated, in addition to the one by *Pells Consulting* on behalf of *Coal Free Southern Highlands Inc*. The impact on landholder bores are far more significant, as detailed in the *Pells* model. Based on that model, impact on our

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'Elgin' bores are more likely to have head losses in the range of 20-30 metres. In consequence, a greater number of landholder bores are likely to be affected.

We draw attention to one of our irrigation bores located at Mt Broughton (GW103692), which *Hume* deem to be unaffected, based on their determinations. However, the *Pells* model predicts an approximate 20 m drawdown impact.

It is recognised that there is a very significant variation of impacts derived from groundwater models that have been generated, as a 'guide' to impacts, and that the reality is more likely to be a different scenario. It is evident that *Hume* have adopted a moderate approach, and that the integrity of their data is strongly questioned. Landholder rights have been poorly managed, as evidenced by that submitted herein.

SUMMARY

The following summarises the main points raised in this submission in relation to *Hume Coal* advice:

1. The bore impact data and associated information provided to us is both erroneous and misleading;
2. The understanding of groundwater pumping design, proposed remediation, and associated impacts on water supply for 'stock & domestic' and 'irrigation' purposes are poorly understood by them;
3. The realistic impact of the mine on private groundwater entitlements are considered to be much greater than predicted;
4. The logistics of remediation 'make good provisions' to landholders, based on the widespread impacts will be impossible to manage;
5. We strongly object to any decision to approve the operation of the proposed mine;

Attachment 1

Groundwater bore 'make good' consultation correspondence from Hume Coal dated 23.5.17, includes 'Groundwater Bore Overviews & proposed 'make good' bore diagram.

Mr Ben Cottle

Director
Filetron Pty Ltd

Date: 13th July 2017

HUMECOAL
PROJECT

23 May 2017

Greig Duncan
Project Director
Hume Coal Project P/L
PO Box 1226
Moss Vale NSW 2577

Re: Groundwater bore 'make good' consultation

Dear Landowner,

This is a follow up letter to our previous correspondence regarding your groundwater bore(s).

As part of the project determination process a water assessment has been prepared that documents the surface and ground water assessment methods and outcomes.

I am writing to inform you that if the Hume Coal Project is approved by the NSW Government, your groundwater bore has been identified as requiring remedial mitigation.

In accordance with the NSW Government's Aquifer Interference Policy (AIP) 2012, Hume Coal is obligated to 'make good' impacts on any bore which experiences a water level drawdown greater than 2 metres. This is described in the AIP as greater than 'minimal impact'.

In order to assist your understanding of the Hume Coal Project's impact on your groundwater bore, I attach the following documents:

Attachment 1	NSW Government's Aquifer Interference Policy (AIP) 2012
Attachment 2	Groundwater bore baseline assessment form (example)
Attachment 3	Groundwater bore particulars (obtained from the NSW Water database)
Attachment 4	Example of proposed 'make good' measures, particular to your bore(s)

As the Hume Coal Project progresses through the NSW Government's determination process, we will continue to keep you up to date on our obligations with regard to your groundwater bore. Our staff will contact you to discuss the Hume Coal Project, its impact on your groundwater bore and the potential mitigation measures available. Alternatively, please don't hesitate to call into the Berrima or Moss Vale offices to talk with one of Hume Coal's staff.

I look forward to working with you as we progress the development of the Hume Coal Project and encourage you to contact us should you have any further enquiries or requests.

Yours Faithfully,

Greig Duncan
Project Director
Hume Coal Project

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HUME COAL
PROJECT

Groundwater Bore Overview

Bore	GW105102
Owner	Filetron Pty Ltd
Property Address	Elgin 300 Exeter Rd SUTTON FOREST NSW 2577
Easting	255075
Northing	6169083
Licenced Purpose	irrigation
Proposed mitigation	increased pumping costs

Bore Details

Initial Standing Water Level (m)	72.1
Screens From (m)	85.0
Screens To (m)	151.0
Total Depth (m)	151.0

Modelled Estimated Bore Impacts

Project drawdown - max (m)	2.5
Project time to max drawdown (years)	25.5
Project time to 2m drawdown (years)	22.4
Project time to 2m recovery (years)	35.0
Number of years drawdown > 2m (years)	12.6

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HUMECOAL
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Groundwater Bore Overview

Bore	GW107006
Owner	Filetron Pty Ltd
Property Address	Elgin 300 Exeter Rd SUTTON FOREST NSW 2577
Easting	254526
Northing	6169294
Licenced Purpose	irrigation
Proposed mitigation	increased pumping costs

Bore Details

Initial Standing Water Level (m)	112.0
Screens From (m)	90.0
Screens To (m)	175.0
Total Depth (m)	175.0

Modelled Estimated Bore Impacts

Project drawdown - max (m)	3.7
Project time to max drawdown (years)	~~225.5~~
Project time to 2m drawdown (years)	20.5
Project time to 2m recovery (years)	42.1
Number of years drawdown > 2m (years)	21.6

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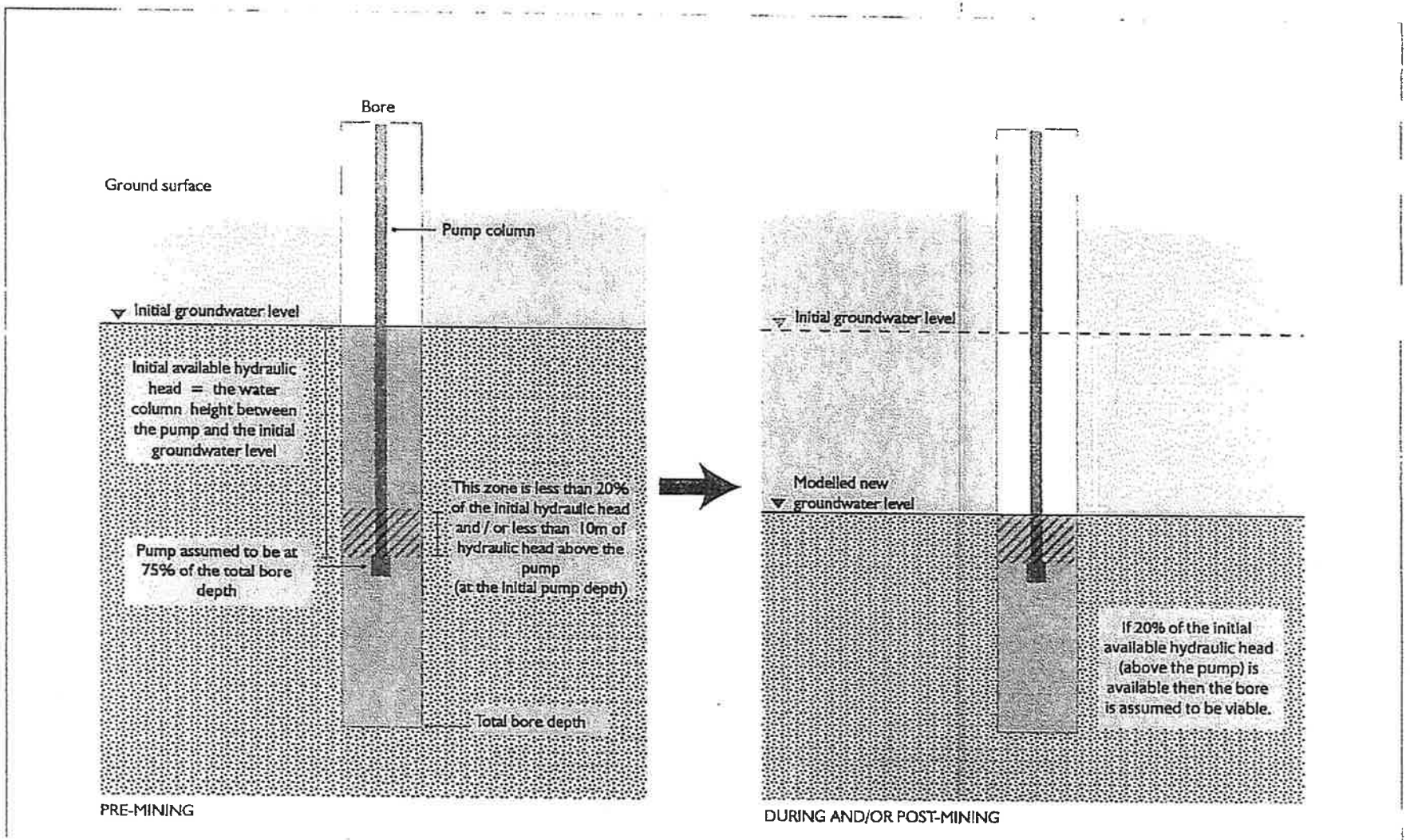

HUMECOAL

Make good strategy - increased pumping costs only

Hume Coal Project

Proposed 'make good' provisions

Figure 4.1